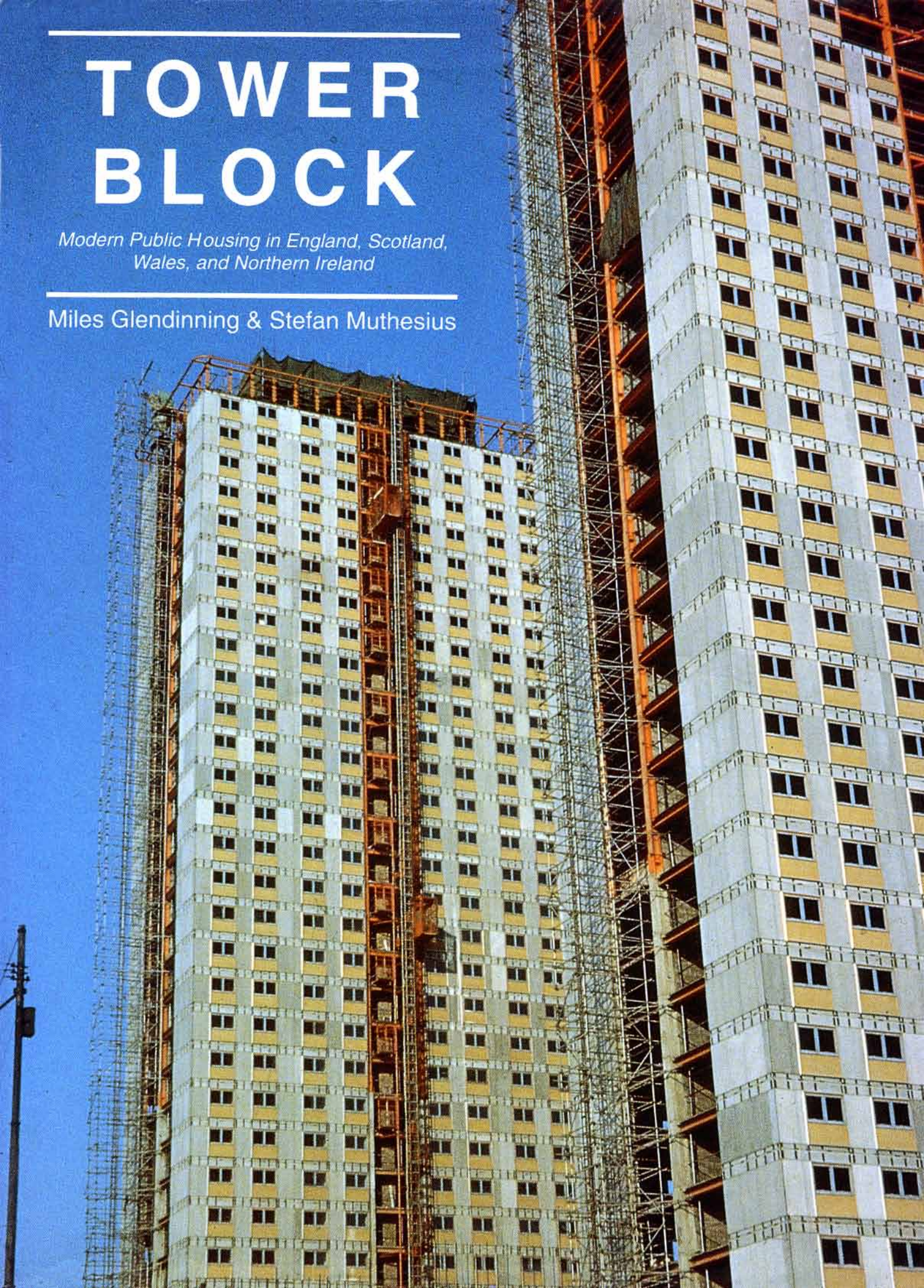
TOWER BLOCK

Modern Public Housing in England, Scotland, Wales, and Northern Ireland

Miles Glendinning & Stefan Muthesius



TOWER BLOCK

Modern Public Housing in England, Scotland, Wales, and Northern Ireland

Miles Glendinning
Stefan Muthesius

Once they were seen as one of the greatest triumphs of the postwar Welfare State and of the social functionalism of Modern architecture. More recently, high flats and other dense Modern housing patterns have become the target of widespread, violent condemnation. The authors of *Tower Block* have decisively broken from this polarised rhetoric, believing that it has itself fuelled the 'high-rise problem'. Instead, they have undertaken a cautious but comprehensive historical analysis of the buildings in the hope that this may help foster a generally more balanced attitude towards them.

Two fundamental questions are addressed in these pages. Firstly: why were tower blocks held to provide good dwellings – better than any previous form of dense urban housing? Here, the authors explore the beliefs of designers and theorists in technical matters such as density, layout, construction and services, as well as in the less easily defined, yet equally urgent, search for 'community' in new housing. And they show that, alongside all this, there ran a belief that it was possible, in at least some of these solutions, to achieve an absolute architectural quality.

The second question takes a different form. Why was there such a rapid and massed building of multi-storey blocks – peaking in the mid-1960s – across all urban areas of Scotland, England and Wales? An immensely broad research programme, using both central and local sources, including countless interviews, has allowed the authors to conclude that the chief driving force was municipal pride – the idealistic daring of councillor 'housing crusaders' determined to give 'their people' new homes, as many and as fast as possible. In Northern Ireland, on the other hand, the new housing drive was masterminded by powerful civil servants.

In its comprehensive answer to these two fundamental questions – which take in, between them, the conception and the production of Modern housing – the book contributes significantly to the history of Modern architecture, as well as social policy and public administration. And the two massive gazetteers at the end, containing a statistical list of all public-authority high blocks in England, Scotland, Wales, and Northern Ireland and the Channel Islands, and a bibliography of architecturally noteworthy projects, provide a vast quarry of data for local and national historians.

Miles Glendinning: Born in London in 1956; studied at the universities of Cambridge, East Anglia and Edinburgh. Now teaching at the Department of Social Policy, University of Edinburgh, and working at RCAHMS. Currently researching the history of architecture and housing in Scotland. His tower block flat was condemned as a slum in 1979. Publications include: *Provincial Mixed Development* (as M. G. Horsey; with S. Muthesius); *Preservation – Dawn of the Living Dead; Tenements and Towers* (for RCAHMS).

Stefan Muthesius: Born in Berlin in 1939; studied at the universities of Marburg, Munich and London. Now teaches at the University of East Anglia, Norwich. Currently researching the history of architecture and design in England, Germany and Poland. His terraced house was condemned as a slum in 1945. Publications include *Victorian Architecture* (with Roger Dixon); *The English Terraced House* (also Yale University Press); *Art and Architecture in Poland* (forthcoming).

JACKET ILLUSTRATIONS

FRONT: *GLASGOW—SHOCK CITY OF THE HOUSING REVOLUTION.* The 31-storey Blocks 1 and 2 of the Red Road development seen under construction in 1965. Architect Sam Bunton proclaimed, 'Housing is no longer domestic architecture: it's public building'. (Sam Bunton Jnr.)

BACK: *A MUNICIPAL CRUSADE.* Official opening of Enfield LBC's 10,000th new postwar dwelling (131 Bounces Road, Edmonton), on 14 January 1967, by the Minister of Housing and Local Government, Anthony Greenwood. (London Borough of Enfield)

Printed in Hong Kong

ISBN 0-300-05444-0

9 780300 054446

YALE UNIVERSITY PRESS NEW HAVEN & LONDON

Inspection of models for the LCC Princes Way (Ackroydon) development, on 17 November 1950. From left to right: Cyril Walker (Director of Housing and Valuer), Reginald Stamp (the new, design-minded Housing Committee Chairman), and H. J. Whitfield Lewis (Principal Housing Architect). (Greater London Record Office)

TOWER BLOCK

Modern Public Housing in England, Scotland, Wales and Northern Ireland

Miles Glendinning and Stefan Muthesius

Published for
The Paul Mellon Centre for Studies in British Art
by
Yale University Press
New Haven and London

Acknowledgements

Special gratitude is owed to Michael Brandon-Jones (for help with the illustrations), to Eamonn Hynes and Tim Jilani, and to Mrs Sadie Gibson (for loan of papers relating to her late husband Cllr David Gibson).

We would also like to thank the following individuals and institutions: F. J. C. and L. Amos, N. Antonovics, Basildon District Council, J. Beckett, Belfast Newsletter Photo Librarian, J. and N. Benjamin, Birmingham City Town Council (Town Clerk), N. Bullock, S. Bunton Jnr, F. Bushel, N. Carroll, City of Aberdeen District Council Planning Department (G. Massie, J. Souter), Lady E. Denington, Department of the Environment (Mr Phillips and Mrs Martin), Department of the Environment for Northern Ireland (S. Stewart), *Dundee Courier* (Mr Spence), J. and E. Eastwick-Field, S. Fagan, A. J. Sheppard Fidler, I. Flett, A. Gilmour, I. T. Glendinning, K. Grasby, Greenwich LBC (Department of Administration), K. Grieb, A. Grieve, Mrs E. Gullick, N. Hambleton, N. Harris, A. Harvey, A., K., M. and S. Horsey, Jersey Local History Library, A. D. Johnson, J. Kernohan, Leeds City Council (Town Clerk), Linenhall Library (Belfast), Liverpool City Council (Building Control Department), E. H. M. Love, T. McCartney, Manchester City Council (Building Control Department), A. Massey, K. Murawska-Muthesius, M. Murawski, B. Muthesius, National Housing and Town Planning Association, Newcastle-upon-Tyne City Council (Building Control Department), J. A. Oliver, P. Rogan, A. Ross, B. Russell, Scottish Development Department (D. Hart), Scottish Record Office (West Register House), M. Shigler, J. Sjöström, T. Dan Smith, Cllr E. J. C. Smythe, B. Solman, States of Jersey Housing Department, G. P. Stell, S. Stewart, R. Stones, Strathclyde Regional Archive (R. Dell, A. Jackson, I. O'Brien), S. Turnbull, P. Turner, F. Wasoff, D. Watters, A. and A. Whitworth, F. A. Willis, G. Woodman, and to the *Architectural Review* and *Architectural Design* (Emap Business Publishing Ltd).

NOTE: Measurements in this book are imperial.
1 inch = 25.4 mm
1 foot = 0.3048 m
1 square foot = 0.0929 square m
1 acre = 0.4047 ha.

Copyright © the authors

Designed by John Trevitt
Set in Linotron Ehrhardt by Best-set Typesetter Ltd., Hong Kong
Printed in Hong Kong through World Print Ltd.

Library of Congress Cataloging-in-Publication Data

Glendinning, Miles, 1956–
Tower block: modern public housing in England, Scotland, Wales, and Northern Ireland / Miles Glendinning and Stefan Muthesius.
p. cm.
Includes bibliographical references and index.
ISBN 0-300-05444-0
1. Public housing—Great Britain. 2. High-rise apartment buildings—Great Britain. 3. Architecture, Modern—20th century—Great Britain. 4. Architecture and society—Great Britain.
I. Muthesius, Stefan. II. Title.
NA7540.G58 1993
728'.3140483'094109045—dc20 93-26962 CIP

Contents

Acknowledgements *page* viii

Introduction 1

Section I: Design 7

Part A: The Modern Dwelling: Plan, Fittings, Construction 9

1: The Search for the New: The Postwar Definition of Modern Architecture 9

2: Inside the Dwelling: Size, Plan, Fittings, Heating 14

3: Need and Fit: Type of Household and Type of Dwelling 22

4: The Case for Flats and Maisonettes 24

5: Mixed Development 29

6: Daylight and Densities: Zeilenbau and Open Space 35

7: Multi-Storey Architecture in the 1950s: Point Block versus Slab Block 53

8: Very High Blocks 61

9: Services Outside the Flat and Access 66

10: New Construction: Reinforced Concrete and Prefabrication 73

11: New Construction and Appearance. The Modern Public Authority Dwelling 90

Part B: 'Community Life': A Postwar Architectural Stimulus 94

12: A Welfare State Utopia 94

13: Town Planning: Communal Open Space and Housing Layout; The Neighbourhood Unit 97

14: The Sociology of Community: From Social Reform to Scepticism and Nostalgia 101

15: The Modern Architect in Public Housing: Publicity and Criticism; Theory 104

16: 'Solving, Architecturally, the Most Difficult of Social Problems' 110

17: New Socio-Architectural Catchwords: Space, Urban, Townscape, 'Prairie Towns', Urban Redevelopment 116

18: The Smithsons: Association and Communication; Team Ten 121

19: Infinite Possibilities of Design in the 1960s 132

Section II: Production 151

Part A: A Municipal Crusade: Modern Flats and the Defence of Housing Production in Britain 153

20: The Land Trap: Multi-Storey Flats Versus Overspill 157

21: Central Government, Local Government and Housing Production in the 1950s 174

22: Quantity or 'Quality'? Defeat of the Designers 183

23: Financing and Organising the 1960s Housing Drive 194

24: Package Dealers and Negotiators: Housing Production and the Building Boom 200

Part B: Scottish, English and Welsh Housing in the 1960s: National, Regional, Local Variations 218

25: 'Give the People Homes!' Scotland's Housing Blitzkrieg 220

26: The Curate's Egg: Provincial Initiatives in England and Wales 247

27: Break-up of an Empire: Reorganisation in London 265

Part C: Northern Ireland's Housing Revolution 285

28: The Pursuit of 'Parity' 286

29: The Great Leap Forward: Production in the 1960s 294

Section III: Breakdown 305

30: The Rejection of Modern Design 308

31: End of the Drive: The Collapse of 'Production' 312

32: 'New Slums': Management Problems and the Undermining of Production 319

33: Conclusion: 'Utopia' on Trial? 324

Appendix: High Flats in the Channel Islands 328

List of Interviewees 329

Statistical Tables 331

MAPS (showing administrative boundaries): Central Clydeside; Economic Planning Regions of England and Wales; West Midlands; South East Lancashire; West Yorkshire; Merseyside; Tyneside; Greater London 337

Gazetteer 1: Multi-Storey Developments Erected by Public Housing Authorities in the UK and Channel Islands since 1945 345

Gazetteer 2: A Selection of References to Public Housing in the UK from 'National' Periodicals, Chiefly Architectural, *c.*1945–1970 370

Notes 382

Abbreviations 406

Bibliography 408

Name Index 410

Subject Index 419

Introduction

The conditions in which many people lived remained shocking. In one sense they were more shocking than before because of changing ideas of what was adequate or decent. What had once been normal now seemed scandalous. Thus in Sunderland in the sixties nine out of ten families had no indoor lavatory.

P. Calvocoressi, 1978

Someone recently asked me what were the most urgent everyday issues that concerned Edinburgh folk 40 years ago, in 1952, the year the Queen came to the throne. I replied that there was only one real issue in the City at that time: bad housing. There was one particularly bad tenement in the Canongate I fought to get demolished. It was in a shocking state of dilapidation, and its services had been cut off by vandals, who had ripped out the piping. So the inhabitants, just to get their water, had to struggle with pails all the way down to the street, then right down to the foot of the Canongate, to the public toilets! The scandal was, that all this was going on with the Queen in residence at the Palace of Holyroodhouse, just a few yards away!

Pat Rogan, 1992

Blocks with lifts are throwing their towers into the skies. They will dominate the landscape for miles around. These flats, as far as planning goes, will equal, even surpass anything that has been built in Scotland for private ownership. They will be provided with lifts of a foolproof nature, all heat, light and hot water services from central sources, and in every way will probably be the finest house building achievement ever attempted . . . It will be interesting to see how such edifices will fare at the hands of the denizens of great industrial towns. Truly, democracy is still on trial.

J. Steel Maitland, 1952[1]

A HISTORICAL ACCOUNT of the vast and complex subject of public housing in England, Scotland, Wales and Northern Ireland must begin with a number of simplified facts and assessments. From the end of the First World War, the building of homes through public or non-profit-making agencies became seen as a necessity by professional and political groups. In this book on post-1945 Modern housing, we cannot describe in detail the collapse of the old system of privately built mass housing for rent, and the emergence of large-scale municipal housing from 1919. Almost all the small, speculatively built dwellings of the nineteenth century were now looked on as being in some degree deficient, structurally as well as in their planning and design, and many, if not most, were labelled 'slums'. It was taken for granted that vast sums of public money would have to be provided to rectify this situation. The new public housing was to be coordinated by 'national' agencies; it was to be planned, designed and built in an up-to-date manner under professional direction, in order to assure health and convenience, and also architectural quality. Over-arching values were formulated and constantly reiterated so as to provide a sense of mission: 'maximum output', 'standards' and, later on, 'Modernity' and 'community'.

After the Second World War, the new Welfare State, with its increased emphasis on comprehensive public provision of services, cast the 'housing problem' in an even worse light, despite all the building in the interwar years: a huge demand for new dwellings was now foreseen. Nobody could, of course, establish definitive figures for the number of houses to be built in each town or region. Certainly we cannot, in this book, attempt to assess the general constraints and calculations of demography, 'housing need' and housing economics during those decades. In fact, for some postwar housing reformers, the number of new homes needed appeared to be virtually limitless; they would not rest until they saw all nineteenth-century working-class, or even lower middle-class, dwellings replaced.

During the interwar years, over one million publicly built dwellings were provided—30% of all new dwellings. The period between 1945 and the end of 1969, however, saw the completion of over four million public dwellings, comprising 59% of total housing construction. This startlingly high percentage—for dwellings directly built, owned and let by State authorities—was hardly matched even in Eastern Europe. It must be noted, however, that these overall totals were rather unevenly distributed across the UK. Between the wars, public housing accounted for 28% of all new dwellings in England and Wales, only 15% in Northern Ireland, but as much as 67% in Scotland. The contrasts are even sharper when we compare some of the urban areas:

Glasgow, 71%, against Northern Ireland towns, a mere 6%. In the postwar period to 1969, public housing's share climbed markedly in England and Wales (51%), consolidated itself in Scotland (85%) and soared in Northern Ireland (64%).

A further striking characteristic of post–World War II public housing in the UK is its diversity of dwelling types. Almost two-thirds (that is, 64%—never less than 44% in England and Wales, or 35% in Scotland) of total public housing output in Britain between 1945 and 1979 comprised 'cottages', laid out in vast suburban developments much in the manner of the early twentieth-century type of garden suburb. About another 20% took the form of flats in three to five-storey blocks, a type which was chiefly used in inner urban slum-clearance areas, but also in outer suburban locations in Scotland (where it merely perpetuated pre-1914 patterns) and, after World War II, in England. And lastly, there were multi-storey dwellings: the new types of flats and maisonettes in blocks of six or more storeys. They form the chief subject of our account—for, although high blocks were never preeminent in overall statistical terms, only exceeding 20% of all approvals in England, Wales and Scotland in 1963–7, and, again, briefly in Scotland in 1970—there is no doubt that they, more than any other type, have come to epitomise the postwar 'Modern Dwelling' in the big cities of the UK.

These Modern blocks of flats, prominent as they appear still today, were not just built as a straightforward response to a simply stated need, at minimum expense. They formed part of that extraordinary collective drive for 'Modernisation' during and after World War II. In these years, there was an urge to reconstruct, a pressure whose urgency derived not just from wartime destruction but also from a widespread conviction that the old fabric of towns was rotten in any case. The new housing was to be based on a greatly expanded science of habitation, which ranged from the technical to the socio-psychological. Among reformers and politicians, the early postwar years were a time of shared beliefs whose strength is now difficult to appreciate—beliefs in the reconstruction of the physical fabric as well as in a whole range of socio-political values. Public housing was to be an important instrument in this fundamental and comprehensive reform. Never before or since has new public housing appeared so prominent as it did with the Modern blocks of flats of those decades. The chief aim of this book is to try to recreate some of the urgency and immediacy of this great adventure, whether by investigating the various fields of intellectual speculation and scientific enquiry which supported it, or by narrating key examples of the innumerable episodes in which the building of Modern blocks was actually decided and 'pushed through'.

All histories of building and architecture ask the same basic questions. These questions fall into two broad categories. The first group comprises questions concerned with the conception, design and construction of buildings—the subject of this book. Who was the client? What was the building intended for—or, in other words, how did the client, and those who helped in the process of planning and design, perceive the purpose of the building? Which forms were preferred, and which values were the forms meant to express? How were the detailed elements of plan and construction arrived at? Who precisely did what, among clients, designers and builders? What were the particular processes by which the individual project was financed, organised and built? The second group of questions, by contrast, concerns the subsequent history of buildings, after their completion—a question to which we shall return at the end of this Introduction.

THE PROVISION OF PUBLIC HOUSING

A general rule can be applied to the provision and planning of buildings: the larger the project, the more important and powerful the client. The basic framework of public housing was, first of all, set by the central State: laws were passed by Parliament, financial assistance was provided from the Exchequer, and advice, even rules concerning planning and construction, were promulgated by the Government departments responsible for housing in the various constituent parts of the UK. But the actual organisation and the building—to a degree unparalleled in Western Europe—was undertaken by municipal authorities; after World War II the Scottish Special Housing Association and the Northern Ireland Housing Trust also played a major role. Much of this basic pattern of patronage had been established, at least in Britain, since 1919, and we take it largely for granted in this book.

Taken altogether, the providers and 'agents' of public housing formed a very varied group. At first, not all of them were actually publicly employed. For instance, there were those who, from the late nineteenth century onwards, called themselves 'housing reformers'. They wrote and otherwise proselytised the values associated with public housing in charitable and social organisations or professional societies, and were at times consulted and employed by the Government. Elizabeth Denby was such a 'sociologist and specialist in low cost housing'—to all intents and purposes a 'private individual' who tirelessly propagated the cause of Modern urban flats and helped promote particular projects during the late 1930s (notably Kensal House). After the war, by contrast, charity was mostly succeeded by a new kind of professionalism. Now a more typical career was that of A. W. Cleeve Barr, a prominent architect involved in devising innovations in building technology and organisation, and throughout his activities employed directly or indirectly by central or municipal government. There was also another new profession, that of town planner; almost all its members occupied public posts. Town planning concerns frequently interacted with those of architects, who also found public employment increasingly attractive—although many important public housing commissions were won in open competitions by architects in private practice. Finally, there were the contractors and builders, and building suppliers, virtually all belonging to private enterprise, although many local authorities built some blocks with the help of their own direct labour forces.

Among this variety of 'agents' there were, however, two groups which exerted the greatest influence in the process of creation and large-scale building of multi-storey blocks and other large agglomerations of Modern public housing: firstly, the designers; and, secondly, those whom we call the 'producers', the councillors and supporting officials who provided

the political and organisational impetus behind large-scale production. The two major sections of this book, Sections I and II, are, in effect, devoted respectively to the activities of these two groups.

Postwar architects and designers, it has been claimed by recent historians, were able to direct the course of innovation in everyday life to a degree not dreamt of by their forebears in the profession. Certainly, in no other period of housing design in Britain do we witness such radical changes in the physical form of dwellings. It was essentially the newly appointed housing designers in the London County Council (LCC) who, from 1950 onwards, devised and helped to push through the pioneering public authority exemplars of high blocks, novel in their conception of use, in their construction and in their architectural form. The Modern designers of the LCC, such as the Principal Housing Architect, J. Whitfield Lewis, were, one might say, backed by the force of the Modern Movement, or, more literally speaking, by those mouthpieces of Modern architecture, the *Architectural Review* and the *Architects' Journal*. As one would expect, our account of these designers' theories and intentions, contained in Section I, is largely derived from this kind of publication. Another vital element in the initial successes of the LCC designers, and thus in the introduction of Modern flats to public housing in the UK, was the receptivity of powerful LCC councillors such as Evelyn Denington to 'progressive' design ideals. As a result, the LCC architects were in the remarkable position of enjoying both professional power and political backing. These agencies and agents, although based in London and largely preoccupied with specifically English concerns, enjoyed 'national' status among designers in all parts of Britain, and their values were treated as, by definition, 'national' values of 'British' design.

In Section II, however, we shall see that a very different balance of influence began to emerge outside London, once the main design formulas of Modern blocks had been worked out and their numerous technical problems appeared to have been solved. From this point, the focus of power in public housing moved to the other group: to the local politicians within the big cities of Scotland and the English provinces. The values and concerns of these 'producers' appeared quite different from those of the designers: above all, they were preoccupied with the local-political imperative of housing, or rehousing, as many as possible of 'their' own fellow citizens within their municipal boundaries. Accordingly, what mattered more than anything else, in their housing policies, was to construct the greatest number of new dwellings. The massed building of multi-storey blocks on the outskirts of Glasgow in the mid-1960s, for instance, would have been unthinkable without the forceful campaigning work of Councillor and Housing Committee Convener David Gibson; his main task and skill was a kind of impresario-like activity, constantly arguing, persuading, organising.

In this great task of 'output', certain local authority officers also played a vital role. But here, in contrast to the LCC, with its all-powerful designers, the role of the local authority technical specialists, engineers or architects, such as Cross in Glasgow or Maudsley in Birmingham, was chiefly organisational—to assist the councillors by negotiating and monitoring sites and programmes. It was also frequently their duty to cajole the contractors into offering large 'package deal' contracts for high blocks. In such cases, it was those contractors who also undertook the detailed design of the blocks. The engineer Lewis Cross, Glasgow's powerful 'Housing Progress Officer', incessantly reminded the firms: 'You are the designers!'[2] In this way, municipal architects and engineers were free to pursue their organisational work, in ensuring that the 'housing drive' proceeded at a maximum rate.

We shall see that, by contrast, the LCC architects pursued design for its own sake, rather than output, and were able to prevent the 'package dealers' from gaining a foothold in the Council's programme. Unlike the London designers, the officials in other cities did not have the 'national' mouthpieces of architectural journals at their disposal. Although in many respects the multi-storey blocks built by authorities such as Glasgow or Salford in the 1960s were physically similar to those introduced by the LCC designers in the 1950s, the two groups of officers and councillors, defined within the 'British' framework as 'national' (i.e., in London) and 'provincial', existed almost in two different worlds. In contrast to the first Section, therefore, the sources for Section II are almost entirely contained in unpublished municipal reports or derived from interviews with a very large number of contemporary participants. This also accounts for the rather different language used in Sections I and II: polished architectural journalism on the one hand, and 'down to earth' comments by the municipal 'actors' on the other. This discrepancy between 'national' and 'provincial' was especially important in the case of Scotland, whose own national architectural tradition had been partly decapitated by the proliferation of 'British' professional and opinion-forming agencies in London since the mid-nineteenth century. As a result, the country's incipient counter-tendencies to the 'mainstream British Modern' evolving in London emerged in a somewhat inchoate, yet none the less powerful, form.

In contrast to some recent historical accounts of the mass-production of public housing, our book argues that it is only when one traces the national constraints within the various components of the UK, as well as the particular circumstances of key municipalities, that one can understand the timing and the quantitative impact of decisions which led to large-scale Modern housebuilding across the union. But why, it may be asked, if Scots and English housing policy and architecture are dealt with at such length, and Northern Ireland separately treated in Part C of Section II, why is Wales hardly mentioned specifically in this account, other than as the tail-end of that collective administrative concept, 'England and Wales'? There are three reasons for this. Firstly, the many centuries of English domination in Wales left the two countries with a common Government administration (up to 1964), a common municipal structure, and common legislation. Secondly, the Welsh nation's cultural identity has been traditionally held, not least by nationalist commentators, to reside chiefly in the spoken word rather than in three-dimensional objects. Last, and not least, very few high flats were built in Wales. A similar building pattern applied in Northern Ireland—another essentially rural

society—but within a highly distinctive political and administrative context. As we shall see in due course, municipal housebuilding zeal was largely absent in the Province: it was the Stormont Government's civil servants who exerted the greatest influence.

To explain, as in the books by Dunleavy and Finnimore, the multi-storey 'boom' in various localities primarily as a result of the centralised or 'structural' pressure exerted by, say, building contractors is an interpretation which seems to us not only misleading, but untenable in the face of the plentiful evidence of forceful local authority initiatives.[3] In our pattern of explanation, we emphasise the cumulative effect of the non-orchestrated and diverse decisions of powerful local 'actors'. Even among those urban areas characterised generally by large-scale output, there were strong divergences over the building of Modern housing. In Greater London, for instance, multi-storey flats comprised about a quarter of total new council dwellings in the first three postwar decades, and about half of output in the mid and late 1960s, but in Glasgow from 1961 to 1968, they accounted for a staggering 75% of all new public housing.

The first two sections of this book are built on the notion of a broad postwar consensus among housing 'providers', concerning the large-scale building of Modern dwellings. But this interpretation must be qualified at the outset: for there never was, nor ever could be, complete accordance about all aspects of housing. Disputes and divergences were present throughout our period, until they burst right into the open in Section III. At times, even the two chief 'providers' of public housing in Britain, the central State and the municipalities, were at odds, because the former had endorsed region-wide plans drawn up by town and country planners, which proposed the resettlement of a high proportion of the major cities' populations outside their boundaries. From the mid-1950s, on the other hand, the central State directly supported inner urban housing, by encouraging slum-clearance and by providing (under intense pressure from the cities) special subsidies for multi-storey blocks. Yet this did not push out the municipalities from the driving seat: it only reinforced their independence. But as already stated, the opposite applied to Northern Ireland: a strong Government and a strong national housing agency (the Northern Ireland Housing Trust) faced by weak or reluctant local administrations.

Divergencies of interest were bound to arise from the natural division of tasks; no single 'agent' could concern himself or herself with all the factors that went into the building of a major development, especially at times when things had to move rapidly. To devise a new joint between large prefabricated panels is a task that is far removed from the calculation of statistics concerning households and their varying dwelling needs, or from the aesthetic–formal concerns of the architect, let alone from discussions of socio-psychological factors. It could be argued that conflicts were inevitable: as each profession strove to contribute to the reforms as a whole, its fervour also led it to stress its own expertise and to distrust others. Town planners, sociologists and architects, who worked closely together in the immediate postwar years, soon began to part company. In Section II, we shall trace one particularly sharp divergence during the period of greatest output in the 1960s. At that time, the 'production-orientated' councillors, and some of their chief supporters among the local authority officers, began to find themselves at odds with the 'design-orientated' views of many architects and planners; for the latter seemed to place unnecessary complications and obstacles in the way of what the multi-storey 'crusaders' considered to be their main aim: output.

The more specifically architectural concern for form, and the socio-psychological understanding of the effects of various forms, are the areas in which there occurred the most rapid and violent fluctuations of opinion. In fact, one can say that town planning and architectural preferences completely reversed between the late forties and the late sixties. In the forties, cottages or tenements lining traditional streets were condemned, while high blocks set in open space were praised; by the late sixties and early seventies, a rejection of high blocks and public open space had set in, and there was a renewed liking for 'traditional' rows of housing along ordinary streets. The 'national British' story of the 'point block' began essentially at Roehampton, where it was devised by LCC architects in the early fifties largely for reasons of 'design', and more particularly because of its Modernity and its suitability as an accent within a 'Mixed Development', placed in an existing park. The London 'national' professional journals gave their utmost support. The later fifties saw further development of the constructional possibilities of high blocks. Then, from the early sixties, some of the 'housing crusaders' in Glasgow, Dundee, Liverpool and elsewhere chose to employ precisely this late-fifties type of high block for their own purposes of output and the 'eradication of the slums'. These late 'producers' did not appear to notice, and probably would not have cared had they noticed, that architectural and sociological opinion in distant London, that the 'national British' journals, had begun to reject precisely this type of dwelling, and were even busy revaluing the hated slums! The dichotomy between 'design' and 'production' was, by now, so entrenched that it would soon assist, even, in the collapse of the whole movement of public housing.

But, of course, historians of specifically *English* housing are used to the analysis of rapid changes in housing preference. In the nineteenth century, for instance, some of the prestigious-looking large terraces in Paddington were already, upon completion, subdivided into small flats for tenants of a social status far below that suggested by their external appearance. The reason for this was that the 'better classes', in England and Wales, were at that time in the process of changing their preference from terrace to detached or semi-detached. In the later nineteenth century the bungalow began as an upper middle-class type but rapidly travelled down the social ladder: within about fifty years it was the object of nothing but scorn on the part of the design and planning establishment. No other major country seems to show such volatility in its debates about types of housing.

Can the turbulent story of preferences in public housing also be understood in these terms, as a perpetuation of the English pattern of fluctuating taste in housing types—together with an unsuccessful attempt to extend this pattern to Scotland? Certainly, the building of flats in England was always seen as a somewhat unusual matter, and a cause for

debate. Flats were first introduced there in mid-nineteenth-century London, both as high-class and low-class dwellings. During the following century, however, they were built conspicuously and almost exclusively for the latter classes, and acquired in the process a rather negative image; now, in the early 1990s, we have seen a revival of positive interest among housing managers and other professional groups. Has the violence of these fluctuations something to do with the fact that, in organisational terms, the UK stands at one extreme of housing provision within the 'Western' world—as its twentieth-century low-rent housing has almost all been built and managed by State and municipal agencies, whereas most other 'developed' countries, outside the former Eastern bloc, have relied more on State subsidies to a variety of cooperative and private companies? Such an interpretation is not supported by the fact that Scotland has built a far higher percentage of public housing than England, and yet has often not endorsed the latter's many fluctuations and polarisations in housing fashion (for instance, the opposition between 'Hard' and 'Soft' factions in the 1950s).

Across the world, reactions to the flat, as such, vary greatly. In Southern Europe, Latin America and the Far East, it appears that flats of whatever kind are still 'Modern', and are accepted unquestioningly as normal urban housing for all income groups. In North America, middle or upper-income apartments in inner cities have gained wide popularity, but the utilitarian tenement blocks or 'project' housing for the poor have also left the flat with an enduring stigma of 'expediency'. In some Northern European countries, including France, recent affluence and mobility has coincided with some decline in the tradition of both inner urban life and apartment blocks. It was Scandinavia where, in the opinion of many, there seemed the most convincing combination of the flat, Modernity, and low-cost provision: and it was those countries that postwar designers in Britain most sought to emulate. But in contrast to Britain, Scandinavia as a whole has never ceased to have a strong and uncontentious flat tradition. Even in Scotland, whose tradition of monumental housing architecture, unexceptional in European terms, has long been branded an 'aberration' within the 'British' context, the building of urban flats was discouraged for a time, during the early and mid-twentieth century, by the challenges of English critics and reformers.

PUBLIC HOUSING IN USE

All this brings us, finally, to the history of the actual use of our blocks. There are three major aspects to this: firstly, the physical functioning of the fabric and all its fittings; secondly, in the case of large complexes of buildings, the history of allocation, administration and maintenance; and, thirdly, the judgements of the users in the years after completion. However, as already stated, our account only deals with the provision of Modern housing up to the point when dwellings were completed. None of the further stages in their history can be discussed at any length in this book. This means that our concept of the user is largely that envisaged by the providers, which might be considered as something of an abstraction. A few general reflections should be offered at this point.

In the matter of building quality, there can be little in the way of academic argument: either the lavatory flush works or it does not. Much more difficult would be the investigation of more innovative or complex fittings, such as Modern heating equipment; assessment of these might have to take account of the interaction of numerous practical difficulties, and, at times, a failure to use the equipment in precisely the way intended by the 'providers'. Modern dwellings incorporated an unusual number of innovations, whose precise performance was, at least initially, hard to predict. In attempting a history of physical problems, such as condensation, in Modern flats, a very detailed study would first of all be needed to determine the precise proportion of truly 'bad' estates. This would then have to be set into a wider context of the history of innovation in building, and of different kinds of expectations among various groups, as well as the precise history of the flats' use as well as of letting policies and management—in relation, of course, to anticipated and actual maintenance costs.

The second area of possible 'complaints' concerns that which goes beyond the material–practical and which comes under a variety of headings: socio-political concerns (for instance the labelling of dwellings as 'middle-class' or 'working-class'), socio-psychological concerns including those of gender-specificity, and architectural ones (in the narrower, aesthetic sense of the term). Of course, the boundaries between these areas and the 'practical' and 'socio-architectural' are always shifting. In the case of postwar Modern public housing, the apparently widespread tenant satisfaction at first greatly enlarged the assumed scope of the 'practical': Modern flats seemed such a strong contrast with the old housing which was the daily setting for most people's lives, both as an image and in purely practical terms. For people leaving what everybody saw as grimy and primitive old houses, and moving into light, Modern dwellings, plentifully equipped with the fittings which they had mostly not experienced but had long been conditioned to desire, there could at first have seemed little to complain about. Everything was so new—from the viewpoint of users as well as of providers. Well beyond 1960, councillors were faced with their constituents queuing outside their houses or in their 'surgeries' with pleas for urgent rehousing into such new dwellings.

However, what makes the story of the 'reception' of Modern housing so immensely complicated and controversial is not so much the complex debates of the time, but the criticism which developed afterwards. In the decades before the 1960s, the attitudes of both Capitalism and Socialism towards the lower strata of consumers were largely in unison. Capitalism prided itself in supplying more and more material goods at prices the lower classes could afford; Socialism strove to subsidise a number of key 'services', of which housing was one of the most important. Both Capitalism and Socialism assumed that the lower-class recipients of such provision had every reason to be satisfied. Hence the unity of State and commercial provision, of municipal clients and private-enterprise builders, up to, and including, the 1960s 'systems building' boom.

From the later 1960s onwards, a new generation of professional and political commentators on housing began to reject those notions of 'provision', in design as well as production, as simplistic, patronising or downright dictatorial. 'Consumers' of all classes were now deemed to demand not just greater provision, but greater choice. State provision could be criticised as inherently rigid. The new watchwords were 'user flexibility' and 'participation' (which we shall discuss briefly in Chapter 30). This also coincided with a renewed stress on socio-psychological considerations, which many commentators held to be more important than the 'mere' provision of physical services; and was often accompanied by new ways of discussing architectural forms and imagery. Of course, these new ideas only gained credibility because so much new housing now existed: so many more people had become used to the technological innovations of Modern housing, and now took them for granted. In some recent Hegelian and Post-Structuralist theories concerning the relationship of production and consumption, there is an even greater emphasis on the 'contribution' of consumers, or, better, the 'appropriation' of objects by their consumers: the acquisition of an object, first of all leads to alienation, which must then be overcome through active appropriation.[4] At any rate, the history and sociology of housing, over the past twenty or thirty years, has produced a host of studies of the users of all types of dwellings.[5]

In our context, that of the history of housing up to about the mid-1960s, we see no need to enter into the details of the history of use, nor the lengthy discussions on the dialectics of housing provision and consumption. One can distinguish between two simple kinds of such relationships: firstly, the user handles the object in precisely the way that was intended by the providers; secondly, the user modifies the object during use. For the purposes of our account, it suffices to state that the Modern dwelling was conceived, and was understood at the time to have been conceived, for the former kind of 'passive' user. In the theory of Modernity, particularly within the concept of Functionalism, design was meant to envisage, to take care of, all possible functions or practical uses of the object. Equally clearly, one can state that the concept of user primacy or participation, which has enjoyed dominance over the past twenty years, belongs to the second kind of provision–consumption relationship. The user who departs from what he or she is 'meant' to do is entering a different realm, and takes on some of the attributes of the designer, or even the 'provider'. We must, however, remind ourselves at this point that, even today, few DIY enthusiasts would dare to interfere with many technical elements that occur in any house, for instance attempt to manufacture the components of an electric power point or make a bath tub. As the electric socket and the big white fixed bath tub were among the chief new elements in the Modern dwellings of thirty years ago, it is perhaps understandable that less emphasis was given then to the idea of individualism in dwelling use.

Design, production and use form part of a broader network of sociological and political notions of the production and the consumption of housing.[6] Their constant circularity is illustrated by the fact that the theory of 'user flexibility' and tenant 'participation' does not seem to have originated primarily with any specific group of users or tenants, but was first propagated by groups of 'providers', notably designers and journalists. What we really witness from the 1960s onwards is a new consensus between some providers and some users, directed, by both, against the previous groups of providers: the architects who devised the forms of Modern housing, and the councillor 'housing crusaders' who pushed through their large-scale construction and letting in all urban parts of Britain. It is these 'agents' with whom this book is concerned; we shall come back briefly to the post-event criticism of Modern housing in Section III.

SECTION I: DESIGN

Modern and Future Homes

In South America a new city, Brasilia, is being built as the capital of Brazil. It is a concrete city and so uses the latest way of building.

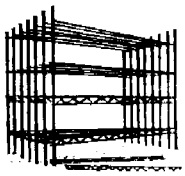
First, steel girders are used to make the framework of a building. They carry the weight. Then the floors and walls are added. Often the windows are large, and the rest of the wall-space is filled by pouring wet concrete into moulds over iron bars which help to make it stronger. The concrete sets hard, and solid walls or floors can be made quickly. A flat roof, also made of concrete, completes the building.

Small houses of steel and concrete can be made in parts in the factory. These pre-fabricated houses are then taken to a site and very quickly put up. New light materials, such as aluminium, asbestos and plastic, are also used in building today.

Two modern ways of building in Britain:

a pre-fabricated house

the steel framework of a block of flats

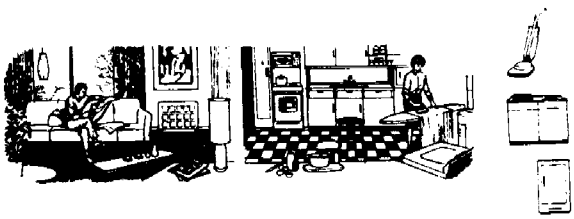


Brasilia is not only a concrete city, but also a planned city. When a new town is built today, factories, schools, churches and houses are all planned at the same time. The planners give the houses rooms which are light and have pleasant views. Most houses have a small garden, and flats often have an open lawn around them with trees.

At night, the rooms are well lit by electricity. Even lonely farms have electricity brought to them by power-lines.

Houses are much more comfortable to live in today. Many have central heating which means that every room is warm, and all the family need no longer sit around a fire in one room. Gas, electricity and oil are used for heating as well as coal. Towns have less smoke, and houses are much cleaner.

Many families can enjoy themselves in their homes by watching television or listening to the radio. New materials and modern furniture make the home a far more comfortable place than our ancestors could imagine.



Perhaps the kitchen has changed more than any other room in the home. It has walls and surfaces that can easily be wiped clean. From America have come many gadgets to help housewives.

Instead of on an open fire, cooking is now done on modern gas or electric stoves. Pressure cookers can make very quick meals. Most houses have running water provided, so that the housewife turns on a tap and has hot or cold water in the sink in the kitchen.

It is easy with an electric vacuum cleaner to clean furniture and carpets. The dust is sucked up by the cleaner, and carpets no longer have to be hung on a clothes line and beaten by hand.

Many washing-machines are automatic. The clothes are put in and left to wash themselves. The machine switches off when the work is finished.

The refrigerator keeps food fresh for long periods and saves the housewife frequent journeys to the shops.

Questions

1. What are the new ways of building today?
2. Why is your home cleaner today than it would have been a hundred years ago?
3. Write a few sentences about your kitchen at home.

1.1. Pages from Evelyn E. Cowie, *Living Through History*, Vol. 1: *Homes*, written for secondary schools in 1967. A summary of some of the aspirations of the 'Modern Dwelling'.

Part A
The Modern Dwelling: Plan, Fittings, Construction

CHAPTER 1

The Search for the New: The Postwar Definition of Modern Architecture

For those who have been used to living in much older property, or in shared accommodation—the chief joy of a post-war house or flat is the bathroom and the kitchen.

A. W. Cleeve Barr, 1958[1]

The application of scientific principles to the home will do much to lay the foundation of a better scheme of things; . . . our modern appliances . . . should transform *taedium vitae* into *joie de vivre.*

G. & E. G. McAllister, 1945[2]

It is light and open space that really matter to people.

Marianne Walter, 1947[3]

THE HOMES OF the postwar years were to be homes of a new kind. Today, in the 1990s, when we build dwellings, whether terraced, detached or as blocks of flats, they do not normally differ substantially from those of the past. New elements may be found inside, or hidden within the construction, but they are not usually meant to influence the look of the outside—which might even be consciously modelled on a specific style of the past. The postwar Modern dwelling had to be, and look, radically different, inside and out. For many, 'Modern' meant a new type of dwelling altogether, the multi-storey flat, making use of completely new methods of construction. There was a host of new fittings: above all large windows, a separate bathroom and a kitchen with built-in cupboards, electrical sockets in all the bedrooms and more.[4] Naturally, the precise course of history of the postwar Modern dwelling was not quite as straightforward as the above pronouncements by housing reformers make it appear. Bathrooms had, in fact, been made compulsory in new council dwellings during the thirties, while in the fifties we witness a new, exceptionally Modern kind of internal bathroom—in high blocks of flats—which was artificially lit and ventilated, and which went somewhat against the trend towards daylight and openness referred to by Marianne Walter. But, on the whole, there was no doubt as to the pressure for new technologies, and for open display of the New both inside and out.

At the outset of our study one might, however, expect a more thorough definition of Modernity. To the Moderns themselves, at least to the core group of International Modern designers, such as Walter Gropius [1.2], this would have provided no problem: everything seemed eminently clear and simple, in contrast to what was seen as the confusion of nineteenth-century architecture. 'Modern' meant something rational, logical, pure, universal or, at least, international. Most writers claimed that *all* elements of architecture could be explained in relation to construction and 'function', hence the coining of the term 'Functionalism' as a comprehensive characterisation of the movement. 'The New Architecture is functional: that is, it is developed out of the accurate setting forth of practical demands.'[5] Recent, 'Post-Modern' critics and theorists, such as Manfredo Tafuri or Kenneth Frampton, have, however, done their utmost to break up this simplicity; today's writings on Modernism usually stress paradox and contradiction. Moreover, virtually all the values of Modern architecture are now either condemned outright, or said to have led in the wrong directions: Utopia to dystopia, straightforwardness to banality, and practical–material concerns to commercialised consumerism.[6] In addition, the architectural 'New Right', under Roger Scruton and David Watkin, upholds a more traditional, or Romantic aesthetic of creativity. We shall deal with some aspects of the Late

1.2. 'The Master and his Disciples.' In 1956, Walter Gropius received the RIBA Gold Medal. Listening to this major German-American originator of International Modern architecture and of new types of dwellings (see ill. 6.7), from left to right: Nikolaus Pevsner, author of *Pioneers of Modern Design, From Morris to Gropius*, first published in 1936; Leslie Martin, Architect of the LCC, involved in the design of many housing developments; J. M. Richards, one of the editors of the *Architectural Review* (see ill. 15.1); and (far right) Maxwell Fry, who had worked with Gropius in England in the mid-thirties, after the latter had fled Nazi Germany. (*AJ* 19-4-1956, pp. 372–3)

Modern and Post-Modern critiques of Modernism at the end of the book. However, it would be futile to claim that our analysis of Modern design throughout the book could avoid completely the influence of recent notions and values. Present-day discussions of technological factors or innovations, in particular, are inevitably influenced by the very fact that we no longer pursue unrestrained exploitation of precisely those technologies. Thus, any attempt at a clear and simple definition of Modernity in architecture today would appear a thankless task. What is certain is that 'Modern' is a movement of the past, and that many of its values have changed or vanished. We use the capital *M* throughout to emphasise the designation of the movement as history—we cannot say what is, or ought to be, 'modern', or 'contemporary', in any other sense.

The problem of a comprehensive theory or definition of all architecture, or of any particular phase, is a very old one and is, all the Moderns' statements notwithstanding, as difficult in their case as it is for any other period. Alongside any purely practical attributes claimed for them, buildings can serve many other purposes, and a diversity of values can be attached to them, notably those called aesthetic or cultural in the wider sense. But the actual subject of this book is not Modern architecture in general but one specific type of Modern building. Our analysis should serve primarily as an explanation of this one type, and in most parts of the account we will try to keep theory and the problematisation of architectural definitions at bay. An analysis of any particular type of building should begin with its primary raison d'être and the ways in which it is planned and constructed—which in the case of the dwelling concern first and foremost 'practical', matters of physical, material use. And yet, any statement of this kind immediately begs again the question of the general definition of architecture: to assign priority to the 'material use' implies judgements about the other components of architecture. There is a circularity in the analysis of any type of building, from which one can never escape.

The division of architecture into practical use, construction and aesthetics was first formulated by Vitruvius, in his three headings: *utilitas*, *soliditas*, *uenustas*. There is little doubt that this old triad still applies to much of both Modern and Post-Modern design theory—whether one's definition of *uenustas* tends towards formal–visual values or towards various kinds of cultural–social 'contexts'. The chief problems arise from the different kinds of links between *uenustas*, between art, culture or politics, on the one hand, and the material–technical definitions, on the other. It seems that there were always links, and that these links kept changing; at any rate, our perceptions of the links seem to grow ever more complicated, and it simply appears impossible for us, in our historical analysis, to make a straightforward use of the Modernists' simplified 'functionalist' definition.

Yet, surely the basic values in this notion of progress in the realm of the material–functional (in the case of house-building the provision of comfort within the bounds of economy) do not change over time. This was, indeed, the way that the propagators of the Modern Movement saw it. 'Progress' appeared uni-directional, and the designer's task was to devise new technologies in order to increase comfort; historical diversity in design was a consideration that belonged to the nineteenth century. Yet, by the seventies and eighties, many designers did change their views about some of even the most basic 'functional' values of Modernism. Moreover, we now witness a more sceptical attitude towards the 'New' altogether. This allows us now to adopt a historical perspective to the thinking of functionalist' designers: much Modern design combined the thinking of generally Fordist economics with that of Classical science. Taylorism, a concept first developed to rationalise factory production, was, from the early decades of this century, also applied to domestic design.

In the close analyses of material factors undertaken by the Modernists we witness a tendency to subdivide and separate functions minutely, followed by a belief that close-fitting forms can be devised to help fulfil all functions—a thinking that can be characterised by the catchphrase 'need-fit'.

More specific values which governed much of Modern design in housing came from the health movement, which chiefly manifested itself in the demand for cleanliness and orderliness, and which also demanded the provision of as much air and, especially, daylight as possible. All of these values were held to be unassailable, scientifically and morally, as well as economically. As in the case of the 'social housing' argument itself, they originated in the nineteenth century; Modernity in the twentieth century was held to have achieved the ultimate scientific and technological realisation of these aims for all. There was a belief in the maximal as well as in the minimal. Maximum height and maximum daylight or sunlight were demanded inside the dwelling; at the same time there was the search for maximal methods of heating. There was a general drive for maximum technology—today 'environmental technology' seems more a matter of fine-tuning. The 'kitchen for the *Existenzminimum*' was a favourite minimal design concept of the thirties and forties.[7] The logic of the maximal, or minimal, was, furthermore, linked with the notion of 'standards': 'Our standard needs'; 'our logical thinking about needs'.[8] Once such maximal/minimal standards had been determined, they could, and, indeed, should, be infinitely repeated. 'Standardisation' appeared to make sense in economic terms as 'mass production', which, in turn, appeared an essential help in securing the newly determined standards 'for all'. A classic example of this type of thinking and planning was the 'Zeilenbau' formation, the arrangement of blocks of flats in parallel rows, guaranteeing, apparently at minimal cost, maximum, and equal, amounts of sunshine for all.

'Functionalism' referred not only to use, but also to construction. Here, the demand for standardisation and for the minimal/optimal had always existed under the simple diktat of saving expenses. Ironically, the fifties and sixties showed an unprecedented variety of materials employed in housing construction—especially if comparisons are drawn with the previous period of universal stone building in Scotland, and brick and timber building in England. On the other hand, both steelwork and reinforced concrete did then adhere to the same basic principle, namely framework construction. One of the most striking features of standardisation in frame construction was the way the standardised parts supporting a high building did not have to be thicker at the bottom—a natural feature in traditional building [10.2]. As regards the relation between construction and function, theories diverged, from the standardised-construction Rationalists, such as Mies van der Rohe, who believed in the building of universal regular frameworks to be adapted for any kind of use, to the 'Organicists' under Hugo Häring and Alvar Aalto, who advocated the greatest individualisation of plan and construction from the outset. In the sixties, frameworks became thinner and services more complicated: the 'construction–function' relationship was redefined as 'environmental control', and flexibility now seemed the essence of all Functionalism. On the other hand, we witness, at the same time, a return to solid walling of the most inflexible appearance.

One may thus hesitate to call the material concerns of Modern architecture 'purely practical'. Looking back from the seventies and eighties, when 'practical' acquired implications of pragmatic, even 'ad hoc', and a prefence for individualistic solutions, the 'practical' of the Moderns appears, by contrast, centred around a set of strong, universal axioms. Recent critics have thus recommended the use of the term 'rationalism' rather than 'functionalism' for the characterisation of Modern design. In that light, Modern design could be seen as something highly theoretical rather than practical. In our accounts of planning and building technology, we shall vary between a simple description of some innovations, without questioning further their historical basis in science and technology, and a more analytical examination of those new design and planning techniques and their underlying values which are particularly relevant for our main topic, the new types of flats.

But whatever the specific definition of Vitruvian *utilitas* and *soliditas* for Modern design, we have already come to the point where we have to go beyond the material–practical. As already stated, all architectural theories from Vitruvius onwards have attempted to link the practical with aesthetics, or art. What those latter terms mean in our context is chiefly the judgement of the appearance of a building for its own sake. But we have also referred to the circularity in all explanations of Modern design—the way in which Vitruvius's three criteria reinforce one another. The Moderns—taking the term 'Modern' in its widest sense, from the eighteenth century to the 1960s—attempted to ennoble the mundane or practical with a theory and architectural aesthetic *of* the practical, under such headings as Functionalism or Rationalism, although very often this consisted in simply declaring the practical, especially new technology, *as* the artistically valid. Today we are inclined to think in much more complicated terms about these relationships and we shall discuss aspects of the problem more fully in later chapters. We do not believe that any one of these factors can be isolated, let alone be found to be the sole or the initial motivating force within a uni-directional logic. What needs to be remembered first of all is that most kinds of Modern design—however much they were rooted, or held to be rooted, in everyday practical matters—were also subsumed under a term taken from the world of high art: style. Modern design can be termed 'Modern Style', or rather, from the 1920s, the International Modern Style of art, architecture and design.

The close association of art with the practical and 'social', or socio-political, in turn, held two major implications. Firstly, designers of the intellectual avant-garde art were now more ready to take up the designing of low-cost housing and products—although it is hard to find precise parallels in the UK to that typical Modern phenomenon, the avant-garde artist-cum-prophet of social betterment, such as Gropius or Le Corbusier. Secondly, the better classes began to make use of Modern design for their own environment—if they had any ambition to 'move with the times'. Modern Design was not just about science, or political and social conscience, but something that was also appreciated aesthetically. In the

narrower sense of the 'aesthetic', this meant that the forms and the colours of the major examples of Modern design seemed as valuable and as enjoyable, even 'elegant', as those of the most praised of the older styles. Most accounts of Modern architecture were duly prefaced with a short history, in which Modernism appeared as the logical conclusion.

The most cherished general Modern visual quality was lightness, both in the sense of increased light inside and in lightness of construction; the chief preferred form in the thirties and forties was the continuous white surface. A popular characterisation was 'simplicity'; this was nothing new as such, in that pure geometrical forms had always been one of the ideals of design. But for theorists of Modern product design, such as Herbert Read, a geometrical form, a smooth surface and regularity in general were, in turn, seen as the results of practicality as well as optimised production methods. In architecture, regularity and the demands for standardisation led to a new stress on repetition, a linear kind of repetition, one without the need for accents at the centre and the corners, as in the case of Classical simplicity. The Modernists delighted in the seemingly endless horizontal and vertical line—a value which in many ways goes back to the Sublime as first formulated in eighteenth century aesthetics in England and Scotland. Clearly, 'simplicity' is one of the most complex terms in recent design, and has to be used cautiously, because of its many variants: Modern, Classical, even 'Picturesque simplicity'—the latter of renewed importance from the 1960s.

We must now turn from the aesthetic–formal values of architecture back to socio-cultural factors, which, in turn, were linked with some of the economic aspects. The forms which we describe carried connotations of cleanliness and economy, as well as those of 'art'. The earliest 'healthy dwellings' for the poor were looked on as strictly utilitarian structures with no ambitions as to polite architecture. In the later nineteenth century, providers of the better kinds of low-cost housing had begun to add some ornament—but this had meant incurring additional expense. With the new Modern 'Functionalist' style there appeared no need for this, as the new types and the new methods of construction were held to provide beautiful forms by themselves, something that, of course, appeared as a vital demonstration of the value of 'Functionalist' architecture as a whole: economy as art/architecture; economy itself can be art. Low-cost housing seemed a type of building eminently suitable for Modern architecture, while the nineteenth-century contribution to low cost housing lay chiefly with non-architectural elements, such as the drainage system. As we shall see, however, it will never be possible to assess the real cost-effectiveness of any given Functionalist undertaking, taking in all the circumstantial factors.

In Britain, or, rather, in England—somewhat in contrast with other countries, such as Germany or the Netherlands—the International Modern style had taken its first foothold, in the very late twenties, almost completely within the circles of the artistic elite. The crucial transition occurred in the late thirties, when some of the young Modern architects determinedly entered the sphere of low-cost provision.[9] During and immediately after the war, activities in planning and building became the chief expression of the reformist Unionism of the time: the idea that Britain must be 're-ordered' as a whole. Many designers forged links with another area of endeavour that seemed to guarantee order and progress, namely Modern scientific town and country planning. Modernity became part of the symbolism, even one of the instruments, of the new postwar 'order'. Of course, by 1945, or even by 1950, we cannot speak, as yet, of a universal acceptance of the Modern style. As in the case of so many political and social pronouncements of the time, an apologetic and admonitory tone still prevailed. 'Try something different';[10] there was 'a need to know . . . for the consumer'.[11] One of the essential vehicles of communication between the designers and the users was the local authorities' Tenants' Handbooks; here, too, we sense a strongly admonitory tone. But the continuous series of technical innovations from the late forties to the mid-sixties, combined with the all-out rhetorical support in the discourses of the professionals, strengthened the values of the Modern and secured, for a short time around 1960, their almost universal acceptance.

Relationships between aesthetics, wider cultural factors and the more material concerns in architecture—in short, the 'meaning' of a building—never remain stable for long. In the early thirties, in England, stark Modern forms were a sign of advanced good taste, a matter for intellectuals, while the appropriate style for civic architecture, including much housing, was the Classical. In the forties, Modern blocks stood for a still somewhat experimental kind of health consciousness, under municipal auspices, though this now served a much wider segment of the population. In the years around 1960, Modern housing was seen as the norm for all in a 'Modern Society'. By the late sixties, the meaning of high blocks was changing once more, this time to a negative image.

However, for the housing reformer and designer from 1930, certainly from 1950, there was a considerable degree of unity and force in the definition of Modern design. This unity of sharply formulated aesthetic preferences, strongly held moral–social–political values, and the conviction that much, and more, technology was needed, drove forward the Modern movement in housing. Modern design simply meant the spirit of comprehensive renewal, the search for the New, through scientific investigation as well as verbal and visual rhetoric. A striking contrast between new and old was sought. The new had to be provided for all, especially for the poorer classes. 'Functional', too, meant the New, the experimental—new plans and new fittings, new methods of construction and new looks. Above all, there seemed no doubt that the last factor, the appearance of housing, was the straightforward result of the first two; and this also provides, at this point, a justification for our emphasis on the first two headings of the definition of architecture. We begin our account with the plans, the equipment and the construction of Modern types of dwelling.

The conviction that virtually everything about the dwelling had to be researched and devised afresh had gained ground in England in the thirties. Continental Modernism had been rooted in the demands for a global renewal after World War I. As Andrew Saint observes in connection with the Hert-

fordshire Schools,[12] much of the postwar impetus stemmed from the scientific effort during the war itself. Who were the chief researchers? In many cases they were, of course, the actual planner and architect, or the engineer in a contracting or building supply firm. All research now had to be specialised and 'professional', in the highest sense of the term, not only in design as such, but in the fields of physics or chemistry, sociology or demography. Each of the specialists brought his or her professionalism to bear on the great consensus of reform; for instance in the surveys which were undertaken for all major towns in the forties. Moreover, research had to be pursued continuously, or at least recurrently.[13]

Some 'agents' of research, like the architectural journals, had been around for a long time: almost all these agencies were, of course, London-based and tended, in the absence of concerted alternatives, to propagate 'national' 'British' norms based on specifically English cultural values. To cite only a few journals: the *Architectural Review* dealt with broad issues of architectural theory and history, the *Journal of the RIBA* with the main technical and social issues, and the *Architects' Journal* with a variety of largely mundane, though often highly technical matters. The architectural press is, in fact, the main source of what is reported in this section of our book (see Chapter 15). Professional bodies, likewise, had been pursuing research for some time. The RIBA through its 'Architectural Science Board' and other kinds of venues was particularly influential up to about the mid-fifties.[14] Of much more recent origin and chiefly consisting of architects in public employment, was the Architects and Building Technicians group (ABT).[15] The town planners were served by two societies, the Town Planning Institute and the Town and Country Planning Association. Other societies were less tied to specific professions. The National Housing and Town Planning Council and the Housing Centre, founded in 1900 and in 1934 respectively, brought together many professional groups, critics and municipal officers as well as councillors; their conferences were publicised by their journals, the *British Housing and Planning Review* and the *Housing Review*. Some influence was also exerted by a variety of voluntary groups, such as the Association for Planning and Regional Reconstruction, the National Council for Social Service, or the Voluntary Association for Women. The Committee for the Industrial and Scientific Provision of Housing, set up in 1941, paralleled the efforts of others, but it was sponsored by the steel and aluminium industries.

However, research on a large scale could only be undertaken under the auspices of the Government. Modernity, as we said above, was something that concerned society as a whole. The central State, being ultimately responsible for the provision of public housing, saw it as its first duty to provide a scientific basis for the many manuals and recommendations which were continuously issued. From 1919 onwards, research on council housing appeared to be 'so much a matter of committees'.[16] The most broadly based group, the Interdepartmental Committee appointed by the Minister of Health, the Secretary of State for Scotland and the Minister of Works, was chaired by Sir George Burt (chairman of the building firm Mowlem) and brought out a very comprehensive series entitled Post War Building Studies: the first volume, *Housing Construction*, was issued in 1944. Even more influential was the Government's own Building Research Station (established in the early twenties, and more recently renamed the Building Research Establishment).[17] After the postwar impetus had abated a little and when public finance was short, it was individual local authorities who appeared to be going ahead with new ideas. But only the new, large and powerful Housing Division within the LCC Architect's Department, from 1950, was able to set up a permanent group of practitioners whose sole task was 'Research and Development'. In contrast to the more purely scientific and frequently more diffuse kind of research of the years to 1950, the LCC's work was usually closely involved with ongoing projects, for instance with internal bathrooms and single stack plumbing.[18]

During the 1960s, research activities became again more varied. Foreign 'gurus', such as Buckminster Fuller, Christopher Alexander and Jane Jacobs, exerted a considerable influence. At the other end of the spectrum much practical research, structural as well as organisational, was undertaken by private contractors. Universities also joined in, as in the case of Edinburgh University's Housing (later Architecture) Research Unit, founded in 1958, and active in theory and practice (e.g., the Ellor Street scheme in Salford). In England and Wales the Ministry of Housing and Local Government (MHLG) became active again; its Development Group, set up in 1960, was clearly modelled after the LCC group—not surprisingly, as that was where some of its leaders, such as Oliver Cox, came from. The Group's Design Bulletins were handsome to look at and written in concise language—quite in contrast to the earlier, frequently unwieldy Government reports. Another leading figure of officially sponsored building research, in the MHLG and later in the National Building Agency was A. W. Cleeve Barr—like Cox an ex-LCC and ex-Hertfordshire Schools architect. In addition, private 'planning' consultancies sprang up by the mid-sixties, many staffed by eminent former public architects and planners, such as Shankland and Cox. Never fulfilled, however, were the high hopes, voiced in the sixties, for a special 'Research Council for the Environment'.[19]

By the mid-1960s the research drive appeared to have attained an unprecedented academic maturity and professionalism. About five hundred full-time researchers were estimated to be working in all fields of building science.[20] At the same time, however, a new and rather different kind of research activity arose—investigative journalism—which purported to address itself not primarily to the providers, but to the users. Even the seemingly most fundamental values of Modernism, as well as its methods of research, began to be doubted; the first result was a modification of the ideal of close, 'scientific fit', of scientific standards', into a notion of technology and 'freedom'.

CHAPTER 2

Inside the Dwelling: Size, Plan, Fittings, Heating

In Britain heating is a controversial question.

H. Kamenka, 1947[1]

IT MIGHT BE surprising to note, at the outset, that the most important aspect of the dwelling—the size of the living space—seemed to generate the least discussion. To provide the greatest possible amount of space, was, after all, the basic aim of all the efforts described in this book. There were no fundamental scientific issues at stake; it was a purely quantitative matter and there was nothing particularly Modern about this topic. It was always the State that set 'space standards', and their observance was usually made a condition of loan sanction. Figures went up and down according to perceptions of the general economic situation, and there were disputes as to how standards should be assessed in detail, whether they should be calculated for each kind of room or for the dwelling as a whole. It was never possible to agree on a precise method of comparing flats and maisonettes with houses: generally the former two would be slightly smaller.[2] The average figure was about 900 square feet for a three-bedroom dwelling in England and Wales, somewhat less in Northern Ireland, but more in Scotland—although variations usually did not exceed 15%. On the whole there was a climate of satisfaction: 'In terms of internal space standards, British municipal housing is without peer.'[3]

As regards the provision and disposition of the various kinds of rooms themselves, there was also relatively little discussion. Designers tended to follow the model plans issued by successive Governments and those devised by some local authorities, notably the LCC.[4] There was, again, not very much discussion as to the differences between the plans of cottages, flats or maisonettes. The parlour, in the sense of 'working-class parlour', which, since Raymond Unwin, had been deemed to lead to pretentiousness, was now virtually eliminated, and designers provided a larger living-room. The kitchen tended to be treated as a minimal 'working kitchen'—a notion very much to the liking of the Modern architects of the thirties.[5] But it was subsequently realised that this plan still did not prevent people from eating there, in the most cramped conditions, and, in 1950, the LCC stipulated the inclusion of both a 'working kitchen' with space for occasional meals to be taken, and a large living-room [2.1]. The other two major possible combinations were: a smaller living-room and a larger 'dining kitchen', or a living-room with a dining recess.[6] These three patterns were endlessly varied in public housing; in the sixties we notice a trend towards the enlargement of the kitchen.[7] The 'open plan', that is, a large 'through' living-room, played a certain role in wide-fronted houses and in maisonettes.[8]

The operative word for designers was Space—one of the catchwords of the period. 'We want space. Psychologically we want space . . . to feel a largeness which is probably missing from our working lives. Physically we want space: to move easily', wrote Anthony Bertram, one of the popularisers of Modern architecture and design in the forties.[9] We shall, in a later part of this book, examine the idea of 'space' as a general planning and architectural issue. Inside, the chief recommendation was that the shapes of rooms should be squarish, as this 'increases the sense of space',[10] and that furniture should be pushed to the wall, as demanded by Modern interior decoration styles. As part of the campaign for increased completion rates in the early fifties, one space standard was actually reduced: that of room heights, which were lowered in England and Wales from 8 feet or 8½ feet to 7½ feet in 1952.[11] But this actually met Modern preferences, as rooms appeared larger, and a light source closer to the ceiling was also preferred.[12]

The 1960s brought new emphases again, and, in England and Wales, the interior planning of the house seemed to move forward into the very forefront of professional discussion. In 1961, the Central Housing Advisory Committee's Sub-Committee on Housing Standards, chaired by Sir Parker Morris, published a Report, *Homes for Today and Tomorrow*, hailed as 'the most exciting thing on housing published since the war' [2.4].[13] The more fluent style of presentation of the 'Parker Morris' booklet was clearly intended to differ from that of official manuals and rulebooks; and, unlike previous publications of its kind, it was aimed at the private as well as the public sector. The Report's chief message was that standards of English housing must move with the times and must be 'higher' all round. An essential precondition, the subcommittee asserted, was that the individual designer should be provided with as much freedom as possible. Hence the Report contained few specific prescriptions, except for overall sizes. Sizes should, indeed, be increased; the largest dwelling, a three-storey house for six people, should contain 1,050 square feet, and 50 for storage; maisonettes for the same purpose 990; flats 930 square feet.[14]

But at the same time, prescriptions for the sizes of individual rooms were abolished. To Parker Morris, these appeared as strait-jackets. The uses of the home, and of

WHY WE MUST PLAN WELL

"HOUSING"—what an enormous field for future joint endeavour, responsibility, scientific application and hope that one simple word implies to-day. In this year of grace 1944 we, as a nation and individuals, should realise that when we build again we have the greatest opportunity for rebuilding splendidly that has ever presented itself to any nation. How are we facing this opportunity? Are we really conscious of our vast responsibility?

SOME VITAL QUESTIONS

First of all we know that the rejuvenation of the face of Britain cannot take place overnight. That being so, are we planning for the best even if it has to be over a long period, and even if we shall not live to see and enjoy the completed whole? Are we sure that when our master plan is completed it will be an everlasting memorial to those who have died that we might live? Are we, in fact, going to build for ourselves or for the great future? These decisions must first be made.

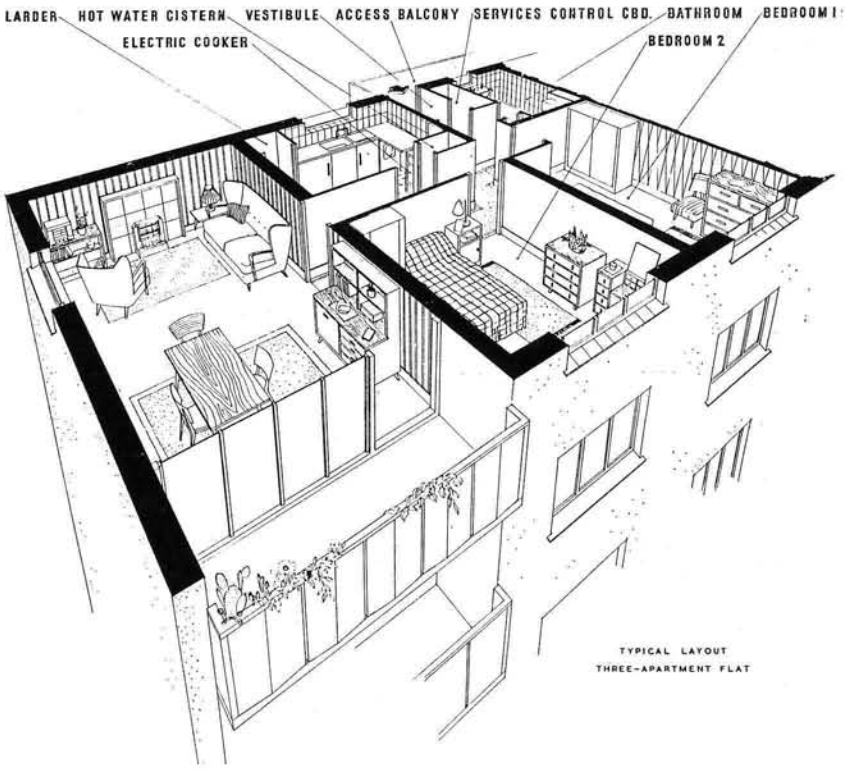
Although the plan to rebuild nobly and well is seen now only as through a glass darkly, the desire is here with us. It is this desire that has prompted the women of the country to tell authority what they want. Until now they have never made any united attempt to voice their views on housing. The bigger problems—the location of industry, the position of agriculture in our national economy, the gigantic task of finding employment for the people, women leave to their menfolk. But housing is a woman's business. She has to make a home of the houses men build.

We know that the average house has never been built as well as our builders could have built it—only because we have been cheeseparing, have lacked imagination and enterprise so far as housing is concerned. Housing has been, in fact, almost anybody's baby.

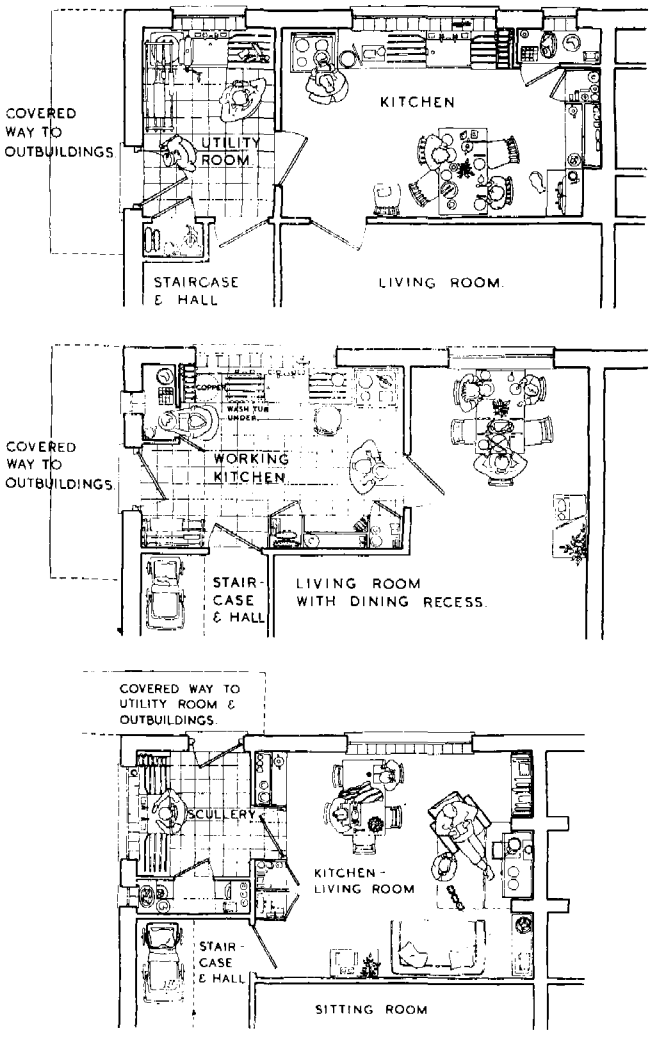
A BIG STEP FORWARD

The excuse that better building "would cost too much" can no longer hold good when we have seen what scientific application, proper organisation and considered use of the machine can produce for destructive purposes. It needs little imagination to realise what could be done for housing by harnessing this power for constructive purposes. Housing is a problem which has never been tackled comprehensively and nationally.

2.1. A page from the *Daily Mail Book of Post-War Homes*, 1944, which was specially directed towards the housewife.



2.2. Kirkcaldy BC, Valley Gardens, designed and built by Wimpey from 1954; an advanced type of council flat, including a novel type of underfloor heating. (*B* 9-9-1955, p. 435)



2.3. Kitchen and living-room plans from the Dudley Report, 1944; the Modern designer's close analysis of the variations of domestic life in the small English dwelling.

each individual room, were now conceived to be extremely diverse; the layout as a whole should therefore be as flexible as possible. For instance, someone might use a bedroom for quiet study during the evening—a possibility which also opened up new perspectives in the old debate on the precise use of the living-room. The Report severely criticised the Ministry of Housing's (MHLG) early-1950s 'People's House' philosophy of 'cheaper and more', with its reduction of circulation space.[15] After space and freedom of movement, the second essential demand was for heating, that is, whole-house heating: in turn, this was to facilitate freedom of use.

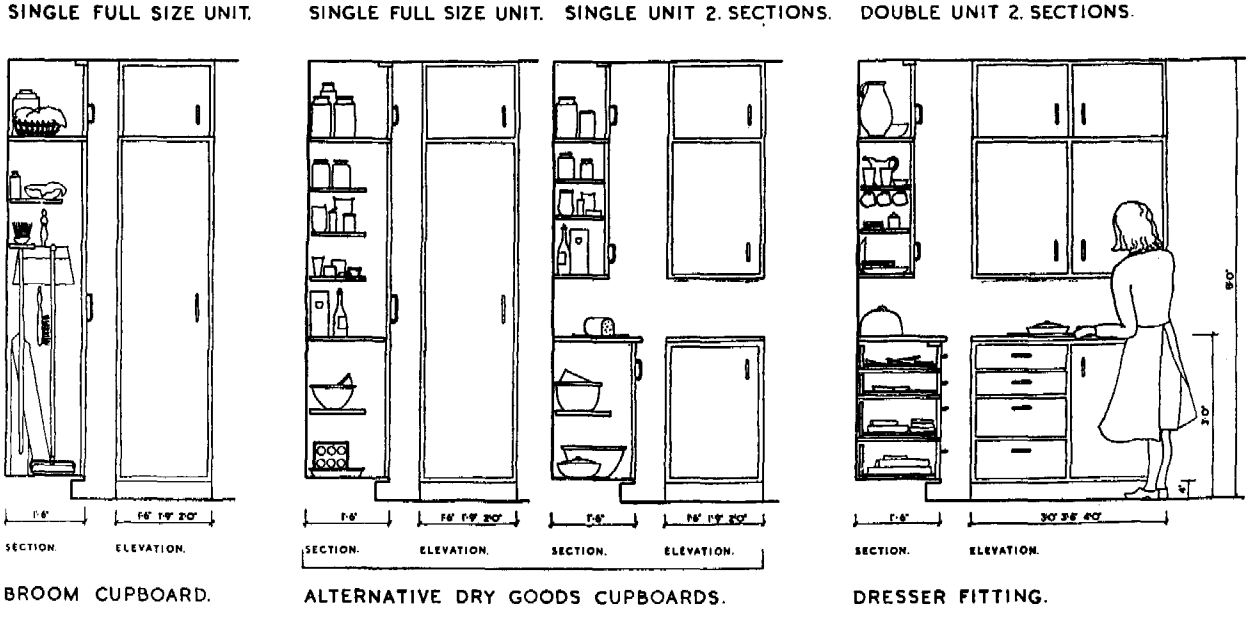
The origins of some of the thinking in the Report go back to the Townscape movement of the 1950s. This might sound an odd connection to make, but the drawings in the Report are indeed the work of the arch-Townscapist Gordon Cullen, and literally depict the flow of activities and space between partially enclosed and partially open rooms. On the other hand, the attitudes of the Report being 'not about rooms so much as about activities—the range of which is 'extremely wide'[16]—also point forward to a new stress on flexibility and freedom in planning generally, which led to a modification of the detailed prescriptive approach in Modern design and to which we will return at the end of the book. But the immediate effects of Parker Morris lay in a different field. As we shall see in Chapter 22, to all those involved in housing production, the Report's stipulations seemed to mean, above all, more expensive dwellings. At the same time, many local authority designers demanded that at least the space stipulations of the Report should be made mandatory. This was achieved in England and Wales in the years 1967 to 1971, and in Northern Ireland from 1973. In Scotland, the space standards introduced by the Department of Health in the fifties had already equalled or come close to Parker Morris standards.[17]

There was one essential addition to the space of flats: the private balcony. However, discussions about its use and its desirable size were sometimes a little uncertain; occasionally there was a plea that the expense of balconies should be saved, and used to provide more room inside.[18] Parker Morris stipulated an area of not less than 40 square feet. From about the mid-fifties, it was argued that balconies should be recessed within the contours of the building—something that the new 'cross-wall' construction could easily achieve. Earlier on, by contrast, architects and engineers had often delighted in daringly cantilevered balconies. From the physical evidence it appears that there are as many blocks with small balconies as there are without, though few of the highest blocks appear to have them. In the later sixties, new modes of combining flats, maisonettes and houses in complex layouts brought a variety of balconies, small walled-in courts, gardens and the like [6.10, 11.1].[19]

One of the most heavily discussed innovations in the home, particularly during the 1940s, was the 'fully fitted kitchen',[20] by which was meant the fitting of draining boards, work surfaces and especially cupboards. One of the aims of the 'fitted kitchen' was to induce tenants to keep things in order—though this was, of course, hardly stated explicitly [2.5]. Local authorities vied with each other in these matters: there was a 'Birmingham Kitchen' and a 'Coventry Kitchen'.[21] More important in our context is the bathroom. After all, for most working-class tenants this was a type of room they had not experienced before. The history of its provision in interwar council houses was complicated; the inclusion or omission of a bathroom served as a kind of convenient cut-off point in the economics of the planning of each estate. From the stipulation of a 'fixed bath' in 1923, statutory provision evolved slowly to the point where a fixed bath, in a separate bathroom, was prescribed for all new dwellings in 1936; it was, however, only after World War II that the latter arrangement really began to prevail, and not until then was a hand basin installed in all bathrooms.[22] A toilet was often provided in a location separate from the bathroom; this became increasingly common for larger cottage-dwellings, which were also occasionally given a second WC downstairs. A great novelty was the bathroom in the centre of the block of flats, artificially lit and artificially ventilated, first introduced in Britain in the early fifties; advantages were a reduction of the length of outside walls and savings in heating.

2.4. Drawings by Gordon Cullen for the Parker Morris Report of 1961. The watchwords in the sixties, particularly among London designers, were communication and flexibility. Sockets in all rooms of the home were still considered a novelty. (MHLG, *Homes for Today and Tomorrow*, 1961)

2.5. Kitchen fittings from the Dudley Report, 1944. Built-in cupboards were to help tenants keep their homes tidy.



Judge the efficiency of hot water systems by the satisfaction or otherwise of the people who have to live with them. Ask any tenant of a Sadia equipped house or flat—you always get the same contented answers. Hot water by Sadia means no dirt, no work, negligible maintenance, and utter reliability—all at lowest running cost.

To the architect, hot water by Sadia means far easier planning and installation. Sadia water heaters—the range extends from 2.2 gallon sink units to 120 gallon industrial models—do not have to be located on outside walls. No flues, boilers or fuel stores. Pipe work is reduced to a minimum. Sadia is simplicity itself.

SADIA
HOT WATER BY ELECTRICITY

IN LOCAL AUTHORITY BUILDING

2.6. Hot-water supply advertisement. A number of energy producers were competing for the services in council dwellings. (*MJ* 29-9-1961, p. 3095)

Apart from construction itself, heating presented the greatest technical challenge to the designers and builders of Modern dwellings. There was a realisation that 'an ample supply of very hot-water . . . is the greatest labour saving device' [2.6]. Early methods of reliable hot-water supply, that is from the later nineteenth century onwards, were invariably linked with the main fireplace; the interwar period saw the growth of a great variety of independent appliances. In 1945, we read: 'It is assumed that all new houses will be fitted with a piped hot-water supply', and flats are expected to have the best deal; 'families . . . [will be] housed in new flats where constant communal hot-water will be supplied'.[23] Although the methods of supply were to remain extremely varied, Modern systems aimed to integrate all provisions of heat.[24]

In order to cope with the enormous and open-ended equation of relevant considerations regarding space heating, we must simplify the story, omitting a good number of factors. We cannot deal here with the history of science and technology more generally, nor with the origins of the various appliances and their respective performances; the term 'Modern' can here only be used at face value. We must leave out cost factors, apart from the most general comparisons. Prices were, of course, linked with the whole economic

context of the various industries, and their attempts to increase their shares of the market. In the early postwar years, national fuel policies were of great importance: prices had gone up considerably. Increased attention was given to insulation as well as to clean air, but ventilation received less consideration than previously.

The basic problem was that the old systems no longer seemed good enough. The postwar climate of socially applied, Government-sponsored scientific research was well exemplified by a Report prepared in 1945 under the auspices of the Department of Scientific and Industrial Research: *The Heating and Ventilation of Dwellings*, or, for short, the Egerton Report. Sir Alfred Egerton, chairman of the committee, was a fairly eminent scientist, as well as an Establishment figure who served on innumerable public and professional committees. Scientific detail is the essence of this book: physiology, fuel policy and transport, heat loss, warmth conditions, ventilation, insulation, pollution, calculation of fuel consumption, rural housing and more. There is, however, relatively little discussion of heating appliances themselves, and the Report contains no list of conclusions, beyond recommending certain minimum temperature levels—around 65 °F in the living-room and around 45–50 °F elsewhere—which was of some influence.[25] But the chief advice given is that of 'flexibility', because 'there is no single answer to the question "What is the best system of heating for domestic purposes?"'[26]

Although everyone was aware that normal heating methods in Britain were old-fashioned, they remained in widespread use. A survey in 1956 reported that 96% of households with incomes below £20 used open coal fires.[27] Even architects, on occasions, still wholeheartedly advocated the open-fire system.[28] For instance, it remained customary for LCC dwellings, with few major exceptions, through the 1950s, and was even used in the 11-storey maisonette blocks at Loughborough Road [7.8].[29] One also has to remember that many households used portable paraffin or electric heaters in addition to the fireplace.[30] There were also improvements to the 'solid fuel appliance' itself, by way of gas ignition, downdraughting, convectors and even radiators feeding from the cylinder behind the appliance. Most of these improved methods of room heating included a built-in hot-water heater, the 'back boiler'—which meant constraints in planning, because of the required proximity of the living-room fire to the taps in kitchen and bathroom. Heat efficiency was generally improved by 100% or more.[31]

But the search for more modern systems continued apace. One of the largest experiments in building and heating technology, extraordinary by any standards, was undertaken by the Government's Building Research Station in 1947–8, at Abbots Langley, Hertfordshire. Here, ten pairs of semi-detached houses, each equipped with a different heating system, were built and then left unoccupied for a year, with the heating fully in operation. During the following three years, the tenants were moved, every year, from one house to the next![32] The aim was to test the performance of the ten different systems, and the thermal qualities of the buildings themselves. From this time, a kind of cleavage between theory and practice appeared, which continued into the early 1960s. On the one hand, there were ardent and costly experiments undertaken by innumerable bodies, State, professional and trade—witness the multiple contributions to the Conference on Domestic Heating, organised in 1956 by the Institute of Fuel.[33] On the other hand, there were recurring statements that modern methods could not in practice be introduced, because they were too costly.[34] This was also the argument used by the LCC's Director of Housing in favour of the retention of the coal fires just mentioned: do not put an extra burden on tenants.

'In Britain, heating is a controversial question. In the USA and in most Continental countries the problem is solved, and the answer is central heating', wrote the little-known English-American architect H. Kamenka in 1947.[35] But by the later fifties the situation in the UK, too, was beginning to change rapidly. General affluence was helping to push cost-consciousness aside. Some were even trying to argue down the costs of the new methods.[36] A number of important Modern housing developments, incorporating full central heating and combined hot-water systems, were by then well advanced, or completed and let: Pimlico, Rosebery Avenue, Bishop's Bridge Road (Hallfield), Roehampton, Park Hill. These set-pieces now simply could not be ignored.[37] Furthermore, the multitude of flues for open fires was causing problems in high buildings and took up valuable space; 'central heating releases the architects from the tyranny of flues and fuel stores'.[38] The carrying and storage of coal began to seem intolerably inconvenient. Large-scale high-density redevelopment appeared to reduce installation cost, and, by the early sixties, central heating was becoming more common in London.[39] In cases where the heating plant supplied a large development, as with Pimlico, the term district heating, or block heating, was used [6.17]. Pimlico was held to be the first example of district heating in the UK, and its installation was considered so efficient that the older, huge private luxury block immediately adjacent, Dolphin Court, joined in.[40]

However, it would be rash to assume that this meant the conclusion of our story. Just at that time, two alternatives to hot-water central heating were introduced in the field of public housing: floor heating (also known as 'floor warming' or 'electric underfloor heating') and warm-air heating. The former consists of wires embedded in concrete; its installation costs were lower than even those of solid fuel appliances. Hot water was produced separately in 30-gallon cylinders, also heated at night, for each flat. The first serious experiment took place in an 8-storey block commenced in 1954 by Kirkcaldy Burgh Council at Valley Gardens [2.3], and many more Scottish examples followed. For instance, Wimpey's 20-storey Royston 'A' point blocks for Glasgow Corporation were much publicised on their completion as 'All Electric Flats'.[41] In 1958, Cleeve Barr's praise for this system made it seem, on balance, the best, while his enthusiasm for hot-water central heating seemed somewhat muted.[42] He hardly mentions central hot-air heating, which was also under experimentation at this time: here, heat was supplied by hot-water from a central boiler to a heat exchanger in each dwelling, or, a variation, warm-air was drawn from a gas-fired unit in each dwelling.[43] By the early sixties, this latter system had been employed in some major developments,

2.7. Weatherfoil hot-air heating in the LCC Brandon Estate, commenced in the late 1950s (see ill. 8.2). (LCC, *Housing Services Handbook*, 1962)

such as the LCC's Brandon Estate [2.7], or Edinburgh Corporation's Martello Court.

So, by the early 1960s, we witness a choice between six major systems: the coal fire, electric or gas radiant heat, 'conventional central heating' by hot-water radiator, electric floor warming and warm-air heating.[44] Could our argument be ended at this point, by simply weighing up the performance of each system and the overall costs of installing and running it? There were other considerations which depended on the user more than on the appliance. Discussion of these went back to the Egerton Report, where it was stated that the demand for heating was by no means constant. 'Modern life' means that many homes stay empty during the day. What was therefore needed was two kinds of heating: background and topping-up. There was also much discussion, indeed, 'conflict of opinion', as to whether bedrooms should be heated at all.[45] The question was never completely resolved, but it was commonly held that they should be included in the background heating provision. Further variations applied to other parts of the dwelling. We are told that 16% of dwellers want heating in the bathroom while another 24% think it unnecessary.[46] The Abbots Langley experiments were categorised into 'partial', 'two-stage' and 'whole house' systems.[47] Later the alternatives were termed 'intermittent' and 'constant'. Systems were also classified as 'quick response' (warm-air), 'medium response' (hot-water central heating) and 'inflexible/continuous' (thermal storage).[48] One of the selling points of floor warming was its use of cheap electricity at night, but of all the new methods its output was lowest and it served for back-up purposes only. All this led, of course, to even more deliberations and measurements. Sometimes sceptics attempted some debunking: for instance, there were endless calculations as to the outputs of heating needed in relation to differing outside temperatures. But this, of course, was itself fruitless when 'people show no desire to maintain even temperatures throughout the heating season but "make do" with lower temperatures in cold weather'.[49]

Eventually, investigations began to move into a field which was only indirectly concerned with heating systems, and which, instead, was focused on individual tenants—in other words, closer to sociology rather than to housing technology. In the early postwar years, there was occasionally talk of giving tenants a choice, for instance between gas or electric cooking.[50] From the early sixties, however, 'tenant control' began to appear as a major issue. Systems were classified as to whether they were fully, partially or not at all controlled by the tenant.[51] There seemed a notion that the old methods, especially the open fireplace, might after all have been advan-

tageous, because they were entirely under the user's control; conversely, the systems which entailed a weekly charge all year round were now held to be least popular. There was demand for progress with individual metering, although there were again doubts whether all tenants would fully understand how to handle it [2.8].

In 1961, the Parker Morris Report tried to sweep aside all these arguments, as far as England was concerned. It asserted that the modern methods of construction used for high buildings had made the old coal fire obsolete, and claimed that the new theories of planning for flexibility made central heating imperative. After the demand for increased space, this was the second of the Report's priorities: 'Better heating is the key to the design of homes . . . for it provides an extra degree of freedom in meeting individual needs.'[52] The 1960s, we must remember, were the years in which avant-garde architects were beginning to think of design in terms of the primacy of 'environmental control', and heating and air-conditioning systems were regarded as being virtually the most important aspects in all planning and design. With some justification, we can claim that the arguments about the provision of heating did now come to an end.[53] Central heating was now recommended for *all* dwellings.

It pays you and your clients to put in *solid fuel* central heating

Lowest running costs. The big news in central heating these days is the amazing cheapness of the solid fuel systems. For example, the average weekly running cost for a two- or three-radiator system can be as little as 9/9d! Just compare that with oil, gas and electricity —see chart on right.

Lower installation costs. Compared with oil, solid fuel systems are much cheaper to buy and install. The new solid fuel boilers are really streamlined and require very little attention. They are thermostatically controlled and finished in gleaming vitreous enamel in a range of modern colours.

N.C.B. Housewarming Plan—offers a personal loan to cover the cost of a central heating installation. Low interest—five years to pay—tax relief.

Lowest maintenance costs. Solid fuel systems cost practically nothing to maintain. But with other fuels, skilled maintenance is necessary and this can cost from £5 to £15 per year—another 2/- to 6/- a week on the running cost.

Compare the costs. These are typical weekly costs, averaged over the year, for centrally heating a three-bedroomed house or bungalow—and hot water summer and winter. Look how much cheaper solid fuel is.

	6 or 7 radiators and hot water	2 or 3 radiators and hot water	
COKE - in independent boiler	9/- per cwt	9/9d	15/-
SMALL ANTHRACITE in gravity feed boiler	12/- per cwt	—	14/1d
GAS	1/4d therm plus, say, 2/8d a week standing charge	16/1d	23/6d
ELECTRICITY	1d unit (No standing charge included)	18/2d	29/10d
OIL	1/5½d gallon	*12/10d	*22/8d

* plus 2/- to 6/- a week maintenance cost.

Write for FREE booklet on Central Heating and list of other technical publications to the Coal Utilisation Council, 3 Upper Belgrave Street, London, SW1. Also available 'Central Heating for Houses', a complete 120-page illustrated survey of all the various systems available, from the open-fire-and-back-boiler to the small pipe system. Copies 2/6d each.

The cheapest central heating there is – SOLID FUEL

ISSUED BY THE COAL UTILISATION COUNCIL

2.8. 1960: One of the messages of this advertisement is that in a Modern home you also heat the bedrooms. (*ABN* 10-8-1960, p. 45)

CHAPTER 3

Need and Fit: Type of Household and Type of Dwelling

There is an infinite variety in people's needs and problems.
Living in Flats, 1952[1]

A STRIKING CHARACTERISTIC of the postwar housing movement was the new complex kind of deliberation about sizes and types of dwellings. There seemed to be two major imperatives. Firstly, by any standards, there was a great shortage of dwellings, so it made economic sense to study needs more carefully. Secondly, in those years of general Welfare State enthusiasm, it seemed desirable to extend provision of housing welfare not only to families with children, but also to those groups which had so far not been specifically considered, such as single young persons and the elderly. The Welfare State should cater for the whole 'community'.

The call was now for research into 'what people really need'.[2] At first, the situation did not seem to differ much from that after World War I: the need to help with the 'reconstruction' of the family, which had been disrupted in so many ways. 'Today's houses need to be better, the nation wants virility, wants fertility', blasted the popular Norwich journalist Jonathan Mardle.[3] But more important in our context was a new stress on those groups, or members of the population, that did not make up a 'family', according to the orthodox definition. 'Household' now appeared a more useful unit for the purposes of statistical calculation. Simple quantitative demographic statements, it was now felt, must be amended by sociological investigations of differing household types.[4] The definitions of 'housing need', for instance those by S. P. Brown and Ruth Glass in 1950, assumed a considerable degree of complication.[5]

In particular, it now seemed necessary to investigate all the 'concealed households' of groups or individuals sharing a dwelling.[6] These chiefly comprised young unmarried individuals, young married couples without children, elderly couples whose children had left home, and elderly persons living on their own. So far, many if not most of these lived within larger family groups, with parents, or as lodgers in other households. It was taken for granted that, given the opportunity, most of these small households would actually want to set up home on their own. One of the basic assumptions, so fundamental that it was hardly ever questioned, was that a home is a self-contained dwelling with its own sanitary fittings and its own 'front door'. For the planners and designers, what was required seemed abundantly clear: 'With all the different people, . . . groups or solitary patterns, it is obvious there is a need for a wide range of type and size of dwelling.'[7] As Marianne Walter explained in 1947: 'The needs of a family of 3 or 4 adults would differ radically from the needs of, say, a widow with 3 children.'[8]

In England, the postwar years continued the interwar pattern: by 1950, nearly nine-tenths of new dwellings were three-bedroom cottages.[9] The LCC was still adhering to a policy of building more three-bedroom than two-bedroom flats[10] and Scottish authorities had largely given up building that popular interwar type, the one-bedroom flat. But it was soon emphasised by many English commentators that an ever higher proportion of three-bedroom houses was under-occupied.[11] From the plethora of statistics produced during those years, one major conclusion was drawn repeatedly: there were far more small households than previously realised. The lack of census in 1941 made calculations difficult, but it was estimated that only two-thirds of all households had young children. Then the Census of 1951 revealed that fewer than half of all households had children under sixteen years of age; and that there were many small households: in England and Wales, for instance, over five million out of the thirteen million households consisted of one or two persons only.[12] Now the size ratios generally proposed for new dwellings changed considerably. In 1948, Bevan had still demanded that 86% of English output should comprise three-bedroom dwellings, and that only 8% should be two-bedroomed and 3% one-bedroomed.[13] In 1953, proportions of 53% three-bedroomed, 38% two-bedroomed and 7% one-bedroomed dwellings were discussed,[14] and, by 1951, the LCC was building 40% of its new dwellings in two-bedroom form,[15] freeing the larger dwellings for larger families. The 1956 reform of Exchequer subsidy rates in England and Wales gave even more support for the building of one-bedroom dwellings for some years.

When it came to the actual detailed planning of dwellings, housing theorists and designers divided the smaller households into two major categories: the young (single persons and childless couples) and the old (single elderly or couples). There was not much controversy concerning the dwellings of the single young—not least because it was difficult to estimate how many in this category actually did want to form a separate household. There was some discussion about 'hostels' with communal facilities, such as meal provision, for 'single workers, students and apprentices', in the words of the English and Welsh Housing Manual supplement of 1951, although this kind of communal dwelling played no

more than a minor role in any part of the UK, compared with some other countries.[16] The value of Modern self-containedness, to have one's own bathroom and kitchen, had become too powerful.

Old people, on the other hand, did form a group which could be more clearly defined. Their share of local authority housebuilding increased considerably, from about 4% in the interwar years to 13.3% in 1957.[17] It was estimated that, among the working classes, single old people comprised 10% of all households and older married couples whose children had left constituted another 10%.[18] Moreover, many of the old already lived by themselves, as separate households. Most policies emphasised that the old should be given self-contained dwellings, but that these should be placed among those of the rest of the population, and also close to public transport and shops. They had to be smallish—especially in view of the large size of the many underoccupied council houses. In 1951, out of 6,000 old persons housed by the LCC, 4,800 lived in homes originally built for families.[19] As regards the type of dwelling for the able-bodied elderly, this could take any form: bungalows, rows of small houses or blocks of flats, ground or first-floor flats in blocks without lifts, or flats on any floor in blocks with lifts. Paddington MBC's Bishop's Bridge Road (Hallfield) development, completed in the early fifties, included a central block of flats let entirely to old people [6.19]. For the further category of partially handicapped old folk, it was advocated that hostels should be provided within housing estates.[20] However, by the later fifties, these methods, for instance hostels or flats situated close to noisy areas, were no longer considered suitable; on the other hand, the older almshouse type of grouped cottages had often proved too costly and space-consuming in urban areas.[21] There was a surge of research into the detailed needs of old people. Now 'flatlets for old people' seemed best, small groups of dwellings allowing for complete self-containedness as well as help from a warden.

For planners and architects, the most significant effect of the attempts to diversify dwellings was, of course, the new emphasis on the flat. For sociologists, however, the new thinking seemed to cause more and more problems. Assumptions of a simple state of housing need, static in time and place, began to be challenged, and consideration was extended to demographic changes and population mobility. Furthermore, categories, such as 'need', 'household' and 'self-containedness' were questioned in principle, and found to be harder to define than expected. In any case, was it right for planners to assume that all smaller households actually desired to live in separate accommodation? For the moment, these doubts seemed of interest only to sociologists,[22] but designers caught on in the sixties. And, of course, the point at which demographers' and designers' attempts to fit dwellings to needs leave off, is where the housing factor's or manager's task of allocating dwellings begins.

CHAPTER 4

The Case for Flats and Maisonettes

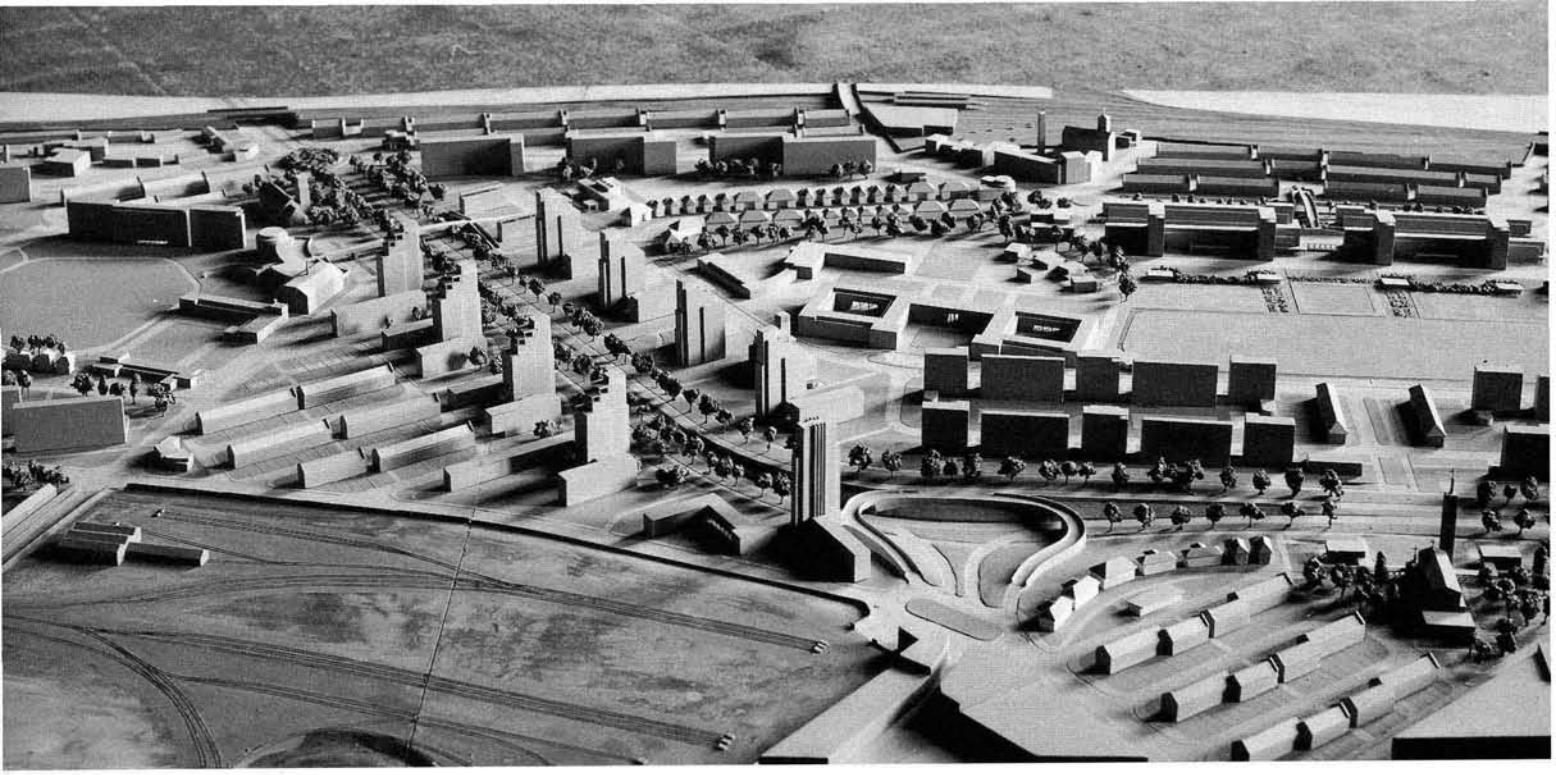
The flat has produced a building type peculiar to our own era.
Yorke and Gibberd, 1937[1]

THE NEW EMPHASIS on the variety of needs was matched by the great variety of types of dwellings evolved by planners and designers. The historical explanation of these types is an equally complex matter. Moreover, each type underwent variations in its internal planning and in the way its surroundings were laid out. Dwelling types cannot be dissociated from other issues, such as the provision of light, 'mod cons', 'urbanity' and so forth. At the outset we must consider one single major type, which, in fact, constituted by far the most important subject of all debates: the flat [4.1].[2]

A very 'un-British' type of dwelling? In Northern Ireland, certainly, and to a lesser extent in Wales, very few flats were built before World War II. But in other parts of the UK, there was nothing new about flats, and yet—because of the dominance of the 'English house' concept in 'national British' debates—the case for them had to be made again and again. In Scotland, tenements (staircase-access blocks of any height, but most usually 3 or 4 storeys) had been the predominant urban type for centuries for most classes, and in London, the subdivision of houses into more or less self-contained flats was an old and common occurrence. A very distinct type of flat arose in London from the middle of the nineteenth century onwards, and sporadically also in other large English towns: four to six-storeyed tenement blocks, assigned to the lower classes. A little later, large blocks of flats for the better classes were beginning to spring up in the West End. In the interwar years, outside Scotland, flat-building was mostly confined to London, with provincial outcrops in Liverpool and a handful of other locations. But there were major changes: most 'working-class' flats were now built by local authorities. At the same time, in the thirties, the style of many middle-class blocks was changing from neo-Georgian to Art Deco or Modern. The postwar years in London continued some of these trends: the vast majority of flats were built by public authorities [5.1], and they also adopted the Modern style after about 1950. But now the rest of the UK also resorted to campaigns of flat-building. Scotland reinvigorated her flat tradition after a hiatus, in the interwar years, when new tenement building had largely been reserved for the lowest classes, and most council dwellings were provided in cottages, while Northern Ireland began to build flats for the first time. In the fifties and sixties, the case for the flat became increasingly the case for high flats—though it must be remembered that even in those decades the older type of three or four-storey block predominated numerically, if not visually.

In England, flats generated many protracted discussions, especially in the thirties and forties. At the outset, it is not clear whether this constituted a straight fight between the houses-with-gardens faction and the flats faction. Or, instead, was there throughout a kind of consensus that, in the postwar public housing programme as a whole, a proportion of flats was inevitable and the question was merely about how high that proportion should be? It is hard to pinpoint the beginning of the 'flats versus houses' controversy. It may first of all be seen as a result of a new kind of town planning thinking, that is, new ways of linking factors of demography with location, in which the design of the dwellings and its surroundings were considered in much wider contexts than ever before. There is no doubt that the 'flats versus houses' debate was fanned largely by the Garden City faction among town planners (Frederic Osborn and 'his' Town and Country Planning Association) and their particular logic, which seemed to allow virtually everywhere a supposedly perfect marriage of town and country—by which was meant houses with gardens for the great majority—and which promised to solve the 'problem' of the dreaded city, with all its squalor and disorder. 'Rat or squirrel?' Osborn quipped when he referred to the dwellers of high-density flats.[3]

However, from the mid-thirties onwards, other English reformers, such as Elizabeth Denby, began to extol what they saw as the virtues of town life, and asserted that this required greater density and, hence, a denser type of dwelling as well. To these reformers, who took much of their inspiration from the Continent, the universal low density of the English suburb seemed objectionable;[4] and the Garden City movement was seen not as a valuable reform in town planning, but simply as a further contribution to the spread of suburbia. We will discuss these anti-suburban attitudes and the new emphasis on 'urbanity' further in a later chapter. In any case, in the forties, virtually all authors on housing addressed the 'flats versus houses' question. Some of them conveniently chose to leave the subject open.[5] Other important tracts, such as the Labour Party's pamphlet on housing of 1943,[6] and the book *Homes for the People*, produced by the public-architectural 'trade union', the Association of Building Technicians (ABT), came out in favour of cottages for the great majority.[7]



4.1. Birmingham: Model of the proposed Duddeston and Nechells Redevelopment by the Corporation's Public Works Department (City Engineer H. Manzoni), 1943. Architecturally wildly ambitious and reminiscent of the Soviet Pavilion at the Paris World's Fair of 1937, this style was not, however, to appeal to English postwar council designers. (Public Works Department, Birmingham City Council)

Yet, by the forties, there was widespread agreement among English housing reformers that—urbanity or not—flats had to be introduced into inner urban districts if one wanted to keep the densities found with the existing, old housing—a problem which had come to the fore only in the thirties precisely because it was only then that inner urban 'slum-clearance' had been started in earnest.[8] The notion of density in the health and technical sense will be explored in more detail below: what matters here is that, so far, advocacy of higher densities in inner urban areas, in effect, continued a status quo. To most reformers it also seemed clear that the majority of inner urban flats were being built, and would continue to be built, for the lower classes, which meant a simple continuation of the general London practice. Some writers, such as Max Harrison of Mass Observation, deplored the controversy altogether, but his 'Flats for some, Welwyns for others' did not really offer a clear or novel answer.[9]

It became necessary to attribute to the flat some specific, desirable characteristics in order to move beyond the simple polarisation of the Flats versus Houses controversy. Here, the main answer was, of course, provided by the Modern flat. At first this meant the middle-class, or 'luxury' flat. During the thirties, it was in association with this category of flat that Modern architectural theories and designs for high-density urban life, as something positive, were introduced to Britain. The rhetorical extreme of this movement was represented by Yorke and Gibberd's book of 1937, *The Modern Flat*, which wiped out everything that existed before: 'The flat has produced a building type peculiar to our own era; without precedent in the architectural past' (although a potted history of flats from Roman times is given a little further on!).[10] An important model was the block of 'minimum' dwellings at Lawn Road, Hampstead, one-bedroom flats for middle-class occupants built in 1933 to the designs of the avant-garde architect Wells Coates; it was followed by Lubetkin's celebrated middle-class blocks Highpoint One and Highpoint Two in Highgate.[11] Characteristically, the Association of Building Technicians' book opens its discussion on flats by remarking that 'there may be the highbrow for whom a small house is "too antiquated" to consider seriously'.[12] It is important to note, though, that Modern luxury flats were not widely built in Britain, with the exception of some Inner London districts, in the years after World War II.

Modern flats were held to be superior because of attributes which were given a very vague and general name: 'amenities'. Reflecting back again to the origins of the middle-class flat in London in the later nineteenth century, these amenities were something that the general run of English terraced houses, ill-adapted for multiple occupation as they often were, did not possess. Indeed, one has to remember that even many good-class large terraced houses were inconvenient in important practical respects, with, for instance, bathrooms situated four floors down from bedrooms. By the twenties, as Ravetz states, all proper flats in London had become self-contained as regards 'conveniences', and this included flats purpose-built for the working classes.[13] An essential step towards the more widespread establishment of the Modern flat had been taken.

Some reformers laid a special stress on privacy; they were convinced that flats, as such, could provide a considerable degree of seclusion. It was continually emphasised that flats provided, or ought to provide, Modern conveniences such as central heating.[14] Furthermore, in contrast to the individual cottage or house, it was argued that these amenities could be run and kept in good order, not necessarily by the occupier, but by teams of specialists, ranging from gardeners to boiler stokers—and that not only in better-class flats.[15] Modern

facilities were meant to save time for the average flat-dweller, especially for the housewife. Finally, amenities were also defined as including communal services, such as conveniently located nurseries, community rooms, clinics, restaurants and the like, and, again, that could include working-class flats.[16] Taking all these provisions into account, a few commentators went so far as to roundly declare the flat to be superior to the house, or cottage—or, at least, better than the 'semi'.[17]

It was thus frequently taken for granted that these amenities would be provided, with due differences in detail, in higher-class as well as in working-class Modern flats. Yet there seemed, on the whole, to be an ambiguity in English debates concerning these amenities. Discussion oscillated between statements that flats possess these amenities by definition,[18] and demands that all flats *should* be equipped with such amenities.[19] Those who condemned flats were said to have missed out on practical experience of the amenities in a really Modern flat.[20] The Dudley Report, too, argued the case for Modern low-class flats and cited the model flats of Quarry Hill, Leeds.[21] Yet, after the war, an essential factor in the controversy concerning the LCC's postwar block dwellings was again the question: did these flats possess sufficient modern amenities, as was asserted by Cyril Walker, the official responsible for both their design and their management, or were they inadequate as dwellings, as some Modern designers claimed (see Chapter 15)? We shall later refer to an even more difficult issue, namely whether or not flats induced 'community spirit'.

To reiterate, the postwar years saw a new emphasis on the great variety of households requiring accommodation, and their need for many different types of dwellings, especially small dwellings. The burning issue in these English debates now was: should the small dwelling best be assigned to the block of flats? To many commentators the answer was yes. This response was based on two assumptions. The first sprang from the idea of differentiation of need, which led reformers such as Marianne Walter to state, 'Who will need flats? . . . We are assuming here that single persons and families consisting of adults only, would in the main prefer flats—provided, of course, that their design, lay-out and distribution offer amenities not economically available in small houses.'[22] The second reason was a continuation of the older assumption which equated flats with urban density generally.[23]

As a whole, though, the 'flats versus houses' issue remained undecided. It has to be remembered, for instance, that interwar LCC suburban cottages provided a full range of dwelling-sizes, from one to five rooms.[24] Furthermore, London block dwellings and new Scots tenement flats also contained a whole range of sizes, for all types of families; a fair proportion of such flats were three-bedroomed ones, akin to the normal type of house. Even many of the more Modern council flats built in London in the years after the war were to contain flats 'of all sizes'—for instance in the Bishop's Bridge Road (Hallfield) development [6.19].[25] It was not until around 1950 that we witness a more systematic diversification, and hence a separation of types: 'Larger dwellings are usually more conveniently built as houses, and smaller dwellings as flats'.[26] We shall return shortly to this new English trend, systematised as 'Mixed Development'. An essential argument for small dwellings in blocks of flats seemed the fact that there would be no wasteful stairway, as in the small, two-storey house.[27]

Some of the general support for the flat was perhaps of a rather more rhetorical nature (Thomas Sharp: It is 'dictatorial to imagine that all families want houses').[28] It is not surprising, then, that there never seemed to be any agreement as to the actual, precise proportion and numbers of dwellings which should be built in the form of flats. Mass Observation's findings of 1943 varied enormously, between 0% and 46% (the latter being a figure for those who did not want gardens).[29] The *County of London Plan* of the same year, with its panoply of calculations of densities, acreages, numbers of people and types of dwellings, arrived at a recommendation of about 70% for the denser parts of London.[30] The Dudley Report laid down a mere 10%—rather surprisingly, considering its enthusiasm in general for the flat.[31] Marianne Walter proposed flats for 44% of all families in larger urban areas,[32] and the Brooke Report, *Living in Flats*, of 1952 proposed flats for all 'except large families'.[33] At the other extreme, the first group of the New Towns, in the early 1950s, were said to be building only about 5% of their dwellings in flats,[34] while, in 1958, even Osborn conceded that London housing should comprise about 20% flats.[35] A sociologist in 1960 regarded the issue as 'still an open question'.[36]

After 1950, the arguments concerning flats concentrated chiefly on high blocks of flats. What must be stressed at this point is that, alongside the new types of high flats, the medium-height block of flats continued to be built in large numbers by authorities in all parts of Britain, except in the most rural districts. One extreme was represented by Glasgow, where three and four-storey tenement blocks formed the vast majority of the Corporation's programme until the late 1950s. Even in a supposedly non-'flat-minded' English city such as Birmingham, such blocks (in 1957) formed as much as 75% of the city's output.[37] The other extreme was perhaps the Northern Ireland public housing programme, where very few flats were built during the fifties. Over the various parts of the UK, such blocks formed the unsung mainstay of public housebuilding from the fifties into the seventies. There was no precise label—'walk-up', 'tenement', 'low rise', 'medium rise'—nor was there a precise formula for their height. London blocks of four storeys now had to have a lift; this also meant that the older standard kind of five-storey block of flats without a lift was eliminated. In England and Wales, until the 1956 subsidy changes, the predominant type was of three storeys. It contained mostly smaller dwellings, was of conventional, perhaps cross-wall construction and had a pitched roof; yet it usually contained the (in English terms) more 'modern' type of direct internal staircase access. Although this type of block was not so frequently built in England and Wales from the late fifties, its Scots equivalent, the traditional three and four-storey staircase-access tenement block, was still constructed in substantial numbers up to the seventies and beyond. In any case, concerning this type of flat, there seemed to be little or no controversy.[38]

MAISONETTES

In the search for denser types of housing after the war, the terraced house initially enjoyed a limited revival in terms of practicality, cost-effectiveness and some architectural considerations, especially as an alternative to the dreaded 'semi'. The scope for the building of cottages was at first limited in Scotland, owing to their higher cost in relation to tenements, except in the programmes of small burghs and New Towns. In England, Wales and Northern Ireland,[39] however, a row of two-storey houses was cheaper to build than even the three or four-storey block of flats, and it became the standard type [28.2], especially for the outer suburbs of all towns and in rural districts: here, the South Norfolk schemes designed by Tayler & Green around 1950 achieved wide acclaim.[40] In 1946, the well-known interwar architect and polemicist A. Trystan Edwards published a tract, *Modern Terrace Houses: Researches on High Density Development.* He pointed out that densities of over 200 persons per acre—the range of the London five-storey block dwellings, or of higher-class tenements in Glasgow—could be achieved with narrow-fronted terraced houses, each with its own back garden or roof garden, and with four-storey flats in blocks at street corners. But this density was achieved by a kind of skimping, which cut out many elements customary in traditional terraces and most other types of dwellings. There were winding stairs instead of straight ones, there were narrow streets, and there were no fireplaces, or chimneys and no garages or back access ways (with dustbins placed in special compartments in the front).[41]

It was its high ground coverage and lack of public open space which made the inner urban terrace unacceptable to the vast majority of English and Welsh planners and designers in the forties and fifties. And most of Edwards's dwellings were largish houses, which appeared of little use at a time when the search was on for small types of dwellings. It would, of course, have been conceivable to divide the houses into flats: but this was precisely what had happened to the old London terraces. To virtually all planners in the forties, this would have seemed tantamount to recreating the very slums whose demolition they were then advocating. We have to wait until the sixties for a new revival of the terrace.

However, from 1950 onwards, a great numbers of 'houses' and 'terraces' were built in rows, in the form of 'maisonettes'—a combination of cottage and flat which constituted yet another example of the complexity ever characteristic of types of dwellings in Britain. The names of dwelling-types in the UK have always been shifting and often imprecise. At the most general level, in England the term 'house' is used to refer solely to non-flatted dwellings; in Scotland the same term is synonymous with 'dwelling', and the dwellings called 'houses' in England are known either as cottages or, according to height, as bungalows or 'two-storey houses'. The label 'maisonette' had long been used in London to denote self-contained flats, comprised within a shell which looked, on the outside, like a two or three-storey terraced or semi-detached house; north of the border these semi-detached, two-storey flats, built in great numbers between the wars, were referred to as 'four-in-a-block houses', 'flatted houses' or (if private) 'quarter-villas'. The postwar Modern 'maisonette', however, was almost exactly the reverse of the older London 'maisonette' type: a flatted block divided into dwelling units, each unit two floors in height, and with a small internal staircase leading to the bedrooms in the upper floor. In other words, we have a stacking up of two-storey houses: not flats looking like cottages, but cottages looking like flats.

In most parts of Britain this maisonette type, in contrast to the straightforward flat, was something definitely new. Only occasionally do we hear about precursors. In Scotland, many 18th and early 19th century tenement blocks contained flats occupying more than one storey, with internal staircase, while another kind of model was presented by the London habit of placing a row of houses on top of a row of shops. The LCC, and many Scots authorities, often used the type to form the top two floors of a five-storey block of flats.[42] There was an awareness that the type was popular in America, under the name 'Duplex'[43]—although in England, to add to the confusion, the term 'Duplex House' was used in the 1940s for attempts to devise flats in two-storey blocks suitable for later amalgamation into houses.[44] Generally, little was said about maisonettes, even in the late forties. To the supporters of the ultra-Modern style, the type was well known, through Le Corbusier's 'immeuble-villas'. It was Powell & Moya, at Pimlico, who are said to have introduced the four-storey maisonette, as well as three and seven-storey blocks which combine maisonettes and flats.[45]

From the early 1950s, the four-storey maisonette block caught on rapidly among Modern architects [9.3]. It was sometimes placed on top of a row of garages; another popular version comprised a row of maisonettes on top of ground-floor flats. What was said above, concerning the construction of medium-height flats, also holds true for the new maisonettes. They were conventionally built at first, but later a more Modern type of cross-wall construction was widely adopted. In contrast to four-storey flats, a lift was not needed. Many two-bedroom maisonettes were built: however, this reached the borderline of an economic use of space, as it had been argued that one of the important savings of the flat derived from the elimination of the staircase from the small dwelling.[46]

Among architects, numerous modifications or improvements to the new pattern were suggested. Segal criticised the external access (lack of light and privacy) and the noise in bedrooms placed below living-rooms.[47] However, his complicated alternative designs, which interspersed two-storey 'hanging gardens', were too expensive to be implemented.[48] There were variants incorporating internal corridor access on the Unité model, but this was not used very frequently—some of the later 'cross-over' versions will be discussed below. In the vast majority of cases, access was by open galleries. During the 1950s, all types of maisonettes were believed by English professional commentators to be popular with tenants.[49] The main argument in support of this was simply their claimed similarity to houses; 'it is reasonable to assume that tenants have a liking for maisonettes . . . [T]hey offer more privacy and quiet, and have more the feeling of a private house.'[50] Furthermore, in England and Wales, maisonettes were in most cases cheaper to build

than flats. In some discussions of the matching of households to dwelling types, maisonette appeared synonymous with cottage, and the intent was to place 'families with several children into houses or maisonettes'.[51]

In 1953, LCC designers (chiefly Leslie Martin)[52] devised a new version of the maisonette; first produced in mock-up form, it was of a mere 11 foot clear width, and had an internal bathroom [6.26, 7.9].[53] This 'narrow frontage' type was to be used on many developments, in the form of 11-storey slab blocks, which will be discussed below. The higher the block, the less, of course, it mattered whether the dwelling was a maisonette or a flat. The 1960s provided further multi-storey versions, such as the single-aspect maisonette,[54] and in the sixties we will meet further combinations of cottages, flats and maisonettes in 'low-rise high-density' developments. In 1958, following several years of experience in the LCC, Cleeve Barr summed up what he saw as the chief advantage of medium-height blocks of maisonettes: twice as many dwellings have ground-floor access and a garden than in the case of a block of flats. Barr identified a clear, hierarchical association between household size and dwelling type. Large families (requiring four or more bedrooms) should live in cottages; three-bedroom dwellings could take the form of cottages or maisonettes, according to density; and smaller dwellings should be contained in blocks of flats.[55] A measure of agreement had been reached in the deliberations among English professionals about the correspondence between type and size of dwelling, between need and fit; this balance was called 'Mixed Development'.

CHAPTER 5

Mixed Development

[to ensure] that whatever the age and size of the family, it has the right kind of dwelling; and that there is every type of family in the community.

Frederick Gibberd 1949[1]

WE HAVE REFERRED to the new emphasis on the differentiation of need. Households differ markedly, or even, in Marianne Walter's words, 'radically'; and these differences were taken to require a wide range of dwellings, which had to be strongly distinguished in every way. We then described the ways in which architects claimed that this demand for variety could be fulfilled by the building of terraced houses, high or low flats, and maisonettes. There was, however, no precise answer as to which type best corresponded to which size of dwelling, especially for the middle range of sizes. Indeed, as the new Modern housing patterns began to spread among architecturally 'progressive' authorities, after 1950, all kinds of variants and combinations were built. For instance, English and Welsh New Town Development Corporations (with the exception of Harlow) and the Northern Ireland Housing Trust mostly built cottages, and a few flats in two-storey blocks externally resembling cottages. At the other extreme, some Metropolitan Boroughs were erecting inner urban developments exclusively of eight or ten-storey blocks, containing flats of all sizes. Only the new maisonette type was reserved to a narrower range of two and three-bedroom dwellings.

Mixed Development seemed to provide the answer to all these questions; it meant bundling all types together, so to speak, and allocating them within one development. Recent research in the history of mixed development has underlined its importance in all postwar professional debates about the dwelling in England and Wales; however, it was not a pattern of much relevance or significance in Scotland.[2] In the politics and rhetoric of postwar renewal, there was a strong emphasis on the togetherness of all classes: some planning and architectural aspects of this movement will be dealt with in later chapters. At this point we are chiefly concerned with the more practical questions of the choice of dwelling types. This was a time when, as already hinted at, the 'flats versus houses' controversy was temporarily dying down, and all commentators were agreed, for the moment, that there had to be some flats; on the other hand, nobody seemed to side with the all-flats Modernists of the 1930s any more. As J. M. Richards remarked: 'by letting it be imagined that high flats were their sole objective, the town-minded modern architects failed to win a clear-cut victory over the garden-suburb sentimentalists'.[3]

We ought to think back to the crucial division that was made between inner urban and outer suburban development. During the interwar period, the latter was generally taken to mean low density, and thus cottages and plenty of gardens, the former high density and hence flats and only flats [5.1]. This pattern usually entailed a class division—in Glasgow, for instance, 'Ordinary' cottage schemes were usually destined for lower middle and skilled working-class tenants and 'Rehousing' tenements for the unskilled; in London, cottages were for 'elite working-class families' and flats for 'average working-class families'.[4] It certainly entailed a division as regards amenities, more for houses, fewer for flats.[5] How could these divisions be overcome? The supporters of Zeilenbau flats from the thirties (a planning method to which we shall come below) thought they had eliminated at least one important element of the dilemma, by introducing as much, or even more. greenery into towns as the Garden City supporters could provide in their suburbs. But other planners went further. For instance, Thomas Sharp asserted in 1940 that 'the alternatives of rebuilding are *not* central flats or suburban houses . . . [T]here are arguments for the building of flats anywhere people want that form of dwelling.' And. 'there can be central flats *and* central houses'.[6] The precondition for all this was, of course, the surrender of the twelve houses to the acre low-density formula long advanced by the Garden City faction. In one important respect, the advocates of mixed development did follow the Zeilenbau high-flats supporters, in that for them, too, the provision of greenery in inner urban areas was very important. We can thus argue that mixed development was, in some respects, at least in planning terms, a successor to the Garden City. A similar kind of logic was at work in both cases: like the Garden City's town/country ideal, mixed development, too, tried to provide the best of both worlds.

We shall see that English Modern architects' criticism of the 'monotony' and 'massiveness' of London block dwellings in 1949, as well as their attack in 1953 on the uniformity of low-density New Towns, both served to reinforce the mixed development arguments. The concept, at its most elaborate, was expounded in two publications of 1958, emanating from the public architectural establishment: A. A. Bellamy's MHLG design manual *Flats and Houses 1958* (which should be compared to the revised Part 1 of the *Scottish Housing Handbook*, also of 1958), and Cleeve Barr's *Public Authority Housing*. Here, there was yet more emphasis on variety in the

5.1. Two types of layouts to be avoided: key planning and design arguments for Mixed Development. (A. W. Cleeve Barr, *Public Authority Housing*, 1958; Aerofilms)

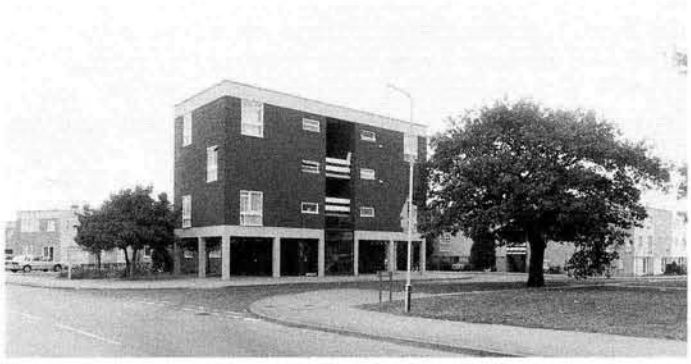
matter of density and in allocation of different types, combined with the increasing prevalence of high-blocks. The argument could now be formulated as follows: generally speaking, high blocks should only be built where they can be 'justified'; yet the desire for more cottages can justify more high blocks. Within this broad formula there was considerable freedom. The outside limits of the architectural definition of mixed development were reached when a high block was placed as an afterthought adjacent to an existing cottage estate, or, at the other extreme, when a few bungalows, or low blocks of flats, were thrown in with very high blocks. In Scotland, Glasgow's Red Road development of 1962–8 comprised seven blocks of 26–31 storeys, containing 1,326 dwellings, and a single group of 3-storey flats with 24 dwellings.

Thus, mixed development was undoubtedly a new idea. It seems that its very first manifestations did not appear before the 1930s.[7] During the wartime and early postwar years, the idea was then developed in detail by English planners and architects. The *County of London Plan*, in 1943, set out elaborate calculations of the proportions of flats and cottages in each area, but in the high-density districts (200 persons per acre), inclusion of cottages was not envisaged.[8] The Dudley Report endorsed the principle, but lacked detail. The Ministry of Health's *Housing Manual* (1949) illustrated some models of mixed development, but they did not appear prominent among all the photographs of two-storey houses. Perhaps the first well-known project which systematically applied the mixed development principle was Hackney MBC's Shacklewell Road and Somerford Grove development, designed by Frederick Gibberd in 1945 and built in 1946–7 [5.2]. Here, at a middling density of 104 persons per acre, five types of dwellings are provided, in order to ensure 'that whatever the age or size of the family, it has the right kind of dwelling; and that there is every type of family in the community'.[9] However, the coordination between size of dwelling and type of dwelling is not very clear-cut, as there are three-bedroom dwellings in the form of both cottages and flats. Shortly afterwards, the LCC built its much-publicised Lansbury development in the Stepney-Poplar Reconstruction Area [5.3], based on the initial ideas of Abercrombie and overseen by Percy Johnson-Marshall's planners. This contained what was later called a 'maximum number' of different types: three and six-storey flats, four-storey maisonettes, and two and three-storey terraced houses.[10]

The idea of mixed development was driven home most forcefully in the first schemes designed by the LCC Architect's Department after its resumption of responsibility for housing design in 1950; this had been preceded, about a year before, by Gibberd's addition of a point block and other flats to a large development of houses at Mark Hall North, Harlow New Town. A similar demonstration of the principle was built at Sish Lane in Stevenage: Yorke, Rosenberg and Mardall's long seven-storey slab block.[11] A fully fledged mixed development emerged at the LCC's Portsmouth Road (Alton East) development at Roehampton, designed from 1951 and commenced in 1953 [7.5][12]. The very first prototype of LCC mixed development, however, was the less well known, slightly earlier scheme at Princes Way and

5.2. London: Hackney MBC, Shacklewell Road and Somerford Grove, 1946, designed by Frederick Gibberd; an early Mixed Development without sharp contrasts between types of dwellings. (*AD* 6-1946, p. 143)

5.3. London: LCC Lansbury, Nankin Street and Pekin Close, late 1940s, designed by Bridgwater & Shepheard; the best-known of early Mixed Developments, an LCC showpiece of the early postwar years but not liked by the strict Modernists of the 1950s (see Chapter 15).



5.4. Basildon NTDC: Ghyllgrove, The Gore, 1957, designed by Lionel Brett and Kenneth Boyd; Mixed Development within a narrow band of heights but sharply contrasted types: 2-storey and 3-storey terraced houses and '3-storey flats on "pilotis"', the latter completely surrounded by open public land.

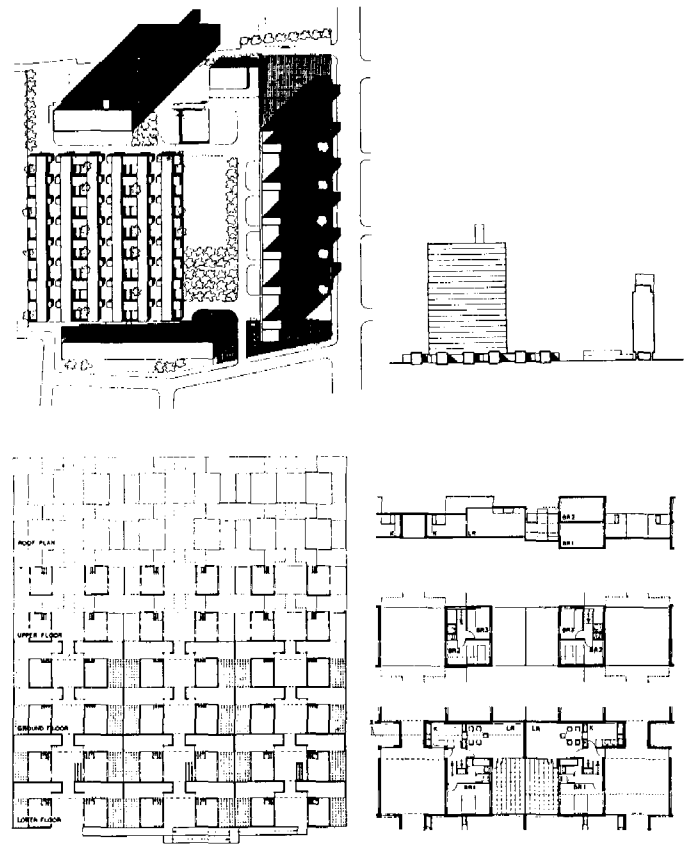
Wimbledon Park Side (Nos. 2 & 3 Sites; also called Ackroydon) whose construction commenced in 1952. Here, the 436 dwellings comprise a total of nine types of dwellings: 314 flats (in 11, 8, 5 and 3-storey blocks with internal staircase access, plus 3, 4 and 5-storey blocks with balcony access); two types of maisonettes; and terraced cottages. Not the least significant innovation, of course, was the fact that high point blocks were included here—their first occurrence in an LCC development.[13] But such a degree of variety was not to be repeated: the Department's architects tended to eliminate the multitude of medium-height intermediate solutions. At Portsmouth Road (Alton East), 58% of dwellings were in high blocks, 32% in maisonettes and 10% in houses. The most striking element in all these outer suburban estates was, in effect, not so much the fact of dwelling mix—there was nothing special, after all, about suburban houses as such—but the fact that one could now expect high blocks in the most leafy surroundings [7.7].

In the developments of the LCC and English provincial authorities such as Birmingham CBC during the later fifties, we witness a consolidation as regards sizes and types of dwelling: large dwellings for large families in cottages, medium-sized dwellings in cottages or maisonettes and small dwellings in flats.[14] Following the subsidy changes in MHLG's 1956 Act, there was a further simplification as regards height, leaving one preferred type to correspond to each of the three size categories: two-storey cottages, four-storey maisonettes, and multi-storey blocks of flats, a division which was (especially in London) conveniently called '2, 4, 11'.[15] The proportions of dwelling sizes varied greatly; no agreement as to a standard division could be expected. Cleeve Barr suggested that the two-bedroom dwelling should form about 40 to 50% of all dwellings in a 'normal scheme'—whether in flats or maisonettes [5.5][16].

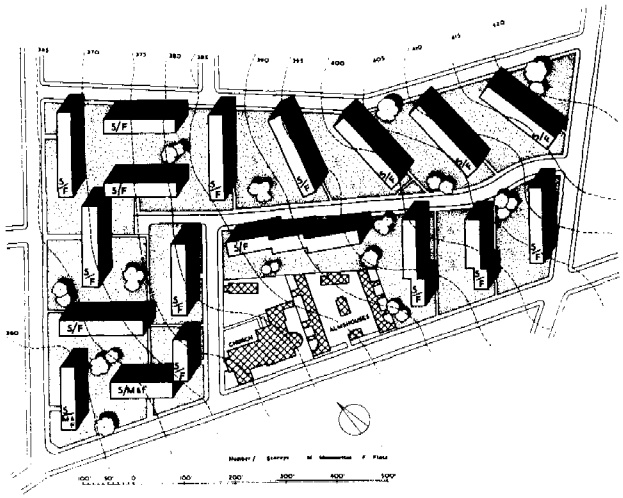
One could hardly have thought of a more solid and logical foundation for housing design than the need-fit formula of Mixed Development. However, it by no means reigned supreme. After the initial paying of lip service to the idea, some authorities, as we shall see, simply built great numbers of high blocks of flats without any of the other components. This applied especially in Scotland: in Glasgow the high blocks usually contained small dwellings only, while larger dwellings were accommodated in lower blocks of flats, not necessarily situated in the same district. In Liverpool the largest blocks, the 22-storey Camus blocks of the sixties, each contained three sizes of dwellings, one half of them one-bedroom flats and a quarter each of two and three-bedroom flats.

In the sixties, experts began to doubt the formula itself. Dislikes regarding the juxtaposition of high and low in mixed developments began to emerge: it was claimed that the users of the gardens of houses did not want to be overlooked by the residents of high flats; conversely looking down from high on to gardens and the roofs of small houses was said to increase vertigo.[17] More important, by the mid-sixties, it appeared that the attempts to allocate the right size of dwelling to the right kind of household had not, in general, worked: too many large families still lived in small dwellings and too many small households in large dwellings.[18] There seemed to be a reluctance on the part of tenants to conform with the presumed correlation between household and dwelling size. In principle, mixed development meant that every household should move to another dwelling, as soon as there occurred any change in its size or circumstances. But in practice many older couples, for instance, simply did not want to move out of their three-bedroom houses when their children had left home.[19] At the same time, there was a growing conviction on the part of housing reformers and some housing committees that there should be more flexibility in what was offered to prospective tenants. Among housing managers in England and Wales, in particular, there was also a perception that the general increase in living standards was tending to lead to a greater insistence on cottages at the expense of flats, even of smaller flats. In England and Wales, commentators held every household to be entitled to a wider range of amenities, such as a private garden or yard.[20]

By the early sixties, architectural ideas about the look and composition of a group of dwellings had begun to change from the simple juxtaposition of high and low to a preference for complex agglomerations—we might still call this 'Late Mixed Development'—into which a mixture of sizes of dwellings was usually accommodated, but without the earlier mixed development's formal, architectural emphasis on each of the different dwelling types [19.9]. These new complicated plans, again chiefly an English, or, rather, London, affair, also made possible the more frequent provision of private yards or small gardens, even in the case of flats. There was now a demand for greater 'flexibility' all round, as well as



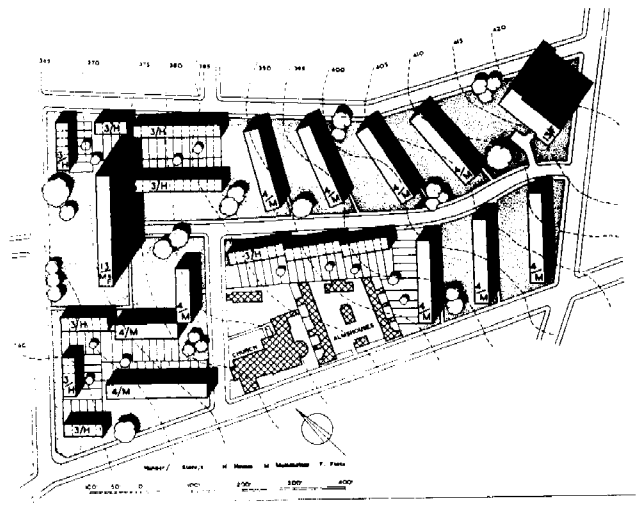
5.5. Mixed Development proposals by Chamberlin, Powell & Bon, 1956: row houses and skyscrapers. (*AD* 10-1956, p. 327)



Density: 140 habitable rooms per acre

No. of habitable rooms required . . 1,718
No. of dwellings required . . . 456

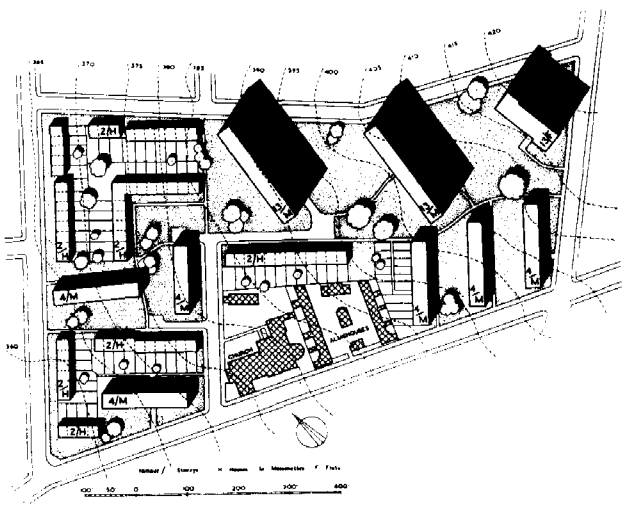
Type of dwelling and % required	5-Storey flats		5-Storey flats and masionettes		Dwlgs.	Rms.
	Dwlgs.	Rms.	Dwlgs.	Rms.		
BSR. 1 p. 1 rm. 5% .	25	25	—	—	25	25
1 BR. 2 p. 2 rms. 5% .	25	50	—	—	25	50
2 BR. 4 p. 3 rms. 20% .	90	270	—	—	90	270
3 BR. 4 p. 4 rms. 25% .	115	460	—	—	115	460
3 BR. 5 p. 4 rms. 30% .	135	540	—	—	135	540
3 BR. 6 p. 5 rms. 8% .	30	150	8	40	38	190
4 BR. 7 p. 6 rms. 7% .	—	—	32	192	32	192
Totals . . .	420	1,495	40	232	460	1,727
Percentages . .	91·3	86·5	8·7	13·5	—	—



Density: 140 habitable rooms per acre

No. of habitable rooms required . . 1,718
No. of dwellings required . . . 456

Type of dwelling and % required	3-Storey houses		4-Storey maisonettes		13-Storey flats		13-Storey maisonettes		Dwlgs.	Rms.
	Dwlgs.	Rms.	Dwlgs.	Rms.	Dwlgs.	Rms.	Dwlgs.	Rms.		
BSR. 1 p. 1 rm. 5% .	—	—	—	—	24	24	—	—	24	24
1 BR. 2 p. 2 rms. 5% .	—	—	—	—	24	48	—	—	24	48
2 BR. 4 p. 3 rms. 20% .	—	—	32	96	59	177	—	—	91	273
3 BR. 4 p. 4 rms. 25% .	—	—	30	120	—	—	84	336	114	456
3 BR. 5 p. 4 rms. 30% .	—	—	136	544	—	—	—	—	136	544
3 BR. 6 p. 5 rms. 8% .	36	180	—	—	—	—	—	—	36	180
4 BR. 7 p. 6 rms. 7% .	32	192	—	—	—	—	—	—	32	192
Totals . . .	68	372	198	760	107	249	84	336	457	1,717
Percentages . .	14·8	21·6	43·3	44·2	23·4	14·5	18·3	19·5	—	—



Density: 140 habitable rooms per acre

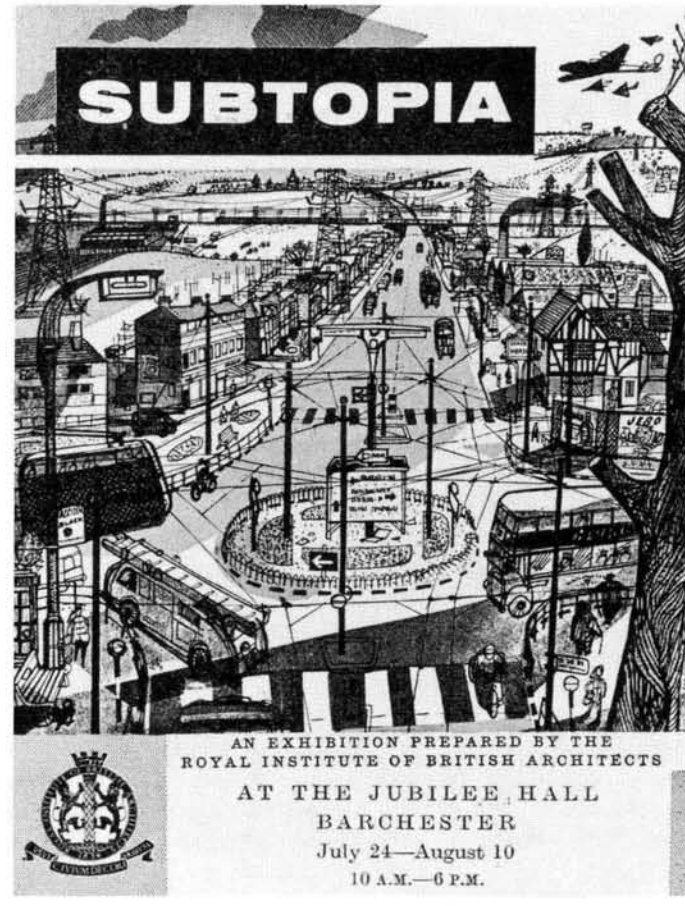
No. of habitable rooms required . . 1,718
No. of dwellings required . . . 456

Type of dwelling and % required	2-Storey houses		4-Storey maisonettes		13-Storey flats		13-Storey maisonettes		Dwlgs.	Rms.
	Dwlgs.	Rms.	Dwlgs.	Rms.	Dwlgs.	Rms.	Dwlgs.	Rms.		
BSR. 1 p. 1 rm. 5% .	—	—	—	—	24	24	—	—	24	24
1 BR. 2 p. 2 rms. 5% .	—	—	—	—	24	48	—	—	24	48
2 BR. 4 p. 3 rms. 20% .	—	—	—	—	52	156	38	114	90	270
3 BR. 4 p. 4 rms. 25% .	—	—	—	—	—	—	114	456	114	456
3 BR. 5 p. 4 rms. 30% .	—	—	116	464	—	—	20	80	136	544
3 BR. 6 p. 5 rms. 8% .	37	185	—	—	—	—	—	—	37	185
4 BR. 7 p. 6 rms. 7% .	32	192	—	—	—	—	—	—	32	192
Totals . .	69	377	116	464	100	228	172	650	457	1,719
Percentages . .	15·0	21·9	25·3	26·9	21·8	13·2	37·6	37·7	—	—

5.6. Mixed Development: three possible ways of housing the same number of inhabitants on the same piece of land at 140 persons per acre. (*Flats and Houses 1958*)

greater adaptability. Looking back to the housing of the fifties, with its sharply contrasted high and low blocks, a designer of the following decade drily observed that this contrast might be taken to indicate that a different kind of person lives in each.[21] When, in 1968, we read that 'most large dwellings will probably be used at some time during their life for families with children, even if they are unsuitable', and that this is not something one should worry about, we realise that mixed development as a principle had virtually been abandoned.[22]

6.1. A street in the East End of London as depicted in one of the many small general books on planning and design which appeared during the war. The caption runs: 'Good, solid, sanitary building, perhaps . . . But it is no sort of a place for people to live in, particularly when it is surrounded with miles of similar streets and buildings. It is little better than an open-air prison, and besides being unhealthy, thwarts the opportunity for a full and happy life.' (RIBA, *The Rebuilding of Britain*, 1942)



6.2. Another reviled image of the 1940s and 1950s: the seemingly *unplanned* and *undesigned* suburban 'sprawl'. (*JRIBA* 8-1957, p. 395)

6.3. London: LCC Hilldrop Estate, Islington, 1946–8, designed by C. H. Walker; dense developments of 'block dwellings', examples of what the more advanced Modern-minded *Architects' Journal* in 1949 called the 'inhuman' type of postwar London flats, which were based on interwar, and ultimately pre-World War I low-cost types of urban dwellings (see Chapter 15). (*AJ* 17-3-1949, p. 251)

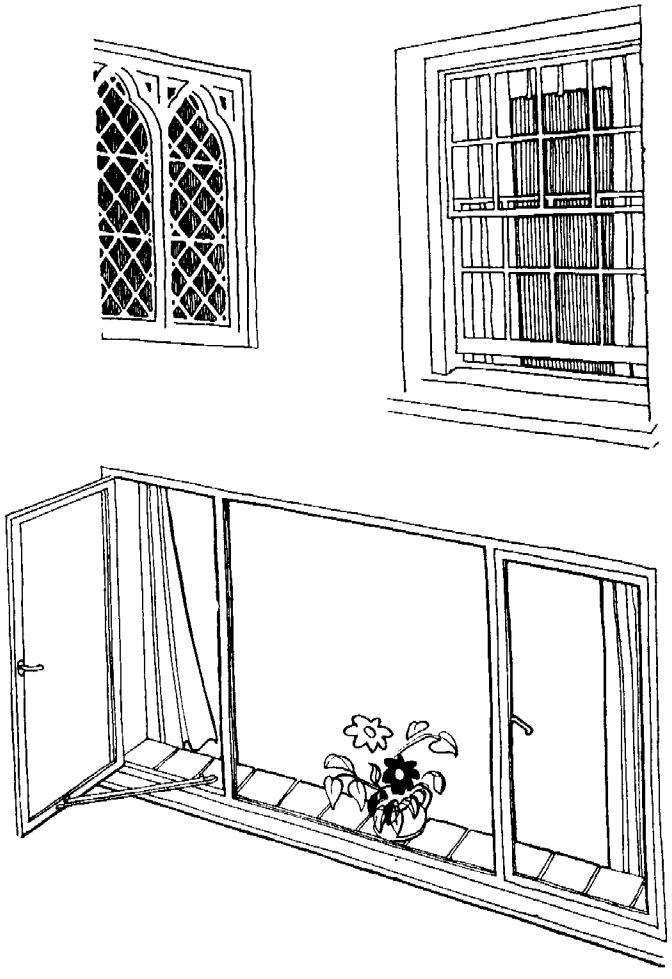
CHAPTER 6

Daylight and Densities: Zeilenbau and Open Space

. . . capable of an exact and scientifically sound solution.
Thomas Sharp, 1940[1]

IT WAS DURING the 1930s and 1940s that the reformers' invectives against older urban and suburban housing reached their highest pitch [6.1, 6.2, 6.3]. The characterisation 'slum' was extended from the narrow and overcrowded developments of the older parts of towns to the average late Victorian tenement or terrace. Above all, it appeared that their inhabitants lived in permament semi-darkness. The provision of almost daylight conditions inside the dwelling was emphasised by all Modern architects, most fervently by Le Corbusier, although the origins of these notions date back to the health movement in the nineteenth century. Daylight was cherished at most times in the history of building, but it was usually one among many other desirables. Today, again, many dwellers are prepared to put up with less light, when this means the enjoyment of other benefits, for instance those resulting from a central urban location. To the Moderns, such kinds of thinking would have been anathema. In the early stages of our developments, designers even brought in a straightforward medical argument. As Maxwell Fry stated in 1934 in an article on working-class housing: 'In the last few years the medical profession has seriously awakened to the therapeutic benefits of daylight, and the call for larger areas of window space'; and Arnold Whittick pointed out in 1943 that 'typhoid germs live only a few minutes in the sunlight and two years out of it'.[2] Later, though, the medical argument was rarely thrust into the foreground in this way, perhaps in order to avoid stressing too much what had come to be seen as the 'clinical' image of the Modern style. In any case, the well-appointed Modern individual house we now find fitted with a wall-to-wall window, at least where it faced the garden.

Windows had for many decades been of standard size, form and even manufacture, especially in England and Wales; now their shape was open to discussion [6.4].[3] By some, long horizontal shapes were considered healthier, by others vertical ones.[4] From the fifties, new forms of construction, such as the 'box frame' or 'cross walls', made it possible for windows in flats to reach along the whole of the external walls.[5] For the daylight-minded reformers, the new aim was to plan the flat, or, rather, the entire block of flats, in a manner so as to let as many of the flat's perimeter walls as possible coincide with the external walls of the block. In the thirties, there emerged a radical critique of the plans of the older type of smart blocks of flats which are such a familiar sight in the West End of London [6.22]: towering structures, usually aligned along the surrounding streets. Inside such a block, one or several, often exceedingly narrow, courts give only scarce light to many of the rooms. Furthermore, the depth of the block made necessary the most complicated



6.4. 'The Development of the Window: Elizabethan, Georgian and contemporary ways of solving a problem.' An example also of Modernism's polemical use of history: life in older houses happened in the dark. (ABT, *Homes for the People*, 1946)

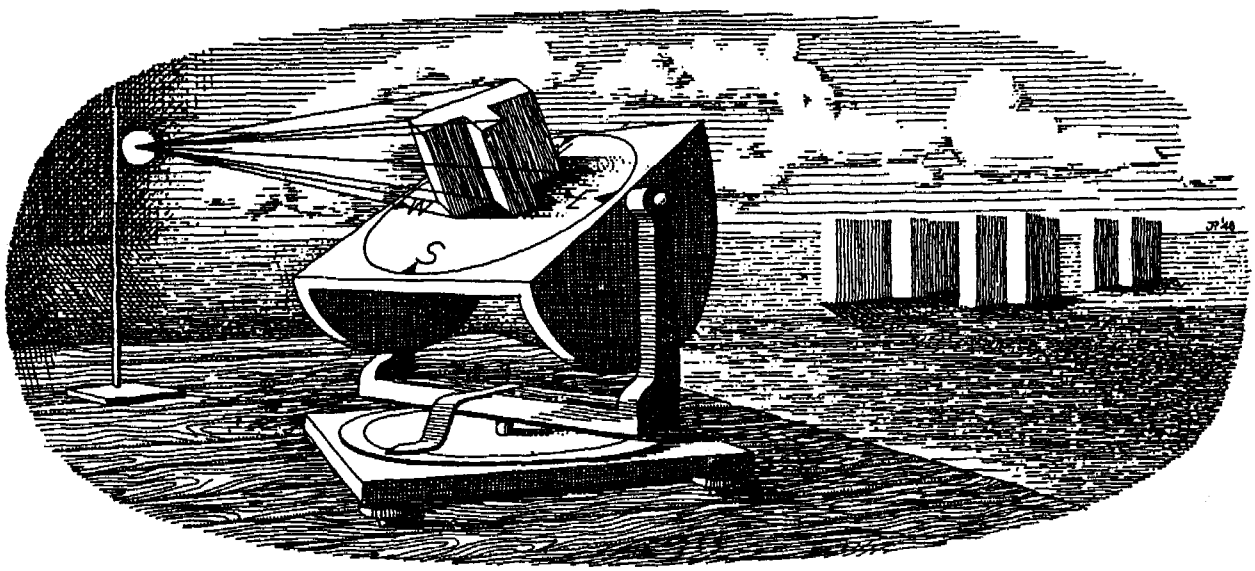
shapes for subsidiary rooms and corridors—'more ingenious than ideal', as Yorke and Gibberd caustically observed in their book *The Modern Flat* of 1937.[6] Working-class flats were usually criticised for many reasons; yet their planning, being much more straightforward (at least in England) than that of more expensive flats, was thought to show a number of advantages. The most modern examples had by that time already adopted the simple rectangular shapes that were regarded as appropriate for healthy planning; each flat gave out to two sides; each flat, as well as the entire block, formed a simple rectangular shape; every room, including kitchen and bathroom, received a good measure of daylight.

In her recent evaluation of mixed development, Ruth Owens remarked that 'daylight was the most onerous of the determinants of estate layout'.[7] For roughly a century, of course, there had already existed byelaws concerning the treatment of the space around buildings. But in the thirties, there was a profound change in thinking on this subject among architects, planners and housing reformers. Now the old regulations, with their prescriptions of maximum heights and minimum distances between buildings, aimed to prevent overshadowing, were repudiated as a kind of externally imposed 'negative planning'. Instead, there was a call for a 'positive'[8] way of designing, in which optimal conditions would be ensured by taking into consideration, from the start, all aspects of planning the building and its surroundings. Such ideas were intimately linked with the abandonment of the traditional street and the 'street block' as the chief determinant of building layout. The provision of daylight became a 'planning matter', almost in the sense of town planing: something that went far beyond the concerns of the individual building.

We must tackle one by one the various measurements and values involved in housing layout: daylight, density, the form of the dwelling and the layout of the spaces in between. All designers and reformers agreed that it was most important to be scientific about this process of planning. The provision of sunlight, wrote the most eminent of the new town planners Thomas Sharp, was 'capable of an exact and scientifically sound solution'.[9] In retrospect, though, we must attempt to distinguish between calculable facts—scientific measurements—on the one hand, and, on the other, the specific values of the period which guided the conclusions derived from the measurements.

The first concern was for 'orientation', one of the oldest in the planning of dwellings. It had long been taken for granted that rooms facing the quarter between north-east and north-west should be avoided, and hence, as a general rule, all blocks of flats were to be built along a north–south line.[10] A good Modern 'through' flat would thus have the maximum of light in the morning as well as in the afternoon. But the more urgent concern was now with light as a measurable quantity, which could be stipulated in a variety of ways: for instance, by 'requiring sky visibility from the working parts of a ground floor living room', or, as the Dudley Report put it, 'every room should have a clear view of part of the sky'.[11] Later on we encounter the demand that sunlight should penetrate the dwelling for at least one hour a day at least, ten months of the year.[12]

Some of these pronouncements were inevitably not very precise. But one requirement is made clear by all of them. The Dudley Report writes: 'every room'; and this literally means every room in every flat. It is the concern for equality of provision which dominates the thinking of the reformers, and which creates a situation quantitatively and qualitatively different from the old space-about-buildings byelaws. These older prescriptions chiefly attempted to guarantee a minimum of light, and were thus associated with a very uneven distribution of light and darkness; hence, however ingeniously the older blocks of flats may have been planned, they were unacceptable to housing reformers and Modern designers such as Yorke and Gibberd. The most important result of the proliferation of research activity in this field, especially during the war, was the official report of 1944, *The Lighting*

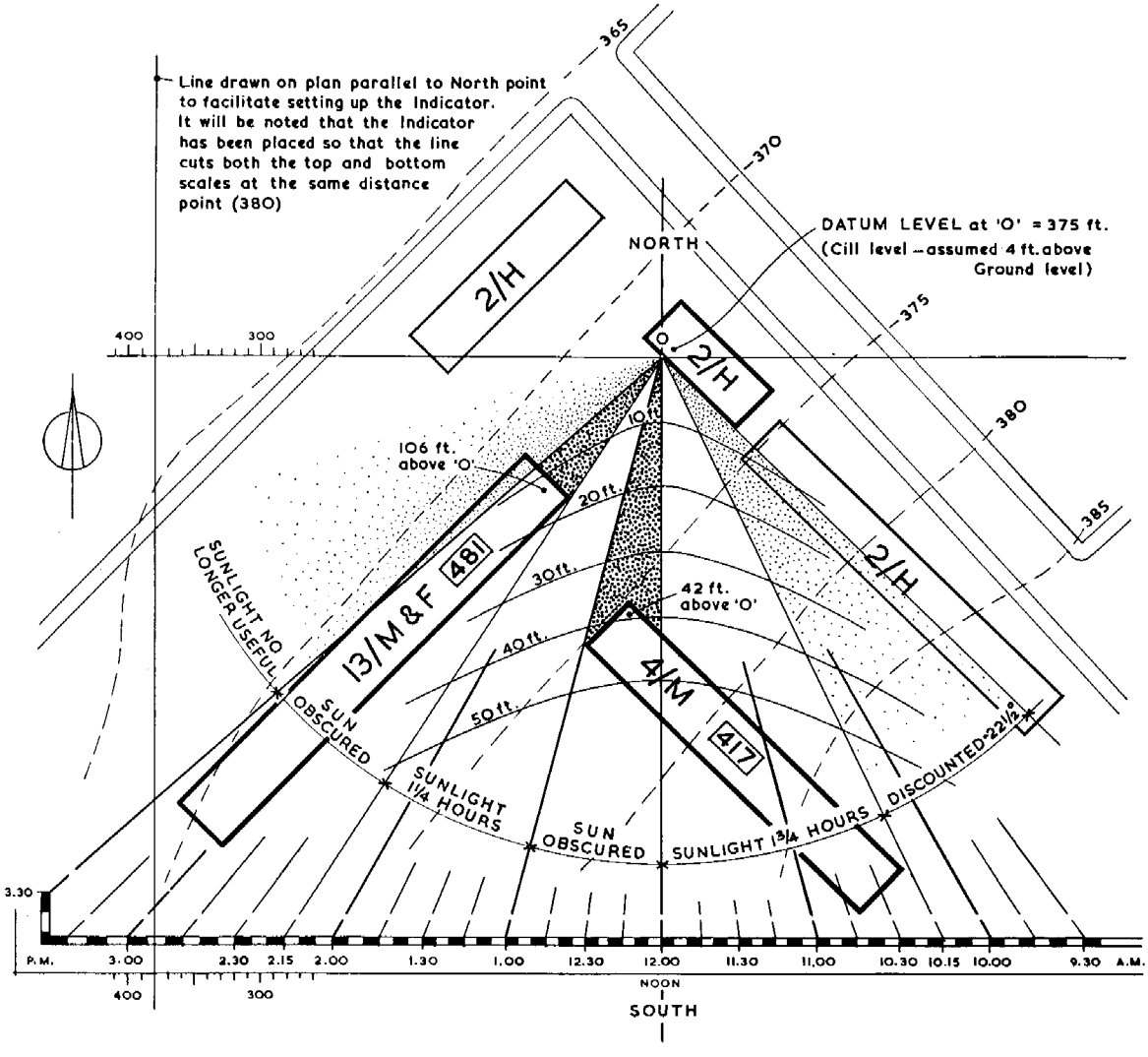


6.5. Vignette for an article on 'The Influence of Technical Research on Design and Methods of Building' by M. Hartland Thomas, 1948. (*JRIBA* 3-1948, p. 188)

of Buildings.[13] A number of techniques and instruments were developed in order to establish the 'Daylight Factor' (a term which, roughly speaking, denoted the daylight inside a room as a proportion of the light outside). These efforts resulted in the promulgation of a 'Daylight Code' in 1950. There were similar attempts in connection with sunlight [6.6]. Subsequently, from the late fifties, techniques of measurement grew more complex—at the same time, paradoxically, as the architectural designers' interest in the subject as a whole was declining.[14]

By the 1940s, the older byelaw regulations and associated calculations regarding 'space about buildings' had become divided into two complementary factors. A single set of criteria had been replaced by an equation between the measurement of light and a new way of calculating the use of land and space: the measurement of 'density'. Housing density was a measurement which in Britain dates back to the early days of town planning. At the time of World War I, the Garden City planner Raymond Unwin argued that low density was not only visually and morally preferable, but that it also made economic sense. During the twenties, Unwin also turned these 'nothing gained by overcrowding' arguments against the skyscraper.[15] From the thirties, the term was more widely adopted: to state a density figure could give a general idea of the character planned for the town or area. Town planners devised a pyramidal structure of densities, in order to establish a scale of activities and functions, ranging from the city centre to the outer suburbs. It was still, on the whole, assumed that new residential areas would mostly be built on the outskirts at low densities. Therefore, their measurements were expressed as houses per acre—'twelve houses to the acre', in Unwin's case.

This measurement obviously had a limited application, especially in the case of flats, and it made even less sense for districts containing dwellings of varying sizes. The Model Clauses of 1938 specified another category of density for flats: persons per acre.[16] This more abstract (as far as shape of buildings was concerned) but more precise type of measurement gradually superseded its predecessor. 'The question of the number of people that can be housed in a given area is obviously all important.'[17] During the fifties and sixties, 'p.p.a.' was to become a measurement employed by all those involved in planning and housing, designers and politicians, in their negotiations over the types and heights of housing to be built in particular areas or locations. Later variations, such as 'habitable rooms per acre' (h.r.p.a.) and 'bedspaces per acre' (b.s.p.a.), were of narrower currency, and did not usually differ greatly from persons per acre. A further refinement was provided by differentiating between 'gross density', covering a whole district with many kinds of land



6.6. Application of the Standard Sunlight Indicator to a group of 2-storey houses, 4-storey maisonettes and a 13-storey block of maisonettes and flats. (MHLG, *Planning for Daylight and Sunlight* (Planning Bulletin 5), 1964)

uses, and 'net density', or 'net residential density', concerned with the individual group of dwellings as such.

We have noted above that the 'flats versus houses' controversy of the 'forties was to some extent a controversy about the merits of the 'urban' and the outer suburban. It was thus a controversy about densities: Osborn's advocacy of State-imposed decentralism versus urban high-density concentration. After 1943, the *County of London Plan*'s concentrically zoned densities became established as a kind of planning orthodoxy: 200 p.p.a. as a highest generally acceptable figure, 136 and 100 as inner suburban levels, and lower figures for the outer suburbs. We have to emphasise here again that our account of every one of these scientific procedures needs to be divided into the neutral methods of measurement itself, and the values or ideas that direct the selection of results and help formulate the conclusions. In the case of 'density', in this context it is clear that what interested an increasing number of town planners and housing reformers was the desire for more daylight at high densities. In low-density developments the question would not have arisen; there was no problem in providing plenty of light, although the most ardent supporters of urban high density managed to slip in an occasional side-swipe, to the effect that low-density developments could actually, in certain cases, lead to insufficient lighting—for instance, in the narrow passages between pairs of semi-detached houses![18] 'Density', like the 'Daylight Factor' was first of all a scientific way of measuring, but 'High Density' was a value, a particular desire, favoured by reformers and designers in those decades—analogous to the way in which low density, as such, had seemed desirable for Unwin in the earlier decades of the century.

High density is one of the crucial factors that underpin much of the housing discussed in this book. It provided, as we saw, an intrinsic link between housing design and the new science of town planning. Back in the late thirties, English supporters of high density, such as Elizabeth Denby, had asserted that that country's towns should be built in a more compact way, saving land, long journeys to work, 'unnecessary roads, sewers and other services', and that satellite towns and suburban sprawl were inimical to a happy social life.[19] The images of the Modern Age new constructions, including blocks of flats, as shown in Yorke and Gibberd's book of 1937, were juxtaposed with the 'old-fashioned' English cottage-style suburban house. During the war, Government reports stressed the need to preserve agricultural land; reinforced by the food shortages of the war and postwar years, this argument was eagerly taken up by the supporters of high density.[20] In the fifties, critics and architects formulated a new ideal of life in dense towns, an ideal to which we shall come back in the chapters dealing with the concept of 'community'—where we will be concerned not so much with measurements, but with the 'look' and the 'feel' of high density.

On the other hand, when we pass on to consider the great municipal drives for housing production in Section II, the arguments concerning density will appear yet more complex. A new faction, the municipal 'housing crusaders', began to build large numbers of Modern multi-storey blocks in suburban or gap-sites irrespective of the notional density of the sites or blocks in question, leaving many designers protesting. The 'low-density' faction reiterated that the overall density of cities was too high, and preached the 'overspill' of 'excess' population to low-density New Towns and expanded towns. The 'high-density' supporters, on the other hand, argued that multi-storey blocks were especially desirable in 'high-density' inner urban areas, in the context of designer-supervised comprehensive redevelopments, but should only be used occasionally as vertical accents in the outer suburbs.

The third variable in the discussions of light and density was the form and type of dwelling, and the layout of the groups of dwellings. In terms of traditional Scots or English housing patterns, an urban density of 200 p.p.a. could imply, in the first case, better-class tenements, and, in the second, the very densest kind of terraced development, for example back-to-backs. Both these possibilities were anathema to the reformers because of the lack of light. By 1950, another, much more recent type of dense urban development became anathema, too, the London type of four to five-storey 'block dwelling'—although that condemnation contained reasons other than density. For the supporters of the high-density urban dwelling there was, we must remember, no resorting to suburban low density. As Yorke and Gibberd confidently stated in 1937: 'If we suppose . . . that people are housed in tall flat buildings in wide gardens, then the idea of dispersing them in little individual villas must seem monstrous.'[21] A little later Thomas Sharp wrote: 'as for flats it is possible . . . to put as many as a hundred [flats] or more on a single acre, with each flat enjoying an extremely high standard of sunlight penetration'.[22] Sharp overshot the mark probably more than he realised; his implied density of 300 plus would not have been tolerated by planners in the later forties and early fifties. For LCC planners, 200 remained the upper limit. But as the fifties went on we witness a number of proposals, by Kadleigh, Jensen and others, for special city centre developments with dwellings at a density of 300, 400 or more. After all, 415 p.p.a. was the net density of one of the most successful 1930s English high-class complexes of flats, Dolphin Square in Pimlico.[23]

Thus there was one type of building that fitted the trend towards higher density: the block of flats. In our previous chapter on the question of flats, we adduced arguments of 'need and fit' in favour of this type, without ever reaching any very clear conclusions; in the context of density and daylight, by contrast, the arguments for the flat appeared more clear-cut. Together, they seemed to provide a basis of argument which remained firm for some time. Moreover, the scene was set for blocks of flats to go high. The already mentioned report of 1944, *The Lighting of Buildings*, does not explicitly deal with dwellings; but it does deal with urban areas and it takes high density for granted. A vicious circle, it was now argued, had resulted from the old custom of building around the street-block perimeter: higher, denser buildings meant a reduction of light. Perimeter layout should be replaced by 'open planning'. Now it appeared possible to maximise all three desiderata: more light, higher density in general and a greater number of dwellings. And there was a fourth desideratum which could be achieved at the same

time as the other three: open space. If, that is, one builds high.

ZEILENBAU AND OPEN SPACE

We can now turn to the actual new patterns of housing which were introduced around the time of World War II by the 'town-minded Modern architects'.[24] What, precisely, resulted from the demand for 'open planning'? Designers wished to banish the kind of attitude to high density epitomised, for instance, in the New York 'zoning laws', which converted high buildings into great mound-like structures, towering over narrow streets, tapering away at the top. Instead, as regards mass-housing layout, Modern architects proposed a free arrangement of clear, rectangular shapes, independent of the street network.

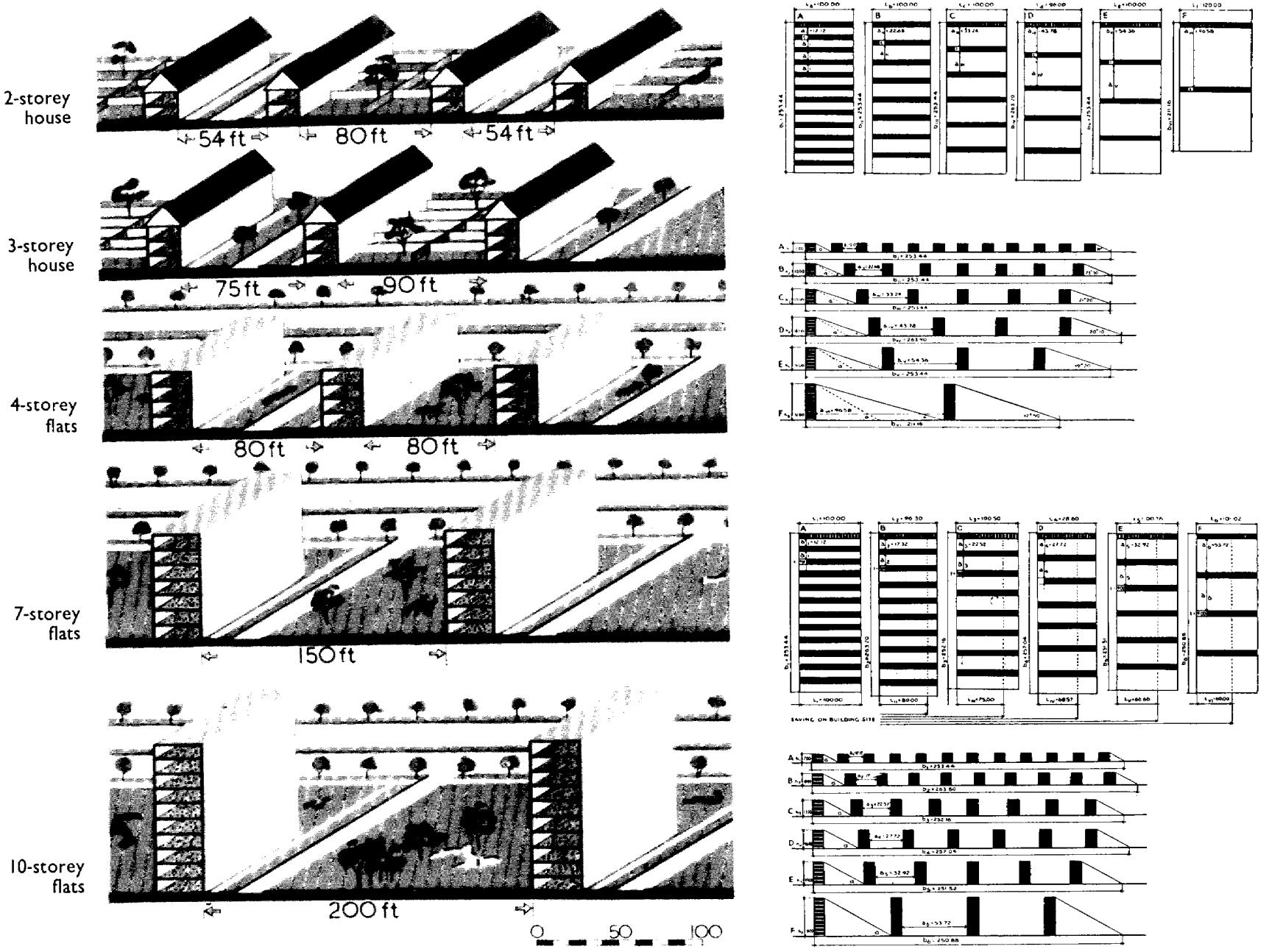
The 1930s version of this style of housing layout was summed up by the German word 'Zeilenbau': the arrangement of blocks, row after row, as regular as the *Zeilen*, as the lines on a page of writing. The practice dates back to Modern German municipal estates of the twenties.[25] It seemed the most scientific, in fact, the only scientific, layout. The investigators of daylight provision denounced all forms of housing other than the straight, rectangular block. The worst layout, they claimed, was the enclosed courtyard; blocks of a cruciform or a Y plan were somewhat better. Other reasons for the condemnation of courtyard blocks and other compact or enclosed layouts were also advanced: their alleged lack of privacy, their noise and so forth.[26] During the thirties, the main impulse towards Zeilenbau building, and supporting calculations, came from Ludwig Hilberseimer and Walter Gropius.[27] They had formulated their ideas around 1930, and the latter's book of 1935, *The New Architecture and the Bauhaus*, spread their ideas throughout the English-speaking world [COLOUR III]. Strict orientation was the first principle: a block should be aligned from north to south. If the existing street pattern ran in a different direction, then the Zeilenbau blocks should be planted independently of the street pattern. 'The sun should determine the orientation of houses, not the street.'[28]

Even more important, however, was Gropius's arithmetical and geometrical argumentation. His main claim revolved around height [6.7]. Gropius observed, quite straightforwardly, that increased height allows one to house more people on a given piece of ground: but, he also asserted, contrary to the anti-high density arguments put forward by some English town planners, that this did not result in less light for the inhabitants. In a comparison of high blocks and low blocks on a given site, of the same size, Gropius showed that the light angle remained the same, but that one-third more people could be housed on that site. Conversely, at a constant ratio of inhabitants to site area, going higher with the buildings would reduce the number of buildings and would thus allow a reduced light angle—and permit more sunny grounds between the blocks.[29] According to this argument, a height of between eight and twelve storeys appeared ideal; the worst solution seemed the old tenement blocks of three, four or five storeys, which fell between houses and high flats, with the advantages of neither. With calculations concerning the angles of light being so precise, it was, of course, essential to reduce other obstructions to the minimum: there was no room any more for pitched roofs.

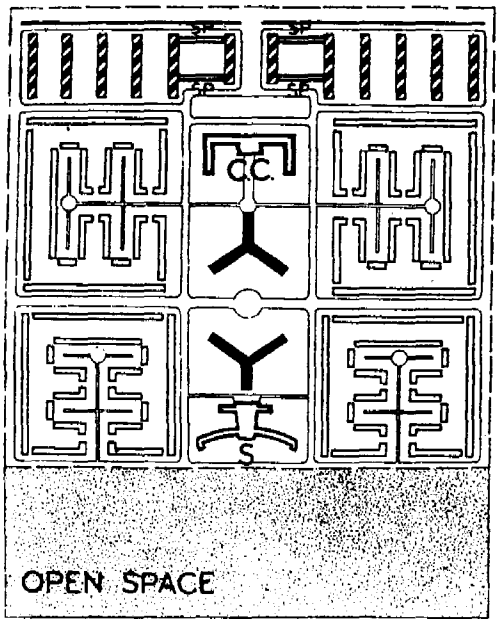
In 1934, the Council for Research on Housing Construction published designs for long parallel blocks which were still very densely placed and, as yet, not much greenery was intended.[30] In the following year, one of the foremost English Modern architectural practices, Tecton, won a Cement Marketing Company competition for Workers' Flats with a Zeilenbau project.[31] By that year, the just completed Bergpolder development in Rotterdam, a single, long, slim, high slab block situated in its own patch of greenery, was given extensive publicity in Britain [6.12][32]. However, most major private Modern blocks of flats of the thirties, such as Highpoint, Pullman Court, and also Quarry Hill in Leeds, did not adopt the pure Zeilenbau principle, but instead adhered to a cruciform or semi-courtyard plan. It was only after 1945 that the major designs in public housing, such as Lubetkin's in Finsbury and Powell & Moya's in Pimlico, began to adopt the new methods.

For Gropius, open space served to let the maximum of light into the flats; but also needed careful consideration in itself. Blocks must be distanced from the public street. Access was designed through special small roads leading to single blocks or pairs of blocks, so as to disturb the green spaces as little as possible. 'The demand for more spacious and above all for greener and sunnier cities has now become insistent; sun and greenery are values in themselves'; Gropius spoke of the 'Green City' or the 'City Verdant'. In England this would of course fit in with the tradition of landscape gardening. 'The true spatial approach' lies with 'landscaping in a park', the architect Sheppard Fidler said in 1953.[33] But the crucial factor was that by building high, 'open space' could also be achieved in denser inner urban situations, one major early example of which is the extremely compact Golden Lane development in the City of London [8.1]. In municipal housing this kind of space was needed for all: 'Open ground space is more important than most other amenities.'[34] However, its actual purposes remained vaguely 'the organisation of society in open space so as to intensify the sense of community to satisfy functions of active and passive recreation'. The *County of London Plan* stipulated, after 'extensive research',[35] that four acres should be allocated for every thousand inhabitants [6.8].

Altogether, the term 'space' had gained an enormous importance in discussions about Modern architecture, and we shall deal with the issue of 'community space' in later chapters. One of the new ways of considering space in Modern architecture was the way in which outside and inside spaces could interpenetrate. Modern methods of frame construction made it possible to leave out the walls between the frame, and to place a building on exposed columns or piers ('pilotis'), which appeared particularly novel in the case of high buildings [6.10]. The space thus gained served to increase the 'continuity of space', or, in more practical terms, the continuity of the grounds. It would increase air circulation and also had a number of practical uses: it served as a covered play area for children, and, in a national emer-



6.7. A geometrical demonstration of the advantages of flats over houses as well as of the advantages of building high: more light and more green areas. Left: Diagram from E. J. Carter & E. Goldfinger, *The County of London Plan*, 1945), a simplified version of (right) Walter Gropius's analysis in *The New Architecture and the Bauhaus*, 1935.



50 ACRE SITE DEVELOPED THEORETICALLY AT A DENSITY OF 100 PERSONS PER ACRE.

PERSONS PER DWELLING - 3·6
MAJOR OPEN SPACE - 4 ACRES PER 1000 PERSONS

POPULATION APPROX 4000. CHILDREN APPROX. 500 [3-15]

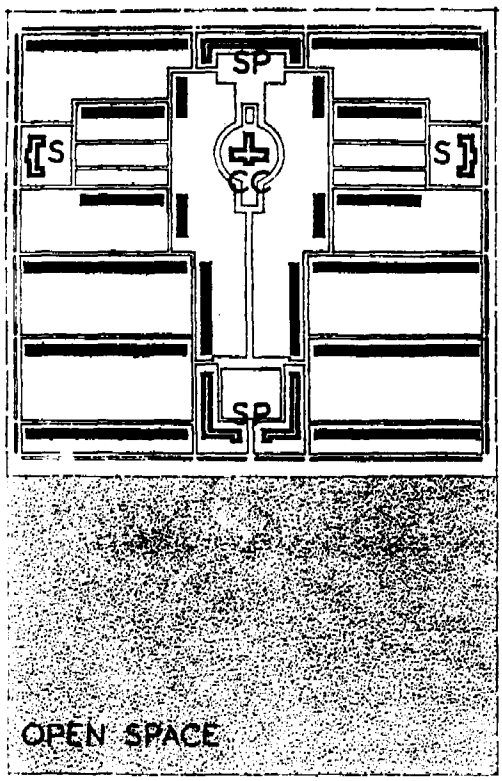
DENSITY (a) - 100 - 40 ACRES
DENSITY (b) - 80 - 50 ACRES
DENSITY (c) - 60·7 - 66 ACRES

IN 2 STOREY HOUSES - 2232 - 55·8%
IN 3 STOREY FLATS - 994 - 24·8%
IN 8 STOREY FLATS - 778 - 19·4%

OPEN SPACE REQUIRED - AT 4 ACRES PER 1000 - 16 ACRES

2 STOREY HOUSES
3 STOREY FLATS
8 & 10 STOREY FLATS
PUBLIC BUILDINGS

S SCHOOL
C.C. COMMUNITY CENTRE
SP SHOPS AND BUSINESS
N.S. NURSERY SCHOOL



50 ACRE SITE DEVELOPED THEORETICALLY AT A DENSITY OF 200 PERSONS PER ACRE.

PERSONS PER DWELLING - 3·6
MAJOR OPEN SPACE - 4 ACRES PER 1000 PERSONS

POPULATION APPROX. 8000 CHILDREN APPROX. 1000 [3-15]

DENSITY (a) 200 - 40 ACRES
DENSITY (b) 160 - 50 ACRES
DENSITY (c) 97·6 - 82 ACRES

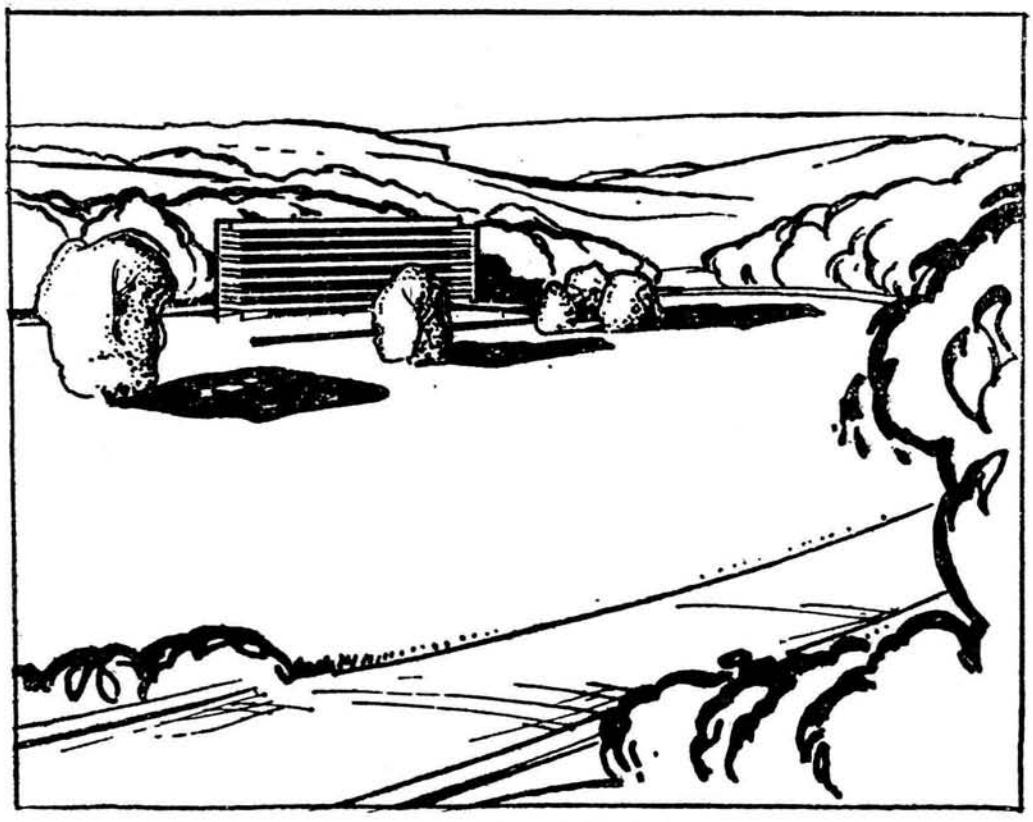
IN 8 STOREY FLATS - 2880 - 36·1%
IN 10 STOREY FLATS - 5112 - 63·9%

OPEN SPACE REQUIRED - AT 4 ACRES PER 1000 - 32 ACRES

8 & 10 STOREY FLATS
PUBLIC BUILDINGS

S SCHOOL
C.C. COMMUNITY CENTRE
SP SHOPS AND BUSINESS
N.S. NURSERY SCHOOL

6.8. *County of London Plan* of 1943, by J. H. Forshaw and P. Abercrombie: calculations for dwelling types, density and open space.



6.9. 'Flats in a Country Park', proposal by Thomas Sharp in his popular Pelican Book *Town Planning* of 1940.

6.10. London: St Pancras MBC, St Pancras Way, 1946–9, designed by Norman & Dawbarn. 'Pilotis': 'The omission of three ground-floor flats promotes added interest, varied views, greater feeling of space and contrasts of light and shade'. (Ill.: *AY*, Vol. 4, 1952, p. 155; comment: *JTPLI* 2-1953, p. 56)

gency, the space could be filled with concrete for shelter.[36] From the late fifties, it also served as a buffer zone between the grounds and the privacy of the flats above.

Finally, outlook assumed a tremendous importance. Again, the logic of the Gropius theory meant that *all* dwellings, on all floors, including the ground floor, should 'command a clear view of the sky, over the broad expanses of grass . . . instead of the ground-floor windows looking on to blank walls, or into cramped sunless courtyards'.[37] For Yorke and Gibberd, in 1937, 'the view belongs to everybody'. The chief function of the private balcony, they claimed, was that it 'improves the outlook'.[38] Just as Gropius's calculations of the relationship between building height and density differed greatly from those by Osborn, so did the open spaces of this Modern city differ from those of the Garden City, where 'garden' largely referred to private gardens, one for each family. Yet, from a broader standpoint, we are still reminded of the demands of the Garden City planners: housing and greenery formed part of an integrated conception of dwelling. High density now meant that greenery was not reserved for the outer suburbs, but could be had in the very centre of the largest cities. Interestingly, Arnold Whittick, a not uncritical supporter of Continental Modern architecture, tried to link the new planning with that of the Garden City. He claimed that most people in Britain disliked streets, and therefore wanted their house situated in greenery set well back from the street. The spacious surroundings of Modern blocks of public housing signified, above all, the freeing of the lower classes from the darkness of the slums. More detailed questions of design and use, as well as the issue of privacy versus community around blocks of flats, will be discussed further below [6.12–6.26].[39]

6.11. Edinburgh BC: Muirhouse II Development, seen from the twentieth floor of Martello Court in 1991 (see ills. 24.14, 25.21).

6.12. Illustration from the best-known English book (1937) on the subject of 'Flats', showing a late Victorian district in Preston, Lancashire, and the just-completed block, Bergpolder Flats, in Rotterdam.

"The Englishman's home is his castle."

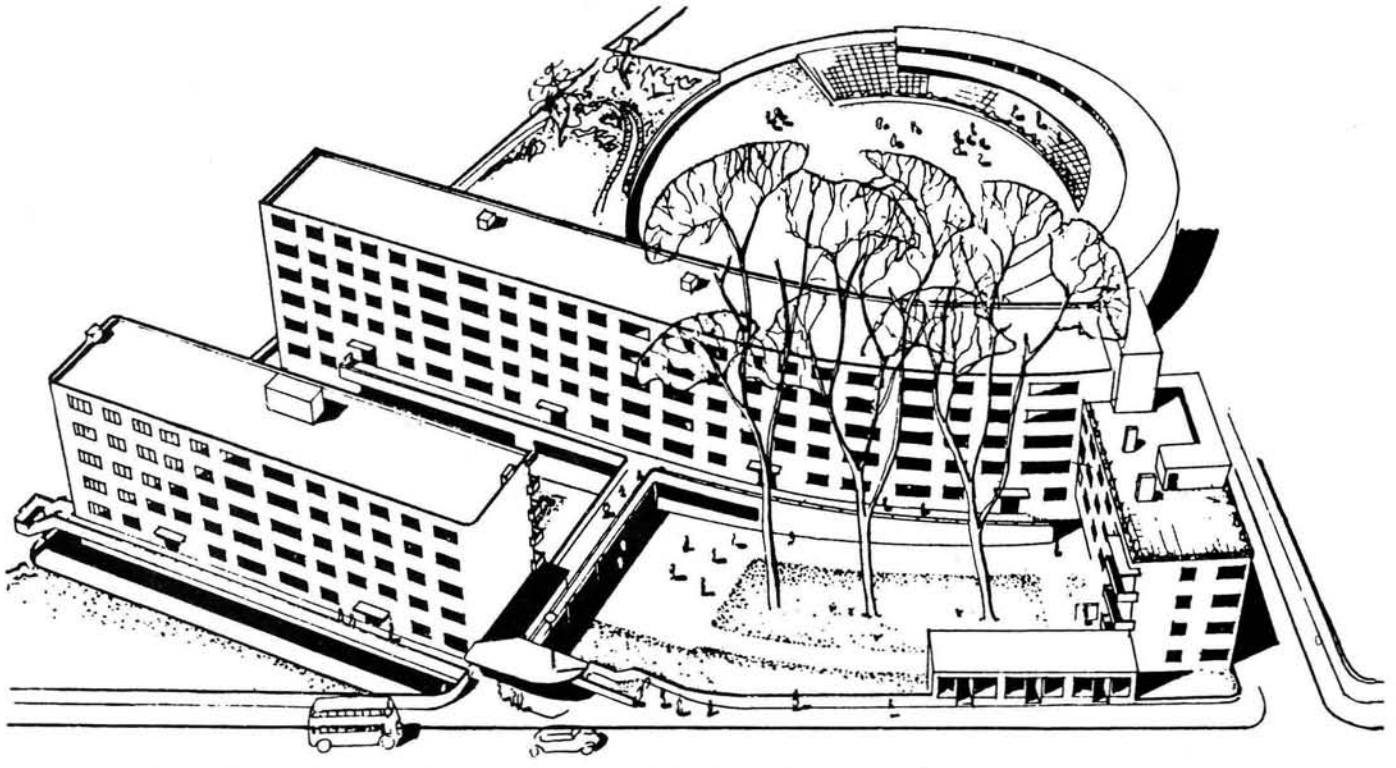
THE MODERN FLAT

F. R. S. YORKE, A.R.I.B.A.

FREDERICK GIBBERD, A.I.A.A.

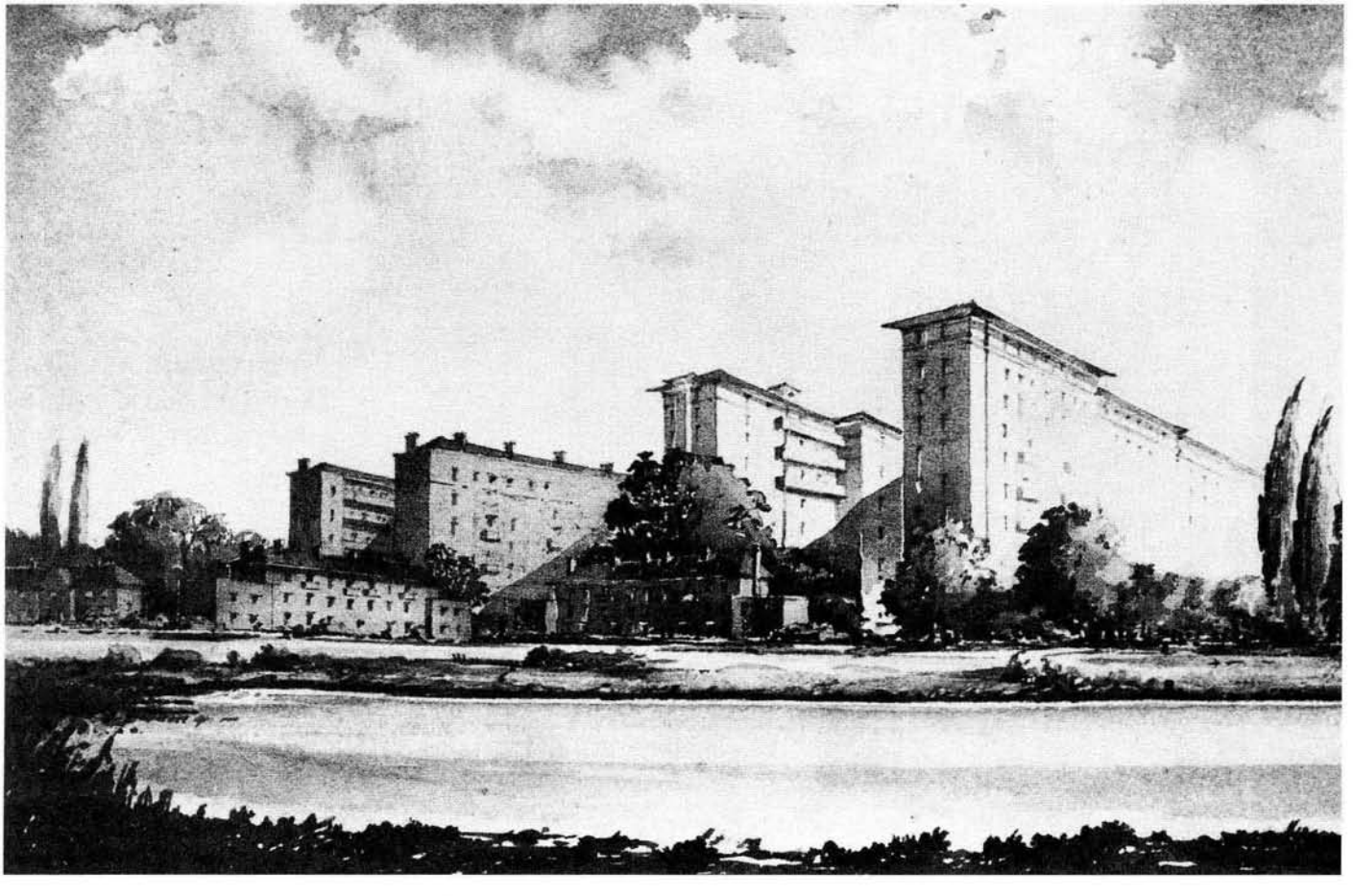
NATIONAL CENTRAL LIBRARY

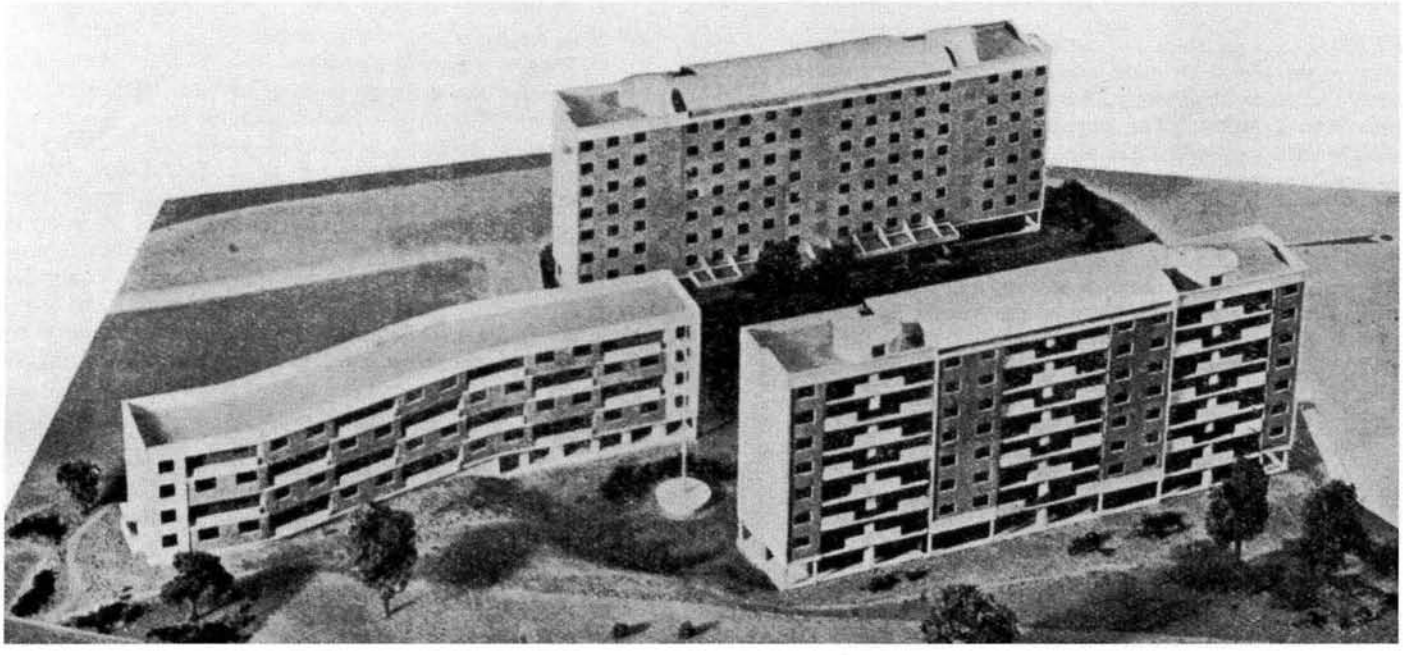
THE ARCHITECTURAL PRESS, 9 QUEEN ANNE'S GATE, S.W.1



6.13. London: Kensal House, Ladbroke Grove, 1937, low-rental flats for the Gas Light and Coke Company, designed by E. Maxwell Fry, et al., with 'housing consultant' Elizabeth Denby. This was probably the first proper Zeilenbau development in the UK. (F. R. S. Yorke and F. Gibberd, *The Modern Flat*, 1937)

6.14. London: LCC Woodberry Down Estate, Stoke Newington, planned 1943 by J. H. Forshaw et al., built 1946–8; unusual especially in its early inclusion of high Zeilenbau blocks in a suburban area. (LCC, *A Survey of Postwar Housing of the LCC*, 1949)





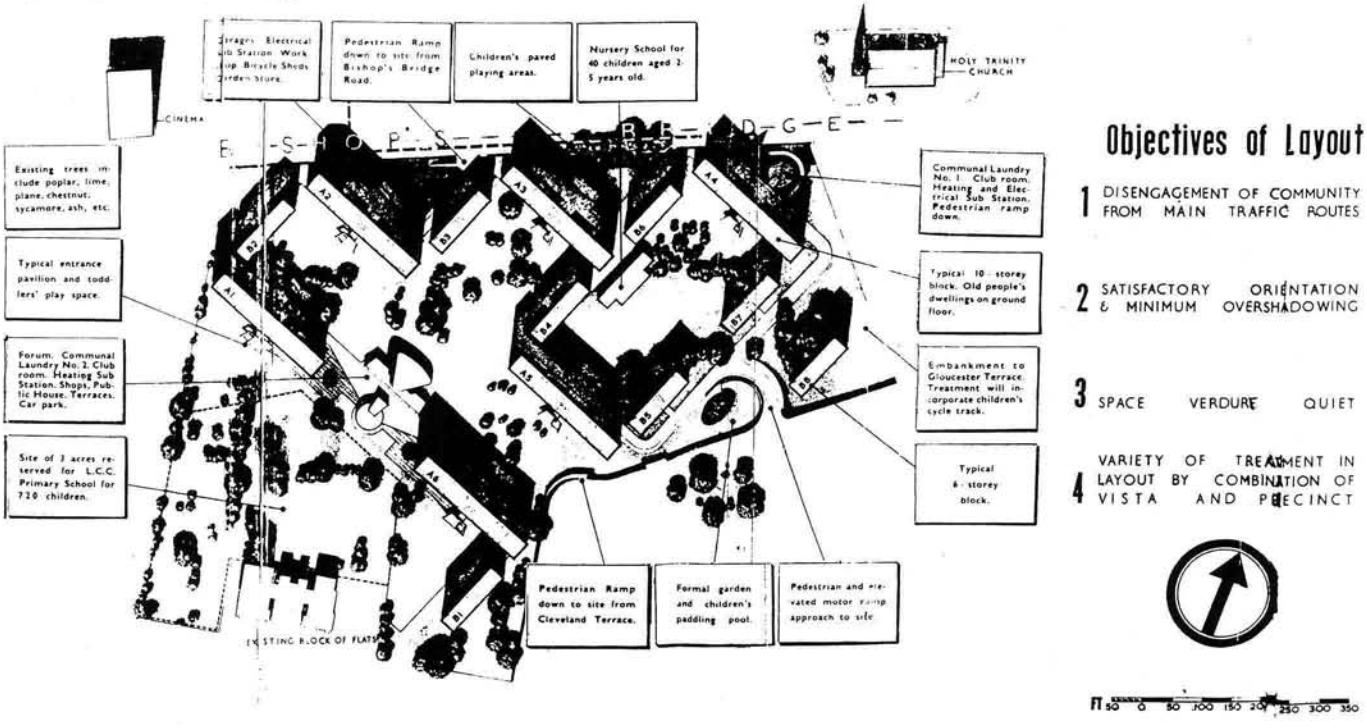
6.15. London: Finsbury MBC, Rosebery Avenue (Spa Green), 1946–50, designed by Tecton/B. Lubetkin; a variation of the Zeilenbau pattern (see ill. 10.4). (*AJ* 1-8-1946, p. 77)

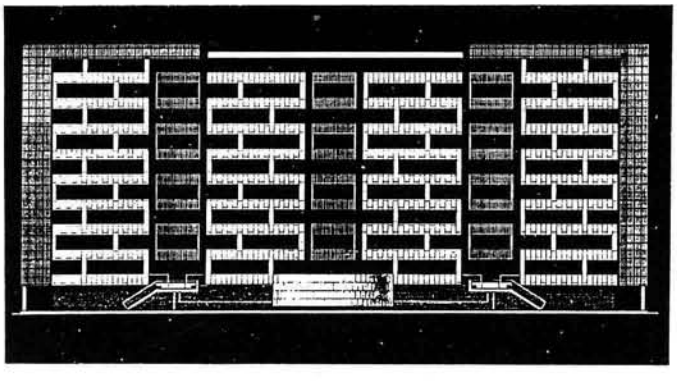
6.16. London: Finsbury MBC, Busaco Street development (Priory Green), 1947–50, designed by Tecton/B. Lubetkin (see also ill. 9.1). (*AJ* 9-10-1952, p. 433)

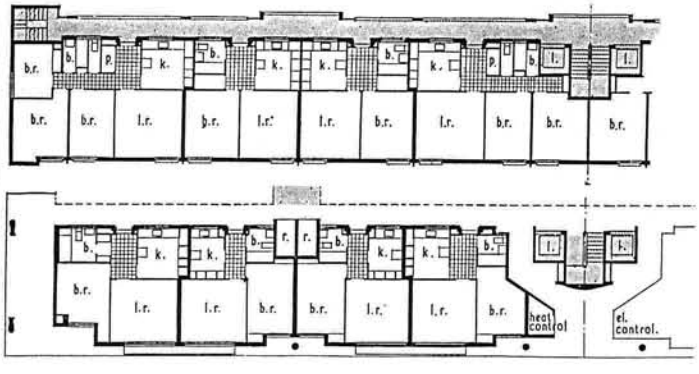
6.17. London: Westminster MBC, (Churchill Gardens), Pimlico, begun 1946, designed by Powell & Moya; photographed 1958. The blocks next to the circular district heating accumulator were the first to be completed, by the early 1950s (see ill. 6.25). (*AB* 8-1958, p. 285)

6.18. Walthamstow MBC (near London): Countess Road, Priory Court, 1946 onwards, designed by F. G. Southgate; Zeilenbau flats in strong contrast to the ordinary outer suburban rows of houses (see also ill. 6.24). (Vestry House Museum, Waltham Forest)

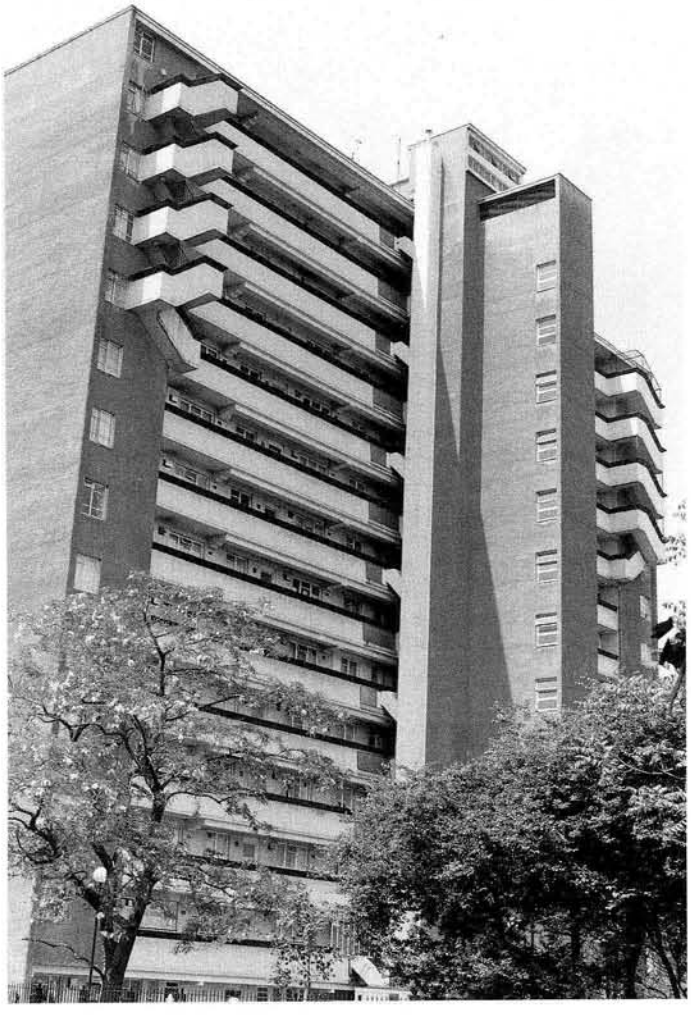
6.19. London: Paddington MBC, Bishop's Bridge Road (Hallfield Estate), 1949, designed by Tecton, later Drake & Lasdun. This is one of the most consistent of all inner-suburban Zeilenbau developments; the regularity of the layout is reflected in the patterning given to the façades. (*AY*, Vol. 4, 1952, pp. 140, 142)



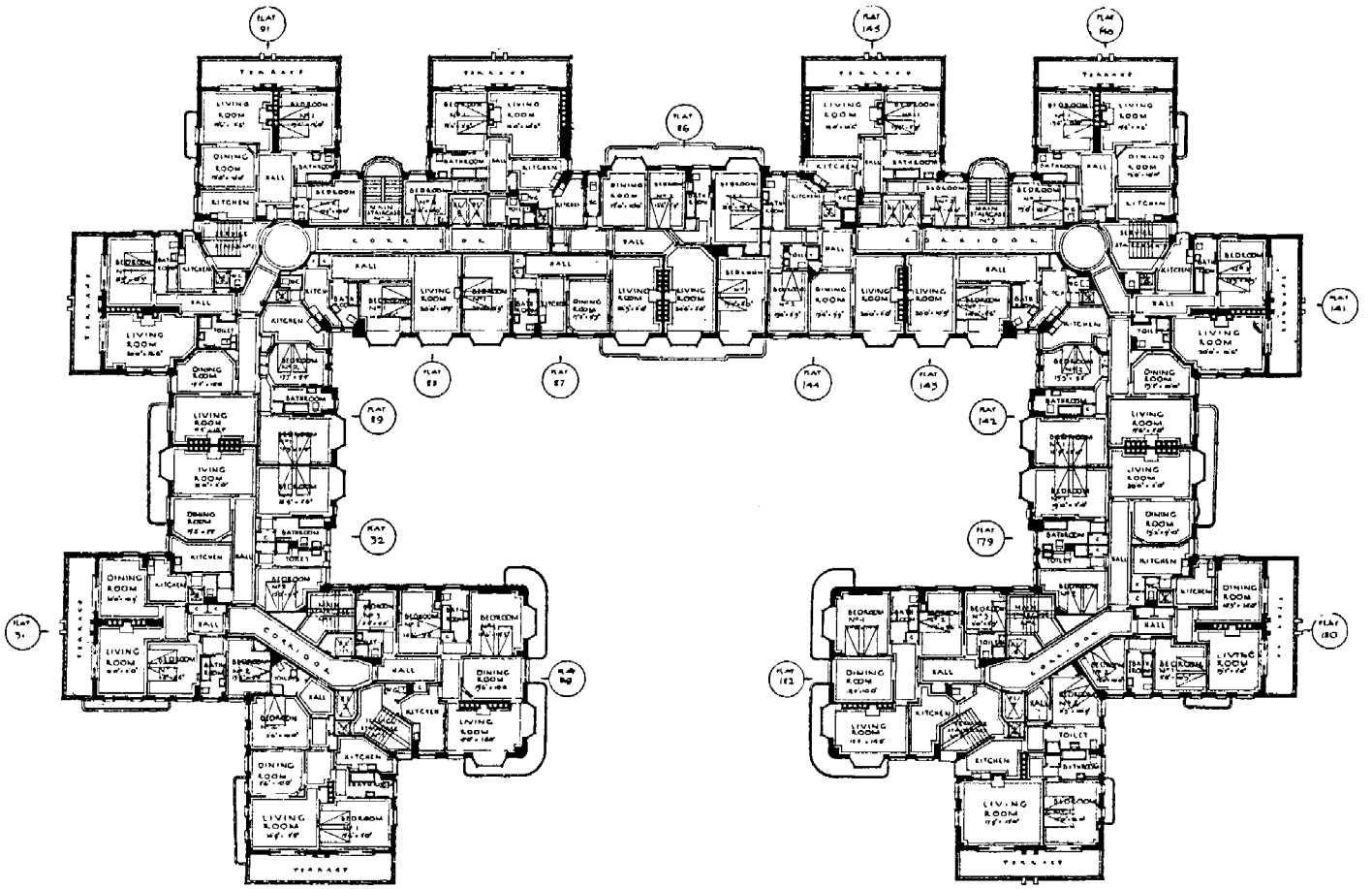


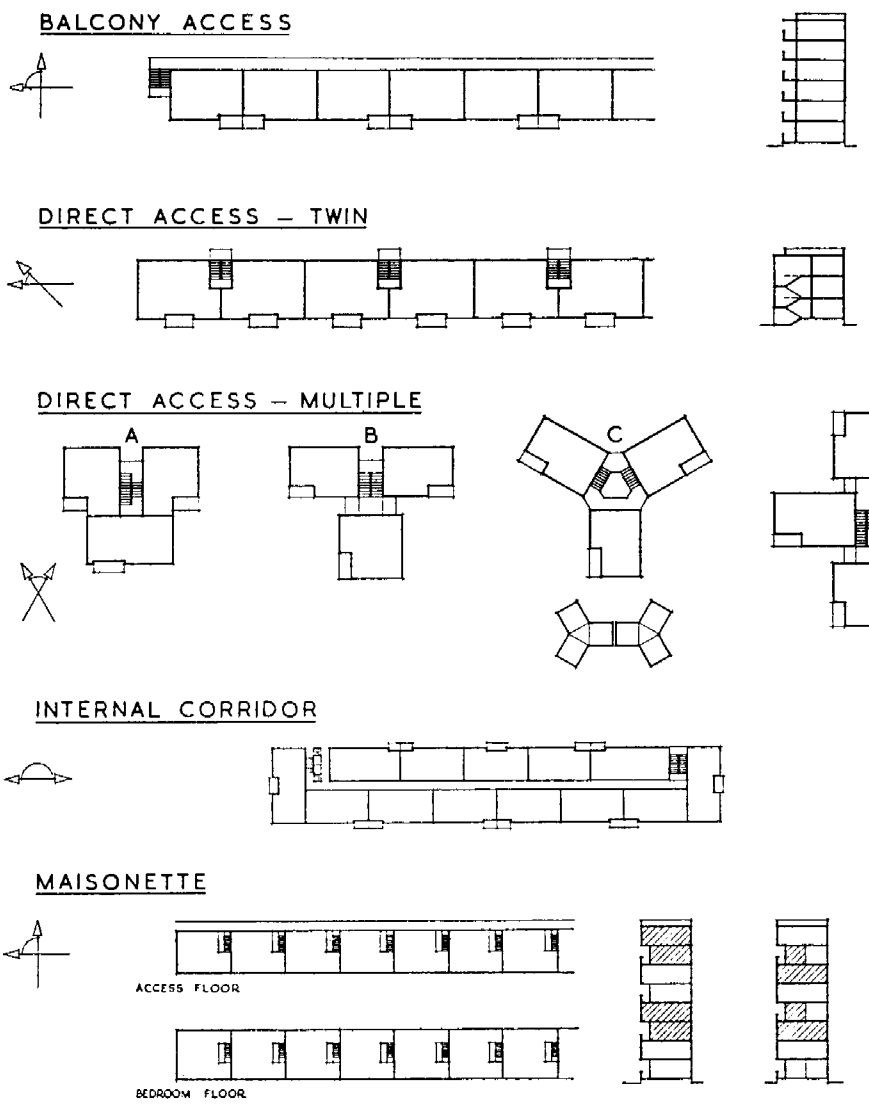


FLATS
BRUNSWICK CLOSE
FINSBURY
for Finsbury Borough Council
ARCHITECT: JOSEPH EMBERTON FRIBA



6.20, 6.21. London: Finsbury MBC, Brunswick Close (Percival Street), planned 1957, designed by Joseph Emberton. The staggering of the slab blocks provides extra light (see ill. 6.20). (*JRIBA* 1-1957, p. 108)

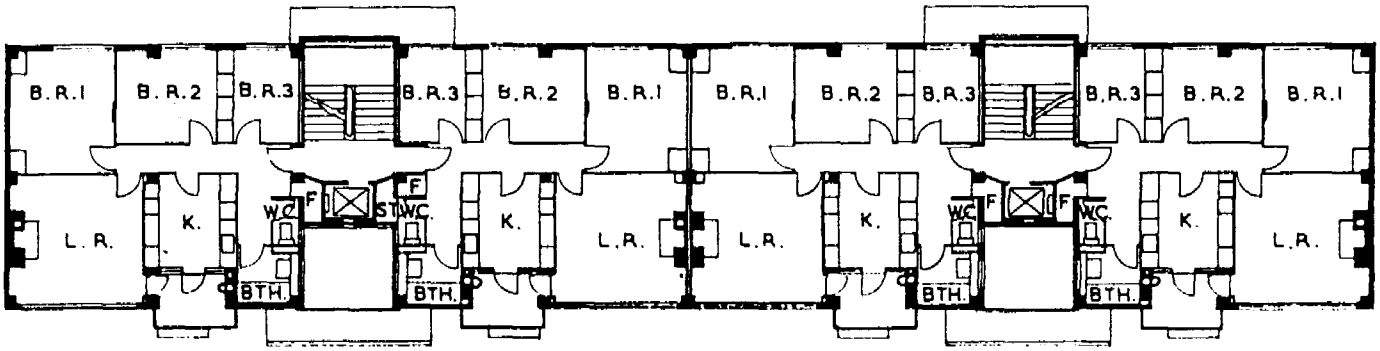




6.22. Typical plan of high-class interwar urban flats: cramming rooms and services into a restricted area: Dorset House, St Marylebone, London, 1935, designed by T. P. Bennett & Son. (F. R. S. Yorke and F. Gibberd, *The Modern Flat*, 1937)

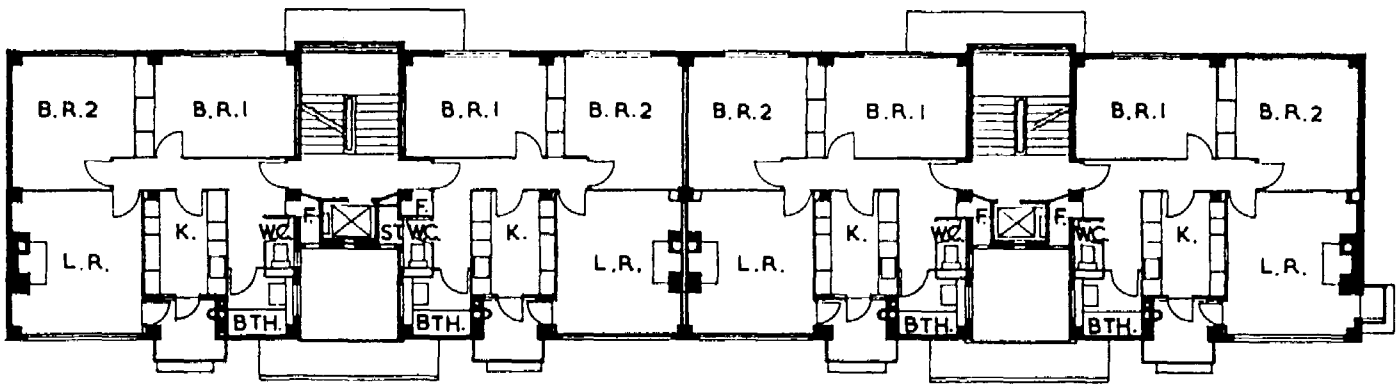
6.23. Types of access to flats and maisonettes. (*JRIBA* 3-1947, p. 249)

TYPICAL 3-BEDROOM FLATS

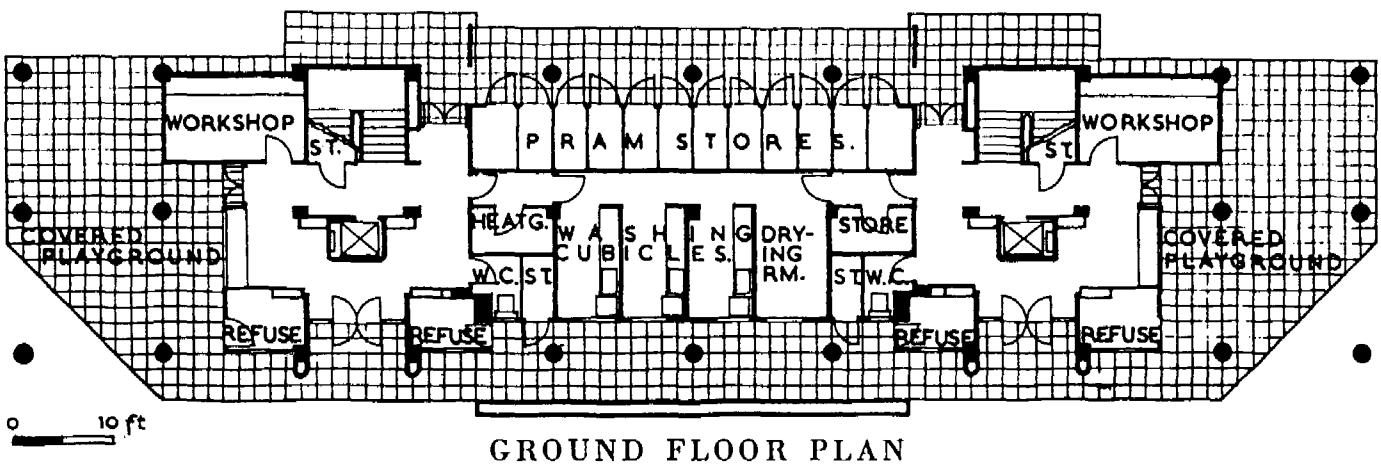


UPPER FLOOR PLAN

TYPICAL 2-BEDROOM FLATS

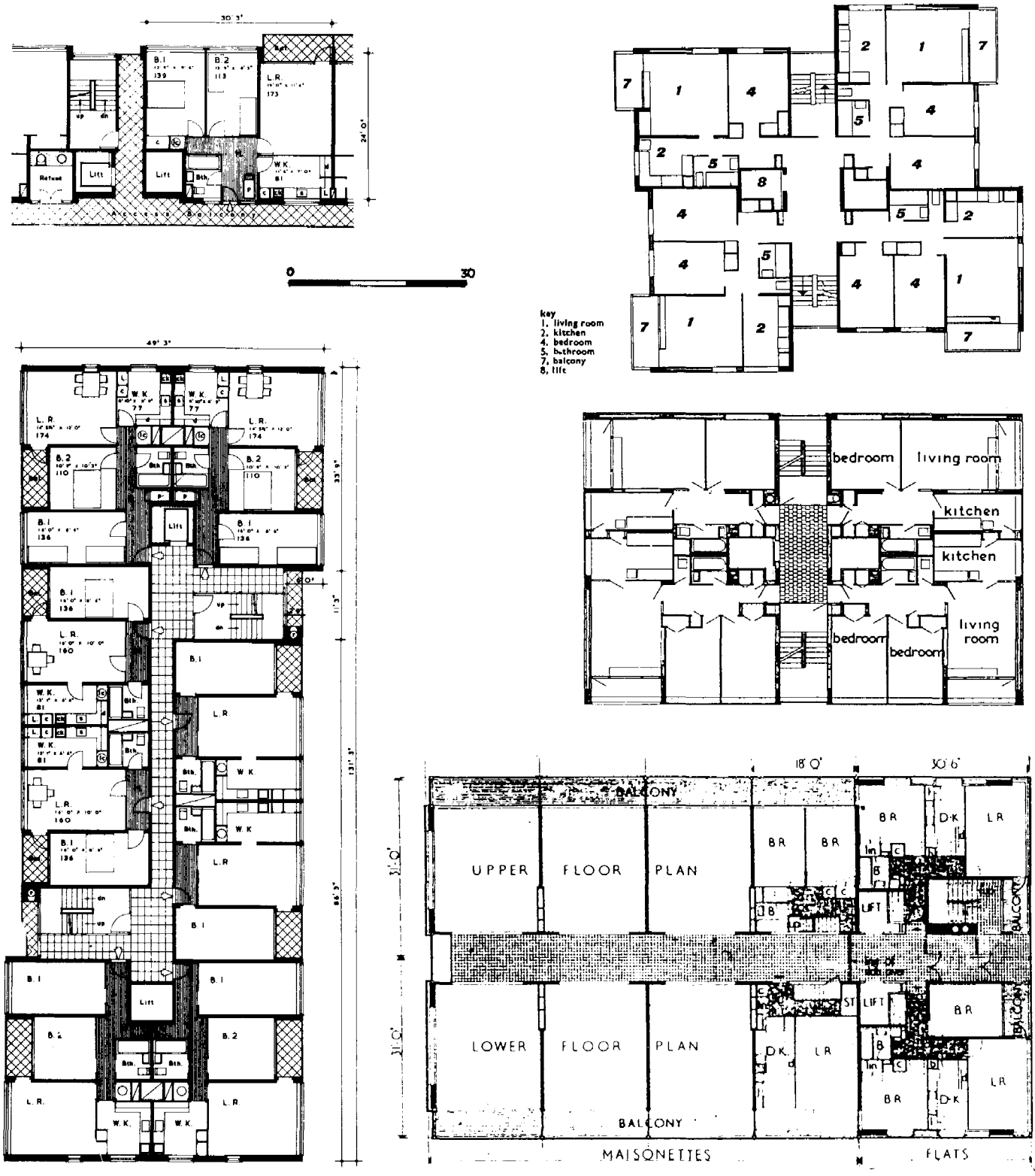


UPPER FLOOR PLAN

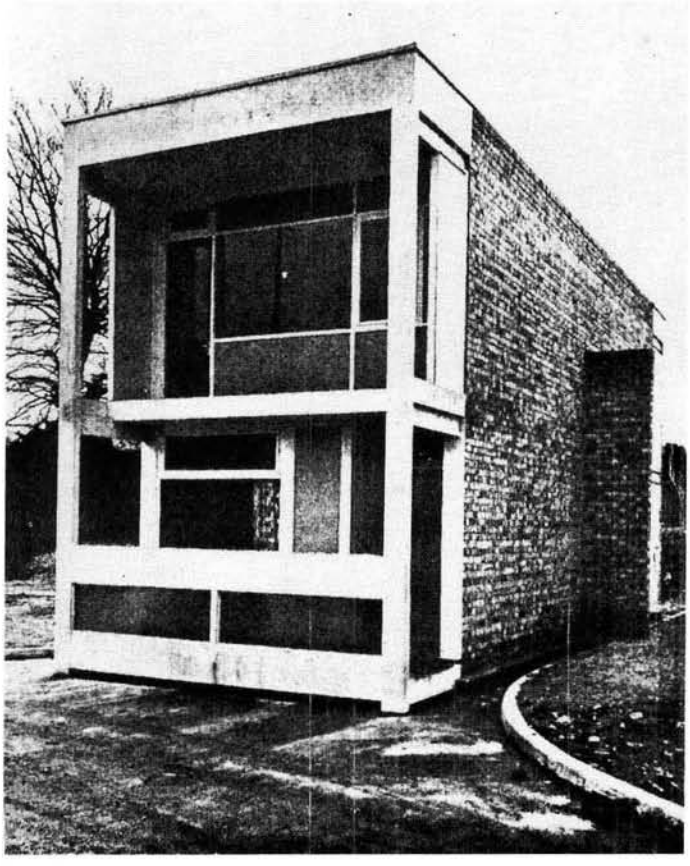


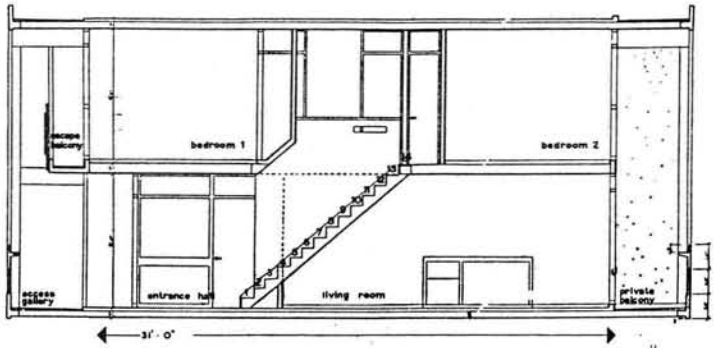
GROUND FLOOR PLAN

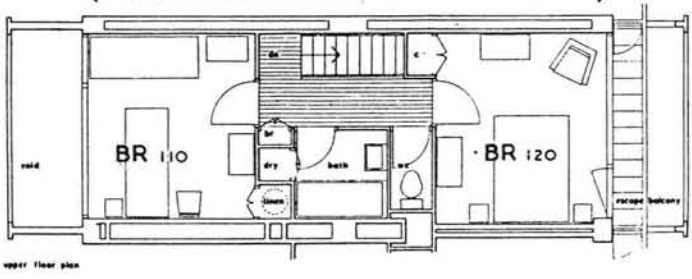
6.24. Plans for Priory Court, for Walthamstow MBC (near London), 1946 (see ill. 6.18); rectangular units with maximum light penetration from two sides and economic concentration of pipework for kitchens and bathrooms. Other services are grouped separately on the ground floor. (Cement and Concrete Association, *Flats at Countess Road Walthamstow* . . . , [London 1949])

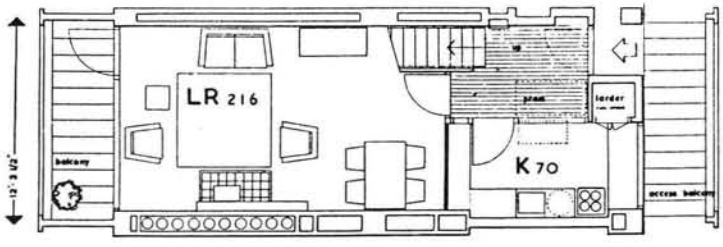


6.25. Plans for high flat blocks; all LCC, except first. Top left: Flats with balcony access (Churchill Gardens, Pimlico; see ill. 6.17). (*Flats and Houses 1958*) Left: One and two-bedroom flats with corridor access. (*Flats and Houses 1958*) Top right: Point block with one and two-bedroom flats (Portsmouth Road (Alton East); see ill. 7.6). (*AR* 8-1959, p. 26) Centre right: Point block with one and two-bedroom flats (Roehampton Lane (Alton West); see ill. 7.8). (*AAJ* 1-1957, p. 145) Bottom right: Maisonettes and flats combined (Clive Street; see ill. 8.3). (*AJ* 28-3-1957, p. 457)









6.26. London: LCC 'mock-up' Model maisonette, erected in 1953 at Purley, designed by P. J. Carter, A. H. Colquhoun and C. St J. Wilson; based on Le Corbusier's Maison Citrohan and his Unité d'Habitation in Marseilles, although the living-room lacks Le Corbusier's two-storey part. (*AD* 9-1953, pp. 258–9)

CHAPTER 7

Multi-Storey Architecture in the 1950s: Point Block Versus Slab Block

. . . significance as a symbol of the aspirations of the people of our age and time to rebuild in a worthier way than the old.

A. G. Sheppard Fidler[1]

THE LOGIC OF multi-storey flats had been fully formulated by the end of the 1940s. Height could be seen as the positive manipulation of daylight rules: 'an increase in . . . height . . . will, for a given population density, always improve the lighting conditions'.[2] But it was only from 1950 onwards that high blocks of flats—higher than five floors—became a real issue in Britain. The few private multi-storey blocks built in the thirties were very exclusive. In the years immediately after the war, building restrictions prevented further erection of this kind of dwelling. On the whole, interwar proposals for low-cost multi-storey flats had remained tentative and theoretical. Elizabeth Denby in 1936 advocated flats 'of any height'.[3] Walter Segal, in a most wide-ranging investigation about all kinds of dwellings in 1948, asserted that heights exceeding six or seven floors would prove too costly.[4] Planners such as Sharp or Abercrombie and even Gropius were no more specific than to demand blocks of around ten storeys. In London, a very few Zeilenbau blocks did exceed five storeys immediately after 1945, with the ten-storey mark attained around 1948.[5]

We might call the calculation of light and height 'scientifically correct', but it would be a poor statement if it were intended as a characterisation of the high block as a whole. We can borrow here an expression from avant-garde town planning: 'positive planning' means devising new kinds of spaces and new kinds of shapes altogether, 'negative planning' refers to ameliorating given shapes, preconditioned by expediency and economy, referring to the control of the invisible guarantors of health, the drainage systems. This was what the late nineteenth century contributed to health in housing. In the creation of striking shapes, Modern housing design goes infinitely beyond that. As so often in architectural discussions, once a 'functional' design had been explained in all its practical aspects there appeared no need to dwell upon the matter any more. This meant, first of all, that the apparent scientific certainty of the slab block, the Zeilenbau arrangement, was soon pushed into the background. A great variety of types of high blocks were discussed from now onwards. The starting point for many of the more intense discussions of high blocks came from a new direction: it stemmed from their architectural design, in the narrow sense of the aesthetic of the visual. Around 1950, there was a widespread feeling that it was time to move beyond the prevailing postwar practical and utilitarian outlook; in some architectural circles this led to a new stress on formal concerns, and on the insistence on the architect's freedom as a designer. In fact, the first examples of a completely new kind of multi-storey block in the LCC's programme, presented in 1951, coincided with, and were even seen as the result of, the transfer of the design of housing from the office of the Valuer to that of the Architect. We shall return to these aspects of our story in the next part of this section; here our concern is specifically with the new 'free . . . aesthetic of height'.[6]

The architectural desire for high vertical structures which are not 'towers' of a traditional kind is a comparatively recent one, originating with the American skyscraper movement in the 1880s and 1890s. European Modern Movement designers of the interwar years showed perhaps less interest in purely vertical structures than one might have expected—the slender Zeilenbau blocks of the 1930s excelled usually in their length, not in their height. But at the RIBA's High Flats Symposium of 1955, Frederick Gibberd emphasised that high blocks 'give more pleasure to more people . . . a new kind of space, surprise views'.[7] At least from the late forties, Gibberd had been one of those who campaigned most strongly for 'freedom of design'; 'the freedom that one has in designing flat blocks has given so much licence in design'.[8] Like Sharp, he was also a fervent advocate of landscape design in connection with all kinds of dwellings. One of the strongest criticisms made of municipal flats of the kind prevalent from the interwar period onwards was that, with their careful Beaux Arts layout and the uniformity of their horizontal and symmetrical coordination, they lacked vertical accents; rather, the LCC blocks, built in solid brick and usually carrying pitched roofs, looked like 'overgrown cottages'.[9] Very soon regular, repetitive Zeilenbau would suffer a similar kind of condemnation: 'avoid the ghastly uniformity of six or eight storeys over the whole scene'.[10]

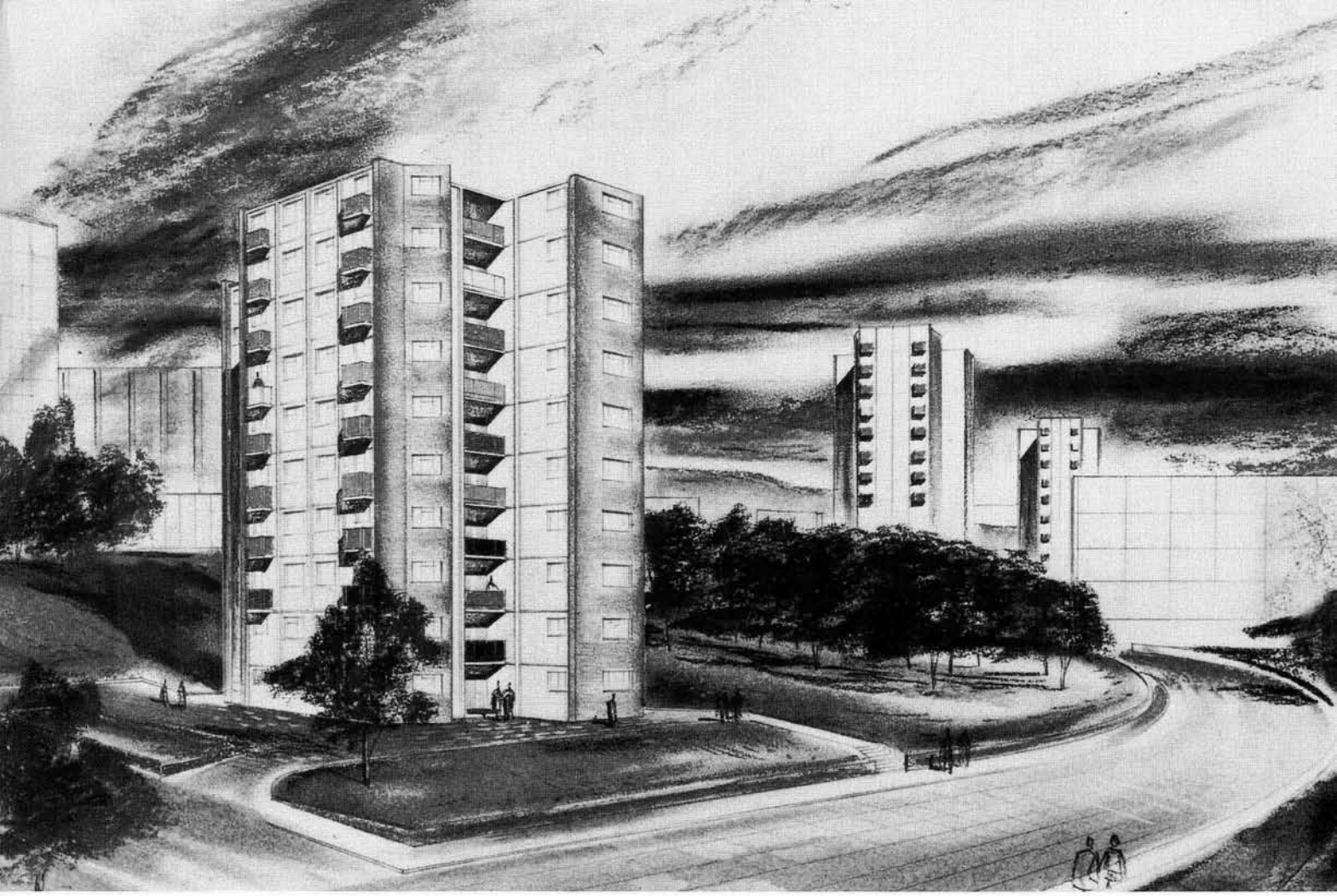
When an architect in 1958 spoke of the 'unique problems' posed by tall buildings[11], this seemed a somewhat vacuous statement: height, simply understood, had always been a common architectural value; but its importance was never greater than in those decades. 'Fine sheer towns that will make their inhabitants proud to live in them', wrote Thomas Sharp. Mixed developments provided an excellent basis with their 'streets of serene houses with an occasional tower of houses lifting into the air'. High blocks in mixed develop-

7.1. Sir Hugh Casson's comments on a Stockholm point block, Kärrtorp, in 1952: 'Two extreme attitudes of mind towards city planning were cited by Colin St John Wilson in a recent article in the *Observer*: the first, that of the "cottage-and-a-cow man", who considers cities should be scaled down; the second, that of the supporter of Corbusier's "human" vertical garden city. There was a great deal of sense in Mr Wilson's defence of vertical living, but he did not explain how slab blocks could be "humanised". His article caught the eye of Hugh Casson, who was apparently flying over Stockholm with one hand, as it were, and reading his Sunday paper with the other. The result? Another article in this week's *Observer*. Mr Casson, who pointed out that for economic reasons we would have to build upwards whether we liked it or not, favoured the use of point blocks, "sculpture in space", such as this one at Kärrtorp, Stockholm, designed by H. Klemming [in 1948], which he rightly thought were potentially more human in scale than slab blocks, though more expensive. It is encouraging that, at a time when the popular Press is attacking "skyscrapers", a newspaper should give its pages to a debate not on whether we should build upwards, but on *how* we should build upwards.' (Photo from a Swedish exhibition at the Building Centre, Store Street, London WC1.) (*AJ* 28-2-1952, p. 264)

ments could be a 'thing of beauty'.[12] Epithets from the fifties are plentiful: 'landmarks',[13] giving 'scale and interest',[14] 'can be deeply moving',[15] or 'tonic effects . . . [that] stir men's blood'.[16] One could call a tower block simply a 'sculpture in space', as did Hugh Casson in 1952, gracing with this metaphor a recent, rather squat-looking Swedish point block [7.1].[17] What the English valued most in Swedish Welfare State housing[18] was the careful landscaping of the new high-density peripheral estates; this, of course, corresponded to what was considered an archetypal English mode of designing: buildings in a landscaped garden. In the later fifties Nikolaus Pevsner claimed that the high blocks in the park of the Roehampton estates had actually helped to create a specifically English version of International Modern.[19] At the same time, there soon appeared equally strong arguments for high 'accents' in dense urban areas.

The very first of the new type of high blocks of flats, in any part of Britain, was designed by Gibberd and built from 1949 for Harlow New Town: The Lawn at Mark Hall North, a single block of 10 storeys of a very individualised shape, devoid of right angles [7.2]. This block is, furthermore, juxtaposed with a number of horizontal groups of dwellings, as it forms part of one of the first examples of a mixed development. It had taken mighty efforts to persuade the Ministry of Town and Country Planning to allow a high block in a leafy area of a low-density New Town; but soon afterwards, Gibberd, in his capacity as consultant architect-planner for Harlow Corporation, devised a master plan for

7.2. Harlow New Town DC: Mark Hall, The Lawn, 1950, designed by Frederick Gibberd for Harlow NTDC; the first point block in the UK—and of a rather unusual shape. It also forms part of the first mature Mixed Development.



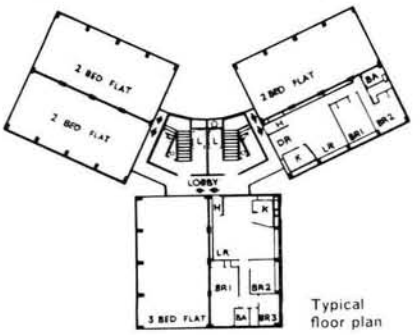
7.3. Glasgow: proposals for multi-storey blocks on Glasgow Green by Sam Bunton, *c.*1951–2 (see also Chapter 20). (Glasgow District Council)

the placing of more point blocks, as part of the town's overall scene. The two main aims were to punctuate the rolling landscape and to mark the position of some of the neighbourhood centres.[20] Gibberd's tower at Harlow was just being completed when the LCC Architect's Department presented its new scheme—first as a widely publicised model in November 1951—for a mixed development with towers at Portsmouth Road (Alton East), Roehampton [7.6]. Informal layout within existing parkland was uppermost among the aims which prompted the placing of this series of slim 11-storey blocks [7.6]; the previous layout, by the chief planner of the Department, Arthur Ling, had still proposed high blocks terminating street vistas in a more regular Beaux Arts manner.[21] Birmingham followed precociously with the 12-storey experimental blocks of its Duddeston and Nechells Redevelopment Area, begun in early 1951—but their double Y form did not yet correspond to the latest thinking [20.11]. Sam Bunton, in January 1952, proposed 15-storey point blocks for Clydebank's Central Redevelopment Area, as well as slab blocks of 6 to 12 storeys [7.3].[22]

'We should not advocate the building of high flats merely because we like the look of them aesthetically', wrote Thomas Sharp in 1953,[23] at a time when he was already turning away from Modern blocks—while in the forties, as already quoted, he had been one of their greatest enthusiasts. But implicit here is the question as to the extent to which architectural aesthetics were responsible for the introduction of high blocks, in relation to the other reasons which we have given for the planning of high buildings. We hear in those same years that Coventry's Modern flats were first introduced in order to achieve 'some visual variety'.[24] The usually conservative *Builder* commented in 1956 that there were questions as to who wanted to live high, but pointed to the 'undoubted fact that in suitable surroundings a vertical feature can be most attractive architecturally'.[25] Much of the controversy about flats was now transferred to the specific issue of high flats. Two major symposia in the RIBA in 1955 and 1957 dealt with a multitude of aspects of the type. The question as to who in particular should live in the new kind of dwelling, as far as England was concerned, seemed to have found an answer in the mixed development formula: houses for large families, maisonettes for smaller families, high blocks for small households. Yet prominent English designers continued to differ in their estimates. Womersley, one of the most fervent advocates of high blocks, and one who rejected cottages completely as a possibility for inner urban developments, estimated that 25 to 50% of all households would prefer to live in high flats;[26] in fact, the maisonettes he was planning from 1953 onwards in Sheffield's huge Park Hill development close to the city centre, were held to be suitable for all kinds of families [18.9]. Gibberd, a more cautious Southern English designer, with most of his work in the New Towns, estimated that a mere 20 to 30% desired to live in high flats.[27]

The discussion of amenities in flats likewise continued in the case of high flats. The LCC's Architect's Department's sociologist, Margaret Willis, investigated some of the Council's new flats and their practical elements, for instance the ways in which tenants used private balconies, but also more psychological kinds of concerns, such as privacy around the flat. Although she listed many adverse comments, she concluded that, on the whole, positive responses prevailed.[28] However, the frequently mentioned major question which stood behind so many debates about flats persisted. Do Modern flats *per se* provide amenities, or does one have to take special care to provide the flats with those amenities? 'Already tall blocks have been responsible for many advances socially and technologically'[29] which have been 'so far only provided in luxury flats and hotels'[30]—for instance the early internal bathrooms at Roehampton (Portsmouth Road/Alton East). On the other hand, we read that 'high flats will be accepted by tenants only if they function well'.[31] The discussion about the numerous problems involved in provision of high blocks—construction, access, services, costs—had now begun.

We witness now a whole new vocabulary: 'multi-storey' and 'tower block'; 'high rise' (from the US) and 'multi' (in Scotland) entered the language a little later. By 1953, 'point block' and 'slab block' had taken their place in the vocabulary of Modern designers.[32] This meant, of course, an end of the Zeilenbau consensus. Criticism of the latter had, in fact, begun in the late forties, and this was mainly of a general aesthetic kind: the blocks were found to be dull and mechanical.[33] For Lionel Brett and Walter Segal, correct orientation could stand in the way of other values, such as pleasant informality.[34]

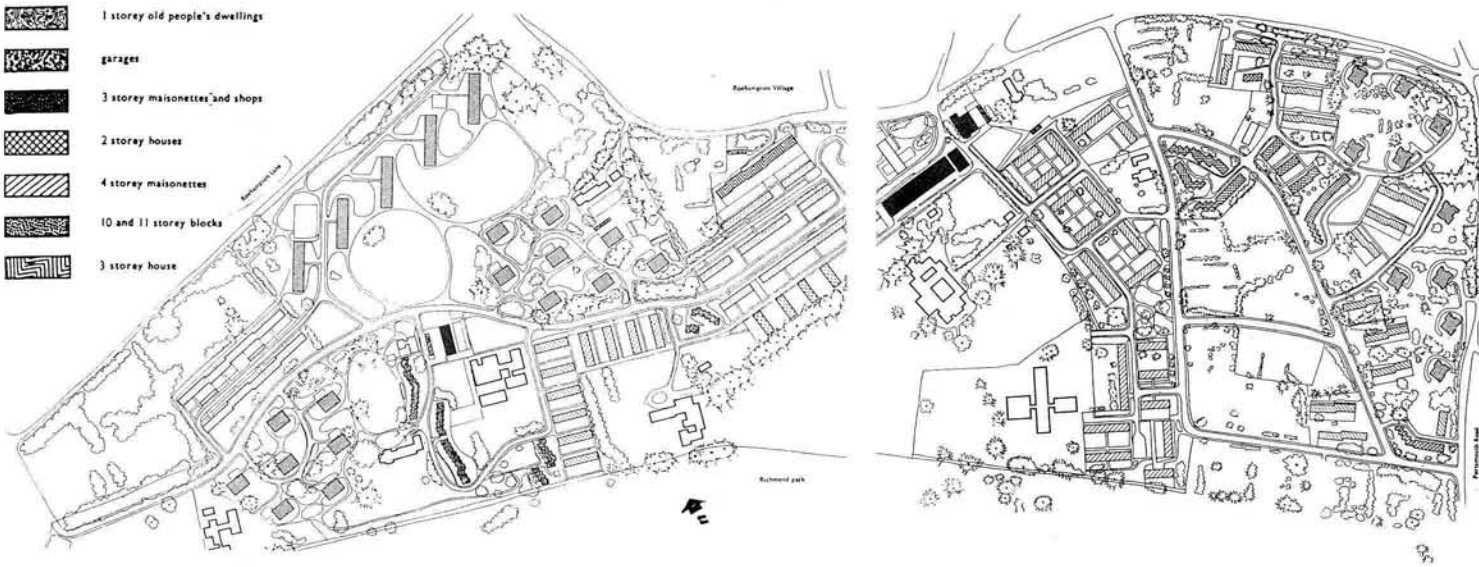


7.4. London: Paddington MBC, 'Perkins Heights,' 1953, an unexecuted project by the Borough Architect, Major Rolf Jensen, one of the most fervent supporters of high blocks (see also Chapter 27). (R. Jensen, *High Density Living*, 1966)

In the early 'fifties, innovation in multi-storey building became identified by many local authority designers with the point block, 'the only new housing form developed since the war'.[35] The point block was seemingly unknown in the UK before the late forties. The Dudley Report had discussed briefly the Y and the H forms of layouts and their advantages, in regard to daylight control, over the old closed courtyard plan [7.4],[36] but only few projects of the Y pattern were built.[37] Varieties of the H plan are frequent. Stairs and lifts are placed in the centre and, because of fire regulations, they are relatively open on two sides. This makes the two parts of the H appear rather detached from each other. There was, furthermore, some study of the cruciform low-cost blocks of New York City.[38] The first example of slim point blocks, much illustrated in Britain in the late thirties, was the group at La Muette at Drancy near Paris. Fifteen storeys, slim, they were connected with lower blocks containing larger flats, thus forming a rudimentary kind of mixed development.[39] The main impetus, however, came from the Swedish 'punkthus' type in Stockholm (Reimersholme and Danviksklippan), built in the early forties, rather massive blocks with internal staircases, bathrooms and kitchens [7.1], as well as from the more slender twelve-storey blocks at Rosta, Örebro.[40]

Point blocks had particular advantages over long Zeilenbau blocks where the site was small, or the ground uneven. Orientation was less of a problem than in the case of slender blocks, as each flat, being situated at the corner of the block, faced two directions.[41] On the other hand, in a properly orientated and slim slab block all flats received the same, the maximum, amount of light—in contrast to the point block where this varied somewhat according to the direction in which the flats faced. Point blocks certainly cast a narrower shadow, which moves more quickly. The grounds situated near the centre of a slab block's shadow could be without sun for long periods at a time: 'dominantly horizontal types of buildings cast more extensive shadows than do taller, more slender units'.[42] The smaller the number of blocks in Zeilenbau arrangements, the better: that was already the conclusion of the *Lighting of Buildings Report* of 1944, and it was echoed in 1947 by Marianne Walter.[43] Narrowly spaced blocks can easily 'create an impression of enclosure and high ground coverage',[44] which ran counter to the ideal of wide open spaces.

In other respects, too, point blocks seemed more Modern than horizontal blocks. They usually incorporated internal staircase access rather than balcony access—arrangements which will be discussed in more detail below. It was also easier to make provision for a concentrated internal 'service shaft', especially when this was arranged with internal bathrooms adjacent to it. In 1951, the introduction of point blocks at Portsmouth Road (Alton East) at Roehampton heralded the beginning of the new housing architecture of the LCC, their slim shape and square outline instantly con-



7.5. London: LCC Roehampton layout plans, Roehampton Lane (Alton West), designed 1953 by M. C. L. Powell, O. J. Cox, R. Stjernstedt, et al. Right: Portsmouth Road (Alton East), designed 1951 by C. Lucas, et al. (*AR* 8-1959, pp. 24–5)

7.6. London: Roehampton. The much publicised 1951 model for the LCC's Portsmouth Road (Alton East) scheme, the best-known of all Mixed Developments, which contains also the first of the mature series of LCC point blocks. (*AJ* 8-11-1951, p. 548)

signing to history the previous year's eight and eleven- storey complicated T-shaped designs at the nearby Princes Way site. The site at Roehampton was 'heavily wooded . . . with quite considerable variations in level . . . [and] it became obvious that the way to get the right kind of tall block development was to use point blocks' [7.8]. Naturally the LCC remained most faithful to the type it had pioneered and, by 1965, had built over a hundred of these slender multi-storey point blocks.[45]

And yet the large slab block quickly found its adherents, too, particularly in London. By 1951, architects in the UK had become fully aware of Le Corbusier's almost-completed Unité block in Marseilles.[46] The Unité was hailed in architectural and sociological terms as well as for its mighty shape. Among some London architects, point blocks and slab blocks became treated as polarised opposites. Slab supporters tried to devalue the point block by saying that it could never have the same effect, or eloquence as a church spire.[47] At Roehampton Lane (Alton West) LCC architects felt that, in 'a large open space, you cannot arrange point blocks like a row of soldiers and we decided [by September 1953] there was a case for tall blocks of a different form'.[48] The slabs here are not actually put in a row, but staggered [7.8], in the way Gropius had proposed in 1935. The LCC architects simplified the Marseilles block's complicated structural frame into a new kind of cross-wall/box-frame structure (Ch. 11). Point blocks, on the other hand, at this stage adhered to a more complicated and less systematised reinforced concrete frame structure.

In England, the Unité's intricate plan was simplified into a stack of identical maisonettes. The 'rue interieure', or internal access corridor, was replaced by the traditional English external balcony, which also was cheaper than the internal staircase access of the new point block type, and which made possible a greater economy in lift provision. The high slab thus became a new type of maisonette block. In the process, the close contact with the ground—which, if we remember, had been one of the chief declared aims of the four-storey maisonette type—was ruptured, and the ground floor was converted mainly to open space around 'pilotis'. Once that step had been taken, it did not really matter how far upwards the block went. In the Bentham Road [10.6] and Loughborough Road developments [7.7], designed by 1952, the only high blocks are maisonette blocks of eleven storeys, surrounded by very wide lawns.[49] In the end, point blocks and slab blocks in London were to represent different types and sizes of dwellings: small dwellings in the former and medium-sized in the latter. They can thus be seen as a manifestation of mixed development; point blocks were built in both parts of Roehampton. From the late fifties, e.g. in Stepney and Poplar, some very high blocks combined flats and maisonettes, and thus the point and the slab [8.3–8.4].

[right] 7.7. London: Roehampton, aerial view of LCC Roehampton Lane (Alton West), designed by C. A. Lucas, J. A. Partridge, J. A. Killick, S. F. Amis, et al. (*CQ* 39, 8/12-1958, p. 59)

[above] 7.8. London: LCC Loughborough Road, Lambeth 1954–7, designed by C. G. Weald, C. St J. Wilson, et al.; 11-storey maisonettes, 4-storey maisonettes, 2-storey houses and other types. (*AB* 4-6-1958, p. 736)

7.9. London: LCC Picton Street, Camberwell, 1955–7, designed by A. W. Cleeve Barr; maisonette blocks (for the construction, see ill. 10.5).

7.10. London: LCC Trinity Road (Fitzhugh Estate), Wandsworth, 1953–5, designed by R. Stjernstedt, O. Cox and K. Grieb; a development of point blocks only. (*AJ* 22-9-1955, p. 378)

CHAPTER 8

Very High Blocks

Multi-storey housing is likely to be the dominant form of urban dwelling in this century.
A. W. Cleeve Barr, 1961[1]

THE EVER INCREASING enthusiasm for height brought a spate of ambitious projects. One of the most tireless supporters was Major Rolf Jensen, Paddington's Director of Housing and Borough Architect between 1947 and 1956 [7.4]. By 1952, he was already advocating point blocks of 15 to 17 storeys at a net density of 300 to 400 p.p.a.; only about 12% of the site would be built over.[2] In Jensen's later book of 1966, *High Density Living*, the point block remains his main choice, and he reiterates that the surrounding parks will give a 'unique sense of freedom'. His polemic remains vigorous: 'urbanophobia, conjured up by . . . sociological writers, . . . figments of their imagination, . . . unlike the real malady, known as "New Town Blues"'.[3] Earlier we witness some London inner urban projects of the fifties which generated wide discussions. Sergei Kadleigh's scheme of 1952, High Paddington, presented a multi-form structure containing over thirty floors of maisonettes above a high base accommodating shops, offices and so forth [17.2]. Here, all the arguments about high urban density—housing near the workplace, slum-clearance, protection of agricultural land—were repeated with great force. The *Architect and Building News*'s proposal (sponsored by Pilkington Bros.) for 22-storey slab blocks in Soho [17.3] was followed, in 1955–6, by Chamberlin, Powell & Bon's designs for the Barbican, with towers of more than 30 floors. Only this project was eventually built, in the sixties, and the height of the towers was even increased to 43 and 45 storeys—the highest flats in the UK [17.4; COLOUR XV].[4]

Though none of these proposals included low-cost housing, they did substantially contribute to architectural and planning theories concerning comprehensive urban development in high-density contexts—especially in view of their emphasis on the accommodation of a great number of functions besides dwellings. The desire for high urban buildings manifested itself in the late fifties,[5] with many of the most prominent office blocks, such as the Vickers Tower in London or the CIS Tower in Manchester;[6] however, many local authority projects on the same scale, such as 31-storey towers proposed for Woolwich and Erith (Thamesmead),[7] or those of Hollamby's Brixton central area redevelopment scheme (50 storeys), of 1967, remained unbuilt.[8]

At the outset, in the case of planners and designers in England, especially in London, the justification frequently given for high blocks was that they formed the necessary complement to the cottages in a mixed development. In the course of the fifties, this kind of thinking lost some of its impact. Clearly, in the very densest urban centres, cottages were hardly feasible, and private gardens of whatever kind would have made little sense. From about 1960, we witness an increasing number of multi-storey blocks of flats, at least in large cities outside London, built without any of the mixed development component. Many of these very large blocks of dwellings contained a fair range of flat sizes, and sometimes included maisonettes, and hence reverted to somewhat older patterns of providing a 'mixed development' without architecturally demonstrating the fact. Jensen, too, never seems to have envisaged classic mixed development. All his blocks, within their surroundings, would contain 'provision for full family life';[9] yet Jensen's models differed from the very high-density London proposals of the sixties in that he kept stressing the importance of greenery. From around 1960, the London inner urban proposals took part in a new trend in which greenery and any kind of large, wide-open space had lost much of its appeal, and was replaced by a new feeling for 'urbanity' and new kinds of multi-form planning—to which we shall come back. The mixed development logic did, however, continue to some extent, when designers came to build the new types in the suburbs: height should not, it was thought, only be a characteristic of the inner city, but the outer suburbs also need the occasional very high accent. However, it now seemed better to have 'fewer, but higher' blocks.[10] The single powerful accent, in strong contrast to low dwellings, even bungalows (for instance in the designs of Chamberlin, Powell & Bon from the mid-fifties onwards), was seen as preferable to the massing of medium height blocks [5.5].[11]

Architectural history has witnessed many phases of illustrious intellectual speculation which failed to result in building on any scale—and, equally, much building activity of a specific kind more or less divorced from the world of high theory. By 1960, the multi-storey block had passed from the former category to the latter. From the late fifties, a vast number of high blocks of flats were built in all parts of Britain, but there was little comment on the topic among architects regarding the more general aspects of this type. Statements in the early to mid-sixties usually indicate that the authors 'accepted the *need* for at least some high buildings'.[12] Sir Keith Joseph, despite his reservations about

unrestricted multi-storey building, prefaced the MHLG Planning Division's 1962 brochure *Residential Areas: Higher Densities* with the assertion that high blocks were 'good to live in and to look at'; and even by 1967, some architectural commentators still maintained that 'high-rise living' would still form 25 to 30% of all dwellings in the future.[13] Few critics, however, went as far as Cleeve Barr, who, in 1961, maintained that 'multi-storey housing is . . . likely to be the dominant form of urban dwelling in this century'.[14] Another major reason for the relative lack of detailed architectural advocacy of high dwellings was the fact that, from about 1960 onwards, they had ceased to be of interest to most avant-garde London architects, who had begun to devise various types of medium-height and even 'low rise high density'.

On the other hand, a great number of technical and practical details were still being worked out: above all the construction of blocks, but also their fire safety. The LCC 11-storey limit reflected the restrictions of London building regulations, which allowed proprietors to object to the erection of any block which was to be over 100 feet in height and less than 300 feet away. Fire brigade ladders could only reach to a height of 80 feet. Fire regulations were a difficult matter generally, as, prior to the sixties, there were only local byelaws, and no nationwide framework of control. Expensive escape stairs had to be provided, but much depended on the fire resistance of the construction of the blocks, and the ventilation of lobbies. An increasingly lenient attitude developed towards high-flat projects, and, from 1954, a new London code made it possible to provide just one incombustible staircase, which would now suffice in blocks of any height, although this depended further on the ventilation of the point of access to the staircase.[15]

Then, of course, there was always the problem of costs: for we must remember that costs generally soared following any increase in height over the traditionally cheapest English two-storey cottage or Scottish four-storey tenement. Here the later fifties brought assertions by some architects that costs could be kept within limits, or at least could be calculated more accurately.[16] But, as we shall see in Chapters 21, 23 and 29, throughout the late fifties and sixties, the levels of multi-storey subsidy, and the administrative application of the subsidy regulations, largely sufficed to cancel out the additional costs of high building. Political discussion about high flats became focused chiefly on the provision of the greatest number of dwellings on limited sites at the quickest possible rate. One of the reasons for the relative lack of discussion of these questions was precisely this lack of local political pressure *against* high-flat costs.

By the mid-fifties, some developments were beginning to rise beyond the 11-storey LCC standard; the LCC lead in high building was already being eroded by Metropolitan Boroughs and provincial English authorities. The first LCC development over 15 storeys in height, comprising the 18-storey Blocks 1–6 at the Brandon Estate [8.1], was authorised in 1957; also in that year, a 19-storey block was envisaged for the Tidey Street site. But a 16-storey block at the City's Golden Lane development had been under construction since 1954 [8.2], and, in 1957–8, Camberwell, Finsbury and St Pancras all approved blocks of 15 to 19 storeys. Between 1956 and 1959, the first provincial schemes of 15 to 16 storeys were commenced in Bristol, Birmingham and Southampton. In 1955, the engineer Peter Dunican could still express uncertainty about the feasibility of heights over 20 storeys [8.3, 8.4].[17] The LCC's first flats of 20 or more storeys were two 21-storey blocks at Warwick Crescent, authorised in 1961. By that date, however, blocks in that height range had been authorised or commenced by numerous other authorities in the English provinces and, now, in Scotland; in 1959, by Westminster and Glasgow and

8.1. London: LCC Brandon Estate, Southwark, designed 1955 by E. E. Hollamby.

8.2. London: Corporation of London, Golden Lane, 1954–9, designed by Chamberlin, Powell & Bon for 1952 competition; view across the sunken court to Great Arthur House.

8.3. London: LCC Clive Street and Mountmorres Road Sites, Stepney, begun 1958; flats and maisonettes combined (for plan, see ill. 6.26).

8.4. London: LCC Tidey Street (Lincoln Estate), Poplar, planned from 1956, built 1962, designed by A. J. Tolhurst; 19-storey crossover maisonette block. (R. Jensen, *High Density Living*, 1966)

from 1960 by Southampton, Edinburgh, the Corporation of London, Newcastle, Smethwick, Liverpool and Finsbury. The breakthrough in Glasgow's exceptionally vigorous multi-storey drive came in 1962. In that single year the city's Housing Committee commenced or let contracts for no fewer than thirty blocks of 20 or more storeys, while the Red Road site included the first council blocks in the UK over 30 storeys[COLOUR X]. Out of a UK cumulative total at that date of sixty-five blocks of 20 or more storeys, complete or under commencement, thirty-nine blocks were located in Glasgow!

As we shall see, the most powerful impulse to build large numbers of dwellings in the sixties came from the political leaders of some of the large cities. The rest was technical detail, of concern to specialists who, nevertheless, had to interact closely. The story of design of Modern housing for any particular urban site for which high-density development was envisaged might begin with the arguments of the City Surveyor and a consultant engineer (or their equivalents on the staff of a package-deal contractor) that poor soil conditions and resultant deep foundations, or the awkward shape of the site, might confer an economic or construction-time advantage on fewer, but higher blocks. The City Treasurer might then confirm that the available Exchequer subsidies would cancel out the additional expense of a higher proportion of multi-storey development, thus removing cost from the equation. The City Architect and his planning and technical specialists might point out that blocks needed to be even higher in order to accommodate increased car parking on surrounding land, or for the reason that large blocks, closely spaced, reduce the capital costs of the central or district heating systems. But, against these arguments, the Housing Manager, or City Factor, might point out that any increase in the proportion of multi-storey dwellings, if it took the form of small flats, would unbalance the planned ratio of dwelling sizes for the entire development, and, if it took the form of larger flats or maisonettes, would cause financial or organisational difficulties in the provision of supervised playground space.

We shall turn to many of these special problems presently, but at this point we must ask, yet again, the truculent, as yet unanswered question concerning the 'amenities' of flats. Did flats, by definition, provide Modern amenities, or did providers and designers have to make sure to include them in their planning and building of the blocks? A more satisfactory answer can now be given in the case of multi-storey flats. At least from the early sixties, *all* high and very high blocks did provide, as a matter of course, *all* the important new technical amenities, such as—to cite only the most recent—high-speed lifts, and one of the three major Modern forms of heating. Additionally, in an increasing number of cases, Parker Morris[18] or equivalent space standards were observed; one of the reasons given was that flats, and especially high flats, should not be in any way 'inferior' to cottages.[19]

UNIVERSITY OF EAST
LIBRARY

CHAPTER 9

Services Outside the Flat and Access

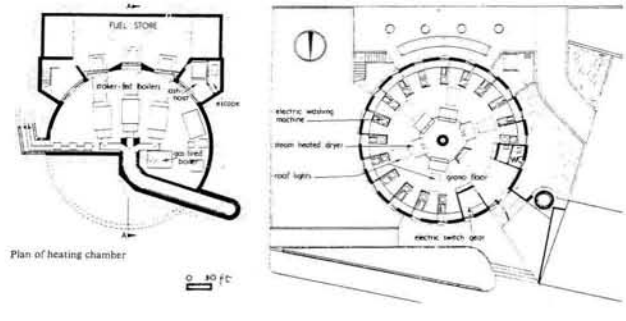
Nowhere are the advances of modern technique shown so clearly as in the equipment of a dwelling . . . Not only do these things increase comfort, but they reduce labour.

Homes for the People, 1946[1]

PLUMBING, LAUNDRY, LIFTS, REFUSE DISPOSAL

MANY SERVICES WERE extensively affected by the new types of high blocks. Some of the new developments in plumbing went completely against the grain of established customs of building. From the later nineteenth century onwards, throughout the UK, pipes had to be on the outside walls of buildings, they had to be inspectable and ventilation had to be shown to be properly provided for, by means of special ventilation ducts. By the 1950s, this manner of plumbing began to seem completely out of date, at least in the case of flats, because of the danger of frost and the unsightliness of the pipes. Now, in most respects, a great simplification took place. In high blocks all ducts were placed inside the blocks, at or near the centre, in an area which was of little use otherwise. Here Pimlico was the pioneer. It was also advantageous to group the bathroom and toilet as close as possible to the duct and, thus, to the centre of the block. Here Roehampton led the way, while Park Hill and others followed—although these methods had been practised before in other countries. Such planning involved special, mechanical ventilation for the internal rooms, but this seemed to pose no great problems. All of this led to the 'single-stack' system of plumbing, greatly reducing the number of central pipes, obviating the need for an additional ventilation pipe.[2] Even some terraced council houses in London were now equipped with internal, top-lit bathrooms.

The provision made for clothes washing in public housing would form a story in its own right; one would have to begin with anthropology and end with the technological history of the actual equipment itself. Here, however, we have to restrict ourselves to description of innovations introduced to new flats at the instigation of the housing reformers. There had been, it was claimed, 'great advances after the war' in this respect. Earlier, the main concern had been the provision of hot water as such. But now laundry facilities became a special area of council management, even control over tenants. The new stipulation was the communal laundry for each block or estate [9.1, 9.2]. Official publications praised the advantages of such a system: the saving of labour, prevention of steam and condensation in flats, and the reduction of drying facilities elsewhere through use of spinners and driers. However, reformers were aware of opposition on the part of many tenants: this was caused by the necessity for advance



9.1. London: Finsbury MBC, Busaco Street development (Priory Green), 1947–50, designed by Tecton/B. Lubetkin; communal laundry (see ill. 6.16). (*AJ* 9-10-1952, p. 441)

booking of machines, by the lack of privacy, and by the fixed charge added to the rent. As the machines, and their supervision and maintenance, were very expensive, the introduction of communal laundries proceeded very slowly. The late fifties saw this method of communal provision within council schemes largely superseded by commercial launderettes, and, of course, by the private family washing-machine: the latter had not seemed feasible in 1952, but had spread to 40% of all households five years later.

Clothes drying always remained a problem. Drying spaces were provided where there were no communal laundries, either in communal drying rooms or in heated cupboards in each flat. However, drying outside was always considered advantageous by tenants, and many blocks were provided with substantial drying grounds [9.3]. However, this was not liked by many officials, and did not always prove convenient for tenants of higher blocks, because of lack of control. In Scotland, clothes drying in back courts, as part of the urban tenement tradition, was all the more stigmatised for this reason, in the eyes of reformers. Much more popular was the use of the balcony, where provided, for drying purposes. But here, again, many officials and designers objected on grounds of propriety. Cleeve Barr, however,

9.2. Dundee BC: Menzieshill 9th Development, 1963; view of a communal laundry. (D. C. Thomson Ltd)

9.3. Norwich CBC: Globe Place, Vauxhall Street, 1958, designed by David Percival; yards for four-storey maisonettes.

argued that in this case practical considerations ought to come before formal appearance and 'tidiness'.[3]

Critics of lifts argued that they would never have been necessary in the first place, but for the excessive height of blocks; although this overlooked the fact that they could also be used by tenants of the lower floors, who up to then did not enjoy such a service. Early on, before World War II, lifts did not seem affordable for working-class flats, with very few exceptions, such as Quarry Hill in Leeds. During the thirties, with pressures on density and space, and the first moves to slum-clearance, the question of the economic and practical height limit for lifts was raised more often. Keay demanded lifts for blocks of six or more storeys, and Dudley for four or more.[4] For loan sanction purposes, the latter limit was adopted by the English and Welsh Ministry of Health, while the Department of Health for Scotland chose five or more as its lower limit. In 1949, the LCC asserted that all its new schemes already incorporated the new English standard.[5] Partly as a result of these regulations, during the forties and much of the fifties, five-storey blocks of flats (and four-storey blocks in the case of England and Wales, and, later, Northern Ireland) were built in much smaller numbers;

maisonettes, however, could still be built without lifts to a height of five storeys in Scotland, and four storeys in England and Wales. Occasionally, even in the late fifties, the provision of lifts at five and six storeys was still questioned.[6] In addition, a second lift was normally held to be necessary from a height of between seven and ten storeys.[7]

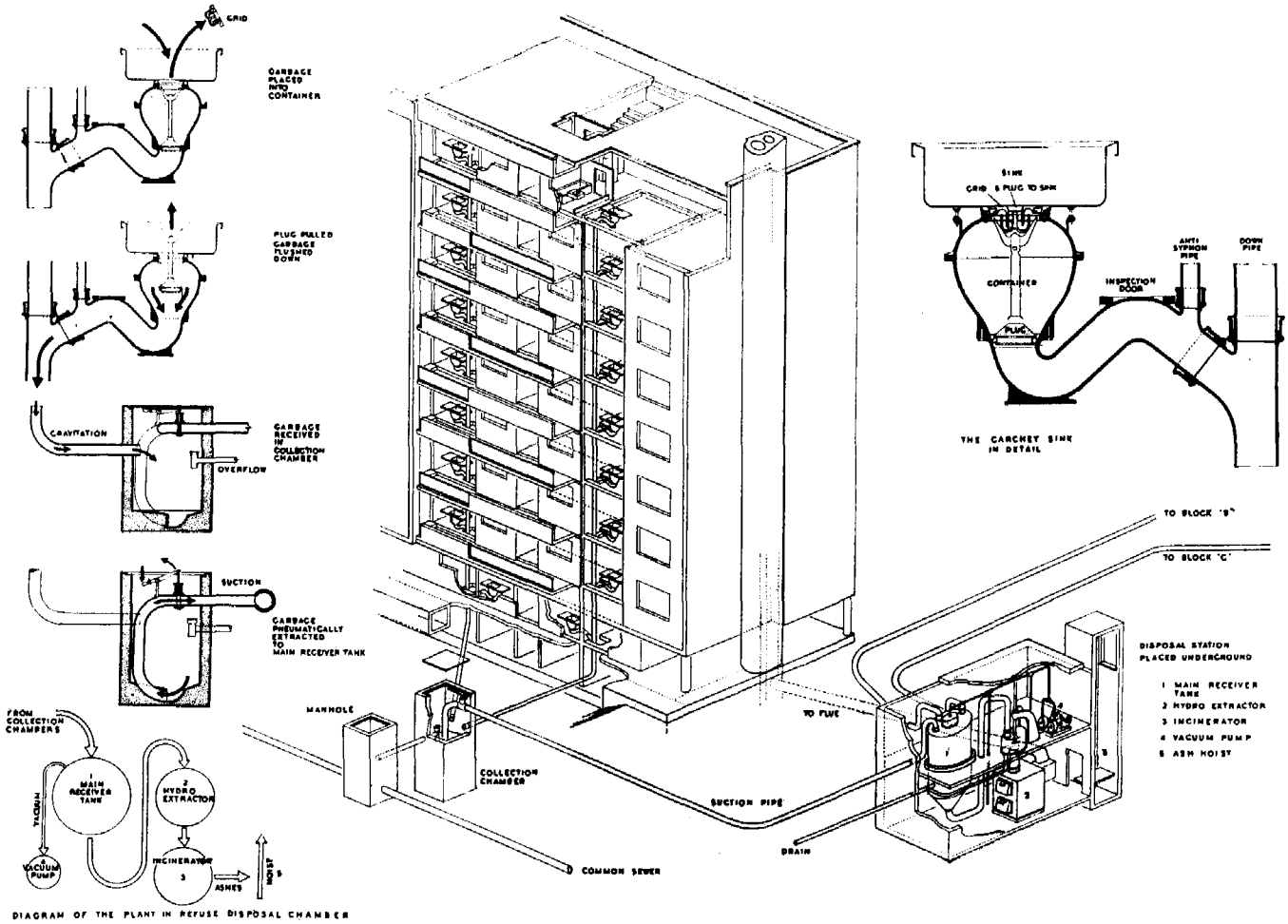
The size of lifts was enlarged equally grudgingly. The LCC, after the war, frequently provided 'coal hoists', then adopted as standard the two-person lift, later the four-person lift, and, by the late 1950s, the eight-person lift able also to accommodate a pram.[8] Above ten or twelve floors, a new problem occurred: that of speed. At this height, a rate two or three times that of the standard lift was necessary: thus, 250–300 rather than 100 feet per minute. The price of lifts could add one-fifth to the total costs of each dwelling, although considerable variations were due to the plan of blocks: slim point blocks or staircase-access Zeilenbau blocks, with fewer dwellings served by each lift, were more expensive than balcony-access slabs or the 'double tower' plan favoured by A. A. Bellamy.[9] Designers also recognised early on that lifts could bring out certain 'anti-social tendencies in the human breast'. In 1958, Cleeve Barr listed: 'sheer joy-riding following the first opening of a block; graffiti; the courting couple stopping the lift between floors with a finger on the emergency stop . . . and the urination inside the lifts by children and tradesmen'. But it was proposed that these problems could be eased by removing the emergency button, by providing public toilets nearby, and by lining the cars with specially toughened ribbed aluminium.

Literally the final item in the design of a high block was the cover, or roof, for the lift machinery. How to avoid it looking like a 'top hamper'[10] was the task of the architect, who was to design a disguise, and a study of the variety of solutions reveals the freedom open to the designers of multi-storey blocks. From the later fifties onwards, many large developments, particularly those consisting of a conglomerate of blocks, accommodated lifts in a separate tower where the location of the machinery was made into a special feature, inside the so-called hammer-head.

Plumbing, laundry and lifts, in the context of Modern housing design, meant major innovations. By contrast, in the almost equally important area of refuse disposal, there was hardly any change between the end of the war and the late sixties. Regardless of the type of flat, three methods were available. Firstly, groups of dustbins could be located on each floor, or large bins at the ground floor, to which tenants would themselves carry refuse—a task made easier, of course, by the provision of lifts. Secondly, chutes could be provided, accessible by one or several hoppers on each floor, from which the rubbish would fall into bins in a special ground-floor chamber [9.4]. Comments about this system varied from great satisfaction about its simplicity to criticism about dirt and noise. Later on, especially in very high blocks, chutes were often located away from dwellings and combined with the escape stairs shaft.[11]

The third method of waste disposal, developed in France between the wars, was the Garchey system. In the kitchen of each dwelling, a flushing sink with a large central waste hole was installed: rubbish was carried away through pipes to a central disposal station, where it was partly burned to provide heat for hot water. This was clearly a high-prestige system, and was much discussed in a period when providing and maintaining cleanliness was the most important issue to housing reformers. However, Garchey was very expensive indeed: in the early postwar years, its installation added £60–70 (around 5%) to the total cost of each flat, in com-

9.4. London: Finsbury MBC, King Square, Goswell Road, 1964, designed by Emberton, Franck & Tardrew; refuse collectors at the back of a high block. For the designer, it was important to show the technology.



9.5. London: Finsbury MBC, Rosebery Avenue (Spa Green), 1946–50, designed by Tecton/B. Lubetkin; Garchey System Refuse Disposal. (*AR* 3-1951, p. 148)

parison with the chute system. To be financially feasible at all, it needed a very large housing scheme: such as Quarry Hill in Leeds, Park Hill in Sheffield, or Rosebery Avenue (Spa Green) in Finsbury [9.5]. For once, the LCC lagged behind in an aspect of technical experimentation and gadgetry, although by 1960, there were still only six Garchey schemes anywhere in the UK.[12]

ACCESS TO FLATS: BALCONY ACCESS, INTERNAL STAIRCASE

It might well be argued that a factor which influences life in flats even more than height is the arrangement of access [6.23]. What is astonishing in postwar housing in the UK is the variety of methods of access. Never before or afterwards was there so much debate about these matters than in the decades after World War II. Even in the case of postwar terraced houses, there emerged several possible means of access to the back of the row. The Radburn pattern of layouts led to lengthy discussions as to the relationships of houses, and even specific rooms, to access. A thorough study of this subject would, of course, have to go back to the lower-class speculative housing of the nineteenth century—Scots tenements and English, Irish and Welsh terraces—with their striking variety of access arrangements.[13]

There has probably never been another feature in UK public housing which has been so widely criticised, and at the same time so widely used, as balcony access to blocks of flats [9.6, 6.21]. Balcony access, also known as 'gallery access' or, in later versions, 'deck access', is ubiquitous in Modern postwar blocks of all heights, from 2 storeys[14] to 27 storeys [27.14]. The method is rare on the Continent, except in the Netherlands, where 'galerijbouw', pioneered earlier in the century, proliferated dramatically after 1945. In Scotland, the traditional pattern in the tenements of most towns was internal staircase access, but balcony access was found in Dundee and some smaller burghs; it occurred frequently in English nineteenth-century tenement blocks. In the interwar years, it was used again for working-class flats in England, but not in Scotland. There were other factors at work in the perpetuation of this pattern in public housing—considerations which, after the war, would hardly be voiced publicly. For there persisted from nineteenth-century English practice an idea that blocks should be designed to allow easy supervision, exposure to fresh air, and through ventilation: balcony access was 'for dirty people', as one of the most eminent designers of council housing, Lancelot Keay, remarked in 1935.[15]

Most comments after the war by designers and reformers concerning balcony access were negative, and emphasised its lack of privacy, a problem experienced especially by flats adjacent to lifts or stairs, with people constantly passing en route to or from flats further away. The balcony was also criticised for taking light away from windows situated immediately beneath. The implications for orientation were not good. The block had to be aligned east–west (rather than north–south, as Zeilenbau demanded) in order to let the best rooms face south. This, in turn, made the gallery even

9.6. Bristol CBC: Redcliffe Development, begun 1953, designed by J. Nelson Meredith; variations on balcony access for maisonettes and flats. (Cleeve Barr)

more open to cold winds, especially at greater heights: for instance in the case of Finsbury MBC's Brunswick Close development of 1956 (designed by Emberton) [6.21], or, much later, in several of the 8 to 12-storey blocks at Southwark LBC's Heygate Development Area (1969). The worst fault of balcony access seemed to be that habitable rooms, such as children's bedrooms, could be overlooked by passers-by.[16] Economy was the universally cited reason in favour of balcony access in public housing.[17] From the mid-fifties, access by lift again pointed in the same direction: the number of flats on each floor served by each lift, in the case of balcony or deck access, was usually much greater than in the case of point blocks.

One consolation, however, derived from the fact that maisonettes seemed to fit in rather better with balcony access: the 'upstairs' bedrooms did not give out directly on to the public passage, and there was less overshadowing of windows below the balcony. The late forties and the fifties brought a certain measure of consolidation: gallery access was retained for small flats; larger flats would be situated only at the ends of blocks, at the point where balconies terminated.[18] The designers of the LCC's Portsmouth Road (Alton East) emphasised that they had not provided balcony access for any of the flats in their scheme.

Yet much of the repudiation of the type proved illusory: for the maisonette slab blocks at nearby Roehampton Lane (Alton West), planned from 1953, reintroduced balcony access to England again on a large scale. The supporters of the maisonette slabs could credibly cite one practical disadvantage of point blocks: if somebody living in the upper parts of a point block wanted to visit a friend in the upper parts of an adjacent block, this might involve a rather long and complicated journey.[19] By the mid-fifties, tenants' sociable behaviour became an issue with designers. The 'street deck' could now become considerably wider, and much longer, linking a number of blocks rather than merely rows of flats within single blocks (Chs. 16, 18). Many lesser modifications to the system were tried: placing galleries inside the body of the building, rather than allowing them to project outwards; reducing their length; recessing doors to increase privacy [18.3]; constructing railings which were safe for children; or enclosing the balcony altogether.[20]

There were a number of other methods of access, such as the standard hotel or hospital layout, a central internal corridor, which could stretch to an enormous length—although some claimed that this was suitable only for small flats.[21] A complicated arrangement combining maisonettes with internal corridors was also tried, in the form of the 'cross-over' and 'scissor' types [19.18].[22] Many reformers and designers favoured the 'tenemental' or staircase-access

plan customary of Continental high flats, one staircase and lift serving two flanking flats on each floor. Kensal House [6.13] and Quarry Hill were two very influential prewar examples; after the war, Armstrong and Whittick and many others advocated this plan-type.[23] Swedish practice, in general, favoured staircase access—and Sweden was also the land where the point block originated. The point block was held to mean an end to open staircase access, and Portsmouth Road (Alton East) even introduced the heated lobby, until then unheard of in council housing in the UK [6.25]. However, the simpler plan of the point block was varied to some extent by new regulations concerning fire precaution, including provisions for ventilation of emergency staircases [8.3].[24]

SERVICES IN THE AREAS AROUND BLOCKS OF FLATS

With suburban cottages or bungalows, there is hardly ever any problem as to the layout and division of the outside of the house, except perhaps in the age-old question of back access. For the areas outside a block of flats, there are countless possibilities, including the visual pretence that the block is a row of terraced houses. As with every other aspect of the planning of dwellings, the postwar period brought a great deal of variety and controversy. In the case of council flats, first of all the question arose as to the level of services which the authority should provide in each project; the answer varied from estate to estate. As to the accommodation of services, we must first note that in England, there was an established contrast between better-class flats in urban areas, where many services were squeezed into basements and attics, or were provided within the flats, and lower-class flats, which followed traditional working-class terraced house types in locating many of these services outside, adjacent to the house. In traditional working-class urban flats in Scotland, likewise, many of the facilities were provided in the courtyard behind the block. Continental observers must be reminded of the fact that few dwellings in any part of the UK possess cellars. In our remarks we must again restrict ourselves to the pronouncements of reformists and designers.

We began our account of the shape of the Modern multi-storey block by discussing the new or increased importance of light and air, which was deemed necessary to create the proper healthy conditions inside the dwelling. There was also an aim to provide greenery outside, which again was considered healthy; often designers used the high-flown architectural terminology of 'space between buildings'. 'With densities of 200 or more persons to the acre, open ground space is more important than most other amenities.'[25] There seemed an increased need for outdoor recreation after the war. At the same time there were demands for a greater, tidier and more permanent provision for sheds and other services around blocks of flats. Neatly grouped sheds became a feature of a great many developments [9.3].[26] They were usually placed within an asphalted area, which could also serve as a drying ground, and which was often, in the words of one housing manager, surrounded by 'architect-designed brick or timber screens'.[27] Cleanliness seemed the primary consideration; in 'building for low income groups, vermin-proof construction, surrounded by asphalt yards was commonly adopted on grounds of health and cleanliness'.[28] In England, in Zeilenbau layouts, these areas usually existed in juxtaposition with grassed areas at the other side of blocks, while, in Scotland, the traditional street-block layout for tenements was maintained, with the frequent addition of small fenced-in front gardens. There was thus an attempt to differentiate strongly between the front and back of the flat—a tendency which, as we have seen above, the Zeilenbau apostles disliked: they demanded that it should be replaced by greenery all round.

In England and Wales, Parker Morris advanced more ambitious theories, arguing that modern life needed more storage space all round, and there should always be indoor and outdoor storage (whereby the surface area for the former was computed separately from that of the overall area of the flat), in order to maintain the self-containment of the dwelling. During the 1960s, the physical expression of this aim seemed to take almost opposite forms, in flats and cottages. On the one hand, the modern, high block of flats was now to a very large degree self-contained: there was no need for coal-sheds, because of the new heating methods. Large lifts took prams, even bicycles, up to the flats. The Modern dwelling eliminated 'service areas' as something that somehow possessed a lower status than the 'front'. On the other hand, the new architectural trend of 'low rise high density' sought to emphasise self-containment in quite a different way, by providing many more enclosed small private gardens or yards adjacent to each dwelling [COLOUR VII]. After the mid-fifties, ever more careful consideration was called for: 'In high density schemes every piece of open space must be carefully planned.'[29] There were two major problem areas: children's playspaces and car parking.[30]

To what extent should play facilities be included in an account of the design of council housing? Were they not the concern of other departments of the municipal authority? Indeed, the early postwar housing reformers seemed to care very little for these matters—although a picture of happily playing children, preferably with new multi-storey blocks soaring behind, never came amiss in publicity material [24.2]. It seemed to be self-evident that the new large areas created by Modern planning would provide amply for all ages. But from the early 1950s onwards, there were demands from the National Playing Fields Association, from sociologists and from some official reports, that playgrounds should be a priority when designing space around flats. Mixed development had called for a kind of integration of all ages; now there needed to be discussion about the precise location of play areas, not too close to old people's flats but not too far away from the children's own homes. Playgrounds were categorised according their suitability for three age-groups, divided at ages five and ten.

By the later fifties, interest in this subject had grown enormously. There was now a counter-tendency which opposed too much regulation by council officials and advocated a freer kind of playground. In the case of the 'low-rise high-density' developments of the sixties, there were suggestions to 'regard the whole layout [of the housing estate] as a play structure . . . [including] ramps, screens . . .' and,

accordingly, to design everything in a 'robust manner'. There were even suggestions that the overall density of individual developments should be limited according to their assumed suitability for children, and that maximum net densities should, for this reason, be fixed at around 140 p.p.a.[31]

The major debate of the 1960s was car parking. Understandably, until the mid-1950s, reformers said very little on this matter. In those years, hardly more than one garage or parking space for every ten or even twenty flats was provided. But by 1956, at least one commentator was recommending 75% provision. In 1957, LCC planning requirements had jumped to 25% provision in the suburbs, 50% in inner urban areas. Parker Morris advocated 100%, a figure followed by many of the major developments of the sixties. Further spaces, it was also asserted, should be laid out for visitors; in 1966, we read a recommendation of 1.25 car-spaces per family. In 1958, Cleeve Barr still echoed the concept of the quiet green around flats, and a reduction of the number of roads: 'the provision of quiet footpaths . . . away from the noise and fumes of motor traffic has become a social need'. He mentioned that 100% provision was imminent, but does not say much about where it was to be provided.

The problem must, in fact, have come as a rude shock to designers. In the sixties it was debated whether spaces should be created underneath dwellings, or in adjacent multi-storey car-parks with terraces above. At a density of 200 p.p.a., one car per dwelling meant three levels of parking—playgrounds could be located on top. All this added greatly to the notional rent of the dwellings, especially as the building of garages was not eligible for Exchequer subsidy. With garages potentially occupying up to 50% of the open space, the whole conception of high density seemed in danger. One way out was to build 'more dwellings in tall blocks in order to free ground space for car storage'. Another possibility was to design more complex multi-layered structures with car spaces underneath [19.12]. Lastly, of course, high densities themselves could be abandoned: this solution, although itself outside the confines of the present story, was presaged by the way in which LCC and other planners made use of the new car-parking requirements, as reinforcement for their longstanding 'diminishing returns' argument against 'site cramming'. The new problems of car parking and play space provision did, however, show, once more, that the design and layout of high-density housing had become an extraordinarily complicated business, in which the most unexpected factors might exert influence upon one another, practical, as well as architectural in a narrower sense of the word, in combination with socio-psychological problems to which we shall come.[32]

CHAPTER 10

New Construction: Reinforced Concrete and Prefabrication

Prefabrication has the possibility not only of increasing speed of erection but also of increasing the comfort of our houses.

Homes for the People, 1946[1]

THE MOST IMPORTANT single issue with high blocks was, of course, construction. We can begin with the simple realisation that, for buildings of more than five storeys, the old methods would not do any more. We shall deal here with the major structural innovations from the 1940s into the early 1960s. The building-industry context of these innovations, and the impact of prefabrication and 'systems' on multi-storey flats at the peak of production in the sixties, will follow in Chapter 24.

Our main concern in this chapter is thus the subject of building as engineering. Public housing formed a major constituent part of the postwar history of structural engineering: the most eminent names of the profession, such as Samuely and Arup, recur frequently. At the same time, architects usually remained in control of the overall design process; a number of specifically 'architectural' issues will be dealt with separately in the next chapter. As with many other more purely technical aspects of our subject, our account can only be a partial one. We cannot deal here with the whole of the building process and we have to leave out the building supply industry as such; there can be no assessment in these pages of 'quality', of the performance of materials (that is, the relationship between expectations and results), of variations of workmanship, or of problems of maintenance, whether anticipated or not. Nor can we deal with the question of the expected life-span of Modern housing blocks—one assertion in the early sixties was that they would last well into the first half of the next century.[2]

Structural experiment was something that had, up to 1930, been conspicuously absent from the design of flats. There simply did not seem any reason, economically, to change the old methods. In the thirties, a few architectural firms and Modern groups, such as Tecton and MARS, spearheaded the investigation of new kinds of building. It was not until the late forties that more widespread thinking on the construction of flats and a continuous series of innovations began. By 1954, a building scientist, W. A. Allen, and an architect, E. D. Mills, could speak of 'our inability to settle down [to an agreed method of modern building;] . . . we are in a highly creative period where we seek originality at every turn'.[3] We have already characterised in more general terms the efforts of the research groups which had sprung up during the war. The first aim of this new 'architectural science' movement was to devise a programme for dealing with postwar economic problems: materials and labour shortages. But it also contributed to a fundamental reappraisal of the methods of building construction, in which economics play only a subsidiary role.

Although later commentators, during the fifties and sixties, tended to belittle some of the results of the 'architectural physics' of the wartime and immediate postwar years, for their lack of immediate applicability,[4] the change in general approach proved to be extremely influential. It was already evident in *House Construction* (1944: the first Burt Committee report), and it appeared more prominently in the third edition of the much-valued Building Research Station handbook, *Principles of Modern Building* (1959).[5] The handbook's first edition, in 1938, had divided the subject into walls, floors and other basic parts of a structure. This was a treatment firmly in the tradition of all builders' manuals: one dealt with methods of construction, with the trades, and with materials. The 1959 edition, however, proceeded in a completely different way. Its subject-matter was divided primarily into the chief demands made upon a structure: namely, that water, wind and cold should be excluded, fire prevented, and daylight admitted; it then explained how various methods of construction could help to fulfil these demands. Primary importance was now attached to what was somewhat later called 'functional performance', and to its scientific measurement; we have already dealt with one of the novel branches of this study, the 'provision' of daylight and sunlight.

Having thus established the priorities, and the logical procedure as a whole, new kinds of scientific precision were likewise crucial for the new methods of construction. Structural design in accordance with these principles, whether with old or new materials, involved various subtle but pervasive changes of practice. 'Measurability' now stood at the beginning of each undertaking. Instead of the old, vaguely 'empirical', 'margin of safety' and ad-hoc provision of additional thickness, one now prescribed exact performance criteria of stability and protection, and allocated the material and devised the structure accordingly.[6] The new principles were most fully developed in the well-known formula which separated 'structural' and 'functional' demands. This, in turn, fitted most closely the favourite constructional model of those decades, that of frame plus infill: the frame to hold up the building, and the cladding to keep out the weather.

One of the results of this new thinking was that many existing building regulations were considered to be a hindrance

to efficiency. It was claimed that, because of their lack of a basis in measurement, they had erred unnecessarily on the side of caution. We saw, above, these developments at work in designing for daylight: the inflexible old blanket limitations on building height and proximity were now superfluous, as one could achieve greater density and daylight penetration by manipulating the shapes of buildings from the ground upwards. In the fifties, existing local byelaws were increasingly waived, and in the early sixties nationwide building regulations and standards were established in Scotland, England, and Wales.[7] An epoch of unprecedented lightness in building had set in.[8]

The new science of construction, the drive for economics (linked to the belief in the possibility of large-scale standardisation), fuelled the desire for the industrial prefabrication of building components. Wartime mass production seemed to provide direct models.[9] During the following decade, the lightweight standardised structures and cladding of the new Hertfordshire schools were universally applauded. In housing there was a 'frantic' search for new techniques—a repetition, to some extent, of the first wave of experiments after World War I. But virtually all the initial attention was devoted to suburban houses. In 1948, over a hundred built or proposed methods were officially counted.[10] Their variety was bewildering. Most combined a number of materials: steel, timber, concrete, asbestos sheeting and others. The vast majority adhered to some kind of frame construction, combined with cavity walls, although an influential minority chose in-situ poured concrete—a technique subsequently prolifically used by the Scottish Special Housing Association, as well as by Wimpey and Laing, which will be discussed further below.[11] The only significant experiment of the forties in large-panel concrete prefabrication was applied to construction of two-storey flats in 1944–9 by Glasgow Corporation's Direct Labour Organisation.[12]

The new kind of factory control seemed to help not only with quantity but also with quality—the above-mentioned factors of precise calculation of performance—in a way which was not possible with on-site work. An extreme example was the type of house which was, apart from the foundations, completely produced in the factory and carried in a few sections to the site.[13] This method was applied particularly to the vast programme of temporary aluminium bungalows, the 'prefabs' (125,000 in 1945–8). The other essential element which seemed to be closely bound up with modern materials and factory production was that of 'mod cons'. Many postwar 'non-traditional' houses, as well as all 'prefabs', contained modern kitchens, bathrooms, constant hot water and new heating methods.[14]

Was the prefabrication housing movement of the 1940s a success as a whole? The 'prefabs' and the much smaller number of 'permanent aluminium bungalows' were both hated (for their looks) and loved (for their conveniences). At the peak of this phase, in 1948, 30% of all permanent council houses were built using 'non-traditional' methods, and the total number of such dwellings built in the forties exceeds, probably by a considerable margin, that of the better-known 'system built' high flats of the sixties. However, from the early fifties, when there was a revival in brick supplies and traditional building construction, and in building output as a whole, prefabrication lost its attraction.[15] There were two main reasons why the subject of structural innovation within public housing failed to attract and hold the attention of architects so far: firstly, the size and urgency of housing output, which seemed to necessitate a direct involvement of Government-directed planning and sponsorship of the building industry, bypassing the architectural profession; and, secondly, the fact that most of the forties 'non-traditional' houses simply did not *look* Modern. The most widely built of the new types, the in-situ and no-fines concrete houses, were externally indistinguishable from traditional brick construction with roughcast covering. Architects felt that they had not been involved.[16]

In the last analysis, architects and engineers lost interest in the prefabrication of two-storey houses during the fifties because they wanted to pursue the construction of flats. The desire to devise new methods of building now had to be pursued in different fields, and in a much more comprehensive manner than mere experimentation with materials for small-scale supports and walls. A large building undertaking, such as a high block of flats, needed new thinking on several fronts. Ever closer cooperation was required between engineers, architects and quantity surveyors; and designers now felt it desirable to extend this to include the contractor, too—provided that the latter was attuned to their own requirements. It was hoped that the emergent method of assigning contracts by prior negotiation would allow this primacy of design. Prototype schemes, such as the LCC's Picton Street development, built by Laing in 1953–5,[17] were seen by many architects as holding out promise that they could coordinate the building process at an early stage. This would have been especially relevant in experimental schemes where the costs were hard to predict: competitive or selective tendering, appropriate for the construction of buildings already fully designed by the architects, seemed much too inflexible in such cases. However, it will be seen in Chapter 22 that the reality of contract negotiation and organisation was to prove very different: in large-scale practice, the notion of designer-controlled negotiated contracts seemed, on the whole, ineffective.

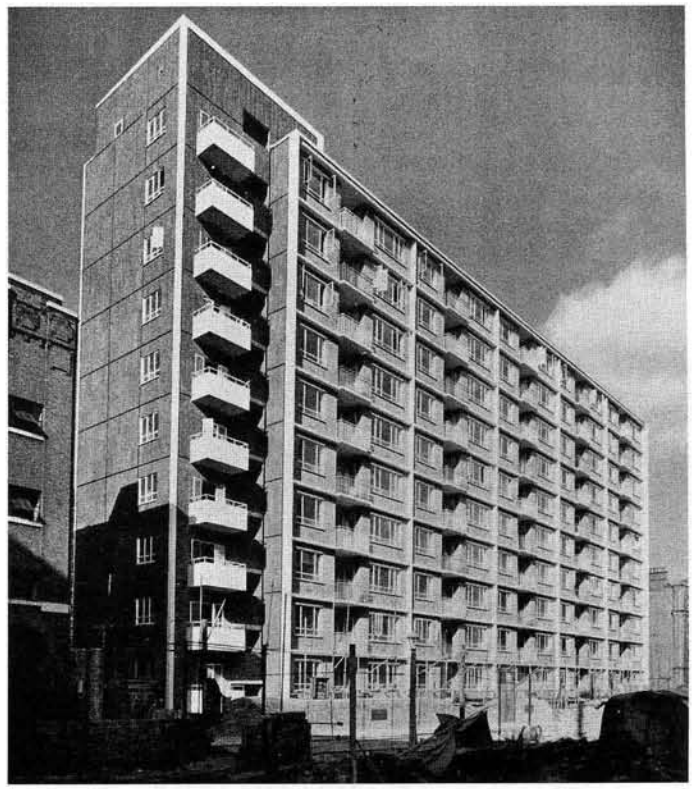
A further organisational development which greatly facilitated structural experimentation in the construction of flats was the mechanisation of site processes. Buildings of six or fewer storeys could be dealt with by mobile cranes. For higher buildings, the tower crane was introduced to Britain about 1950, and by 1954 some two hundred were already in action. Such contracts were literally 'centred around the tower crane and its capacity'.[18] At Picton Street, the tower crane could lift weights of thirty tons and assist in the in-situ casting process as well. Another major advantage was the fact that it made possible the elimination of scaffolding. In the words of an engineer in the mid-fifties, such a modern building site was characterised by 'complete order . . . and an absence of workmen', in contrast to the traditional 'overpopulated, semi-organised rubbish dump'.[19]

For the actual construction of high blocks, a number of methods were on offer. Occasionally loadbearing brick was used for structures of eleven storeys or even higher; however,

this demanded a new kind of 'calculated brickwork' and thus a new kind of precision which was a far cry from traditional brick walling.[20] What is more important here is that by 1950 most multi-storey flats, whatever their method of construction internally, were still covered externally with smooth brick walls, roughcasting, even plastered surfaces [7.2]. We noted above that the years around 1950 marked a turning point as regards high buildings: they were becoming a subject of special architectural discussion. Likewise, it was architects who clamoured now for a more visually open use of new methods of construction. As J. M. Richards asserted in 1951, 'nowadays the chief incentive to interesting design lies in the process of discovery of what can be made of some new technical developments'.[21] The Festival of Britain of 1951 had proved a hotbed of structural experimentation. Engineers, on the other hand, voiced somewhat different kinds of concerns: for instance Peter Dunican of Arup, who cooperated with Laing, the contractor, and Cleeve Barr, the LCC architect, in the Picton Street experimental scheme, asserted that engineers had their 'own particular preferences', and that the best solution was that which 'allowed the maximum mechanisation of the building process'.[22]

In the early 1950s, frame and infilling, or frame and cladding, became the almost universally accepted principle of multi-storey construction. As far as materials were concerned, the great majority of very high urban buildings to that date had relied on steel [10.1]. So did Quarry Hill (from 1935), the most ambitious—though not exceptionally high—scheme of council flats in the UK to date. Perhaps even more admired was the light character of the prewar Bergpolder flats in Rotterdam of 1934 [6.12].[23] Among major London postwar experiments in steel-framing were the St Pancras Way and Cromer Street developments for St Pancras (1946 and 1947), and the Great Ormond Street (Dombey Street) scheme for Holborn of 1946; in Birmingham, the Duddeston and Nechells Unit 1 blocks (1950) were steel-framed [20.11]. But steel was expensive, and was intermittently in very short supply around 1950. Its use in council housing became extremely rare—a few spectacular examples were constructed in the Clyde Valley steel belt in the early sixties, in Glasgow (Red Road) [COLOUR X] and Motherwell (Parkhead Street), and also in Paisley (George Street Stage 2).

The alternative was reinforced concrete (r.c.). The well-known Grindelberg 10 to 15-storey slab blocks in Hamburg of the late forties actually changed from steel to reinforced concrete frame during their construction, apparently saving 20% of the construction costs.[24] Reinforced concrete had progressed considerably in Britain after World War II.[25] It was something that could be made available anywhere and most of its ingredients could be procured locally. By comparison, the design, fabrication and transport of steel structures could be cumbersome. There was now a new lightness in reinforced concrete construction, which contrasted with earlier ideas that concrete had to be something bulky and heavy [10.2]. The use of shuttering, that is, the moulds required for concrete casting, had become rationalised into a number of flexible and precisely organised processes: there were continuous sliding shutters, intermittent climbing shutters and, especially important in our context, shutters



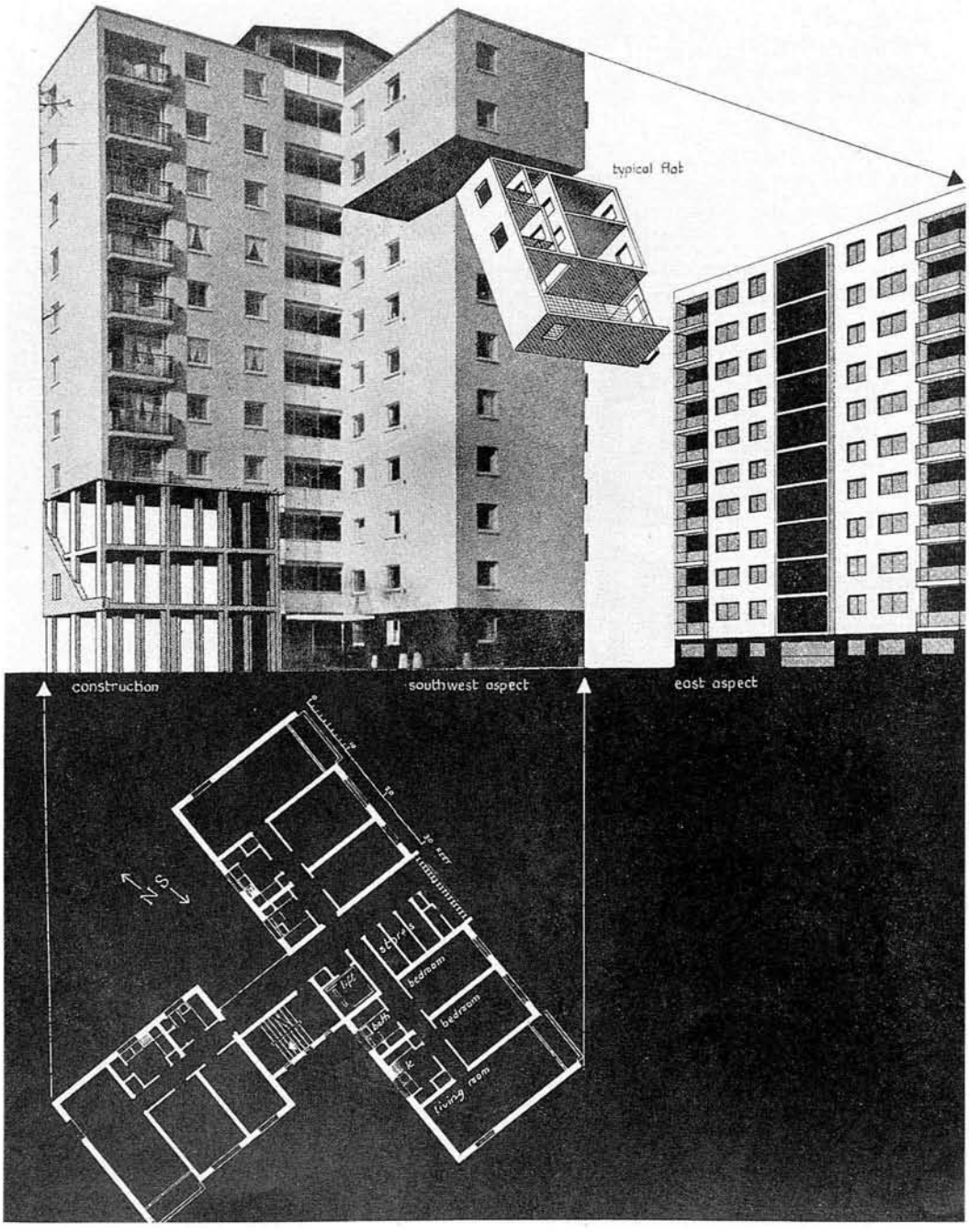
Dombey Street Flats, Holborn — Hening & Chitty, *Architects*

HOPE'S
STEEL DOOR FRAMES
HENRY HOPE & SONS LTD., SMETHWICK, BIRMINGHAM, & 17 BERNERS ST., LONDON, W.1

10.1. London: Holborn MBC, Great Ormond Street Area, Dombey Street, 1948–9; steel-framed flats. The frame is, of course, not visible but can just be felt in the thinness of part of the elevation (see ill. 6.12). (*AR* 11-1949, p. 337)

standardised to the floor height and wall length of rooms.[26] The concrete mix itself could now be drier than had usually been the case before, provided it was graded more carefully (in accordance with scientific measurement of the various properties of the ingredients), and this lighter mixture could be compacted into the moulds more efficiently by a process of vibration.[27] Additional strength could be achieved, and the amount of steel used in the reinforcement could be greatly reduced, through the new technique of 'prestressing': that is, the wires embedded in the concrete are tensioned while the concrete is poured around them. Prestressing makes the r.c. beam better able to withstand tensions, and was much used for floor construction from World War II onwards. 'Poststressing', on the other hand, was a new method used in strengthening the vertical members of a frame after they had been put together on site.[28]

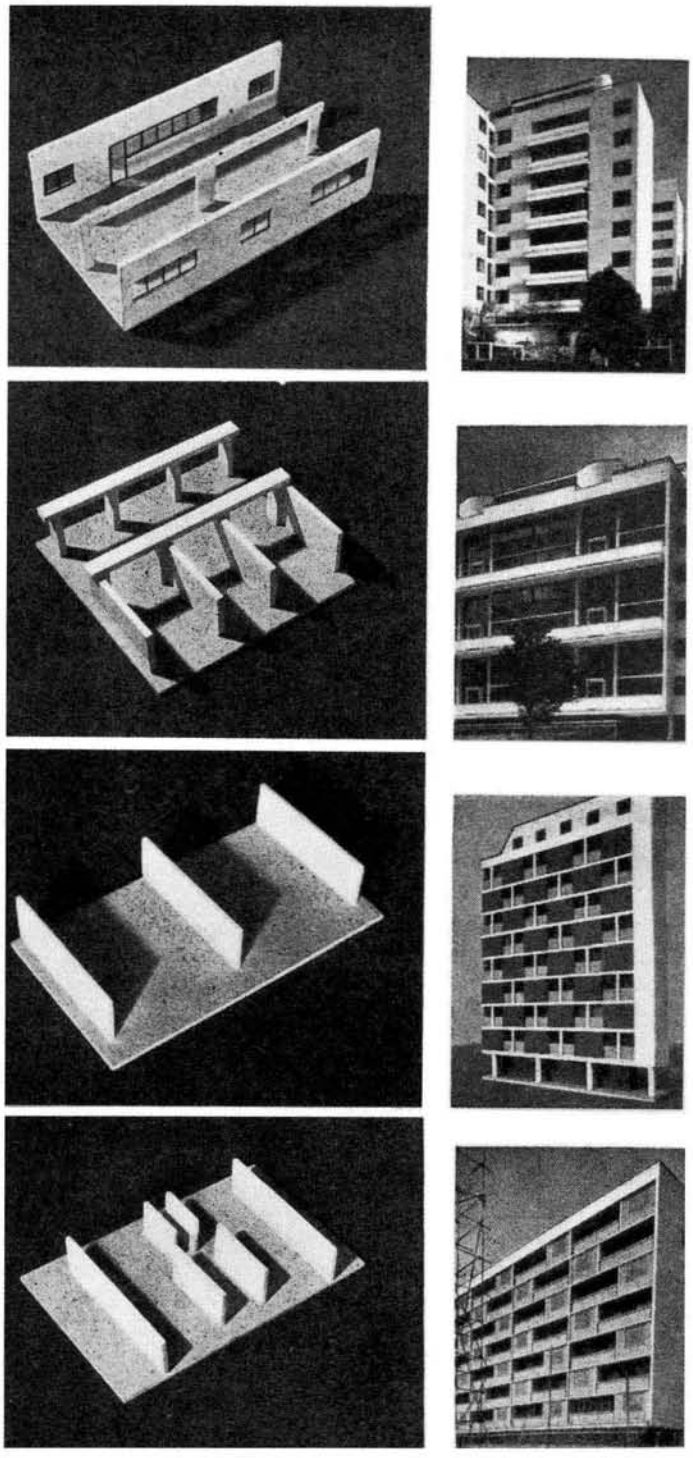
The majority of 'non-traditional' blocks of council flats, at least until the mid-fifties, were of r.c. frame construction.[29] A tremendous model for designers was the complicated frame of the Unité in Marseilles, where there had also been a



10.2. Coventry: Tile Hill, flats, diagrammatic view, demonstrating the regularity of reinforced concrete framework construction. (*AR* 7-1956, p. 29)

midstream change from steel to concrete. In early postwar multi-storey construction in Britain, the frame method was used for an 8-storey block at Paddington MBC's Church Street development (from 1951); the 16-storey main block at the City's Golden Lane development (from 1954) [8.2]; the LCC's point blocks at Portsmouth Road (Alton East) [7.6] and Roehampton Lane (Alton West) [7.8] (both 11 storeys); and the Brandon Estate [8.1] (17 storeys). It was also envisaged by Kadleigh in his High Paddington proposal, which exceeded 30 storeys in height [17.2]. Internal dividing walls and external facing could, of course, be carried out in a great variety of materials, including a smooth brick, as in the case of Britain's first point block, at Harlow (designed by Gibberd) [7.2], or the three 11-storey slabs built at St Pancras MBC's Regent's Park Area C development (from 1953). Here the frame is covered completely; at Sheffield's Park Hill Part One (from 1957), by contrast, the brick is shown strictly as infilling and the framework is extremely prominent [18.7].

There were some variants of r.c. frame construction [10.3],[30] such as external, monolithic walls, reinforced by spine walls and further tied together, by r.c. floors—as employed in the early phases of Pimlico in the late forties. This construction had the advantage over the frame system that no piers were needed which were liable to project into rooms at points where they might be awkward for occupants—as, for instance, in the flats of Walthamstow MBC's Countess Road (Priory Court) development [6.24]. The external monolithic wall/spine wall method did, however, create complications for the cladding with brick: at Pimlico, for instance, the brickwork rests on a projecting brick ledge

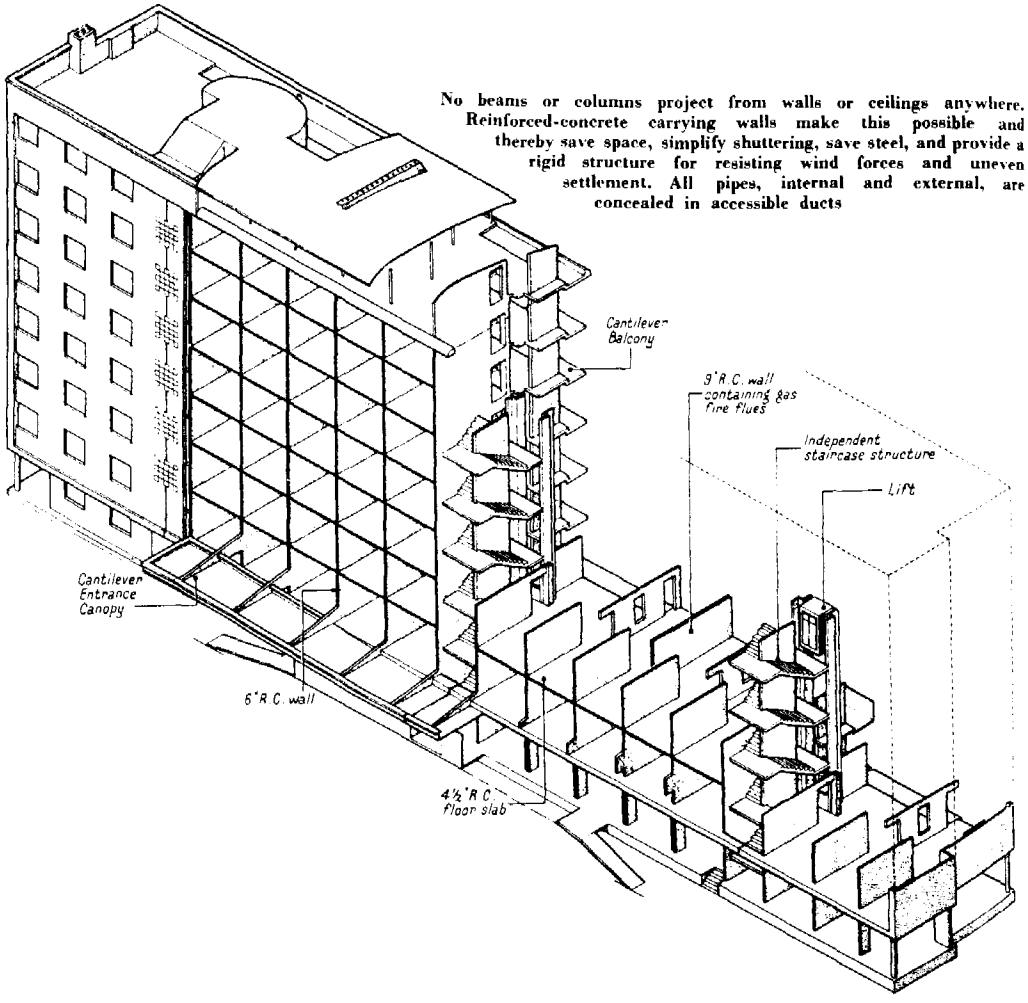


10.3. Construction methods of high blocks by means of reinforced concrete walls. From top to bottom: External load-bearing walls (High Point I, 1934); Transverse load-bearing walls (High Point II, 1937–8; both high class private flats in inner-suburban London designed by Tecton/B. Lubetkin); Transverse load-bearing walls without stanchions (Finsbury MBC, Holford Square, designed by Tecton/B. Lubetkin; Paddington MBC, Bishop's Bridge Road (Hallfield), designed by Tecton/B. Lubetkin, later Drake & Lasdun (see ill. 6.19). (*AR* 3-1951, p. 139)

above the windows, and has to be tied to the concrete behind. The engineer Felix Samuely seems to have had a predilection for use of such external r.c. walls, as at Bedford's Ashburnham Road block (from 1953), and Finsbury's Galway Street development (from 1958).[31] A kind of reverse of this was the 'flat slab' method (also known as beamless floor or plate-floor), where continuous horizontal planes tie together a series of vertical 'columns', though few public housing blocks used this method.[32]

In the later 1950s phases of Pimlico, the engineers and architects turned to a different method for construction of their slab blocks: the box frame [10.4]. Reinforced concrete is simple in principle: what is complicated is the casting process. The more casting of small and narrow parts and corners, the more lengthy and costly the process of construction, because of the complications of the shuttering. Furthermore, there are the many problems of fitting the walls neatly into the frame. Hence a method was devised which involved a different way of looking at the construction of a block as consisting of a number of units or cells. This kind of thinking takes the internal dividing walls as the starting point together with the floors and other horizontal members. If we think of both of these elements as something relatively rigid, we can combine them into a kind of frame. This frame has the added advantage of providing ready-made the main internal divisions at the same time—provided, of course, that these divisions do not need to be broken through. In other words, this kind of frame system suits buildings which are rigidly divided into small units—such as blocks of small flats. Two equally important terms, 'cross wall' and 'box frame', were used to describe this method; occasionally 'egg-crate' was also used. These terms were often employed in an overlapping way, even synonymously; but, in discussing their origins historically, it is important to distinguish them from each other. Cross walls, as such, do not have to be of concrete. From 1950, non-multistorey council dwellings in England, especially four-storey maisonnettes, were increasingly built in cross-wall brick construction; this method became popular among LCC architects. It could even be used for terraced houses—as witnessed by Eric Lyons's private sector 'SPAN' terraces. It provided effective separation between each dwelling; as there was no necessity for walls at each end of the 'box', the demand for more light could be met; and private balconies and deck access platforms could be accommodated within the structure [11.1].

With concrete, cross-wall construction seemed to make even more sense. While brick could still not be beaten for cheapness by the mid-fifties, some architects asserted that there was 'evidence that the concrete [cross-]wall loadbearing system offers a basically economic solution'.[33] Many four-storey cross-wall tenements in concrete blockwork, designed by Sam Bunton, were built in the early fifties in Glasgow [20.1]; here, precast concrete blocks had, in any case, been used for much of the Corporation's programme from the twenties onwards.[34] The status and definition of the first use of concrete cross wall, or box frame, for multi-storey flats is hotly contested. By the late thirties, Lubetkin had already attempted to combine major methods of r.c. construction of high flats at Highpoint One and Two: r.c. external walls

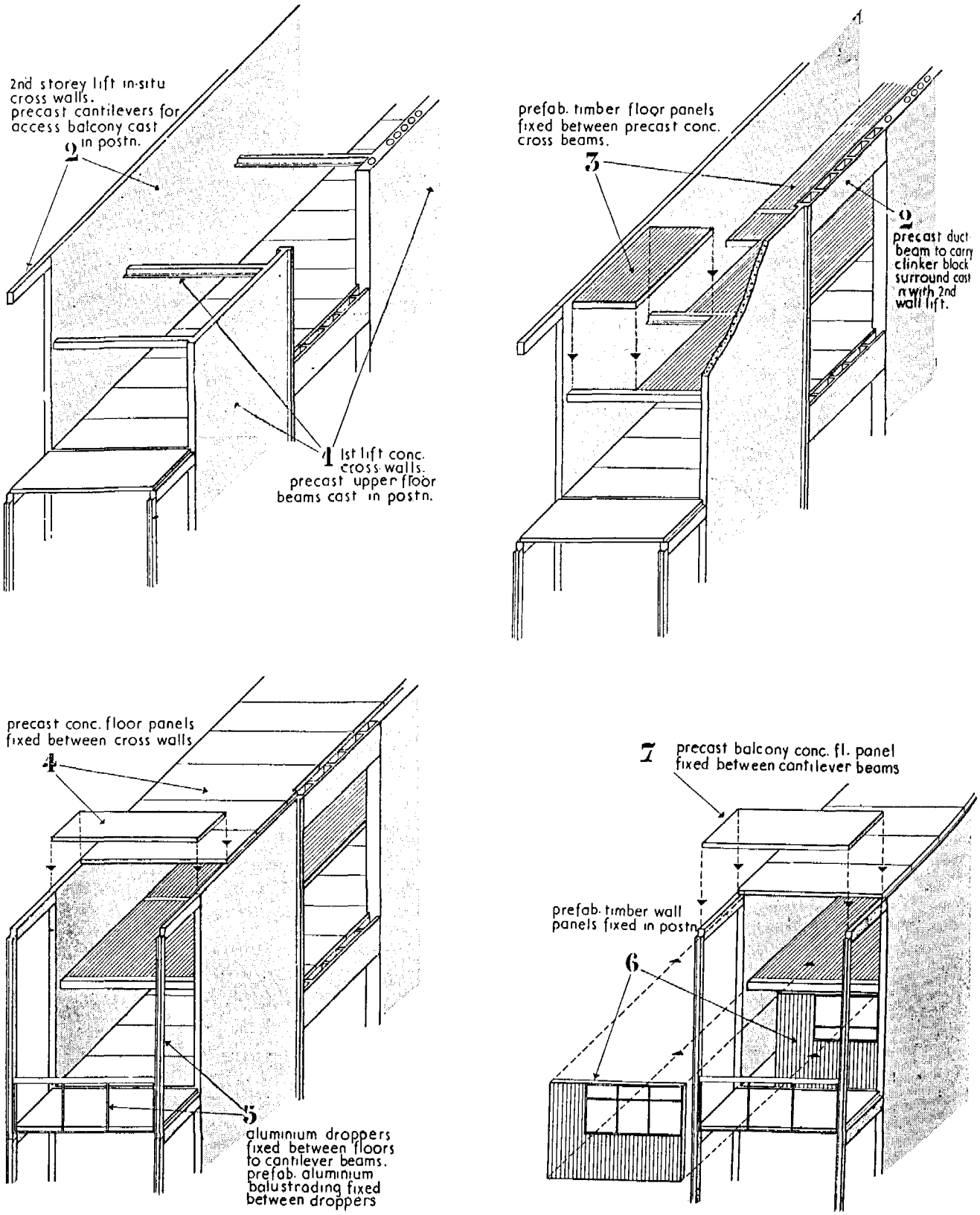


10.4. Reinforced concrete box-frame construction. London: Finsbury MBC, Rosebery Avenue (Spa Green), designed by Tecton/B. Lubetkin; engineer: Ove Arup & Ptns. (see ill. 6.15). (*Building* 9-1946, p. 276)

combined with internal spine construction and classic r.c. frame.[35] In his postwar designs for Finsbury MBC, he employed r.c. box frames [10.3], said to be the first in Britain and based on an undisclosed Danish model.[36] However, a block was reputedly built in Middlesex in 1935 in this form of construction.[37] The first completed postwar example of an r.c. box frame in London (in 1948), was claimed to be a small block of maisonettes, Brett Manor, built in Hackney by a charitable trust to the designs of Edward D. Mills.[38] Mills and Lubetkin both collaborated with Ove Arup, who also became involved with the Building Research Station's experimental block at Abbots Langley.[39]

Lubetkin's box frame was followed immediately by Lewisham MBC's Whitefoot Lane development (1950–1), designed by Max Fry, another rather extravagant gesture at a height of only five storeys. The LCC then adopted the box frame as the constructional method for its new type of 11-storey maisonette slab block: the Zeilenbau ideal of a stack of dwellings in a slim block with maximum openings on either side. The first LCC narrow-frontage slab blocks, however, appeared equivocal in their structural provision: Felix Samuely and Colin St John Wilson conceived a design which resembled cross-wall construction in plan and an r.c. frame when photographed under construction (as the cross walls had to incorporate cavities to accommodate the old-fashioned fireplace flues) [10.6]; while in the celebrated 11-storey maisonettes at Roehampton Lane (Alton West), r.c. cross walls alternated with a brick infilled r.c. frame [COLOUR IV]. Peter Dunican (an Arup partner) and Cleeve Barr both fervently believed in the box frame. Constructionally, their own experiment at Picton Street represented the early culmination of this development of the LCC slab block [10.5]. Reinforced and unreinforced cross walls alternate; there was particularly careful measurement of the strength of all respective materials: as strong as necessary and as light as possible. Longitudinal strength in the box frame 'house of cards' was provided at both ends by strong flanking walls, as well as by the grouping of stairs and lifts near the centre.

So far, we have discussed only the 'bare bones' of a block of dwellings. Earlier in this chapter, however, we hinted at a major general innovation in Modern building: the separation of frame and 'infill'. What we are concerned with here is the outside covering of the frame, or box frame—in the laguage of structural engineering, the cladding. This, too, needed much more rigorous scientific consideration. In 1955, Dunican and Cleeve Barr elaborated on the desired performance of cladding: light in weight and strong. Its chief functions were to keep out wet and cold, and to provide soundproofing and fire resistance.[40] Lastly, the external sur-



10.5. Cross-wall–box-frame reinforced concrete construction. London: LCC Picton Street, Southwark, designed from 1953 onwards by A. W. Cleeve Barr; contractor: Laing; engineer: Ove Arup & Ptns. Almost all parts are cast or made before they are assembled with the help of the tower crane and quasi-slotted together. The drawings show practically all the parts needed to form the basic stucture of the block and the balconies attached to it (see ill. 7.9). (Cleeve Barr)

face of the cladding was subject to aesthetic scrutiny: the new freedom as regards the look of the building was often emphasised even in technical accounts.

The thermal properties of all kinds of external walls were minutely investigated and measured in the context of the desire for more reliable heating methods, for instance in the Egerton Report of 1944. The Housing Manual of 1944 introduced the 'U Value', measuring the degree of heat exchange between inside and outside, with '30 U' as the upper limit, beyond which the heat loss was considered excessive and wasteful. Subsequently, new considerations of ventilation, and an increasing fear of condensation, both greatly complicated these discussions. As regards sound insulation, standards were graded I and II. About 50% of recent public authority dwellings, Cleeve Barr reckoned, achieved Grade I. The decisive factor was the weight of the material employed. In this respect, the new kinds of heavy concrete dividing walls had an inherent advantage; wooden floors were out.[41] Investigations were further complicated by regarding cladding not simply as a 'barrier', but as an 'environmental filter'.[42] It is important to note that the enthusiasm for a combination of r.c. frame and manipulable cladding led to the condemnation of brickwork as bad at keeping out water and cold, especially in exposed positions.[43]

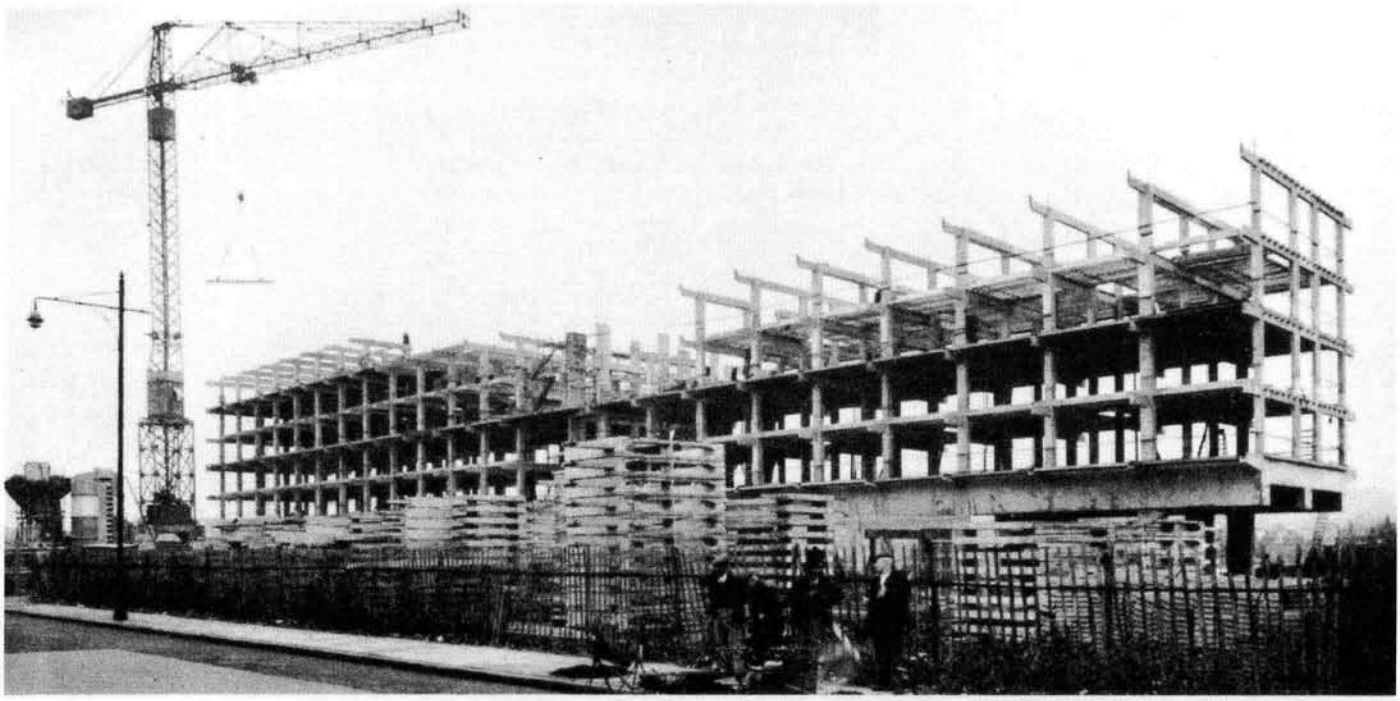
'If all the external materials used were listed,' we read in connection with the LCC Brandon Estate, 'the list would read like a building exhibition catalogue of cladding materials' [8.1].[44] In the early fifties, there was still uncertainty about new materials, and brick still seemed the best proposition.[45] Glasgow Corporation's massive tenement-building programme of those years used various facing materials, none of great novelty: roughcast, common brick, facing brick, terrazzo slabs or precast concrete blocks [20.1]. But a few years later, experiments abounded. No single material would do: there needed to be a combination of materials, each used according to its own special performance, as in the case of the insulating agents, woodwool and polystyrene. The external layer was frequently of metal (for example, corrugated aluminium), but there was also, surprisingly, much use of wood externally, for instance at Picton Street [10.5]. The cross-wall maisonette block of whatever height, with its varied, often brightly coloured infill cladding, was certainly one of the most characteristic sights of English urban housing of the late fifties and early sixties; we shall come below to the use of prefabricated concrete elements in cladding.[46] A separate, but related area of experiment was that of flat roofs, which were 'in the centre of violent controversies', we read in 1946. Such arguments were often of an semi-aesthetic nature. It was for general rationalist reasons of constructional consistency that one ought not to introduce timber roofs in buildings whose ceilings were of concrete. But to many engineers and designers, the flat roof's practical advantages also seemed proven: it was 'better at keeping the weather out than pitched roofs', it was cheaper, and it provided 'space for recreation'.[47]

The requirements of structural and functional performance of Modern blocks of flats converged in the design of the joint: the Modern joint was something completely 'without precedent'.[48] In traditional construction, the myriads of individual joints merge with the small 'building components', the bricks, into a quasi-monolithic whole. But the new emphasis on light cladding and on the efficient assembly of large cladding panels conferred a new special importance on the joint and the variety of its sealants [10.11]. This significance was further complicated by the subject of 'cold bridges'—breaks in insulation, for instance, at the point of contact between outside walls and concrete posts. Joints must accommodate movements of heat, moisture and structure, and at the same time exclude air, water and dust. Moreover, there was a new school of thought which maintained that partly open or flexible joints performed better than hermetically sealed ones.[49]

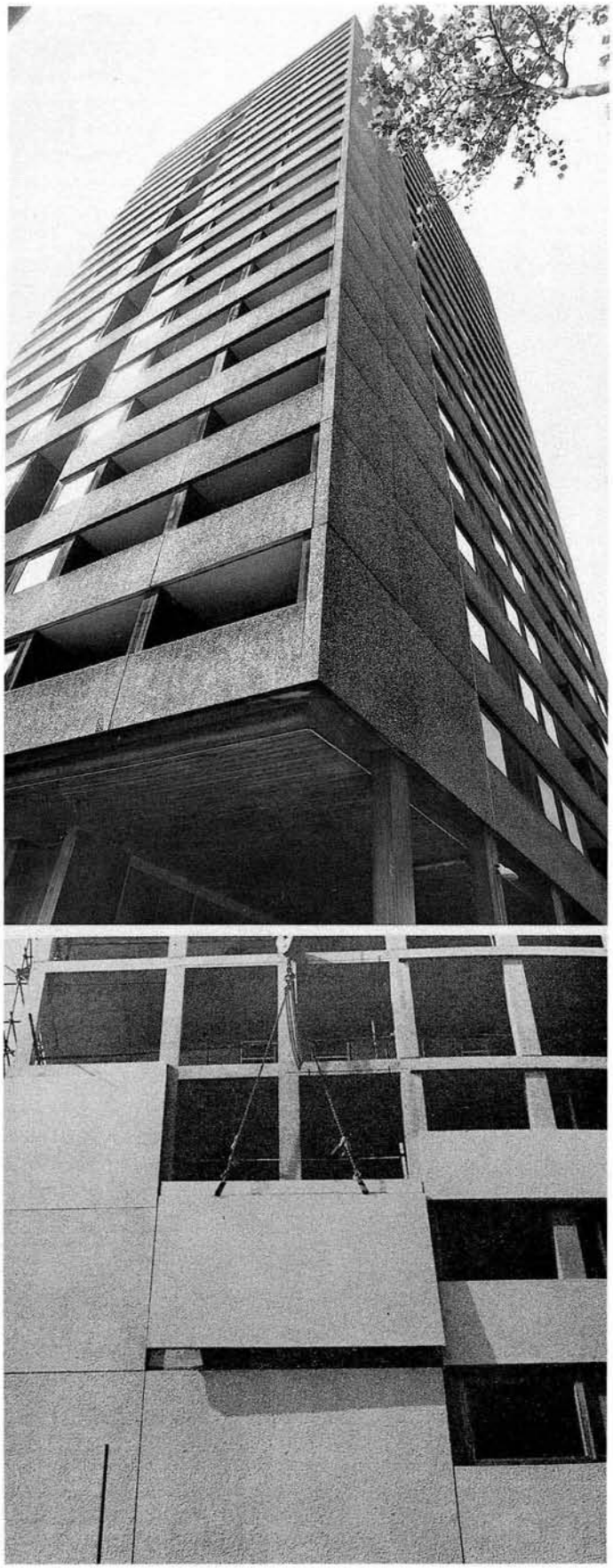
We must return to the subject of prefabrication [10.6]. Cleeve Barr claimed of his Picton Street scheme that it was 'perhaps the most rationalized yet . . . by maximising the use of precasting'.[50] The precasting of floors, for instance, obviated the cumbersome in-situ handling of horizontal shuttering. Apart from the cross walls, most other repetitive components of the Picton Street blocks were prefabricated [10.5]. These were dropped into position by the tower crane. Furthermore, the production of the in-situ parts was mechanically assisted by the crane, which could move the floor-high shuttering for the cross walls from one location to the next. There was also, we remember, no need for traditional scaffolding in these operations. The designers asserted that speed was greatly improved, as was the standard of the concrete finishes.[51] The cross-wall system—or the box frame—Barr and Dunican concluded, 'lends itself to repetition and standardisation of structural and non-structural elements and therefore to prefabrication and more rapid building methods'.[52]

All kinds of 'cladding' for the external walls, such as metal sheeting, were prefabricated almost by definition. What was particularly important in this context was the special interest devoted to the precasting of external concrete panels. The first major example was the French Mopin construction at Quarry Hill. At Roehampton Lane (Alton West) small panel concrete cladding replaced the smooth concreting and rendering of Portsmouth Road (Alton East), for slab and point blocks alike. For the Trinity Road (Fitzhugh) point blocks, designed by the same LCC group as Portsmouth Road (under R. Stjernstedt), the contractor, Wates, proposed in 1954 that a tower crane should be used, and that some elements, including the cladding panels, should be precast on site rather than cast in-situ [7.10].[53] Around 1960, the very large cladding panels of Westminster's Hide Place attracted much attention [10.7].[54]

Finally, it was something of a paradox that another method of building was frequently mentioned in the context of prefabrication: namely, 'no-fines' construction, quantitatively the most successful of all the new postwar non-traditional house construction methods. The majority of non-traditional two-storey houses of this period were of no-fines construction, built by Wimpey, the Scottish Special Housing Association, and Laing (in the latter case under the name 'Easiform'). The opaque term 'no-fines' denotes, simply, the omission of fine sand from the concrete/aggregate mix, resulting in a cellular kind of concrete with reputedly good insulating pro-



10.6. Reinforced concrete framework construction. London: LCC Bentham Road, Hackney, planned from 1952, built from 1955, designed by C. G. Weald, C. St J. Wilson, et al.; engineer: F. J. Samuely. Most parts are precast on site. (Cleeve Barr)



10.7. London: Westminster MBC, Hide Place (Hide Tower), begun 1959, designed by Stillman & Eastwick Field; external cladding by means of large prefabricated panels. (*AJ* 20-10-1960, p. 586).

perties. For low buildings, steel reinforcement is not needed. Moreover, the concrete is less wet and therefore lighter, and less expensive shuttering can thus be used. Here, too, the tower crane reduced costs and made it possible to go higher. In 1953, there began the building of 11-storey no-fines blocks at Tile Hill Neighbourhood (North), Coventry, and, by the end of the 1950s, the firm had commenced no-fines blocks of 20 storeys, at Royston 'A', Glasgow [25.7, 25.8]; by 1967, the company was building to 25 storeys at Townhead 'B' for the same authority. In some such multi-storey no-fines blocks, in-situ wall panels were combined with a frame construction poured into gaps left between the panels [21.3, 24.3, 24.12, 25.3, 25.4, 25.7, 25.8, 25.17].[55]

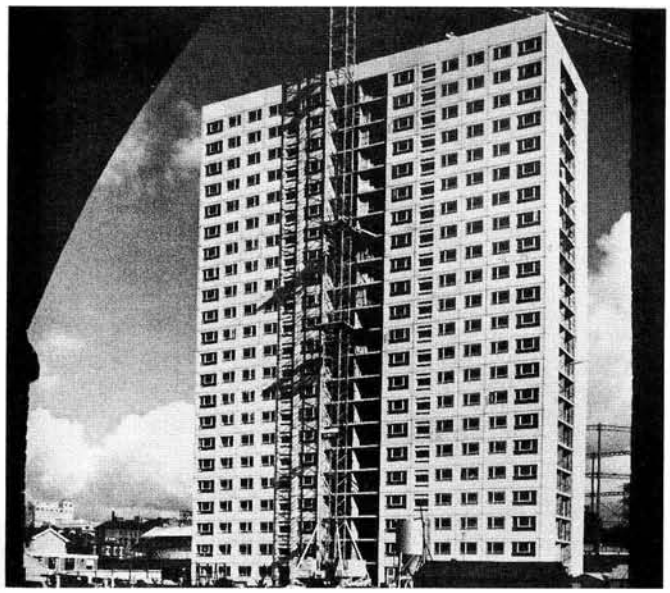
THE 1960S

In the forties, we witnessed an intense concern for new methods of building suburban houses, and in the fifties a quest for the perfection of reinforced concrete frame construction and its cladding. In the early sixties, we enter the most important phase of the use of new construction methods in public housing in Britain. The full development and impact of sixties 'systems building' can only be understood within the context of housing 'production' as a whole, for which the reader should turn to Chapters 22 and 24. The concern of this chapter is still the history of structural engineering. The variety of construction methods overall in the sixties is something that is reminiscent of 'industrialized building' in the forties. As in the forties, much of the designing was done within the firms that supplied the parts and built the dwellings, hence our account must deal with each building firm, with each 'package deal system', in turn. On the other hand, we must bear in mind that the chief construction methods of sixties high blocks developed quite straightforwardly out of the major experiments of the fifties.

To begin with, we must remember again the importance of the tower crane, first introduced in Britain around 1950, as a precondition for all large building projects of the sixties, especially for the handling of the prefabricated parts. The essence of most of the construction methods of this period, the large precast concrete panel, can be seen as a continuation of the box frame of the fifties. The first multi-storey dwellings in the UK of essentially loadbearing precast concrete construction—a nine-storey block built by Clydebank Burgh Council (at Melbourne Avenue) from 1953 to the designs of Sam Bunton—was closely related to the structural design of Bunton's cross-wall tenements then being built in Glasgow.[56] Reema's large-panel cottage construction techniques formed the basis of its multi-storey work in the late fifties for Leeds and the LCC: in the former case the loadbearing wall panels were completely precast, in the latter the precast panels had vertical cavities filled in-situ to provide a kind of framework.[57] Conforming to the fifties pattern, Reema's Leeds and LCC contracts were based on plans by the local authority architect and the engineer Felix Samuely; in the sixties, the firm's input into design greatly increased.

The first major foreign-designed prefabrication construction methods introduced to Britain were those of the French building firm Camus and the Danish firm Larsen Nielsen.

THE WORLD'S TALLEST OF ITS KIND IS HIGH AND DRY



LOGAN TOWERS LIVERPOOL · THE WORLD'S LARGEST BLOCK OF CAMUS PREFABRICATED FLATS
J. W. BODDY, A.R.I.B.A., A.M.T.P.I. — DIRECTOR OF HOUSING · LIVERPOOL
Contractors: Unit Construction Co. Ltd.

compriband
BITUMINISED POLYURETHANE EXPANSION JOINT SEALING STRIP
THE INTERNATIONAL WEATHER-PROOF SEALING STRIP
MANUFACTURED IN 24 COUNTRIES
USED THROUGHOUT THE WORLD
COMPRIBAND (GT. BRITAIN) LTD., TOWERFIELD ROAD
SHOEBURYNESS, ESSEX TELEPHONE: SHOEBURYNESS 2341 2 3

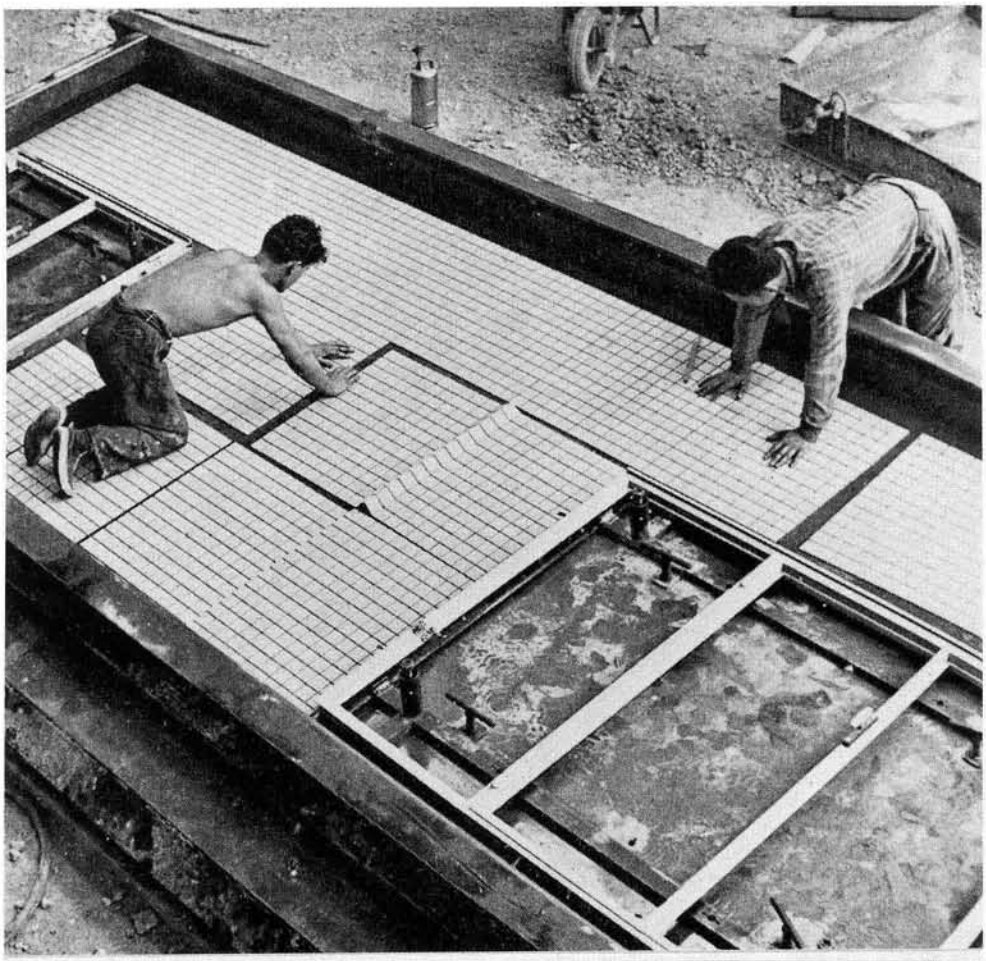
10.8. Liverpool CBC: Boundary Street, Logan Towers, planned from 1963; Camus system. (*ABN* 18-2-1966, p. 21)

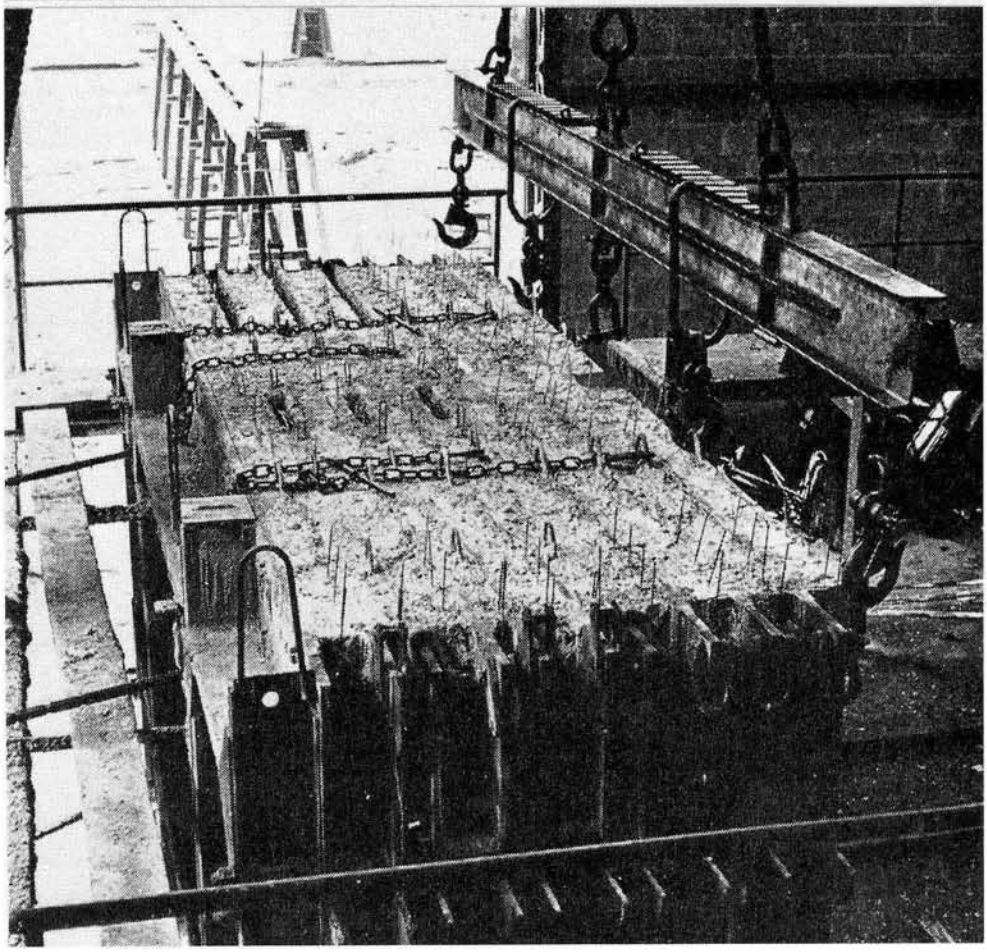
The former, under discussion in England and Scotland since 1959 and contracted by Liverpool CBC in 1963, incorporated panels 21 feet in length; its floors and panels, each at least 6 inches thick, together formed a 'multicellular structure rigidly braced in all directions' [10.9, 10.8].[58] The Larsen-Nielsen method, adapted by Taylor Woodrow-Anglian and used, from 1963, by the LCC, incorporated a main structure of basic loadbearing cross walls, again 6 inches in thickness [22.5, 24.5].[59] Further examples of virtually complete precasting of large wall panels were Laing's 12M Jespersen [10.13, 19.4, 24.7], and the Yorkshire Development Group's 'YDG Mark I' (built by F. Shepherd & Son), with 18 foot spans for the width of the flats and the possibility of a 3-foot depth variation [10.10].

Concrete Ltd's 'Bison Wall-Frame', the most prolifically used 'system' in the UK, named the matter confusingly, yet aptly: there is no frame in the sense of frame plus infill; the walls themselves constitute the 'frame'—a series of all-round boxes [10.11, 10.12, 24.10]. This was occasionally described as 'rigid box construction', but this must not be confused with the prefabrication of complete units of rooms or flats—an essentially Eastern European method not found in multi-storey flat building in the UK. In Bison blocks of twelve or more storeys, all walls are loadbearing, including the external walls; there was no such thing as a 'partition wall'. Here Bison went beyond the 1950s method of cross-wall construction which left two sides of the 'box' open. The wall and floor panels are up to 21 feet in length, and all internal walls have a thickness, again, of 6 inches. A two-bedroom flat could be assembled out of the incredibly small number of 21 precast components, which included a completely prefabricated bathroom and toilet unit and elements of the structure comprising the stairs; the section enclosing the lifts and stairs was put together out of precast units three storeys in height. Despite the emphasis in Concrete's promotional literature on Bison's flexibility of planning, essentially it offered only two and three bedroom flats, and maisonettes were not possible. All staircases and access corridors were internal. The ground floor could not be opened fully for multi-purpose use, as in the case of framed constructions, and normally contained flats [26.3, 26.4].[60] A Scots variant of Wall-Frame was evolved in 1964–5 by Concrete (Scotland) Ltd and the Building Research Station's East Kilbride office, incorporating a number of improvements on the English prototypes [10.12; COLOUR XIII].[61]

Virtually all parts of the new prefabricated blocks of flats were produced in specially built factories, situated at a greater or lesser distance from the site. Concrete Ltd, for instance, created a number of strategically placed factories throughout England and Scotland. This was, of course, a crucial development, a decisive step away from the situation in the fifties, when most of the prefabricated parts of the new advanced blocks were cast nearby on site. A major exception was Wates, who prided themselves that the setting-up of 'factories on site' meant no breakages or delivery delays [23.1, 24.9, 24.8, 27.11].[62] Most 'systems' used a greater or lesser degree of in-situ casting: for instance Tracoba (imported from France by the Bovis subsidiary Gilbert-Ash), Balency (Holland Hannen Cubitt, also French in origin)[63] and Spacemaker (Shepherd). The Swedish Skarne method, imported to Scotland and England by Crudens, was built around a massive service core; a tower crane placed on top of this core was used to attach to it various prefabricated elements [25.24, 26.17]. Sectra, on the other hand, brought from France by Laing, chiefly comprised in-situ casting, whose high-quality precision steel shuttering was heated during casting and moved by a complicated series of cranes and rails; it too, could be called 'factory produced', although in this case the building process on site itself comprised the 'mechanism' of production [10.13, 24.2, 24.6, 29.4, 29.5, 29.7, 29.9].[64]

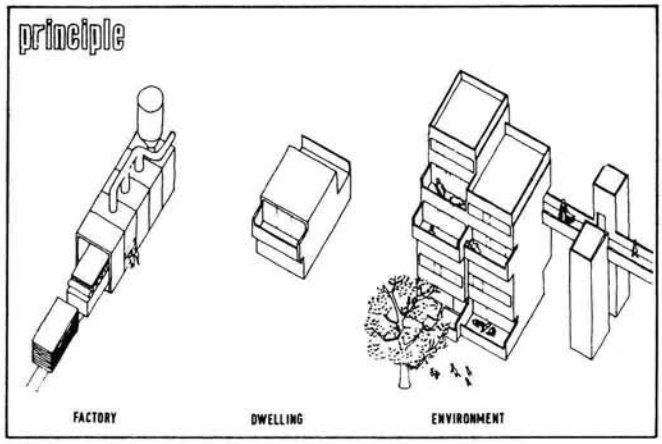
Two variants of multi-storey construction which created quasi-factory conditions on site, but whose procedures proved too complex and expensive for housing production beyond initial prototypes, were the Jackblock (Costain) and, somewhat later, the British Lift Slab methods.[65] Steel-framed construction and precast concrete framing were both very rare, although the forties and fifties had provided models of precast framing, such as a three-storey block in Mellish Street, Poplar. Later some very novel elements were found in the LCC's SF1 experimental point blocks, which combined a steel frame with precast floors and external fibreglass panels—perhaps the most adventurous of all postwar contributions in

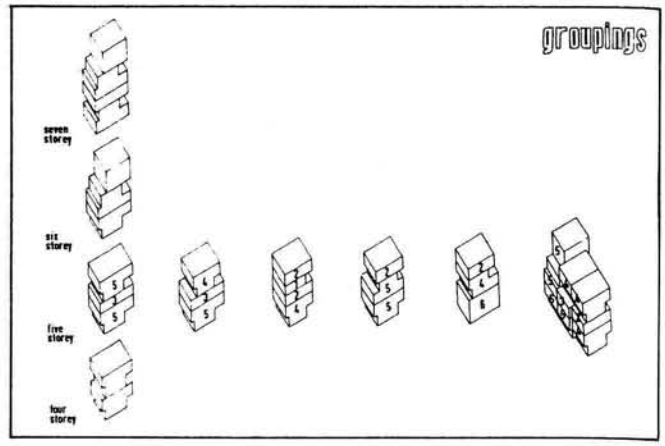


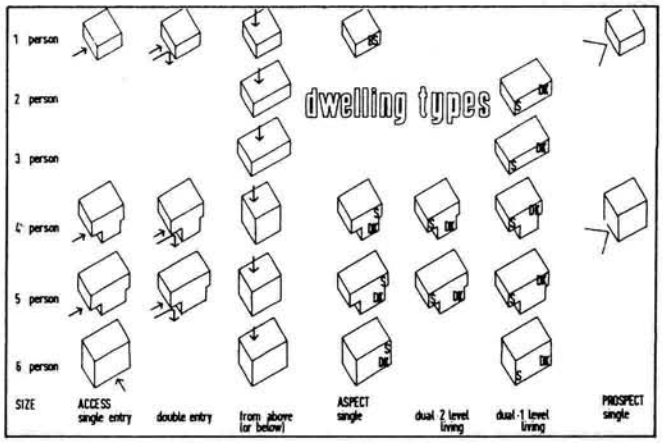


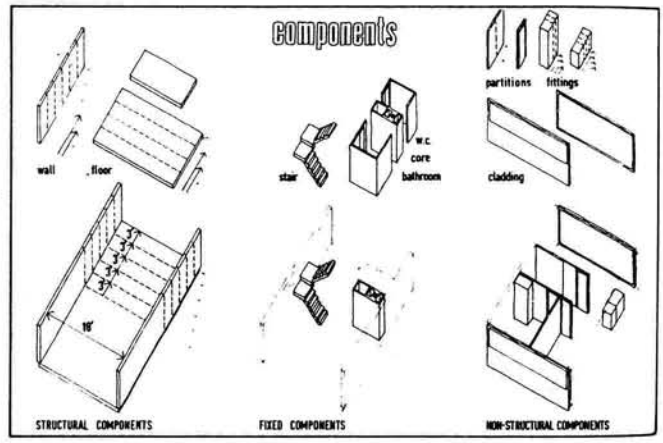
10.9. 'Camus System': plastic wall tiling for external walls is placed into position in the mould before the concrete is poured in; vertical battery casting for walls. (R. M. E. Diamant, *Industrialised Building* . . . , 1964)

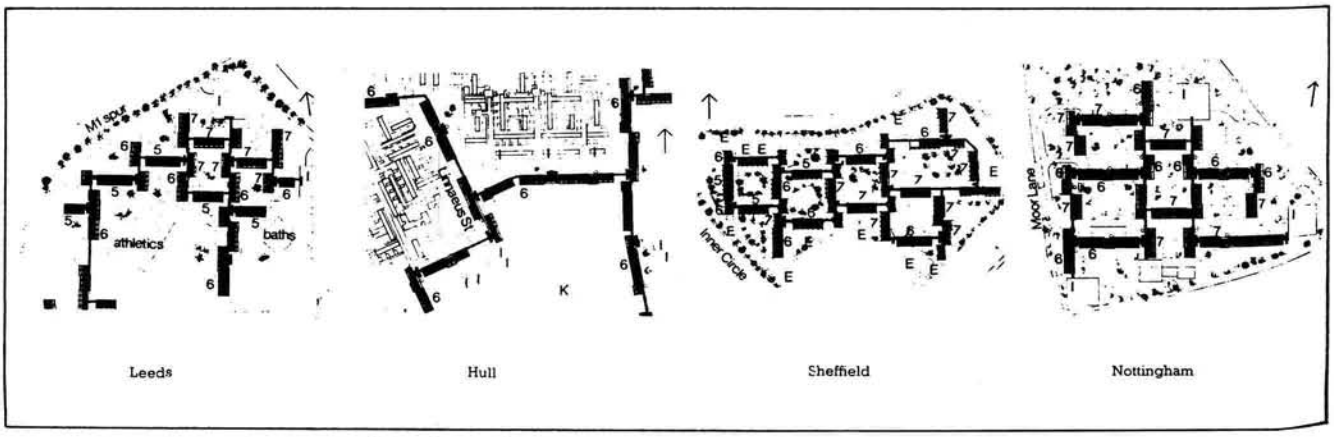
10.10 (opposite). YDG (Yorkshire Development Group), large prefabricated panel construction; architect to the Development Group 1962–8: Martin Richardson. (*AD* 9/10-1977, p. 710)
Leeds CBC: Leek Street (Hunslet Grange, YDG; *AJ* 9-9-1970, p. 567).

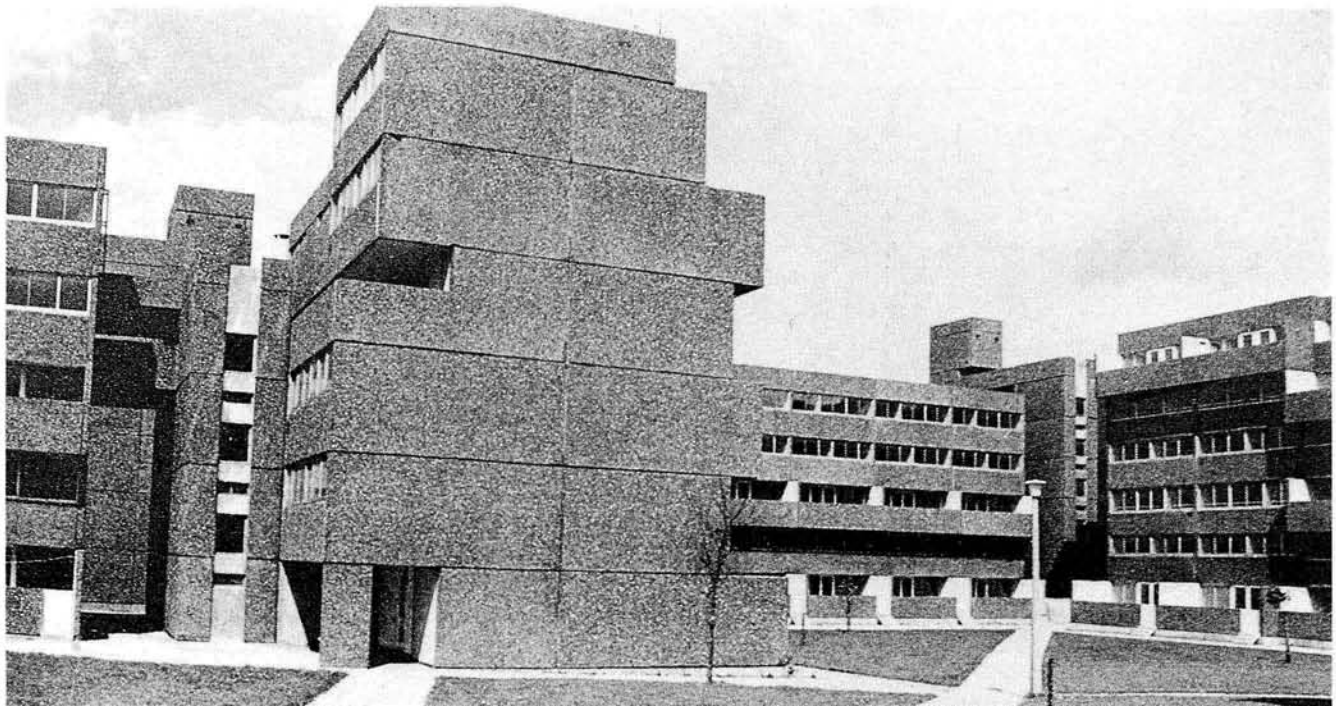

principle
FACTORY
DWELLING
ENVIRONMENT

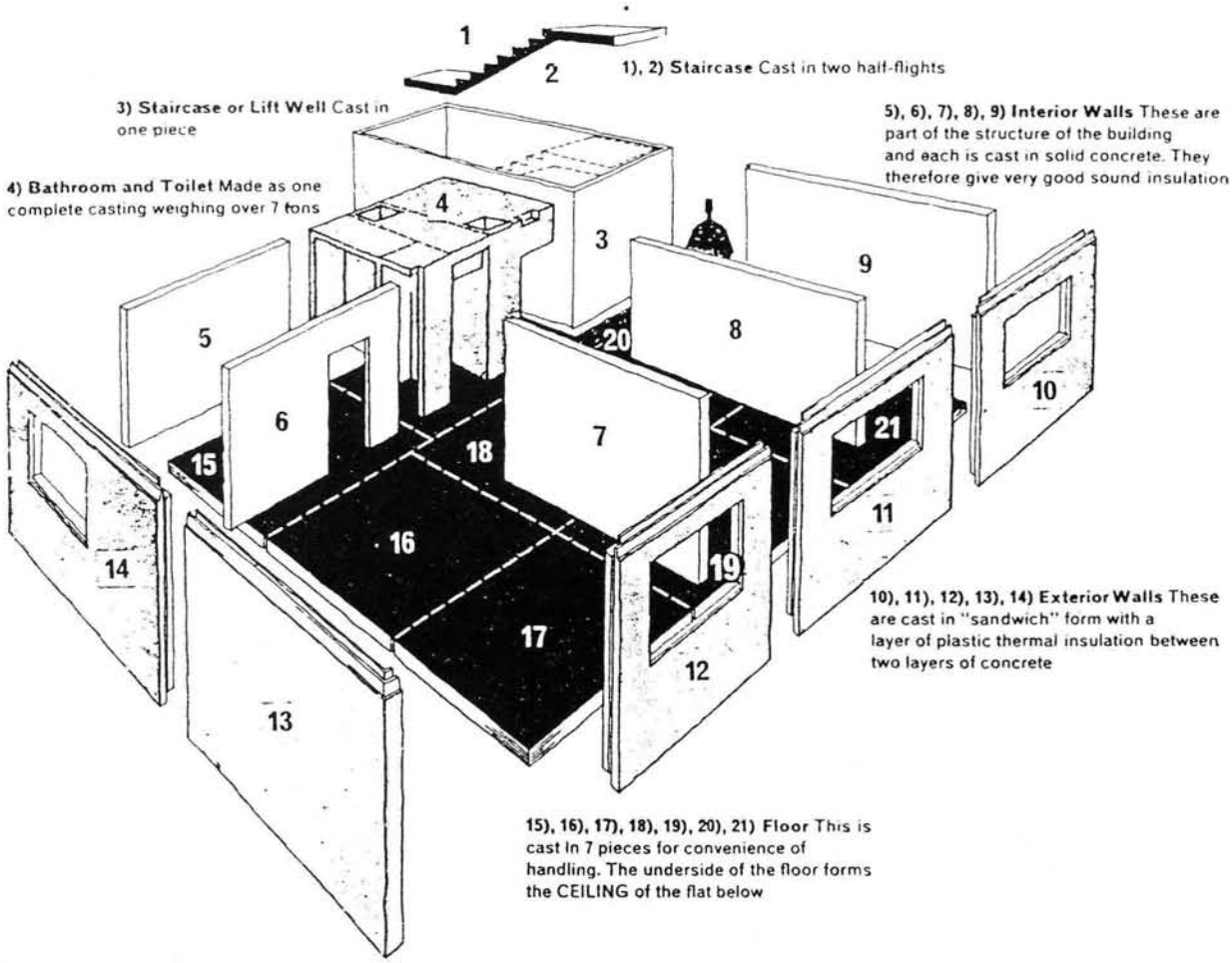

groupings
seven storey
six storey
five storey
four storey

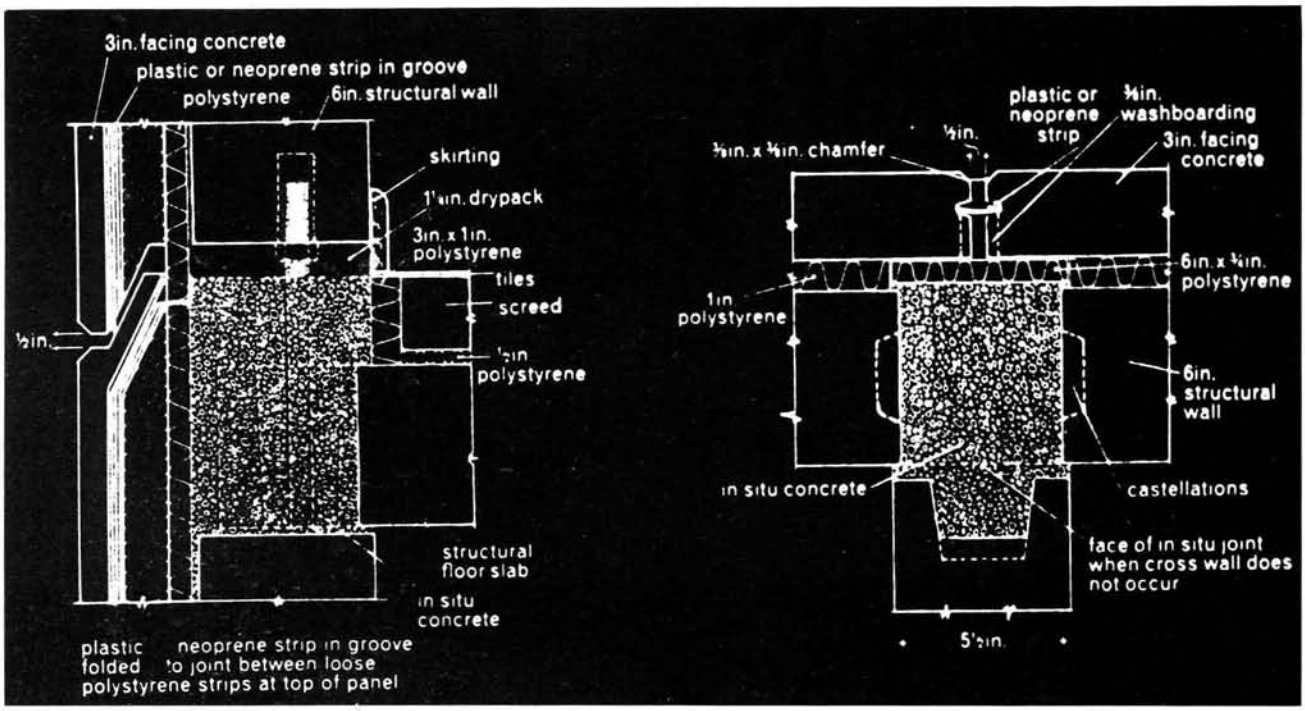

dwelling types
1 person
2 person
3 person
4 person
5 person
6 person
SIZE
ACCESS single entry
double entry
from above (or below)
ASPECT single
dual-2 level living
dual-1 level living
PROSPECT single


components
wall
floor
stair
w.c
core
bathroom
partitions
fittings
cladding
STRUCTURAL COMPONENTS
FIXED COMPONENTS
NON-STRUCTURAL COMPONENTS


M1 spur
athletics
baths
Linnaeus St
K
Inner Circle
Moor Lane
Leeds
Hull
Sheffield
Nottingham







10.11. Concrete Ltd 'Bison Wall-Frame System' (1962). Only 21 parts were needed for one two-bedroom flat in a high block (*AJ* 1-8-1962, p. 262). External joints: Left: vertical section through an external wall at the point of joining with an interior wall; right: horizontal section. (A. F. L. Deeson, *The Comprehensive Industrialised Buildings Annual*, 1965)

the UK to the structural design of multi-storey housing. The plastic panels were derived from ambulance bodies and cast by a car manufacturer in Cleveland, Ohio [10.14].[66]

No-fines construction, of course, lay completely outside the methods just discussed—yet it accounted for the greatest number of cottages and high flats built in any 'system' over the postwar period [10.15]. During the early and mid-fifties, multi-storey variants of no-fines were evolved by Wimpey and the Scottish Special Housing Association, and built, initially, in Birmingham, Kirkcaldy, Coventry and Glasgow. By the sixties, only Wimpey was left building large numbers of no-fines high blocks. Originally, everything was poured on site. But in later Wimpey multi-storey blocks, complete bathrooms and kitchens were prefabricated, and the '1001' point-block type of the early sixties incorporated also innovations in the field of finishing, such as dry lining. New mechanised techniques—the use of tower cranes and a 'cyclic programme programmed by a computer'—also achieved substantial time savings.[67]

Despite the somewhat unfashionable roughcast finish with which it was associated, no-fines approximated the most closely of all the new methods to the universal or comprehensive 'open system' of Modern construction advocated by many architects, in that it could be used with equal facility for all types of dwellings. In the area of cottage building as such, the variety of construction offered generally in the sixties was infinitely greater than for higher blocks, and included much steel or wooden framing. In contrast to the interwar years and the forties, when prefabrication was associated with detached or semi-detached cottages, most methods were now directed towards terraced houses, for which cross-wall construction appeared very appropriate. In all other respects, freedom seemed the watchword. To cite just one of the many varieties, the 'Chamelion System':

> Any frame may be used . . . Square, rectangular, hexagonal and circular buildings can be constructed . . . , an electrical low temperature heating system built into the interior wall lining panels . . . use of cranes or external scaffolding not necessary . . . panels can be fitted in place by one man on single-storey buildings and two men on multi-storey constructions . . .

—presumably with the second man standing on the shoulders of the first![68]

It was an essential aim, even a raison d'être for all new methods of construction to provide as complete a range of services as possible. Great financial savings could be achieved by fitting these in at prefabrication stage. Occasionally this had been advocated in the 1950s.[69] In prefabricated schemes of the sixties, many service conduits, such as electric underfloor heating ducts, could be included in the precast panels. Likewise, window and door frames were attached to the panels at an early stage and joinery work was reduced to a minimum. The more sophisticated and varied methods of casting now available also made it possible to eliminate plastering, by the provision of internal surfaces suitable for the direct application of wallpaper or paint. Large prefabricated panel building perpetuated the concern of fifties designers for the 'manipulation' of walls to provide insulation. In the case of sound insulation, the weight of the panels in itself provided the answer. Bison claimed the usual Grade I. For thermal insulation most large-panel methods used a layer of polystyrene between the layers of the outside panels. Bison claimed an outstandingly low U value of 0.15 [10.11].[70]

Major problems remained with the joints. As we saw already in the case of cladding in the fifties, large building parts produce fewer, but far more prominent and potentially awkward, joints. It was essential to link the panels effectively, to secure the rigidity of the box frame.[71] This was mostly achieved by tying together the ends of panel reinforcement bars, or by 'dry packing'. Another very popular joint treatment, that of grouting (the injection of cement slurry), constituted, in effect, a major break from the basic prefabrication principle of dry assembly. A great deal more complication and variation occurred in the case of external joints; these were subject to the same arguments already mentioned, such as the debate between advocates of hermetically closed joints and those supporting partly 'open' joints. In any case, heights of above 100 feet, that is 11 storeys, required 'greater accuracy all round'.[72]

10.12. London: Tower Hamlets LBC, Mansfield Buildings Area Stage I, Charles Dickens House, Bethnal Green Road, 1967. 'Bison' block, showing the varied kinds of facing given to the prefabricated panels.

LAING HOUSING SYSTEMS

Easiform

A system of rapid *in situ* concrete cavity wall construction for houses, flats, and maisonettes. Easiform has provided 100,000 homes for local authorities throughout the United Kingdom. An Appraisal Certificate endorsing the use of the system has been issued by the National Building Agency.

12M Jespersen

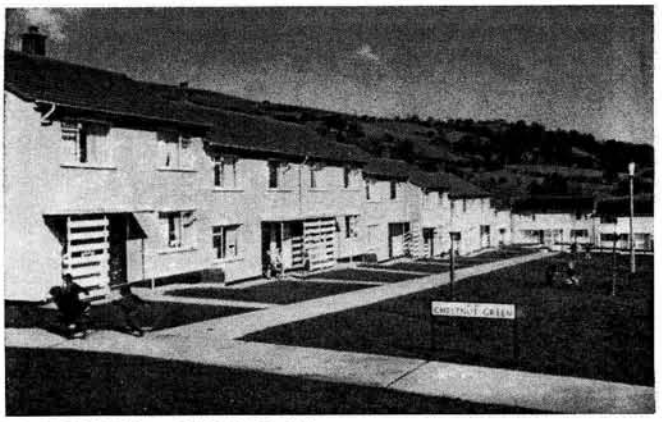
The 12M Jespersen system produces 'factory-made' housing by the manufacture of easily-handled precast concrete panels of modular sizes for walls and floors. Production of the panels is carried out at Laing semi-automated factories, ensuring absolute quality control. The number of site assembly operations is reduced to a minimum and the speed of erection is high, with all lifting work fully-mechanised. It is specially designed for the larger schemes of houses and flats for local authorities who need to meet the requirements of a large concentration of high-density building within a limited area. Appraisal Certificates endorsing the use of the system have been issued by the National Building Agency.

Sectra

An economic 'factory-on-site' system of *in situ* concrete construction, which also includes the use of prefabricated components and extensive mechanical handling, for the rapid erection of residential buildings of between four and 30 storeys. Sectra is particularly suitable for local authorities who require the advantages of industrialised building in medium-sized projects spread over a large area.

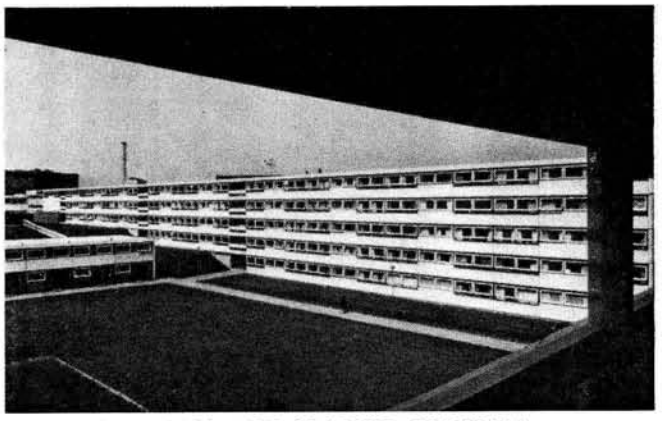
Storiform

A rationalised system of *in situ* concrete wall and floor construction for multi-storey flats, incorporating the extensive use of prefabricated components. Flexibility of design to suit the particular requirements of architects and local authorities is a feature of this economical method of construction.



EASIFORM—CWMBRAN

SECTRA—SUNDERLAND

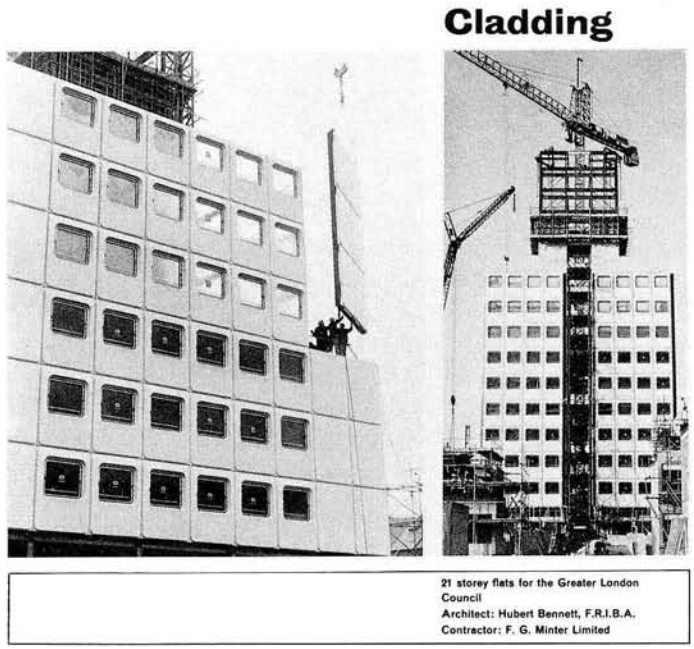


12 M JESPERSEN—ST. MARY'S, OLDHAM

STORIFORM—BLACKBURN

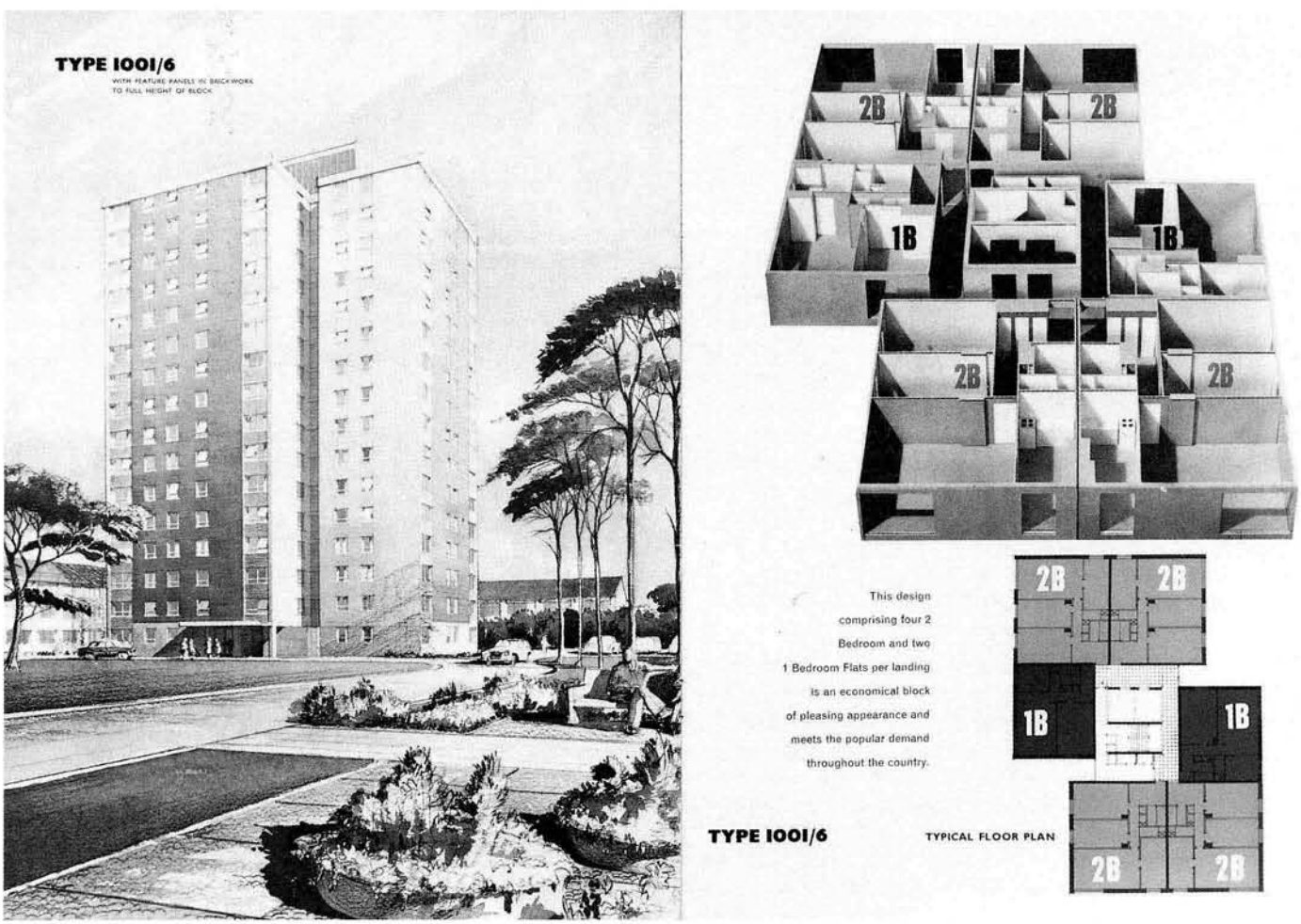
LAING **for completion on time**

10.13. Laing advertisement, 1967. (*Housing and Planning Review*, 1969)



10.14. A new building method devised by architectural designers in the LCC: 'SF1', steel frame and plastic cladding (Walterton Road, Paddington and Watney Market, Tower Hamlets, built by the GLC from 1965). (*AD* 3-1967)

10.15. Wimpey Type 1001/6 point block. (*Wimpey Rationalised planning in No-Fines Construction*, [*c.*1963])



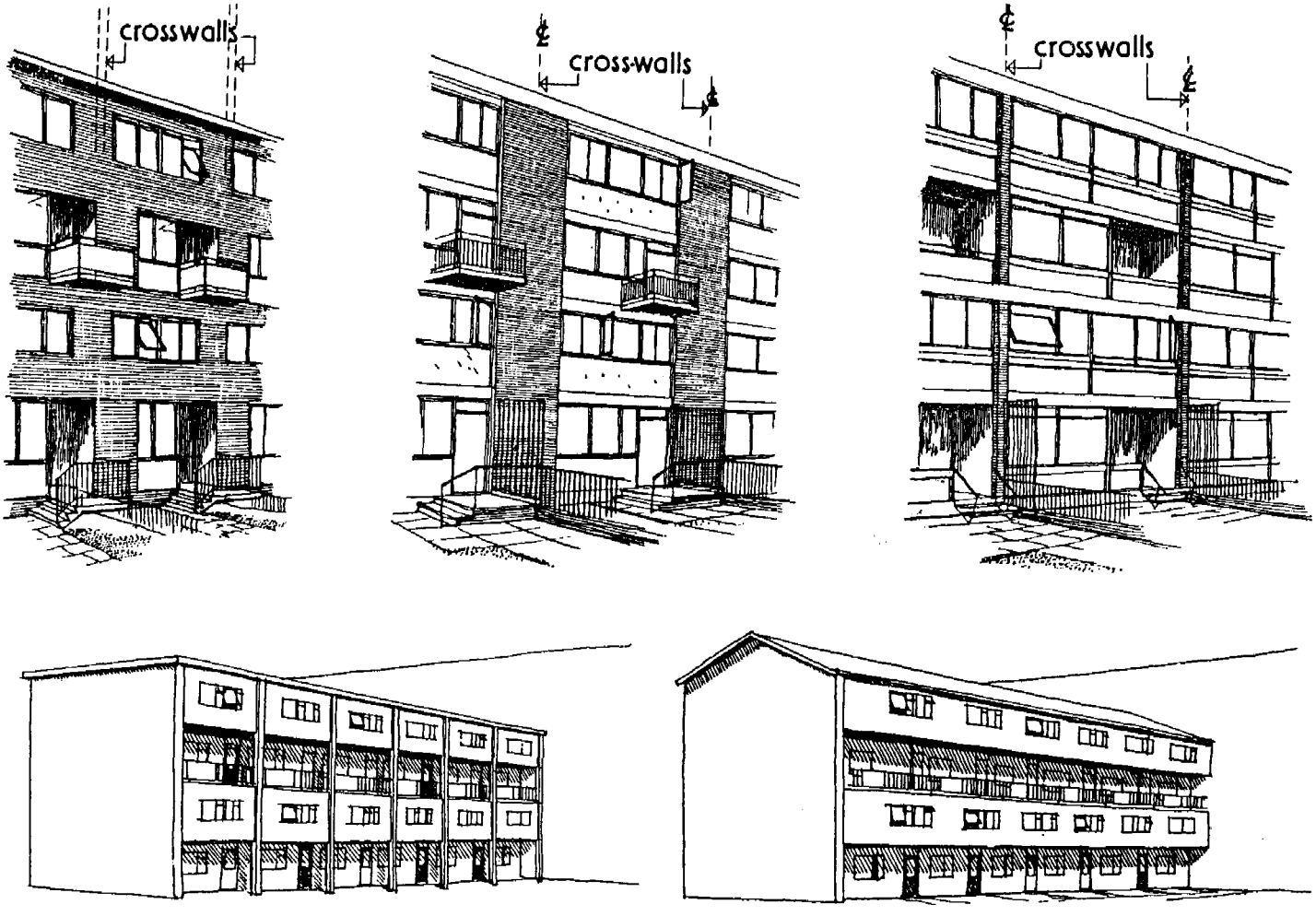
CHAPTER 11

New Construction and Appearance: The Modern Public Authority Dwelling

. . . Ethic or Aesthetic? Reyner Banham, 1966[1]

TO DEVOTE A separate section to the 'architectural' aspect of construction would have seemed inappropriate to many supporters of Modernism. For is it not the essence of Modern architectural design that architecture and engineering are one and the same thing? Yet, we have already pointed to the fact that, although structural engineers were 'responsible' for so many new methods of building, it was architects who, at least during the 1950s, initiated, or stipulated, many of the new methods of construction. And, at the very end of our story, we will find that architects once more took the lead, this time in phasing out the new methods of construction, chiefly because they had now come to dislike the look of them.

We are touching here, in fact, on one of the most complicated elements in Modern architectural debate. We need to reflect back to our brief dealings with the central problem of architectural theory, namely the relationship between the 'practical' and the aesthetic. Construction is science, but construction also constitutes that which is visual in architecture. Thus a formal discussion about, and aesthetic evaluation of, construction, detached from considerations of performance and stability, can be a most natural pursuit [11.1].



11.1. Cross-wall construction for four-storey blocks, showing a variety of methods for the external treatment of the ends of the cross walls. (Cleeve Barr)

Architectural theoreticians of the period remained ambiguous. Building, or technology, *is* architecture. Advanced building technology, 'pure construction', as shown, for instance, by the Festival of Britain Exhibition of 1951, is something of value in itself. 'Industrialisation . . . [is] the basis of design';[2] '. . . intelligence, order, beauty, mass production'.[3] One of the minor but typical catchwords of the period was 'no detailing'. At least some parts of buildings could, it was claimed, be exempted from decorative, 'formal', or aesthetic consideration; these would show 'no conscious detailing'.[4] The historian and critic Nikolaus Pevsner asserted that the LCC's multi-storey blocks at Roehampton Lane (Alton West) displayed 'no compromise with sentimentality',[5] and in Banham's view, Park Hill expressed an 'utterly uninhibited functionalism'.[6]

Description of construction by architects and their critics oscillated between statements that, on the one hand, a construction, a form, simply exists, and, on the other, assertions that something is being 'expressed'. In 1952, the comment ran that the grid of the Hertfordshire Schools 'expresses prefabrication'.[7] A major article of 1952 by Frederick Gibberd was entitled 'Expression in Modern Architecture'. Gibberd's analysis is symptomatic of the rapid shifts of interest in postwar architecture, especially in England. His preceding major contribution on architectural theory in 1948 concerned itself exclusively with the abstract formal values of the overall shapes of housing. In 1952, Gibberd was passionately interested in the ways in which the exterior of a building corresponds to its construction, and he devoted his utmost attention to the 'expression' of framework grids, corners and window-frames [11.2].[8]

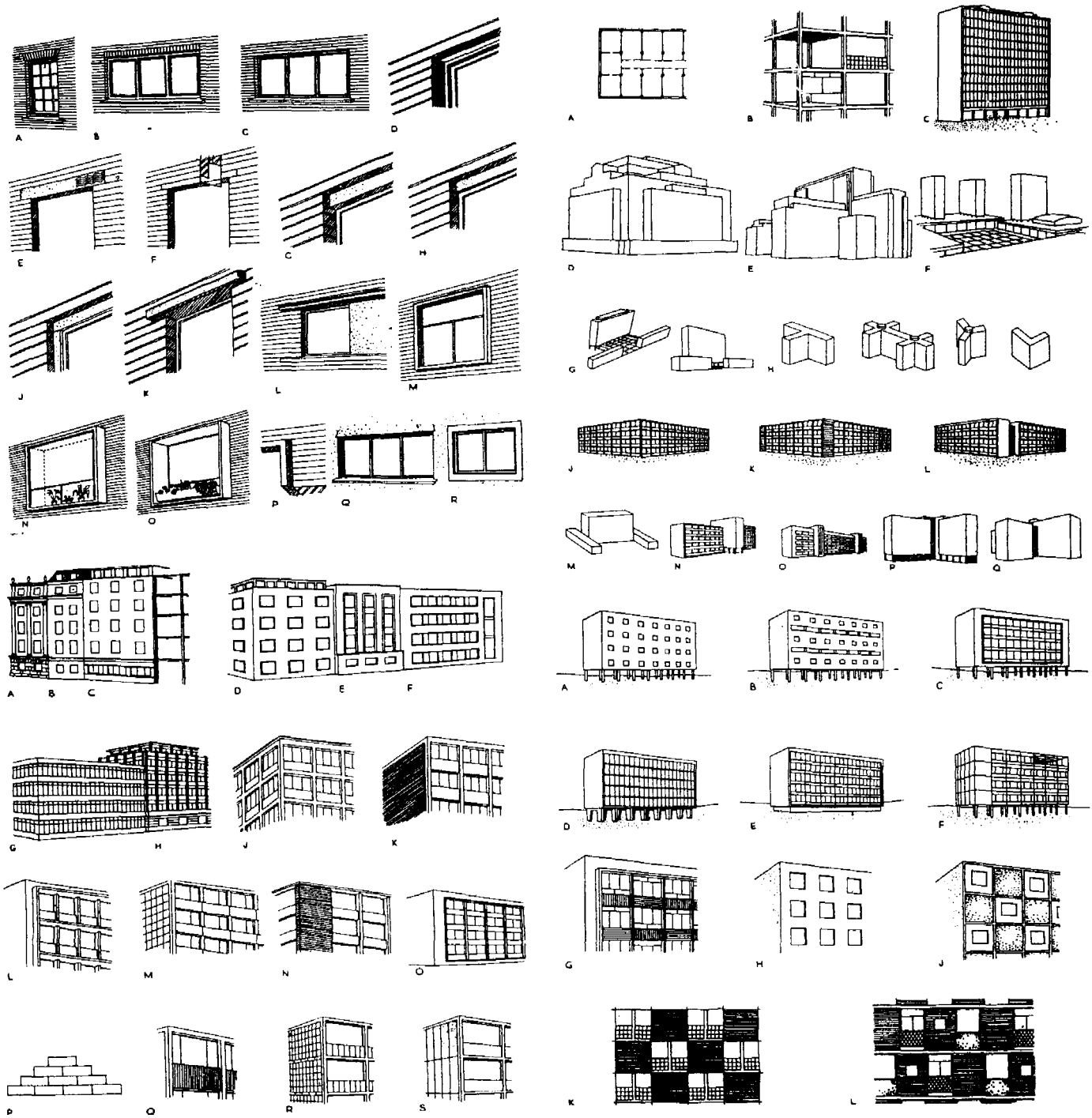
A few years later, the idea of materials 'as found'—first adumbrated by designers in the 1920s—gained ground again. 'Integrity' and a 'new ethic' were among the chief new catchwords—although they were sometimes given a question mark, for instance by Reyner Banham: '*Ethic or Aesthetic?* was the subtitle of his book, *The New Brutalism*, of 1966. This movement, in the field of housing, encompassed a wide range of ideas, often contradictory: on the one hand, a preference of rough surfaces of concrete and brick; on the other, an essentially backward-looking sociological approach to which we shall come later. Banham himself complicated the issues of new technolgical construction immensely by declaring in the later fifties that much of the 'technological' work of the International Modern Style constructivists of the twenties is best understood as symbolic rather than actual technology. Subsequently, Banham also emphasised a crafts aspect in much of Modern construction.[9]

The simplified approach we must take here is to cite the architects' formal descriptions of some new methods of construction. How did architects evaluate the frame as such? Some held that cross-wall construction 'mirrors modern architecture', no more, no less.[10] Others praised the resulting strict formal geometry, for instance at the Unité.[11] Some architects around 1950, such as Richard Llewellyn Davies, identified 'endlessness' as a particular aesthetic virtue of frame construction.[12] Bound up with these discussions was the age-old architectural formula of 'variety within unity'. Some critics, especially the proponents of early New Brutalism, contrasted the regular, 'anonymous' structures of blocks of flats with the diversity of fitments, curtains and the like, provided by the inhabitants.[13] In the sixties, this antithesis was further accentuated in the idea of the Megastructure: a massive service grid, filled by 'subordinate, transient accommodations'. The same contrast could also apply to the 'carpet' or regular cellular layout of late sixties 'low-rise high-density' housing: 'each house has its own identity, but the forms remain constant'.[14] There was a fascination with the repetition of the same basic measurement, the 'unit', which designers liked to call 'modular'.[15] With some exasperation, Kenneth Campbell declared in 1962: 'there is far too much talk about variety and monotony'; instead, the architect should simply get on with his business of designing.[16]

The high maisonette slab block, created by the LCC Architect's Department in the early 1950s, was a variation on this theme: it combined box-frame logic with a 'frontage-saving' type of dwelling. A little earlier, Lubetkin had also used the box frame in his designs for high blocks in Finsbury: here, the external façades received a varied, chequerboard patterning which only intermittently revealed elements of the frame [6.15, 6.16]. But for the 'Hard' grouping of LCC architects, the strong box frame around each maisonette 'expressed the actual physical limit to each dwelling'; 'each unit read'.[17] The older methods of covering frame constructions with brick, or brick plus a plaster skin, were completely given up. A further method was to let only the floor slabs reach the outside and thus provide a strongly horizontal visual emphasis; the intervals are filled mostly with non-loadbearing brickwork. In four-storey maisonette blocks, by contrast, we usually find a strong stress on the verticality of the cross walls [11.1]. In this context, as in the case of the box frame proper, the 'hole in the wall' type of window no longer seemed to make sense;[18] it usually stretches the whole width of the interval.

Much of the rest was 'cladding'. Cladding was chosen and assembled according to the various 'functional' requirements described above, such as insulation, and incorporated a great variety of materials: steel, aluminium, asbestos, wood, wired glass backed by another material, and, later, plastic. New aesthetic preoccupations ran alongside these practical considerations. There seemed a constant need to emphasise the architect's freedom in the 'aesthetic possibilities' of cladding design.[19] The most important element of choice was, of course, colour. The use of lively colours on façades, particularly of maisonettes, became a hallmark of much public authority housing of the later fifties and early sixties [COLOUR V].

Concrete ('the building material of the 20th century')[20] was valued visually *per se*, but also in that it made possible a wide variety of forms, ranging from ever lighter kinds of framework to chunky, irregular, 'sculptural' components with all kinds of surface patterns. Again, the Unité seemed a fount of inspiration. The traditional notion of 'finish' as something that was applied 'afterwards' ran contrary to the new conception of a 'constructional' architecture. It was argued that the surface of concrete did not result from the application of craftsmanship, as in the case of most other materials, but directly from the mechanical techniques



11.2. The 'expressions' of Modern frame construction. (F. Gibberd, 'Expression in Modern Architecture', *JRIBA* 1-1952, pp. 79–87; *AJ* 24-2-1952, pp. 118–24)

employed to produce it—hence the term 'self-finishing'.[21] The third approach to structural concrete (after thin framework and chunky in-situ casting), namely, precast panelling, also entered at this point. Cladding seemed particularly attractive, as it led away from large, homogenous, smooth surfaces—something that was not liked any more, certainly on the outside of buildings constructed by framework [10.7]. Cladding provided a 'natural' surface relief, or at least a pattern or system of lines. The semantics and the range of methods of concrete casting, Le Corbusier's 'béton brut', or 'out of the form' (Stillman and Eastwick-Field),[22] oscillated between rough, 'as found' treatments, displaying the 'accidental' marks of shuttering, and highly manipulated and varied mixtures of aggregate (strictly speaking, of course, a contradiction to the just-mentioned characteristic of 'self-finishing'). In any case, all these forms were seen as embodiments of 'directness of expression', which gave more satisfaction than 'clothing the structure in superficially pleasing materials'.[23]

In the 1960s, some of the 'system' firms exploited a wide

choice of surface treatment as one of their main selling points. Thus Concrete Ltd claimed that Bison permitted 'a complete range of external finishes' [10.12],[24] and Cleeve Barr cited a 'system' which provided for 23 'varieties of finish' and, believe it or not, 57 varieties of colour.[25] On the other hand, prefabricated multi-storey housing in the UK did not resort to the more striking and recherché methods of achieving variety of surface patterns and brightly coloured decor employed in France, often employing the very same 'systems' (Camus, for instance).

The sixties were furthermore characterised by a broadening of preference, a multiplicity of methods applied in construction. Some were stressing again the technological basis of all designs, aimed at low-cost provision. 'The New English Humanism: Prefabrication in its Social Context' was the title of an article by Guy Oddie in 1963.[26] Avant-garde critics and designers, like Buckminster Fuller, Banham and the Archigram Group, demanded ever closer links between architecture and engineering, and even more with environmental technology and even biology.[27] One of the chief aims of all design was now 'flexibility'; the International Modern architecture of Le Corbusier and others began to be seen as inflexible and technically naive: we shall come back to these problems nearer the end of the book. In a similar vein, architect-researchers, such as Cleeve Barr, working with Government agencies, demanded that architects should simply be 'part of the building industry'.[28] The prefabrication methods devised for housing under the auspices of the Ministry of Housing, such as 5M and 12M, were claimed to be more flexible as regards layout than those offered by the 'package-deal' building firms—arguments to which we shall return in Section II.

But what was becoming characteristic of the architectural scene, in particular with the English avant-garde, was a deep division: the mechanistic faction was beginning to be strongly opposed by other groups, stressing that value particularly esteemed in England: individualism. One of the first manifestations of this came as early as 1957, when *Architectural Design* criticised the celebrated Picton Street blocks as 'not meant for human beings . . . [being] an egg box raised on its side' [7.9, 10.5].[29] A major attempt was made, from 1962, to establish a multi-storey 'system' which allowed for a greater degree of individuality in looks, by the Yorkshire Development Group. Martin Richardson's YDG Mark 1 design emphasised both 'repetitive cellular structure' as well as flexibility and variety of dwelling sizes. Basically, YDG Mark 1 was a large-panel/box-frame structure with the same 18 foot interval throughout, but its depth could be varied at intervals of 3 feet: hence the walls project and recede throughout the lenght and height of the blocks [10.10]. In addition, Richardson covered all surfaces with a particularly rough aggregate in 'Yorkshire Grey', in order to establish a vernacular continuity with old stone villages.[30]

Richardson was indebted to some extent to Westminster's Lillington Street scheme [19.13]. Initially, in 1961, John Darbourne had envisaged a concrete cross-wall construction with roughcast brick cladding, but when the flats came to be built, he chose a brick cross-wall structure (with concrete floors, of course), faced with red brick of a rough kind.[31] A new love of brick, including the reuse of London Stocks, was another trend within English Brutalism's 'Ethic' (or Aesthetic).[32] In addition to the architect-in-technology movement, there was now also a strong movement trying to limit the influence of technology, and a further stress on individuality in design.[33] By 1968, a large and complex scheme in Southwark, Dawsons Hill, had completely turned away from crosswall or large-panel methods, or any kind of prefabrication, and adopted a monolithic, in-situ concrete construction, clad with brick throughout; a rejection not only of what the sixties stood for, but of many of the beliefs of the forties and fifties as well [27.18].

THE MODERN TYPE OF PUBLIC AUTHORITY DWELLING

All chapters so far come together to suggest one simple conclusion: the Modern Dwelling is the sum of various technical innovations. But there are several kinds of Modern dwellings. 'Modern', as most commonly understood, meant new kinds of conveniences which occurred in all houses built from about the 1920s (in the case of central heating, from the 1960s). Clearly, we have been concerned in this section chiefly with certain Modern *types* of dwellings. 'Modern' is still usually equated with 'practical'. But our Modern types of flats could also be seen as the outcome of rather more specialized scientific endeavours, the axiom of maximal light at high density. New construction methods made seemingly optimal solutions possible, as well as standardisation and equality of provision. All this linked with the somewhat older values of housing reform: a maximum of space, not only inside but also outside the dwelling. The result of this was not just an increase in size and bulk, as with pre-Modern blocks of flats, but new kinds of light and slim structures, many of them striking in their height. There was a conviction that this was the chief, even the only, way of providing Modern dwellings for the mass of the population in the larger towns and cities, who were still living in dwellings which—and this seemed forever worth repeating—lacked both light and adequate conveniences. We must now turn to another kind of thinking which greatly affected the design of public authority housing after the war, and which can broadly be termed social, as well as 'architectural' in a narrower sense of that term.

Part B
Community Life: A Postwar Architectural Stimulus

CHAPTER 12

A Welfare State Utopia

Something more than mere accommodation.

Theo Crosby, on the plans for Park Hill, Sheffield in 1955

The idea of community life is the big human factor which the planners have detected and which underlies all their planning.

E. J. Carter and E. Goldfinger, 1945

It has been aptly said that whilst the interior of a house is the property of the owner, the exterior is the property of the public.

L. H. Keay, 1939

Alles, was sozial gut ist, ist auch schön.

Christoph Bon, 1990[1]

THE MONUMENTAL IMPACT of the key word of this part, community, was matched only by the complexity of its meaning as it evolved through two decades of postwar planning and design. Later critics could only marvel at that 'package... which, viewed as a whole, had an extraordinary intellectual and emotional impact on the thinking public'.[2] As the town planner and architect J. H. Forshaw claimed at the end of a lecture on housing in 1948: 'Today it is easier for all to be less selfish; all have been tempered by the fire of common sacrifice in the war... Between the wars the provisions for education and recreation were not nearly enough to give spiritual satisfaction and a sense of purpose to community life.'[3] Clearly, 'building for the community' could be taken as a synonym for, even as a political underpinning of, a 'British national consensus', not just for public housing but for planning and building as a whole. It applied to all the concerns discussed so far, including the 'potential for planning borne out of functionalist rationality... [which] was held to bring about human dignity and equality'.[4] More specifically, 'community' referred to a long line of utopian thinking, of concepts for the 'ideal city'. But in the postwar years, 'community' in Britain also meant something even more specific; in town planning and housing it referred essentially to the degree of, and the kind of, socialisation among small or large groups of dwellers. This, in turn, was something to be investigated by sociologists, planners and designers. 'Community' was to become a special concern for the housing reformer and the housing design professional.

To begin with, 'community' seemed to arise from a practical division: we are exclusively concerned with what happens around the outside of the dwelling. But now, 'outside the dwelling' does not refer to what was discussed in previous chapters, with the way the outside affects life inside the dwelling, that is, with the angle of light, or with the way the dust chutes or the lifts operate; it refers to a different set of values. The quote at the beginning of the chapter indicates that the inside and outside of the dwelling are not just practical opposites but are seen as sociologically, even politically, different domains. There was in England (but much less in Scotland) a traditional adherence to privacy and self-containedness inside; it had always been one of the chief aims of all those involved in housing reform to make this self-containedness available to all.[5] The provision of communal facilities within blocks of flats, such as communal kitchens, with which other Socialist Modern housing programmes sometimes experimented, never found much favour in England, even in theory.[6] 'Home', 'Homes for the Poor', remained major catchwords, though they were now linked

chiefly with the scientific–technological investigations of the 'Modern Home'. 'Privacy' continued as an important notion in detailed planning, for instance in the attempts to reduce overlooking in high-density housing. But the main targets of sociological research and social policy, one might say the chief moral issue of housing, appeared transferred to the design of the areas outside the block of dwellings, linking the broadest of social issues, such as 'community', with planning and architecture; linking attitudes and behaviour with 'form' and 'space'.

The practical–technical problems of the dwelling, the 'Modern Home', were mostly dealt with by a wide range of specialists in design and industry who cooperated in varying kinds of groups. In 'community planning', however, we witness a dominance of a narrower set of professions: town planners, sociologists and architects. Moreover, we frequently sense a spirit of competition between these professions: each of them claimed to have a fundamental concern for the problem. The profession which began to dominate the debates after 1950 was that of the architects—or, to be more precise, the group of Modern, 'social-minded' architects to which we have already briefly referred under the new kinds of design for high blocks. Architects claimed that the forms they devised could fulfil the demands of sociology and social policy.

We should also remind ourselves at this point of the deliberations in the first chapter, the definition of architecture as function, construction and art. Our initial theory was that the designer of Modern housing began with the first two, while the third category was held to be largely a result of the virtuous application of the first two. But 'architectural', like 'social', was also seen as something that supplemented 'mere' practicality and technology; it could even be seen as being superior to the realm of the purely practical. A description of a planning and housing scheme in 1954 gave a convenient summing up of many debates—presenting its headings in, we presume, the desired order of importance: 'visual, social, functional'.[7]

A comprehensive definition of 'community' cannot be attempted here. It is a term which combines flexibility of meaning with the powerful expression of widely held values. We can begin with some of the more overtly political pronouncements—for instance concerning democracy: 'if all sense of belonging to a community is lost, then one of the essentials of democracy will also be lost'.[8] Expressions such as 'social justice', 'social renewal', 'a new social order', 'social mixing', 'social health'[9] were freely used by politicians and designers alike. Aneurin Bevan, the Labour Minister of Health, in a speech to the RIBA, maintained that equality had to come because, for instance, the better-off could not find servants any more.[10] The arguments used here often reveal the same simple need-fit logic that was traced in previous chapters. When people 'can meet each other easily', said the architect and town planner Judith Ledeboer, 'they are inclined to become a group'.[11] Occasionally, reformers openly attacked the desire for privacy. Bevan saw the English habit of fencing and walling in the front garden as an 'almost pathological desire for privacy'. Berthold Lubetkin, perhaps England's premier Modern architect, as well as the most outspokenly Socialist of all practitioners, condemned the desire for 'Gemütlichkeit' as a 'lack of civic valour';[12] his overarching aim was to create an 'Eldorado for the working classes' by 'marching shoulder to shoulder with them'.[13]

The arguments and questions about class were immensely complex. Was the fervent advocacy of equality nothing other than an ideological weapon with which the middle classes attempted to pacify the lower classes? To what extent was the 'Modern Dwelling' a middle-class concept anyway?[14] In the immediate postwar years, we witness a transition from the provision of low-cost housing as a charity to the idea that the State should help to build rental housing 'for all', in the service of integrating the classes. Modernity seemed an important means to eradicate old images of low class. The term 'working-class housing' was officially abolished by Central Government in 1949[15]—although the educational aims of 'social engineering' were still energetically promoted by public authorities; the 'area outside the dwelling' was, as we cited above, seen as the 'property' of the 'public'. From the fifties, opinions diverged. On the one hand, the breadth of the new affluence, by itself, appeared to help with class integration. On the other, we note the way in which some sociologists and designers stressed the quality of homogeneity of the working-class strata as such, as it had existed 'traditionally'. At the end of the book we shall briefly discuss new concepts, such as 'participation', which were to change the meaning of community, and even of local democracy: the Welfare State providers and designers of the postwar years were now frequently seen as undemocratic in the way that they had 'imposed' their ideas on the dwellers. After 1970, with the 'revival' of the terraced house or tenement, Modern council blocks, however much conceived as 'classless' initially, were relegated firmly to a category of lower-class dwelling. One has to remember the essential structure of the class stratification of dwelling types: whatever the intentions regarding any type at any given moment, the hierarchy is shaped by the total of existing dwellings, old and new.

In the early years after the war, values of 'community' or 'neighbourhood' were applied in many contexts and at many levels. To begin with, the term could simply refer to a frame of mind on the part of the dwellers. 'I am hoping that you will all be good neighbours', said the Prime Minister, Clement Attlee, when he opened the first London housing estate completed after the war.[16] One could conceive of a Tenants' Council as a direct descendant of an Air Raid Precaution Committee.[17] Then there was the tradition, going back at least to Octavia Hill, of middle-class care for the lower classes in their estates: sympathy combined with exhortation; social work starting from the smallest units, the individual, the family, extending to the care for the estate as a whole. From the later thirties, there was an increasing advocacy of health centres and community centres [6.19],[18] although, by the fifties, some of the enthusiasm became muted because of the problem as to who should initiate community events—the dwellers or the authorities.[19] In any case, for most estates the community centre remained on paper for financial reasons[20]—although schools were used for a wide range of community purposes. Other facilities with a strong communal accent were the public laundries that were built for some urban groups of housing.[21] Public houses, on the other hand, were

something the reformers of the postwar years preferred not to mention.

However, the concern of this chapter is not primarily with the actual social life of housing schemes and the workings of their communal facilities, nor with those professions and institutions which occupied themselves with the tenants' welfare or the details of their communal affairs. Instead, we are dealing here with the views of those who planned the estates and designed the dwellings. Crucially, theirs was a belief that it is planning and design which can, as such, bring about the desired actions and feelings. The ideals of the designers can be summed up in one word: 'Utopia'. The idea that planning and design were the main instruments for creating a happy and well-ordered community has a long and distinguished tradition. It usually entailed a consensus between designers and social scientists, as well as politicians and patrons. We could go back to Plato's ideal state or the visions of a New Jerusalem, or at least to the Ideal Cities of the Renaissance. The nineteenth century brought a number of different and partly conflicting notions: primarily, the care about all aspects of health, which further enforced system and order; but, equally, a nostalgia for the less ordered pre-industrial village or town, which was believed to have been more conducive at least to mental well-being. Many twentieth-century town planners, and domestic designers, such as Raymond Unwin, sought to reconcile the two points of view.[22] In the twenties and thirties we find, especially among the architects of the Weimar Republic and the Soviet Union, new attempts to create Utopia chiefly through the systems of new technology.[23] In all parts of Britain, in the years after World War II, it was the strength of the spirit of universal renewal which seemed to bring all kinds of Utopia within reach. From the late sixties, the balance tilted decisively against the Modern 'purely technological' Utopia.

What was especially characteristic in the work of English groups of Modern designers was the desire to apply the Utopian concept of community to the design of every housing development. There is no need here to tackle the wider history and context of Utopian planning and design. We can restrict ourselves to its synonym 'community', a notion that was both more diffuse and more down to earth; the wide appeal it gained was related precisely to its ready applicability in so many situations. Before the 1940s, the term 'community' was rarely used in English planning and architectural discussions. It was first taken up chiefly by town planners, who thought of it in terms of the unity of parts of towns, which, in practice, entailed large areas of public green between groups of houses, as well as between blocks of flats. From the later fifties, we will follow chiefly the architectural designer's search for a kind of space, or area, which had qualities of enclosure, usually characterised as 'urban'; the earlier kind of openness now began to be despised. By the sixties, 'community' was chiefly understood as the association of small groups in narrowly confined areas. From large-scale town planning we move towards the design of spaces of an almost intimate kind.

Much of the following chapters will be devoted to the analysis of the pronouncements of designers and critics. There would not have been much point in embarking on a semantic discussion of the 'angle of daylight', the 'mix of concrete', or the 'speed of lifts', but the terminology of this section, words like 'social', 'community', 'space', or 'urban', never had very tightly fixed meanings; they could not be measured easily and precisely. Furthermore, we shall still be concerned, throughout, with the definition of 'Modern'. Virtually all the designers and critics dealt with here belonged to the International Modern avant-garde; and yet, we shall find, very early on, a move away from the clear definition of Modernity postulated in the first section. The most difficult questions concerned the actual relationship between 'community' and the type of dwelling. How much did the advocacy of the Modern block of flat have to do with the desire for community spirit? Which types of flats, if any, were thought to be most conducive to the desired forms of community life? What problems arose regarding the relationship between Modern communal openness and privacy? What seemed certain was a close relationship between 'community' and high density; but within this equation we find a wide variety of detailed solutions. Finally, it must be stressed that the concern with definitions and criticism does not mean that we will lose sight of the buildings themselves. The 'built forms' of public housing, to use a favourite term of the period, kept changing as much through the influence of new social policies—linked, as they were, to aesthetic–formal values—as through technical–practical considerations.

CHAPTER 13

Town Planning: Communal Open Spaces and Housing Layout; The Neighbourhood Unit

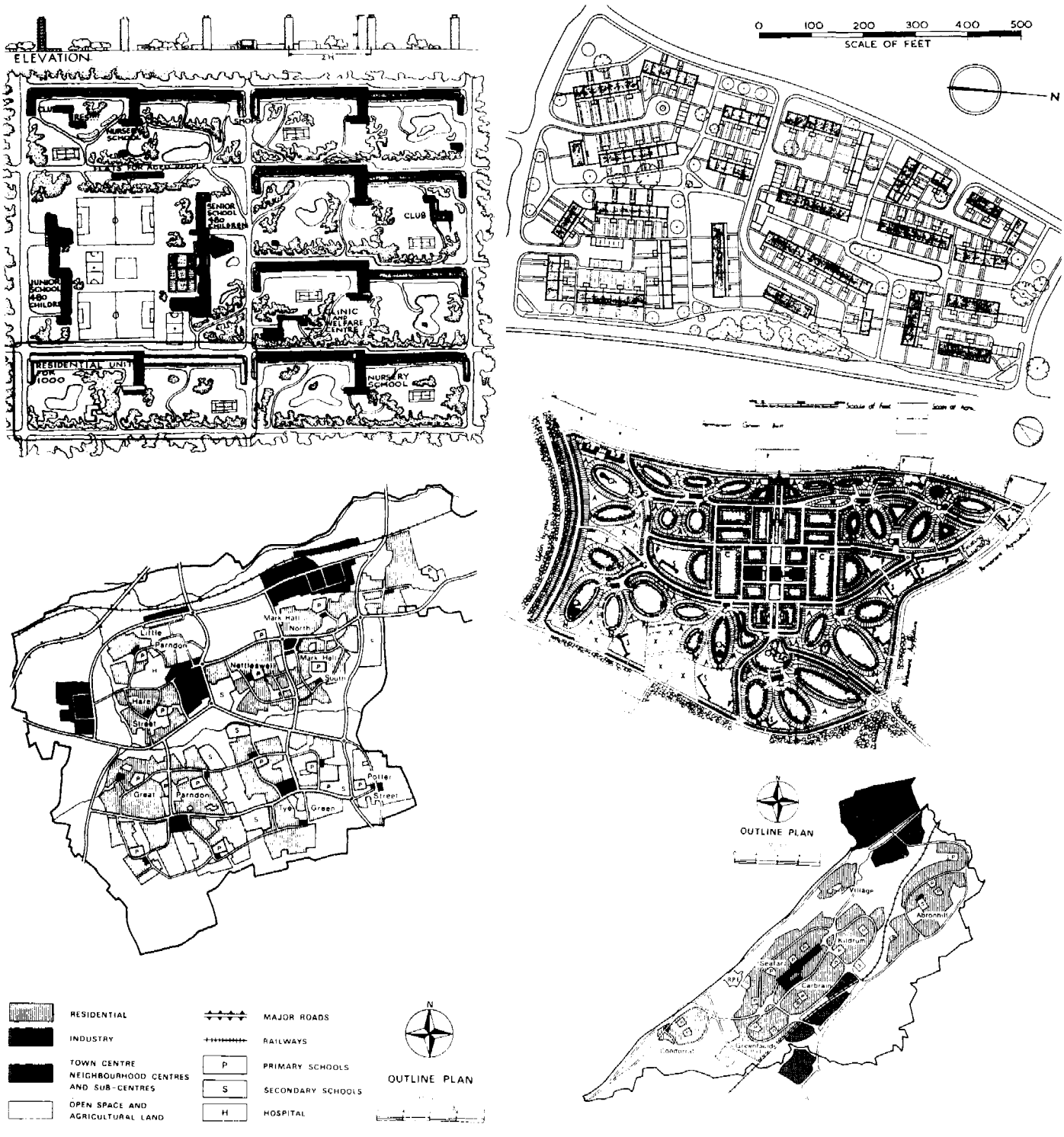
A strong natural tendency among human beings to live in a neighbourhood together if they can.
Professor Sir Patrick Abercrombie, 1952[1]

NOBODY COULD COMPETE with the speed with which the town and country planners rose to power in Britain in the 1940s. It was the vast framework of structural planning powers which brought about the 'great planning epoch of the 1940s'.[2] Planning or Non-Planning meant a 'simple choice between order and disorder', wrote Thomas Sharp in his little Penguin book of 1940, *Town Planning*, which sold a quarter of a million copies.[3] Put at its simplest, all the land in Britain was now controlled as regards its use—industry, agriculture, habitation—controlled by local authorities and ultimately by Central Government. The first of the all-embracing components of town planning was scientific research. The Barlow, the Scott and the Uthwatt Reports prepared for the Government on 'national British' planning issues, the Dudley Report on housing and planning, as well as the *County of London Plan*, all date from the period of the war. In addition, all large towns published their own lavish Reports, Plans and Surveys. So far, it was argued, planning had been understood as rules and regulations which restricted a development. This was now characterised as 'negative' planning; what was now desired was 'positive planning'. The old type of negative planning could, for instance, be concerned with securing privacy; modern, positive planning on the other hand, would create something new, for instance the design of a new town, or aim at the establishment of 'satisfactory groupings of people of different ages'.[4]

Pronouncements on town planning and housing thus abound in statements such as 'to serve and stimulate communal purpose';[5] 'to facilitate social intercourse and the democratic way of doing things';[6] or, a little later, and somewhat ambiguously, to support 'a strong natural tendency among human beings to live in a neighbourhood together if they can'.[7] 'The social arguments for community planning are now fairly generally accepted', wrote Abercrombie in 1944.[8] A kind of adjectivisation of the term 'community' occurred. It was now used as a general quality which did not need to refer to any actual kind of group; it could be used without definite or indefinite article—community-this, community-that—all of which served to heighten its values even more. The 'evidence' submitted by an RIBA committee to the Ministry of Health on the 'Relationship between Housing and Town Planning' is shot through with the term. Under the heading 'Lack of Community Development in the Past', we read of the lack of relationship between peripheral housing estates and the 'communities of which they . . . form part'; the habit of separating classes is deplored throughout. What was proposed under the next subheading, 'Community Development of the Future', was, however, essentially a rephrasing of the four principles of the CIAM Charter of Athens: Dwelling, Work, Recreation and Transport.[9]

As early as the following year, 1943, Abercrombie and Forshaw presented a rather different model: the 'neighbourhood unit'. In England, both the Dudley Report and the *Housing Manual* of 1944 strongly emphasised this concept. Its sources, like those of all town planning movements, go back to the Utopian tradition, but the first use of the neighbourhood terminology itself can be found in the United States in the 1920s. In the writings and plans of Clarence Perry, Clarence Stein and Henry Wright, there was a stress on the close grouping of an estate, firstly around a community centre, and then also in conjunction with certain patterns of vehicular access—which we shall examine shortly, under the heading 'Radburn'. It was essential that all elements of a neighbourhood had to be considered as a 'whole'. As Mumford observed: 'the playground and open spaces and small meeting halls were treated as an integral part of the housing development'.[10] He considered that most Garden City planners, such as Howard and Unwin, had concentrated their efforts too much on the 'city', that is, on the Garden City as a whole, and had thus somehow overlooked the concept of the smaller unit of the 'neighbourhood'.[11] Thomas Sharp claimed that the Garden Cities contained 'only inhabitants', not communities, and that they were a sociological and aesthetic failure;[12] Parker and Unwin's earlier studies on community life seemed forgotten. Maxwell Fry, in his description of the MARS Plan for London of 1938, had already used the term 'neighbourhood unit', but he treated it as one quantitative element as a kit-of-parts of several units (a 'residential unit' of 1,000 inhabitants; a 'neighbourhood unit' of 6 × 1,000; and a 'borough unit' of 9 × 6,000) [13.1].[13]

Abercrombie and Forshaw followed the MARS planners in using the school as the determinant of size, but they put much greater stress on one of MARS's divisions: the 6,000–10,000 unit. The primary school thereby becomes the real focus and determining factor: no child under eleven should have to cross a major road en route to school.[14] The Neighbourhood Unit thus appears primarily as a practical



13.1. Top left: A 'Neighbourhood Unit' Plan, part of the MARS Group's Plan for London'. It shows the earlier International Style Modern kind of a more rectilinear, schematic division of towns. (Maxwell Fry, *Fine Building*, 1944) Top right: Wrexham: Queen's Park (Gordon Stephenson, planner, 1952). The Radburn principle strictly divides access to the houses: pedestrian only to the front of the houses, vehicular at the back, with some garage cul-de-sacs. (*JRIBA* 7-1952, p. 332). Centre right: 'Reilly Greens', devised by C. H. Reilly. Special emphasis is placed on the semi-public greens at the back of houses. (L. Wolfe, *The Reilly Plan*, 1945) Bottom left: Harlow New Town (from late 1940s, F. Gibberd), showing the strong division into a number of 'neighbourhoods', whereas some later New Towns, such as Cumbernauld (bottom right, from the late 1950s, L. Hugh Wilson), placed more emphasis on the main town centre. (Ed. H. Evans, intr. P. Self, *New Towns: The British Experience*, 1972)

solution. But it is also more than that. For Fry, the purely quantitative approach meant that, when it came to the actual plan for the whole, a series of rectangular blocks of dwellings in lavish areas of parkland were simply added together to form a kind of vast grid pattern. The *County of London Plan* proposals, on the one hand, follow the regular housing layouts of international Zeilenbau; on the other hand, the text puts much emphasis on the 'manageable size' of the unit, its 'self-contained' and 'compact' nature. The striking colour map divides London into a great number of residential communities, such as 'Camberwell', or 'Peckham', appearing as clearly defined and well-rounded blobs; this 'egg-basket' map was contributed by the young Arthur Ling, later of LCC and Coventry fame [COLOUR VI].[15] It appeared that 'community' had found a practical application and a convincing synonym in 'neighbourhood'. All the early New Towns, Harlow, East Kilbride, Stevenage, and others, begun in the late forties, adopted the neighbourhood division.[16] Further factors determining the size and shape of the neighbourhood subdivision were the shopping centre and the differentiation of roads. Large wedges of parkland separate each group of neighbourhoods from the next.

However, very soon the town planners' image—and that of the early New Towns, too—became tainted through the criticism and the jealousy of neighbouring professions. Already by 1952, Liverpool's City Architect and planner, Ronald Bradbury, could say: 'the subject has now lost its popular appeal'.[17] Sociologists attacked the 'unscientific' notions of community, architects the 'bureacratic' interference with design ('aesthetic control').[18] It was architects, or 'architect-planners', such as Percy Johnson Marshall or (Lord) William G. Holford, who were launching the new kinds of 'urban design', to which we shall come.

COMMUNAL OPEN SPACE AND HOUSING LAYOUT

One can say that the town planning of the immediate post-war years was chiefly about the provision of what the slums were lacking: open space. Public parks for the lower classes had been advocated for a long time and the City Beautiful movement of 1900 also pleaded for central open parkland, chiefly to help with the display of civic buildings. In the thirties and forties, openness was demanded for all parts of the town, in every kind of area, for the purposes of 'recreation, light and air, for the sight of trees, grass and flowers—that is a basic and fairly stable need'.[19] It was held that, after the war, there would be a need for a greater number of games facilities than before.[20] One of the most potent kinds of illustrations of Modernity was that of an open playground in action. A further aim was 'the organisation of society in open space so as to intensify the sense of community'.[21] 'These "scenic" factors have as much influence on the inhabitants of a community as the shape of their individual houses.'[22] London planners demanded four acres of this kind of space for every thousand inhabitants.[23]

Roads accompanied by open greenery, and stretches of open grass and parkland, were also used in the attempts to delineate 'neighbourhoods'.[24] Landscaping was increasingly made an integral part of the design of a housing development, to be appreciated in the same fully three-dimensional way as the dwelling itself. Landscaping meant more than laying out a number of roads and devising areas of grass and shrubs between the houses.[25] Gibberd claimed that the 'English School of Landscape design (probably the country's greatest contribution to art) has been revived and given a new dimension largely by the New Town Movement'[26]—although there was also much influence from Modern layouts in Scandinavia, especially Denmark.[27] On a smaller scale, the desire for continuous landscaping brought a powerful desire to dispense with individual front gardens. The veteran Manchester housing reformer and Garden City propagator Sir Ernest Simon desired 'orderly swards of lawns and planted areas'.[28] A practical reason was also mentioned frequently: residents had been neglecting their gardens during the war and they appeared slow in recovering their gardening activities—a situation markedly different from that after World War I. 'People are proud of the communal front gardens', we now hear.[29] It was even argued that older children playing in back gardens are liable to damage the plants.[30] Never before did planners and housing reformers put such a low emphasis on the private garden.

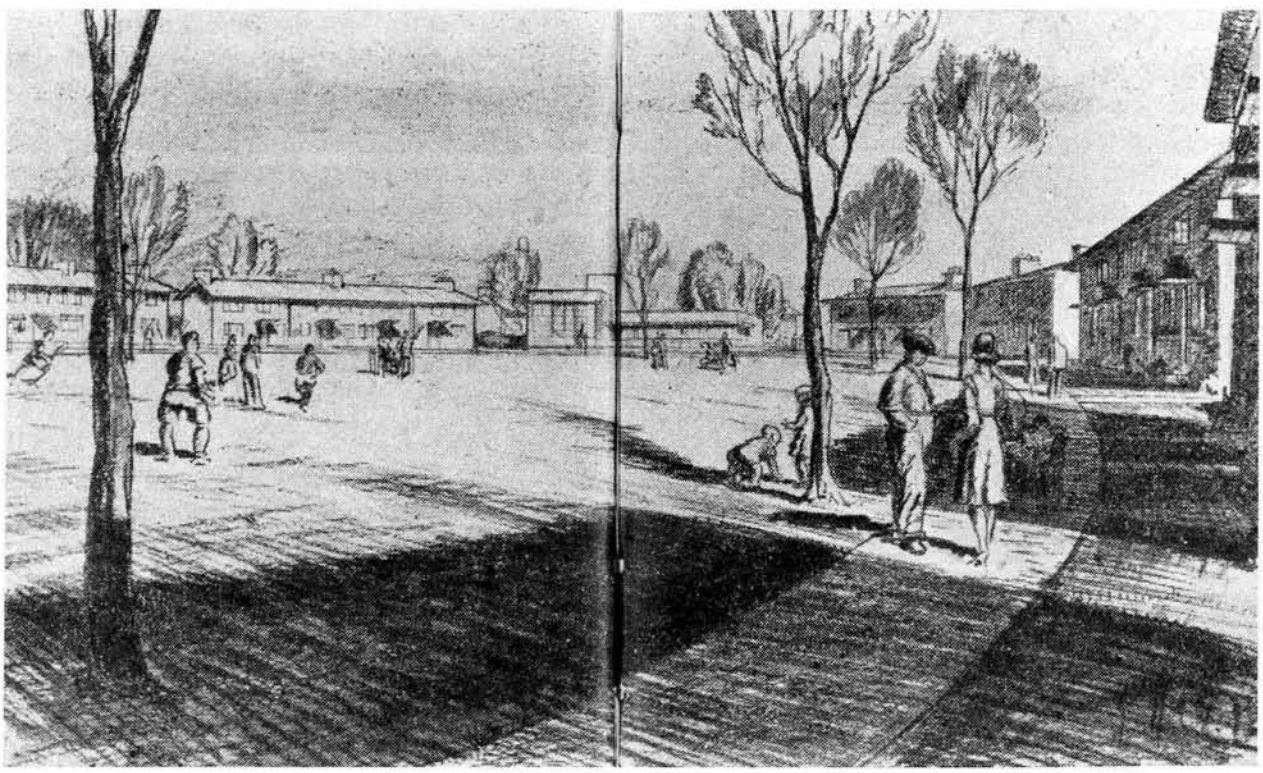
Open space also characterised the 'Reilly Green', devised by one of the best-known English planners, Sir Charles Herbert Reilly, during the war. As published in a tract by Lawrence Wolfe, it constituted one of the most strident formulations of Utopia in those years ('A New Way of Life . . . of fundamental, universal validity'). One 'Reilly Unit' comprised about 250 houses surrounding an oval-shaped green. Houses and gardens opened more or less directly on to the green, along which ran merely a footpath; the road access was resticted to the other side of the houses [13.2]. A very lively use of the green was envisaged. In addition, there were more communal facilities, located at the intersections of the greens, which would even contain communal kitchens, in accordance with the drive to reduce housework ('isolationist home life' versus 'spontaneous cooperation').[31] That the 'Old Village Green' was one of the enduring concepts of English planning hardly needs to be stressed, although it must be noted that village greens are normally bordered by individual front gardens, and that they are not cut off from vehicular traffic.[32] It was perhaps because of Wolfe's exalted Utopian language and because of the fact that his proposal contained only cottages, that the Reilly plan itself was soon forgotten, but the inward-looking quality of a unit, and the stress on the communal use of the green, were to exercise an important influence.[33]

Reilly was influenced by the Radburn Plan, a much older and more enduring concept. This layout was first devised by Clarence Stein and Henry Wright—also of 'neighbourhood unit' fame—in a town of that name in the State of New Jersey in the late 1920s. The Radburn Plan was another way of devising a relatively small and coherent group of houses (although, confusingly, a Radburn unit was sometimes called a 'superblock'). Its real ancestor was the cul-de-sac, something that had been 'revived' by Raymond Unwin and was used in most Garden Cities and garden suburbs.[34] This eliminated through traffic and also reduced the construction cost of roads. Later on, a garage court was often built at the

end of the back gardens of the houses. Radburn took this differentiation of traffic a decisive step further: the garage court, the vehicular back access and the back garden entrance now serve as the chief entrance to the house, whereas at the 'front' the street is eliminated, and only a footpath remains. The main emphasis on the front side is on greenery, a pedestrian-only area of a communal character, looking like a small village green. There is still an entrance to the house facing the green; it was suggested that the living-room should also face this side of the house, although this could lead to complications regarding the disposition of the other rooms inside.[35] Throughout our period, the Radburn plan provided the starting point for a great variety of layout solutions for houses and even flats; in the sixties it served chiefly as a model for the separation of traffic.

Surprising though it may sound, Modern blocks of flats went in many respects but a short logical step beyond Reilly Greens and Radburn cul-de-sacs. Some Zeilenbau blocks, with parks on one side and short access roads on the other appear, on plan, like Radburn cul-de-sacs with their end blocks shorn off. Blocks of flats constitute the logical conclusion in the attempts to provide open space around dwellings and to eliminate the ordinary corridor type of street. The higher the block, the better; some of the 20-storey point blocks of the 1960s covered less than 20% of the total area of the development. The problem of the private garden is eliminated. Lawns sweep up to almost all sides of the block. There is usually no differentiation any more between 'front' and 'back'; 'that wretched prefix back' (Raymond Unwin).[36] It was even remarked, with a somewhat obscure logic, that on these 'common lands'[37] the inhabitants of flats (in the case of Le Corbusier's Unité) lived in 'much closer connection with the ground than normally' where everyone has 'a little bit of garden railed off'.[38] The new kinds of landscaped surroundings, can provide, it was claimed, 'for almost every human need'.[39]

Blocks of flats of the most Modern type thus gave the most strident manifestation of the demand for open public space. We explained in a previous chapter on Zeilenbau flats the prevailing principle of equality of provision. The public parks of the Garden City and the City Beautiful were located in specific places and at varying distances from the dwellings. Now park-like spaces are available to all in equal measure; they are open for everybody's use, immediately outside the dwelling. Reflecting on the various kinds of treatment of outside space in garden suburb layouts can help us to understand what at first glance appears a major paradox: how can the long-standing ideal of 'Anglo-British' housing reformers and town planners, the garden suburb of individual houses, suddenly turn into an advocacy of high blocks of flats? At least part of the answer lies in the fact that both types of layout pursued the 'healthy dwelling' situated in green spaces. There seemed overwhelming evidence of physical and sociological advantages if that space is public space. However, from the fifties onwards, discussions about open space around dwellings became altogether more complex.



13.2. 'Reilly Green': 'Single Green with Cricket Match in Progress' (see ill. 13.1).

CHAPTER 14

The Sociology of Community: From Social Reform to Scepticism and Nostalgia

The science of Social Studies provides the information needed to plan a community, whether a town, village or housing scheme.[1]

THUS IT WAS claimed at a RIBA conference in 1946. The rise of the 'housing sociologist' in matters of detailed planning, such as the size of kitchens or balconies, has already been mentioned. This chapter deals with a different branch of sociology; we can begin with the fact that a pioneer town planner, Patrick Geddes, had been one of the founders of the Sociological Association back in 1903. After the war, sociologists helped especially with the numerous 'surveys' of towns, which were largely factual and statistical investigations, serving to determine precise needs in the fields of housing, education or health.[2] Somewhat different interests were pursued by another school of 'urban sociologists', originating chiefly in America, which had become more interested in the ways in which certain groups within towns, such as ethnic minorities, had constituted themselves as cohesive groups, and in the ways they adhered to their specific values. Both directions will be of importance here. They are summed up in two words taken from one of the main theoretical foundations of the American Neighbourhood Movement (we have already mentioned their influence in Britain), a book of 1887 by a German sociologist, Ferdinand Tönnies: *Gemeinschaft und Gesellschaft*. The latter word stands for society in its economic, administrative aspects; the former for society in the sense of the group, in Mumford's words, the 'intimate, face-to-face community' and the 'spontaneous, instinctual . . . relationships' within this group.[3]

It is not possible here to assess the role the word 'community' played within postwar sociology as a whole. In 1961, it was held to be the most frequently used concept in sociology after 'relationship'.[4] In any case, it appears that, in those decades, the 'sociology of housing', among professionals, or, at any rate, academic sociologists, was synonymous with the concerns of this section; in fact, Morris and Mogey's book bearing the title *The Sociology of Housing* is entirely devoted to the community and neighbourhood feelings in a small group of re-housed lower-class people.[5] The first book in the UK specifically devoted to 'community' in housing, *Watling: A Survey of Social Life on a New Housing Estate*, appeared in 1939 and was written by the young sociologist Ruth Durrant (later Glass). Her approach she claimed to have derived straight from Tönnies. The district, an LCC cottage estate in suburban London, was relatively small, and the author goes into considerable detail, for instance, about the workings of the community centre. However, for the author, the essence of 'community life' had to be sought in the way that problems and experiences are shared and discussed informally amongst the residents. The reasons for the absence of this communication in Watling, noticed by Durrant, will be explored presently.

In her sociological work after the war, chiefly for town surveys, Ruth Glass covered many aspects of the sociology of housing and towns. She demanded 'empirical contributions', 'objective indices' concerning households and social groups and their 'well-being', as well as their institutions.[6] Her contributions to research on the distribution of sizes of households and dwellings have been mentioned in a previous chapter. However, her early intensive investigation into the estate of Watling also pointed in a somewhat different direction. In one of the most noted postwar pieces of research, that by Leo Kuper and Birmingham University into a district of Coventry (the cul-de-sacs off Braydon Road in the Houghton Estate), the 'field' was restricted to ninety families. The intensive interviewing not only investigated practical matters, but also 'common attitudes', or feelings, including gossip, and 'common occurrences' among immediate neighbours.[7] Later, Morris and Mogey put over seventy questions to each family. Both Glass and Kuper now wanted to steer away from the older type of large-scale factual 'social' surveys, now held to be superficial and biased. And yet, Glass had also begun to disagree with the approach that concentrated on attitudes, rather than on facts. Strictly speaking, she herself no longer specifically homed in on the issues of community.[8] 'Let's give up the idea that sociability is the real criterion of the validity of social structure'; more important to her were other criteria: does the child do his or her homework well, or is the father able to go to his trade union meeting?[9]

What is of interest in our context is less the method of sociology itself, but the definition of community and its values, which resulted from these enquiries. In the most intricate of these English investigations, that by Morris and Mogey, 'community' is subdivided into a number of groupings by size, such as neighbourhood or small residential group. The latter, consisting of about eight to twelve houses, is particularly important.[10] What matters most in such a small group seems simply the state of being satisfied with one's neighbours. Sociology here descends to a scale where it almost ceases to be sociology: feelings and judgements

essentially depend on the characteristics of individuals, as individuals.[11] At the end of the book we shall, in fact, refer to the rise, in the sixties, of a 'psychology of housing' which developed out of, and at the expense of, the sociology of housing.

Anybody who is searching for a clear answer as to what constitutes 'community', or 'a community', in the countless investigations of those years, will need the utmost patience. In fact, we witness, with increasing frequency, a kind of despondency among sociologists. The Dudley Report had already stated that it was difficult to define 'neighbourhood'—and left it at that.[12] Beginning with some statements at the 1946 RIBA Sociology of Housing Conference and going on to the work of Charles Madge, Kuper, Burns, G. D. Mitchell, Glass, Dennis, Kunstler, Morris and Mogey, it was increasingly concluded regarding our concept: too complicated, impossible to define, not useful.[13] Margaret Willis, the sociologist of the LCC Architect's Department and chiefly concerned with more practical aspects, likewise did not seem inclined to contribute to the subject of community; she certainly did not want to commit herself to proposing any specific values.[14]

Furthermore, there were factors in society which seemed to militate against the possibility of establishing long-lasting communities. It was commonplace to mention modern mobility and the extended methods of communication, and the resulting greater pace of change in general. The findings in Middlesborough, one of the best known of the urban surveys, suggested to Glass that physical demarcations between districts or neighbourhoods do not coincide precisely with the locations of the inhabitants' social activities.[15] As regards class and the cherished aim of some politicians and many town planners—the mixing of classes in one estate—Glass was already stressing in her investigation of Watling that tenants used the estate as a springboard to larger houses in a higher-class district.[16] The sociologists of the 1950s, almost in unison, warned that the mixing of classes does not occur easily.[17] In any case, it was argued that different classes show different degrees of sociability, the working classes much more so than the middle classes. Kuper divided the working people of his district in Coventry into 'rough' and 'respectable', the latter usually being far more concerned with privacy than with sociability.[18] The sociologists thus helped to establish a new attitude towards the working classes. There had been for some time a notion that the working classes usually showed a gregarious behaviour, but as far as most housing reformers were concerned, this was not to be taken much note of.[19] In fact, it could even be stipulated that the inhabitants of a block of flats ought to be kept away from 'the dangers of making undesirable acquaintances on communal staircases';[20] 'doorstep gossiping' was not something that earlier housing reformers had wanted to encourage.[21] In the early fifties, however, we witness the beginnings of a movement among English sociologists, and soon also among some architects, which cherished working-class gregariousness, and considered gossiping at the doorstep a special social value.

We stated above that early sociology rode in tandem with social reform, utopia and 'social engineering'. We cannot judge here what the move away from these great aims meant for sociology as a whole. As late as 1952, the well-known American housing reformer Catherine Bauer-Wurster could be found saying that the 'consumer wants social value decisions . . . on the part of the planner'.[22] But we have already quoted Glass's repeated demands for objectivity, and Kuper turns directly against Mumford when he states: 'social balance, . . . we don't discuss the desirability or otherwise of it here'.[23] Rattray Taylor denounced the 'authoritarianism' of some of the new planning legislation.[24] More rarely, in the 1950s, do we find voices that strongly challenge the neighbourhood concept as an 'uncritical vogue',[25] or that reject it altogether.[26] There were demands to break up the concept of community into different headings, such as traffic, aesthetic and psychological, each held to be fundamentally different from the next—making, of course, a nonsense of the Modern concept of unity of planning and design.[27] Wearily, we are reassured that the concept does have a relevance, for those, like mothers of young children, or old people, who most closely depend on the facilities provided in a small area.[28] Ruth Durrant (Glass) had already stated, in 1939, that, in this age, community can be realised 'only in a crisis of urban life'.[29] She does not say whether this includes war. It would be hard to rule out this thought; indeed, many years, later, another sociologist remarked that 'war-time analogies . . . statements of faith . . . are notoriously unsound bases for peace-time planning'.[30] Why then, asked Norman Dennis in 1958, do we find so much emphasis on the neighbourhood when it turns out to be a futile concept? His answer is a straightforward Marxist one: the middle classes are using it as an ideology in their attempts to keep the working classes at bay, by trying to disperse and resettle them.[31]

Does this apparent sociological demise of 'community' also mean an end to the cooperation of town planners and architects with sociologists, an end to an important link in the great wartime and postwar consensus? Occasionally, demands for cooperation were still repeated, but on the whole these contacts cooled considerably.[32] Glass described the planners' sociology as an 'instinctive' quest for reform, influenced by the writings of Mumford and Ebenezer Howard.[33] Architects held that sociologists provided only analyses of what existed, and gave no indications as to what should be built. 'The frigidity is mutual', Glass concluded in 1959.[34] The final and most fundamental blow came with a more basic challenge to the belief that physical forms can determine attitudes or behaviour: 'Our final suggestion is therefore to shift [the investigation] from . . . the physical determinism of the expert . . . to the activities of the residents themselves'[35]—not something that one would expect the architect and town planner to take on board very readily. As regards the research activities undertaken by the architects and planners themselves, particularly from the late 1950s, some of these could be classified as sociology, at least of the more empirical kind, for instance the extremely detailed research into old and new housing at St Mary's, Oldham.[36] More important, however, were the ways in which the planners and architects developed their own notions and values regarding 'community'. The Garden City/New Town faction felt itself unassailable in any

case; their adversaries, the 'urbanists', created new kinds of beliefs in the possibility of lively 'urban' designs (Chs. 18, 19).

What is equally important to realise is that the new convictions did not, by any means, bring about the end of the sociology of community. There was already the germ of a new direction, a new set of values. While there was scepticism regarding the establishment of Modern communities, there was little doubt that close-knit communities had existed in the past. They were held together by what everybody agreed to be the chief ingredients of community, simple need and mutual help, and the ties of kinship.[37] There had been a longstanding conviction, especially on the part of the Utopian town planners, that the Industrial Revolution had destroyed 'community'. But 'urban' sociologists now found that, on the contrary, the one-industry pattern of the older type was highly conducive to 'community'.[38] As a result, the idealised view of the old village or small town, cherished by older English town planners and sociologists, was now supplemented with a positive view of a far greater number of towns: more precisely, the old working-class districts in those towns; districts which comprised homogeneous groups of the lower—although not the lowest—strata of the working class. Dwellings in slums, or streets in slum districts, if not yet the slums as a whole, suddenly received a revaluation.[39] The most celebrated of those studies by sociologists appeared in 1957: Michael Young and Peter Willmott's *Family and Kinship in East London*. The circle of people investigated is small and homogeneously working class, and the enquiry puts emphasis on personal relations. Most importantly, there is now an affirmation that Bethnal Green is a 'good', and thoroughly 'urban' district. Community Life here seems far superior to that in a spread-out suburban development of modern houses which the authors also briefly investigated (the LCC out-county Debden Estate). The tentative beginnings of a similar reappraisal of the Scots tenement tradition were seen in 1958, in an article by the architect Michael Laird.[40]

One major conclusion, drawn previously, seems to have been reaffirmed: The modern planner *cannot* design a community *ab initio*. There is the overwhelming importance of the time factor: a community needs time to 'mature'. What is more, it had been proved that the very Modernism of the houses in the new suburb, low-density layout and self-containedness, worked against community, whereas the commonplace look of the old urban fabric did not seem to matter; it could even act as a positive factor. This was a further grave blow to Modern planning and design, a blow which was, at first, slow to sink in, but which was reinforced by Jane Jacobs's even more famed book of 1961, *The Death and Life of Great American Cities*, subtitled *The Failure of Town Planning*. In fact, sociologists now turned against the planners and designers by condemning their buildings on practical and sociological grounds; already Kuper had warned that a housing layout can have planned *and* unplanned consequences.[41] The first investigations by sociologists into the socio-pathology of Modern flats had already been started.[42]

Clearly, this was the final break between architecture and sociology; we shall return to it in Chapter 30. Yet it was still possible to emphasise some broad strands of thought, some general cultural tendencies and systems of evaluation which underlay both design and sociology in those years. To begin with, both shared frequent outbreaks of nostalgia for elements of the past, coupled with a new indifference to Modern technology, which only a moment ago had appeared the most desirable goal to all housing reformers. In both fields we witness a transition from the large to the small: from large comprehensive plans to the design of small areas, for intimate surroundings; from demography and statistics to the study of immediate, spontaneous activities in everyday situations. There is a new value attached to towns among sociologists; we shall follow the way in which architects define and redefine 'urban' for their own purposes. Are we surprised, then, when we find that Peter Willmott's further researches were well publicised by the town planners? When he undertook an investigation of Dagenham, he realised that the quality of community could even be found in this—by the standards of the 1960s—dullest of all the interwar London suburbs of low-density council housing. In other words, this seemed a reaffirmation of the principle of non-connection between physical shape and community feeling. Yet Willmott goes on to say: in Dagenham, chiefly because of the cul-de-sacs, 'the physical arrangements of the houses . . . allow the development of traditional ways'. Comparing Dagenham to Bethnal Green, he states: 'were it not for the spread-out character of so much of [Dagenham's] housing there would be even closer similarities between the social life of Dagenham and of the East End'.[43] The sociologist concludes with a formula, that of higher density, which is one of the central concerns of the architects in the fifties and early sixties—as we shall see.

CHAPTER 15

The Modern Architect in Public Housing; Publicity and Criticism; Theory

I taught the housing manager sociology.
David Percival, Norwich City Architect[1]

THE SOCIOLOGISTS WERE opting out; the star of town planning appeared to be on the wane. The 1950s were the years when many architects took over the roles of both the planner and the sociologist. At the same time, architects emphasised the superiority of their work over that of engineers and technical designers. In England, while it is true to say that, from its beginnings in 1919, many of the foremost designers found an interest in council housing, it was the Garden City type of layout on which they concentrated. They rarely tried their hand on inner urban flats: R. A. H. Livett's Quarry Hill scheme for Leeds of the late thirties was the first Modern example. The situation in the LCC was compounded by the way in which, in 1945, the design of housing had been reassigned to the Director of Housing and Valuer, Cyril H. Walker, in order to ensure 'maximum output'.[2] Nobody ever disputed that the move was successful in those terms, a 'military' operation producing a vast number of dwellings quickly. On the other hand, the types of dwellings Walker provided largely continued those of the prewar years. Yet, some of the London Metropolitan Boroughs were already following a different line by employing private avant-garde architects for a small number of developments. Finsbury came first, where Berthold Lubetkin of Tecton had started planning before the war [6.15, 6.16]; then came Westminster's Pimlico scheme (Churchill Gardens), won in a competition by the very young architects Powell & Moya in 1946, supported by the Housing Committee Chairman, Charles Russell, and the Town Clerk, Sir Parker Morris [6.17]; Gibberd in Hackney [5.2] and Norman & Dawbarn in St Pancras were soon to follow [6.10]. 'Diminish the tenement atmosphere', was the demand in Holborn MBC's Housing and Planning Committee in 1946.[3]

By 1949, dissatisfaction with LCC blocks had become widespread. There were strong pressures from the Council's architect, Robert Matthew, to return housing design to his department. In Spring 1949, the architectural critic J. M. Richards, launched a stinging attack, first on radio, then in the pages of the *Architects' Journal* [6.2]. The criticism remained general and even vague, but it was effective all the same, concentrating, as it did, on essential values. Walker's blocks were, firstly, branded 'inhuman', too large and uniform; they looked as if human beings were being treated as 'units' or 'digits'. Secondly, and this was especially the tenor of innumerable letters to the journal's editor, the blocks lacked Modern style.[4] Two years later Richards attacked the showpiece of the LCC's postwar planners, the Lansbury estate in East London: this much-vaunted project, initially devised by Sir Patrick Abercrombie, doyen of town planners, was now labelled 'architecturally negative and dull' [5.3].[5] In 1953, Richards blasted the New Towns in similar terms [17.1]. It was characteristic, in the attacks on Walker's designs, that hardly anybody criticised the actual accommodation that was offered. The defenders, Walker and Housing Committee Chairman C. W. Gibson, pointed out that the flats were economic, carefully planned and relatively spacious inside; in other words, they provided 'comfortable homes'.[6] Yet, by December 1949, the Council decided to bring to an end the 'present temporary arrangements'.[7] Design of all new developments was reassigned to the Architect, Robert Matthew; Walker's involvement was much curtailed. C. W. Gibson was replaced by Reginald Stamp [Frontispiece]. Together with Evelyn Denington (vice chairman of the Housing Committee), Matthew and Stamp supported throughout the Modern architects' way of thinking. The newly appointed Principal Housing Architect was J. Whitfield Lewis, whom Denington had met when he was working for Norman & Dawbarn in St Pancras.[8]

The Department immediately attracted a great number of avant-garde architects and architect-planners; some, like Oliver Cox and Percy Johnson-Marshall, had come straight from that hotbed of socio-architectural innovation, the Hertfordshire schools, and most of the them also belonged to the architectural 'trade union' AASTA/ABT, sworn to public service commitments.[9] At times the housing section of the LCC Architect's Department comprised 250 practitioners ('the largest public architecture department in the world') and included the highly acclaimed Research and Development Group. By the later 1950s, its reputation, in the London-centred world of 'national British' architecture, seemed to be boundless.[10] On the one hand, its staff wanted to be seen as working for their public client, or simply for 'The Community': in the words of architectural journalist Robert Furneaux Jordan, producing such kinds of pioneering work would simply not have been possible 'under commerce'.[11] On the other hand, the size of the office and the liberal way in which it was run enabled junior staff to feel free to devote themselves 'solely to architecture'. The most prominent group leader, Colin Lucas, of prewar Connell,

Ward & Lucas fame, was especially known to care for nothing else but 'architectural quality': 'no design was ever repeated'.[12] Roehampton Lane (Alton West) was built to the designs of his group, which then included the young W. G. Howell, H. A. W. Killick, J. A. Partridge and S. F. Amis—later, as HKPA, to become one of the best-known postwar (private) architectural practices in England [7.8].[13]

In the first postwar decade, only Coventry could pride itself on a similar reputation for Modern planning and architecture, under Sir Donald Gibson, City Architect and Planning Officer until 1955. In 1953, Sheffield councillors engaged as City Architect the outspoken Lewis Womersley, then Northampton borough architect. His mixed developments followed the recent London models.[14] Supported by councillors Albert Smith and Harold Lambert, Womersley delegated the design of his most spectacular scheme, Park Hill, to two very young and daring London designers, Ivor Smith and Jack Lynn, 'working as a private practice within his Department' [18.7].[15] By 1956, John Summerson could comment that those designers, who had put their early efforts into public housing, now stood among the elite of the profession.[16] Bearing in mind that other kinds of architectural commissions were scarce in the early postwar years, one might say, with considerable truth, that Modern Council Housing *was* Modern Architecture.

ARCHITECTURAL PUBLICITY AND CRITICISM

In the beginning was the phrase.

R. Banham, 1966[17]

'Architecture has always been partly carried forward on discussions of why and wherefore.'[18] One could probably expect such a comment from J. M. Richards, one of the editors of the *Architectural Review* and the *Architects' Journal*. Lionel Brett (Lord Esher) later commented that the 1950s were 'one of the dimmest decades in our architectural history, enlivened at intervals by broadsides from J. M. Richards'.[19] The architectural and building press as a whole was characterised by a striking hierarchy, from the high intellectual–artistic, London-based, down to those concerned with the material matters of building;[20] it was only during the sixties that the majority of professional periodicals began to adopt a more graphically varied layout and a more journalistic language, and the difference between 'art' and 'trade' journals was reduced. The *Review* tended to supply 'undiluted Third Programme', at least from the early forties onwards, which included a great number of esoteric topics, such as history, foreign geography, aesthetics, landscaping, indoor plants and many others.[21] A literary and cultural history of the style of architectural journalism has still to be written. There was a tendency to use a panoply of references to intellectual as well as ordinary life. Robert Furneaux Jordan, for instance, one of the chief Modern critics, in his article on Lubetkin's municipal flats, talked about both Descartes and orgasm.[22] Furthermore, Richards was assisted by many important writers and academics, including one of the chief architectural historians in the UK, Nikolaus Pevsner—who also happened to be one of the most respected international apologists of the Modern Movement—and a younger, more sceptical critic and historian, Reyner Banham. To engage a historian to work out a pedigree meant the ultimate accolade for a new building; it was Pevsner who wrote the chief criticism of the LCC's flagship, Roehampton [7.8], and who traced its European ancestry.[23] After the mid-fifties, however, some of the *Review*'s critical domination of the 'British' avant-garde had to be shared with another journal, *Architectural Design*, edited from 1953 by Theo Crosby.[24]

The journals did contain criticism in the narrowest sense: judgements as to whether a building was good or bad. On the whole, however, the selection of a building for illustration and description pointed, *per se*, to its merits. In the thirties, the *Architectural Review* took a strong partisan line in favour of International Modern; by the fifties, this was refined by an insistence on the stringent criticism of Modern buildings, instead of uniform praise.[25] However, the 'power' of selection remained, and the hierarchy among the journals was developed possibly even more strongly under Modernism than ever before. For instance, the low-cost flats by established London designers, such as Grey Wornum and Edward Armstrong, were classified as 'best of a number of good, workmanlike housing jobs' and were subsequently less frequently shown in the *Review*.[26] Frederick Gibberd felt somewhat unsure about his own stylistic credentials in the early fifties, but thought he could count himself among the Moderns by virtue of the fact that his work was 'still published in the *Architectural Review*'.[27]

In 1951, the *Review* announced a new method of 'critical appraisal' of the 'finished work of architecture', whereby a more strictly architectural analysis was to be kept distinct from 'technical description', from the 'objective analysis of the design'. Buildings could be praised, or condemned, for 'purely' architectural reasons, as in the case of the Lansbury development, disregarding apparent successes in planning and other practical terms. The emphasis was now on 'visual qualities', especially on 'spaces', 'rather than with planning'.[28] An extreme example of this tendency was the *Architects' Journal*'s analysis of Brett's housing in Roe Green, Hatfield New Town, of 1952, where the formal and the technical descriptions were totally separated from each other—an extreme case, because the two and three-storey dwellings appear rather ordinary to anybody not familiar with the critical language.[29] Participants in competitions for housing were admonished to present in their explanatory notes not only the practical details of their schemes but also their 'basic ideas' about housing.[30] Even somebody who was primarily an engineer and planner, such as Wilfred Burns, could engage in purely formal descriptions: 'the varying heights of buildings [at Golden Lane], the strong horizontal emphasis throughout, made even stronger by the vertical contrasts of the sixteen-storey block' [8.2].[31]

No wonder that we find the critics' language itself being criticised, sometimes even by the very users themselves: 'Thus we get Humane Objective Organic Spontaneity, and the mist begins to clear.'[32] The *Housing Review* admonished architects: 'Discuss these matters in simple language . . . which we will understand.'[33] Directed not only at the avant-

garde architectural press, but at the Moderns in general, was a remark in the *Builder*—at that time one of the more 'mundane' and conservative journals: 'High Paddington . . . is being systematically boosted into prominence by the high pressure methods to which Le Corbusier's followers (and other members of the "High Gang") are so lamentably addicted.'[34] The clash between the LCC Valuer and the Modern architectural critic was also one of language. The former did not understand what more could be said about his blocks of flats; were they not simply 'good homes'? Architects used their own language and they kept changing it. A new tone was to enter with the pronouncements of the Smithsons and New Brutalism from the mid-'fifties.

A completely uncharted territory is the structure of architectural criticism in the media at large. 'Provincial' newspapers carried reports on new local council housing which were usually supplied by the respective architects' departments themselves.[35] Professional architectural writers sometimes deplored the absence of a proper architectural language in the press in general,[36] while the latter, in turn, criticised the professionals for their jargon and maintained that the general public had no interest in architecture.[37] It was only later, from the late sixties onwards, that we witness the beginnings of 'media campaigns' against Modern council housing, initiated, in part, by a new breed of journalist-critic who professed to be on the side of the user.

An account of architectural photography should properly belong with the chapter on criticism and reporting. Pictures usually serve the praise of buildings, though occasionally photographs are used to demonstrate that a building or a layout is bad. The methods used in the New Towns ('Prairie Towns') attack were most blatant in their denunciatory aim [17.1]; they lack one element that was the *sine qua non* of a good architectural photograph: contrasts of light and shade.[38] Pictures also dramatised a building by presenting a diagonal view [6.10], a practice not new in itself: 'perspectivists' had followed it for centuries. Architectural drawing, which had lost less of its importance than one might think, showed a variety of styles, from the serenity of Walter Segal's outline drawings to the 'Townscape' drama of Gordon Cullen and Fred Millett, or the 'high unreality' of Norah Glover's watercolours of Thamesmead.[39]

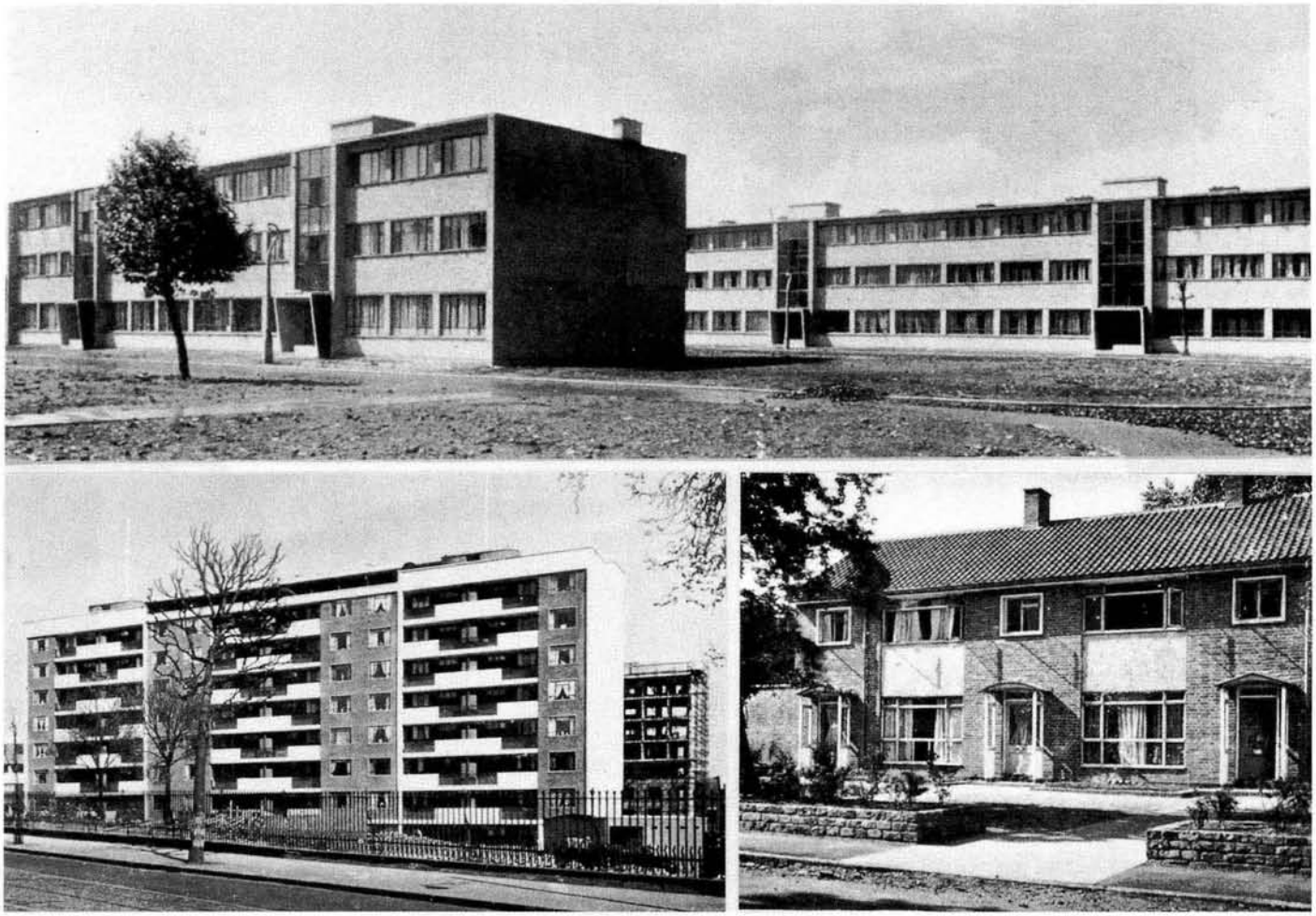
Illustration and criticism certainly helped to put some public housing projects on an architectural pedestal; it is virtually impossible to find a journal or appropriate book which does not illustrate Roehampton at least once. But the architects held up a strong hierarchy of their own values, and the vast majority of developments, regardless of their contributions to planning or construction, or of the way they made an impact on a local housing situation, found only an occasional mention in the 'trade' journals, if at all. From around 1960 onwards, Modern public housing received very much less attention in architectural circles and, by the end of that decade, architectural journals joined in its denunciation. The chief protagonist was, once again, the *Architectural Review*—even though this meant, in effect, condemning much of what this journal had stood for a decade or so earlier. But then the definition of Modern design itself had never been anything other than open-ended.

MODERN ARCHITECTURAL THEORY IN THE EARLY 1950S: FUNCTIONALISM, FORMALISM, RATIONALISM, EMPIRICISM, HARD, SOFT, HUMAN . . .

In a traditional view of architecture, art can be 'applied', or added, to the other elements of the Vitruvian definition, to plan and construction. For instance, symmetry can be applied to a layout of blocks of flats, and decorative elements can be added to the walls. There is some choice of detail in these matters, while the practical elements remain the same. Thus the LCC Valuer Cyril Walker, sensing that his blocks were under criticism for lack of architectural merit, promised that 'a greater variety of elevational treatment' would be considered in future.[40] For the planner-architect Abercrombie, writing in 1944, there appeared to be quite a number of possibilities for the architectural 'treatment' of English dwellings: the 'Early Lutyens–Parker Group', that is, cottage style elements; the 'Welwyn–Roehampton Georgian' (that is, the earliest parts of the Roehampton estate); the 'Jellicoe–Kenyon Moderate' (sheer brick walls and roofs which are often nearly flat); the 'Connell–Wardian advanced' (referring to two pioneers of the thirties); and the 'Gropian-stark Modernist'.[41] Anybody in search of more pungent characterisations of twentieth-century English styles in a similar vein should turn to Osbert Lancaster's cartoon guides.[42]

A more basic distinction is that between the styles for flats and those for houses or cottages. Cottages usually assumed an older style, flats frequently a more Modern one. By 1945, a general Modernity was associated with a flat roof, and with the way in which the Georgian proportion for windows gave way to more horizontal forms, mostly using new kinds of metal frames. There was more accentuation by means of horizontals than verticals. The horizontal band, a kind of moulding, sweeping round a curve, be it only around the corner of a balcony, became an important sign of Modernity, and also of foreignness (Erich Mendelsohn) [6.2]. However, from the late thirties the more narrow circle of the International Modern Style began to label these forms 'bogus', 'Modernistic' or 'jazz'; today we tend to use the neutral term 'Art Deco'.[43]

It was one of the chief aims of the International Modern Movement to render this kind of choice a thing of the past. Altogether, 'decoration' was anathema. 'Today, a singular degree of unanimity has been reached among architects whose outlook is independent of academic tradition and prejudice': thus ran the manifesto of the MARS group in 1938.[44] The justification for this claim lay in the conviction that the 'underlying attitude [is] scientific and not an arbitrary or sensational meaning'. In 1940, J. M. Richards voiced a similar belief, in his popular little Penguin book *Modern Architecture*, that architecture was closely bound up with science and with the 'march of progress' in general.[45] In a previous chapter, we explored one of the prime examples of this thinking—'Zeilenbau'—and, as regards construction, we touched on the 1950s notion of 'no detailing'. The best characterisation for this kind of thinking seemed to be 'Functionalism', a word which gained currency around 1930, specifically in conjunction with the International Modern



15.1. A selection of illustrations and comments from J. M. Richards's attempt to take stock of Modern architecture in 1950. ('The Next Step', *AR* 3-1950, pp. 170–8) Top: 'Routine Functionalism: 'By the end of the 1939 war the modern movement was so firmly established that the functional routine had become in many places the unquestioned idiom of the ordinary architect, usurping the pattern-book role of the Georgian routine of twenty years before . . . Flats at Poplar, London (Blair Street, 1949, designed by W. Rankin), a workman-like application of the functional routine by a borough engineer.' Bottom left: 'Post Cubist . . . the pure abstraction . . . of Le Corbusier and . . . Dutch *stijl* . . . The work of Tecton: . . . the aesthetics of abstract geometry . . . expressive modelling of their façades (flats at Finsbury, 1949 [see ills 6.15 and 16.1])'. Bottom right: 'Empirical Organic. A new regionalism . . . marrying the functional with the organic . . . seeking inspiration in the particular (the characteristics of site, structure and materials, for example) rather than in the general . . . of the rational-mechanical . . . The deliberate use of motifs which create a sympathetic atmosphere by their association rather than by their form (housing at Hackney by Frederick Gibberd, 1948)'.

Style, and one which has played an important role in architectural discussions ever since, not only among architects. To cite an economist/housing reformer: 'Flat roofed houses have provided interesting experiments in functional design.'[46] We have already hinted at Rationalism and Functionalism as the central tenets in Modern design theory, in which the old Vitruvian problem of how to link the practical with the artistic was given a new turn, by declaring that the practical itself contains artistic values. Functional*ism* represented an attempt at a grand underpinning of a materialist view, in order to provide a sense of unity. It was thus used also in a broader sense, as a stylistic label.

But the enthusiasm about the 'functional' as the New was already beginning to be seriously eroded from about 1950 onwards—in fact, it is hard to find unequivocal statements regarding Functionalism in English writings even in the late thirties. By 1960, Reyner Banham had presented his thesis about the insufficiency of the term[47]—which also led to the abandonment of the notion of there being one canonic, unified version of the 'Modern' style. In 1949, the editor of the *Architectural Review*, H. de Cronin Hastings, described two versions of the Modern, both, to him, equally valid: 'the rational or classic or crystalline' of Le Corbusier, and 'the romantic . . . or organic', as in the work of Frank Lloyd Wright.[48] Shortly after, J. M. Richards made an attempt to attack the problem head on. His article 'The Next Step?' begins by tackling the question of the 'functional' [15.1]. Firstly, 'the whole question can be begged by saying that architecture of whatever kind is functional if you include all possible spiritual and emotional needs among the functions

to be catered for'. Secondly, functionalism, he claims, has come to mean the 'most economical satisfaction of physical needs'.[49] In the end there is, among the variations of the Modern which Richards analyses, no such thing as a straightforward Modern Functionalism; there are only particular sub-species, such as 'the functional routine', or the 'functional tradition' (old industrial architecture). In addition, there are those categories which refer chiefly to the element of repetitiveness in Modern construction: 'mechanistic' and 'Machine Aesthetic'. Richards's other headings can, on the whole, hardly be called very systematic: Pioneers, International Style, Formalist, Neo-Classical, Diagrammatic, Post Cubist, Regional Organic, Empirical Organic.

Richards's categories, to some extent, do confirm Hastings's broad distinction between 'rational/classical' and 'organic', which appeared to be the most effective of any set of general labels at that time. This differentiation stemmed from a mode of thinking, contrasting the regular and the individual, which had been current at least since the beginning of the nineteenth century. The former corresponded to Richards's 'formal' and 'post-cubist' style, which was brought into England, according to Furneaux Jordan,[50] by Lubetkin and his firm, Tecton. Their Highpoint Two, a private multi-storey block of flats in Highgate (1937), shows a bold 'formal' coordination of its façades [10.3]. In his flats in Finsbury after the war, Lubetkin goes further in the direction of the formal, with all-over patterning of façades, although this pattern is still related to the box-frame construction behind [6.16]. To Lubetkin, functionalism was something that goes without saying, and the architect must strive to 'create order out of chaos' and evoke the 'emotional impact of patterns'.[51] The Bishop's Bridge Road development (Hallfield Estate) in Paddington, begun by Tecton and completed by Denys Lasdun, also consists of slab blocks with similar sorts of patterns as in Finsbury, but the Bishop's Bridge Road patterns appear more independent of the framework behind than do Lubetkin's flats [6.19]. According to Lasdun himself, the blocks 'disown a narrow functionalism', and are 'clean, bold and ruthlessly formal'.[52]

Many other varieties of Formalism were discussed in the 1950s: Beaux Arts regularised planning (Banham), Renaissance geometry (Colin Rowe; Rudolf Wittkower).[53] Le Corbusier's Unité, too, seemed to confirm the importance of geometrical patterns.[54] Joseph Emberton was said to have moved from prewar 'functionalism' to geometry in his postwar housing.[55] A little later, the critic Sherban Cantacuzino attempted to extend the formal argument by emphasising, in a review of the flats of Powell & Moya, that flat geometry is not enough, but that three-dimensional, sculptural qualities are also important.[56] Rationalism and Formalism were, of course, also linked with considerations of construction. In fact, much of the appeal of this movement was related to the way in which it took into consideration the regular grids created by the new methods of constructing large buildings, such as the box frames of large slab blocks [10.4].

The other major 'style' was labelled 'organic': 'Regional Organic', 'Empirical Organic', or 'The New Empiricism', which appeared as a sudden import from Sweden around 1947.[57] It was claimed that the Swedes had turned away from the rigid International Style, which, in retrospect, was characterised both by too strict an insistence on 'the stern reality of reinforcing rods and tuberculosis statistics', as well as by 'a too rigid formalism'.[58] Instead, they sought to proceed experimentally, objectively, informally, undogmatically and with more individuality. Psychological factors were considered as important as those of material function. This movement, too, had its preferences as regards construction. 'Undogmatic' could mean the inclusion of traditional methods, such as tiled, pitched roofs, in cases where they were thought to fit in better with the natural surroundings. This sounded very much like another version of the specifically English Picturesque tradition. Indeed, the *Architectural Review* had been stressing the value of this tradition for some years: De Cronin Hastings delivered a 'Plea for an English Visual Philosophy founded on the true rock of Sir Uvedale Price'.[59] Pevsner and his fellow-immigrant S. Lang were busy unearthing the original theories of the Picturesque, and by the late fifties Pevsner propounded a kind of unity of the International Modern and the Picturesque, with no need to search far for a perfect example: Roehampton [7.8].[60] The fullest expression of this English 'organic' was Townscape, the reawakened admiration for that country's picturesque old towns and villages, to which we shall come below.

Which of the two branches was the more Modern, Formalism or Empiricism? This, again, is precisely the kind of question to which there is no clear answer. Naturally, the *Architectural Review* believed that their favoured style was the more forward looking, and that they had superseded the mechanistic aspects of the Modern style. But the other camp accused them of 'sentimentality'[61] and later complained about the 'insufferable tedium of townscape'.[62] Clearly, Empiricism could come close to the views of Traditionalists, such as those of Reilly, who had earlier objected to the regularity of Zeilenbau.[63] Gibberd found that his outlook had changed from the International Functionalism of the 1930s to 'Romanticism'.[64] To the other camp, it seemed that the *Review* had jettisoned some of the singlemindedness of purpose which, in their view, the Moderns should see as their raison d'être. But then, as Banham had begun to argue, and later drove home in his book *Theory and Design in the First Machine Age*, Modern architecture as a whole was not as pure, logical, or 'material' a concept as the early Functionalists and Rationalists had made it out to be. No wonder James Stirling exclaimed at the time in exasperation: 'Let's face it, William Morris was a Swede.'[65]

Perhaps the combatants were tired of 'isms', or long words generally. Some now began to argue with each other simply as 'Hards' and 'Softs'. This largely remained a matter of in-fighting within the LCC Architect's Department. The split had started just after 1950. The 'Softs' came first: their numbers included Whitfield Lewis, Cleeve Barr, Oliver Cox, Rosemary Stjernstedt, Ted Hollamby and Percy Johnson-Marshall. Like William Morris, they were sometimes called 'The Swedes'. Some elements in their designs, such as pitched roofs, as well as the (in England) more traditional kinds of brickwork and the coloured patterning at the entrances of blocks of flats, were occasionally dubbed

'People's Detailing', an oblique reference to the Communist affiliations of some of the 'Softs'.[66] Portsmouth Road (Alton East) at Roehampton [7.6] was, as we have seen, the first 'mature' mixed development, cherishing variety of forms, irregularity of layout and picturesque landscape effects. The lower dwellings all have pitched roofs. The frame of mind cultivated by the 'Hards', by contrast, was 'puritan', 'uncompromising'; their models were International Style Modern Zeilenbau, Lubetkin, Powell & Moya, and, of course, Le Corbusier's Unité. Their demonstration piece was erected next door to Alton East, at Roehampton Lane (Alton West): a series of parallel Unités, emphasising repetitive rectangular framework—even the houses within this greatly simplified mixed development have flat roofs [7.8]. Thus, in essence, the Hard–Soft alternative was a continuation of the Rationalism/Empiricism debate.

New 'isms' were coined to reassure the outside world and to keep the architectural debate going. 'Humanism', or 'The New Humanism', was sometimes used synonymously with New Empiricism, but the meaning of 'human' could be almost infinite. It could, for instance, imply low density and much landscape,[67] or higher density: 'the 'smaller unit... the designer can make it more personal, more human'.[68] Thomas Sharp spoke of small, irregular towns as 'most warmly human places';[70] Lasdun, on the other hand, praised the 'humane, geometric space' of his widely spaced Bishop's Bridge Road (Hallfield) blocks [6.19].[69] 'Inhuman', referring to a repetitive appearance, as well as to very high density, was the most damning of the judgements made against Walker's LCC blocks [6.2]. Yet, again, in the 1953 attack on the New Towns we can read of: 'twelve houses to the acre, an inhumanly low figure'.[70] Years later, 'inhuman' was to be applied to high blocks as well. In the point block versus slab block debate, Hugh Casson held that the former were more human than the latter. 'Human scale' was a popular variant. Le Corbusier's Unité was certainly thought to possess it; after a discussion on the building in 1951, it was stressed that everybody, the Softs and the Hards, were agreed on that.[71] Similarly, to Pevsner, Roehampton appeared 'vast, yet not inhuman'.[72] In 1963, the 'New English Humanism' was even applied to prefabrication and its regularity.[73] Seemingly aware of the problems posed by the frequent use of the word, Summerson commented that human had 'temporarily acquired a meaning almost equivalent to "cosy"'.[74] Others, such as Banham, were less polite: 'the so-called New Humanism of the early '50s and the endless guff we used to hear in those days of human scale etc. etc. A movement... it has died already.'[75]

By 1953, a new 'ism' was just around the corner—New Brutalism—which contained elements of both Hard and Soft. Summerson's attempt in 1957 to clarify and restrict the definition of Modern architectural design to a 'spatial programme' for 'the convenient performance of specific functions',[77] as well as his recommendation for 'remorseless objectivity', were not much heeded.[78] Indeed, one can make out a case—fortified by the fact that Summerson himself never was an all-out supporter of International Modern—that the more Modern the designer or theorist, the more sceptical was his or her attitude towards any kind of simplistic Functionalism, in fact any kind of 'ism'.

CHAPTER 16

'Solving, Architecturally, the Most Difficult of Social Problems . . .'

OR SO REMARKED, in 1958, one of the most influential architect-planners in the UK, Robert (later Sir Robert) H. Matthew, in his foreword to A. W. Cleeve Barr's authoritative handbook *Public Authority Housing*. We have already mentioned a similar classification of architecture, in the comments on an urban renewal project of 1954: 'Visual, Social, Functional'.[1] We can assume that 'functional' compounds the first two Vitruvian headings, convenience and construction. What interests us here is the apparently new heading, 'social'. There is overwhelming evidence that architects of the forties and fifties saw themselves as social reformers, just as much as did the town planners and some of the older generation of sociologists. Party-political affiliation varied and is of little importance in our context. Tory One-Nation supporters as well as Modern Left-wingers took for granted the new 'national British' Welfare State, as well the tradition of service by the municipalities. Statements such as 'architecture, a social art'[2] or remarks about the 'new social conscience' of the architectural profession (by J. M. Richards)[3] were commonplace. In this movement of progressivism, the 'social programme' of the famed Hertfordshire schools served as the major 'British' model of the early fifties.[4] Cleeve Barr sprinkled his handbook with such terms as 'social need', 'social value', 'social progress'.[5] Architects and sociologists formed discussion circles, such as the Kenilworth Group in London. In a major supplement on the state of English architecture in *The Times*, the planner-architect Lord Holford drove the point home at great length: 'The English Architectural Revolution['s] . . . causes have been largely social in origin, for architecture is a social art and the building of new towns . . . a form of social therapy'. One result of the architects' and planners' 'therapy', Holford asserted, had been the fact that new housing developments were now of an 'almost classless' character.[6]

Like all social reformers of the period, housing architects deemed themselves to be in possession of a power which at times could override even the preferences of dwellers themselves. As somebody put it squarely and simply in one of the early postwar RIBA Conferences on architecture and sociology: 'what the public wants is not necessarily what it should have'.[7] There was, for instance, the ubiquitous problem of untidy garden sheds erected by the tenants for their own purposes: 'residents must not interfere . . . and not erect unsightly sheds', remarked Frederick Gibberd in 1955.[8]

There was, of course, a whole spectrum of possible meanings of 'social'. To many, it referred to investigations concerning, for instance, whether tenants use balconies for washing or for storing the pram—in other words, factors which should come, in a more narrow sense, under the heading of practical, empirical planning. In our context, here the meaning of 'social' is, clearly, more a socio-psychological and socio-political one. Although the borderlines cannot always be drawn succinctly, the distinction between the major definitions of the 'social' is of great importance, because of the hierarchy mentioned above, in which socio-political considerations were held to be of a value superior to those of a more material–practical type. The architects' sociology could thus be considered superior to that practised by the housing managers. Their concerns were also seen as superior to those of most other officers involved in housing, for instance traffic engineers. In particular, architects wanted their say in the layout of at least the minor roads in a new development. To cite Holford again, in addition to a 'programme', that is, a plan for all matters practical, a redevelopment scheme must supply 'something which, in addition, symbolizes the existence of a community'.[9]

We have, in the previous chapter, dealt with the problems of the Modern permutations of Vitruvius' triad—utility, solidity and beauty—and especially with the attempts to relate the first two to the third. Here our question is simpler. Did Modernism perpetuate the traditional upholding of beauty, or 'architecture' in the narrower sense of the word, as the highest category of the three? We note that at least in practice, that is, in the day-to-day evaluation of architecture, the old system of values was largely upheld. 'Architecture' was what was expected from the architect; planning and construction were often taken for granted. Patrons and critics frequently exhorted designers to concentrate on 'art'. For instance, Aneurin Bevan spoke of a 'competition between local authorities and architects as to who can lay out the most beautiful estates'.[10] Mumford wrote of the work of the architect as something which proceeds 'from physical necessity to the vital and the free, the realm of personal choice'.[11] Government Housing Manuals, too, had begun to stress the importance of freedom of design for the architect. Le Corbusier, in the speeches made at the presentation of the RIBA Gold Medal in 1953, was praised not only for his social commitments but also for his 'artistic integrity'.[12] 'A house is not just a machine for supplying those material services', wrote Rattray Taylor.[13] Likewise, sewage is not enough in town planning;[14] avoid the 'functional routine of a

Borough Engineer';[15] 'town design is not a science but an art', said Lionel Brett.[16] Bad sanitary conditions in old towns could matter less than bad socio-psychological conditions in new estates.[17] Cleeve Barr's book—although ostensibly devoted to matters practical and scientific—often tries to go beyond: for instance, 'the orientation of blocks of flats in parallel rows, facing east and west... the spacing of the buildings for daylight... [have] been overdone'; more important for Barr is the 'sense of enclosure' which can be obtained by a group of blocks of flats.[18]

It thus appears that a number of the Modern trends of architectural thought converged in the emphasis on the social *and* the architectural; in fact, it seemed that the new emphasis on the 'social' helped to buttress traditional, Vitruvian and Romantic values in 'Architecture'. At the same time, this could be seen as a strong direct link between the practical and social purposes and the aesthetic elements of architecture, of the kind the Moderns so ardently desired. We should remind ourselves here of an architect's maxim, which was cited at the beginning of Chapter 12: 'All that is socially good, is also beautiful.' As J. M. Richards wrote enigmatically and rhetorically in 1950, 'architecture... [is] itself a means of bringing order and urbanity into a disorganised world'.[19] Lubetkin, when asked what 'marching shoulder to shoulder with the working classes' actually meant for the architect, replied simply: 'good architecture'.[20]

COMMUNITY LAYOUT: FROM TOWN PLANNING TO ARCHITECTURAL DESIGN; 'THREE-DIMENSIONAL DESIGN'

There was one very simple way of identifying a community in architectural terms: 'Use the healthy word community instead of estate.'[21] An early comment in a Government report took an equally unproblematic line about what was desired: 'Local authority estates which are well laid out, attractive in appearance and which clearly form a pleasant and neighbourly background for real community life'.[22] When sociologists were beginning to attack the viability of the notion of community, some planners and architects hastened to restate their continuing confidence in the ideal: 'I am a firm believer in the neighbourhood unit group', said Abercrombie in 1952.[23] In countless architectural descriptions the word occurs as a matter of course; 'the most difficult problem of how community can be achieved...', runs a typical comment.[24] It has to be admitted that architects, too, occasionally voiced doubts; Gropius, for instance, sounded a little impatient when, in 1952, he pointed to 'the wealth of theoretical thought on community living' and admonished his readers to get on with actually building communities.[25]

The early models of 'neighbourhood' planning which we discussed above were, one might say, largely conceived as plans; in a Radburn cul-de-sac and a Reilly Green, 'togetherness' was something that could be perceived on a map [13.1]. Seen on the ground, the most important unifiying factor was the landscape and the treatment of the gardens, paths and roads. Now designers were beginning to demand more strictly architectural ways of achieving coherence. We have already cited Mumford's demand for the 'integration' of all functions within the plan; this is directly followed by the demand that 'the neighbourhood should have a certain coherence and architectural expression, both through the general plan and through the individual design of the buildings'.[26] Mumford cited one possible architectural method of marking out a community, the long continuous block of dwellings, as in the Römerstadt, the celebrated Frankfurt estate of 1930, which he saw as 'a retaining wall, boldly [separating] the community itself from the small garden plots below'.[27]

There were, however, simpler formulas. The most elementary stipulation was to avoid monotony. The Dudley Report demanded that every centre of a neighbourhood should form a 'comprehensible entity' and should possess 'individual character'.[28] Planners and architects alike faced the ubiquitous Victorian and interwar suburbs, 'unplanned' and 'undesigned'. It was not only the outright old slums that formed the target of designers' outrage, but also those innumerable 'dreary, though sanitary streets that cry out for rebuilding'. These districts stood for 'social sterility, aesthetic emptiness and economic wastefulness'[29]—another paraphrase of 'social, visual and functional'.

A very important concern was size. Smallness was always an advantage, 'providing a comparatively small unit in which the individual will inevitably be impelled towards neighbourly attitudes and actions'.[30] Forshaw tried to define the 'architectural unit of housing': the 'house group is an architectural and social form'.[31] Judith Ledeboer pleaded for 'walking distance as the chief unit of size'.[32] In England, the image of the old village and the small old town persisted: 'small, simple... homes... communities'.[33] The cul-de-sac—whether of the Radburn variety or any other—clearly continued as an attractive layout in this context. We can also mention the sociologist Kuper, whose detailed investigation of residents' opinions of each other was centered on the cul-de-sac, although he did not conclude firmly as to whether this induced neighbourliness or not.[34] There was also the frequent stipulation that there should be more terraced houses in English suburban developments,[35] to avoid the spread-out effect of the dreaded suburban 'semi' or bungalow. 'In its intimate character [the terrace] expresses the spirit of the community and is in itself a "house group".'[36]

One of the most important catchwords for many architects and architect-planners in the late forties was 'three-dimensional design',[37] which meant that it was not sufficient to create patterns on the map,[38] or details on a façade.[39] This involved a more abstract view of a group of buildings, or the grouping of buildings around a space. Thomas Sharp wrote of the 'single picture' which can be formed by a street. Frederick Gibberd, in a RIBA Lecture in 1948, and later in his book on town planning, revived much of the abstract architectural language which had been developed in writings on the aesthetics of the Picturesque in Britain from the eighteenth century onwards. All buildings are seen as 'mass', whose chief quality is 'repose'; groups of buildings should always cohere. Forms should not vary excessively, nor is complete symmetry advisable. Special considerations must be given to sloping terrain. Gibberd supplied innumerable 'thumbnail sketches' of abstracted groups of houses and flats without doors and windows.[40]

FROM SCIENTIFIC DENSITIES TO ARCHITECTURAL AND SOCIO-PSYCHOLOGICAL DENSITIES

Architects, furthermore, tried to 'appropriate' some of the more technical methods used in the planning of housing for their own concepts of community design. We discussed 'density' as a measurement (usually expressed as persons per acre), its aim being to determine the amount of daylight for flats. Secondly, 'density' served as a shorthand, as an overall description, of the layout of any type of development. Very gradually a demand for high densities emerged in an attempt to reduce distances to work and to prevent the eating up of valuable agricultural land.[41] Elizabeth Denby, and, more cautiously, the Dudley Report, already saw a further virtue in dense building, in that it induced 'civic pride' and general urbanity, in the sense of fostering outdoor life.[42] Low density became more and more associated with the look of the dreaded suburbia. With *The Density of Residential Areas* in 1952, the desire for higher densities found qualified MHLG sanction. Around 1950, we witness a rapid turn towards high flats among some architects. Some proposals, such as those by Rolf Jensen, for blocks of fifteen or more storeys, even envisaged a density of 400 p.p.a., which was twice the highest zoned density in London.[43] Le Corbusier was praised for his 'audacity' in proposing very high densities.[44] For Jensen, one of the results of raising height was an unusually large amount of open space—75% or more of the total ground area of a development—for public use. 'High density [is desirable] not only because of economic considerations but also for the more satisfactory aesthetic and human background which [it] will provide.'[45]

Soon, the new Urbanity and Townscape Movement was also to demand a reduction in the size of open, public spaces. Hence 'density' could now be used in two opposing ways: to calculate factors which pertain chiefly to the inside of the dwelling, or as a guide to design the areas outside the dwelling and with the uses of the space between the dwellings. The earlier kinds of calculations of high density had resulted in wide open spaces; the new emphasis on high density concerned itself with smaller kinds of spaces between the buildings.[46] From the late fifties onwards, architects tended to put less stress on the 'correct' orientation of blocks of flats and the daylight factor.[47] We might thus conclude that the concept had now been 'architecturalised'. Both methods, however, share a basic interest in 'high density'. 'Density is modestly stated at 75 p.p.a.', we read about the Laindon 5 development, Basildon.[48] Until the mid-sixties, a figure of high density was a source of architectural pride. However, with the growing variety of shapes in housing, doubts also grew as to the usefulness of density calculations as such.[49] A belief developed which held that, especially within the 'medium-density' range, between about 80 and 120 p.p.a., almost all types and forms of housing could be used. To the designer it was shapes that mattered; figures, by themselves, were of little use.[50]

MIXED DEVELOPMENT: 'COMMUNITY' AND ARCHITECTURAL VARIETY

The thinking involved in Mixed Development was related to that in the concept of 'high density': to ensure the provision of a large number of dwellings, as well as ample open space, on a small piece of ground. In addition, there was a special stress on a variety of sizes and types of self-contained dwellings, because this was what different households were held to require. But, again, this kind of practical–empirical sociology was supplemented by socio-political and socio-psychological considerations. Ruth Owens, in her recent wide-ranging study of mixed development in England, placed the new desire to create happy communities or neighbourhoods at the beginning of her explanation of the concept.[51] It was assumed that all individuals or groups actually wanted to live in close proximity: 'Old people really want to mix with the others on the estate and not be planted in a special colony of their own.'[52] Likewise, there were demands to mix social classes, which meant the inclusion of at least a few better-class dwellings in the estate,[53] and perhaps even some 'problem families'; but in practice, these measures were taken up very rarely.[54]

A Mixed Development *must* contain a variety of dwellings. There must be flats; if one wants cottages, the logic goes, some people have to live in flats; the higher the flats, the more room for cottages. Within this strict logic, however, there was considerable freedom. There were no precise limits as to the overall size of a mixed development. Some schemes adopted a more even mixture of forms, such as Gibberd's Shacklewell Road and Somerford Grove development for Hackney MBC, in 1946 [5.2]. The buildings in this 'community', which comprises 'every type of family, . . . have been grouped in a series of closes, each with its own small and intimate character'.[55] Later, there was also a tendency to juxtapose types boldly [5.6], such as bungalows and 30-storey blocks of flats, as in the (private) Boston Manor project.[56]

For most English architects, the complications of design which mixed development entailed were entirely welcome.[57] In the new architectural climate in London, Cyril Walker's blocks gave a useful demonstration of the dreaded kind of uniformity [6.2]. But what the designers also wanted to avoid was the seemingly arbitrary variation of forms, as shown, for instance, in a large scheme in Gibraltar designed by Messrs Robert Atkinson in 1946: the same basic type of dwelling is accommodated in blocks which constantly vary in height and width.[58] Forshaw succinctly formulated the preferred solution in 1949. This was the designer's formulation of mixed development: 'One of the proper ways of obtaining variety is to differentiate the function rather than the style of a group of dwellings.'[59] In other words, variety can be achieved by methods other than just varying the roof line; it is much more convincing to juxtapose a house with a block of flats. 'Occasional blocks of tall flats give really interesting groupings and an attractive, changing skyline that is generally lacking.'[60] Gibberd pleads for a maximum of formal contrasts of low and high blocks,[61] although one should not be insensitive and place just a few bungalows or high accents

'somewhere in a sea of semis'.[62] Variety within unity—a well-tried principle of Picturesque aesthetics—was desired. Gibberd certainly practised what he preached when he closely bound his first English point block, The Lawn, into the two-storeyed neighbourhood of Mark Hall, Harlow, by means of three-storeyed blocks of flats [7.2]. However, as we shall see, already by the early 1960s the forms of mixed development and of 'community design' were to change considerably.

BLOCKS OF FLATS AND COMMUNITY LIFE

In blocks of flats, socialisation is likely to be an issue from the start, simply because this type means high densities almost by definition. In Scots tenements and in early English working-class flats, close contacts between dwellers were taken for granted. In fact, the English blocks were usually disliked because of what was considered a severe lack of privacy.[63] Hence high-density high-class blocks of flats attempted to compensate for the lack of privacy by providing ample Modern conveniences, as well as facilities for servants. The early champions of widely spaced Zeilenbau and other kinds of modern high blocks then tried to argue that a very satisfactory degree of privacy could be achieved in these layouts, through freedom from being overlooked. It is significant that in the pronouncements of the 'older school' of designers of flats, such as Edward Armstrong's, as well as in Walker's defence of his LCC blocks, there was hardly any mention of 'community'. The stated aim was the provision of individual homes, and their chief quality was warmth and privacy. There was even a cautiously voiced suspicion that a community centre might be seen by the tenants as an element of condescension; 'club room' seemed a better term.[64]

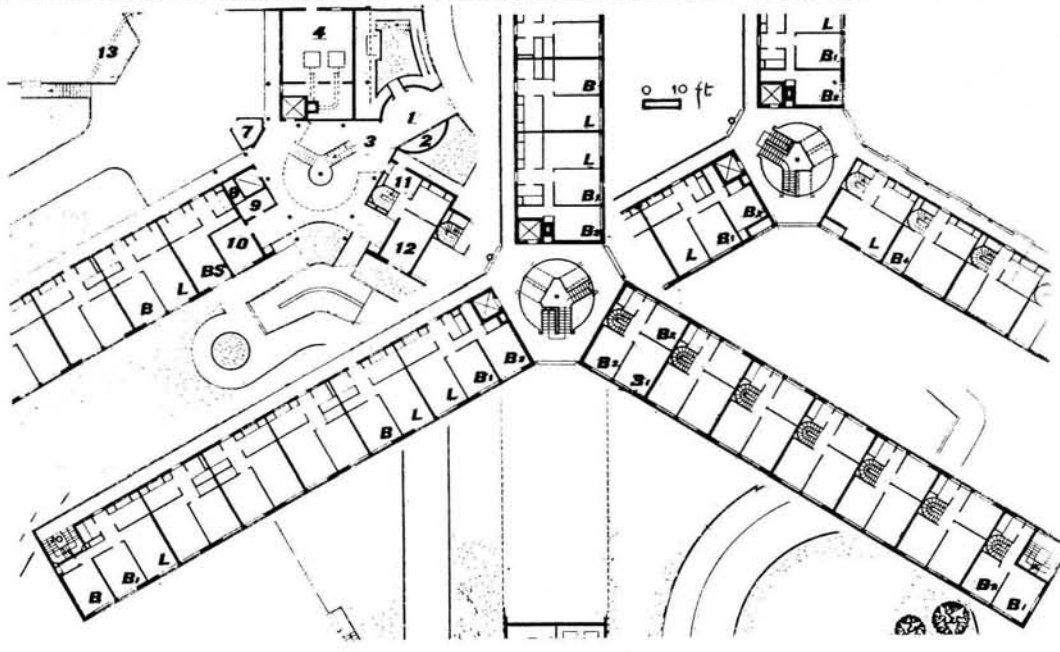
It must have come as a surprise to many when, in the late thirties, some housing reformers and architects began explicitly to link the flat type with good community life: a large block of flats could 'form a community of its own'.[65] Experiments with blocks of flats in a Modern style, such as Kensal House, Kensington (built philanthropically by the Gas Light & Coke Company in 1938) [6.13], excelled in the provision of communal facilities, especially for children. The new enthusiasm for denser urban dwellings on the part of Modern architects demanded both the adaptation of elements of Modern convenience from recent high-class flats, and a continuation of the traditions of a caring service to the lower classes. Some postwar urban flats, Lubetkin's for instance, were exceptionally well provided with communal facilities, such as laundries [9.1]. But what interests us here is the emergence of a belief that the Modern block of flats, as such, can generate community feelings. The housing reformer Elizabeth Denby, who, with Maxwell Fry, had helped with the planning of Kensal House, rhapsodised about its English 'urban village' character: 'On a sunny evening or at the week-end each balcony has its tenants leaning elbows on the rail, smoking, gossiping, happy, like a group of cottagers perched above each other on a steep cliff.'[66] Thomas Sharp contrasted flats and their 'communal facilities' with the 'social isolation of small houses with private gardens'; architecturally speaking, too, the possibilities of 'grouping are far richer with flats than with detached houses'.[67] One of the most fervent advocates of flats, H. Kamenka, stated plainly that flats brought an increase in community spirit.[68] In the early fifties, Ruth Glass spoke of the 'social security' which some people find in the 'comradeship of the crowded urban block'.[69] Forshaw was perhaps the most persistent, and consistent, supporter of all denser kinds of dwellings; we mentioned his plea for the terraced house. He even advocated flats in country districts, though these were primarily intended for young workers. Forshaw again carefully stressed both social and formal elements: one of the main advantages of these flats in the country would be the ample recreation grounds situated between the blocks, and the able designer could use blocks to create interesting architectural compositions in the landcape.[70] It was Forshaw who insisted, in the mid-forties, on the inclusion of eight-storey blocks—the highest LCC flats to that date—in the outer suburban location of the Woodberry Down Estate [6.14].[71]

An obvious area for discussion was the access to the flat within the block. But these deliberations tended to be contradictory from the start. Lubetkin made a special ornamental feature of the entrances to his blocks, declaring them to be 'focal points', which 'give a sense of community to the inhabitants' [16.1, 16.2].[72] On the other hand, we saw that the point block at least partly owed its shape to the desire for privacy, in that only few parties share the direct access to each group of flats. But we also noted that for the maisonette block, as well as for most slab blocks containing flats, the older type of access was chosen, the 'balcony', or open passageway, which had been prevalent in English working-class flats since their inception. This happened chiefly for reasons of economy—in the face of criticism of the defects of balcony access, especially, again, its lack of privacy. We do, however, encounter occasional pronouncements by designers, in the early years after the war, that balcony access was conducive to sociability (a curious contrast to contemporary research in the Netherlands, where 'galerijbouw' was advocated precisely on grounds of greater privacy!).[73] In 1952, this idea was taken up by the designers of Roehampton Lane (Alton West): they held the long passages to be one of the advantages of their long maisonette slab blocks, where far more tenants were in direct contact with each other than was possible by means of the vertical communication in point blocks.[74] An essential influence was, again, Le Corbusier's Unité with its spacious internal corridors and internal services, itself based on comparable considerations of 'community'.[75]

We have reached a crucial point in the arguments about the Modern dwelling generally, and high blocks of flats in particular. The demand for high density and the desire to foster 'community spirit' through design both spurned the development of our Modern types of dwellings. At the same time, privacy remained a value. To place Zeilenbau blocks widely apart helps with privacy, but also leads to monotony, we read in 1952.[76] The chief purpose of the open space between the late 1930s type of Zeilenbau blocks was the encouragement of physical recreation, which would, by itself,

it was hoped, foster community life—we quoted Forshaw on this at the beginning of Chapter 12. On the other hand, for the next ten years, into the 1960s, point blocks as well as slab blocks did become more self-contained and more widely spaced apart, with no need for ancillary buildings any more, except garages. This certainly reduced the need for the actual physical use of the grounds. After the immediate postwar years, the demand for physical recreations for all seemed to diminish generally. From about 1955 onwards, the split among English designers witnessed in Roehampton, between Portsmouth Road (Alton East) and Roehampton Lane (Alton West), became deeper. Many local authority architects continued to design wide open spaces until the mid-sixties, but other designers began to lose interest in them. The 'townscapists', in fact, began to reject them altogether. Soon, some of the youngest avant-garde designers abandoned the point block, even the isolated slab block, and pursued 'sociability' by new methods of designing access ways and by devising new means of communication between blocks.

16.1. London: Finsbury MBC, Rosebery Avenue (Spa Green), 1946–50 (see ill. 6.15). Tecton/Lubetkin emphasised the 'communal' nature of the areas around the entrances to the blocks of flats.



16.2. London: Finsbury MBC, Holford Square (Bevin Court), 1954, designed by B. Lubetkin; flats and maisonettes. The photograph could still be seen in the architect's office in the year of his death in 1990. (*AR* 2-1955, pp. 90–1)

CHAPTER 17

New Socio-Architectural Catchwords: Space, Urban, Townscape, 'Prairie Towns', Urban Redevelopment

The earth has been opened up to the sky. S. Cantacuzino, 1956

Subconsciously we need space enclosure. C. Culpin, 1954[1]

WE HAVE DEALT with a number of values which inspired architects and their critics in the 1950s. We have noted their desire to outflank the town planners by their forceful attempt to redefine the public status of the areas around the house or the block of flats. One of the essential new doctrines of twentieth-century architecture was 'space'. The designer is not only concerned with 'mass', with buildings, but with what lies in between: this must also be designed. It was only around 1900 that German architectural historians and critics established this emphasis on space, in an abstract sense, as one of the essentials in architecture. The avant-garde movements of the twenties, De Stijl and Constructivism, extended notions of 'spatial design' to the areas around buildings, demanding the 'interpenetration' of inside and outside space.[2] Gibberd gave a clear enough definition of this most difficult notion: Space 'is itself intangible, but nevertheless it is quite real. You cannot feel or touch it, but once you relate the objects to each other you are conscious of the space between them.'[3]

The desired kind of space that we have met with so far has been the wide-open kind of space, which usually meant park-like surroundings; 'the true spatial approach' lies 'with landscaping in a park', wrote Sheppard Fidler in 1953.[4] The most advanced Modern designers aspired to create open spaces not only around the building, but also underneath it. New methods of construction made it possible to place even high buildings on 'stilts', or, as Le Corbusier called them, 'pilotis' [COLOUR IV]. Here 'the earth [was to be] opened up to the sky.'[5] For the Smithsons, the 'pilotis of Le Corbusier's largest block were 'symbols of the participation of the Unité in the life of Marseilles'.[6]

However, we have already pointed to a new trend in the late 1940s which favoured smaller groupings in order to create smaller environments. One of the great complications in the history of twentieth-century architecture is the presence of two completely contrasting values of space. In the late nineteenth century, the Austrian town planner and architect Camillo Sitte pointed to the desirability of small, or at any rate, firmly enclosed, and preferably irregularly shaped spaces in towns. Unwin made Sitte's work known in England, and applied his concept to some aspects of Garden City planning, for instance the cul-de-sac. But with the prevailing City Beautiful symmetry, and with International Style regularity and openness, Sitte became largely forgotten. In the forties, however, Thomas Sharp became an adherent to a Sitte-like fondness for dense old villages and small towns. Sharp still spoke mainly in terms of a kind of 'picture', as presented, for instance, by an old street.[7] It was Gibberd who in 1948 linked space with 'grouping'. Grouping sets out to create spaces 'for example, in the dramatic effect of passing from an enclosed space to a more open one'.[8] 'Subconsciously we need space enclosure . . .'.[9] Almost without saying, it appeared that these kinds of spaces help foster community: 'linked courts . . . [foster the] friendliness of community life'.[10]

A term less abstract than 'space' was 'Urban', one of the most important English-British architectural catchwords of the fifties and beyond; in Scotland, with its mainstream-European tradition of monumental housing architecture, there hardly seemed a need for any special advocacy of the 'urban'. In our context, this idea's origins can be found in the already mentioned English pleas for higher density and a more 'urban' kind of life. Arguments concerning town and country, or town versus country, worked in a complex way. Paradoxically, a major starting point for the new Urban movement was a particular view of the English village. For Thomas Sharp and many others, there was no essential difference between the small old town and the old village. The same kind of close grouping of buildings could be found in both. Formulations, such as Denby's and Ruth Glass's 'urban village' proved to be extremely powerful, for instance in the characterisation of the new housing at Golden Lane in the City of London [8.2], which included a 16-storey tower block. The diagram prepared by Arthur Ling for the *County of London Plan*, depicting familiar London districts as overlapping blobs, gave rise to the idea that London was in reality a large cluster of 'villages' [COLOUR VI].[11] Low density was found only in the suburb. According to Sharp, Ebenezer Howard's Garden Cities were failures, as they produced neither town nor country, but only reinforced suburbia,[12] or, to use a new term of the fifties, 'Subtopia'. Suburbia had nothing to do with the 'real' country, it only helped to destroy it.

The new English 'urban' ideal also had little in common with the early twentieth-century notion of 'civic' or municipal grandeur, which had been an ideal linked with the 'City Beautiful Movement'; this, too, had meant a pursuit of wide-open spaces and lavish greenery, especially in town centres. Now 'urban' can refer to any small section of a town. To architects, 'urban design' could be just another term for

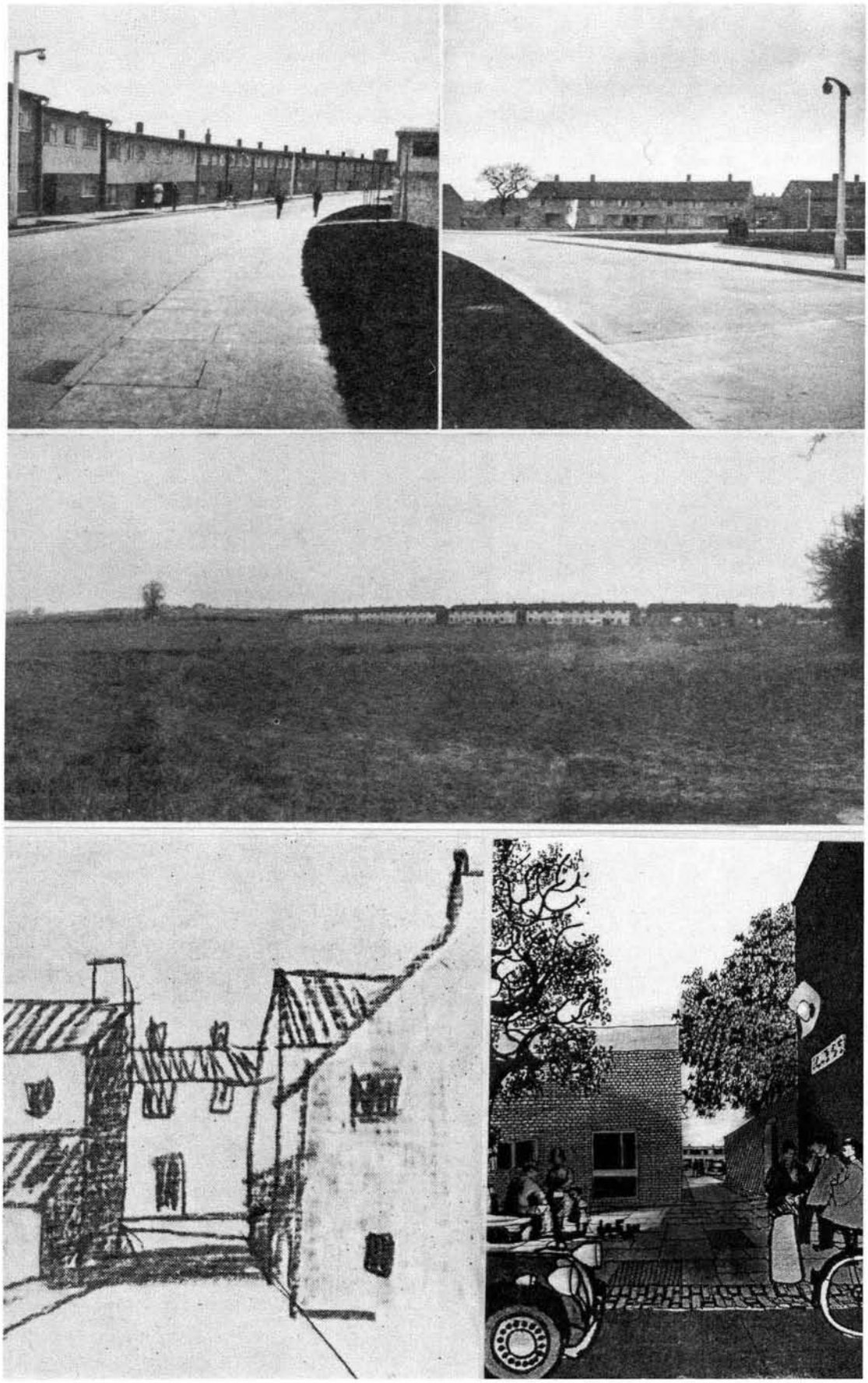
'architecture', something that goes beyond the traffic engineers' concerns, or town planners' quantitative analyses.[13] A town had to be built around 'urban life'; for instance around the 'the neighbourliness of a closely built-up street'[14] It was, above all, 'community' which was lacking in suburbia. Elizabeth Denby pointed to the street and café life of the Continentals as something the English could profitably import. After the war, we are told, now in the town planners' official language: 'The community planning principles establish the promise of a new urban order.'[15] J. M. Richards put it a little more colourfully: 'the gregarious Englishman . . . of the old English or Georgian market town . . . has been turned into a misogynous suburban'.[16] Richards's colleague Gordon Cullen thought that this kind of urbanity was of greater importance, ultimately, than comfort inside the house. Urban design, Richards remarked, certainly went beyond the notion of providing just high blocks of flats in lavish parkland—as in the proposals of the MARS designers.[17] At this point Richards was clearly influenced by the notion of mixed development, which, in turn, was itself related to the desire for greater density and neighbourhood coherence. Clearly, the new value of 'urban' went in tandem with the new trend in the discussions of density. Designing a good town, or a good housing estate, is not primarily concerned with calculations of lightfall, but with the creation of spaces which convey an impression of a certain intimacy, of compactness, concentration and complexity. These values remained influential into the late 1960s—while the resulting plans and forms varied greatly.

The campaign against 'Prairie Planning in the New Towns' in the *Architectural Review* in July 1953 was far more daring than the attack on the LCC Valuer's blocks of flats four years before. In the earlier case, it had been grudgingly admitted that the building of the London block dwellings had fulfilled an urgent need speedily; with the New Towns, likewise, it had to be admitted that the individual dwellings were Modern, satisfactory, even excellent. But, to the *Review*, the socio-psychological and architectural deficiencies of the New Towns seemed to outweigh by far the practical merits of their housing. What made the clash such a bitter one was the fact that the young town and country planning profession prided itself precisely on the fact that it had mapped out a complete concept of happy life, not just a notion for minimal dwellings [13.1]. Yet, J. M. Richards asserted that the 'high ideas of 1946' had not been fulfilled. Already, in 1950, Thomas Sharp had remarked briefly that the New Towns looked 'suburban' and recommended more compact and urban layouts. Richards's elaborate invectives, coupled with a number of very negative photographs, as well as 'positive' sketches by Gordon Cullen, can be summarised very easily [17.1]. The New Towns, with very few exceptions, suffer from precisely the same faults as the interwar suburbs which they are meant to improve on. They do not fulfil the criteria of balanced, self-contained communities; their layout is far too spacious, the green areas are over large—a 'worship of the green wedge'—and necessitate long walks; the standard road width is far too lavish. 'Prairie' simply means boredom. It was felt that the 'officials' had taken over from the designers.[18]

At the end of 1953, the *Review* congratulated itself on the success of its attack and brushed aside counter-arguments, such as those which maintained that the inhabitants themselves were satisfied. 'As attempts to create new urban communities . . . [the New Towns are] a failure.'[19] The most vigorous defence was launched by F. J. Osborn. The 'fallacious hypothesis' that high density was connected with neighbourliness—crowding in the London Underground did not normally induce sociability—resulted, Osborn complained, from the architects' manner of 'titivating their own peculiar aesthetic love of "enclosure"'.[20] Osborn, of course, was himself convinced that his own Garden City model did induce neighbourliness. At any rate, he could not prevent the ensuing condemnation by many designers of the first New Towns, or, for that matter, of any low-density development bordered by wide green wedges. The 1956 plan for Scotland's third New Town—Cumbernauld (largely drawn up, however, by English designers)—stressed the compactness of the town as a whole, and it was claimed that the division into separate neighbourhoods had been given up;[21] the Boston Manor project of 1958 described itself as 'high density', having adopted the LCC inner suburban zoned density of 136 p.p.a. per acre. The Hook New Town project of the early 'sixties likewise emphasised close grouping around a massive centre.[22] Densities were increased even in some of the later parts of the first group of the New Towns themselves, and multi-storey blocks were occasionally built.

'The great god urbanity and his cosmetic soul-sister, Townscape', Nicholas Taylor once quipped, referring to the last, and perhaps the most successful of the *Architectural Review*'s catchwords. 'Townscape' had been used, for instance, by Thomas Sharp in 1947–9, but it was shortly afterwards relaunched by the *Review*;[23] a word, reasonably specific, self-evident even—and yet it could be filled with a range of meanings. From its much older sister word 'landscape' it borrowed many values and distinctions, and thus contained something very positive from the start, something that reached back to English Picturesque landscape and the *genius loci* concepts of the eighteenth century. From Landscape to Townscape: this literally sums up the course of events in the fifties, the turn away from large grass and parklands to tightly built-up areas. Townscape's most important component was, again, the redefinition of space from open and multi-directional to contained and enclosed, although it also meant breaking the enclosure, in the manner of Unwin and Sitte, with 'unexpected' outward views. Equally important, and more immediately understandable for those unfamiliar with the architect's new language about space, was the new concern for all the details of a townscape scene: the design of pavements and walls, in terms of their materials, colour and texture, as well as all conceivable associated paraphernalia—'street furniture', bollards, signs and the like. There was now very little emphasis on greenery and shrubbery. In developments with a density of 70–100 p.p.a. and above, grass is, we are told, no longer of any use; only hard surfaces are called for.[24]

A strong influence in the Townscape movement was drawings and sketches; the subject seemed, at first, virtually the property of Gordon Cullen. The essential ingredient of



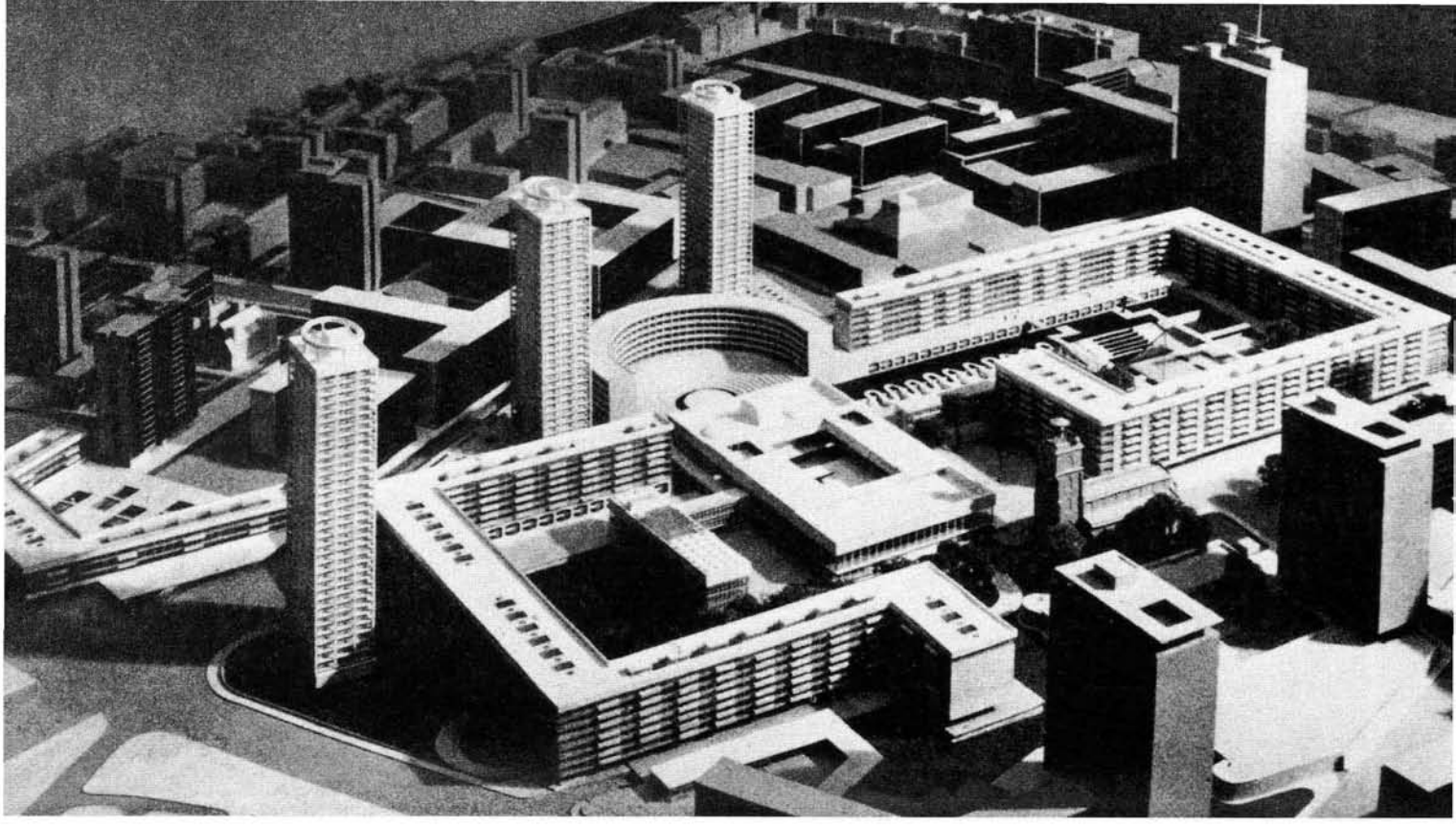
17.1. 'Prairie Planning' in the New Towns: The *Architectural Review*'s 1953 attack on the low-density developments of Adeyfield, Hemel Hempstead New Town, and parts of Stevenage New Town. The old village of Blanchland in Northumberland, on the other hand—in the sketch by Gordon Cullen (bottom left) —is praised for its 'evident urban qualities'. (*AR* 7-1953, p. 35) Gordon Cullen's drawing (bottom right) of Ghyllgrove, Basildon New Town, in 1957; to the supporters of the new concepts of Townscape, the look of the Modern is no longer of much value (by L. Brett and K. Boyd; *AR* 10-1957, p. 226)

most of Cullen's views is life: people are always present and are usually involved in some activity.[25] Informal outdoor life in towns was altogether Townscape's most important message for the planner. But there was one more aspect to all the new 'urbanism' which was in a way opposed to design altogether: preservation. The *Architectural Review*'s sequels to Townscape in the mid-fifties, 'Outrage' and 'Counter-Attack', were essentially about the protection of older kinds of environment. The advocacy of certain kinds of older architecture as models is another paradox of the Modern movement.

'Urban Redevelopment' was the planners' panacea of the 1950s and 1960s, or at least that of architect-planners, such as Percy Johnson-Marshall, and of architects' groups, like SPUR.[26] But here our concern is not the piecemeal development of areas such as Stepney-Poplar, but a number of spectacular projects. All of them incorporated high density, great height, complexity of space, complexity of function, multiplicity of parts and levels which all seemed necessary for the desired kind of 'true city life'. On Clydeside, Sam Bunton's many schemes developed the existing tradition of urbanism. In 1949, for instance, he proposed a scheme of prefabricated five-storey blocks, which were to be built above existing roads and tenements in slum areas; the tenements would then be decanted and demolished, and the spaces below the blocks partly infilled.[27] The first of the really novel London projects—few of which contained low-cost dwellings—was Sergei Kadleigh's High Paddington scheme of 1952: thirty-two floors of maisonettes of the Unité type, placed on a podium structure, containing shops and garages [17.2].[28] In 1954 Kadleigh's proposal for the Barbican area was divided into a number of horizontal layers of different shapes, emphasizing their relative independence from each other and the different kinds of movements for which they were destined.[29] Another scheme of the same year proposed twenty-two floors of dwellings in Y shaped

17.2. 'High Paddington': a daring idea for a town of 8,000 people over part of Paddington Station by Sergei Kadleigh, 1952; a multifunctional podium with dwellings above. (*ABN* 23-10-1953, p. 480)

17.3. 'The Glass Age Development of Soho.' A project sponsored by the glass manufacturers Pilkington Brothers and by *ABN*, advised by the architects G. A. Jellicoe and E. D. Mills and engineers Ove Arup & Ptns. (*AB* 11-1954, p. 408)



17.4. Barbican Redevelopment for the Corporation of London; Chamberlin, Powell & Bon's first scheme, of 1956. Like earlier ideas for the Barbican, this scheme was intended as a Mixed Development of a more comprehensive kind, although none of them included low-cost dwellings. (*AJ* 7-6-1956, p. 632)

blocks, and which were not actually placed on the ground, but were to straddle the old streets of Soho [17.3].[30] Chamberlin, Powell & Bon's enormous Barbican project first appeared in 1955 [17.4; COLOUR XV]. Here, too, there is a broad base structure containing mixed uses, with high dwellings in free formation above; their plan for a large London suburban centre and quasi-new town, 'Boston Manor', of 1958, was very similar.[31] Lord Holford's St Paul's pedestrianised Precinct scheme of 1956 contains no dwellings, but was hailed as a pioneer in the way that it combined Modern servicing and construction with a somewhat irregular, townscape-influenced layout. Vällingby, on the outskirts of Stockholm, seemed to demonstrate most convincingly a combination of shopping centre and high blocks of flats.[32] In the sixties and seventies, some inner suburban municipal developments further elaborated on the idea: Hammersmith LBC's Charecroft Redevelopment (1968–72, near Shepherd's Bush) combines a shopping precinct with parking above, crowned by a number of high blocks. Salford City Shopping Centre of 1968 is one of several large 'provincial' versions of the same type [26.12].

Every project, whether located in the town centre or in an outer suburb, called for the most intense kind of urbanity and city feeling. In 1957, Graeme Shankland, one of the best-known London planner-designers, who was as that time helping with the Boston Manor project, invoked D. H. Lawrence: 'The English do not know how to build a city, how to think of one, or how to live in one . . . [We need] that instinct of community which makes us unite in pride and dignity in the bigger gesture of the citizen, not the cottager; . . . the great city means beauty, dignity and a certain splendour.'[33] And E. E. Hollamby, the designer of the LCC's Brandon Estate, spoke of the 'visual image' one has of 'the conurbation . . . a cluster of tall towers soaring . . . "that is our town"' [8.1].[34]

From here, several trends emerge, and diverge. The enthusiasm for towers brought a spate of high blocks of public housing, although these would be found not only in city centres, but also in suburban, even outer suburban areas; here we rarely find the subsidiary structures propagated in the 'urban redevelopment' schemes. For many advanced designers, on the other hand, the stress on urban density and urban complexity was to lead to new kinds of structures, or 'megastructures', in which the integration of many diverse components becomes the main theme, but which also meant much reduced popularity for the high block, certainly in its isolated form.

CHAPTER 18

The Smithsons: Association and Communication; Team Ten

The expression of a unit of natural aggregation.

D. Lasdun, 1960[1]

AROUND 1955, ANOTHER new avant-garde movement had come to the fore, a group well known in international Modernism, which called itself variously CIAM X, Team X ('Ten'), or The New Brutalism. We shall attempt to define its views in the context of our theme here, the design of the areas outside the dwelling. The first, tentative beginnings of this movement must be seen in the circles of the 'Hards' in the LCC Architect's office, but all its essential ideas were first explored in the illustrated writings of Alison and Peter Smithson.[2] The Smithsons' evocative and often highly metaphorical language, their polemical use of illustrations, must first of all be seen in the context, not of conventional architectural practice, but of the methods of the most advanced circles of the Modern European architectural movement, the Congrès Internationaux d'Architecture Moderne (CIAM), which was dominated by Le Corbusier. The Smithsons' other 'homes' were fine art venues, such as the Independent Group and the ICA.[3] Characteristically, the Smithsons and a small number of others left the CIAM, which, in fact, broke up in the process. Probably nothing can better prove their relative isolation[4] than the fact that, until the late 1960s, they did not actually build any sizeable housing—in a period when such schemes were there almost for the asking.

In spite of all this, many of the Smithsons' ideas and designs belong firmly to the mainstream of theory which we have followed so far: how to apply Modern architecture to the sociological problems seen to be arising from a group of dwellings. In the Rationalism/Empiricism debate in the early fifties, the Smithsons firmly sided with the formal–rational–geometrical group, in their adherence to Mies van der Rohe and to Lubetkin's geometrical patterning [6.15] in their Golden Lane housing project of 1952 [18.1]. New Empiricism, or New Humanism, was the adversary. Team X felt opposed to the latter's pervasive 'make the best of it' attitude. The label 'New Brutalism' was explained as a spontaneous retort to New Humanism[5]—although this is only one of the many explanations of the origins of this most nebulous of all architectural labels.

But the complication really started when the Smithsons began to oppose geometry, from about late 1953 onwards. However, no debt to the *Architectural Review*, to Empiricism or to the 'Prairie Planning' attack was ever admitted. Crucial was the Smithsons' elaboration of the Anti-Functionalist line of criticism, which had begun essentially with Richards's article 'The Next Step' of 1950. There was now, it seemed, no further need for purely 'functional' concerns, such as sanitation, air, greenery, angle of sunlight and so forth. The search for the *Existenzminimum* was 'worthy but dull'.[6] A straight-angled and rationalistic layout did not, in reality, make sense; it was, in fact, 'completely arbitrary'. The geometry of the International Style could be of 'crushing banality', it could also be seen as 'overrefined dry academicism'. Van Eesteren's large Zeilenbau developments in Holland were branded 'great filing systems for men'. The CIAM's Four Functions approach in town planning was likewise relegated to the status of the 'mechanical concept[s] of architecture'.[7]

Although the Smithsons, too, acknowledged certain ingrained English architectural images, such as the 'rightness and inevitability' of old cities and villages, they did not advocate the 'building [of] imitation market towns'; New Brutalism certainly never resorted to any direct copying of older domestic designs. However, like all Moderns, the movement cherished its own 'objets trouvés', things that lay outside conscious contemporary design, even outside 'design' altogether. In their case, it was 'the unadulterated vitality of life in the East End street'. In conjunction with the Independent Group's search for the culture of the 'ordinary', even the ugly, the Smithsons publicised the work of their photographer friend Judith Henderson, showing unkempt children playing in unwashed old streets. These photographs breathed the spontaneity which they wanted to convey in their new designs.[8]

What then, precisely, was the Smithsons' concern in Modern housing? Characteristically, they found it useful to restate one of the basic formulas of England's postwar 'community' planners: 'The moment the man or child steps outside his dwelling, here our responsibility starts, for the individual has not the control over his extended environment that he has over his house.' The designer's prime concern, to restate it at its most basic, was 'community'. The term was extensively used in early, originally unprinted pronouncements, but 'habitat' and, a little later, 'cluster' were chosen in preference. The Smithsons identified more clearly than other contemporary architects and planners what they saw as wrong with sociology: statistics, or the 'survey-assessed amenities', were of no use. The work of social anthropologists

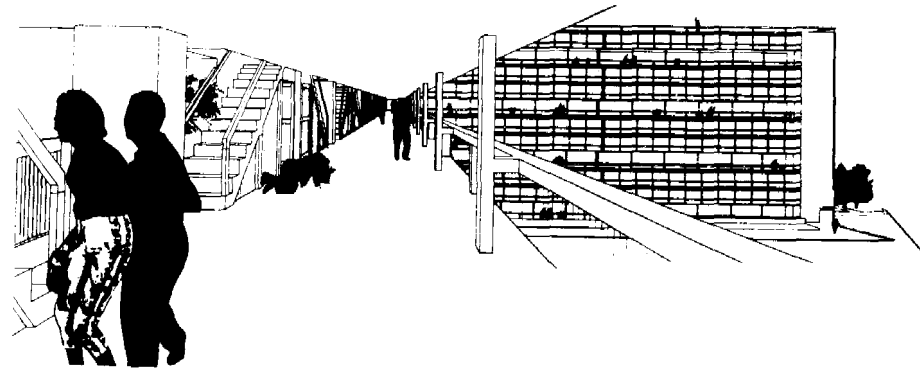
only amounted to ethnology or history; in sum, sociologists were not in a position to tell the architects what to do. Later on, however, the Smithsons remarked that social anthropology had been 'invented' by architects. Much of what they said was, in fact, in tune with the latest sociological conclusions about community: 'The concept of a balanced, self-contained community is both theoretically untenable and practically wasteful.' Concerning the size and shape of community subdivision, they asserted that 'in modern urban society there are no natural groupings above the level of the family'. The chief reason for this was modern mobility. For the Smithsons, sociology, like Functionalism, remained one of the 'mechanical sciences'; their concern was emphatically not with the 'political, technical, mechanical', nor was it with 'generalized man'.[9]

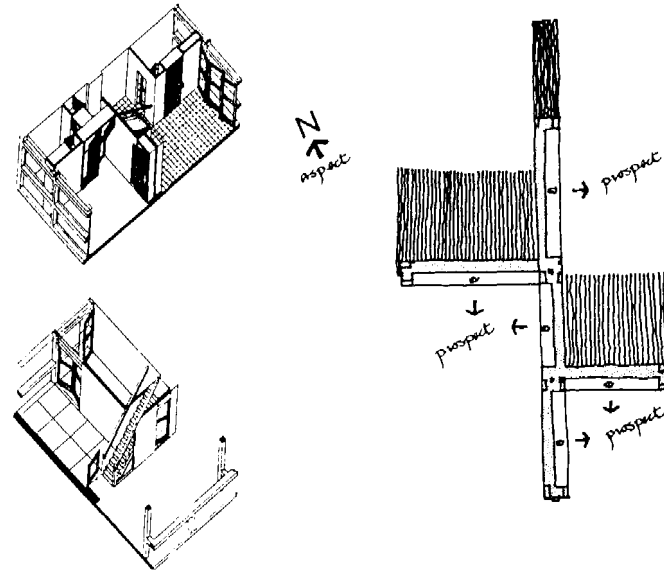
On the other hand, the Smithsons agreed with the new branch of backward-looking urban sociology, like that of Young & Willmott, which searched for patterns of sociability in 'ordinary' old districts. The Smithsons' studies of the small, spontaneous 'clusters' of community probably preceded those of the sociologists. It was these studies and the associated images which led the Smithsons to their own definition of community. What had to be set against 'functional organisation' was 'human association'. Sometimes the Smithsons insist on the use of the term 'psychology': 'shelter is a practical and psychological necessity', or, there is a need for a 'feeling of identity'. We shall, at the end of this book, briefly mention the new relevance of psychology to architecture in the sixties. But the Smithsons' chief concerns can still be called sociological. 'Association' and 'organisation' are still largely synonymous with Tönnies's *Gemeinschaft und Gesellschaft*. The chief quality of a community is that it is 'comprehensible'. 'Community is by definition a comprehensible thing.' The architect is there to help with the creation of community. 'Not social anthropology . . . but architectural invention . . .'; Sociology is 'ameliorative', architecture 'creative'. 'Form is an active force.' 'A valid social entity can result from architectural decisions.'[10] The Smithsons' most famous form and image is that of their first and most influential housing project: the 'street deck' of the proposed Golden Lane blocks of flats, which they illustrated with a number of collaged-in groups of people, engaged in an intense, though unspecified, kind of communication [18.1].[11]

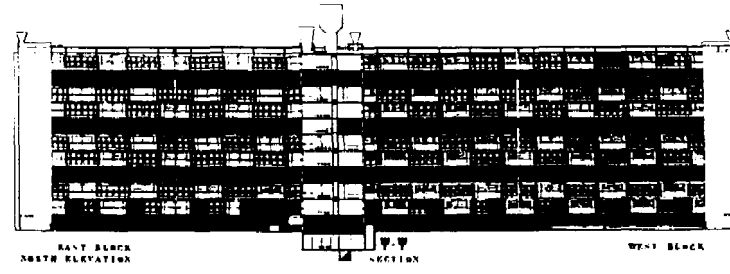
In 1955, the Smithsons decided that 'cluster' was the best term for 'expression' in housing—in spite of warnings that it was too close to the by then discredited term 'neighbourhood'.[12] 'Cluster City: A New Shape for the Community', as announced in the *Architectural Review* in 1957,[13] provided a summing-up. Mechanical-functional geometry must be left behind and be replaced by something that is 'complex' and 'vital'. Another word for cluster is 'aggregation'; the opposite of cluster is 'scatter'. Somewhat later, further words of a similar nature were added, such as 'foci' or 'nodes'.[14] All these elements should show 'a distinct structure'. Initially this was meant in a purely formal, 'aesthetic' sense. Here the Smithsons were influenced by trends completely outside architecture or product design, namely the paintings of Jackson Pollock and Jean Dubuffet. What fascinated the Smithsons was the way that the 'blobs', the splashes of paint or the crinkly lines seemed totally random, moving freely; above all, they were anti-Cartesian, never straight or symmetrical. But there was more to it than pure form. Forms, accompanied by catchwords, are 'symbols', 'signs', 'images'. The aim of forms and imagery is to help 'man to reidentify . . . with his house, his community, his city'; they provide 'places' for society's socio-psychological needs.[15] Catchwords, images and the new architectural psychology are closely linked.

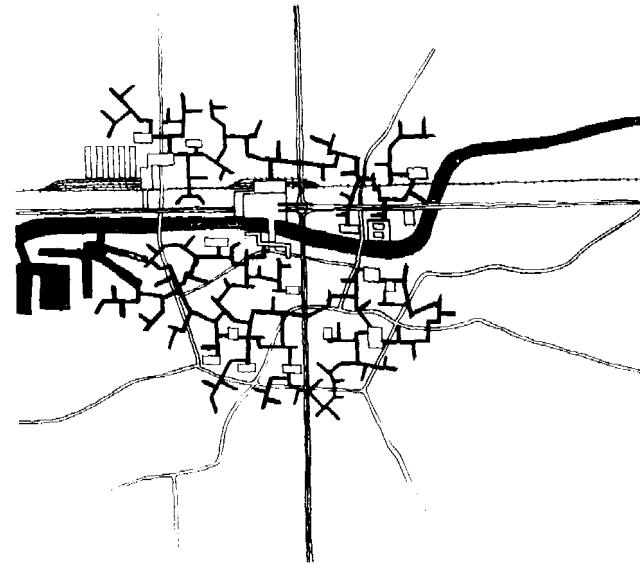
Lastly, there is another new element in the thinking of the Smithsons. There are not only 'nodes', not only points where there is interaction, but these points are linked by a network, which again is spontaneous and not in any way schematic and geometric. 'Communication' refers to movement as well as association. This leads us to look at the 'street deck' in a somewhat different way: for, besides providing the space, or 'place', where people can meet, it expresses the connection between flats or blocks of flats. The Golden Lane decks were planned to be 12 feet wide. All four blocks are interconnected. The same function of 'decks' was emphasised in their project of 1953 for Sheffield University. The Smithsons themselves say hardly anything about the origins of the 'street deck'. Earlier on, we concluded that this mode of access was at that time going out of favour with most English designers, for reasons of lack of privacy.[16] The Smithsons, however, deny that they were harking back to the balcony access tradition. Instead, the origins of the street deck appear extremely diverse, for instance the broad decks of ships, remembered from Tyneside childhood, or the 'internal street' in Le Corbusier's Unité. The Golden Lane street deck is covered, and not roofless as had been the rule in the English tradition—though it was not completely enclosed, as with Le Corbusier.[17] Most important was the notion of the 'street' itself. We have noted above the new nostalgia for the small street or town square seemingly full of community life. It was essential for the street deck that it was at least as wide as the smallest old street, wide enough for milk floats to circulate—although an optimal, an 'ideal', width was never prescribed [18.2, 18.3].

In the sixties, John Voelcker summed up the contribution of the Smithsons: 'Cluster, Mobility, Growth and Change, Identity'.[18] The designer had to care for the immediate surroundings of the dwelling, the places where small groups of inhabitants can meet; at the same time designing and planning were concerned with movement; their aim was to demonstrate flexible movement of all kinds. Ultimately, it was the individual design, the form, the particular configuration of the parts of a building, which mattered most. Modernism's designs, so far, appeared schematic, static and simplistic. The Smithsons' precise position in the arguments of Modern architectural theory still needs further examination. It appears that the New Brutalism brought an end to the old dichotomy 'regularity/individuality' which still governed the Rationalism/Empiricism debate in England during the early fifties. Yet one might argue that this dichotomy did find its continuation in the sixties, in the contrast between the anonymous, 'styleless' infrastructural framework and the images of the ever-changing 'Pop' consumer product. But

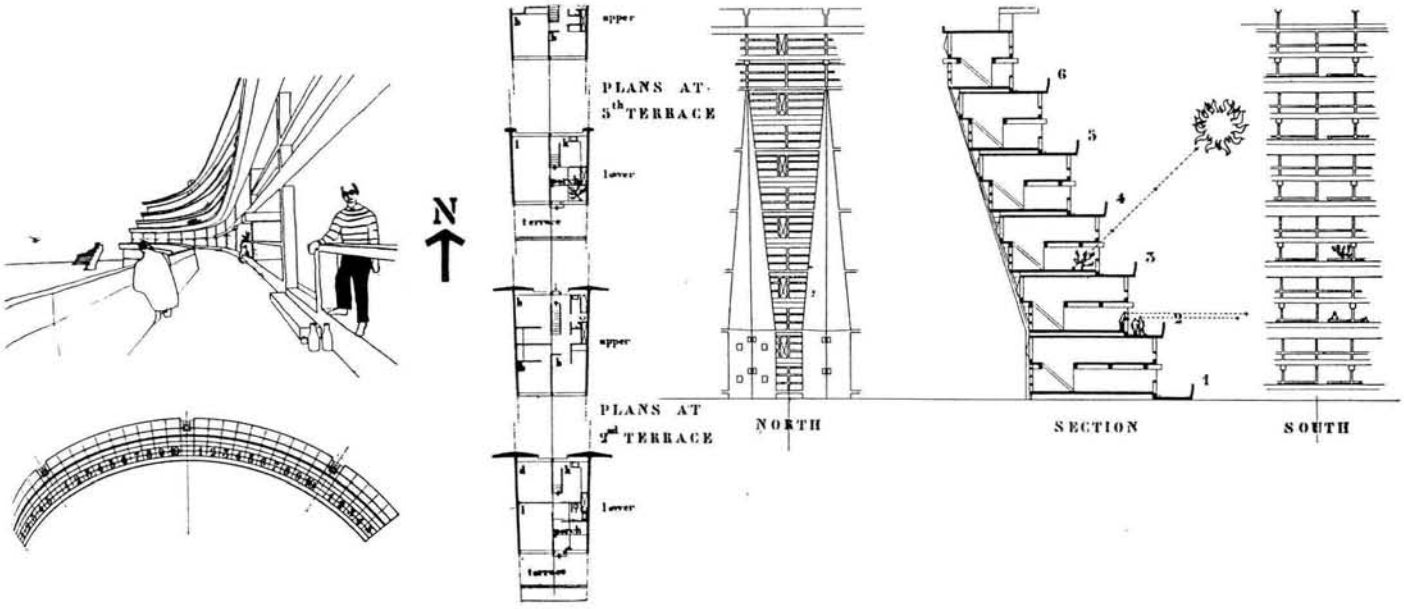








18.1. Alison and Peter Smithson, Golden Lane Competition Design, City of London, 1951–2; maisonette slabs with galleries linking all blocks. These new kinds of wide access ways were to be called 'street decks'. Bottom: 'Golden Lane City.' (Ed. A. Smithson for Team 10, *Team X Primer*, 1968; A. & P. Smithson, *Urban Structuring*, 1967)



18.2. A. and P. Smithson: 'Town' CIAM/Team X Proposal, 1955. Another version of the maisonette slab block with ample street decks – although the floor of the dwellings is slightly higher and provides for a kind of private forecourt. (*AY*, Vol. 7, 1956, p. 35)

18.3. London: GLC Robin Hood Lane, Tower Hamlets, begun 1968, designed by A. and P. Smithson.

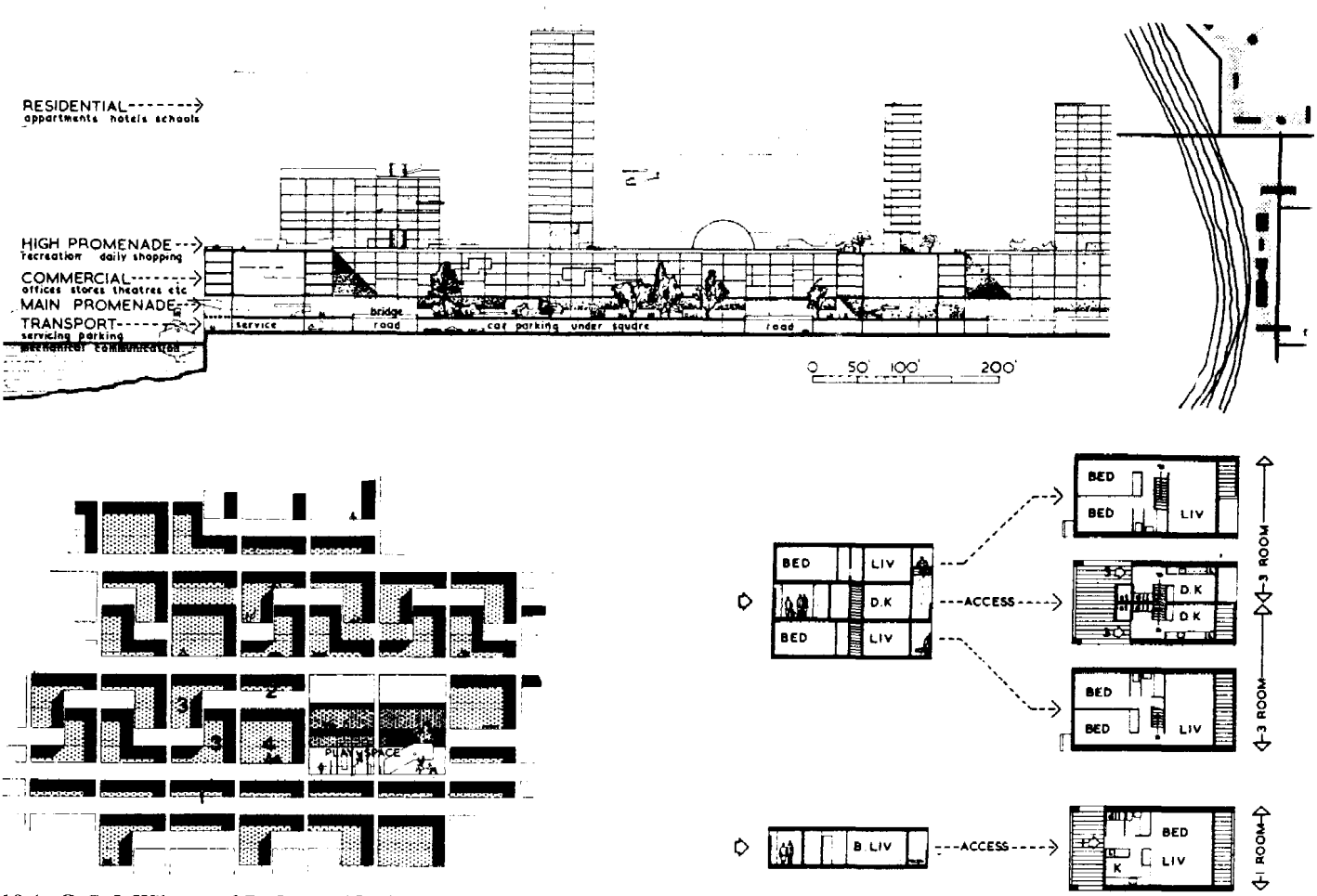
this is outside the frame of reference of our story. Our concern here is what the new kinds of housing schemes looked like, and how, at the same time, their designers conceived of social and sociological issues.

CLUSTER BLOCK; PARK HILL

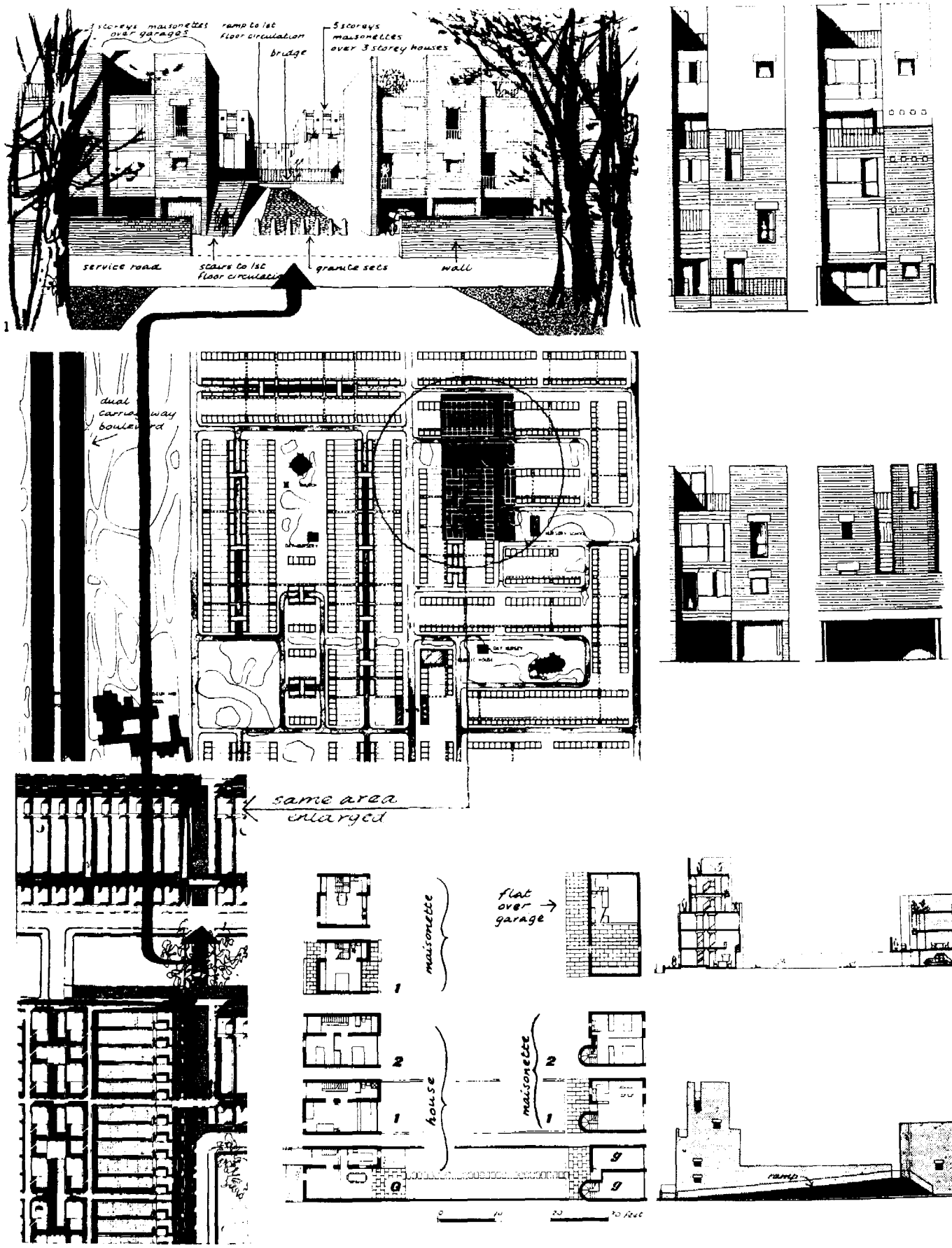
Team X's projects, as published in *Architectural Design* in 1955, attempt to present, between them, a variety of 'habitats'. 'City', by Colin St John ('Sandy') Wilson, comes closest to the latest concepts of Urban Redevelopment mentioned in the previous chapter [18.4]: a multifunctional base, or podium structure (Wilson termed it the 'loose zoning of vertical strata'); and, above, dwellings returned to the 'heart of the Metropolis', although still in the form of isolated point and slab blocks. At the other extreme comes James Stirling's 'Village': 'traditional Methods and Materials', thick walls with no windows shown, and mono-pitched roofs. However, this did not mean Gibberd-like cul-de-sacs of little block-like houses; rather, there is a continuous spine wall with the individual houses projecting from either side. The Smithsons, as well as William Howell and John Partridge, proposed similar models for rural housing. More conventional is Theo Crosby's 'Town', comprising five-storey maisonettes; however, these share with the first two projects the characteristic of a loose continuity. The Smithsons' contribution is a large deck-access block whose most influential element is probably its tilted-back, half-'stadium section' [18.2; cf. 19.11].[19]

By far the most influential of the designs in the long run, however, was the The Town House, by Howell, Killick & Partridge; this was also known as 'Low Kensington' and was published in greater detail during the following year [18.5]. The project at first defies description. Its layout appears as a close-knit network of rectangular divisions; the outline is a curiously dented horizontal. The basis of the scheme is, however, something very simple: the terraced house. But the details, again, are not simple: all dwellings are placed over garages. This also provides a 'complete pedestrian network' with numerous bridges. Some houses carry two-storey maisonetes. These upper maisonettes are accessible from a deck-access walkway system which forms another pedestrian network. In addition, there are 'patio' houses over some of the garages. Altogether, this adds up to a most surprising scheme, the total opposite to the same architects' high maisonette slab blocks which were still under construction by the LCC at Roehampton—yet at Low Kensington the density is 136, that is, one-third higher than at Roehampton. 'Low rise high density' has almost arrived.[20]

The same years, from 1954 onwards, saw the realisation of a new idea of Denys Lasdun's, for Bethnal Green MBC. Here we find a point block, juxtaposed with a long horizontal block, both containing maisonettes. The point block, however, departs from the usual models, and also from the



18.4. C. St J. Wilson and P. Carter: 'City', CIAM/Team X Proposal 1955. (*AD* 9-1955, p. 289)



18.5. W. G. Howell, J. A. Killick, J. A. Partridge: 'Low Kensington' or 'The Town House' Project, 1955–6. Houses and maisonettes, an early example of the attempt to revitalise the inner urban type of terrace, though adapting it to a complicated access system of varying levels. (*AR* 7-1956, p. 53)

geometry previously found in Lasdun's work, by adopting a butterfly kind of plan: four arms project in non-rectangular fashion. These 'arms' are not closely linked together, but are separated from the central stairs and lift shaft, from which short bridges continue into balcony access spurs. The early Usk Street model is varied in the Claredale Street tower, from 1955, which now consists of four parts, each of which contain two maisonettes on each floor. Each dwelling also has a small covered outdoor space. The Usk Street block was described in 1954 in the plainest terms;[21] for the Claredale Street block [18.6] Lasdun adopted a crushing rhetoric, bristling with the new metaphors and catchwords, such as 'urban grain'—a term which Lasdun says is derived from the American town planning critic Kevin Lynch,[22] meaning much the same as Townscape. Also derived from Lynch, Lasdun claims, is 'cluster': 'the expression of a unit of natural aggregation', helping 'to create an image of an integrated community'. Henceforth Lasdun's blocks became known to all as Cluster Blocks. Lasdun claimed to have recreated the old kind of English street with his 'vertical street of stairs'. On the other hand, his access balconies, 'of garden path scale'—in a block fifteen storeys high!—are also meant to give privacy, as few strangers pass along each of the short walkways.[23]

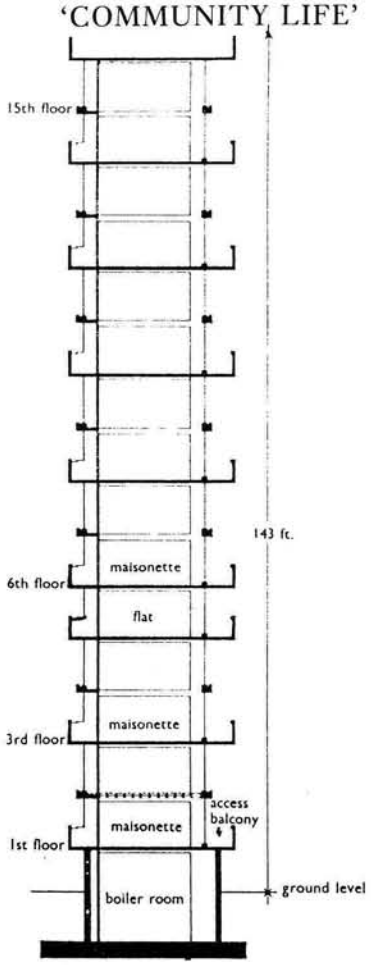
Searching for the apogee of public authority housing design in the UK—according to the 'national' architectural critics of the time—one might well choose Park Hill in Sheffield. No project has been so fully recorded and bestowed with praise, including an accolade from the top critic of the sixties, Reyner Banham (here overcoming his reluctance to deal with public housing). Banham proudly cites—in the context of this Northern English working-class estate—Aristotle, the Villa Rotonda and many other idols of high culture.[24] Park Hill was undoubtedly the flagship of the city's Modern housing. For J. Lewis Womersley, City Architect from early 1953, the scheme was first of all an exemplar of 'Civic Design—its place [was] in the redevelopment of the central area of Sheffield as a whole'.[25] Although it cannot be compared directly with the multi-functional inner urban redevelopment schemes mentioned above, the emphasis on the provision of ancillary 'community' buildings, such as shops, schools and public houses, was strong at Park Hill. Secondly, Womersley was in the early fifties one of the most fervent advocates of high-density flats—in the case of Park Hill, 995 dwellings were built at 192 p.p.a. [18.7–18.11]. For him, flats and civic design went together; this he had already demonstrated in his previous post as the Borough Architect of Northampton, with his outer suburban King's Heath Estate, whose centre is taken up by symmetrical and, in their context, rather monumental-looking three-storey blocks.[26]

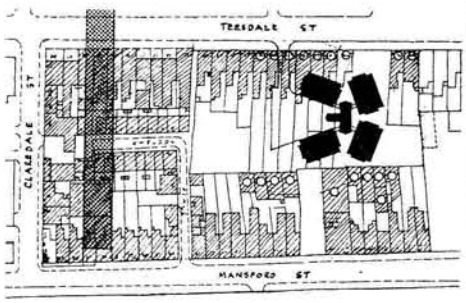
But Womersley went further than that. Implicitly he turned his back on orthodox mixed development when he stated, in 1955: 'In designing these high dwellings an attempt has been made to provide accommodation and amenities which will be comparable with houses on the ground and which will form satisfactory homes for a wide range of families, for small children and for aged persons.'[27] Park Hill belongs to the grand slab-block trend of the early to mid-fifties (e.g., Lasdun's Bishop's Bridge Road, Hallfield), and it is premonitory of those sixties developments which restrict themselves to high blocks entirely. The stress on the wide range of flats, contained within one large overall 'megastructure', looks forward to the later versions of mixed development. Finally, the aspects of privacy and community were balanced, for each dwelling has a small balcony, 'despite the essentially communal nature of the project'.[28] Later Womersley summed it up as 'the inter-relationship of physical layout and community sense'.[29]

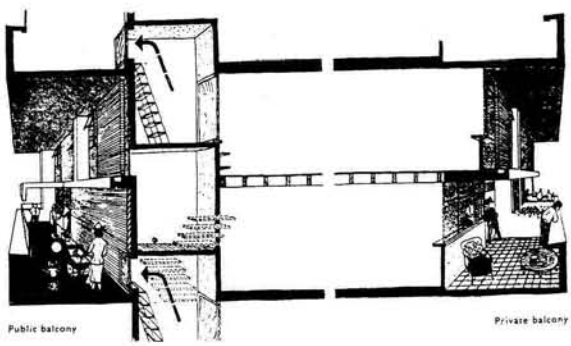
However, Womersley was not the actual designer of Park Hill. Project architects within his department were Jack Lynn and Ivor S. Smith. Their background was rather different, coming from the much younger circle at the Architectural Association in London (AA), which included the Smithsons and Gordon Ryder, who were all investigating the concept of 'street decks'. Lynn and Smith began work in 1953, although the designs were not completed until 1955. They introduced two major elements: the blocks are of different length and the angles at their linking points vary widely. At the same time there is a unifying element: the skyline remains level. Lynn and Smith worked out incredibly complicated constructional devices to link the blocks, which allowed for dwellings even at the points where the blocks turn. At other points, however, the blocks are separated and bridges are thrown across. These bridges serve the street decks, on which Park Hill's fame is chiefly based. Twelve feet wide, they run from one end of the scheme to the other. There was surprisingly little discussion about the details of their design, although Jack Lynn tried to analyse, by way of contrast, the 'no man's land' in the lobbies of conventional blocks of flats, which, he thought, served neither privacy, nor community.[30] It was characteristic that Banham praised above all those points in the networks of movement, where the walkways and the lifts meet—a manifestation of the early sixties stress on communication.

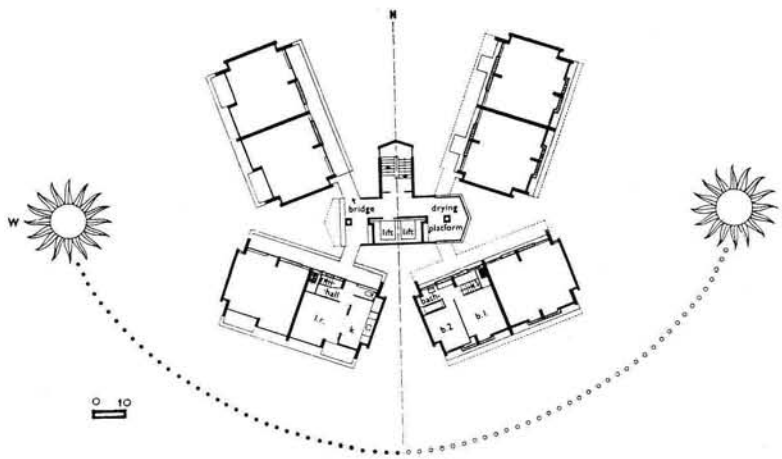
Diverse as its sources might be, Park Hill's success, in the view of designers and allied professions, lay in its unity. There was unison between the factions of design, which normally stressed their disagreement. The appearance of the construction was 'curiously dateless'; the plan could be considered 'functional' to a high degree, according to Banham. What was more, Park Hill seemed to 'work': the behaviour of the occupants seemed to follow the prescriptions of the designers. The housing-welfare-worker and sociologist Joan Demers, who was the first to move in, was satisfied as to provision for children and with the other amenities. Small differences between Demers's variant of sociology and that of the architects (or 'amateur sociologists', in Ivor Smith's own words)[31] could be detected in the way in which Lynn, with some pride, mentioned the differently coloured linoleum strips with which individual occupants decorated their doorsteps: 'Hesitant attempts at self-expression', which 'cannot be discovered by questionnaires'.[32]

Like Lasdun's Cluster Blocks, Park Hill was meant to continue, or recreate, the life of the un-monumental English working-class streets which it replaced.[33] In this respect, however, doubts were already being voiced by 1965. Among

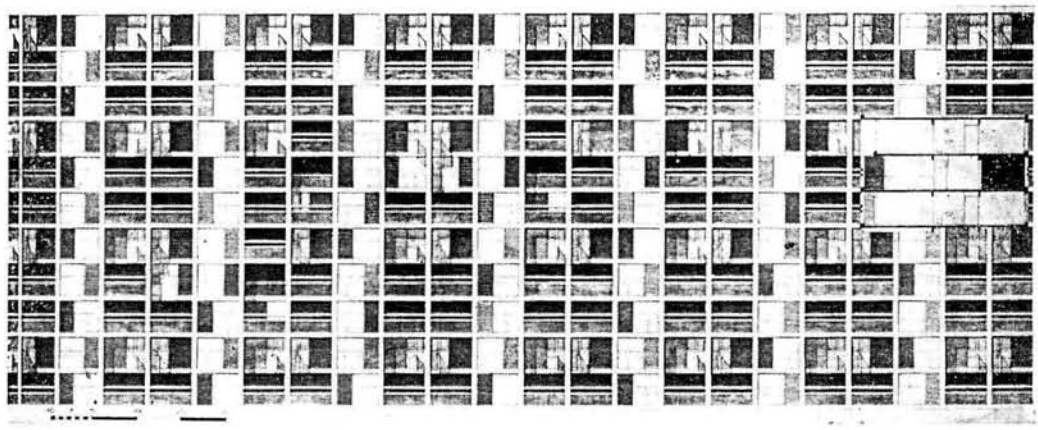


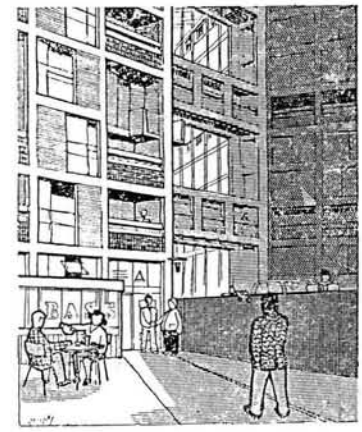






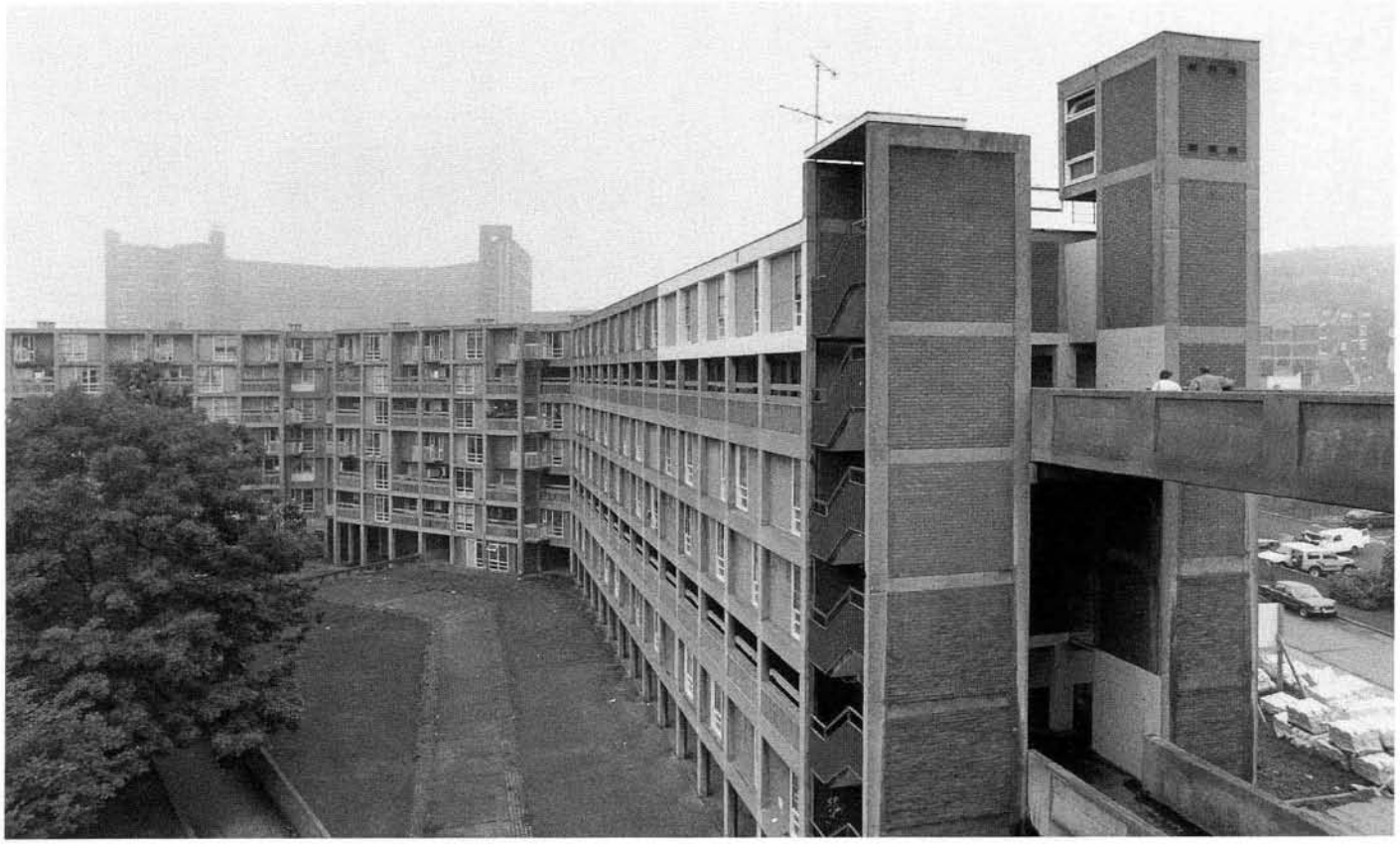
18.6. London: Bethnal Green MBC, Claredale Street, begun 1956, designed by D. Lasdun; the 'Cluster Block', a very individual solution to the problems of the balcony-access maisonette block. (*CQ* 4/6-1959, pp. 7, 9; *AD* 2-1958, pp. 62, 64)





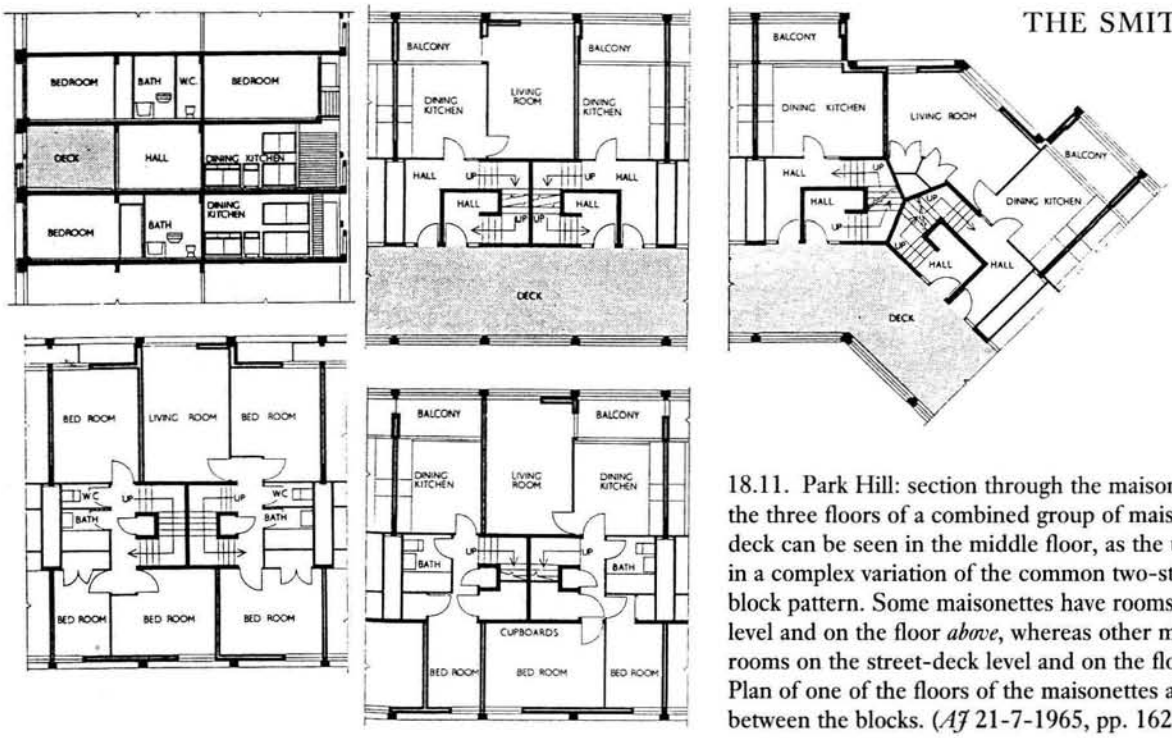
18.7. Sheffield CBC: Park Hill Part One, planned from 1953, completed 1959, designed by J. L. Womersley with Jack Lynn and Ivor Smith; early stage of the plan, showing one of the façades, part of a section, as well as sketches of the private balcony and of some of the public spaces. (*B* 22-4-1955, p. 669)

18.8. Park Hill: aerial view. (*AR* 12-1961, p. 405)



18.9. Park Hill; in the background Park Hill Part Two (Hyde Park), begun 1962, designed by J. L. Womersley, later W. L. Clunie, A. V. Smith (see ill. 26.18).

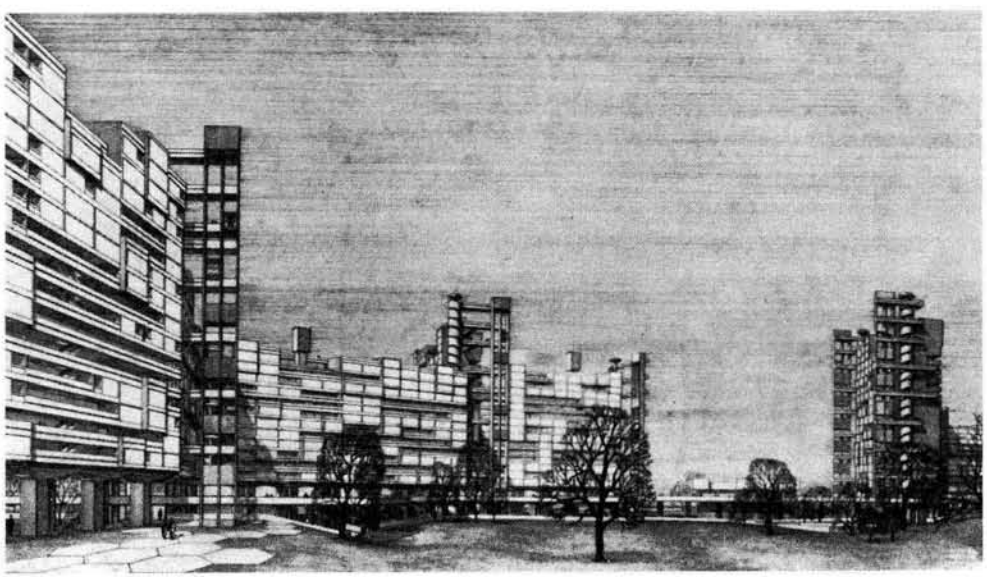
18.10. Park Hill: street deck; photographed in the early 1970s.



18.11. Park Hill: section through the maisonettes and plans of the three floors of a combined group of maisonettes. The street deck can be seen in the middle floor, as the units are arranged in a complex variation of the common two-storey maisonette block pattern. Some maisonettes have rooms on the street-deck level and on the floor *above*, whereas other maisonettes have rooms on the street-deck level and on the floor *below*. Bottom: Plan of one of the floors of the maisonettes at the linking parts between the blocks. (*AJ* 21-7-1965, pp. 162–3)

other things, the street decks were found to lack the 'focal points along their length' which streets on the ground normally seemed to provide. By that time, trends in the design of semi-public spaces had changed, getting away from the straight lines of the fifties.[34] Ideas about outline had also changed: they had to be as varied as possible. Park Hill Part Two (usually called Hyde Park) commenced construction in 1962 [26.18]. It was hoped, as the Housing Development Committee Chairman, Councillor Harold Lambert, remarked in that year, that this development, even larger than Park Hill Part One, would help create 'something of the picturesque fascination of Italian Hill towns'.[35] We shall see later that these typically English attempts to offset massiveness by application of Picturesque design principles, were not emulated in Scotland, where straightforward CIAM-like patterns of towers and slabs seemed hardly contentious, and were realised on an increasingly gigantic scale during the early sixties.

Finally, some projects by students at the Architectural Association during the years after 1955 must be mentioned in this context: for instance a proposal worked out by fourth-year students under the direction of John Killick (of Howell, Killick, Partridge & Amis), for a series of high-density, low to medium-height proposals for Islington. It combined terraced houses with maisonettes, and was fitted out with walkways, bridges and ramps in the manner of Low Kensington.[36] The spectacular high-density housing in Paddington Project of 1957, also by AA students, was clearly influenced by Park Hill in the way in which a number of slab blocks are loosely linked. The skyline, though, is very varied, particularly with lifts and stair towers which prominently overshoot the horizontals [18.12]. The pattern of the façade is also very lively, with walls and balconies projecting and receding. Access decks vary in their width.[37] Other student projects of the late fifties adopt either the highly varied outline of the Paddington project, or the horizontal regularity of Low Kensington.[38] Both methods take us straight into the 1960s.



18.12. Architectural Association (London): Students' project 'High Density Housing Paddington', 1957/8; a very early example of the dissolution of firm block shapes. (*AB* 2-1958, p. 61)

CHAPTER 19

Infinite Possibilities of Design in the 1960s

The possibilities of grouping are endless.

R. Chamberlain, 1960[1]

UP TO AROUND 1960, avant-garde architectural Modernism in Britain appeared virtually synonymous with new solutions for Modern mass housing. But, although for some years new models continued to pour out from local authority offices, the situation of Modern architecture as a whole became rather more complex. Many young designers now became more interested in other new building types, such as campus universities, while the spearhead of the avant-garde took off into a fantasy direction—although both Archigram projects as well as the New Universities still concerned themselves with the problems of urban planning and domestic design. Some of the latest thinking was directed towards a kind of 'service environment' construction, in which bricks and mortar, and even concrete, were to be phased out. Compared with these new, high-flying ideas, the public housing projects appear to fall back into a kind of second-rank, semi avant-garde status. This must certainly have been the conclusion reached by the chief architectural critic of the sixties, Reyner Banham. As a consequence, many of the daring new public housing megastructures, even those in London, such as Southwark's enormous deck-access blocks, never entered the history books of Modern architecture.

Pausing and taking stock, from a somewhat less elevated critical position, the English-British public housing designer of the early sixties could nevertheless feel a certain degree of satisfaction. It seemed that a measure of freedom of design had been achieved,[2] not only within the LCC, but in Birmingham, Coventry and Sheffield, or Norwich[3] and Northampton, and many of the New Towns. Moreover, the designers' successes seemed to correspond to a wider political satisfaction with Modern housing—although the latter consensus, as we shall see in Section II, was not destined to last long. It did not come as a surprise, when, in 1961, the widely read Parker Morris Report demanded further strengthening of designer freedom. Freedom meant, above all, frequent changes, in critical concepts as well as in forms and plans.

Until the mid-fifties, theorists were concerned with basic definitions of the Modern, and the preferred forms appeared, above all, assertive: a design was 'summed up' by a small number of firm, 'sheer' verticals and horizontals. The general aim of unity persisted: 'A good layout of indifferent houses is better than an indifferent layout of good houses.'[4] However, from the late fifties, we witness an avoidance of simple definitions, as well as of large, formal, geometrical design statements. There now seemed an abundance of forms, an endless variety in layout and detail. Even the most basic English formula, two short terraces of houses with gardens behind, could be laid out in seven different combinations.[5] Designers were concerned about 'context', about the unifying pattern—not about a single geometrical form. We witness now the widespread rejection of the 'isolated point block', 'the island slab', 'the habit of thinking of housing as discrete boxes placed on the surface of the site' in free open space. The new concepts of 'totality, complexity, flexibility' as well as 'openendedness'[6] were clearly related to the new ideas of the Smithsons and, further back, to lesser known designs by Le Corbusier, such as the Roq et Rob Project of 1948.[7]

The arrangement of parts of buildings into a 'group' was, of course, nothing new. We have cited Gibberd's subtle formulas for the combination of dwellings. But in the sixties, the word 'grouping' assumed a special importance, as in the noted 'Group House Competition' of 1961–2.[8] The individual elements were relatively small; essentially, they comprised the 'dwelling unit', often placed as an infill in the voids of the new types of frame construction, such as the box frame. Unlike the earlier modes of grouping, the new methods do not fuse the elements into one mass but leave them as distinct entities, 'a consistent system', with each part 'separately identifiable . . . the basic types to add together in a series of infinitely variable relationships'.[9] The outlines of a new kind of agglomeration often remained fuzzy and jagged, the whole forming a heap rather than a box, like Moshe Safdie's Habitat in Montréal of 1967. We may continue with textile analogies when we read of 'Knotted looking blocks . . . where each dwelling is a separately expressed three-dimensional object'.[10] Patio houses ought to be 'complexly woven together'.[11] We read of 'carpets . . . anonymous, cellular, repetitive'.[12] There is, furthermore, a demand that there should be 'no centre', and, of course, no symmetry in any 'Academic sense';[13] 'open-endedness' was opposed to closed geometrical form. Finally, the new kind of 'conglomerate' meant the end of mixed development in the form cherished by England's fifties designers. The separation of dwelling types and their juxtaposition, as in houses and towers, did not make sense any more.

The reinforced concrete frame remained the most im-

portant structural method, but the emphasis is now not merely on rectangularity and regularity, but on versatility and on creating the unexpected projection and asymmetrical accent. Yet there is also a new tendency among English architects to cover the frame. Only in the undercrofts of a conglomerate are the piers left exposed; the rest is clothed, preferably with tough-looking, dark bricks [19.15]. Windows now appear few and far between; they are often slot-like and placed seemingly in random fashion, as in a fortress. Darbourne and Darke's Lillington Street in Westminster, begun in 1961, shows a rough red brick throughout [19.13]. The re-use of the old motley-coloured London Stock brick was pioneered in a famous early work of New Brutalism, James Stirling's private blocks of flats at Ham Common built in 1958 [cf. COLOUR VII]. Some large-panel concrete construction designs, such as 'YDG Mark I', likewise combined a lively layout and jagged contours with continuous, coarsely textured 'walls' [10.10]. 'All architecture must be concerned with the cohesion and the unity of the wall', wrote Sherban Cantacuzino as early as 1956.[14]

COMPLEXITY OF CONCEPTS: COMMUNITY, DENSITY, MOBILITY, PEDESTRIANISATION, PRIVATE OUTDOOR SPACE

In this period of turbulent change, 'Urban' was perhaps the quality which seemed most desirable to all and which retained its hold. 'Community' in the most general sense of the word, continued to be used.[15] As regards its sense specific to dwellings—the connexion between housing and community'[16]—we have already described an development which actually appeared to work in this respect: Park Hill, Sheffield. Later on, Cumbernauld New Town was praised as the 'best example of community architecture in the world' [13.1].[17] However, the new emphasis on mobility was already beginning to lead the attention away from the earlier value of self-containedness and from static, 'concentric' or 'hierarchical' plans.[18] A housing estate, or a suburb should no longer be seen in isolation, but should be planned within the context of larger networks of suburban areas. For the planners of Milton Keynes in the late 1960s, 'the neighbourhood in any shape and size was anathema'.[19] In any case, the quantitative codification by size of population practised by the planners of the New Towns had never been rigidly accepted by architectural designers. As Segal had remarked early on, the intended character and the given locality of a settlement matter more than numerical size.[20] It was probably just as well, as it gave architects complete freedom in applying a concept of 'community' to any size of population.[21]

As regards class structure, we noted above that some sociologists of the 1950s had stressed the working-class homogeneity of old districts. The designers of the LCC Roehampton Lane (Alton West) maisonette slab blocks claimed that their long balcony access-ways were influenced by the notion of working-class 'gregariousness'. The London avant-garde designers Stirling & Gowan launched into detailed evocative justifications of their development at the Avenham (Brunswick Street) redevelopment in Preston [19.1]:

19.1. Preston CBC: Avenham Redevelopment, 1961, designed by J. Stirling and J. Gowan. The rugged contouring of the blocks, as well as the facing with Accrington-type pressed bricks were meant to echo the 'hard working-class' characteristics of the late Victorian town. (*AD* 12-1961, p. 541)

'We tried to retain the vital spirits of... Saturday night, Sunday morning... worktown... old working class habits unchanged.' What this was actually aimed to justify was the use of certain elements of design: sheer walls, jagged contours and a late Victorian kind of hard-surfaced facing brick (although these specific forms were actually taken chiefly from old commercial structures).[22] At the same time, an LCC designer went in the opposite direction: notions of working-class specificity were explicitly disregarded, by introducing features such as 'small secluded courtyards' to the Brandon Estate. To the designer, these represented 'a minor triumph over the housing manager's somewhat morbid predictions of immorality in all sheltered corners'.[23] However, some younger designers, such as Andrew Gilmour, were beginning to feel that the mixed development pattern might itself contribute to the fragmentation of the working class: 'at Roehampton, the people in the two-storey houses were the honest Coronation Street Londoners; those in the tall blocks regarded themselves as superior and were distancing themselves, and those in the four-storey maisonettes were separating themselves into a proletarian sludge'.[24] We shall see that new concepts of 'participation', of tenants' 'power', soon made many of these considerations redundant.

There was a new focus on very small spaces, for instance on the design of a group of entrance-ways. The first deck-access blocks, at Park Hill, were said to offer both a maximum of privacy and a maximum of contacts.[25] Later on we hear that 'sociability can be better encouraged if privacy is first protected'.[26] How do the two interact? There were the Townscapists, who had developed a penchant for the small and lively pedestrian public space. At Park Hill, there is a strong contrast between the public openness and enormous length of the street decks and the self-contained planning of the flats themselves. The designers of the decks of the later YDG blocks and of the Edith Avenue blocks at Washington New Town tried to 'reduce scale all round' in order to achieve a greater 'urbanity'. Walkways should be narrow, and should turn frequently.[27] The interest in wide open spaces was waning: 'Keep public areas to a minimum.'[28] The new English emphasis on smallness could be used to promote community and privacy at the same time. One of the most spectacularly complicated designs of the mid-sixties, with its combinations of open and enclosed spaces, was Camberwell MBC's Bonamy-Delaford Development [19.12]. However, critics were not sure as to whether the relationship between privacy and openness had been solved successfully here—whereas in the LCC's Cedars Estate there was felt to be a 'balance' of privacy and contacts.[29] It was not enough just to provide 'community' and 'privacy' as separate spheres: designers now demanded a 'total indoor/outdoor environment'.[30] As already noted, the Townscapists and Team X enriched the concept of community through new metaphors and images, thereby creating new kinds of links between forms and social and psychological values. Such terms included 'cluster', 'core', or 'community core', 'node',[31] 'grain' or 'texture'; 'environment' was coming into frequent use. Some texts, such as those by Robert Stones on Manchester's new schemes [26.10–26.11], and Martin Richardson's on YDG [10.10], consist very largely of these metaphors.[32] Even more outlandish terms, such as 'Neo-Slum', 'Kasbah', or 'Troglodyte', seem to have originated largely with student projects in the later fifties, whereas the 'Italian Hill Town'[33] was another product of the *Architectural Review*'s Townscape Movement.

Most of the avant-garde housing designers of the sixties were still adherents of 'high density'. What also continued was the contradictory use of the concept of density. On the one hand, there was faith that density calculations could determine design in minute terms. For instance, in his criticism of the Boston Manor proposal, Sheppard Fidler felt that, by reducing the density from 135 p.p.a. to 125, one could have had 'more flexibility and individuality in layout'.[34] A supporter of 'low rise high density' held that figures of 15, 35, 50, 60, 65, 70, 90, 120, 160 each caused a different arrangement of dwellings.[35] But other designers maintained the opposite, namely that a variety of types of dwelling types and layouts could be used at most levels of density. Even at 200 p.p.a., a layout of semi-detached houses could be had (the figure which after the war had denoted the very highest desirable urban density, at which only high blocks were deemed suitable). Some now maintained that, by using high flats, densities of 400 could be achieved.[36] and the advocates of old town life, especially those that followed Jane Jacobs, saw that densities of 450 to 900 were, or even are, normal in those cherished districts. Yet others in England were beginning to condemn high densities altogether. The often cited Research Report of 1968 ('The Home in its Setting', undertaken by the Research and Development Group of MHLG) stressed the 'advantages' of densities of no more than 80 p.p.a.[37] Densities exceeding 130 p.p.a. are 'unsuitable for children'; 'we are making our children "cave dwellers"';[38] by such commentators, London's 136 p.p.a. was already considered too high.

The 1960s also brought new problems of traffic and car parking. At this point we must note the new theories and values which some architects conceived over and above the practical issues, and the way in which they considered the task of designing for movement as their own prerogative, rather than that of the traffic engineers. 'The basis of all planning is circulation.' Mobility, above all, implied freedom: freedom of movement, and—it *had* to be said in the sixties—freedom for the designer.[39] What was needed was 'nothing short of the complete separation of motor vehicles and pedestrians throughout the city'.[40] The history of this separation is a long one, from Sant'Elia to Tatton Brown's proposals in the *Architectural Review* of 1941 and Le Corbusier's plans for Saint Dié in 1951;[41] we also ought to remember 'Radburn' at this point and some of the early inner urban megastructural projects. By 1956, one key aim in the planning of Cumbernauld New Town was to 'develop further current issues on pedestrian and vehicle separation'.[42] The sixties New Towns, such as Skelmersdale, practised separation of movements horizontally. Generally, the emphasis was on the 'age of the motor car', but what was most important in the context of housing was the other main element in the separation of access: a growing emphasis on the pedestrian-only area as a positive feature in itself. Safety and space for children were the most important practical considerations,

19.2. London: Hampstead MBC, Abbey Estate Blocks B and C, Casterbridge and Snowman Houses, from 1965; elaborate communication between two adjacent high blocks.

but, more generally, for the Townscapists, pedestrian, or 'precinctual planning', formed an essential part of the 'urban' character.[43] The Smithsons declared that the 'hierarchy of movement' is 'fundamental to identity'. Travelling by car and walking mean differences of scale and experience.[44] The different kinds of movement were thus planned to exist in close juxtaposition and contrast, preferably by vertical separation. 'Eliminate the physical intersection of pedestrians and vehicles without eliminating the visual contact which is one of the essential parts of metropolitan life'—a piece of architect's advice to the urban road builder.[45] The old type of balcony-access block already contained an outdoor pedestrian network, though a very rigid one. The designers of Park Hill extended these walkways up to a length of half a mile. Separate blocks are often linked by bridges, an element also pioneered at Park Hill. In Crosby's Fulham Study project, 'pedestrian Streets, considered in their own right, as distinct from roads', lead through the inside of the block; the intersections are 'nodal points', where 'people have a choice of routes' [19.2–19.9; COLOUR VII].[46]

Often this meant that the whole development is hauled up on to a podium. The designs for Woolwich-Erith/Thamesmead in 1962 [19.10] were called 'platform housing':[47] one can walk for a long way and in many directions between the houses and blocks of flats without touching the ground, only occasionally catching, through large holes, a glimpse of the dark car parking areas below. Technically, all this was made possible by slender reinforced concrete frame construction. Camden LBC's Foundling Estate, built from the late sixties, consists of two long blocks of flats with a wide area between, which is lifted above street level and set apart from its ordinary multi-purpose street surroundings [19.11]. Smaller developments imitate those effects: one leaves the ordinary street, walks up a ramp or some steps and finds oneself in an area all by itself. Even more modest versions included at least a slightly elevated area of grass in the centre.

A very individual solution is, again, found in Camberwell's Bonamy-Delaford Development, begun in 1964 [19.12]. Here, too, the dwellings are 'lifted up', but not on to one continuous podium, only to small pedestrian areas which everywhere open to a criss-cross of roads below. A little earlier, in 1961, Darbourne & Darke's Lillington Street scheme for Westminster, with its public and private gardens and footpaths inside, was described as 'predominantly pedestrianized. The site virtually becomes a precinct' [19.13].[48] Blocks could also be placed on stilts virtually in their entirety, thus creating pedestrian areas underneath, as at Acorn Place, Camberwell, built during the same years [19.14]. In many of the very high point blocks the dwellings now began only at first-floor or second-floor level, which took account

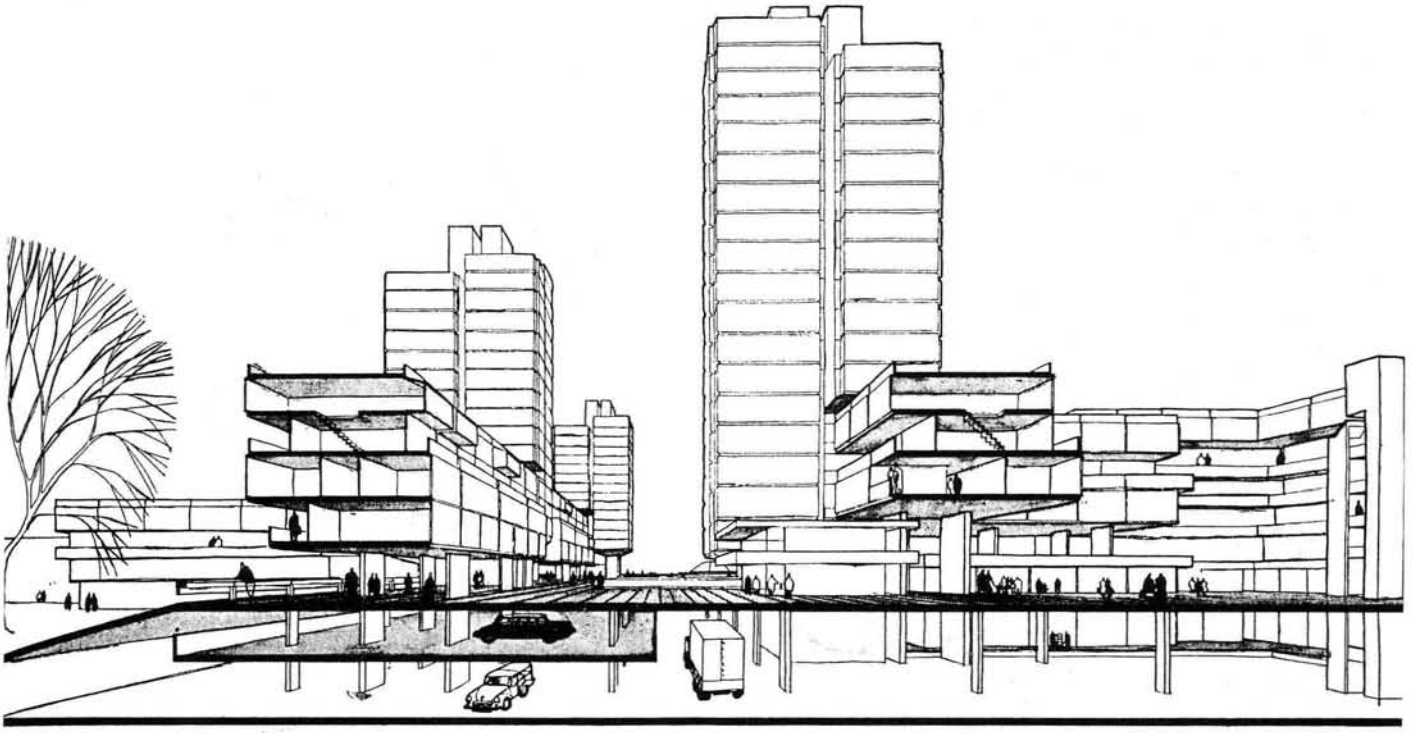
19.4 (left, below). London: Wandsworth LBC, Doddington Road, Battersea, 1967, designed by Emberton Tardrew Ptns. and Laing (12M Jespersen). Bridges connect most of the internal corridors of adjacent blocks.

19.3 (left, above). London: GLC Rowlett Street (Balfron Tower), Poplar 1965, designed by Ernö Goldfinger; combines flats and maisonettes. The access balconies are now completely enclosed and run along every third floor. The block is known especially for the fact that the architect lived in it himself for a while.

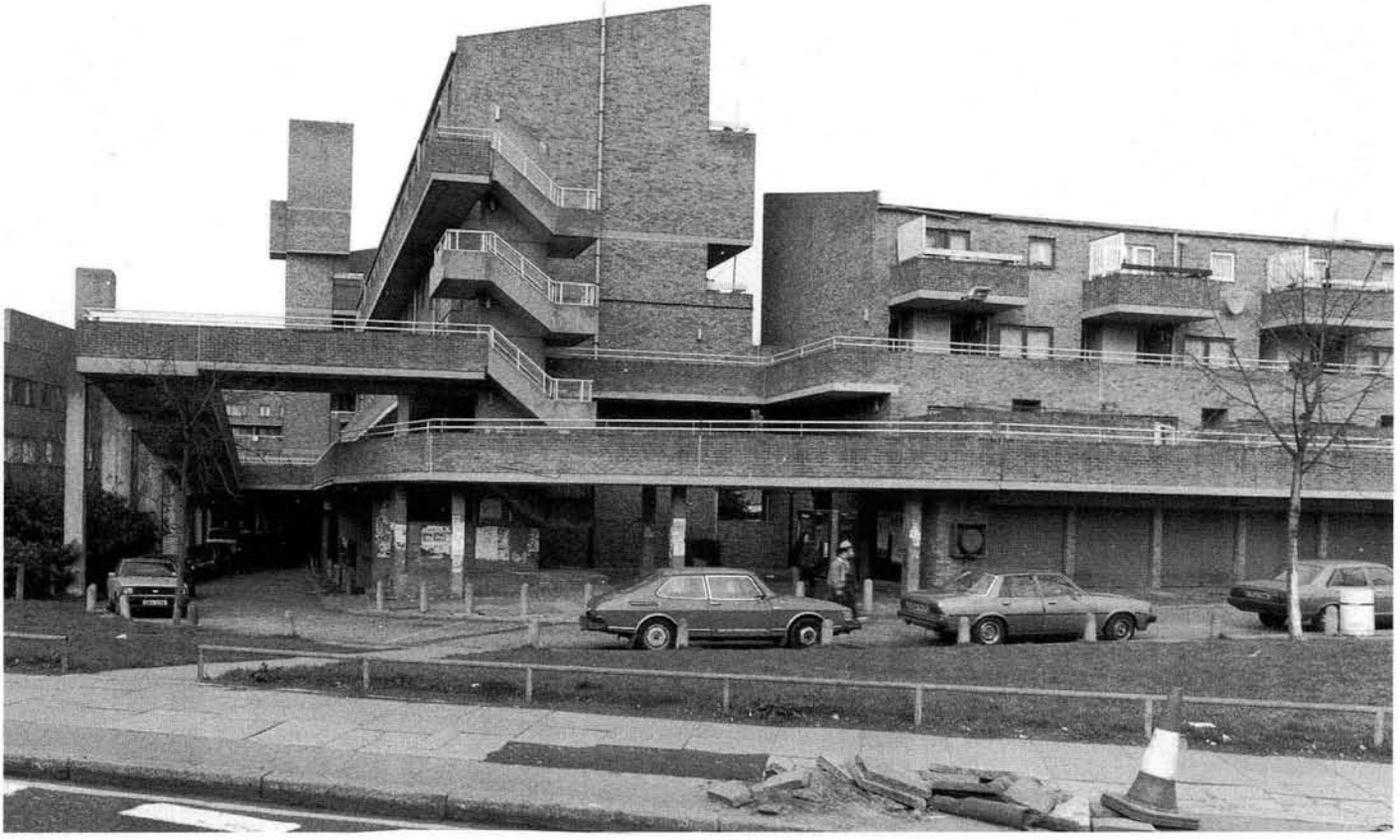
19.5 (above). London: GLC Edenham Street, (Trellick Tower), North Kensington; E. Goldfinger, 1968; the highest block of council flats in London.

19.6 (right, above). London: Camden LBC, Mill Lane, 1971 (views of front and back), designed by Gerd Kaufmann; a late *pièce de resistance* of the principal modes of the 1950s to mid-1960s: multi-storey, very slim—considering the plan is balcony-access maisonettes; set-backs to give maximum exposure to light on the south side.

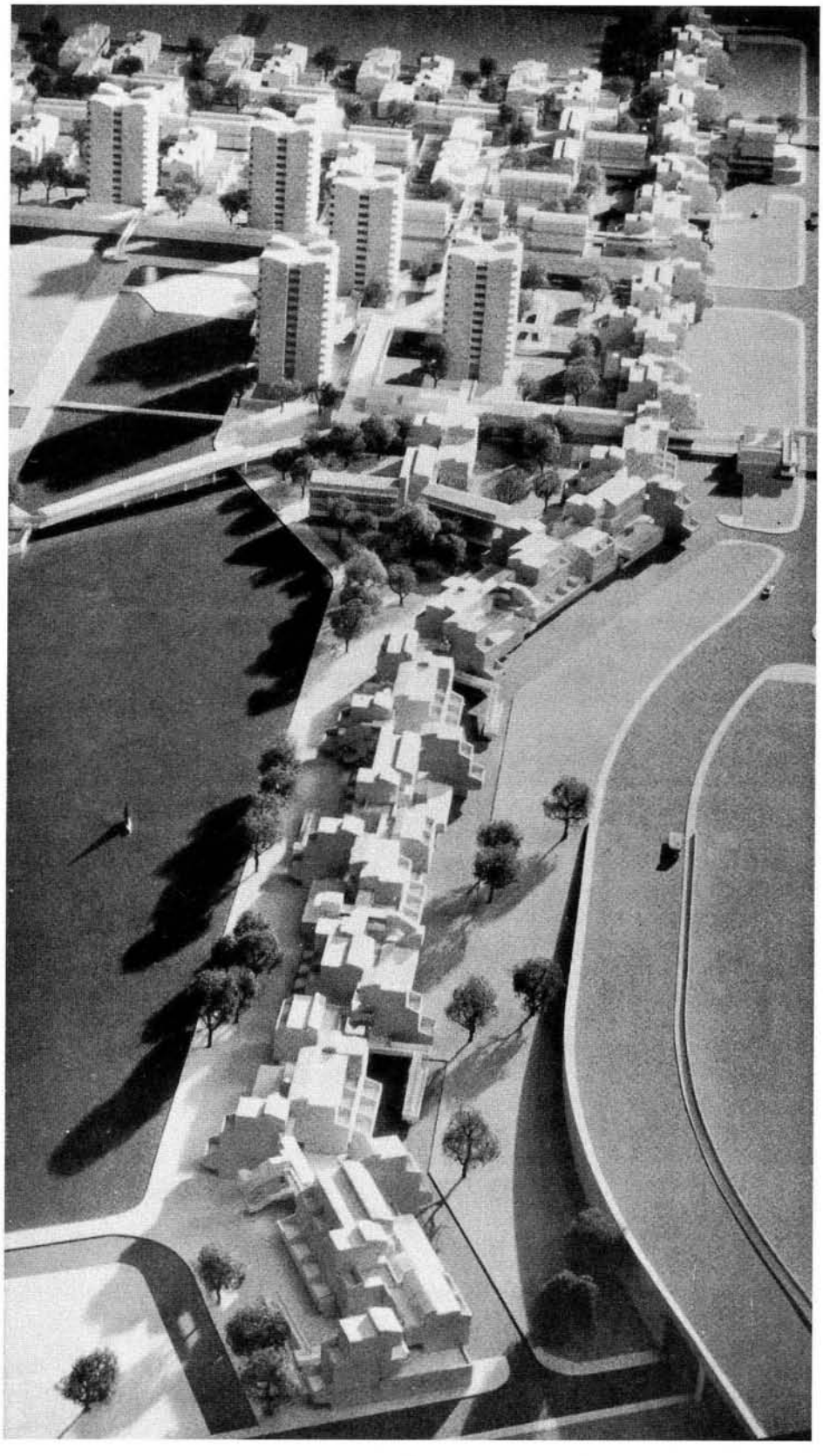
19.7 (right, below). Salford CBC: Ellor Street RDA Stage I, Meyrick Road, 1962, City Engineer: McWilliam and Truscon; consultant architect-planners: P. Johnson-Marshall and Sir R. Matthew; the grounds between the blocks fitted with an additional level for markets and other purposes. (cf. 20.5, 22.6, 26.12)

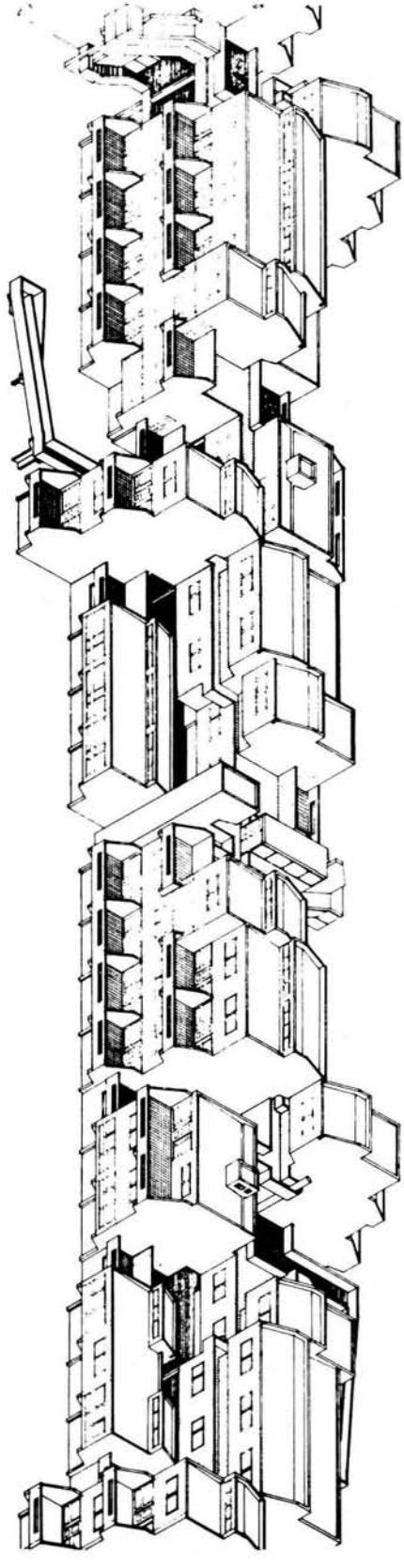


19.8. London: Kensington and Chelsea LBC, West Chelsea Redevelopment ('World's End'); built from 1969 to the designs of E. Lyons, Cadbury-Brown, et al., including far fewer of the vehicular facilities envisaged in the early project by E. Lyons & Ptns. (*JRIBA* 2-1964, p. 53)



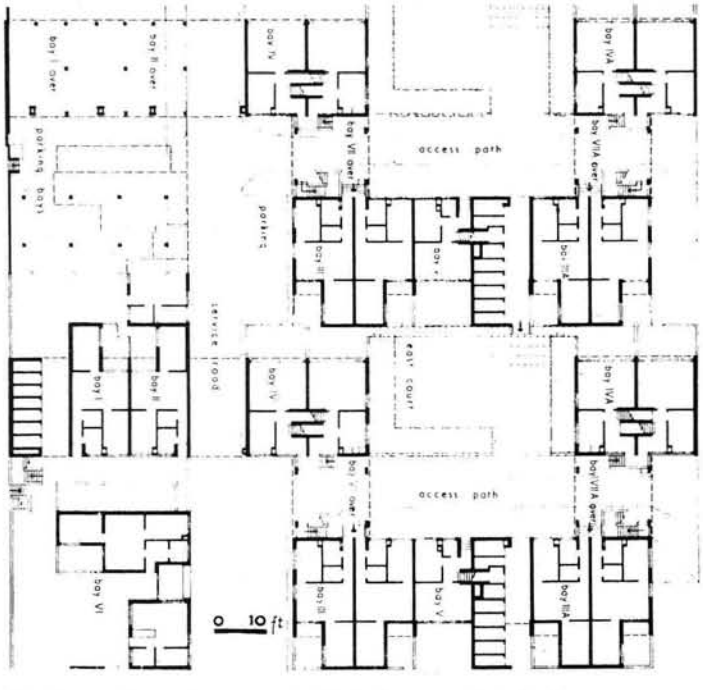
19.9. London: Southwark LBC, Camden Redevelopment, from 1972, designed by F. O. Hayes, et al. Ample car parking and access from below to the communal facilites within the complex are provided.



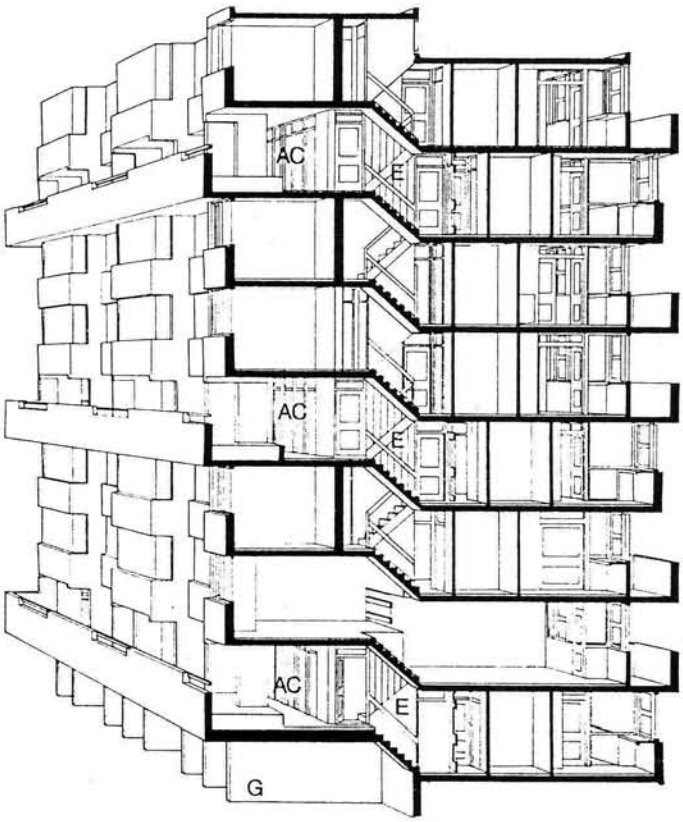


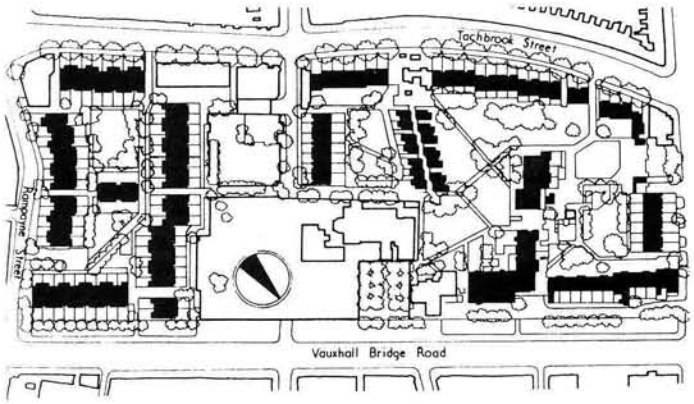
19.10. London: GLC Thamesmead Development, built from 1966; the largest development of its kind, with most dwellings jacked up on to a podium with service and car-parking space below (by J. G. H. D. Cairns & oth.; *AR* 1-1967, p. 21)

19.11. London: Camden LBC, Foundling Estate (Brunswick Centre) begun 1968, designed by Sir L. Martin, P. Hodgkinson, et al. A separate area is created, placed on a podium, containing garages and so forth. All the main rooms of the dwellings look inwards.



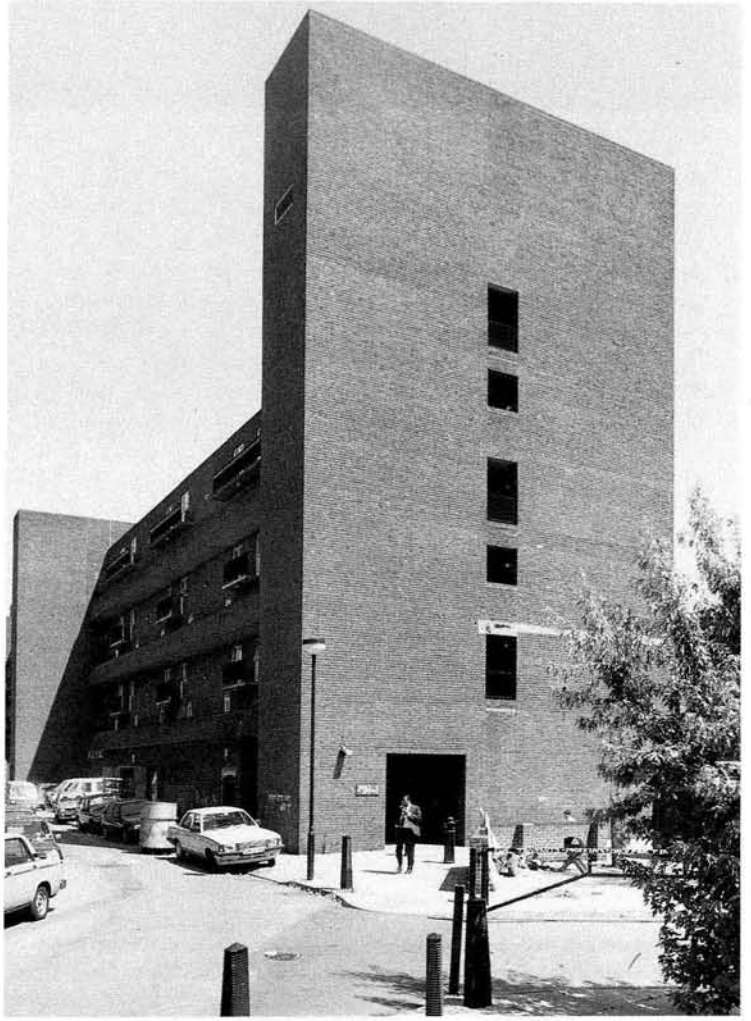
19.12. London: Camberwell MBC, Bonamy-Delaford Development, 1964, designed by F. O. Hayes, et al.; perhaps the most elaborate of the low-medium height developments. Most of the ground floor is taken up by a network of roads, with sheds and parking in between, but the dwellings above have, in contrast with, for instance, Thamesmead, frequent and direct access to that ground floor. (*ABN* 21-2-1968, p. 287)





19.13. London: City of Westminster, Lillington Street, designed by Darbourne & Darke for 1961 competition; Phase I 1964–8, II 1967–70, III 1968–72. This is the best-known of all the 1960s high-density medium-height urban redevelopment schemes; it does its utmost to avoid the old methods of placing straight blocks separately on flat ground. (*AR* 1-1965, p. 39; *AJ* 1-12-1976, p. 1033)

19.14. London: Camberwell MBC, Acorn Place, Peckham, 1961, designed by F. O. Hayes, et al. The greater part of the front block of this estate is lifted off the ground, an extreme example of 'free movement' underneath dwellings.



19.15. London: GLC Ethelred Street Stage II, Lambeth Walk, 1967 onwards, designed by Architects' Co-Partnership. The main aspect of the flats and maisonettes is towards the east, over Lambeth Walk; the west side, on this illustration, overlooks the access street and the railway. The flats are flanked by communication towers.

of the fact that flats at ground-floor level had become unpopular because of a lack of privacy [19.2]. This also left room for the ancillary spaces for sheds or heating plant to be placed within the confines of the block; an additional attraction of this arrangement was, in fact, that the main entrances to the dwellings could be specially emphasised by ramps leading up to them.

There was one other major line of communication: the vertical. Lifts now tended to became separate elements within the agglomeration, with their separateness emphasised, and often ending high above the rest of the buildings. Earlier on, we noted what seemed to be a severe design problem regarding the smooth contour of a block of flats: how to hide the lift machinery at the top of the building. Now lifts proudly display their height [19.3–19.6], and their top is often marked by a special, larger rectangular block in concrete, the so-called hammer-head [18.11]. In the case of steps or staircases, too, there was a desire for external exposure, projecting into space, effective especially when there are a great number of flights running up several storeys; these flights are particularly noticeable because they often provide the only diagonal lines in the pattern of horizontals.

The agglomeration of dwellings should be seen as something 'continuous'. To reinforce this, designers not only channelled traffic within the complex but also tried to give the whole agglomeration a sense of movement, best expressed by the word 'spine'. Some proposals for New Towns, such as Hook, were conceived as a single design or Megastructure. 'Movement' must be taken here at its most metaphorical. Just as in the case of its eighteenth-century use by Robert Adam, the term is now not actually concerned with anybody, or anything that is physically moving, but is transferred to the building itself, or to a prominent part of it. 'Spine' simply refers to a long block which is not quite straight [19.10]. If the block is high and placed on one side of the development, it can also provide the image of a latter-day town wall. The LCC Royal Victoria Yard development (Pepys Estate) is surrounded, on its northern side, by a half-moon of eight-storey, linked slab blocks, forming just such a 'city wall', 'to enclose and give definition to the area as a place to live in' [19.16].[49] The giant wriggling spine in the northern part of Thamesmead was to fulfil both functions[50] —as does the last major, and most famous, example of this pattern, the Byker Redevelopment ('Byker Wall') by Ralph Erskine in Newcastle-upon-Tyne, built in the early seventies [19.17]. Finally, the spine could form the entire development itself, as in Camden LBC's Alexandra Road by Neave Brown, one of the last and longest of all continuous blocks. At this point, we may return yet again to the concept of community. Although we maintained above that mobility seemed to conflict with the ideal of togetherness, movement of various kinds could also help to unify a design. Most of the examples mentioned contain elaborate networks of pedestrian ways: 'Footpaths . . . we regard as the stems from which community would develop.'[51]

By the late sixties, however, most of these elaborate theories—irregular layouts and conglomerates, the whole concept of traffic separation—began to be doubted. Do not overdo the separation of vehicles, a new demand ran; rather try and slow them down. The people of Cumbernauld, we read, walk across the roads and roundabouts and do not use the underpasses provided. Disperse traffic, do not channel it. Lifting dwellings above the ground, placing them on 'pilotis', is wasteful if you consider the dwelling sitting on the ground to be the most valuable proposition. Jane Jacobs went back to what previously had seemed the most primitive mode of planning: all kinds of movement occurring within one kind of street.[52]

There was also now a new stress on privacy. There had hardly ever been any serious question that privacy inside the home was one of the most important design objectives of all. But the new English demand for privacy in some of the areas immediately outside the dwelling went diametrically against the dictum of most postwar planners and designers, namely that the outside of the house comes under the public sphere. We remember that *pièce de resistance* of postwar suburban housing layout, the front garden turned public lawn through the abolition of the fence.[53] In 1950, it had appeared that privacy outside the dwelling, in the case of urban flats, 'was no longer possible'.[54] Housing managers had pointed to the way in which many gardens were misused, and thus created public eyesores.[55] For the surroundings of flats, the authorities preferred clean, hard surfaces and well-arranged

19.16. London: LCC Royal Victoria Yard Development (Pepys Estate), planned 1961; by H. R. E. Knight and others. The almost continuous 'spine block' can be seen at the back.

19.17. Newcastle-upon-Tyne CBC: Byker Redevelopment Phase I, Perimeter Block, 1971 onwards, designed by R. Erskine, and V. Gracie Assoc. View of the 'Byker Wall', which contains flats and which 'shelters' the low and medium-rise houses and flats on its southern side.

groups of sheds. To anybody caring for space, openness, light, air and greenery around the dwelling, any notion of a small enclosed court would simply have meant a return to the old slums. Only Garden City supporters continued to demand private space close to the house—but this meant the old type of back garden.

Why, then, did many architects begin to advocate private spaces once more? Firstly, the increasing desire for a garden or yard in the sixties was associated with a general demand for more 'amenities'. The English notion that a small private space, even if only a brick-paved yard, might constitute an significant 'amenity', seemingly dormant during the forties and fifties, was now apparently being revived in the context of the overall increase in wealth and comfort. Designers' recommendations were cautious at first. Ruth Glass held that in the areas around the old Georgian squares and terraces there was both more 'sociability and privacy'. The Smithsons, in their Golden Lane project, also planned a small yard-garden for most flats and explicitly recalled urban small back yards: 'our sense of a bit of territory' [18.1].[56] The question of how to design the fencing of the small private gardens adjacent to ground floor maisonettes helped to keep alive the discussion about private spaces. After more than a decade of condemning fences around front gardens, we read in 1957 that it is 'just as well' to put fences up again. As regards the back garden, we now read that tenants should be encouraged to arrange these in their own ways; 'private jungles' caused no harm. But they had to be firmly enclosed.[57] Part of the fascination created by the 'court' or 'patio' type of house was its totally enclosed yard/garden. Predictably, there was no agreement as to the point on the density scale at which a small private garden ceased to be possible. Was it 80 or 170 p.p.a.?[58] Tenants, however, as Willmott reminded his readers in 1962, are not interested in density figures, but simply want more privacy, which, he suggested, can be helped by design. There now seemed to be an ever greater liking for the closed, solid-looking yard or garden wall [COLOUR II, VII].[59] By the late sixties, English designers demanded larger gardens; some now thought that 600 square feet (56 square metres) should be the minimum.[60] Milton Keynes was to provide 90% of its dwellings with private gardens.

An enduring term and value was 'space'. But the older Modern notion of space, in the sense of the large open and public space, was now widely denounced: 'The city in a park is a fallacy.'[61] Large open areas were now held to be liable to abuse.[62] Designers now spoke of a special 'sense of enclosure'.[63] We traced the beginnings of this in the Townscape movement; it was now applied to all spaces around the dwelling, a further argument being that this provides better protection from the weather than the windy open spaces around older public housing. All this was linked a new set of socio-psychological values, such as 'belonging', 'place', 'identity' or 'territoriality'. One of the designers' chief concerns was the borderline between the different kinds of spaces; best known is the work by the Austrian-American theorist Christopher Alexander. The preferred forms or values of those years were intimacy and intricacy; they now provide the key to the understanding of privacy and community, as they could be applied to both.[64]

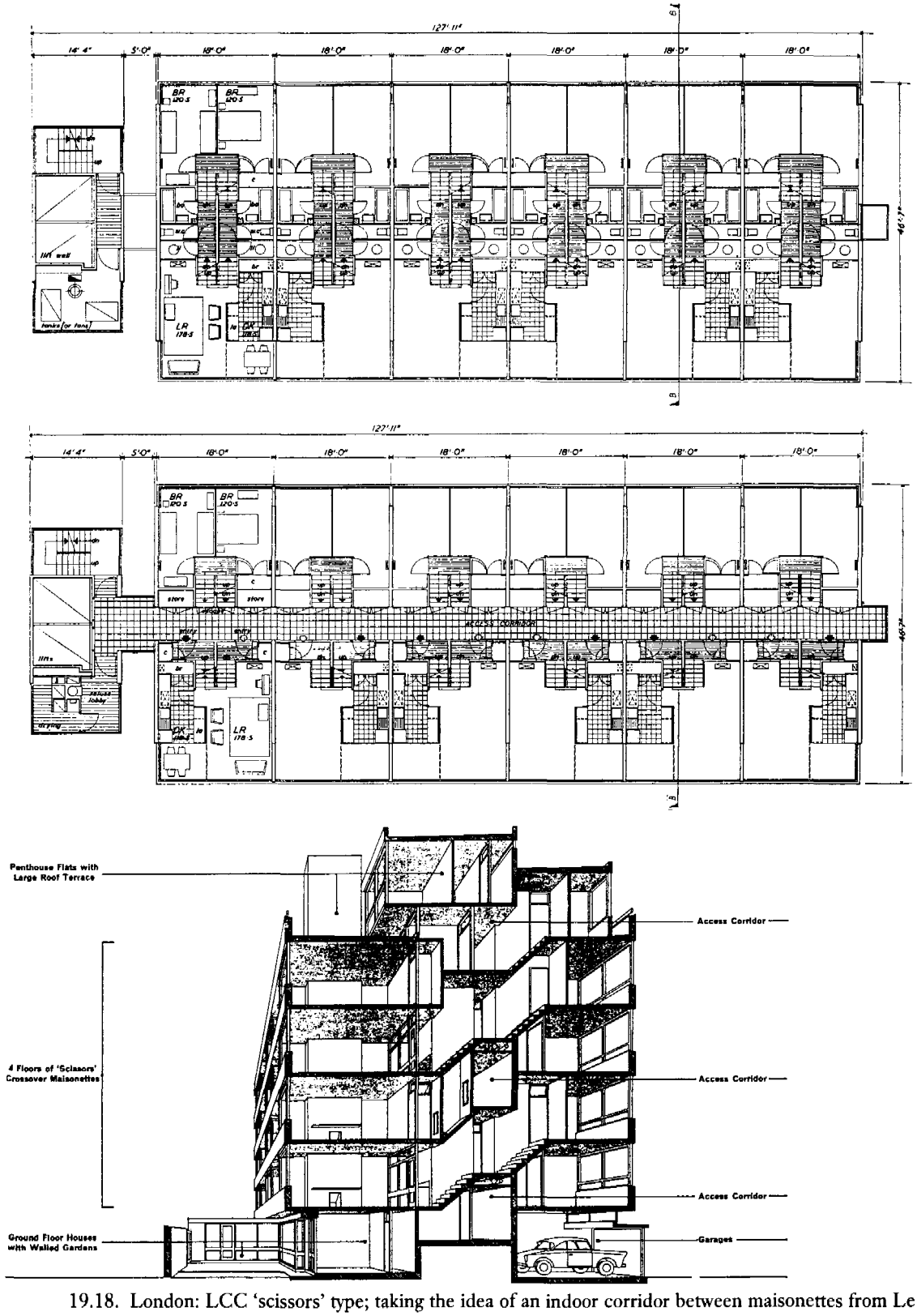
'SECTIONAL DESIGN'

The 1960s complexity likewise affected elevations: 'the cross sections [of some of Le Corbusier's buildings] read like anatomical drawings, they are packed with an activity which would never be gleaned from the plans'. The *Architectural Review*'s Preview in January 1964 commented: 'All the outstanding designs for houses are conspicuous in some way for their sectional organisation, either in the larger considerations or the small.' And the shape of Park Hill was described as 'deriving from its section'.[65] For a number of municipal dwellings, particularly in London, 'sectional' denotes a special type of combination of dwellings. It means, simply, that horizontals and verticals are no longer continuous. Within the single dwelling, the floor is no longer on one level, or on two floors exactly above each other (as in the case of the standard maisonette). Furthermore, the outside walls of the upper floor might be set back from those of the lower floor, or project further out. There had always been situations where these forms could occur naturally: the grouping of houses on a slope, or better still, over a hilltop, was extremely popular in those years.[66] 'Set back' forms seemed to offer a gain in light as well as privacy. Set backs had been used previously as a measure to increase light and air at the top of very high urban structures [9.6], offices, and even private blocks of flats. What was new in the late fifties was the use of the set back even for medium and lower height dwellings, beginning, perhaps, with the 'Low Kensington' project [18.5].

There are also versions of this kind of agglomeration, or megastructures on a grander scale—sometimes two German terms of the sixties, 'Terrassenhäuser' and 'Hügelhäuser', were used.[67] These usually refer to an 'A-frame', for instance in Camden LBC's Foundling Estate, where the sloping sides of the A-frame face the inner area, and the vertical constructional piers are partly exposed on the other, straight side of the halved A [19.11]. There could, of course, be not only setbacks but also forward projections of a floor or two. This again provided a departure from the disliked straight vertical line, as well as added to privacy: 'staggered' treatment was the term used in the description of the Lillington Street designs [19.13].[68] This method lent itself to endless variations, for instance, somewhat later, in Stones's Development Group housing at Gibson Street, Manchester [26.10–26.11], and in Richardson's YDG conglomerates [10.10]. An even more ambitious version of the 'sectional' arrangement was called the 'stadium section' (or 'inverted A-frame'). The Smithsons' 'Town' proposal for a tilted-backwards maisonette slab of 1955 forms one-half of such a structure [18.2]. In 1958, Chamberlin, Powell & Bon's Boston Manor project varied this theme; and, in the late sixties, Alexandra Road, Camden, provided the most impressive built example of the stadium section, with a very strong division between the open side of the dwelling towards the interior, and the closed side, the service side, facing outwards.

Finally, the most complicated arrangements can be found inside some blocks of the 1960s—including some with virtually straight outside walls. Undoubtedly, Le Corbusier's Unité was the chief model: a complicated combination of

two-storey maisonettes, flats and internal access corridors. Immediate forerunners, in England, were the MHLG's model designs for high maisonette blocks,[69] Kadleigh's High Paddington [17.2], and designs by Sheppard Fidler and Darbourne & Darke.[70] In 1962 the LCC Architect's Department worked out further versions,[71] such as the 'scissors cross-over' maisonette type [19.18]. Later, split-level design can also be found in 'low rise high-density' designs, where the demands for multiplicity, or economy, can hardly have been very pressing.[72]



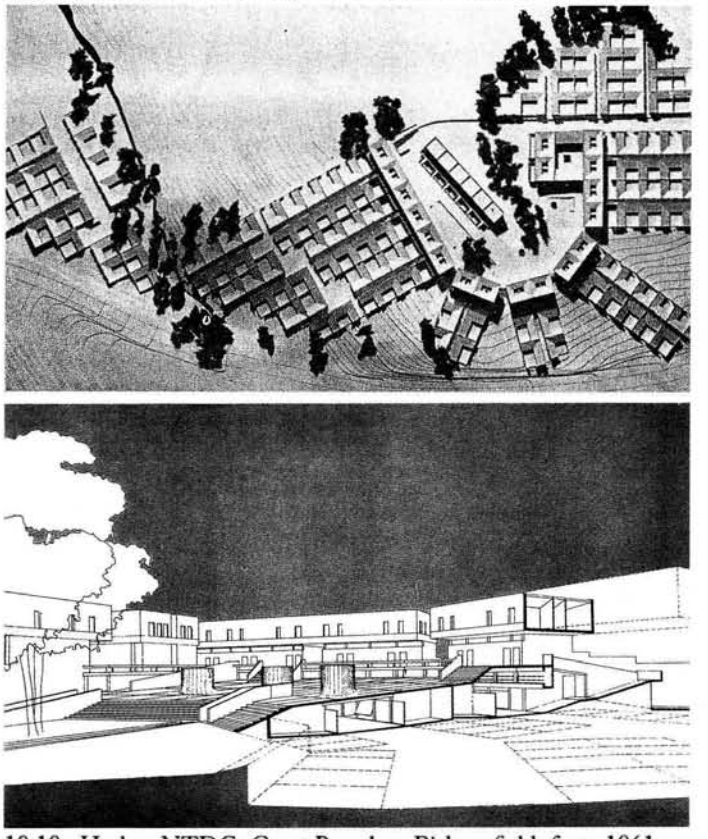
19.18. London: LCC 'scissors' type; taking the idea of an indoor corridor between maisonettes from Le Corbusier, but complicating the pattern further by splitting the levels of the flats (e.g., Abbeyfield Road, Banner Street, Royal Victoria Yard ('Pepys').) (*JRIBA* 4-1962, p. 156)

FROM HIGH RISE HIGH DENSITY TO LOW RISE HIGH DENSITY

In following the new English discussions about design from the late fifties, one theme hardly needs stressing: the growing adversity towards high blocks of flats, especially when built as completely detached structures. From the mid-fifties it had appeared that the 'flats versus houses' controversy could be solved by the mixed development formula: single occupants and couples without children in high blocks, small families in maisonettes (of any height), larger families in houses on the ground. When classic mixed development, the juxtaposing of types of dwellings, began to lose its appeal to English designers, it was the high blocks which began to be left out, while the terraced house was increasingly held to be a universally suitable dwelling for all households. In between the two 'extremes', that later manifestation of the mixed development idea, the deck-access block (of varying heights), continued to be built into the early seventies. Point blocks now appeared problematical for a number of practical reasons, as the cause of strong winds, car parking problems and the proportionally high cost of the service core. But more decisive was the new brand of architectural-sociological argument. As early as 1955, Gibberd, the pioneer of point blocks in England, had hinted at a change in attitude when he observed that blocks of great height and bulk are undesirable, 'as they transform the area into a separate entity and the principle of mixed development was lost'. By the early sixties, avant-garde designers, such as T. Crosby, could confidently assert, 'we are violently against isolated blocks'. By 1965, even Le Corbusier's once cherished Unité was dismissed as 'essentially suburban . . . in its self-containment a negation of urbanism'; somewhat later we hear that 'point blocks are difficult elements to incorporate into a townscape'.[73]

The preference for the intricate conglomerate rather than the isolated high block brings us to 'Low Rise High Density' —the English-British designer faction's most important panacea in public housing in the 1960s, and the one which closes our period. This, on the one hand, still emphasised high density; but, on the other hand, it opposed 'high rise'. A precise definition of 'low rise high density' is hard to find. Four or five storeys seem to be the upper limit, beyond which the less frequently used term 'Medium Rise' applied. At what height the latter classification ceases to apply is not certain. Actual densities of 'low-rise' developments vary widely, from about 70 to almost 200 p.p.a.[74] 'Low rise high density's' history probably began with the 'court' or 'patio' house. This was propagated by earlier International Modern designers, such as Hilberseimer and Segal, and seemed to produce a very high density, considering there was only one storey (Hilberseimer: 120 p.p.a.).[75] A number of designers, especially Chamberlin, Powell & Bon, used the court house in their versions of mixed development from 1952 onwards.[76] Paradoxically, one of the earliest examples of a development with nothing but single-storey court houses can be found in Scotland, at Prestonpans near Edinburgh, planned in 1960 by Robert H. Matthew, at a density of 88 p.p.a. 'Enclosure'-seeking Townscapists found models further afield, in Greece, or the casbahs of Iran.[77]

Other precursors of 'low rise high density' are some of the Team X proposals for 'village housing' by Stirling and the Smithsons: nervously complex agglomerations of small elements. In 1959, the 'St Pancras Project' by Leslie Martin, C. St J. Wilson and P. Hodgkinson created some attention. Two important early models were found abroad, Paul Rudolph's married students' housing at Yale University and the Siedlung Halen near Berne.[78] Outlines, on plan and in elevation are, again, 'ragged', resulting from the combination of a great number of smallish units. The most spectacular first example, Bishopsfield in the Great Parndon area of Harlow New Town, designed by Neylan and Ungless in 1961 [19.19], crowns a hill with a small Megastructure—podiums and flats over extensive garages, and patio houses spreading down the hill. From the mid-sixties, we find built examples consisting almost entirely of 'carpet' or 'mesh' developments, that is, a dense network of court houses increasingly of a more regular patterns of layout.[79] 'Low rise high density' was thus a movement of transition. Its beginnings lay chiefly with the megastructural agglomerations discussed in the previous chapters. By the mid-sixties, the emphasis among English designers was turning towards simpler versions of terraced houses. The well-publicised 'Family Houses I' scheme at West Ham, designed by the Ministry of Housing and Local Government in 1963 [19.20], although complicated on plan, conforms in most ways to an ordinary suburban housing development: two storeys, 'front', 'back', large windows; its density of 80 p.p.a. comes at the lower



19.19. Harlow NTDC: Great Parndon, Bishopsfield, from 1961, designed by Neylan & Ungless; combines flats within a low megastructural hilltop complex with a 'carpet' of low rise, tightly walled-in patio-like houses, spreading down a hill. (*AR* 1-1964, pp. 8, 11)

end of the middle range of density. The later phase of 'low rise high density' thus meant something that went against the first phase [19.21, 19.22].

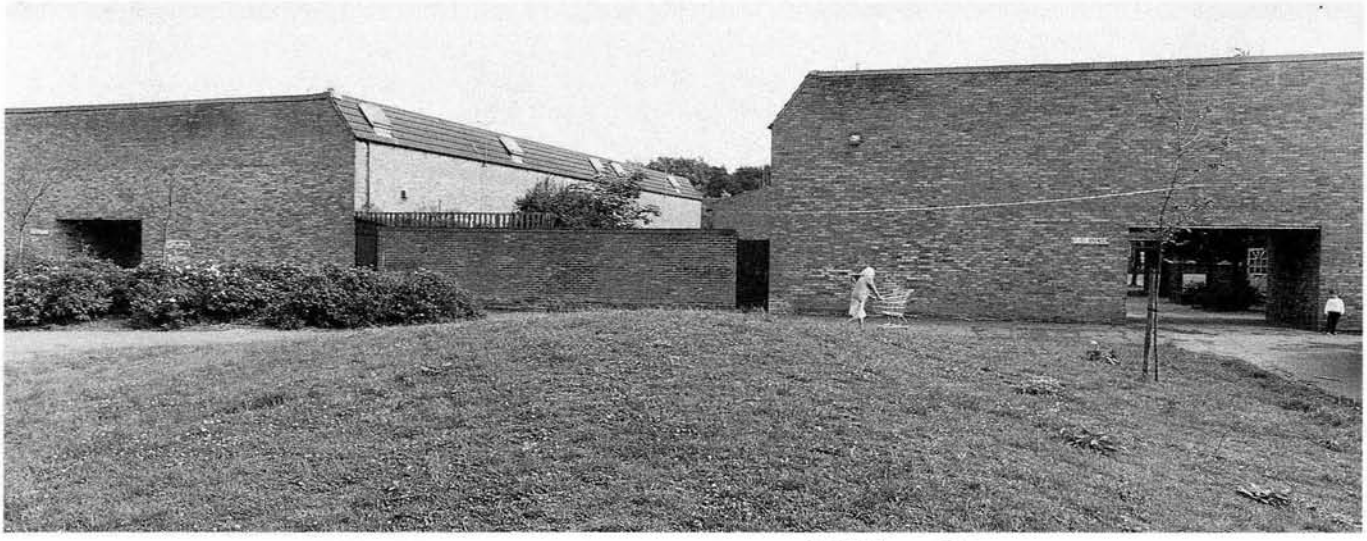
FROM COMPLEXITY TO DECOMPLICATION

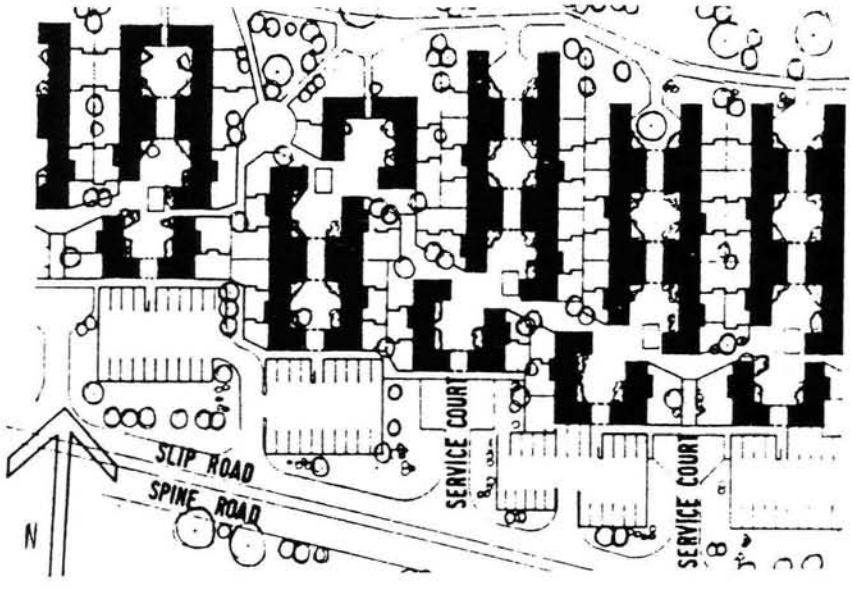
In the decades between 1930 and 1960, scientific calculation of orientation or lightfall could uniformly determine the shape of a large number of blocks. It was the overall shape that mattered. The new mode of design in the sixties, by contrast, concerns itself with the countless details of planning, while overall shapes result almost randomly. In England, there had, of course, always been the preference for olde-worlde Picturesque variety in layout. The Townscape movement combined some of these backward-looking elements with Modernity, and shortly later the Smithsons combined the Modern with their own backward-looking elements. Styles of 'community design' changed from the large, open, 'civic' space to more intimate areas within more built-up structures. The Smithsons also added powerful socio-psychological catchwords and images such as 'assocation', 'node', 'cluster', as well as a new stress on communication, street decks and bridges. 'Privacy' entered the discussion once more in the sixties, and countless arguments were conducted as to the relationship between public and private spheres. For a fuller account of, say, the experiments in Runcorn, the reader should turn to Scoffham.

First 'high rise', then dense conglomerates, and eventually flats as such went out of fashion. Services, such as shops, were not to be placed too close to dwellings because of the noise. The Smithsons, by the late sixties, roundly condemned all 'self-assertive buildings, full of rhetoric'; this included all megastructures, and in particular the 'squalor of servicing areas'. 'Pilotis' were branded a wasteful use of the ground floor; 'all accommodation' should be near the ground. The 'absolute' separation of vehicular and pedestrian traffic, the resulting complicated layouts, were, it was now argued, liable to create problems with deliveries and emergency services; footpath systems could be too complicated and might cause maintenance problems. The courtyard type of layout now appeared costly and created problems of diagonal overlooking.[80]

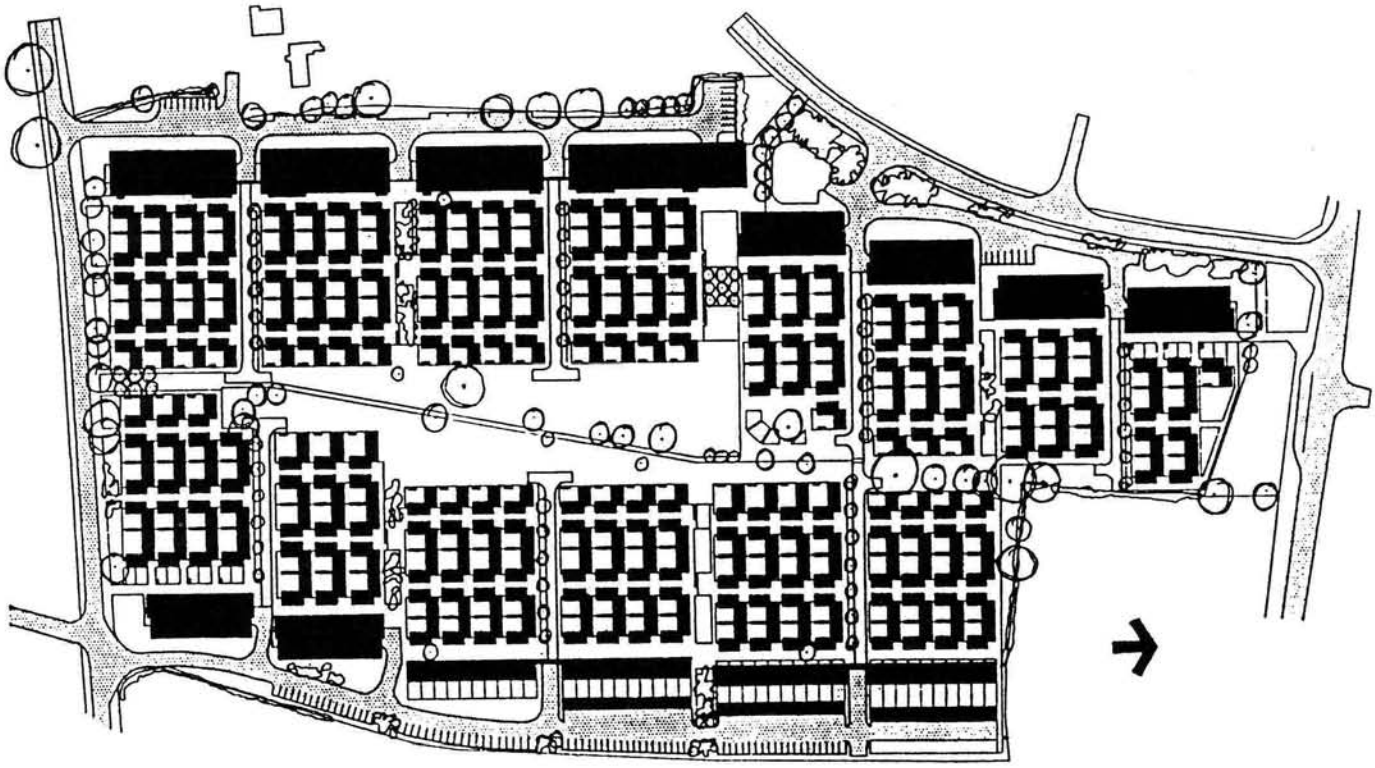
By 1970, 'low rise high density' had come to mean simply a return to houses in a straight row, the terrace. Despite its essentially English origins, this new movement also exerted an indirect influence north of the Border, where it encouraged the nascent revival in popularity of the traditional tenement block. We have dealt above with some early post-war ideas about dense terraced houses and the reasons for their rejection. Now English commentators pronounced them

19.20. West Ham CBC (near London): 'Family Houses I', Ravenscroft Road, built 1963–4 under the guidance of the Housing Development Group of the Ministry of Housing and Local Government, headed by A. W. Cleeve Barr, H. J. Whitfield Lewis and Oliver Cox; a variation of standard terrace house plans. (In the background, West Ham CBC: Fife/Totnes/Exeter Road Development, 1962.)





19.21. Basildon NTDC, Laindon 4 & 5, Mellow Purgess/Somercotes, designed by D. Galloway; 'Kasbah'-like houses with walled-in private gardens, as well as pedestrianised access courtyards; to the surrounding landscape the blocks turn a completely closed face. (*AR* 1-1966, p. 49)



19.22. Harlow NTDC, Great Parndon, Clarkhill, 1966, designed by Associated Architects and Consultants (Bickerdike, Allen Ptns.). A low/medium-density development of 22 family dwellings per acre, mostly accommodated in a 'carpet' of 231 one-storey patio houses. The ultimate in Low Rise High Density and separation of public and private space, this design offers a demonstrative and extreme contrast to tower blocks, as well as to the 1940s and 50s kind of spatial openness (cf. ill. 7.9). The walls are rendered even more impenetrable through a 'scribble-proof' aggregate. This 1992 photograph shows the houses in original condition, before their 'Post-Modernisation' with colours and pitched roofs. (*AR* 7-1966, p. 48)

an admirable solution to a wide range of problems: public space for access, for outdoor activities, including play-space; a place for the car; gardens for privacy, but also for 'companionship'. Overall urban or suburban densities may be reduced, we hear, because of the new sophistication of suburban transport. One can hardly believe it: the return of 'suburbia', of 'subtopian sprawl', even of 'ribbon development'![81] Most of the once cherished values of Modern housing and town planning now appeared meaningless.

MODERN DESIGN FOR COMMUNITY LIFE

The first section of this book was divided seemingly neatly into two themes: firstly, material–practical concerns, such as light, air and new kinds of fittings, as well as new techniques of construction; secondly, the socio-psychological aspects of the design of the areas outside the dwelling. The second part also dealt with aesthetic–formal considerations to a much greater extent than the first. These distinctions corresponded to divisions amongst the numerous professions involved in the planning and building of housing: the wide range of 'technical' professions on the one hand, and the narrower kinds of expertise of the town planners, sociologists and architects on the other. One could even distinguish, within each of three latter professions, between a mundane branch and one which preferred to talk about social-cultural matters, between the sociology of statistical measurements and the town planning of traffic engineering and density calculations, on the one hand, and the sociology of 'community' and the planning of the 'neighbourhood unit' on the other. Avant-garde designers drew an even sharper distinction between the 'borough engineer' type of designer, and those architects who strove to combine 'social conscience' with aesthetic–formal values. 'Community life' was to be fostered through architectural design and investigated through design criticism.

It was accepted among designers that there was a need for both of these basic kinds of thinking. Most would have conceded to the primacy of the practical realm. A Modern dwelling, empirically researched and well-functioning in material–practical terms—'a roof over one's head'—seemed the first need. But there was also widespread agreement that the creation of socially and aesthetically well-designed communities was of a higher value—a dichotomy which, in turn, reflected the basic problems in the definition of Modern architecture. As the design formulas for 'community' were so closely linked to general architectural design preferences, it was not surprising that agreements about the most effective 'design for a community' never lasted long and underwent the same radical changes as the design of the dwellings itself: from open landscaped parks to a preference for small semi-enclosed spaces.

Part A and Part B also presented in many ways a chronological succession. Isolated, regular and repetitious blocks had essentially been devised in the thirties and forties; in the later fifties some of the younger designers began to prefer more complicated formulas. During that period the emphasis on socio-psychological, as well as aesthetic–formal, values became more pronounced. However, a consensus prevailed as to the basic practical, socio-psychological and socio-political suitability, and thus the general desirability of all Modern housing types. In the end, Section III will show briefly how, in the sixties, a range of altogether new values, such as 'user flexibility' and 'participation', came to be used not only as tools to analyse Modern housing, but also as weapons to attack it—its technology as well as its notions of Community. However, the new kinds of design of the late fifties and the sixties were largely restricted to London, whereas the new criticisms of the later sixties coincided with the virtual end of the great boom of public housing. At this point we must turn from 'design' to 'production', to the processes which turned classic Modern design ideals and prototypes into ubiquitous reality.

SECTION II: PRODUCTION

SECTION II: PRODUCTION

Part A
A Municipal Crusade: Modern Flats and the Defence of Housing Production in Britain

If we can create . . . the spirit of a housing crusade, then I believe we may dare to cherish great hopes.

Harold Macmillan, 1951

To someone coming out of the slums of the Gorbals or Leith—and I was born in a tenement in Leith—the idea of going into a house with a bathroom, a proper kitchen, hot water—it was the millennium for them, it was their dream, and it didn't matter a damn to them if it was in a multi-storey block or a cottage—they wanted as many dwellings as quickly as possible!

R. D. Cramond, 1988

In those days, in the sixties, when you went and opened a block of flats the Council had just built, when you walked around and inspected it, you felt proud of what you were giving people!

Councillor Alf King, 1989[1]

Introduction

In the first section of this book, we traced the rise of Modern design to a position of dominance in public housing. By the end of the 1950s, it was widely assumed that the constructional, servicing and architectural problems of high blocks had been solved. This Modern ideal of public housing forms the basis for Section II of the book; we will deal with the large-scale building of Modern dwellings, essentially from the late fifties to around 1970. However, there will be a significant change in focus. So far, we have dealt with dwellings as devised by housing reformers and architects, and built as advanced showpiece developments, such as those of the LCC. Now we turn to the subject of dwelling provision pure and simple. Here we find a rather different set of issues and values: urgent local political demands, financial and organisational constraints and initiatives, lobbying, negotiating, monitoring, pressurising. These were subsumed under the single, all-encompassing aim of 'output', or 'production'; the latter word is here used not so much in its more general economic sense as to denote the demand for, and process of, large-scale building of new dwellings. Now the pace was set by groups different from the designers and reformers of Section I, above all by 'crusading' councillors, pursuing the local-political aim of 'housing their people' and safeguarding their patronage powers of housebuilding and letting, but also by engineers or production-minded architects of local authorities or contractors, serving their political or commercial masters through efficient pursuit of output. The relative simplicity of their aim was reflected in the layout of many developments built in the great 'production drive' of the late fifties and sixties. Now, high blocks were less likely to be built in the context of complicated architectural and planning proposals, but rather as one-off groups, placed on any kind of site, urban or suburban. In Section I, dealing as we were chiefly with London-based designers and theorists, 'national' was often taken to mean England or its capital; now we must deal with a more complex equation between the distinct housing patterns of England and Wales on the one hand, Scotland on the other.

It seems only too obvious that, during this brief period, the values of 'production' and most of those of 'Modern design' were closely bound up with one another. Designers and producers alike took it for granted that the new public housing should both be provided in large quantities, and also be Modern in appearance, construction and equipment. And yet there were, at the same time, emphatic divergences of interest. Many of the designers discussed in Section I already held, and continued to hold, a contemptuous attitude towards 'mere production'. In the sixties, in cities such as Glasgow, a different kind of 'designer' became much more prominent: one who acted chiefly as technical assistant to the driving councillors and organising officials. This new balance of power led to fresh conflicts between 'design' and 'production'.

Yet large-scale production was no novelty within the field of public housing: its establishment as one of the chief yardsticks of achievement for the new municipal housing organisations after World War I had been followed by several

waves of high output in various parts of Britain. Section II traces the way in which, during the fifties and sixties, this 'tradition' of urban housing production progressively became associated with Modern flats. Much of the groundwork for this had been accomplished in the interwar and early postwar years, by those authorities that erected large numbers of flats of broadly 'traditional' tenemental types.

In the building of flats between the wars, as in other areas of housing production, the most significant differences within Britain were centred around the Scotland–England fault line.[2] In Scotland, the national tradition of monumental tenement housing remained an enduring influence, although increasingly stigmatised by the biased 'standards' introduced by Anglocentric housing reformers, and by the effects of rent control in pushing existing tenements into a cycle of decline. Many new tenements were built after 1919 by municipalities, but largely for the rehousing of the 'residuum' cleared from slums. As a result of this gradual internalisation of cultural 'inferiorism', even working-class opinion seemed to have turned against tenements by the forties. But the interwar nationalist 'Scots Renascence' also saw the start of an revaluation of the tenement: Edinburgh's City Architect, Ebenezer MacRae, repudiated cottages and called for a 'return to the old Scots traditional form of building', and the official Highton Report (1935) praised contemporary Continental flats. After the war, there would be a renewed boom in tenement building [20.1]; the production-orientated characteristics of this phase would, in their turn, be perpetuated in the energetic campaigns of Modern flat construction during the sixties.[3]

In England and Wales, on the other hand, interwar council housing production was dominated by suburban cottage estates: slum-clearance and large-scale flat-building only really took hold in the 1930s, in London and a few large provincial centres such as Liverpool. In the capital, responsibility for clearance and building was divided between the London County Council and the 'second-tier' authorities, the Metropolitan Boroughs. This arrangement was later to cause much friction, but, during the thirties, the autocratic Labour LCC administration of Herbert Morrison maintained an easy dominance. In slum-clearance areas, the Council built large schemes of balcony or staircase access 'block dwellings' up to five or even six storeys in height, and in styles (such as neo-Georgian) considered 'modern' under interwar criteria. Only a few of the more precocious Labour-controlled boroughs, such as Bermondsey MBC, attempted flat-building on a major scale.

Immediately following World War II, it seemed that the interwar balance of power and activity in London housing production would be maintained. The LCC's decision in January 1946, as a matter of expediency, to concentrate responsibility for design and erection of its new housing in the hands of its Director of Housing and Valuer, C. H. Walker, paid rapid dividends. Within four years, through administrative efficiency, the avoidance of 'flights of fancy' and the use of cautiously improved prewar patterns, 19,171 dwellings had been completed and a further 51,436 were approved or under construction. The flats which made up 44% of this total were traditional 'block dwellings', usually of four or five storeys in height (although a few higher blocks, up to eight storeys, were built for the first time) [6.2].[4] Walker was also able to impose his production-orientated values and preferred housing patterns on London's lower-tier housing authorities, the Metropolitan Boroughs, as a result of the Ministry's delegation to the LCC, up to 1950,

20.1. Glasgow: Drumchapel Unit 2; 4-storey precast-concrete cross-wall tenements designed by Sam Bunton, seen under construction in 1954. (Strathclyde Regional Archive)

of responsibility for loan-sanction vetting of their projects; and the latter achieved 8,819 completions by the end of 1949. In his scrutiny of these so-called local housing operations, Walker was ruthless in demanding that the full, concentric *County of London Plan* densities [6.8] be achieved—for instance through three-storey blocks of flats rather than cottages. Experimental multi-storey block dwellings were built by several boroughs, for instance at Abbott Road, Poplar, Agnes Place, Southwark, and Notre Dame Estate, Wandsworth.[5] Walker's pressure and assistance accustomed all Metropolitan Boroughs to the idea of large-scale production of flats. By 1950, not only the few interwar high performers, such as Bermondsey and Woolwich, but also others, such as Shoreditch, Hackney, and Wandsworth, were energetically building block dwellings, some of six or more storeys in height. Block dwellings or tenements were also under construction in a few other English and Scots cities. But by this date (as we saw in Section I), the LCC and several 'avant-garde' boroughs, and the New Towns, had already fallen under the influence of designers who emphatically rejected block dwellings, and pushed for the building of Modern flats. The 'heroic' early period of Modern housing architecture overlapped with late and vigorous bursts of production of pre-Modern dwelling types.[6]

It was only a few years later, however—in the late 1950s—that Modern flats themselves were adopted for the same production-orientated purposes as Glasgow Corporation's tenements or Walker's block dwellings. This process forms the chief subject of Section II. Our story, it should be emphasised from the beginning, is overwhelmingly about the housing of the great conurbations—with over 90% of multi-storey flats (of six or more storeys), in particular, located in Greater London, county boroughs or large burghs. Now the types which the LCC designers had advocated as an antidote to Walker's production use of block dwellings were themselves embraced by Walker-like officials, and councillor 'housing crusaders', throughout Britain. Here they were used in ways which were unacceptable to, and vehemently criticised by, the LCC designers and their councillor supporters such as Evelyn Denington. The production-dominated building of Modern flats, in contexts such as the 'package-deal' contract (designed and built by the contractor's staff), required the intimate involvement of many 'designers' in the technical sense—municipal engineers to identify and lay out the sites, contractors' architects and engineers to design and superintend the erection of the blocks—yet this activity would not have been acknowledged as 'design' by the LCC architects.

It is at this point that high blocks began to play a crucial role: they turned out, perhaps unexpectedly for some, to be especially suitable for the rapid exploitation of small gap-sites, which were becoming increasingly prevalent in the fifties. We thus encounter a crucial moment in the history of the high Modern block: initiated by 'designers' in the context of new planning and architectural concepts, these values now became translated into pure 'production' advantages. It was in this gap-filling capacity that multi-storey blocks were much more suitable than the older tenements or block dwellings with their far greater horizontal spread. However, this coalescence between Modern design and production did not mean that the schism between the two factions was closed: on the contrary, it in many ways widened. The producers saw high blocks as gap-fillers; the designers rejected this argument as simplistic and dangerous. Eventually, fortified by a general collapse in the idea of 'production', the late sixties were to bring a complete turn against high flats within the design profession, the very profession which had introduced the type, but which now repudiated the many blocks built as only a parody or misuse of the original idea.

Most recent historians have argued that high flats were 'imposed' on local 'communities' by external forces. However, we shall see in the following pages that the truth was very different—that they were a key *expression* of local municipal power, rather than an attack on it. Indeed, one of the main reasons for the translation of Modern flats from design to production purposes was the urgent desire of some cities to defend their power against the perceived threat posed by one powerful 'national' group of designers, the town planning profession.

Our story starts with a powerful, Government-supported challenge to the established structure of local authority housing provision, during the 1940s. This challenge set up a 'land trap' for local authorities, by curbing their land supply, and thus threatening their autonomy in housing policy. It took two loosely associated forms, both trying to turn away from 'mere' local housebuilding to a town planning conception of housing as part of some wider process of reconstruction or modernisation. The less contentious of the two policies was an energetic resumption of slum-clearance from the mid-fifties; this was linked, in England and Wales, with a curb on municipal development of suburban sites. We shall discuss this in some detail in Chapter 21. Much the more threatening aspect of the 'land trap' for local authorities was the second policy: an attempt by town planners and others interested in 'rational reconstruction' to constrain the development of urban housing land, and to force cities to overspill outside their boundaries many of those displaced by slum-clearance.

This orchestrated 'British' challenge, during the forties and fifties, established broad constraints on the choices available to local authorities on housing policy. But it did not dictate or determine their response. There was much population loss from cities during the fifties and sixties, but this happened mostly in the form of 'unplanned overspill' of the middle classes. The officially preferred policy, a combination of slum-clearance and large-scale planned overspill of industry and working-class housing, was not, in most cases, seriously implemented. Instead, powerful local authorities determinedly set about the task of keeping control of their own housing destinies, by combining slum-clearance with a building policy at variance with Government-endorsed decentralism: the massed development of high flats on their own territory, using one element of the LCC mixed development formula in a manner akin to Walker's use of block dwellings for 'site cramming'. In England and Wales, this powerful movement cut across the grain of a popularly entrenched anti-urbanism and (in the English case) individualism. In Scotland, by contrast, the high national-cultural status of urban settlements, as natural centres of order and

authority, facilitated decisive collective action by cities and burghs. It was here, too, that the fewest mixed developments, and the most high blocks on their own, were built.

Thus the Modern housing which swept through Scotland and England during the fifties and sixties was not actually caused by the 'land trap' itself, but by the particular response chosen by the municipalities, in their opposition to the Government's pressure for 'nationally' planned and orchestrated reconstruction. Finally, once established, high-flat building was taken up for uses divorced from its original association with perceived land shortage—for instance in Dundee, where it allowed rapid exploitation of plentiful suburban land.

This account does not systematically consider the role of 'ideology' in housing production, nor attempt to differentiate sharply among values, between 'pretexts' and 'concealed motives'. However, some distinctions of this sort will emerge. We will find that the rhetoric employed by councillors at the time emphasised 'crusading' moral aims, such as 'housing the people' or 'banishing the disgrace of the slums'. Evidence drawn from the present-day recollections of councillors and officials concerning their actual motives, on the other hand, suggests that considerations of municipal power, independence and prestige (notably the retention of population and rate revenue) in many cases provided the chief incentive for multi-storey building. However, what we cannot do here is to weigh up the respective influences of these two groups of values and pressures, as there was no systematic procedure at the time for the canvassing of the opinions of those to be housed or rehoused.

Our focus on the great power wielded by councillor 'crusaders' and official 'organisers' in the largest authorities represents a sharp divergence from the theory of decision-making in housing provision put forward by recent historians, such as Dunleavy, Owens or Finnimore, which has emphasised the power exerted by other groups or 'actors' (the national architectural or planning professions, or building contractors), and has correspondingly portrayed local groups and individuals as weak and exploited.[7] Here, by contrast, the decentralised nature of decision-making in public housing is interpreted as a source of strength, enabling driving 'housing leaders', set on output expansion, to emerge at local level from among both members and officers.

Just as the activities of the LCC architects were of paramount significance in Section I, so Section II will be dominated by the policies and initiatives of the municipal 'housing crusaders'. This story reaches a dramatic climax in the multi-storey crash-drive of Glasgow. Here, in the 'shock city of the Modern housing revolution', we shall see that no 'national British' group (planners, civil servants or contractors) was able to withstand the overwhelming negotiating and organising power wielded by two 'local' figures: the Corporation's Housing Committee Convener, Councillor David Gibson, and the engineer Lewis Cross, 'Housing Progress Officer' in charge of sites and contracts. The architectural results of Glasgow's 1962 multi-storey revolution were blocks of an unfettered monumentality, unparalleled at that date not only in these islands, but in Europe as a whole.

Many preceding historical accounts have also claimed the exercise of power in housing provision to have had homogeneous, if not crudely simplistic, aims of economic, political and social exploitation. By contrast, this portrait of the production drives of the sixties local 'housing crusaders' merely adds another overlay to an already intricate picture, and further undermines any idea of 'homogeneity' in the values behind housing provision as a whole. We traced in Section I the numerous and varied debates among architects and other reformers in the forties and fifties. The LCC's large mixed developments of the mid and late fifties, and Glasgow's multi-storey-only 'package-deals' of the mid and late sixties, employed physically similar Modern high blocks; and both represented the large-scale exercise of 'State power' in public housing provision. Yet the driving values of the LCC architects and the Glasgow 'crusaders', in some ways, could hardly have been more different!

But even if the historian, today, chooses to view the municipal response to the 'housing problem' chiefly as a matter of power and class, councillors at the time could afford no such detachment, in the face of the queues of constituents—almost exclusively women—that formed every day outside their houses or 'surgeries', urgently demanding rehousing and a council tenancy: 'An endless stream of older women . . . all with the same question: "When's ma hoose comin down?"' Motherwell's then Housing Convener, Hutchison Sneddon, recalls that

> I used to come home every night to my house and they were queuing up the top of the common stair and round again. I had a two-room tenement flat, and one of those rooms was totally used for interviews! My wife and I, in our first house, never had a meal without a visitor there! People just came to your house at 9 a.m., 9 p.m., whenever they wanted. Always the question was the same. 'When am I going to get my house? When am I going to get rehoused?'[8]

CHAPTER 20

The Land Trap: Multi-Storey Flats Versus Overspill

Planners, the force of whose movement comes from the popular desire to escape from Town Cramming.

F. J. Osborn, 1949[1]

DURING THE EARLY postwar years, the housing land supply of local authorities increasingly became the target for a range of restrictive, Government-endorsed policies. Of these, the most onerous were imposed under the broad heading of town and country planning. In this chapter, we will examine this seemingly grave threat to the cities' autonomy in housing policy, and will find that they seized energetically on the building of multi-storey flats as a way out of the 'land trap'. In contrast to the visual concerns of prewar Green Belt and Ribbon Development legislation, the first official development restrictions were motivated by a concern about housing land supply. Increasingly, the Government used the Green Belt provisions of the 1938 Act and the 1944 Greater London Plan to discourage the LCC from building outside its boundaries ('out-county' building); and, before the decade was out, other authorities also faced advisory plans advocating Green Belt designation of much building land. We will discuss shortly the effects of Green Belt policy in West Central Scotland. In England, pressure from bodies such as the Council for the Preservation of Rural England had led the new Minister, Duncan Sandys, to issue in 1955, out of the blue, a circular asking provincial cities to designate Green Belts. At the same time, the Ministry of Housing and Local Government (MHLG) had also begun to respond to political pressure from the agricultural lobby, by pressurising authorities to economise in the use of land. This new defensiveness over 'waste' was no search for 'cuts', but resulted from Macmillan's determination to secure an expanded housing drive by 'going to do battle with the Minister of Agriculture for housing land'.[2]

These piecemeal land-restriction policies would not, in themselves, have been unduly onerous in their effect, had they not been allied to a doctrine committed to the curtailment of municipal power over housing: the town planning movement, newly elevated to Government-endorsed status after World War II. Here, we are concerned with the local-political implications of planning—with the way in which the 'national British' town planning establishment set up a 'land trap' for the cities, which they would only escape through massed building of Modern flats.

The planning onslaught against the cities chiefly derived from a longstanding architectural theory of working-class housing, formulated by a line of nineteenth and early twentieth-century English writers and architects from Ruskin through to the Arts and Crafts Movement, and dominated by the ideal of the individual cottage-dwelling, whose ruralising wholeness would, it was claimed, restore 'dignity' to working-class life. At the turn of the century, this theory had been extended to a city-wide scale, advocating the relief of the 'chaotic' industrial city by the establishment of 'rational' Garden Cities or cottage-settlements; and it had become the focus of the new discipline of town planning. The work of Raymond Unwin established the Jekyll-and-Hyde character of the town planning movement. His public activity was dominated by the sober professionalism of the Ministry official and committee man, planting garden suburbs across England and Scotland, and establishing the cottage (in the 1918 Tudor Walters Report) as the mainstay of the new State housing programme. Behind this orderly façade, however, a socialist evangelism continued to blaze. The town planning discipline was from the beginning shot through with utopianism and enthusiasm for sweeping prescriptions of reconstruction.[3]

20.2. Town and Country Planning Association meeting in London, 1944. F. J. Osborn is seated at front left. (Town and Country Planning Association)

It was probably the campaigning of F. J. Osborn, Secretary (from 1936) of the Garden Cities and Town Planning Association, later the Town and Country Planning Association (TCPA), which most powerfully synthesised all these tendencies [20.2]. For Osborn was the first to combine the

common-man pretensions and latent English nationalism of the cottage-movement (a 'Chestertonian belief that common prejudices are almost invariably sound') with a reworking of Ebenezer Howard's decentralist theories around the idea of central State intervention in all parts of Britain. Osborn attacked the 'irrationality' of the modern city, with its congested inner areas and sprawling suburbs. He demanded the Government should impose a Britain-wide replanning programme of 100 new towns, in order to secure the rational restructuring of both housing and industry.[4] Implicit in Osborn's thinking were markedly coercive assumptions: that existing municipalities were archaic irrelevancies whose potential opposition to reform should simply be disregarded; and that the assumed universal preference for cottages over flats could be used to justify the enforced displacement of large segments of the urban population. The TCPA were dismissed by many contemporary commentators as a fringe group, as 'monomaniacs' who 'gave the impression they had more clout than they really did'. But the trenchant doctrines of State-imposed decentralism, formulated by Osborn, were only partly watered down in the official manifestos of reconstruction during and immediately after World War II: the Barlow Commission Report, which established the principle of mass population dispersal; the various city or regional plans masterminded by Sir Patrick Abercrombie, which implicitly or explicitly applied this principle to particular cities; and, above all, the 1946 New Towns Act, which sought to move the focus of urban development away from the old conurbations to new and self-contained towns planted, as Osborn demanded, by administrative diktat [20.3].[5]

At this point, we must remind ourselves that town planning was no monolithic bloc; none of its principal players—Howard, Unwin, even Osborn—advocated the complete abolition, rather than the relief, of the industrial city. But what concerns us here is the particular issue of planning attitudes towards municipal housing provision. Here there was a measure of consensus. A clear link can be traced between Osborn's longstanding advocacy of the use of professional, administrative power to enforce planned overspill, and the policies of the new postwar planning establishment, with its non-elected New Town Corporations (clearly based on the standard colonial 'ExCo'), and its low regard for municipal institutions. In the opinion of Percy Johnson-Marshall, 'no . . . city realised the scale of the urban housing problem . . . Abercrombie had begun to tackle it, but it far transcended the ability of any councillor.'[6]

The confrontation between this professional 'planning machine' and the established municipal structure of housing provision was uniquely dramatic in Scotland, for two reasons. The immediate cause, concerned with the physical pattern of dwellings, was the conflict between the national tradition of monumental housing and urbanism—which differed little from that of most other European countries—and the Garden City vision of the planners, based on specifically English norms. The planners' theories and rhetoric merely put a fresh gloss on the cottage ideal previously imported by housing reformers. To the planners, the high net density of the Victorian tenemental areas was bad enough: but Scots municipalities had compounded this 'problem' by building so many new tenements, and (in rural areas) two-storey 'four-in-a-block' flats, often where no flats had existed before. Anti-tenement housing reformism went hand-in-hand with anti-municipal 'regional' planning, and both were now powerfully endorsed by Central Government. This fact points to the second, underlying cause of conflict. During the war, the perceived destructive effects of 'nationalism' in Europe had weakened Scotland's nascent political independence movement, and the sweeping emergency measures applied across Britain—the concerted 'war effort'—had powerfully bolstered the administrative basis of the Union. The proconsul-like wartime rule of the Secretary of State, Tom Johnston, and the 1945 Labour victory, had welded a firm link between 'progressive' Socialist British Government centralism and the planners' Britain-wide reconstruction aspirations. Scots municipal 'housers' were now under attack on two levels—professional-technical and national-cultural.

This new planning alliance was to be cemented by focusing on a powerful 'bogeyman'—none other than the city of Glasgow itself. Between the wars, national housing debates had certainly been much concerned with the city's particular problems, with its vast and (under the influence of rent control and owners' rates) growing number of slum dwellings. Yet over this period, despite efforts by Osbornite councillors such as Patrick Dollan and Jean Mann to denigrate the tenement in favour of the cottage, tenement-building had survived within the city, and had remained prominent even in the grandiose plan for total rebuilding drawn up by the City Engineer, Robert Bruce, in 1945.[7] Now, however, it was Glasgow as a whole which was to be 'problematised'. At this very moment, when the Corporation was confidently planning its own self-contained reconstruction, it suddenly and unexpectedly found itself caught in the jaws of a potent 'land trap'. For the Government endorsed not the Bruce Plan, but a sweeping decentralist proposal for the Glasgow region drawn up by Abercrombie, on the tried and tested model of his numerous regional and city plans in England. This, the Clyde Valley Regional Plan, defined Glasgow itself, not just its slums, as the 'Glasgow problem'; and it sought to cut the city down to size by means of a Green Belt which would render unusable much of its building land. Only half of the 500,000 slum-dwellers to be displaced by clearance (under Bruce's plan) could now be re-housed within the city boundaries; the remainder would have to be overspilled to New Towns. In 1946–7, armed with Abercrombie's interim plan, the Department of Health for Scotland (DHS: the Government department responsible for housing and planning) forced Glasgow to abandon much of a major peripheral scheme about to be built at Castlemilk, and then added insult to injury by designating Scotland's first New Town at East Kilbride, adjacent to the city boundary and only two miles from Castlemilk [COLOUR VIII].

Abercrombie's team of course shared with Bruce, and Glasgow's own councillors, an aspiration to do away with the city's closely packed slums. But the Plan also had a hidden anti-municipal agenda: for its provisions, if implemented, would destroy the power of Glasgow's Housing Committee, by taking away its building land and compelling the city to export half of the population displaced by its slum-clearance pro-

gramme. The forceful way in which Abercrombie's plan was imposed on Glasgow, despite the Corporation's great power, reflected a consensus between Ministers and decentralist-minded civil servants, which seemed to substantiate the planners' sweeping expectations at the war's end. The Osborn–Barlow vision of Government-directed, Union-wide 'dispersal' mesmerised even Abercrombie's key Scots helpers, such as Robert Matthew, Robert Grieve—'the practical leader of the team'—and Alan Reiach. Grieve subsequently recalled Osborn's populist charisma: 'How I adored that man!'[8]

But, as will be shown in the next chapter, a more enduring alliance stood in the way of the planning faction: that between large Labour local authorities and production-orientated Administrators in the Scottish Office, both determined to pursue the 'numbers game' of large-scale building and low rents. Postwar public housing in Scotland became a field of conflict between these two central-local coalitions. At first, during the late-1940s era of messianic planning, the English-inspired 'decentralist' grouping held sway: its furthest point of advance was the imposition of the Abercrombie 'land trap' on Glasgow. During the fifties and early sixties, however, the resurgence of public housebuilding, coupled with the political weakness of Scottish Unionist Ministers, was to allow Glasgow and the large burghs to fight back, and to block key elements of this strategic assault on both the country's largest city and its nationwide municipal housing structure.

FROM NEW TOWNS TO EXPANDED TOWNS

Thus, by the early 1950s, a threat had emerged which seemed to pose considerable danger to the housing land supply of cities in Scotland, England and Wales. This resulted both from the Government's partial endorsement of planned population dispersal, and from its search (from 1951) for economy in public housing's use of land, as part of the 'People's House' campaign for higher output. In 1952, however, the advance of decentralism was set back by the decision of the Conservative Government to distance itself from the exceptionally costly New Towns policy. In England and Wales, the Government went so far as to announce in that year that no more would be started. In Scotland, the New Town programme was protracted by the tenacity of the Secretary of State, James Stuart, and of Administrators and planners such as James McGuinness and Robert Grieve. Stuart secured authorisation of one further New Town, Cumbernauld, in 1954 by arguing with the Chancellor that his political position in relation to Glasgow Corporation—given the Green Belt restrictions now in force—would otherwise become 'quite untenable'. But DHS was dissuaded from designating a third Glasgow New Town at Houston in 1956 by local landed pressure; its New Towns policy thereafter lapsed for several years.[9]

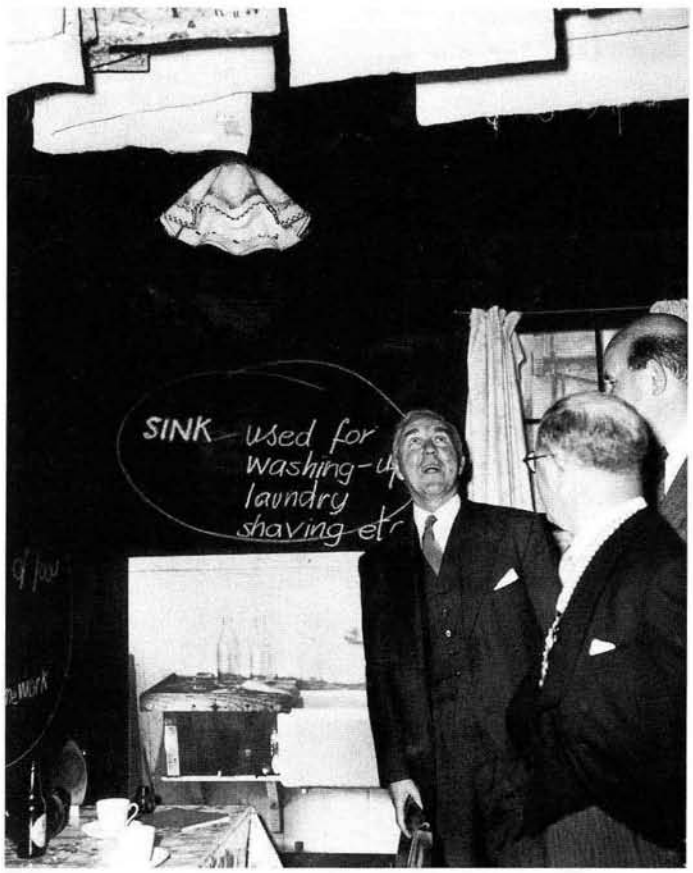
On the other hand, civil servants did preserve some continuity with the previous policy, especially in England and Wales: MHLG's Secretary from 1954, Dame Evelyn Sharp, had formed part of the Ministry of Town and Country Planning contingent inherited at the merger of 1951 [20.3]. To compensate for the atrophying of the New Towns programme, the so-called Town Development policy, established in England and Wales on a piecemeal basis around 1950, was strengthened by the 1952 Town Development Act. Now overspill from the 'sending authorities' (the old conurbations) would be channelled, not into New Towns, but into expansion of existing towns ('reception authorities'). New housing in the expanded towns could be built by the reception authorities or (under a building agreement) by the sending authorities. This expanded-town programme was supported by the TCPA, although Sharp herself was unimpressed by Osborn's incessant lobbying: 'He *aggravates* me!' It also influenced other elements of 1950s housing policy: the MHLG housing subsidy increases of 1955, for instance, were explicitly viewed by Sharp as complementing Sandys's Green Belt circular.[10]

In Scotland, Town Development provisions were applied to the problems of Glasgow by the 1957 Housing and Town Development (Scotland) Act. This promised higher overspill grants than MHLG's subsidies, and further building in reception areas, entirely at Exchequer expense, by the Scottish Special Housing Association. However, the SSHA, a nationwide housebuilding organisation under close DHS and Treasury supervision, which was intended to supplement local authority output in areas of particular demand, was always distrusted by Labour-controlled councils. They saw it as a potential Unionist Government Trojan horse, intended to diminish their local powers of employment and house-letting patronage.[11] Sustained by these provisions, and indirectly linked to the revival of nationwide slum-clearance in

20.3. Dame Evelyn Sharp seen opening the Broadhall Community Centre, Stevenage New Town, in 1956. (Stevenage New Town Development Corporation)

1954, official overspill expectations remained high. Proposals ranged from only 5% of existing population for Greater London and 9% for Bristol, to 14% for Leeds, Sheffield and Newcastle, 18% for Glasgow, Birmingham and Liverpool and an astonishing 23% for Manchester and Salford![12]

As it transpired, however, the expanded towns programme pleased almost no one: it only focused more sharply the local-political opposition to overspill. The views of working-class slum-dwellers were never systematically canvassed on this issue, allowing Osborn to represent overspill as an emancipatory crusade. But many councillors in sending authorities believed that there was considerable public disquiet concerning the policy, especially among semi-skilled or unskilled city-dwellers. We have already seen that some architects and sociologists stressed the idea of a 'local community' during this period. Many councillors, too, in inner urban slum areas such as Stepney or Bootle, held that there was a strong feeling of local attachment among the inhabitants. This, although partly bound up with the impact of rent control in discouraging residential mobility, was also undoubtedly linked with the intense parochialism of the residents. Cities' own outer suburban cottage estates already attracted criticism enough from new tenants, on grounds of social isolation, inconvenience and high transport fares (for instance in a 1958 ITV documentary which branded Nottingham's remote Clifton estate 'a graveyard with lights'); it was clear that new or expanded towns could only be attractive to skilled and upwardly mobile workers. One of the largest-scale single overspill operations attempted, the LCC's decanting of nearly one thousand households in 1959 from Warwick Crescent (Paddington) to Slough and elsewhere, caused such disruption, with 'all the old dears saying "I'll be carried out feet first!"—going so far from where they'd been brought up!', that even Labour members of Paddington MBC privately began to question the LCC's official policy of support for dispersal.[13]



20.4. Henry Brooke, Minister of Housing and Local Government, inspecting a mock-up of a slum kitchen while touring the LCC's 'Moving from London' exhibition (mounted to promote overspill) on 22 September 1958. (Hulton)

Whatever the presumed state of public opinion, city councillors had a far more pertinent reason to oppose overspill: the effect on municipal finances of diminution of the local tax base (rateable value) and, often, of the Central Government supplement provided by Exchequer Equalisation Grant. This loss applied whether the overspill houses were to be built by the reception authority, by the sending authority or by the SSHA. The problem was expressed most bluntly by Conservative members, such as Shennan of Liverpool:

> One of the great problems in replanning is the realisation that the city's corporate wealth is in its rateable value, and this, in turn, rests upon the earning and spending power of its citizens. It is therefore essential that . . . as many as possible of our citizens and our business enterprises shall be retained within the city's boundaries.[14]

In Scotland, the only sending authority designated under the 1957 Act was Glasgow itself. Within Glasgow Corporation, there was a widespread perception that overspill was a direct attack upon the city's housebuilding and low-rents policies, owing to the far higher average level of contributions from rate fund to housing revenue account than was made in big English cities. 'It was adding insult to injury to have to help a family to be exported from the city, and then to have to pay for it!' More generally, Glasgow councillors saw overspill as a slight on the entire city: 'They felt they were being denigrated!' Throughout urban parts of Britain, overspill seemed to threaten municipalities' building activity, simply by proposing to siphon away people for which houses would otherwise have had to be built within their own boundaries. And the towns facing the highest overspill were generally those with active housebuilding councils, whose powerful Housing Committees would not lightly tolerate the dismantling of their building 'empires'.[15]

In this respect, local-political opposition to overspill derived less from any quantifiably harmful effect, whether on land supply or municipal finance, than from its collective psychological effect among councillors. As it continued through the 1950s, it became the focus for general disquiet about the new but ill-defined central challenge to local housing autonomy. Only rarely were overspill proposals directly linked to restrictions on municipal building land within a single programme: most notably, in the case of a 1957 redevelopment plan for Glasgow, to be discussed later in this chapter. To authorities set on large-scale programmes, however, overspill seemed part of a climate ever more inimical towards their freedom to build on a large scale.

The unpopularity of the expanded-town overspill programme contributed to, and was reinforced by, its adminis-

trative ineffectiveness, as nobody had a real interest in seeing that it worked. The only major exceptions to the general hostility of sending authorities were the LCC, as a regional council involved in the coordination of Metropolitan Borough overspill [20.4], and Manchester CBC, whose peculiar zealousness in pursuit of low-density dispersal policies will be discussed below. The LCC discovered its isolation when it called a conference of major cities in 1956 to discuss the financing and administration of overspill. Here, the opposition of the provincial representatives was exemplified by the blunt response of Liverpool's Labour leader, Alderman Jack Braddock: 'If it is intended to press Liverpool to rehouse its housing applicants miles from the City, we shall be prepared to resist it.'[16]

In England, the administration of the Town Development policy generally devolved to county councils or joint committees dominated by the counties (and substantially influenced by agricultural and landed interests), and the programme thus became a football in the endemic feuding between counties and county boroughs. To the latter, overspill seemed a threatening extension of earlier county opposition to boundary extensions and land purchases.[17] Even when overspill agreements were concluded, they were hamstrung by continual inter-authority discord, at both member and officer level. The West Midlands was perhaps the most strife-ridden provincial conurbation. There, the county boroughs such as Walsall and Wolverhampton balanced their conflicts with the counties over housing land with the need to keep a vigilant eye on the doings of 'Big Brother' Birmingham, while the city itself pursued its own boundary-extension battles; the urban districts and small boroughs formed a seething and squabbling backdrop. In 1950–1, for instance, Staffordshire County Council, seeking to block a proposed boundary extension by Wolverhampton CBC, established an overspill agreement with Wednesfield UDC and Seisdon RDC, under which Wolverhampton was initially promised a total allocation of 10,550 houses; in 1957, this was cut to 6,596. However, following several years' disagreement over output and reletting arrangements, the agreement petered out in 1963 after only 3,979 dwellings had been built, leading Wolverhampton to register its 'profound disappointment at the collapse of the overspill promises made to the Corporation in 1950'.

At first, some receiving authorities in England or Scotland were enthusiastic ('smallish towns [were] anxious to join, because they were in a desperate economic situation . . . [with] lots of goodwill, but not much ability!'), but their euphoria was soon dispelled by a rise in Public Works Loan Board interest rates, which reached 5.5% by 1956; Ashford UDC, for instance, was only deterred from repudiating its overspill agreement with the LCC by Board of Trade threats to withhold industrial development certificates. Even with highly motivated planning staff on both sides, progress in the thorny area of 'overspill of industry' was often glacier-like. Frank Tindall, East Lothian's dynamic County Planning Officer, recalls the unexpected direction into which his pioneering Glasgow overspill scheme at Haddington was eventually forced: 'To try and get people with jobs, we had to wait, for instance, till the local van driver got a better job, then overspill could take his job, and so on. Which took forever! So in the end we got fed up with this, and got Glasgow to send across batches of retired people, school caretakers and so on, who were of course very good.'[18]

Local uncertainties about overspill were echoed by similar feelings at Government level. To Dame Evelyn Sharp, on the one hand, decentralism remained an ideal, but one best secured through New Towns, as a Ministry creation whose achievements were ever worthy of research and reflection [20.3]; by comparison, Town Development seemed to her dull and fragmented. Her subordinates, on the other hand, were troubled by its administrative complexity, and believed that 'it was extremely difficult to make it work, because the administrative machinery was inadequate—it lacked the simplicity of a New Town'. And Ministers, by the mid-1950s, were increasingly aware of local reservations about the entire process.[19]

But the decisive opposition to overspill emanated not from the receiving authorities, nor from elements within the Government, but from large, urban sending authorities, in the conurbations of England and Scotland. They, during the 1950s, felt increasingly threatened by a Government-sponsored decentralist policy, which seemed all the more unacceptable for its self-contradictions. Development Plans and housing land supply were constrained by expectation of up to 23% population loss: yet the required overspill provision was manifestly inadequate. At the root of towns' worries was a gnawing fear of impending land shortage—made worse by the impact of slum-clearance (to be discussed in the next chapter). The problem seemed as much qualitative as quantitative: not just a cut, but a fragmentation of the land supply into myriad gap-sites and redevelopment areas.

To many Housing Committees, it now seemed imperative to find a way out of this 'land trap'. Their anxiety stemmed less from popular opposition to overspill or desire to preserve existing 'communities', than from an anxiety to safeguard the autonomy of municipal housing and financial policy, and to defend 'civic status' in general. What was at stake here was less a matter of hard figures than of collective or institutional attitudes: indeed, in historical retrospect, this siege-mentality seems occasionally to have verged on the irrational. For an increasing number of large authorities, it now appeared obvious that some new means of maintaining output on piecemeal sites had to be found as a matter of urgency.[20]

HIGH FLATS OUTSIDE LONDON: A PRODUCTION COUNTER-ATTACK

It was at this point that local authorities were presented with a weapon tailor-made for a defensive building campaign: the multi-storey block (of six or more storeys). We learnt in Section I that high flats were introduced to England and Scotland after World War II as a prominent component of Modern architectural patterns of housing. LCC and other architects had rejected older flatted types, such as Walker's four or five-storey tenements, or 'block dwellings', on grounds of their street-block layout and their allegedly lumpish appearance. Pursuing new ideals of light and open air, they advocated use of higher, freestanding buildings, often as part of co-

ordinated mixed developments. But the urge of forceful urban authorities throughout Britain to build large numbers of dwellings within their boundaries—the driving force of our story in Section II—was not affected by the LCC designers' success as such. Rather, this desire was to be led into new channels under the urgent pressure of the 'land trap'. Increasingly, those pursuing higher production would seize on the designers' high blocks and begin to use them as an output weapon, simply because of their greater height.

The designers had established and buttressed their definition of appropriate high building at both the architectural and the planning levels. The architects did so, at least partly, by promoting the mixed development pattern, in which high blocks formed only one element among several. Some town planners tried to restrict high blocks to relatively limited numbers, by means of their own interpretations of that highly flexible codification of the relationship between land and numbers of dwellings: 'density'. The basis of those planners' line of attack was the so-called diminishing returns theory, first formulated by Unwin and Osborn. This held that the massed building of ever higher flats was an irrational attempt to 'get a quart into a pint pot', which in fact provided very few additional dwellings, because the open space required by further dwellings very soon outstripped the open space released by increased height. This was almost the opposite of Gropius's argument in favour of higher, more widely spaced blocks. Planners in the LCC and elsewhere supported this diminishing returns doctrine by elaborate theoretical assumptions. They asserted that fixed areas of open space for ancillary functions (proportional to the number of dwellings) ought to be provided in every new housing development; and, confident in their own power, they assumed that municipalities *would*, in all cases, do so. These supposedly obligatory provisions included school playing fields, public open space, roads and (in the sixties) car parking.[21]

In the 1940s, layouts of closely spaced five-storey LCC tenements had shown themselves easily capable of attaining 200 p.p.a., the maximum zoned density in Inner London; and, in the following decade, even MHLG architects favourably disposed to Modern design admitted that densities of 100 p.p.a. could be obtained without exceeding four storeys. Yet this approximate range of zoned densities—between 100 and 200—was also to form the context in which most multi-storey blocks, often of twenty storeys or more, were to be built, from the late fifties to the late sixties. The operation of the concept of 'density' was, as we have seen, highly complex and ambiguous. To Modern designers, it appeared to offer a means of extending and reinforcing their influence. It helped them to propagate patterns of housing which they favoured for urban use—above all, mixed development—and then to prevent others from appropriating multi-storey blocks and turning them into another form of 'site cramming'.[22] The production lobby, however, saw the tenement/multi-storey antithesis in almost opposite terms to the arguments offered so far. To them, the difference between the two forms was solely one of height and straightforward dwelling gain—considerations which began to seem increasingly important, as land supply became more and more troublesome. The slender point block seemed so much better at filling small gap-sites than horizontal tenements. Organisationally, too, multi-storey blocks, once established in an authority's programme, seemed by far the easiest way to realise large batches of dwellings quickly from small, scattered sites. Influential designers sensed the threat that this posed to their own role. In the view of the LCC's Oliver Cox, for example, piecemeal redevelopment of an area with isolated point blocks 'was madness. If it had to be developed piecemeal, you did an overall plan!'[23] [COLOUR IX]

But to the Housing Committee and officers of an active, production-orientated city, the density regulations, diminishing returns theories and careful mixed development patterns of the designers could only seem artificial or irrelevant. These 'producers' increasingly came to the conclusion that high blocks offered the easiest way to develop quickly the small gap-sites with which they were now often confronted. Having done so, they then found no difficulty whatsoever, by a thousand and one minor changes of site definition—inclusion of adjacent open space, adjustments to the notional phasing of redevelopments, and so forth—in ensuring that each site conformed to zonings and any other applicable planning 'rules'.

In the schemes of the LCC and other 'progressive' London authorities, it was not the social and visual sophistication of mixed development, but the sheer scale of the new Modern high blocks which exerted a clear fascination on 'provincial' visitors, whether from Newcastle or Middlesex. This was a result both of their suitability for high output, and of their visual connotation of Modernity and progress. To a councillor from Halesowen, for example, Hackney MBC's 15-storey point blocks at Paragon Road 'made his own authority, which thought it was progressive, look like a snail which had lost its way'.[24] As the new housing types percolated outwards from London, an inexorable pattern began to assert itself. The straightforwardness of high blocks' quantitative potential, seen from the perspective of local housing needs, progressively displaced the socio-stylistic intricacies of the original mixed development theory: and more and more production-orientated towns seized on multi-storey blocks as a way to revive output and break out of the 'land trap'. Between 1945 and 1952, 80% of all high flats approved in the UK had been in the County of London; but in 1953–7, the proportion fell to 57%; and in 1958–62, to only 23%. Eventually, the most vigorous building of high flats, in the sixties, was to coincide almost exactly with a renewed public housing boom across the urban areas of the UK. In the mid-sixties, high flats mostly came simply to mean high output.

In cities and towns whose councillors felt themselves threatened with mass overspill or land starvation, the qualifications attached to multi-storey blocks by the LCC designers were pared away, in favour of an increasingly open pursuit of numbers. Instead of mixed developments, the all-multi-storey scheme became prevalent: a couple of point blocks, say, on a suburban gap-site or small clearance site, with the odd low block sometimes tacked on or added later, and with site definition and notional density adjusted to suit the high blocks wanted, rather than the other way round [20.5]. The ideal of tailor-made design for each site was replaced by that of the standard 'package-deal' block; and, under urgent local

pressures, the sociological elaboration of 'need-fit' or 'community' planning was replaced by letting on a 'first come, first served' basis. The first significant steps in this direction were taken by two English cities with an unusually strong (in that country's context) existing municipal 'flat tradition': Liverpool and Leeds.[25]

The City of Liverpool was the first large 'provincial' authority whose use of multi-storey blocks came to be directed by an almost undiluted emphasis on production. Here, the city's evenly balanced religious–political voting divisions were maintained by covert agreement between Labour and Conservatives (in contrast to Glasgow, whose Labourist alliance of the Roman Catholic and Protestant working classes avoided any religious–political schism). As a result, there was an underlying consistency in housing policy during the first two postwar decades, and the city was long regarded by MHLG Administrators as a model of uncomplicated high output. Liverpool's cosmopolitanism and lack of identifiable rural hinterland, and the dependence of so many of its working-class inhabitants on the docks, ensured that the local-political passion for cottages, characteristic of many other English towns, was here very much less pronounced. Between the wars, the Corporation had built many slum-clearance flats in the centre; and, in the 1940s, this policy was maintained by the City Architect, Lancelot Keay.[26]

After the war, Liverpool's flat-building was at first still confined to block dwellings, although two experimental multi-storey blocks were commenced in 1954 by Keay's dynamic and forthright successor, Ronald Bradbury. The city's perception of land crisis finally erupted into the open in 1955, following Labour's capture of the Council. The city had been willing to overspill population to sites immediately outside its boundaries, and indeed proposed that the largest of these sites, at Kirkby, should be designated a New Town. But the MHLG turned down this proposal, and then propelled the Corporation into frustrating expanded-town overspill negotiations. As a result of these delays, during the mid and late fifties many working-class Liverpool councillors rapidly turned against the idea of any sort of overspill. This sentiment was exploited to the full by the Labour Group and Council Leader, Alderman Jack Braddock [20.6], whose sometimes coarse and truculent manner concealed an instinctive sympathy with the aspirations and sectarian fears of slum-dwellers in inner wards such as St Anne's (a mainly Roman Catholic

20.5. Production-dominated slum redevelopment: 1964 view of the Ellor Street Redevelopment Area, Salford, showing three slab blocks built by direct labour to the City Engineer's designs (see also ills. 19.7, 22.6, 26.12). (Salford City Libraries)

20.6. Liverpool's Labour leader, Councillor John Braddock, seen visiting a pharmaceutical factory at Speke in 1947. (*Liverpool Daily Post and Echo*)

area represented by his wife Bessie), or St Domingo and Netherfield (held by the small Protestant Party under an electoral pact with the Tories).[27]

Braddock and his wife, former Communists who had since moved far to the right within the party, exerted an iron grip on Liverpool's Labour politics, through a 'ruthless apparatus' of religious–political control and patronage. In 1955, incensed by the Ministry's obstructiveness on the land question and by its failure to pay overspill subsidy for Kirkby, Braddock unleashed Bradbury, and his Housing Committee Chairman, Alderman David Nickson. Now an impetuous burst of multi-storey building commenced, using any available land: point blocks and slab blocks, suburban sites and slum-clearance sites. At first, some blocks were built in slum-clearance areas such as Everton, with the intention of redeveloping them without disturbing existing religious–political groupings; on the other hand, suburban point blocks, such as those at Beechwood Road or Sefton Park, were let to skilled working-class tenants [20.7]. During the early sixties, however, this social differentiation rapidly diminished. The Braddocks believed that there was distrust of multi-storey flats on the part of families with children, even in Liverpool. But the 'land trap' appeared a far more immediate threat in social, economic and political terms. So, in 1957, Bradbury was directed to step up the city's counter-attack against overspill: defying the supposed diminishing returns of increased height, he added more storeys to blocks already

20.7. Liverpool: East Lancashire Road development (Coronation Court). The first multi-storey block commenced in the city; built by Costain in 1954–6. Photographed 1957. (Liverpool City Council)

authorised (for instance, raising the Garibaldi Street scheme from 10 to 14 storeys); and he drove a coach and horses through the zonings, by securing approval for a 22-storey block at Harding Street, at a density of 229 p.p.a.[28]

Leeds, in contrast to Liverpool, was a city characterised by longstanding Labour control. Here the Housing Committee, under the leadership of the Rev. C. Jenkinson, had in 1935 augmented its cottage-building programme by embarking on one of Britain's first large-scale multi-storey redevelopments, at Quarry Hill; after the war, this slum-clearance programme resumed in 1955 with the Saxton Gardens development. Leeds's schemes were seen by councillors as a 'success' and as popular among tenants. But, by 1956, with the impending exhaustion of central and peripheral sites, it was evident that a new policy was needed to rescue the city's housebuilding from collapse. The political initiative was seized by a new and energetic Housing Committee Chairman, Councillor Karl Cohen [20.8], who demanded the use of multi-storey blocks to maximise the yield of remaining gap-sites. The means to this end was provided by the City Architect, R. A. H. Livett, who produced tower-block plan-types suitable for traditional or prefabricated construction. In 1956, the first contract, for twelve 10-storey precast-construction blocks on five suburban sites, was awarded to Reema, while negotiations for ten more blocks in brick-clad in-situ construction were commenced with a Lancashire contractor, Townson. We shall see in a later chapter that this pattern of semi-competitive negotiated tower-block contracts was to provide the backbone of Cohen's programme over the ensuing decade, in which he managed to clear the worst of the slums and waiting list backlogs [20.9].[29]

20.8. Alderman Sir Karl Cohen; photograph of 1972. (*Yorkshire Post*)

20.9. Leeds: Lincoln Green redevelopment, photographed 1992, showing standard 10-storey blocks built by Shepherd in 1958–60.

Leeds's repetitive blocks were seen by LCC visitors as a prime example of a provincial 'debasement' of the patterns they had pioneered. Denington recollects that 'we went up to Leeds and were horrified at what they were doing, building tall blocks everywhere, on hills, where they weren't justified!'[30] LCC architects were shocked yet fascinated by the raw power of some Northern English municipal 'housing leaders'. One LCC architect who moved to work in Leeds expressed the view that 'the most prominent councillors were just blustering, coarse heavy men who were extremely ambitious—60% proof personal ambition, to get knighthoods or hold the Mayor's mace! The key officers were the professional engineers, used to top-down command Socialism—gross men marching paternalistically over the landscape!'[31]

Following the example of pioneering authorities such as Liverpool and Leeds, many lesser provincial cities—by no means all under Labour control—seized on high flats, from the late 1950s, as a means of breaking out of the 'land trap'. In 1957, for instance, Portsmouth CBC, the most congested English county borough in the 150,000–750,000 population range (in terms of gross density), was facing the exhaustion of its principal building site outside the borough, Leigh Park, combined with increasing ward-level pressure for commencement of slum-clearance on Portsea Island. In that year, also, MHLG refused the Conservative administration's sweeping boundary extension plans, which were intended to staunch the population loss of development outside the borough, with its associated reduction in rate revenue and Exchequer Equalisation Grant. Although the building of tenement-type multi-storey flats had aroused opposition in 1953 from councillors and prospective tenants, four years later the increasing difficulty of letting Leigh Park, and the even greater undesirability of overspill agreements, had come to seem a far more immediate problem. After much debate, the Housing Committee's powerful and long-serving chairman, Councillor Frank Miles, secured approval of Portsmouth's first 12-storey block at Nelson Street, in 1960. He argued that, although costing £70 more per dwelling than Leigh Park cottages, it 'would provide more homes on Portsea Island, for a diminishing population would adversely affect the Government block grant to Portsmouth'. The City Architect, F. Mellor, also justified the scheme on the grounds of popular opposition to overspill: 'Many people who are being rehoused have said that they want to stay in Portsmouth, and the Committee is attempting to fulfil these wishes.' Only ten to twelve such blocks were envisaged at this stage, although thirty-eight were subsequently built. However, their defensive potential against the threat of population dispersal was so clear that councillors immediately pleaded for even higher blocks and densities, and urged the Committee to 'keep people in the city. Many people do not want to move outside to places like Leigh Park. They say it is like being sent to Siberia.'[32]

In this chapter, we are not yet dealing with the climax of the multi-storey production revolution: the 1960s. At this point we are concerned with the initial spread of high blocks in the 1950s. This process, as one might expect, was quite uneven: for every Liverpool or Leeds, there was a city hesitant about, or opposed to, the tower block as an unabashed production weapon. We saw in Section I that several key English provincial authorities with powerful and design-orientated City Architects, such as Coventry or Sheffield, sought to emulate the LCC's architect control and limited, one might say design-constrained, use of multi-storey blocks. However, this task was always fraught with difficulty, as these authorities worked under urgent local-political and financial pressures unknown to their LCC counterparts.

20.10. A. G. Sheppard Fidler (Birmingham City Architect 1952–64) at his desk in 1954. (*Architect and Building* 8-1954, p. 303)

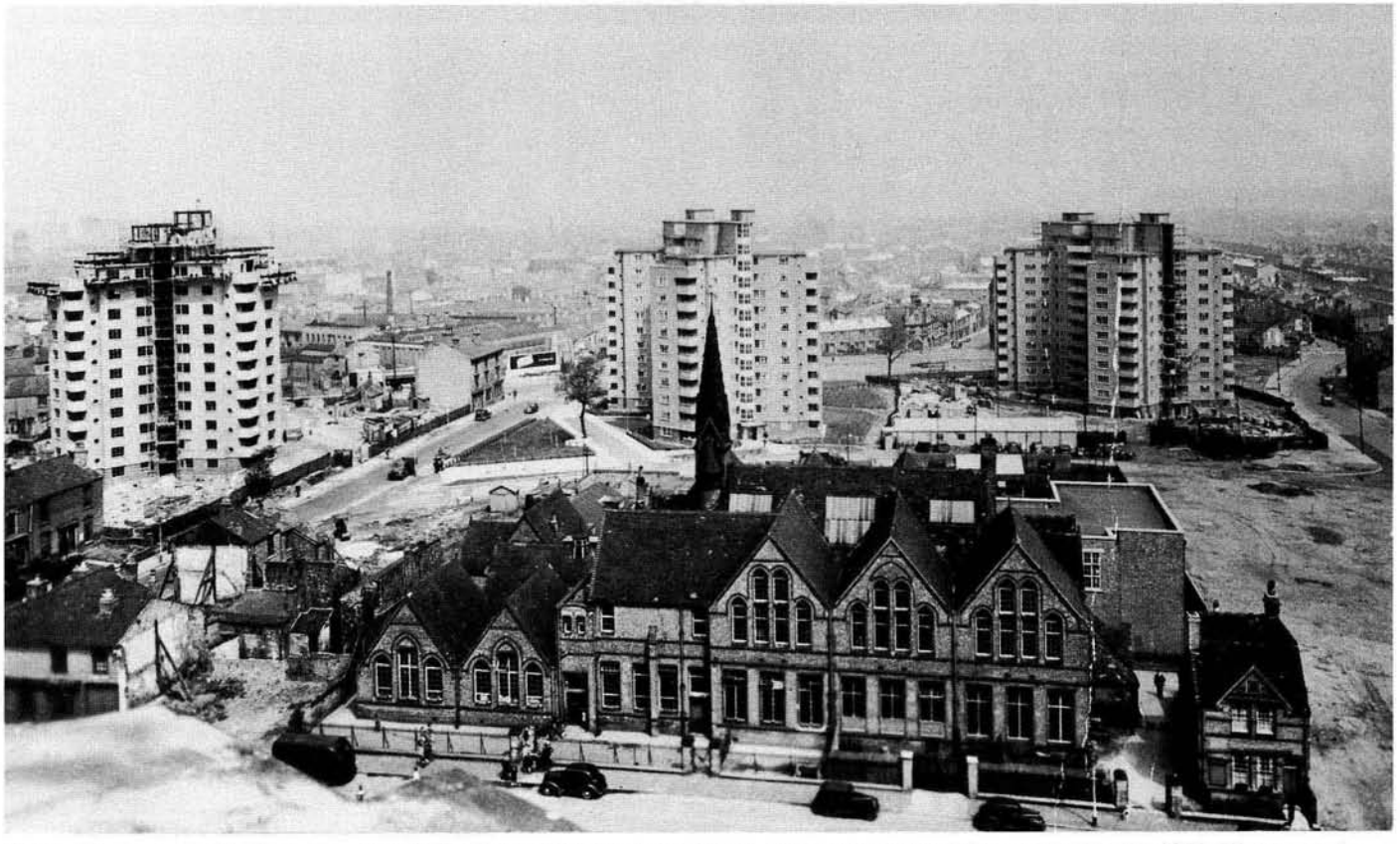
There was always the potential for clashes with production-minded interests over the correct use of high blocks. The most significant example of such a conflict occurred in England's second city, Birmingham, following the appointment in 1952 of the Corporation's first City Architect, A. G. Sheppard Fidler. Previously chief architect to Crawley New Town, Sheppard Fidler boldly set out to establish the primacy of design in Birmingham, by introducing LCC-style mixed developments [20.10]. However, there was no grouping of design-minded councillors in Birmingham, and so this 'design-first' initiative was highly vulnerable from the start to any pressure from production-minded members and officers. His new department, whose responsibilities included housing design and construction, had originated simply as an offshoot from the establishment of the powerful City Engineer, Herbert Manzoni, who subsequently retained responsibility for town planning and all public works. Unlike Manzoni, Sheppard Fidler enjoyed the patronage of no single parent committee, and soon began to feel that his department had been created in a fit of absent-mindedness: 'Birmingham were an engineering city and felt they didn't need a City Architect. It was funny to find I wasn't really wanted—I thought "What the hell am I doing here?" It was the Town Clerk and myself versus the rest—and then when the Town Clerk suddenly committed suicide, that wasn't much help!!'[33]

The new City Architect inherited, from Manzoni, a programme of contractor-designed 6 to 8-storey blocks for use both on slum-clearance sites and in the suburbs; these had been commissioned after prototype 12-storey blocks in the Duddeston-Nechells Redevelopment Area had proved excessively costly ('the lumpiest things you'd ever seen . . . everyone gets their own staircase there!') [4.1, 20.11]. Sheppard Fidler recalls:

> When I went to Birmingham, you could have called it Wimpey Town or Wates Town. The Deputy City Engineer came into my office the very first day I arrived, shoved all these plans on my desk, and said, 'Carry on with these!' He was letting contracts as fast as he could go, didn't know what he was doing, just putting up as many Wimpey Y-shaped blocks as he could! This rather shattered me, because we'd had very careful schemes prepared at Crawley, with very great interest on the part of the Development Corporation, whereas in Birmingham the House Building Committee could hardly care about the design as long as the numbers were kept up—I'd been used to gentle Southern people! There was very little architectural quality about these 'mud pies', but I either had to let it run and hope to bring in changes—which is what I did—or go to the Council and say 'Stop everything for two years while I change things!' Then I'd have been out, not them![34]

Therefore Sheppard Fidler continued, reluctantly, to build Manzoni's architecturally old-fashioned 'mud pies' [21.3], until new policies were ready, which, he hoped, might establish the primacy of design within Birmingham's housing programme. The first of these policies was that his Department should produce its own designs for cottages, low flats and point blocks, which would form the basis of selected or negotiated contracts with national firms, employing their own construction. Contractual initiative could thus be diverted into collaborative development work and constructional experiments: 'I'll design it, and you can Wimpify it!' His second innovation was the replacement of homogeneous 6 to 8-storey blocks with mixed developments, tailor-designed for each site [20.12]. Sheppard Fidler pointed to 'the impossibility of getting high densities . . . with standard type plans and without mixed development'. In confident LCC style, he asserted that 'overrepetition of layout groups must be guarded against and resisted if "design" is not to be relegated to be the least important factor in development'. Thirdly, a landscape architect, Mary Mitchell, was appointed: 'I had a hell of a time explaining to the Committee why I required such an unusual being . . . that what we wanted was a landscape designer and not a "Parks Department person"!'[35]

However, the initial success of Sheppard Fidler's campaign to establish the equality of design considerations with those of sheer output also owed much to external circumstances, and, in particular, to the willingness of Bradbeer's Labour administration to countenance a large overspill programme. By 1959, storm-clouds were to appear on the horizon, with the collapse of hopes for a major boundary extension, a turn



20.11. Birmingham: Duddeston and Nechells Redevelopment Area, Unit 1, 12-storey blocks under construction in 1951. These massive steel-framed and brick-clad blocks proved exceptionally costly, and were described by Sheppard Fidler as 'the lumpiest things you've ever seen'. (Birmingham City Council)

in opinion against overspill within the Corporation, and the accession to power of Alderman Harry Watton, a new Labour Group leader impatient for a reversal of the decline in the city's housing programme.

If Birmingham was, for the moment, insulated from any push to full-blooded multi-storey production by Sheppard Fidler's commitment to 'progressive' design, its great rival as 'second city of the Empire', Glasgow, experienced a similar outcome, but as the result of almost opposite influences. Here, another new City Architect, Archibald Jury, was able to accommodate the most urgent output pressures in a very conservative way, by building tenements, derived in the first instance from Scotland's national tradition of monumental housing architecture, but also similar to flats he had designed at Speke, in his previous post as Keay's deputy in Liverpool. During the early 1950s, Jury had been able to secure the release of substantial pieces of Green Belt land. The ability of his department to develop these sites with three and four-storey ranges—resembling, in their plain but dignified rendered style, equivalent blocks built in those years on the outskirts of cities in Sweden—made possible a building rate (per head of population) between 12 to 64% higher than any of the largest English cities [20.1]. Jury recalls: 'It always came back to the target . . . as many as could be constructed in the least possible time—throughout my entire service in Glasgow!' The city was thus able to put off the inevitable final confrontation over land, and had no need to turn to multi-storey blocks to prevent a slide in output.[36] But, however high the short-term output achieved through tenement-building, there was no long-term strategy with which to oppose the planners' central–local alliance. Thus the latter continued to make the running in policy terms, and sought to reinforce the 'land trap' still further. We shall see later that Ministers' political vulnerability limited the Government's scope for action. Hence the pace was now set not by DHS Planning Division, which had a 'sharp perception of the impossibility of getting a Ministerial stand against Glasgow', but by Jury's own planning staff, under R. E. Nicoll. They doggedly tried, with the encouragement of the TCPA and the city's brief Progressive (non-Socialist) leadership around 1950, to force into the open the overspill implications of the 1951 Development Plan and a 1952 report on Glasgow's housing needs.[37]

Glasgow's planners argued that, out of 100,000 dwellings to be cleared, 60,000 would have to be overspilled outside the city. This figure was, however, dependent on the establishment of density and other controls in the redevelopment areas. To secure this, they devised a diluted variant of the LCC mixed development pattern, with cottages omitted, and used diminishing returns argumentation to justify imposing a density ceiling of 165 p.p.a. in those areas. They advocated that the redevelopment areas should contain no more than 50% high flats, and schemes for the first area to be tackled, Hutchesontown-Gorbals, were commissioned from Sir Robert Matthew [20.13] and Sir Basil Spence. Spence and his project architect, Charles Robertson, designed colossal, rugged 20-storey slabs with inset communal balconies [20.14, 20.15]. These were represented by Spence to the Housing

20.12. Birmingham Lee Bank Redevelopment Area: perspective of western section, *c.*1963. This was a typical example of the landscaped mixed developments favoured by Sheppard Fidler for slum-clearance and suburban sites. (Birmingham City Council)

20.13. Glasgow, Hutchesontown-Gorbals Area 'B' development: montage made and photographed in 1960 by job architect John L. Paterson, and exhibited at the 1961 Modern Homes Exhibition, Kelvin Hall. Paterson also devised the roof-mounted floodlighting on the high blocks—an idea, inspired by Hieronymus Bosch, which was used on many subsequent Scots multi-storey schemes. (City of Glasgow District Council)

20.14. Hutchesontown-Gorbals CDA seen during redevelopment in 1965. The four Area 'B' blocks were seen completed at right, the two Area 'C' blocks at centre, and the SSHA's four Area 'D' blocks under construction at left foreground. (Planair)

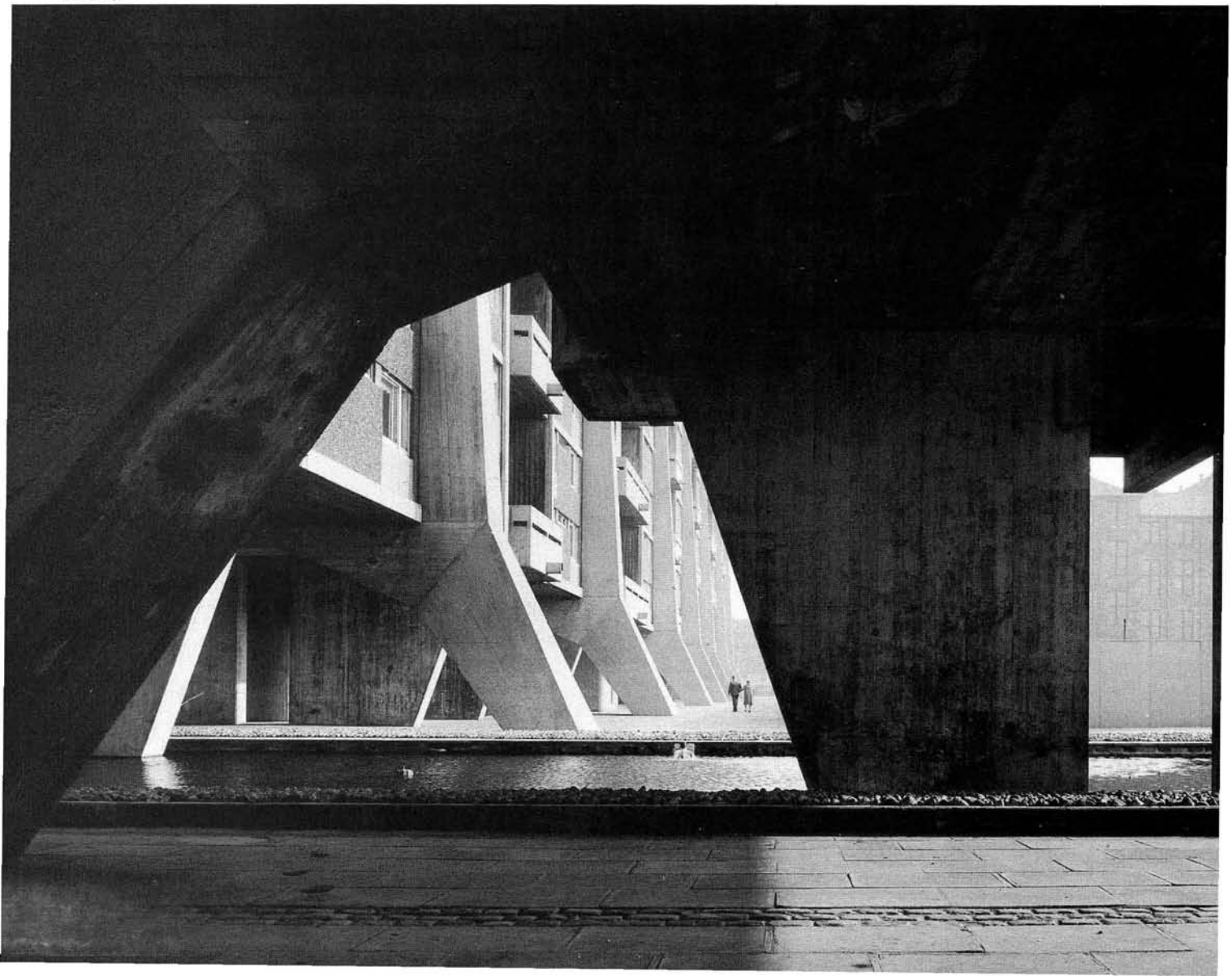
Committee as a revival of the working-class life of the tenement back green: 'He told them, "On Tuesdays, when all the washing's out, it'll be like a great ship in full sail!"—that was a patter-merchant if ever there was one!' But although these two 'grand gestures' were useful in breaking down initial conservatism within the Council against high flats—as evinced in the predictions of the Medical Officer of Health, Dr Horne, that 'back to back' planning and internal bathrooms would cause disease—the output usefulness of these schemes was vitiated by slowness and cost overruns.[38]

In the meanwhile, however, the Housing Committee was faced with a far more acute threat. In 1957, Nicoll's planners, working closely with the staff of Robert Grieve (Regional Planning Officer in DHS Planning Division) had secured Corporation acceptance of a daring housing plan: the *Report on the Clearance of Slum Houses, Redevelopment and Overspill.* Nicoll's report explicitly proposed, with few exceptions, to end most new building in the city other than in the redevelopment areas (RDAs). These districts would now mostly become Comprehensive Development Areas (CDAs), under close planning control. As most CDAs could not be significantly cleared before 1963, new housing in Glasgow during the six intervening years would be almost completely diverted into overspill.[39]

The Corporation and Labour Group leadership, under Peter Meldrum, now officially favoured decentralism; but among some councillors (from both Labour and Progressive parties), there was 'a general uneasiness' about the increasingly explicit overspill threat, and, even, about the 'juggernaut-like' scale of the redevelopment plans. Many members nursed an underlying desire to 'do it all in Glasgow, keep the rateable value, and keep yourself as the second city of the Empire!' To them, piecemeal development of existing gap-sites or areas condemned by the Medical Officer of Health, had long seemed preferable. Indeed, during the 1950s, such thinking had been tacitly supported by housing Ministers such as Commander Galbraith (Lord Strathclyde) or J. Nixon Browne.[40]

A more easily identifiable source of anti-overspill thinking, whether within the Corporation or within the Government, was the indefatigable crusading of that one-man research and propaganda organisation, the architect Sam Bunton. Following a hectic wartime period organising the rebuilding of bombed Clydebank, Bunton began devising and promoting

20.15. Hutchesontown-Gorbals Area 'C' development (architect: Basil Spence) photographed in 1965 when almost complete. (Henk Snoek)



20.16. Sam Bunton (on left) setting off with a group of young golfers on an exchange visit to the USA (sponsored by him), in the late 1950s. (Len Bunton)

one grandiose scheme after another for the reconstruction of Glasgow using multi-storey flats [7.3]. Unlike the LCC designers, these never took the form of academic projects imposed from 'above', but were developed with key Clydeside contractors, always with a view to commercial viability; and they had the explicit strategy of undermining the planners' overspill proposals. The wide dissemination of Bunton's ideas within central and local government was assisted by his skilful cultivation of figures such as Tom Johnston (wartime Secretary of State), Craig Mitchell (DHS Under-Secretary in charge of housing) and A. Macpherson-Rait (the Glasgow Progressives' Housing Convener). His manner was not only genial and breathlessly enthusiastic, but was also characterised by a 'curious idealism—when you went into his office in Clydebank it was as though you were going to see Mussolini—seated behind a big desk—the atmosphere was messianic! He'd say, "It's obvious that fate has marked me out for this! Doors just keep opening in front of me, without my needing to push! Join us—and put your ideas at the cutting edge!"' The extravagant scale of Bunton's many schemes, his lack of interest in small details, and his admiration for big business were all influenced by Glasgow's interwar infatuation with the cinema-borne imagery and drama of American urban culture. Correspondingly, he trenchantly rejected the conventions of 'national British' architecture, dominated by Anglocentric preconceptions of ruralising Picturesqueness, individuality of detail and gentlemanly amateurism. Where even Liverpool's housing delegation to New York in 1954 had been overawed and frightened by the densely packed Parkchester project, Bunton found only exhilaration and inspiration in that city's soaring skyscrapers. Having designed in an Art Deco manner before the war, Bunton now vigorously embraced, and stayed faithful to, the 'CIAM mainstream' of Zeilenbau and other formal layouts. Like many other postwar European architects specialising in housing and redevelopment work, such as Belgium's Renaat Braem, but unlike most English designers, he saw nothing inherently problematic, nothing requiring dilution or qualification, in the design of dwellings in massive, regularly arranged blocks. 'Housing today', he declared, 'is no longer domestic architecture; it's public building. You mustn't expect airs and graces, and things like different-sized windows and ornamental features.'[41]

However, despite Bunton's expansive world-view, and his inexhaustible energy and ingenuity, there was no concerted political or administrative backing for his proposals: Glasgow's Housing Conveners of the 1950s were too cautious to seize the initiative, while Jury and middle-ranking DHS Administrators looked on Bunton's schemes with scepticism, on grounds that they caused 'endless complications' and demarcation disputes. So the central–local alliance between the Corporation and DHS planning factions was able to block his ideas, one after the other, and continued, on the surface, to seem invulnerable.[42]

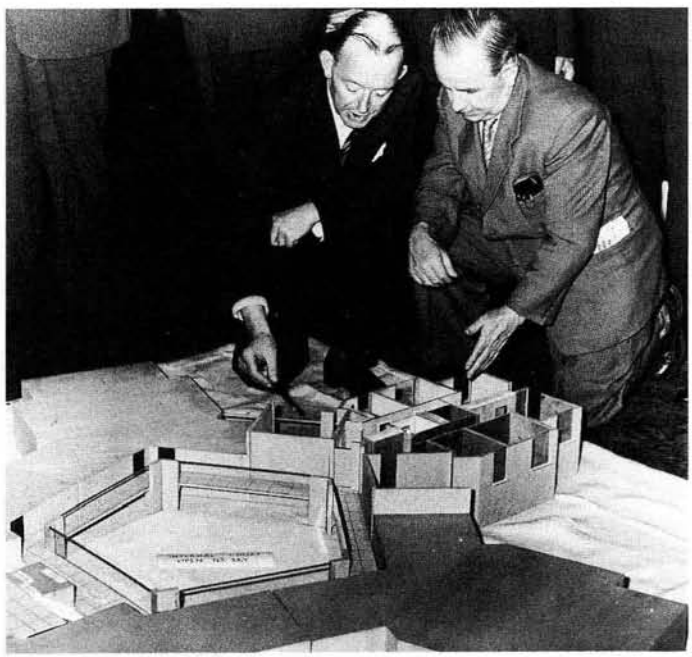
In June 1958, for instance, Bunton put forward proposals for in-situ multi-storey redevelopment within Glasgow using massively squat blocks of pentagonal or polygonal plan: this scheme was intended to counter the Glasgow planners' redevelopment and overspill report of the previous year [20.16]. Within the DHS Planning Division, alarm bells rang, and the Under-Secretary, T. H. Haddow, immediately proposed a collaborative attempt with sympathetic elements within Glasgow Corporation 'to puncture the Bunton thesis, which is liable to spoil the atmosphere for the whole overspill operation'. By November, Nicoll's planners in Glasgow had prepared a counter-report around diminishing returns argumentation and statistics derived from the LCC Planning Division [6.8]; and this report was handed to Haddow by Peter Meldrum, Glasgow's Labour Group leader, who was becoming increasingly impatient with what he saw as the reactionary, anti-planning stance of the Housing Committee within the Corporation. Haddow triumphantly minuted James McGuinness, Planning Assistant Secretary, 'Anti-Buntonia, I think!'—and McGuinness, in his turn, congratulated Robert Grieve: 'Mr Nicoll's staff seem to have made good use of their recent contacts with you!' By February 1959, McGuinness could pronounce Bunton's proposal 'practically dead'.[43]

By 1959, it had become clear that no long-term counter to the planners' central–local alliance would derive from Bunton's Niagara of audacious proposals. His schemes had been invaluable in keeping anti-dispersal thinking on the boil within the Corporation, and in readying the Housing Committee, in collective psychological terms, for the daring leap in thinking that any eventual turn to wholesale multi-storey building would require. But, however contractually well-grounded, his ideas lacked political muscle. A decisive

political initiative, originating from within the Committee, would be required if it were to stand any chance of forcing through any effective counter-strategy against the daunting overspill programme proposed in the planners' 1957 *Report on the Clearance of Slum Houses, Redevelopment and Overspill.* The implementation of such an initiative in the early 1960s will be discussed in later chapter: this was to involve the massed building of multi-storey flats on any available site within the city, in order to escape the Abercrombie 'land trap' once and for all.

During the 1950s, the uncertainties over high flats in cities such as Birmingham and Glasgow represented only the tip of the iceberg. In Scotland, it is unclear whether hesitancy about high flats was exacerbated by the transient wave of popular anti-tenement sentiment fostered by the housing reformists. But in England and Wales, as we have already remarked, there seemed to be a deeply rooted cultural hesitancy about flats of all kinds. By 1955, flats and maisonettes of all kinds still only comprised 29% of annual English and Welsh public housing output: in rural areas the proportion was far smaller. Five years later, this proportion had risen to 47%; the equivalent figure in Scotland, starting from a much higher base, was 53%. We shall see at the end of Part C of this Section that the building of 'traditional' types, especially terraced cottages, remained even more prevalent in Northern Ireland than in Britain during the 1950s.[44]

A number of large English and Welsh towns would, in all likelihood, have built high flats but for undermining; extractive industry often coincided with 'slum' concentrations. Such authorities were unprotected from diminishing land supply in the late fifties: Stoke-on-Trent CBC, whose building was restricted to semi-detached cottages in many areas, saw annual output crash from 2,054 to only 187 between 1956 and 1959.[45] Other cities with large housing programmes of broadly 'traditional' character were able to keep up a considerable output well into the sixties. Foremost among these was Sunderland CBC, which, with no overspill threat and no land shortage, was able to maintain by far the highest building rate of any county borough in England and Wales over the first two postwar decades, but which did not commence its first multi-storey block until 1961. In some other English authorities, there was tension also between local anti-flat conservatism and architectural aspirations to emulate the design hegemony of the LCC or Coventry. For instance, Norwich's new City Architect, David Percival (previously Gibson's deputy in Coventry), could barely persuade the Housing Committee to build even four-storey maisonettes or point blocks.[46]



20.17. Sam Bunton (left) and George Robertson, Glasgow Corporation Planning Committee Sub-Convener (right), examining a model of a proposed pentagonal multi-storey block in June 1958; one of Bunton's numerous unrealised essays in dense urban redevelopment. (*Glasgow Herald*)

In only one major English city, Manchester, was this apparent national hostility towards flats and high densities elevated to the status of an official municipal policy. Here, E. D. Simon's interwar polemic against the intractable evil of the inner 'slum belt', and his advocacy of suburban cottages, had prevented the formulation of any redevelopment policy, and had led the Council in 1944 to forbid the building of flats higher than three (later four) storeys, or 90 p.p.a. density. During the fifties, under the influence of Lady Simon, Derek Senior of the *Manchester Guardian*, and the City Surveyor, the Corporation fervently pursued overspill building agreements with a range of nearby towns and urban districts, and relegated its own Housing Committee to a 'Cinderella'-like status, permitting it only a faltering programme of low flats, maisonettes and narrow-frontage houses. By the end of that decade, the Medical Officer of Health was clearing enormous swathes of the 'slum belt' each year, Manchester's proposal for a major out-county acquisition at Lymm had been refused, and, despite the overspill programme, output was sharply falling. Increasingly MHLG's Housing Administrators, impatient with the dilatoriness of the Corporation (especially compared with Liverpool's consistency of output), began to press it to alter its policies.[47] Yet Manchester's lack of emphasis on 'production' was not compensated by any initiatives in the field of 'design'. Birmingham's Sheppard Fidler, for instance, found the city 'a very backward place—they didn't do anything, just cleared sites—it was a desert! I've never seen anything like it!' The Simon tradition had left the Corporation without any obvious housing leader among the members to revitalise output, while the newly appointed Director of Housing, J. Austen Bent, was a man of meticulous detail rather than grand strategy. As a result, there was, for the moment, no way out of Manchester's output impasse. We shall see in Chapter 26 that a resolution to this problem would only be achieved in the early sixties, by a turn to vigorous multi-storey production.[48]

CENTRAL AND LOCAL

We have now traced the origins of a municipal response in Scotland and England to the 'land trap' of the late forties and fifties, based on the adoption for production purposes of the high blocks originally devised by LCC designers. The

next four chapters will explain how, from these uncertain beginnings, the great adventure of Modern 'mass housing' gathered pace across the various parts of Britain. As we stated in the Introduction, the relationship between local and national influences forms a central theme of this section of the book. For an apparent contradiction runs through this story: the discrepancy between the haphazard geographical spread of the new Modern methods, influenced by local circumstances and by individuals, and the apparently homogeneous solution adopted for the land crisis: the exploitation of piecemeal sites with high flats.

A simple explanation for this superficial 'homogeneity' suggests itself immediately: that it was 'imposed' on particular towns, from outside or above. Most recent historians of the period have reached this very conclusion. Perpetuating the time-honoured Unwinian assumptions of the 'irrationality' and 'diminishing returns' of high blocks, they have asserted that local authorities misguided enough to build them must have been duped by external influences. F. J. Osborn argued that 'this is partly a class matter . . . one could develop a Marxist theory of the thing', and identified 'architect-journalist lizards' as the chief culprits. Other 'conspirators', such as the central State or the building industry, have been pinpointed by more recent writers. Almost all of these accounts have echoed Osborn's dismissive view of municipal culture, and have characterised local councillors or officers as mere puppets, powerlessly acting out a 'pre-structured' pattern.[49]

In the next chapter, we shall see that the reverse was in fact the case. Central Government had assisted in setting the 'land trap'. But it did not prescribe the solution to this problem, a solution which would sweep across England and Scotland: the building of high flats in existing urban areas, rather than overspill outside those areas. The driving forces of these Modern 'mass housing' drives were big cities with serious perceived housing problems in which the municipal-housing 'numbers game' had, since 1919, taken strongest hold. In such large local authorities, strong housing factions consciously and decisively engineered the sharp policy change of a move to high blocks, in an attempt to maintain output. Various motives lay behind this, ranging from a hard-headed anxiety to preserve rateable value and municipal power, to an idealistic determination to 'rehouse the people'. Usually these local authority housing factions were led by councillors—Group Leaders or Housing Committee Chairmen—but their initiatives often enjoyed strong organisational support from dynamic, production-minded officers: engineers, architects, town clerks.

Of course, we must not form the impression that this urge to build high flats was the sole factor in councillors' minds. In the background, at times, were instincts that ran in different directions. We discussed the arguments employed for and against flats by designers in Section I: these were echoed from the late fifties by other professions, such as housing managers and reformers.[50] But among councillors, too, there persisted doubts about high flats. In England and Wales, this was merely a new manifestation of the general distrust of flats as a whole, caused by the ingrained cultural attachment to the cottage pattern. These feelings applied even in the most highly urbanised areas, particularly in certain Labour Party circles. Among West Ham members, for instance, 'there was great antipathy . . . against flats full stop . . . the idealistic view was: "100% cottages!"'[51] By the fifties, however, these local-political qualms had become chiefly focused on more limited practical problems, such as the building of flats in remote suburban locations, or proposals to decant slum-clearance tenants to high blocks whose rents would be higher than those of cottages.[52] In Scotland, councillors' hesitation regarding high flats chiefly emanated not from opposition to flats as such. Rather, the continued straightforwardness and cheapness and, thus, the political attractiveness of tenement-building was reinforced by the low rents prevalent in council housing: paradoxically, this made the very high cost of early multi-storey prototypes seem an even greater obstacle than in England.[53]

However, during the period which forms the focus of Section II—the late fifties and early/mid-sixties—the sometimes powerful qualms concerning high flats among councillors and supporting officers were none the less overcome in most cases, and overcome decisively. Among councillors, this was the result not of external pressure, but of the plain quantitative advantages of multi-storey blocks in satisfying the supreme local-political demand of those years: maximum output of new dwellings. In the case of some Labour-controlled authorities, political considerations also undoubtedly influenced the desire to frustrate the 'land trap' and retain the working-class population; but the vigorous multi-storey programmes of predominantly Conservative authorities such as Portsmouth or Brighton show that narrow party-political motives provide only a partial explanation. Among the officers, opposition to multi-storey building was overcome simply by the ascendancy of the production orientated groups, a primacy made possible, in its turn, by the political power of their councillor patrons. Figures such as city engineers helped establish and maintain output by cheerfully pillaging the Modern housing store, pocketing the high blocks but discarding the mixed development sociology—while the advocates of design seethed impotently on the sidelines.

We shall return later to discuss the question of relations between various groups within local authorities. The next chapter, however, discusses perhaps the key aspect of municipalities' external relations: their dealings with Central Government, particularly concerning the financing of housing output, during the 1950s—the period when the municipal response to the 'land trap', through wholesale building of high flats, was being formulated. We shall find that the Government and its housing departments in Scotland and England did not take the lead in this policy change, but instead played the role of a sometimes unenthusiastic accessory to the cities, as the latter plunged vigorously into the production of these costly housing types.

CHAPTER 21

Central Government, Local Government and Housing Production in the 1950s

This was a great democratic drive, which Governments were unable to resist, or influence, beyond a certain degree!

P. C. Rendle, 1987[1]

WHAT WAS THE impact of Government policies during the 1950s on the nascent Modern housing drives in England, Wales and Scotland? So far, we have touched on this issue indirectly, by pointing to the involvement of Government Administrators and planners in the central-local alliance which set up the decentralist 'land trap'. Here, by contrast, we are concerned directly with Government *housing* policies—devised and implemented by Ministers and Housing Administrators—and the relationship between these and the activity of large municipalities.

One question dominates this chapter. From the mid-1950s, after the 'land trap' had been set, was it the Government's intentions and actions, particularly through subsidies, which decisively pushed Scottish and English cities to respond to the land crisis by massed building of high flats? The answer to this question, we shall find, is a resounding negative. Some central Government housing initiatives did reinforce the general atmosphere of land crisis—notably the turn to slum-clearance, which compounded the inhibiting effect on suburban development of the planners' zoning restrictions. But it was the great cities, alarmed at the threat of population loss, that decided of their own volition to revive output through multi-storey building. Breathlessly, the housing interests within the Government trailed along in their wake, opportunistically devising rules and subsidies to legitimise and assist the snowballing demand to build high flats—on which Ministers increasingly came to depend for their 'national' output figures.

However, the municipally led movement for greater production did not gain universal backing within the Government. In fact, just as Housing Administrators gave free rein to output, their architectural and planning colleagues put forward a succession of initiatives concerned to promote the design viewpoint in housing, or the relation of housing to national replanning or 'modernisation'. Some of these interventions attempted to modify the direction of the local authority housing drives away from high flats, but the power of the big cities ensured that they were not allowed to impede the push for numbers, until the late sixties.

What were the ways in which the Government could try to influence public housing production in Britain? There existed various administrative and legislative provisions, which varied not only over time, but between England/Wales and Scotland: we should here emphasise that, following the 'British' housing convulsion of 1915–19, the two separate national housing traditions had re-emerged in a new form, and had subsequently, in some ways, diverged further. In Scotland, of course, there was one particular, direct conduit of Government influence, in the form of the Scottish Special Housing Association (SSHA)—a national, non-departmental organisation, financed entirely by Government grant and rent revenue (with substantial annual deficits), which built around 10% of postwar public housing. The Government used the SSHA as a limited regulator of housebuilding levels, partly covering its own lack of influence over the large Labour authorities. But the central theme of this chapter is the relationship between the Government and *municipal* housebuilding. Here the former tried to exert influence in two ways: firstly, by attempts to directly regulate housing policy and even the types of housing built; and secondly, through Exchequer subsidies with conditions attached.

In the area of regulation, we shall see that the British Government's power to direct housing production was in practice restricted by organisational incapacity in England and Wales and political weakness in Scotland. The only firmly established procedure was the vetting of tenders for loan-sanction purposes, but this occurred at too late a stage in the development process to affect building policy, and did not in any case apply to Britain's largest authority, the LCC. Informal initial appraisals of proposals by Government architects or planners, or advisory initiatives (such as the Parker Morris Report) exerted much less effect, and were sometimes opposed to large-scale flat-building.

The effects of British Government policy on subsidies were more complex—especially in contrast to the Northern Ireland Government's vigorously successful use of subsidies to spur its generally weak local authorities into large-scale building. In Britain, although subsidy changes could, over time, influence broad directions of housebuilding (as in the fifties move to slum-clearance) they were unable to encourage particular building types, unless already endorsed by the large authorities. For, although the latter were reluctant to build without subsidy, they could neutralise minor subsidy changes in the short term by pooling rents or subsidies on existing properties, or by drawing further on rate revenue.

Special additional multi-storey subsidies, for instance, were only introduced in the mid-1950s following intense pressure from cities set on building many high flats, and were designed

merely to cancel out their extra cost compared to that of cottages or low flats. Whether a particular subsidy provision was widely taken up, was almost entirely up to the cities. Thus, in response to the overspill and multi-storey subsidies contained in the Housing and Town Development (Scotland) Act 1957, Glasgow Corporation chose to pursue the former with lukewarm interest, but exploited the latter with ferocious energy. It is for this same reason—that specific subsidies for Modern flats were shaped by local authority predilections, rather than the other way round—that there is no systematic discussion of building costs in this book.

Over the remainder of this chapter, we shall return repeatedly to this same conclusion—that no British Government department during the 1950s was able to influence the particular housebuilding policies of large local authorities. Only in the late 1960s would it become possible to use subsidy manipulation to impose significant changes in building type—by the use of the 'yardstick' in England, to discourage multi-storey building. But ironically, of course, this new power would partly result from the very *success* of the local authority–led housing drives in satisfying the political clamour for numbers, and would thus undermine the power of the municipal 'housing crusaders' to ride roughshod over the objections of Government designers!

GOVERNMENT INITIATIVES IN THE 1950S: SLUM-CLEARANCE REVIVAL

> We think that there may be about a million slum houses in this country. And, if that figure proves correct, then we should aim to break the back of the problem in ten years.
>
> Duncan Sandys, 1955[2]

By the late forties and early fifties, two waves of 'general-needs' public housebuilding had attempted to cater for the 1939–51 adult population growth of one million and household growth of two million. We have seen that these production-orientated building campaigns were broadly 'traditional' in architectural form, but that the seeds of Modern architectural change were planted by designers, chiefly in the LCC. A parallel process took place in Government housing policy, where a turn began from general-needs building to a revival of slum-clearance.

During the general-needs housing drives of the late forties and early fifties, the busy tenement-building activity of the LCC, the Metropolitan Boroughs and Glasgow Corporation took place against Government attitudes, and subsidy provisions (in 1946 legislation), all of which represented no great break with the past. Bevan's private secretary recalls that the attitude of the Minister and senior Administrators towards flat-building in England was 'a straight continuation of 1939 thinking . . . [T]here was no special drive for flats, they were just one of those things that occurred in big cities!' Apart from one or two isolated interventions, such as the DHS suggestion that Glasgow build an experimental high block and Bevan's equivalent advice to Liverpool, both in 1945, there was little direct Government interest in the spread of high flats in the cities.[3] This situation remained little changed during the early fifties campaign to raise output—the so-called People's House policy (in England and Wales, devised by Dalton and elaborated by Macmillan), which cut the size and cost of the cottages and low flats which made up almost all the programme, while at the same time greatly increased basic subsidies. The new Government support for the 'numbers game', and the setting of national 'target' figures, did not at first coincide with the increased building of Modern high flats.

The mid-fifties, however, saw the beginnings of a significant change of Government policy in England and Wales, and, to a much lesser extent, in Scotland, which created a climate potentially more favourable to multi-storey housing, but which in no way can be said to have 'caused' the high-flat boom.

In England and Wales, MHLG tried, by administrative and subsidy changes, to scale down general-needs council housebuilding and redirect it into slum-clearance. This, in conjunction with the existing Green Belt and dispersal policies, further intensified the pressure on cities' land supply. The new thinking had readily identifiable qualitative and quantitative aspects. The qualitative element—the encouragement of private enterprise building as well as slum-clearance—originated within the Ministry, as a result of a consensus that Macmillan's hectic programme had provided sufficient elbow-room to allow policy reconsideration: 'There had been a heavy rate of building by local authorities, and we had an illusion that the pressure was becoming less urgent: you could choose.' There were also moves to encourage improvement, rather than demolition, of old houses, but the level of grants and other inducements was for the moment insufficient to overcome the local-political preference for building of new dwellings.[4]

Quantitatively, the mid-fifties saw a succession of moves to restrain and then reduce output. These were imposed on MHLG by the Treasury, which relentlessly pressured in 1955–6 for a cut in the public housebuilding target from 120,000 to 100,000. As a sop to the Chancellor, the Minister of Housing, Duncan Sandys, agreed to the scaling-down, then elimination of the general-needs subsidy. He was anxious to avoid any impression of supineness, and so put up a show of resistance at each stage of this process, wrongfooting the Chancellor a mere two days before the abolition announcement by insisting, without prior notice, on retention of subsidy for one-bedroom dwellings.[5] MHLG's cavalier attitude towards the general-needs subsidy cuts derived from officials' private conviction that, with the continuing availability of subsidy for slum-clearance building, the abolition of general-needs subsidy would make little difference to urban output, especially in the case of flats of four or more storeys. In the first six months of 1956, for example, a mere 5,284 of this kind of flat had been started in England and Wales, where there existed 307,542 slum dwellings. Housing Administrators saw the new emphasis on slum-clearance not as a concealed 'cut', but as a welcome way of reinforcing the power of the cities at the expense of the small fry—all within the broader context of land shortage.[6]

But real output reductions, amounting to 20% across the whole of England, were demanded by the Treasury during the brief economic squeeze from late 1957 to mid-1958. This time, MHLG realised that cuts could not be averted by

sophistic juggling with subsidy definitions, but still tried to protect the big cities' clearance and overspill programmes: the overall reduction, eventually amounting to less than 20%, was concentrated, by manipulation of allocations, on smaller and rural authorities.[7] But the severity of the land situation within the major conurbations was shown by the fact that, despite these Ministry attempts at help, the output of many large cities fell during the late fifties by more than the annual average—sometimes by over a half.

The move away from general-needs subsidies in England and Wales was to prove a short-lived policy, abandoned in 1961, although the emphasis on slum-clearance and on channelling support to the largest authorities would endure throughout the sixties. Between 1956 and 1961, however, the new policies were readily adopted by many towns. Some Conservative or 'non-political' authorities of varying sizes, such as Brighton CBC, Gosport MBC or Cardiff RDC, were anxious to strike out in new directions. Land and local building resources could be reallocated to speculative builders, and clearance could at the same time be commenced; or flats could be built for letting to lower middle-class tenants at higher rents. Equally, some Labour councils, such as Salford, Manchester, Oldham, even Norwich, had cleared the bulk of their overcrowding and waiting-list backlogs, and were prepared, for the time being, to tolerate reduced programmes devoted to clearance of unfit, yet not overcrowded, housing. In both these kinds of authorities, the policy change habitually resulted in commencement of redevelopment schemes and a higher proportion of flats, but the degree of emphasis on high blocks, or their inclusion at all, was a matter of choice for authorities.[8]

Multi-storey building seemed more attractive in towns where land shortage coincided with continuing slum overcrowding, as this caused a vicious circle in the decanting of slum-dwellers. The overcrowding meant that more replacement houses would be needed than existed already in the slum areas (a liability which became progressively heavier as clearance spread); yet the 'land trap' was all the time reducing authorities' options in the location of the replacement housing. In other words, any clearance was effectively 'ring-fenced'. Such a combination of constraints undoubtedly contributed to the beginnings of gap-site multi-storey building in provincial cities such as Liverpool; but the problem was at its worst in the London area. This was partly a result of the MHLG's deletions of suburban land allocations for council housing, and the compensatory rezoning of redundant industrial sites for residential use. Denington recalls one instance of the type of public housing site that the LCC Housing Committee now had to use:

> One day, Percy Johnson-Marshall [as Group Planning Officer responsible for Stepney-Poplar] came to the Committee and reported, 'I have an ideal site, according to the Ministry's thinking, to show you today!' They all sat up and looked so pleased—but *I'd* already seen it at the call-in! He went on, 'It's a curiously shaped site, roughly triangular, quite small. On this side is a high-level railway viaduct; on this side is an enormous great brewery; and on this side is a gasworks!' Just about all we could build on that site was a single high block![9]

There were a number of ways in which these hard-pressed London-area authorities could offset the self-compounding land loss caused by slum decanting. One was to build multi-storey blocks in their own right. It did not have to be pointed out to councillors by Ministry architects or anyone else that high flats might make possible a self-contained process of decanting within clearance areas. Alternatively, if overcrowding was too great to permit this, use of high blocks might at least enable much of the excess population to be absorbed on small gap-sites. So the multi-storey block was now eagerly embraced by a wide range of authorities, some of which had never before embarked on large-scale flat-building, or, indeed, on any continuous housing drive. Within the County of London, of course, building of flats up to eight or ten storeys in height was now well established, as a legacy of the Walker era; but LCC planners vigorously tried to prevent the Metropolitan Boroughs from pursuing any policy of piecemeal multi-storey redevelopment. In 1960, the boroughs' collective mouthpiece, the Metropolitan Boroughs Standing Joint Committee (MBSJC), succeeded in persuading the Ministry to issue a circular (37/60) calling for limited increases in zoned densities as part of Development Plan reviews; but even this initiative, as we shall discover in a later chapter, was to be partly frustrated by the LCC.[10]

Immediately outside the County, however, the story was different. For instance, Croydon CBC's large cottage-building programme of the late forties and early fifties was abruptly terminated by Green Belt curbs in 1955. From that point, the Borough's ruthless 'managing director', Alderman Sir James Marshall, redirected its energies into redevelopment of the relatively few slum areas, building high blocks on any available gap-site. By contrast, another prominent Greater London authority, Willesden MBC, was both ring-fenced, and threatened by Middlesex planners with 17% overspill. In the mid-fifties, its new, energetic young leader, Alderman Reginald Freeson, began to build up the decanting momentum of the South Kilburn redevelopment area, by opportunistic use of high blocks on gap-sites, within the area and outside. To a man like Freeson, the LCC ideal of 'comprehensive' redevelopment, at the expense of immediate housing gain, cut little ice: 'Let's get ahead! If you've got a site, don't muck about—get moving, straight away!'[11]

There were three other loopholes, not linked directly to use of high flats, available to boroughs afflicted with combined slum and overcrowding problems. Firstly, councils could plough on regardless with general-needs building, drawing on rent pooling or cross-subsidy from the rate fund, economising where possible, and (within the County) leaving any slum-clearance to the LCC. Such authorities included Fulham MBC, which only received slum-clearance subsidy for 130 of about 600 dwellings built from 1956 to 1961, or the extreme case of Deptford, which, despite repeated Ministry entreaties and threats, and the existence within its boundaries of some of London's worst slums (such as the notorious Mud Island area), flatly refused to undertake any slum-clearance whatever, and erected some 400 dwellings without subsidy between 1956 and 1961. By 1960, indeed, some MHLG Administrators went so far as to claim that the stopping of subsidies would have only a 'trifling effect' in the short term

on the housing finances of large authorities. But the proportion of English and Welsh council housing erected without subsidy during this period was small. In late 1958, Housing Administrators calculated that, out of roughly 250,000 public authority dwellings in the pipeline, 6% were being erected without subsidy, 67% came under the slum-clearance heading, 8% were in New Towns, 4% were town development overspill cases, 2% were in connection with new industry, 8% were one-bedroom general-needs dwellings, and 5% were other general-needs dwellings approved before 1956.[12]

A second loophole concealed a measure of general-needs building within the two-thirds of the programme officially labelled 'slum-clearance'. This possibility was provided by the system of 'displacements', under which the number of slum demolitions could be saved up as credit to be used against new dwellings within a given time, whether or not the actual displaced families had meantime been accommodated through relets. The original two-year time limit was later extended to three under pressure from Bermondsey MBC and the MBSJC, and eventually became so flexible as to tide many authorities over until restoration of general-needs subsidy in 1961.[13] The third shortcut was to concentrate on areas whose clearance would yield a housing gain, as was frequently the case in decayed Industrial Revolution towns in the Midlands. Even in London, several boroughs devised a cunning way to create useful housing gain, by exploiting the LCC's continuing commitment to rehouse at least 50% of all clearance overspill. In 1956, to the LCC's horror, boroughs such as Bethnal Green MBC began to clear numbers of 'fit' houses (houses not qualifying as 'slums') to create worthwhile sites, and to make some impact on their growing problem of unfit nineteenth-century tenements.[14]

To reiterate: the Government, through subsidy and regulation changes, encouraged the shift in the focus of the English housing programme towards tackling slum conditions. But this did not determine the shape of building; it did not compel authorities to pursue multi-storey programmes instead of other officially endorsed policies such as overspill, or, for that matter, housing improvement. Rather, it was obvious to all who sought higher production that high blocks, used piecemeal on small cleared areas or gap-sites, had provided a strikingly simple way to circumvent the inflexibility of the slum decanting process. Authorities up and down the country eagerly grasped at this sudden godsend, brushing aside the diminishing returns objections of planners. In a 'ring-fenced' slum area, there was now a new method of proceeding with decanting and clearance, which would provide the inhabitants with Modern homes as quickly as possible, without overspill. 'Firstly, you had to create the holes to put a tower block up, which you did by pulling a couple of streets down. Then you put in the block, and commenced pulling down the rest of the area!'[15]

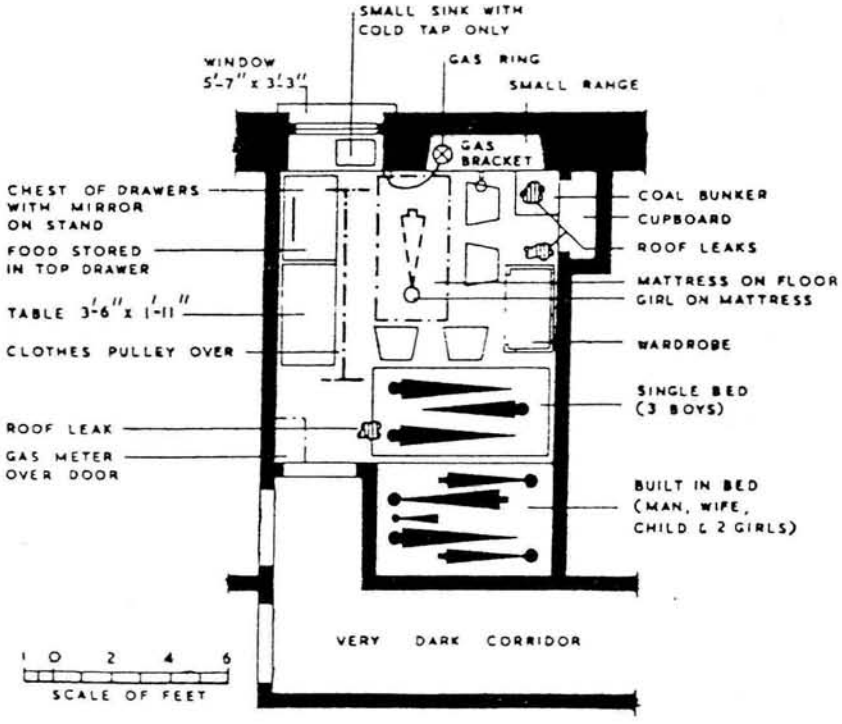
SCOTLAND: GENERAL-NEEDS SURVIVAL

The lasting strength of the tenement tradition in Scotland had delayed the start of multi-storey building by enabling high output to be maintained throughout the 1950s [20.1]. The Government's policy change in favour of slum-clearance in the mid-fifties also had a somewhat weak effect in Scotland, because of DHS's refusal to relinquish general-needs building; and the slow start to slum-clearance, in its turn, further reduced the impetus towards high building during the fifties. Yet, paradoxically, Scottish Government policy, with its unbroken emphasis on large-scale public housing provision, would greatly contribute to the pent-up force of Glasgow's multi-storey drive when it was eventually unleashed after 1960.

The great power of senior Scottish Office officials enabled them to evolve consistent Departmental policies almost independent of the views of individual Ministers. This continuity derived not from one-party rule (as in Northern Ireland) but from the breadth of Ministers' responsibilities, and from the tradition of political consensus in areas such as housing and education. The planning-minded grouping, centred around McGuinness and Grieve, had carried Ministers into a major programme of planned dispersal. But there was another, more deeply rooted central–local coalition in Scots public housing, which was destined to clash fundamentally with the decentralists: the informal alliance between Housing Administrators and powerful local authorities, both committed to high output and low rents.

Thus, in the forties and early fifties, Scots subsidies had gradually gained an edge over their English counterparts, and few authorities diverged significantly from the high-output, low-rent pattern. Although DHS, like MHLG, secured slum-clearance legislation in 1954 and revised subsidies in its 1957 Act, there was no question of any abandonment of general-needs building—despite MHLG grumbles about the resulting 'awkward' variance, and Treasury exasperation at Scotland's 'hopelessly uneconomic' public housing finance. DHS's official pronouncements, for Whitehall consumption, made skilful use of the 'league-table' arguments devised by the 1917 Ballantyne Commission Report. This familiar position was summarised in 1957 by Nixon Browne, in a note to Brooke setting out 'the grim facts about a grim situation'. He asserted that the country was 'not much further on in 1951 than England and Wales in 1931—still a general shortage of houses and not by any means solely slum-clearance. In Glasgow, 100,000 houses are needed (less than half of these to replace unfit houses).'[16]

Certainly, the overcrowding and slum problem was bad [21.1, 21.2], and was getting rapidly worse under the combined influence of rent control and owners' rates—'like a wet blanket over everything'. Entire areas of tenements were in headlong decline, leading eventually to breakdown of factoring and maintenance. Speaking of these 'inhabited ruins', Glasgow's Town Clerk Depute highlighted a paradox of the State's intervention in 1915: 'Forty years ago there were many empty houses but few abandoned by their owners. Today there are no empty houses yet many have been abandoned by their owners.' New housing, on the other hand, was dominated by vast council schemes, catering for middle class and working class, skilled and unskilled alike (in contrast to the English and Northern Irish emphasis on 'spec' suburbia and 'filtering' down of older dwellings for working-class occupancy). At the end of the fifties, owner-occupation stood at a quarter of the English rate: by 1968, only 4% of Glasgow's



21.1. Slum tenement interior, Glasgow, late 1960s. (*AJ* 10-6-1970, p. 1447)

21.2. Plan of single-end (one room dwelling) in subdivided tenement block, prepared by Glasgow Corporation Housing Department *c.*1945, showing living and sleeping arrangements. (City of Glasgow District Council)

postwar dwellings had been built for private owners. In 1963, R. D. Cramond listed five reasons why the level of private building (if seen in average 'British' terms) seemed so 'low': 'the influence of tradition, the old rating system, the level of local authority rents, the lack of competition, and the monopoly of sites zoned for private house building by a very few firms'. To these, one could also add the Labour Government's use of building licensing in the late forties to crush any private enterprise revival. Not even the SSHA contribution to public housing output—around 10%—could make much impact on this monolithic picture.[17]

In fact, the colossal strength of municipal housing provision in postwar Scotland was paralleled only in Eastern Europe. In 'Western' countries (whose postwar low-rental housing was dominated by State-supported housing associations, or semi-autonomous public organisations such as the French HLM societies or the Hong Kong Housing Authority), the closest parallel was much earlier: the interwar drive of the municipality of Vienna. The striking divergence of Scots and English tenurial patterns since 1919 was not associated, in Scotland, with overt cultural or political nationalism. Almost the reverse: its housing schemes, citadels of municipal patronage, bolstered the political power of the Labour Party, which was committed to Union-wide Socialism! The patronage role of public housing was reinforced by the steady fall in the real level of rents, as a result of the unrestricted subsidy from the rates possible since 1935. Between 1938 and 1960, average council rents fell from 48 to 31% of the cost of providing a house; English urban averages, in 1960, ranged from 55 to 73%. In 1959, the average weekly rent of a Scots council house was 8*s.* 7*d.*, and an SSHA house 12*s.* 7*d.*, compared to average public housing rents of 16*s.* 3*d.* in Northern Ireland and 19*s.* 3*d.* in England.[18] With average weekly rents of 12*s.* 3*d.*, Glasgow Corporation could hardly emulate Birmingham's abolition of the rate subsidy in 1963, raising its weekly rents to 44*s.* for prewar and 49*s.* for postwar dwellings. By the late fifties, most large Scottish authorities were devoting a far higher share of rate poundage to housing than cities in England, Wales or Northern Ireland. In 1958, 3*s.* 11*d.* in the £ of Glasgow's rates income was claimed by housing; the highest elsewhere was that of Liverpool (1*s.* 6*d.*). Birmingham, Manchester and Belfast allocated, respectively, only 10*d.*, 8*d.*, and 5*d.* in the £ to housing. The only Scots city closer to the English pattern was Progressive-

controlled Edinburgh, whose housing burden was 1*s.* 1*d.*[19] A comparison between per-capita building levels is also revealing. In December 1964, for example, the highest cumulative total of postwar council housing in England (Sunderland), was substantially exceeded in Scotland by the totals of no fewer than four large burghs (Airdrie, Coatbridge, Dumfries and Motherwell) and three counties. This vigorous urban building, when added to the massive programmes of the Labour-controlled county councils (a stark contrast to the fragmentation of English rural building) and the 10% contribution of the SSHA, fuelled an exceptionally high public building level across Scotland—twice that of England and Wales over the postwar period. During the second half of the fifties, when English public output was 'squeezed' by the Treasury to around 70% of the 1951–5 level, Scotland's output fell by only half that proportion. By the early sixties, United Nations statistics show that the proportion of total housing output built by public agencies was much higher in Scotland than in any other country in Europe or North America: in 1964, for instance, 79%—compared with 66% in the USSR, 51% in East Germany, 2% in West Germany, Denmark and the U.S.A., and just 0.3% in Belgium!

So the options for housing-policy reform changes available to DHS were limited: to nibble at the slums by gradual clearance, abolition of owners' rates and gentle rent rises, through a modest Scots annexe to the 'British' 1957 Rent Act; and to worry away at the council-housing monolith by overspill, subsidy reductions, SSHA building and, again, gentle rent rises. Any radical ideas on the part of Ministers, such as economic-rent multi-storey flats, were firmly discouraged by Administrators. In the absence of a healthy private sector, no DHS initiative (especially if it might be construed as a potential brake on housebuilding) could escape the long shadow of Glasgow and its satellites, their housebuilding and letting fuelled by those 'warring barons', the bailies and councillors: 'Glasgow Corporation was *the* power in the land—no Minister sitting in Edinburgh could do much about Glasgow!'[20] The departmental cohesiveness, autonomy and policy continuity of the Scottish administrative elite contrasted forcefully with MHLG's fragmentation and vulnerability to sudden political interventions. But the civil servants' power in Scotland was only one element in a wider national–local balance, in which the powerful bloc of Labour-controlled large burghs and cities often rivalled the influence of the Government in housing policy matters. We cannot explore here the reasons for the great power of these large urban authorities. One contributory factor, however, was the 300-year continuity they enjoyed with the Royal Burghs of the pre-1707 days of national independence. At any rate, the Treasury viewed DHS's accommodation of these authorities' low-rent, high-output and anti-overspill policies with contempt. Despite the high cost of dispersal, Treasury officials regarded the alternative of a colossal building programme by spendthrift Glasgow as far worse: they warned Stuart that pandering to the Housing Committee would run up vast bills to the Exchequer, and might leave the Secretary of State in an exposed position within the Government, as 'scapegoat for Glasgow . . . to cover up for their [the Housing Committee's] grotesque shortsightedness . . . in assuming for years in the teeth of all the evidence that all Glaswegians could be rehoused in Glasgow'.[21]

THE MULTI-STOREY SUBSIDY: CAUSE OR EFFECT?

The one thing the Government could do was dole out the multi-storey subsidy—and multi-storey flats were *the* symbol of local authority independence! Dr J. Dickson Mabon, 1988[22]

The Government innovation seemingly most relevant to the spread of high flats across Britain was the special multi-storey subsidy introduced by MHLG in 1956 and copied, with variations, by DHS in 1957. The MHLG subsidy comprised fixed supplements increasing in parallel with building height, while the Scottish supplements covered two-thirds of any excess over 'average' dwelling cost. Many have pointed to these subsidies as conclusive proof that the Government was the instigator of large-scale high-flat building—and have gone on to indict the 'irrationality' of such a policy, given that the Government was already well aware of the 'fantastic' extra cost of high blocks. But in reality the subsidies were proof not of the hegemony of Government over municipalities, but of the enduring political and administrative muscle-power of the big cities—now used to secure Government financial support for the high-flat building which might extricate them from the 'land trap'.[23]

The main reason for the introduction of the first special multi-storey subsidies in 1956 was the urgent wish of some large authorities to build high blocks anywhere within their boundaries rather than only in the central redevelopments: the existing site cost and flats subsidies applied only to expensive sites. This pressure had begun several years beforehand, in 1953. The prime mover was Birmingham Corporation, although other county boroughs such as Newcastle also added to the pressure on MHLG. Birmingham's House Building Committee had become alarmed that its programme might soon be 'governed by the redevelopment of the central areas', and therefore decided to start building numbers of Manzoni's six-storey 'mud pies' in the suburbs. But, as these sites comprised cheap farmland, the Corporation paradoxically faced a serious financial loss on such schemes. So the city's leadership bluntly applied its political muscle to encourage MHLG to devise on the spot an appropriate 'discretionary expensive-site flats subsidy' for test-case blocks at Cranes Park [21.3] and Ward End Hall. The newly arrived Sheppard Fidler was amazed at this effortless exercise of municipal power: 'They said, "Look, Minister, you've got to change this! We're the City of Birmingham, not some tiddly little country town—we want these rules changed!" And he did! I was staggered—I thought it was fantastic!'[24]

Once Birmingham had forced its large multi-storey programme through this loophole, MHLG realised, to its dismay, that a little queue of other authorities was already patiently waiting behind, in the expectation that their suburban developments, too, could now be redesignated 'expensive sites'. Such cases included Coventry's Tile Hill and West Bromwich's Yew Tree (both 1955)—while the LCC demanded that Roehampton and its cousins should be similarly treated.[25] This new anomaly only accentuated the dislike of MHLG

21.3. Birmingham: Cranes Park development, seen in 1987. Two 6-storey Wimpey blocks, built 1953–4: one of Birmingham's two test-cases for the application of 'discretionary expensive-sites subsidy' to outer-suburban multi-storey developments. Such blocks were characterised by Sheppard Fidler as 'mud pies'.

and local authorities for the existing flats and expensive-sites subsidies: this unpopularity was caused by the extreme complexity of the financial calculations involved, given serious short-staffing. In 1956, MHLG decided to substitute a simpler subsidy, divorced from site cost or location, and intended merely to equalise the cost to the authority of high flats and cottages. At the same time, the expensive-site subsidy, which had only been of real assistance to Holborn, St Marylebone, Westminster, Chelsea and the City, was recalculated on a simpler acreage basis.[26]

What, however, was the actual effect of the 1956 subsidy change? The simultaneous alteration to subsidies for low flats does appear to have encouraged the building of four-storey maisonettes instead of three-storey flats. But the impact of the multi-storey subsidy was less clear. Building costs as such are not discussed here: but the general perception was that the storey-height increases matched costs evenly. There were claims that multi-storey costs levelled off a little with increased height, creating a slight incentive to build higher. But across the country as a whole, the new subsidies did not provide, and were not intended to provide, any general stimulus to high building, beyond what was already intended by the local authorities themselves.[27]

The provision of similar subsidies in Scotland was less urgent, in view of the continued large-scale construction of suburban tenements: these were considerably cheaper to build than cottages (perhaps in reflection of the pre–World War I tradition of building cottages solidly in stone, unlike the light brickwork of England). Following visits by Administrators and architects to London, the DHS was keen to see a few experimental high blocks built, to permit cost guidelines to be drawn up. It was realised that the two-thirds cost-plus multi-storey supplement introduced by the 1957 Housing and Town Development (Scotland) Act perhaps erred on the generous side, but it was viewed strictly as an interim measure, to be superseded once any major multi-storey drive was in prospect.[28]

In many ways, the measured DHS approach to high-flat subsidies was little more than a reflection of Glasgow's lack of interest in the subject during the mid-1950s. There had been no specific demand from Glasgow for a multi-storey subsidy; but Administrators were well aware that pressure would rapidly mount, as the 'land trap' worsened. Ronald Fraser, the Assistant Secretary who drafted the 1957 Act, recalls that 'there was no great agitation from the Corporation, but we saw that Glasgow was going to be the prime area of relevance, given the site problems and the massive latent demand!' Archibald Jury had already, in 1956, skilfully sidestepped new national cost and planning guidelines for multi-storey proposals, and had forced DHS to consign future vetting of Glasgow high-flat schemes to a toothless joint working party. And, in its comments on the draft 1957 Bill, the Corporation demanded that the multi-storey supplement should cover three-quarters instead of two-thirds of extra costs. As early as 1955, the Treasury had resigned itself to the likelihood that Glasgow would sooner or later attempt to

break free into an unrestrained multi-storey building drive—in which case, it grimly predicted, DHS Housing Administrators would simply act as a postbox for the Housing Committee's demands.[29]

TOLERANCE AND WEAKNESS: GOVERNMENT ATTITUDES TO HOUSING PRODUCTION

Why was it that central Government, having assisted in the setting of the 'land trap' through its overspill and slum-clearance policies, then allowed the big cities, during the 1950s, to define their own response: the massed building of high flats? The reason was simple: that MHLG and DHS lacked the ability and even the inclination to do otherwise, once the wartime and early postwar years of autocratic central interventionism had passed. As the Government's power to initiate and direct a 'national housing drive' atrophied, so the revival in building from the wartime trough brought with it a resurgence in municipal self-confidence. There were also particular national reasons for Government incapacity in this area: in the Scots case, political weakness; in England and Wales, organisational paralysis.

In England and Wales, the enthusiasm of the Housing Minister of the late 1950s, Henry Brooke, to 'identify himself with the slum-clearance programme' and the activities of the large cities was not shared by Dame Evelyn Sharp. She had been unsympathetic from the start towards Macmillan's drive for numbers, and especially towardds large-scale urban flat-building, although she favoured Gibberdian 'landmark' point blocks: 'She always felt she'd been stampeded into it . . . [S]he said what a tragedy it was that Macmillan insisted on so much building and that Labour councils had picked it up—it wouldn't be possible to create a decent environment with so many flats!' . . . 'She just wanted to see the odd multi-storey block in New Towns, the way church spires used to rise, so you wouldn't have a sea of two-storey houses'. Dame Evelyn's personal attention to the centrally planned New Towns or design-conscious authorities [20.3, 21.4] was mirrored by her lack of interest in the obsolete 'old towns', and disdain for many councillors' aspirations.[30]

The effect of this policy vacuum at the top was exacerbated by the fact that MHLG's Housing Administrators were seriously short-staffed throughout the fifties and early sixties. Many Administrators, by no means as unsympathetic to the local authorities as their Secretary, chose to follow the line of least resistance, and simply let rip: 'If in doubt, let them get on with it! If that's what the locals want, and it's not unreasonable in cost—it's their town, after all!' The cornerstone of MHLG's ramshackle administrative controls, its system of yearly allocations (applied except in 1954–7), was itself 'always a fiction—you could make it up as you went along!' Administrators made no consistent provision for any cost control other than value-for-money vetting at loan sanction stage. Even then, they were often happy to allow large local authorities an informal veto in individual cases. Furthermore, much routine decision-making was delegated to regional offices, except during the output slump around 1960: and 'regional offices always go native—they look after their own!' For instance, Edmonton MBC's Housing Chairman, Thomas Joyce, was able to pursue during the 1950s, at his own pace,

21.4. Newcastle-upon-Tyne's Council Leader, Councillor T. Dan Smith, seen with Dame Evelyn Sharp in 1961, inspecting a model of the city's standard point block, then under construction at Cruddas Park and several other sites. (Newcastle-upon-Tyne City Council)

a large redevelopment drive, in the knowledge that MHLG's London regional office would always avoid any show-down:

> Tommy asked, 'What now, Ted?' and he just replied, 'I'm told by my officers you're building a multi-storey block on Fore Street, you're up to the second floor, and you haven't told us, and you're over your quota!' Tommy knew very well, but he turned to the Borough Architect and said, 'Is that true?' The Regional Officer said, 'Tommy, you old sod, you've done it again, haven't you!' But Tommy just replied, 'I can't pull it down, can I!'[31]

If the involvement of MHLG Administrators was confined to a hesitant acquiescence in the spread of high flats, the influence of professional staff was even more peripheral, and, during the late fifties and early sixties, even began to shade into an opposition role. The predicament of the architects and planners was that their initiatives, although encouraged by Sharp as a counter to Administrators' and local authorities' leaning towards output for its own sake, were purely advisory. On design manuals, for instance, she observed in 1957 that 'a synopsis is prepared by Architects and agreed with Admin; and in due course Architects produce a draft. Admin then think it won't do and try to reshape it.' We shall see later that a relatively consistent line among Ministry architects concerning the new patterns—namely, scepticism or opposition towards unrestrained multi-storey building, and encouragement of other types of 'high-density' development—emerged around 1960, once the new, output-centred application of high flats had become clear.[32] Housing proposals were formally vetted by MHLG architects at loan sanction stage: but only trivial alterations could, in practice, be requested at this point. The architects could secure more significant changes in initial informal discussions (especially with smaller authorities), although these were confined to multi-storey proposals because of their high cost; in these initial appraisals, some architects praised high blocks, if used in Gibberdian fashion as landmarks adjacent to open space, while others increasingly attempted to apply cost-based restraints to multi-storey building.[33] The influence of MHLG planners over housing was more indirect, being formally confined to cases of proposed zoning or Development Plan alterations, or appeals and public enquiries, where occasional schemes could be turned down or modified.[34]

The position of Scottish Government designers was even more peripheral than that of their MHLG counterparts. The country's highly urbanised character—nearly 85% of its inhabitants by now lived in towns—permitted very close relationships between DHS's powerful and well-staffed Housing Administrators and the big municipalities, and obviated any need for an allocations system. And the political weakness of Unionist Ministers in the face of the larger Labour councils only reinforced the longstanding central–local consensus in favour of large-scale building between Administrators and authorities. As a result, by the end of the 1950s, it was becoming clear that DHS designers would be poorly placed to resist the most important potential challenge of all: any eventual decision by Glasgow Corporation to break out of the planning land trap, through massed building of multi-storey flats. They simply lacked the necessary administrative and political power: 'No one would dare interfere with this great machine producing houses!'[35]

The fear of marginalisation haunted the Department's planners, whose future in the field of housing policy had seemed so bright in the heady days of the late forties. We shall see later that, once large-scale building of multi-storey blocks began in Glasgow in the early sixties, the Department's planners increasingly turned to the possibility of outflanking the 'housers' at a strategic level, by constructing a national structure of regional planning.[36] Such a retreat into over-arching speculation was not open to DHS architects, who were tied to the day-to-day appraisal of local housing proposals. Their position was a curious mixture of strength where it mattered little, in coordinating the myriad small burghs, and impotence where it mattered most, in the task of restraining Glasgow Corporation. Ever since the beginning of large-scale public housebuilding in 1919, Glasgow had vociferously opposed DHS vetting of individual schemes. Although some DHS architects were in favour of limited construction of 'landmark' point blocks, any turn by Glasgow to multi-storey 'site cramming' was something quite different. But by the end of the 1950s, with just such a policy change in prospect, Housing Administrators began to rein in the architects, to avoid antagonising Jury and the Housing Committee: they warned that 'our relations with Glasgow Corporation generally, and Mr Jury in particular, on the question of multi-storey flats, are highly delicate'. The architects' influence was undermined by their failure to establish cost guidelines for high flats, although Administrators had given them two chances to do so, including the foundation in 1959 of a Joint Development Unit (based on MOE's Development Group, and anticipating that of MHLG by a year); inconclusive research was the only result.[37]

While DHS designers watched from the sidelines, Housing Administrators continued to pursue their primary task: that of facilitating local authority housing production, within Treasury limits. Despite the now considerable status in Scotland of the English cottage ideal, massed flat-building still seemed the most straightforward way to achieve this aim of output: and the sharp change from building tenements to building high flats was eased by the fact that some Administrators had visited, and admired, Roehampton and foreign multi-storey developments. 'We were all very impressed by the early Danish point block schemes such as Bellahøj, landscaped with natural rocks and silver birch.'[38] However, Housing Administrators were taken aback when they realised that the open-ended generosity of the 1957 Act multi-storey subsidy was proving, in its own right, an 'undoubted attraction' to build high, even in improbable locations such as Perth. In response, tough temporary restrictions on multi-storey building were introduced. An apparently decisive resolution to this problem, however, was reached in 1962. In that year, faced with urgent local pressure for expanded multi-storey output, Administrators after much argument secured the replacement of the 'cost-plus' subsidy by an administratively simpler flat-rate payment. Now the procedural restrictions on multi-storey schemes could be relaxed almost completely, thus throwing the output floodgates wide open.[39]

CHAPTER 22

Quantity or 'Quality'?: Defeat of the Designers

Today, architects are part of the building industry.
A. W. Cleeve Barr, 1957[1]

THE BIG CITIES' discovery that multi-storey 'site cramming' offered an escape from the 'land trap' had broadened the scope of Modern flats beyond avant-garde architectural design; and in its wake it triggered conflict between 'designers' and 'producers' for control of the direction of Modern housing. In the early 1960s, this struggle came to a head, inside and outside the Government, with both sides exploiting the booming economy to press their claims. The advocates of 'design' asserted that increasing affluence made it imperative to raise housing 'quality'. Municipal housing 'crusaders', on the other hand, became more vociferous in demanding Government support for increased quantity of building—especially of high blocks. One might ask: what substance could there possibly have been in any quarrel between 'quantity' and 'quality'? After all, in Section I we found an apparent consensus among all 'providers' that Modern housing could provide *both*.

In reality, however, there was a yawning gulf in understanding. The ideals of 'quality' and 'good design' so eloquently advocated in architects' and Ministers' public pronouncements were largely drawn from the 'standards' of Modern Dwelling design and theories of 'community design'. But most municipal 'housing crusaders' acknowledged only a rather more elemental selection of standards—sunlight and daylight, floor-space, kitchen and bathroom provision—which were mostly also applicable to the previous generation of municipal flats; indeed, the late fifties Scots space standards, virtual equivalents of Parker Morris, were applied in the first instance to the massed building of tenements at Easterhouse. To councillors and officials set on higher output, whether of Modern flats or tenements, insistence on anything more than these basic standards certainly seemed frivolous, and even raised a question-mark over its authors' motives. Thus 'design', which to our Modern Dwelling professionals in Section I seemed factual and uncontentious, could end up being interpreted by others as a rhetorical device, a weapon to advance the power of one professional group.

In key instances, such as that of Glasgow, the result was to be bitter conflict. But, more usually, the opposition of design to production was to be bypassed in a less confrontational way. As economic pressure eased, political pressure grew for a revival in 'national British' housing output—a tendency which only increased Ministers' dependence on the active authorities. So the hidden agenda of Government housing policy from the early sixties became a simple extension of the production line of least resistance—which, again, further reinforced municipal power, and allowed the rapid spread of multi-storey building across the urban areas of Britain.

What, then, was the general context, during the early sixties, in which this design–production clash flared up? This period was characterised by a combination of optimism and satisfaction concerning economic prospects and the achievements of public housebuilding, and worries about a whole range of new problems. Within the Government, optimism derived from an expectation of economic and population growth following the financial problems of the late fifties and the further hiccup of the 1961 economic 'squeeze'. There was a feeling that the back of the English slum-clearance problem had been broken, leaving only local pockets of unfitness and housing shortage easily capable of remedy.[2]

But these apparent successes also highlighted new areas of political controversy and vulnerability. Any recovery from the decline in completions since the late fifties was inhibited by land constraints, high interest rates and the slowness of slum-clearance. In Scotland, this only exacerbated the Government's weakness vis-à-vis the powerful Labour authorities, with their demands for continued general-needs output and low rents. In England, conversely, it was the very success of slum-clearance which turned the attention of many cities once more towards their lengthening general-needs waiting lists. The rising clamour for output found party-political expression in the competitive emphasis now given to 'national British' housing 'targets', most dramatically in the declaration of a 400,000 target at the 1963 Conservative Party conference by the new Minister of Housing, Sir Keith Joseph [22.1]. In the South-East of England, the Government also found itself under attack on a range of new issues, stemming from the economic boom and 1957 Rent Act decontrol [22.2]. These included the 'homelessness problem'; the rise in land costs; the threat of mass evictions; and the millstone of 'Rachmanism', a landlord harassment scandal which, 'although in fact a product of rent control, was perceived as a product of rent *decontrol*'. Ironically (in view of many Labour municipalities' increasing reliance on piecemeal multi-storey development), the party's 'national' rhetoric stressed its commitment to a 'comprehensive' housing policy, contrasting this with the Tories' supposedly 'piecemeal' approach.[3]

22.1. The Minister of Housing and Local Government, Sir Keith Joseph, addressing the Conservative Party Conference at Blackpool on 9 October 1963. Sir Keith pledged to fight bad landlords and announced a target of 400,000 for annual housing construction in all parts of Great Britain. (Hulton)

22.2. Sir Keith Joseph's predecessor as Minister of Housing and Local Government, Henry Brooke, encountering anti-Rent Act demonstrators during a tour of tenements in Stepney in 1961. (Hulton)

In the late 1950s, Government designers first began to formulate concerted responses to the production use of high blocks. During the early sixties, exploiting the new political climate of housing, these architects and planners then sought to enter this debate through initiatives which emphasised the idea of 'quality' in housing. MHLG's architects, in a loose alliance with their counterparts in the LCC, saw themselves as occupying the front line in this defence of design. But whereas the LCC architects had relied on visual and social arguments to maintain control over their housing drive, those at the Ministry sought to enlist the principles of cost control into the service of design.

The MHLG architects set out to exploit the disparity between the great cost of high blocks and the cheapness of England's 'traditional', lightly constructed brick cottages. This argument had been formulated between 1956 and 1958 by A. A. Bellamy, a Principal Architect who enjoyed a close relationship with Administrators; and it was incorporated in a manual, *Flats and Houses 1958*, which Bellamy wrote along with S. W. Gilbert, a Housing Principal. *Flats and Houses* argued in favour of building the maximum proportion of four-storey maisonettes in mixed developments, while curbing the proportion of multi-storey flats [5.6]. Bellamy's cost-influenced view of the correct use of high blocks had moved beyond the position of the LCC architects, who held that they should be freely used at the designer's discretion. Bellamy was scornful of LCC assumptions that the economics of mixed development revolved around a cost equation between high flats and cottages, and that 'the height of tall blocks should be increased to allow for more houses'. Instead, he praised the economy of four-storey blocks—in Modern form, of course. These cost-based arguments greatly alarmed Sheppard Fidler, in his capacity as chairman of the joint MHLG–local authority Technical Advisory Panel; he warned Bellamy that 'creating a prejudice against high buildings' might impede designers' freedom.[4]

But the Ministry architects' drift away from high flats was reinforced in 1960 by the appointment of A. W. Cleeve Barr [22.3] as Chief Architect; his arrival was followed by that of other ex-LCC architects, such as Oliver Cox, Colin Jones and Beeban Morris. First, Barr set up a Development Group, on architect-sociologist Ministry of Education lines, which began work on various schemes for cottages and low flats—most importantly, 'Family Houses I' at Ravenscroft Road, West Ham [19.20]. Dame Evelyn Sharp had also hoped that Barr would emulate Education's designer-supervised cost controls. So he and Bellamy worked out a 'cash basis' for curbing high flats and encouraging medium-height Modern flats and maisonettes, and elaborated it into a set of guidelines, published in 1963 in the form of a Design Bulletin containing tables of advisory 'cost yardsticks'.[5]

However, in contrast to the centralised school-building programme, always very much under the thumb of Ministry and county architects and other professional groups, the housing drive was of such urgency that official architects were never likely to be able to exert any real influence over the nationwide spread of Modern patterns. The omens were not good for any centrally directed initiative aimed at fighting the dilution of mixed development principles by 'production'

concerns, and the use of high flats for 'site cramming'. Within MHLG, the sheer scale of public housebuilding caused architectural policy to become seriously fragmented. Even within the central grouping of Whitehall architects, all opposed in varying degrees to high flats, there was a potential division between those who, with Bellamy, singled out their great cost for criticism, and those who attacked them on architectural-sociological grounds: the second group saw the first as 'Treasury fifth-columnists', although this estrangement was to become serious only in the late sixties. Then there were the divisions between the regions and Whitehall, and between the academics and the 'coalface-workers'. On the one side was the Development Group, its activities confined to a quasi-academic vacuum, and acting as if high flats did not exist.[6] On the other side, the regional or territorial architects battled with mounds of case files, trying to apply Bellamy's guidelines, on an ad-hoc basis, to the multi-storey or mixed development proposals with which they were faced.

In the early 1960s, the Bellamy grouping and the territorial architects attempted to introduce further cost-based restraints. But their initiatives, which included a cut in the proportion of high blocks, elimination of 'uneconomic' types such as 3, 5 or 6-storey flats, and more flats on each floor (to spread lift costs), were not fully supported by Administrators, at the level of policy formulation or day-to-day implementation. In 1959, for instance, the latter allowed Chelmsford's Borough Engineer to build a 15-storey block on a suburban estate, despite architects' pressure for a 10-storey alternative based on the *Flats and Houses 1958* cost tables. Even the 1963 advisory yardstick did not prevent gap-site development with individual blocks, as it allowed high site densities at authorities' discretion. However, the early sixties saw the beginnings of the pincer arguments of density definition, that would be used by MHLG architects later in the decade to suppress multi-storey building in England. These held that high building was 'appropriate' only at certain minimum densities, yet that *any* development above medium densities was uneconomic or undesirable.[7]

The most serious effects of the official, restrictive use of 'density' applied to suburban developments. Here, arguments and definitions often fluctuated in an extraordinary way. For example, in 1962, the Housing Committee of the Middlesex borough of Southall decided to develop the town's last major piece of virgin housing land, the Golf Links site, with a scheme including high blocks. Immediately, Southall became caught between the competing density stipulations of two official groupings, both set against multi-storey 'site cramming'. On the one hand, Middlesex County Council's Area Planning Officer flatly demanded that the development should not exceed 60 h.r.p.a.; on the other, MHLG Regional Architects and Administrators would only allow high flats if the 'site density overall' was 100 h.r.p.a. or more, which they regarded as the minimum 'appropriate' level for multi-storey blocks. Eventually, after seven months' haggling over which definition of density should be applied, both bodies agreed to the erection of two point blocks, so long as development was restricted, for the time being, to two-thirds of the site —giving a site density of 98 h.r.p.a., but a density for the

22.3. A. W. Cleeve Barr (left), pictured in 1958, when working as Principal Architect in charge of the Ministry of Education Development Group. (*AJ* 15-1-1959, p. 87)

notional entire scheme of 60 h.r.p.a. Southall also had to promise MHLG that (in negotiations with Middlesex) they would not renounce the right to develop subsequently the remaining third of the site: for, the Ministry speculated, zoned densities might at some future date be raised. If even the relatively modest output demands of suburban Southall were constrained by the competing restrictions of different density bureaucracies, one can imagine the gulf in thinking which separated the elaborate tables of layouts in *Flats and Houses 1958* from the production concerns of men such as Bradbury in Liverpool![8]

While MHLG architects attempted to enlist administrative procedures of cost control into the service of design, the public debate about English housing was meanwhile reinforced by two major official initiatives. The focus of discussion concerning the dwelling itself was the 1961 Parker Morris Report, a characteristic product of the Central Housing Advisory Committee, source of innumerable Establishment-reformist prescriptions for a 'comprehensive' housing policy during our period. As we saw in Section I, Parker Morris emphasised design by architects, and practical and socio-psychological analysis of dwelling use; and it recommended new and potentially costly provisions of additional space, heating and fittings. Here the Committee was partly motivated by its 'apprehension' about the flat, seen by its members as always a mere 'expedient' in comparison with the traditional English cottage, 'which has personal qualities and allows for individualism'. Gadgetry and architect design might partly compensate for flats' supposed inferiority [2.4].[9]

The second initiative, under the broad heading of 'Urban Renewal', was concerned with the wider setting of housing: it sought to go beyond mere slum-clearance, by discussing housing in the context of the mounting pressure for central-area commercial redevelopment. 'Urban Renewal' resulted from a combination of several influences: a growing Ministerial unease about overspill and desire for private-sector involvement in redevelopment; opposition by MHLG planners to piecemeal redevelopment; agitation by the architectural pressure-group SPUR for higher-density 'urbanity'; and pressure from Coventry's City Architect, Arthur Ling, that redevelopment and overspill subsidies should be extended beyond slum areas, and should also cover private developers. This evolved into a Government campaign for joint public/private redevelopment and improvement of decayed, but not unfit, 'twilight areas'. Urban Renewal advocated design-conscious redevelopment which would reject use of high flats for 'site cramming', or as municipal 'status symbols'.[10]

But neither Parker Morris nor Urban Renewal offered any assistance to Ministers in tackling the most pressing aspect of the 'housing problem': the continuing depression in output. This fact was readily grasped by Sir Keith Joseph [22.4]. He was initially charged by Macmillan with the task of using 'urban renewal' as the vehicle of a joint Central Government–private enterprise housing drive, which would partly harness and partly bypass local authorities, creating 'New Towns within old towns'. Joseph eloquently advocated urban renewal, at both a practical and a theoretical level; in 1964, he commissioned from Taylor Woodrow the Fulham Study, directed by the architect Theo Crosby, which explored London twilight area redevelopment at densities far above LCC maxima.[11] But Joseph soon grasped that he could not reverse overnight the economic consequences of half a century of rent control, as 'the sleazy areas where the need for renewal was greatest did not attract private enterprise', especially if incomers had to subsidise displacees' rents. Politically, too, he saw a dead end: 'I dreamt of going to firms like the Prudential and saying, "Under what conditions would you return to investing in housing?" They'd've said, "It's easy—just give us a public undertaking by the Labour Party that they won't cancel it!"—the one thing we couldn't deliver!'[12] He also knew any attempt to impose Parker Morris standards would be resented in many town halls, Labour and Conservative, as wasteful and invidious. And, by driving up prices, any precipitate introduction of Parker Morris might exacerbate the existing housing shortage. Political realism demanded that Joseph work with those 'principalities', the large cities, channelling additional expenditure into their own programmes—even if this simply meant ploughing still higher subsidies into construction of multi-storey blocks. Vainly, Joseph expounded his designers' diminishing returns arguments to countless borough engineers: 'I'd roll up a piece of paper, stand it on the table and I'd say, "This is what you want to do—build a high block—but when you've allowed for planning, sunlighting and so on, why don't you do this?"—and I'd lay it out horizontally. But it was high blocks they wanted!'[13] So urban renewal was put on the back burner, to be pursued in due course by improvement rather than redevelopment, and Parker Morris standards were kept advisory. By 1964, only 14% of new council dwellings under construction in England and Wales incorporated the full standards, and 39% the space standards. Even the subsequent voluntary adoption of the full or partial standards by many local authorities (enabling MHLG to make them mandatory for new council housing in 1969) may have owed something to cities' desire to build high flats: in some places, it seems that Parker Morris was used simply as a cloak for the extra cost of multi-storey construction, at a time of building price inflation.[14]

22.4. Sir Keith Joseph, seen on a tour of Birmingham slums in July 1963. (Hulton)

That Parker Morris provided a potential excuse for more multi-storey building, for those seeking such an excuse, was certainly the conclusion reached by one group of outside observers, the Housing Administrators of the Department of Health for Scotland. They of course stood at one remove from the English debates. Space 'standards' equivalent to Parker Morris had in many cases already been achieved, and many Scots councillors and officials regarded the Report's discussions of do-it-yourself domestic self-expression, hobby

spaces, power points and so forth, as irrelevant to the country's assumed housing concerns: high output, low rents and overcrowded slums. Private enterprise–based Urban Renewal also seemed a non-starter in Scotland. DHS had long accepted that it would be impossible to stimulate private building on any scale: openly acknowledged reasons included the scarcity of building land and the reluctance of the, on the whole, few and monopolistic private developers to 'build down to the market', but underlying these was the pervasive influence of municipal housing patronage.[15]

With Housing Administrators so firmly wedded to the new post-1919 'tradition' of high production and low rents, the main focus of activity and innovation for those within the Scottish Office who aspired to break the municipal stranglehold over housing policy, and more generally substitute the 'comprehensive' for the 'piecemeal' was the wider field of 'regional' planning. Here, as in Northern Ireland, sixties 'anti-parochial' rhetoric of economic and physical modernisation was to find expression in the establishment of a Government department to oversee all aspects of physical development. Following the Toothill Report on economic planning (1961), the Scottish Development Department (SDD) was established in 1962, taking over the development functions of DHS (including housing and planning) and of the Scottish Home Department. SDD's first Secretary, Sir Douglas Haddow, and senior planners such as Robert Grieve, nursed heady aspirations to 'develop' Central Scotland as a whole, by redistributing population away from the obsolete old towns towards new 'growth centres'. This was largely a repackaging of overspill, elevating it far above mere slum-clearance decanting. Similar ideas were in circulation in England—for instance in the proselytising of T. Dan Smith—but only in Scotland did they take on this exalted, overarching character. However, as we shall see, during these years of voluble planning rhetoric, the output demands of Scotland's large housebuilding authorities, although less in the public eye, would be well safeguarded by Ministers and Housing Administrators.

BUILDING BY DESIGN?

The key battlefield in the struggle of those years between production and design concerned control of building itself. In Chapter 24, we shall trace the innovations in contracting and construction which provided the basis for multi-storey production in the early 1960s, despite severe building shortages. This success was made possible by the resounding defeat of an architectural bid for hegemony over the building process.

The idea of prefabricating dwellings on a massive scale, to 'solve the housing problem', seemed a uniquely apt point of convergence for the main streams of 'national British' Modern architectural theory. During the 1950s, those 'social-reforming artist-scientists', public architects, at first preferred to cruise regally within the small ornamental pond of the schools programme.[16] However, from 1961, a bold attempt was made to establish architectural control over prefabricated construction techniques, loosely termed 'system' or 'industrialised' building. The designers had more or less monopolised the new Modern structural methods during their 'R & D' stage in the fifties. Now, faced with the threat that these techniques, along with Modern flats in general, might be appropriated by the advocates of unbridled output, they counter-attacked vigorously, contrasting the bogeyman of 'closed systems' (proprietary construction methods, branded mere vehicles for contractual control) with the ideal of 'open systems' (mass-production of components suitable for use in individually architect-designed schemes). Cleeve Barr demanded: 'Bring in the architect at the production stage.'[17]

The campaign for architect-led 'open system' building in the early sixties comprised two parallel initiatives. The first was centred within the LCC, always exceptional in its domination by designers uninterested in the output implications of structural innovations. The second spread outwards from MHLG's Development Group (overseen by ex-LCC figures such as Barr and Cox) to inspire architect-dominated local 'consortia'.

The LCC's involvement with prefabrication had begun in the early fifties. It formed part of the 'R & D' programme by which the Architect's Department exerted nationwide influence over experimentation in housing structural design. During the fifties, the Department had intermittently experimented with precast construction of high blocks, in collaboration with Wates and, later, Reema. Its first full-scale 'development project', Cleeve Barr's Picton Street scheme [7.9, 10.5], was negotiated in 1955 with Laing, not to maximise output, but because 'we'd put in everything we could think of—and a negotiated tender was the only way to price it!' The starting-point was the architect's design, to which structural innovations and contractors' contributions were tailored.[18]

In 1961, faced with an output slump and shortage of architectural staff, the LCC moved more decisively towards the most conservative viewpoint in contractual matters. The Architect's Department, with the support of the Housing Committee, vetoed significant adoption of 'package-deal' schemes designed by contractors, on the grounds that the Council's sites 'normally necessitate tailor-made schemes to achieve required densities, proportions of dwellings, different sizes etc.' And the one small package-deal experiment subsequently authorised—for two 7-storey Bison blocks at Ryde Vale Road, Wandsworth, containing 56 flats—was so complicated by the tinkering of the GLC's architects that they were triumphantly able in the end to pronounce it a failure.[19]

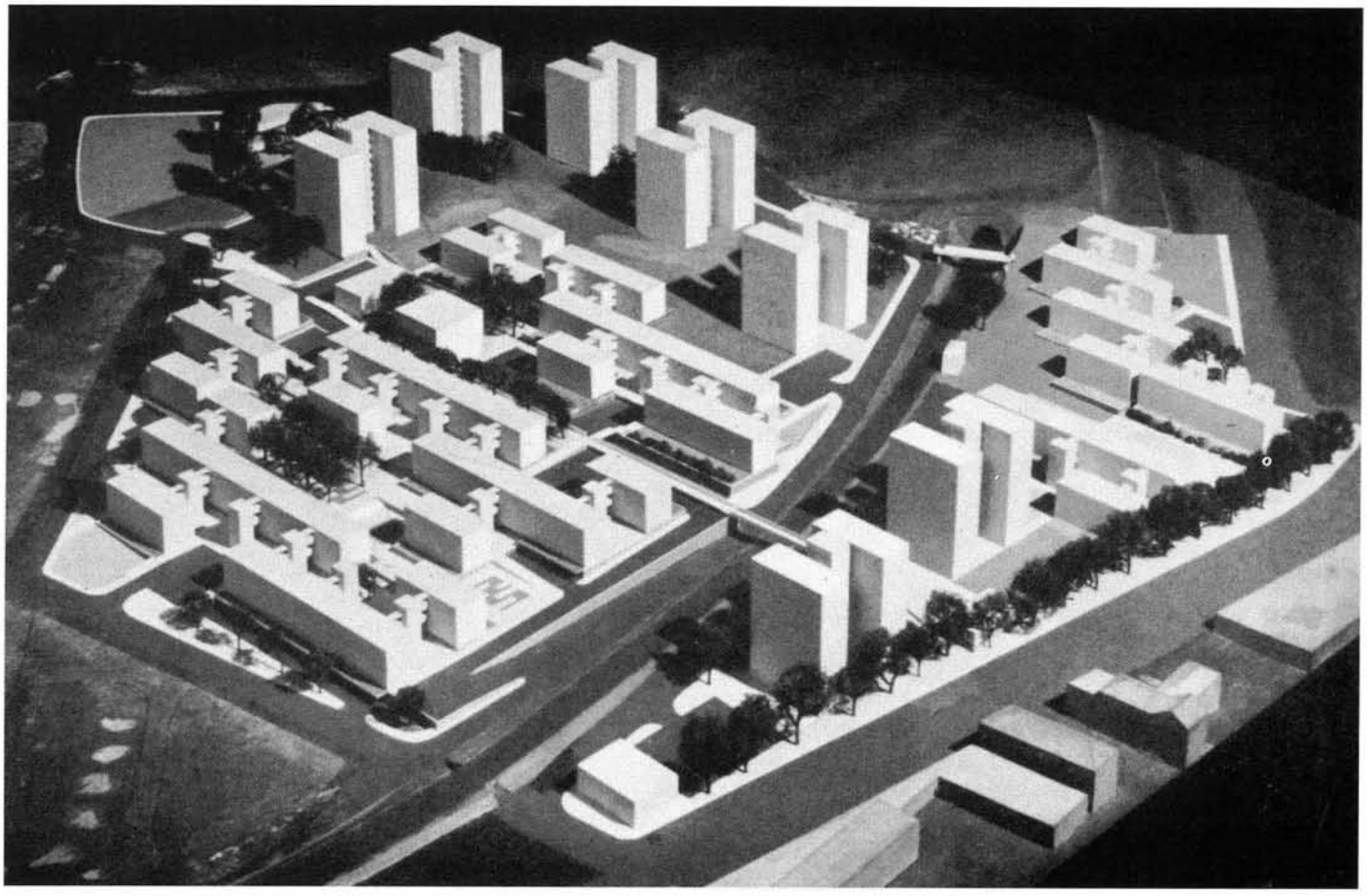
Rather than use package-deals to alleviate the professional staff shortage, the LCC chose to employ private practices, while, in the building field, dabbling with various limited prefabricated supplements to existing output. The two most successful experiments were the Mobile Homes programme, under which timber bungalows were mass-produced by Calders (Northern) for temporary vacant sites, and a joint project with Taylor Woodrow-Anglian for ten-storey Larsen-Nielsen blocks, designed by Martin Richardson in collaboration with the contractors and built first at the Morris Walk Areas and Site, Woolwich (1963) [22.5].[20] But even here, output was not to be allowed to displace design as the Council's main concern: the Larsen-Nielsen contract was

held 'well below its highest capacity to repeat' to 'narrow the gap [between targets and actual output] while maintaining a high standard of architectural merit'. The Department had originally been attracted by Larsen-Nielsen's association with high-quality finish (particularly at Jacobsen's St Catherine's College, Oxford) and Richardson was able to exert considerable influence over the design of the blocks—although he became disillusioned with the formal discipline imposed by the two-flat 'day production unit': 'It didn't express the house, but the production unit, which had no social meaning and therefore no visual meaning.'[21]

At the same time, full rein was given elsewhere to the Department's wilder elements. In 1961, the 'concrete madmen' of Colin Lucas's group were already busy designing new and heavily modelled block types for full in-situ construction, in the first instance at the Brandrams Works development (Canada Estate), Bermondsey. And in that year, there commenced, with the enthusiastic endorsement of Denington and Campbell, a project which was far more spectacular in structural terms: the steel-framed, plastic-clad 'S.F.1' point-block, designed by John Davidson's group. This characteristically exotic product of the LCC design hothouse turned out to be yet another expensive 'one off': the scheme was eventually terminated by the GLC after only four blocks had been built, at Walterton Road and Watney Street Market [10.14].[22]

The second key initiative by public architects to establish power over the building process was centred on the MHLG Housing Development Group; since its inception in 1960, this had always been envisaged by Cleeve Barr, Oliver Cox, and sympathetic Administrators such as R. O. C. Winkler, as a vehicle for the propagation of architect-controlled 'open systems'. It was hoped that its emphasis on two-storey blocks, modular design flexibility and sociological research would counter the advance of contractor-controlled 'closed systems' for high blocks. These the architects denounced as socially and visually crude. Cox asserted that 'external appearance should not be sacrificed on the altar of economy as it has been in all these systems to date'. As the Group's explicit aim was to emulate their Education counterparts, the obvious first step, in an initial project for old people's housing at Stevenage, was to import the CLASP method of school-prefabrication. CLASP was later modified by Pat Tindale into the '5M' cottage series.[23]

By the time of the Cement and Concrete Association conference 'Housing from the Factory' in October 1962, the discrepancy between designers' aspirations and the reality of production had become clear. Cleeve Barr dismissed contractor-controlled prefabrication as a short-term expedient en route to a Golden Age of architect-designed cottages built from standardised components, and Kenneth Campbell grandly asserted that, 'as far as the architect is concerned, he



22.5. London: model of the LCC Morris Walk development, published in 1962. (LCC)

is concerned with the whole of the process we have been discussing today and, in fact, even more'. But Sir Keith Joseph jocularly noted in his opening address that 'although this is called, as a Conference, "Housing from the Factory", I suspect from looking at the agenda that a great deal of it will be flats from the factory'. As explained in 1963 by Neil Wates, the production view of the potential of prefabrication was different from that of the designers: 'System building would have the greatest impact on the output of buildings in high blocks, and [besides] low labour consuming methods in high building would make more labour available to speed up the building of 2 and 3 storey dwellings.'[24]

From that point, MHLG Architects kept up a barrage of initiatives, intended to relax the hold of 'closed' systems and high blocks. The Development Group had already, in 1962, persuaded Oldham CBC to allow it to carry out a 500-dwelling follow-up to Family Houses I, using large-panel prefabrication, in the dilapidated St Mary's area of the town —although some confusion derived from the fact that the Group omitted to inform MHLG's Northern Regional Office, only ten miles away in Manchester! Inexorably, the Oldham project was drawn into the orbit of Laing, an 'extremely tough' firm whose sales pitch, for nearly thirty years, had emphasised involvement in architecturally noteworthy schemes and competitions. Initially it was agreed that MHLG and Laing would jointly develop a modification of the Danish Jespersen 'system' (chosen by the Ministry architects as supposedly the only 'modular' large-panel construction), that Laing would build the Oldham prototype and that the jointly developed 12M Jespersen would then be declared an 'open system' for anyone to use. However, as will be explained later, events were to turn out very differently: eventually MHLG found itself promoting 12M on Laing's behalf, as a 'closed system'. In Scotland, the DHS-SSHA Joint Development Unit echoed their MHLG counterparts' aims, in the face of Glasgow's growing fascination with package-deals. Yet, despite the efforts of Harold Buteux, Chief Technical Officer from 1959 and a zealous proponent of architect-controlled prefabrication, the SSHA was eventually obliged to place contracts for prefabricated high blocks, from 1963, with Concrete Ltd (Bison) and Gilbert Ash [25.6].[25]

But Central Government architects could not be everywhere at once: their campaign would have to develop local offshoots. One way of achieving this was to intervene in key projects, to ensure they were assigned to sympathetic architects of national status. This was first attempted by MHLG at Salford, in Lancashire. Salford's programme was dominated by its formidable City Engineer, G. Alexander McWilliam, and by its equally entrenched direct labour organisation. In 1961, Cleeve Barr, in concert with J. T. Wilkinson, a Senior Planning Officer, successfully set out to dislodge McWilliam from the city's central redevelopment area—although three 15-storey slab blocks designed by the latter's Chief Architectural Assistant, J. H. Earle, had already been commenced [19.7, 20.5]. McWilliam had 'set his heart' on carrying through this vast project in his Department, through the direct labour building (in collaboration with Truscon) of large numbers of these rather old-fashioned blocks, to secure maximum output. In language reminiscent of Richards's 1949 attacks on the LCC Valuer's housing, Barr lambasted the City Engineer's outline scheme: 'The architectural arrangement of most of the blocks of housing appears to be accidental and based mainly on a theoretical north–south axis. The spaces around buildings would be architecturally unpleasant and the views of buildings seen from walking along the proposed roads would be haphazard in the extreme'.[26]

Eventually, Salford gave way, and agreed to the appointment of Robert Matthew Johnson-Marshall as architect-planners for the entire scheme, and the Edinburgh University Architectural Research Unit (ARU) as executive architects for its initial portion: the Ellor Street redevelopment. Percy Johnson-Marshall's brief for this comprised five 17-storey point blocks, and the ARU were given strict instructions to use prefabrication. The Unit, dominated by young architects opposed to multi-storey blocks, found the brief disagreeable, and, on examination of some existing 'systems' (Camus, Taylor Woodrow-Anglian, Coignet), concluded that none offered enough design flexibility, and so 'we would have to do our own system!' An enthusiastic local precasting company, Fram, were structural subcontractors: but the Corporation insisted on its own direct labour organisation (DLO) as main contractor. Saddled with this 'albatross', construction was severely delayed. At the same time, Johnson-Marshall's overall plan for a complex, multi-level 'regional centre' had run into fatal organisational and constructional difficulties [22.6].[27]

Rapidly, it became clear that local offshoots of architect-controlled prefabrication could not be imposed on the municipal structure, but would have to grow within it. Here first arose the idea of consortia: 'regional' groups of municipalities, each directed by its own CLASP-like development group. The economic pretext of consortia was the creation of 'big packages of demand', but their underlying intention was to propagate architectural control of Modern building.[28] This was clear in the policies of the three most important early consortia. The Scottish Local Authorities Special Housing Group (SLASH, formed in 1963) was originally a political initiative of Glasgow's Housing Convener, David Gibson, intended to circumvent high costs and shortages through bulk-buying of materials; but it was soon taken over and redirected by SDD and SSHA architects. The Yorkshire Development Group (YDG, formed in 1961), which initially comprised Leeds, Sheffield and Hull, was partly inspired by pressure from Karl Cohen for higher output, but immediately came under the effective control of a panel of City Architects, who at first (in 1962) adapted a range of existing cottage types, such as 5M or the locally derived Hallamshire and Caspon. From 1966, at the instigation of its Development Architect, Martin Richardson (who was unhappy at the stress on cottages), YDG's exceedingly complex 'Mk 1' range of 5 to 7-storey prefabricated deck blocks was built; after an early 1970s spell of 'dimensional coordination', YDG architects were absorbed by the Leeds City Architect's Department. The Midlands Housing Consortium (MHC), although seen by some member boroughs as a collective bulwark against the designs of 'Big Brother' Birmingham, was in reality an architectural grouping de-

22.6. Salford: Ellor Street Redevelopment Area Stage 8, seen under construction in 1967: four 17-storey blocks, designed by the Edinburgh University Architecture Research Unit and built by Salford's DLO, with Fram as precast concrete structural subcontractors. (Salford City Libraries)

vised by Arthur Ling in late 1961 on the model of Nottinghamshire's schools programme, with the aim of producing an 'open system' for cottage construction. After its formal constitution in 1963, MHC was closely controlled from Coventry.[29]

Although a plethora of consortia sprang up during the remainder of the 1960s, none approached even the modest output importance of these three. In 1965, for example, a London Housing Consortium, and constituent North, West and South Groups, was formed with MHLG encouragement as part of local-government reorganisation; it was based on an existing Development Group of London, Middlesex and Essex authorities. But the LHC proved a toothless organisation largely confined to the leftover sites of outer boroughs with land surpluses. And while consortia were of marginal importance to the big authorities that propped them up, at the other extreme many smaller towns, supposedly the main potential beneficiaries of consortia, contrived to avoid joining any of them.[30]

PAPER TIGER: THE N.B.A. AND 'SYSTEM BUILDING'

System building, as it developed in Britain, was a panacea indeed—it promised the benefits of a revolution in building without a revolution actually taking place.

Brian Finnimore, 1989[31]

The public and professional debate concerning 'system building' was initiated by architects for their own purposes. During the mid-1960s boom, however, it took on a transient life of its own, and was adopted as a handy catchphrase by two other key groups in housing production: contractors and Ministers. To MHLG, 'system building' was useful for two reasons. Firstly, it provided a slogan to justify the expanded public housing drive to the Treasury, on the tenuous grounds that it would help modernise the building industry. After all, Ministers could not be seen to stand idly on the sidelines while municipalities and contractors found their own way round the worsening building industry overload: when large sums of money were being sought from the Exchequer, they had to make a token show of central coordination.

'System building' was also useful to MHLG as a propaganda football during a brief power struggle with the Ministry of Public Building and Works over control of housebuilding policy.[32] The focus of this dispute was the National Building Agency, an organisation originally conceived in 1963 by MPBW, under Geoffrey Rippon, as a means of extending its influence over housing. It was visualised as a central agency to coordinate all local authority demands, with housing, of course, at their head—a 'super-CLASP', overseen by MPBW's Director-General of Research and Development, D. E. E. Gibson. After MPBW began sending

circulars to local authorities, Dame Evelyn Sharp weighed in to block any further erosion of MHLG's position. While paying fulsome lip-service to the ideal of 'systems', she saw to it that the NBA, when eventually set up in March 1964, was administratively strangled at birth: it had no direct departmental patronage, and was kept at several removes from the housing production process. The Agency's only tasks were advisory and hortatory: to 'certify' methods of construction as constituting 'systems', and to assist the formation of local authority consortia to build them. But the official definition of 'systems' was so wide as to be virtually meaningless; and the NBA was prevented by Sharp (in England) from certifying high flats, the real driving force of prefabrication, to avoid ruffling the feathers of the many municipal and commercial vested interests now committed to multi-storey building.[33] During the later 1960s, frustrated by its impotence in building construction, the NBA diversified into management consultancy, where it advised with mixed success on the organisation of, for instance, the Liverpool and Tower Hamlets programmes; and it became much involved with that final variant of 'open systems', the 'dimensional coordination' movement.[34]

Despite his own sympathy towards the NBA's aims, and antipathy to high flats, Sir Keith Joseph was well aware that package-deal high blocks offered the only easy way to raise output quickly. Equally, the Labour Government's supposedly mandatory quotas of 'system' building, although a useful publicity device to pull in small straggler authorities, had little impact on the big cities. They could choose to exploit the slogan of 'systems', like Parker Morris, as yet another pretext for expensive multi-storey negotiated contracts. Or they could, if they wished, openly refuse to comply with the policy. In Scotland, the NBA's 'branch' office did involve itself with high flats, but its campaigning was subordinate to that of the dynamic housing Minister, Dr Mabon.[35]

By 1964, however, debates associated with 'systems' and consortia had reached such a pitch of excitement that the building industry briefly became concerned that the architectural profession might succeed in making inroads on its territory. The journal the *Builder* therefore sponsored an investigation, the 'Roskill Report', which set out a number of claimed disadvantages of consortia. During the mid and late sixties, too, high flats' share of officially defined 'industrialised' output declined from initial preponderance to around 35% (in England and Wales)—suggesting, at first sight, that the architects' campaign had actually begun to bite. But as many contracts included both high and low blocks, it is perhaps more significant that 69% of this output in 1965–73 was accounted for by 'systems' with a 'multi-storey capacity'.[36]

Certainly, large-panel concrete prefabrication was always known to be very expensive for low blocks on their own, although some contractors later found that large orders, such as the Lanarkshire consortium's Camus programme, could yield modest profits. Largely on the basis of Birmingham contracts, over 12,500 Bryant Low Rise dwellings were built [22.7]. But the dispersed layouts associated with low blocks prevented effective use of equipment and slowed assembly: Laing's five-storey Jespersen blocks under construction for Glenrothes New Town, in 1966, were set so far apart that each required its own crane.[37] The only viable 'low rise systems' were lightweight forms of prefabricated or 'rationalised traditional' construction: timber-framing, reconstituted china-clay waste, and so forth. Here the initiatives of the NBA or local consortia could make some impact, especially in English cities where the land situation had eased, for instance in the YDG authorities. But as these programmes largely comprised terraced cottages, in any case long built in a highly 'rationalised' manner with many standardised, bulk-ordered components, they fall outside the scope of this account. Furthermore, many authorities, especially those outside consortia, remained unwilling to consider prefabrication other than for high flats, and many smaller towns still evaded 'system building' altogether: in 1966, for instance, the Clerk of Whitstable UDC reported that it was aimed at larger towns, while Fife County Council's Housing Committee informed SDD that 'system building would be of no assistance in erecting houses because of the use of gap sites, employing their own Works Department'.[38]

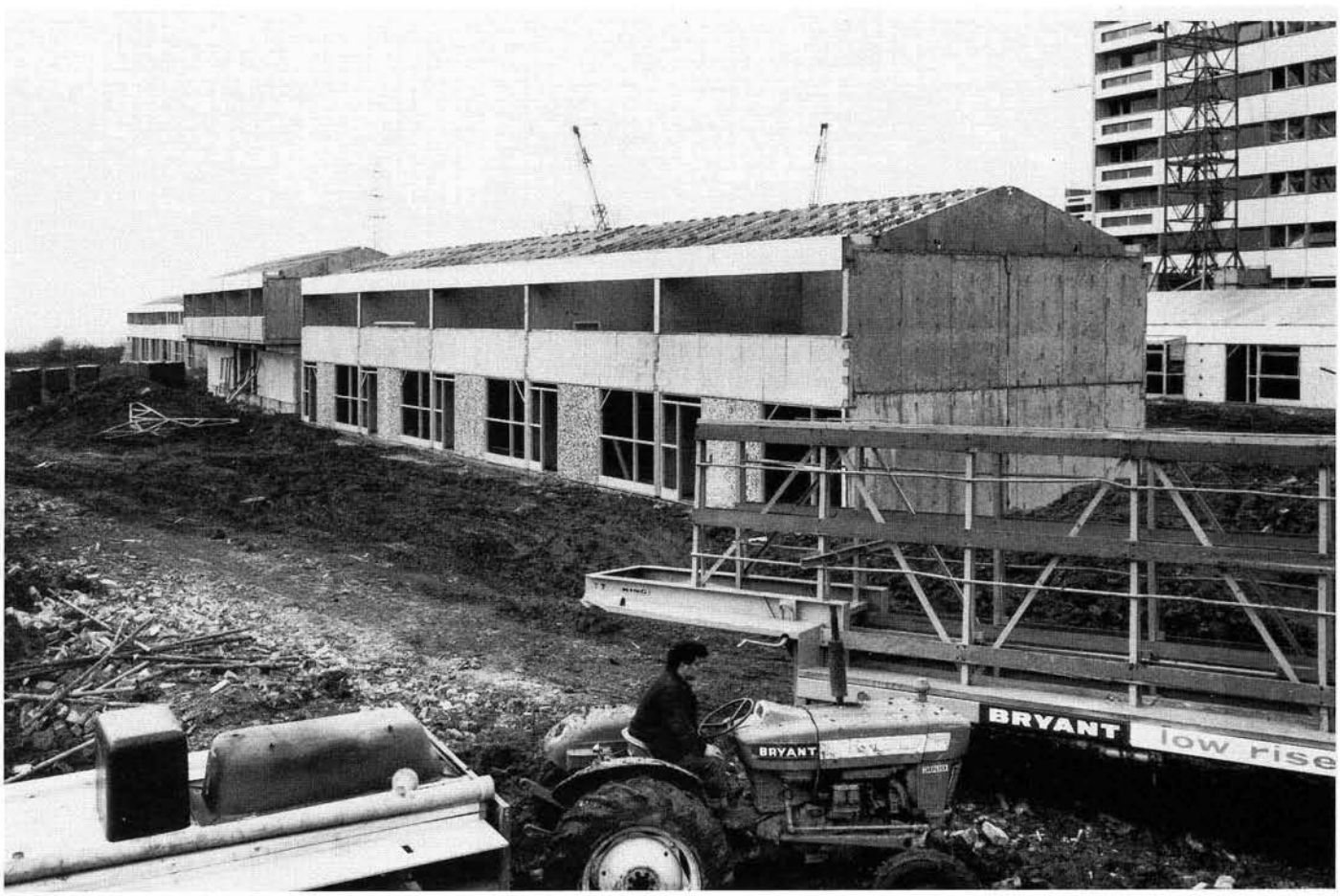
The patchy use of prefabrication, over the various territories of Britain, gave no support to the official rhetoric of building-industry modernisation. In England and Wales, for instance, the proportion of public housing tender approvals classified as 'industrialised'—using the very broad MHLG definition, including many non-prefabricated methods—rose briefly from 28% in 1965 to 42% in 1967, before rapidly falling to 19% in 1970.[39] And if prefabrication as a whole was of transient importance, the impact of the campaign for architect-controlled 'open system' building was even smaller. Outside the LCC/GLC and a few other authorities committed to design, it exerted very little influence over the day-to-day production of Modern housing as a whole during the mid-sixties.

Some architects, seeking an explanation for this defeat, attempted to 'cry foul' and to attribute it to the sheer power of hidden contractual and political vested interests, possibly associated in some kind of conspiracy to unseat the architectural establishment from its natural hegemony over building. One private architect in Glasgow recalls: 'we resented the success of the package deals, and assumed bribery was at work—it was work we could have been doing, because they were taking it away from us!' This circular interpretation has been perpetuated by architectural historians. For instance, Andrew Saint, deprecating the failure of public housing architects to match the tight designer control achieved over school-building, laments that MHLG's Development Group was set up 'too late . . . lines had long been drawn in the battle for housing production, the contractors were in command . . . the influence and sanity it [the Group] tried to dispense were never strong enough, especially in the dire days of heavy panel housing construction.' He takes it as read that the aims of development groups' designers were identical with the needs of local authorities, whereas the 'devastating' multi-storey package deals were 'geared to the convenience of the crane and the accountant, not of the tenant or housing committee'.[40]

We shall discover in Chapter 24 that the reason for the impact of large contractors and their package deals during

those 'dire days' of vigorous production was the opposite of that suggested by Saint. The contractors succeeded not because they bullied or bribed weak councils into adopting policies against their best interests, but because they gave politically strong councils what they required: high blocks, built reliably, quickly and in large numbers. By contrast, much architectural 'R & D' work in the sixties was divorced from the main thrust of housing production. This separation took two main forms—both of which, ironically, conflicted with key elements of Modern architectural theory. Firstly, the architects' work was individualistic and insulated from the 'coal-face' of contracting and building, despite assertions that 'open systems' would form a basis for mass production tied into production needs. The SSHA-DHS Joint Development Unit and the MHLG Development Group glided from one research project to another, designing what they wanted and skirting any involvement with high flats: the MHLG projects were allocated to Laing, longtime builder to the architectural establishment. The Assistant Secretary responsible for oversight of the MHLG Group in the mid-1960s recalls that the architects 'would say, "Right! Now we've finished 5M! Let's get on to the next one!"' Ivory-tower perfectionism was also evident in MHLG sociologists' stipulation that, to provide controlled results, slum-clearance tenants destined for Family Houses I should be of 'very high quality'. The only private architect of national status to attempt to bridge the gap between profession and contractors was Sam Bunton, who was branded a maverick as a result: 'We all used to joke about him—we'd say "He's not really an architect!" He used to advertise himself . . . he admired big business!'[41]

Secondly, the initiatives of designers in the field of building organisation were kept separate from the whole climate of urgent, particular housing demands, and were instead informed by general, professional ideals; these, it was held, transcended the parochialism and myopia of housing committees and the commercial prescriptions of the contractors. Yet no evidence seems to have been produced at the time that development group designs or procedures were superior to those of contractors, in performance or cost terms: a vital point, given the proprietorial way in which the 'design' lobby bandied around the rhetoric of 'quality' and 'standards', as a contrast to the supposedly inferior results of unbridled production. Was this schism a clash between related world-outlooks: between a sophisticated scientific and socio-psychological theory of the Modern dwelling, and a forceful drive to build large numbers of dwellings incorporating but diluting these same ideals? Or was it mainly



22.7. Birmingham: Bell's Lane development, 'Bryant Low Rise' flats in course of erection in 1965. Precast concrete construction, with some timber cladding. (Bryant)

significant here as a conflict between two incompatible groups: 'designers' determined to damn 'producers', whatever they built, as inferior in architectural status; and 'producers' set on output above all else, so as to marginalise the 'design' values of any housing type they used for this purpose?

Perhaps the truth lies somewhere in between, in the parallel interaction of groups of people and ideas. The LCC's Kenneth Campbell recalled: 'The one thing we were determined to do was *not* to become like Glasgow or those other places, in the sense of those enormous, featureless package-deal blocks!' And as the apostles of the Design Revolution fanned out across Britain, similar conflicts of attitudes ensued. For example, Harold Buteux [25.6] recalls his arrival at the SSHA in 1959, primed to transform it into a centre of architect-controlled constructional innovation:

> Previously, what they were interested in was producing dwellings which were all the same. On my first day, there was a senior architect, a dear old boy, with no idea about planning. I asked, 'Let me see what you've got!' He got out stuff on about six schemes, and said, 'We get the engineers to put in the roads, and then give it to the contractors to build standard blocks.' I said, 'We'll have to change this!' He said, 'Oh no, you can't!' So the first thing I had to do was to double the size of the office and then redouble it, and to do my own standard designs to negotiate from. But the trouble was, the local authorities kept asking us to use the old blocks. They were so popular![42]

It was only in authorities such as the SSHA or the LCC, free of urgent local housing needs, or in architect-controlled programmes such as those of Coventry or Norwich, that production could be subordinated and the design lobby satisfied. Any attempt to steer a middle course only exposed the gulf between the two aims. For instance, Lambeth LBC, in the mid-1960s, introduced sophisticated multi-storey and 'low-rise high-density' types, while pushing for higher output [24.8]. Councillors were highly enthusiastic about both design and production aspects of this policy. But one ex-LCC architect, involved with the 'low-rise' designs, expressed a different view: 'The councillors were very different from the LCC members—they were at a much lower level, they only wanted architects because it gave them prestige. I had nothing to do with the point blocks, thank God—they were a bit inhuman!'[43]

We do not, therefore, need to postulate any 'external' influence or corruption in order to account for the defeat of the powerful design lobby's campaign for control of Modern housing during the early 1960s. We shall see below that contractual pressure rarely influenced the chief production issue in major cities: whether or not to embark on wholesale building of multi-storey flats. Rather, contractors stepped in to secure their own share of large high-flat programmes already in prospect. Saint hints at the real reason for the failure of 'design' to conquer 'production', when he regretfully observes that, unlike schools, 'housing has never been permitted to become a professional matter. We all live in houses, we all have opinions about them.'[44] And in cities such as Glasgow or Liverpool, one opinion was uppermost in the minds of councillors: that the maximum number of dwellings should be built within the city boundaries as quickly as possible, whether the designers liked it or not.

CHAPTER 23

Financing and Organising the 1960s Housing Drive

Those were memorable years—everything went with a bang, and money was no object to a big-hearted Government!

Pat Rogan, 1987[1]

By the early 1960s, while output was still depressed, many of the administrative changes needed to convert the pioneering multi-storey programmes of the big cities into a building boom throughout urban areas in Britain were quietly being put into place. Most importantly, in 1961, MHLG restored general-needs subsidies, coming back into line with DHS. The latter, since 1957, had been adroitly fending off Treasury pressure against general-needs building by devices which ranged from ringing but empty declarations of intent (such as Circular 33/1960) to short-term manipulation of tender approvals or SSHA building levels. What was still lacking throughout Britain was any reliable way to channel help to urban authorities who wished to embark on vigorous building, but whose lack of large prewar estates and inability to cross-subsidise rents stopped them from doing so without prohibitive rent or rate rises. The programmes of many previously very active urban authorities had declined during the late fifties by far more than the average.[2]

As a first step towards the weighting of subsidies towards less wealthy urban authorities, the 1961 English and 1962 Scottish Housing Acts introduced a differential system favouring councils with large Housing Revenue Account deficits: each house they built attracted a subsidy of £24 in England and Wales and £32 in Scotland, while other authorities were left with a 'sweetener' subsidy of, respectively, £8 and £12; the higher-rate authorities also qualified for discretionary supplements of up to £24. The Minister of Housing, Henry Brooke, had also fancifully hoped that the lower-rate authorities would be forced by these changes to raise their rents. However, by the time that MHLG's legislation was drafted, in 1960, Administrators had grasped that it would in fact be 'a very puny weapon', which low-rent cities such as Manchester could circumvent by subsidy pooling. Assessing the White Paper from the perspective of Northern Ireland, where 'economic rents' were already the rule, Ronald Green (Secretary of Stormont's Ministry of Health) confessed himself puzzled: 'The test of need is interesting, but none of us here can see how any such test will encourage councils with a weak rent policy to strengthen it. Those who wish to charge a substantial balancing figure to rates will continue to do so, and their action will not affect their eligibility for the higher subsidy.' The corresponding subsidy regime under the Scottish 1962 Act offered DHS Administrators no hope whatsoever of coaxing up rent levels—if they had ever wanted to do so in the first place. As one Principal amusedly noted, having calculated the hypothetical effect of one year's complete loss of subsidy on Glasgow Corporation's Housing Revenue Account: 'After all, what is another 1*d.* on the rates when they are already standing at about 28*s.* in the £?'[3]

But the main aim of the new subsidy regime was to raise output. Here the large, relatively autonomous authorities like Glasgow or Manchester found it more an encouragement than a necessity. Its main function was to flesh out national urban housing drives in England and in Scotland, with the contributions of medium-sized authorities not previously able to afford large-scale building. A typical case was that of Leyton MBC, a metropolitan Essex suburb of 100,000 population. Leyton had built a mere 353 dwellings before World War II, and 1,479 between 1945 and 1961, of which only 3% were multi-storey. At that point, the Housing Committee decisively altered course, and embarked on a crash slum-clearance drive. In the three ensuing years, 1,347 dwellings were built or commenced, 60% of which were multi-storey [23.1]. Following these dramatic changes the Housing Committee's Chairman, John Walsh, was able to record, just prior to the Borough's dissolution in the 1965 Greater London reorganisation, that 'TODAY—slum clearance is no longer just a resolution on the minutes of the Council's agenda. The forward march has begun. The bulldozers are on the move, the slums are coming down, cranes overhang the skyline, "tall tower" buildings are taking shape—11, 17, 21 storeys.'[4]

In England and Wales, the subsidy changes were followed, in 1963, by a move away from MHLG's threadbare system of annual allocations, towards the idea of five or six-year forward programmes. Many active urban councils still continued building mainly for slum-clearance, such as Stretford, or Salford, which augmented its postwar stock of council dwellings by 70% in 1960–6; and some authorities preoccupied with resistance to population loss chose to finance increased multi-storey building by raising the rates further, as in the case of some new London boroughs. On the other hand, a number of county boroughs now tried to cut their rate subsidy, through moderate rent rises in the case of right-wing Labour authorities, such as Leeds and Birmingham, or very high rents, in the case of Conservative-controlled Portsmouth. There was greater flexibility all round. In Scotland, the replacement of the multi-storey deficit subsidy by a flat-

rate £40 supplement in the 1962 Act, and the arguments of the Parker Morris Report, were both grasped with relief by Administrators, as providing an excuse to remove all cost restraints on the towns now queuing up with multi-storey programmes.[5]

Correspondingly, the subsidy changes choked off the programmes of many smaller or rural authorities, and sprawling towns such as Ipswich with large cottage estates. In Scotland, the fragmented small burghs, which made up three-quarters of the 234 local housing authorities and varied in population from 20,000 to only 300, were generally discouraged. 'They were above all concerned about the rates. Glasgow could build a hell of a lot of houses in a year with little effect, because of their large number of existing houses, but the burgh of Culross, with only 500 inhabitants, had to put 6*d.* on the rates if it built a single house!' The programmes of English rural districts went into marked decline, and some 'hopeless cases' stopped building altogether. They were subject to constant tinkering by the county councils: prohibited from borrowing on the open market, they were badly affected by interest-rate rises, which threatened to push rents beyond the reach of agricultural workers.[6] However, the Scots rural programmes, run by the powerful county councils, in many cases benefited from the subsidy alterations, especially in areas dotted with rundown mining villages.

There were still, however, two major organisational deficiencies which threatened to inhibit any multi-storey drives in the various parts of Britain: firstly, a lack of political and administrative impetus within the Government to keep pace with the newly unleashed municipalities; and secondly, fresh financial bottlenecks, brought on by the nascent output recovery.

MHLG's administrative disorder was accentuated, during the early 1960s, by the absence of any Ministerial 'progress-chaser' to keep civil servants and errant large authorities such as Manchester on their toes. Instead, the junior Minister, F. Corfield, was allocated 'random responsibilities'—an isolated reflection of Labour's rhetoric against 'piecemeal' Tory policy. Within DHS (SDD from 1962) the Government's political weakness on the housing question was made worse by the lack of charisma of some Scottish Unionist Housing Ministers.[7] However, during the first years of the Labour Government, from 1964, highly publicised initiatives in economic planning and modernisation were launched, to be coordinated at a 'national British' level by George Brown's Department of Economic Affairs. The head of SDD, Sir Douglas Haddow, was promoted to take charge of the entire Scottish Office in 1964. He elevated to a supra-departmental status the notion that Scotland, as a whole, was a relatively backward 'region' of Britain which required planned 'development'. To this end, he placed James McGuinness in charge of a new praetorian guard, appropriately named the Regional Development Division. Men such as Haddow, McGuinness or Grieve (now SDD Chief Planner) held that housing policy should now be governed by overspill to 'growth centres', as a component of a vast, Government-directed reordering of industry and population. From this cosmic perspective, it no longer seemed sufficient to strip the burghs and cities of their autonomy piecemeal. Now there beckoned the far greater prize of local-government reorganisation, which would stamp the hegemony of Clyde Valley Plan thinking over the whole country, through strong 'regional' authorities able to subjugate restless Glasgow and its satellites.[8]

23.1. Leyton (near London): Clifford Hicks Tower, Oliver Close, under construction in early 1965. Phase I of Leyton MBC's Oliver Close development comprised three 22-storey blocks, built on a package-deal basis by Wates; their precast concrete design was influenced by that of the LCC's Warwick Crescent development. (Vestry House Museum, Waltham Forest)

Some recent historians have identified this 'modernisation of Britain' campaign as a central determinant of Government housing policy, and have devoted much attention to the pronouncements of Ministers, or of Establishment reformers such as Cullingworth and Donnison. By contrast, our account stresses the importance of more prosaic organisational factors. We have already seen that the political and architectural rhetoric of 'mass production' and 'system building' was curiously detached from the day-to-day organisation of building. The same was true of political pronouncements on housing and its place in Government economic planning: here Joseph's 'national target' for completions was elaborated by Labour into a 'National Housing Plan', itself supposedly an offshoot of the DEA 'National Plan'. But while the rhetoric of DEA and Scottish Office thinkers was soaring into the

23.2. London: official opening of Angel House, Edmonton, on 24 July 1965, by Robert Mellish. From left to right: Mr and Mrs Henry Green (new tenants of 3 Angel House), Councillor E. J. C. Smythe (Chairman, Enfield LBC Housing Committee), R. J. Mellish (MHLG Joint Parliamentary Secretary), and Councillor Miss Kit Harvey (Mayor, Enfield LBC). Angel House (or Block A of the Angel Road South development) was EDLO's first battery-cast multi-storey block (see ill. 24.15). (London Borough of Enfield)

stratosphere, the underlying political and organisational realities of housing production had changed little.[9]

In fact, the Central Government activity which most significantly helped the expansion of public housing in the mid-1960s was the least public of all: the continuous behind-the-scenes negotiation between spending departments and Treasury, to secure authorisation of higher subsidies and output. The real usefulness of the 'National Housing Plan' was here—in bolstering departments' negotiating position by sheer volume of reports, statistics, rhetoric. Also important was the forcefulness in Cabinet of the new English Housing Minister, Richard Crossman. He was seen by some of his officials as a maverick, liable to 'argue against what he'd just made people agree to'. Certainly, he ruffled many feathers: 'At Winchester, Crossman once beat a boy so badly as almost to maim him . . . [H]e was fantastically thoughtless in public and private relations, he left bruised feelings wherever he went, he was egotistical, he was treacherous; "Double-Crossman" was a nickname dating from his school-days.'[10] But this abrasive personality also enabled him to extract more cash for MLHG from the Treasury, at a time of mounting economic crisis. In order to ensure that finance was matched by output, Crossman designated one of his junior Ministers, Robert Mellish, as a 'progress-chaser', especially in London. Mellish saw it as his task to 'activate the whole Department with enthusiasm', to support active boroughs by expedited approvals: from 1965, loan sanction approval was often immediate, rather than delayed by months. Outside MHLG, Mellish's influence as Chairman of the London Labour Party enabled him to galvanise many new London Boroughs into vigorous building [23.2]:[11] 'Bob was a real live wire in London!'

Some local authorities found the new policy of closer Ministerial involvement in housing to be a mixed blessing, given Crossman's volatile temperament. A former Administrator in Housing Division 'B' recalls one explosive meeting in July 1966, at which a preliminary design for Hammersmith LBC's ambitious White City redevelopment was personally vetoed by the Minister, in an apparent fit of pique:

There was an initial phase I'd recommended allowing, but because it was expensive it went right up to Crossman. He'd initialled it as agreed. Before the meeting with Hammersmith we talked, and he said, 'We can't allow this!' I said, 'Minister, you've agreed to it.' He said, 'I didn't.' I got the file and, with trepidation, showed it to Crossman, with his initials. He snapped, 'Look at the date—it's a month ago!' And that wasn't a joke! Of course, he could have been under pressure from the Treasury in some way that we weren't to know. Anyway, it put him in a terrific temper. J. H. Waddell, the Deputy Secretary, standing behind Crossman's back, shrugged his shoulders as if to say to me, 'Poor chap, at the receiving end of this!' So then Crossman stormed into the meeting and took it out in a really outrageous way on the Hammersmith Labour councillors, who'd been waiting all the time in the next room, and flatly turned down the scheme!

Following Crossman's replacement by Anthony Greenwood in 1966 [23.3] Mellish retained his MHLG Parliamentary Secretary post, but a great deal of the Ministry's driving force was dissipated. Greenwood was much more stable, temperamentally and administratively, than Crossman: 'A medium-weight Minister, [he was] perfectly able to hold his weight in Cabinet: you knew where you were with Greenwood, one of the great things for an Administrator!' But he was less eager than Crossman to confront the Treasury, and his period as Minister lacked headline-grabbing initiatives. Some Labour housing chairmen, such as A. C. Vinson of Ealing LBC, found this frustrating: 'It was like having a wet flannel pushed in your face!'[12]

Assessment of the charisma of one Minister as against another, was of course a matter of personal opinion. But what was not in doubt was the fact that the Government's dependence on the largest and most active authorities, in the quest for higher output, was undiminished. This made essential a further concentration of assistance. Public attention was fixed on Crossman's public relations initiatives, on the National Housing Plan and the sometimes flippant 'upping' of national housing targets. But the most tangible help, in England, was provided by modification of the allocations system, within the four-year programmes demanded by Circular 21/65. A group of 'priority authorities' was established, covering 60% of public housing output, and comprising

23.3. London: official opening of Enfield LBC's 10,000th new postwar dwelling (131 Bounces Road, Edmonton), on 14 January 1967, by the Minister of Housing, Anthony Greenwood. From left to right: Councillor Charles Wright (Mayor, Enfield LBC), Mr and Mrs Edward Robertson (new tenants), Anthony Greenwood (Minister of Housing), and Councillor Eric Smythe (Chairman, Enfield LBC Housing Committee). (London Borough of Enfield)

the 34 London Boroughs and (from 1966) 106 provincial authorities: the dozen or so largest cities were singled out for the most favourable treatment. In Greater London, as output before the 1965 municipal reorganisation had been very low, allocation restrictions were lifted in 1966. Elsewhere, redistribution to large towns impeded vigorous building by small authorities, although the odd determined and fairly wealthy urban district, such as Northfleet UDC, could still elect to use up its entire year's allocation in building a single point block.[13]

However, it was clear that the 'great heartache' of the cities was still finance. The differential subsidies not only lagged behind building cost inflation, which averaged 32% between 1961 and 1964 in England, but were ineffective against the main threat: the unusually high level of interest rates, especially following introduction of the 7% Bank Rate in 1964. Here, if MHLG faced pressure from the county boroughs, SDD was under siege from Glasgow Corporation. By 1964, the latter was running a Housing Revenue Account deficit of £4 million a year: both the higher-rate 1962 Act basic subsidy of £32 (or even the discretionary maximum of £56) and the £40 high-flat supplement were quite inadequate to support multi-storey building on the scale now desired by its Housing Committee.[14] The Government's response to this political pressure was proposed in 1965 but not enacted until 1966–7: to return some of the way to Addison 'cost-plus' principles, by introducing a new, partly deficit-based basic subsidy, calculated to absorb all interest charges above 4%, and back-dated to 1965 to reward the most active of the new London Boroughs. The 'cost-plus' element would partly offset the extra cost of high blocks, while, it was hoped, it would not encourage the building of any more than already planned. To prevent overlap, the English and Welsh variable high-flat supplement was brought into line with SDD's flat-rate grant and cut from £40 to £30; this favoured blocks less than 10 storeys high. Unlike the Addison Acts, the system was not open-ended: if councils spent more, they would always have to pay part of the additional bill.[15]

The new subsidy was chiefly inspired by a system introduced in 1962 in Northern Ireland (which was itself based on the Scottish 1957 Act's multi-storey supplement); another influence may have been the percentage grant system applied to school-building in the fifties and early sixties.[16] At first, Administrators opposed the proposed subsidy: they feared its generosity would cause a vicious circle of soaring output, overheating and higher costs, and that it would prove administratively unworkable, owing to the involved calculations necessary for each scheme: 'It would have been a nightmare to operate and a field of bitter dispute with local authorities, who wouldn't like it as they couldn't plan!'[17] Eventually, exploiting the delay caused by a General Election, they were able to tie the new subsidy to a system of cost limits—'indicative costs' in Scotland, mandatory 'yardsticks' in England and Wales. When at last introduced, the subsidy in effect set out to resurrect the 'people's house' principle of the early fifties: higher output within given costs, if necessary at the expense of 'standards'. But its implementation saw a divergence between Scotland and England, the one giving priority to output, the other, increasingly, to architecture.

SDD chose to operate its 'indicative costs' straightforwardly on a value-for-money basis, with the aim of sustaining multi-storey building. In balancing indicative costs, density and (implicitly) building type, the benefit of any doubt went to output. In 1969–70, for example, high site servicing costs were predicted for a proposed outer suburban mixed development at Seaton, Aberdeen: part of the site was a reclaimed rubbish dump. Rather than see the area of the scheme reduced, SDD Housing Administrators suggested that the indicative cost should instead be scaled upwards, by raising the density from 117 to 198 p.p.a., and adding seven 19-storey point blocks. In MHLG, the opposite applied: the architects and quantity surveyors, and 'Treasury fifth columnists' among the Administrators, were able to employ the new controls, in conjunction with rigid density restrictions, as a weapon against high flats—a simple mandatory extension of Bellamy's advisory 'yardsticks'. Here, 'beating the yardstick' increasingly served the interests not of output, but of powerful local authority designers such as Lambeth's Ted Hollamby: cheaper-construction 'low-rise high-density' schemes were squeezed on to sites, so that allowable expenditure at any given density could be diverted into lavish architectural features and landscaping.[18] These divergences in administrative practice and interpretation may help explain how (under a supposedly uniform subsidy regime) Scotland still contrived to maintain the highest combined level of Exchequer and rate subsidy in the UK. In 1967–8, for example, 60% of the cost of new council housing in Scotland was met in this way, compared to 24% in England and Wales and 41% in Northern Ireland.[19]

In 1964, a further complication was introduced into the UK's national variations in housing administration, when responsibility for housing in Wales was devolved to the newly created Welsh Office. However, the change was at first cosmetic: there were no rapid divergences from the English patterns, let alone the creation of a wholly distinctive housing policy as in Scotland. Legislation and subsidies were still prepared jointly with MHLG; and there was little real structural change. Before 1964, Housing Administrators, architects and planners were already based at Cathays Park, Cardiff, as part of a Welsh regional office of MHLG (headed by J. W. M. Siberry); a Housing Division was created in 1966.[20]

To sum up: by the early 1960s, the cities' embrace of high blocks for the purpose of large-scale production, supported by the Government's alterations to the subsidy structure, had produced the potential for their massed building on all available sites as a routine policy. In land supply, the possibility now beckoned of a 'virtuous circle' which would emancipate high blocks from their initial land-shortage context. Their use in exploiting gap-sites and producing a housing gain from initial sections of redevelopments had begun to create some very substantial slum-cleared areas. These, along with an increasing number of large peripheral sites such as Birmingham's Castle Bromwich Airfield, could then be developed with high blocks. To those concerned with housing production, it did not matter that multi-storey 'site cramming' in the outer suburbs might conflict with the architectural and planning orthodoxies that high blocks should be used in 'high-density' inner areas, and in designer-

controlled mixed developments. When output was the goal, all sites within a city's boundaries were seen on equal terms, purely on the basis of their potential yield of dwellings.[21]

In the early 1960s, most high blocks outside London still stood as isolated outcrops. But now they were an accepted housing pattern: soon, massive schemes could be routinely channelled through Housing Committees almost without discussion. By 1966, Newcastle CBC's Housing Chairman was able to complain, concerning the Cruddas Park Neighbourhood Centre project, which included a 20-storey slab block and a shopping centre: 'My Lord Mayor, I am stunned. Here we have a report before us which involves well over £1 million, and much of the discussion has been on £623 for a toilet and £3,000 for a police station!'

In an uncannily similar vein, a major contractor's architect recalls:

> You'd go along and present the drawings to the Housing Committee—other people would pontificate a bit, then someone would say, 'We've got Mr Bowie from Crudens here, who's going to explain about the scheme.' Then I'd say, 'There are three 20-storey blocks, with 120 three-apartment and 240 four-apartment dwellings', and so on. Then, 'Any questions?' 'How's it going to be heated?' 'That hasn't been decided yet.' 'Where's the children's play space going to be, Mr Bowie?' 'That'll be designed later.' 'Anything else?' 'No, that'll be all, thank you, Mr Bowie.' Then that would be it through! I used to joke, in Dundee for instance, that there was often far lengthier discussion about rebuilding public lavatories than about doing multi-storeys![22]

By the early sixties, therefore, it seemed that the scene had been set for unrestrained output of Modern flats across the various parts of Britain. Just at this point, however, one final, major obstacle reared its head: a crippling general construction shortage. To surmount this hurdle, it would be necessary to mobilise all available resources within the building industry, conservative at the best of times, in a concerted drive of housing production. The next chapter will describe how this was successfully achieved.

CHAPTER 24

Package-Dealers and Negotiators: Housing Production and the Building Boom

The world's built on supply and demand—and, around 1960, the demand for high blocks was there but the supply wasn't!

Alec Mitchell, 1988[1]

BY THE EARLY 1960s, despite the rumblings of opposition among designers, all seemed ready for a rapid expansion of Modern housing production. There was still discontent over subsidy levels, but, as we have seen, this problem was to be progressively ameliorated. So it came as a most unpleasant shock to local authorities in 1960 when the nascent recovery in output was hit by a gravely damaging labour and materials shortage, resulting from an upsurge in construction activity across the various parts of Britain. The present chapter has a double focus. How was the building of these new and often unfamiliar types of flats organised, in its own right? And, equally vital, how was the additional difficulty of embarking on this task at a time of building shortage surmounted?

In previous chapters we discussed the contributions of architects and engineers to the structural design of individual, one-off multi-storey blocks, and we saw how some designers vainly claimed leadership over the building process as a whole. Here, we are concerned with the practical/material and organisational aspects of this great building boom. We shall see that, while Ministers and some public architects were grandiosely proclaiming the 'modernisation of the building industry', the process of contractual negotiation and organisation, driven by the realities of local and national housing politics and the demand for production, was proceeding, out of immediate public view. The construction industry is hardly a natural monopoly: in 1968, just past the peak of the housing boom, the top five firms accounted for only 9.3% of gross output in Britain, or 26% within the building contracting sub-sector.[2] Not surprisingly, the involvement of this conservative and fragmented grouping in a daring venture such as 'national' multi-storey building was only brought about by an external stimulus—the municipal cry for numbers. This pressure was exerted not in a vacuum, but against an inimical background of labour and materials shortages. We must therefore first trace the way in which the shortages forced those local authorities set on output to resort to new contractual and constructional methods—notably 'package-deals' and prefabrication. Then, the mature organisational pattern of 1960s Modern building throughout the various components of Britain will be outlined.

The central argument of this chapter is that it was the urgent political pressure of large urban authorities, eager to launch themselves into high building as an escape from the 'land trap', which attracted large contractors to leap aboard this accelerating bandwagon. Even in the context of the severe building shortages, the sheer size and power of the cities spearheading urban housing production frustrated any hope on the contractors' part of exploiting this specialised demand to establish a dominant position. Only on the fringes of the sixties housing drive, in the spreading of the net to smaller towns to recoup initial investment on factories and plant, was the contractors' influence felt on building policy. The market for the building of Modern flats was hierarchical: the initial demand from large authorities created and supported complicated networks of national, regional and local relations.[3]

COPING WITH THE BUILDING BOOM

During the 1950s, building capacity had presented no major obstacle to the few municipalities, mostly in London, which were building high flats on a large scale; there was little difficulty in securing selected or fully competitive tenders from local or regional building firms. In-situ concrete multi-storey construction has excellent output potential when combined with plentiful skilled labour, as resoundingly demonstrated during the 1980s by the Hong Kong Housing Authority.[4]

But by the time massed housebuilding across Britain, using Modern flats, was on the cards—around 1960–1—the situation had suddenly changed. A general building boom was under way, with accompanying labour and materials shortages and increased prices and completion times as firms moved out of municipal work into more profitable industrial or commercial building.[5] This overloading was hardly alleviated by the 'Great Squeeze' of 1961. Although industrial and speculative housing construction levelled off, commercial building continued its voracious growth, lengthening the average construction time of a council house from twelve to fourteen months, between mid-1960 and late 1961. The overload was destined to continue at least until the introduction of the 'Brown Ban' of November 1964. By July 1964, the total volume of building work would be 48% higher than in 1958, while only three days' brick supply would be in hand![6] In any case, municipal building was traditionally looked on by local builders as 'hospital work' for a rainy day: so the effect of this crisis on housing production was devastating. In the major English industrial town of

Oldham, for instance, only 100 out of 2,000 local building workers were available for council housebuilding in September 1961, with the result that annual output had settled at just 300 dwellings—even that jeopardised by a grave shortage of bricks.[7]

The first response of any local authority whose tender invitation, during a full market, was unanswered or met with excessively high quotations, was to seek a negotiated contract. The contractor liked this, partly because it was more profitable, but chiefly because it assured him of the job, and thus saved trouble and expense. In some places, the efficacy of competition was in any case restricted by unofficial agreements or 'rings' between local firms (as was, for instance, alleged in Birmingham in 1961) or by the stultifying influence of a strong direct labour organisation. A rolling local authority housebuilding programme based on negotiated contracts often seemed to offer little profit on tender prices, which were always fairly 'thin'. But there was a concealed attraction, compared to private sector contracting: the public authority practice of staged payments, as work proceeded. From around 1958, some authorities began to circumvent this procedure by delaying issue of certificates, and thus payment; but it still afforded most contractors a 'positive cash flow', which could be invested in a land bank as insurance against the next downturn in public housebuilding. The Banwell Committee on contractual procedure (1964) expressed reservations about the spread of negotiated contracts, as did some contractors, on grounds that this was contrary to 'definition, discipline and good practice'. But, during the building shortages of the early sixties, their wider adoption seemed inevitable.[8]

The practice of negotiated contracts was not exclusively associated with building-industry overloading. Some authorities adopted this approach soon after World War II as an aid to streamlined production: for instance, Glasgow Corporation built many thousands of tenements in the forties and early fifties by negotiation with a 'consortium' of local firms and with its own direct labour force. The same years saw the first tentative application of negotiated repeat contracts to the complexity of multi-storey building, by English authorities such as Birmingham and Shoreditch: these were often based on initial competitive tenders. The architectural press gave much prominence to the LCC's negotiation of the Picton Street contract with Laing in 1953–4, hailing it as a paragon of advanced organisation [7.9, 10.5]. In fact, the reverse was true: whatever the constructional importance of this scheme, it was contractually only remarkable in the context of the LCC's own old-fashioned practices.[9]

However, with the early sixties building shortages, negotiated contracts suddenly became of more general relevance throughout Britain. The Government, under pressure from the big cities, rapidly relaxed existing restraints. In Scotland, DHS had tried to forbid negotiated contracts where a consultant or local authority architect was involved. But, in 1961, restrictions were lifted on the order of Under-Secretary J. Callan Wilson, to accommodate Glasgow Corporation's by then urgent desire to start large-scale building of high flats. In England, a system of unofficial rationing of negotiated contracts, applying both to towns and to firms, was introduced. The main beneficiaries, as with the new differential subsidies, were potentially active urban authorities—now often unable to attract tenderers. For example, Preston CBC's Housing Committee, eager to raise production by 50% and embark on the major Avenham redevelopment, invited bids from nineteen contractors in 1961 for the Avenham No. 1 scheme, but only two submitted tenders. To avoid further delay, the Borough Surveyor, E. H. Stazicker, was then allowed by MHLG to negotiate the second phase with the local firm J. Turner.[10]

A further, highly significant step beyond negotiation was the 'package-deal' contract, under which the contractor designed as well as built the development. This circumvented shortages not only of labour but also of professional staff such as quantity surveyors and architects. A potent development of this idea was package-deal competition: the use of different firms' own designs for quasi-competitive tendering, based on a very general local authority 'brief'. This was almost a mirror image of the procedures of the normal negotiated contract, where an architect's designs were used as the basis for negotiations and briefings. By 1964, 46% of all new public housing in England and Wales (with the exception of LCC and direct labour contracts) was accounted for by negotiated and package-deal contracts; this figure rose to 55% in 1966–8 at the height of the Modern housing boom, falling back again to 28% in 1970.[11]

The response of the public–architectural establishment to the package-deal was predictable: to thrust its head deep into the sand. 'Neither now nor in the future is there a place for the promoter of the standard designed multi-storey block,' thundered R. Woodcock, a senior DHS architect,

> and we should not deviate from the decision to place the onus for design on the local authority architect or consulting architect... [T]his should be stressed in all cases where a local authority have in mind to employ a nominated contractor, whose services should be confined to collaboration on the working details, organisation and building.

Already, in 1957–8, the DHS architects had strenuously opposed an attempt by Edinburgh Corporation to allocate package-deal contracts for up to 18 multi-storey blocks on four sites to a 'panel' of contractors including Wimpey, Scotcon, Crudens, Laing and the SSHA direct labour force. Ironically, the related attempt by DHS to ban negotiated contracts in cases where a municipal or consultant architect was involved had had the unintended effect of encouraging package-deals! A similar attitude was displayed by the architects of MHLG: for instance, M. B. Blackshaw, Cleeve Barr's deputy, severely upbraided Stazicker in 1962 for suggesting package-deal competition as a way to circumvent the lack of tenders for Avenham No. 1. It was essential, he claimed, that an architectural brief should be drawn up and issued to all prospective tenderers, to ensure like was compared with like.[12]

In the meanwhile the large contractors were devising multi-storey plan-types for 'traditional' in-situ construction: these would be suitable for package-deal application but would also be capable of modifications to the requirements

of individual authorities. Many firms produced their own designs, such as Laing, whose point blocks were first built in 1960 at Oxford CBC's Blackbird Leys development after a package-deal competition against similar blocks by Wimpey and Wates, and then rapidly spread, in numerous variants, to many of the firm's contracts in larger cities. Although architectural critics of the package-deal constantly emphasised the 'repetitiveness' of these contractor-designed blocks, the latter's guiding principle was in fact flexibility. The firms were engaged in a continuous balancing act, juggling the demands of individual authorities for small variations against their own development of more efficient and economical designs, within the constraints of building regulations and Government housing standards.[13]

In 1960, for instance, the ambitious Musselburgh-based firm of Crudens appointed its first company architect, George Bowie, who evolved plan-types for point blocks, incorporating six flats on each upper floor. These were loosely influenced by Edinburgh Corporation's brief for the company's first multi-storey job, a negotiated contract of 1960 for three 14-storey blocks at Gracemount. In subsequent package-deals for other towns, this plan-type, and more particular generic features, progressively developed. The building regulation requiring a given external wall area in each flat, for instance, was met by some firms, such as Wimpey, through a 'staggered' twin-tower plan. Bowie's staff, however, obtained a more economical rectangular block by locating recesses, or 'lungs', in the side walls. The Gracemount blocks [24.1], and follow-up contracts of 1960–3 in Dundee and Glasgow [25.9], included two on each side: this was reduced to one, cutting thermal loss, in a 'handed' redesign of the six-per-upper-floor block in 1964. But by that time, there was new pressure from output-hungry authorities such as Glasgow: 'Along came people looking for bigger blocks. The solution was obvious—make them higher, but also stick two or more together, adjust the plan-

24.1. Edinburgh: Gracemount development, seen in 1989: 14-storey and 5-storey blocks, built by Crudens in 1960–1 and 1958–9 respectively. (RCAHMS)

ning of the flats for daylight and so on.' The culmination of this plan-type was the Ardler development, Dundee (1964), whose six 17-storey slabs, containing a total of 1,788 flats, each comprised three of the 'standard' blocks strung end-to-end [25.23].[14] Impinging on this internal development process was the constant external pressure for variations of detail and finish on any individual job.

> There never *was* a standard block! No authority ever came and looked at anything we did and said, 'Can we have three of those?'—there were always ifs and buts! Having got yourself a contract your marketing people would tell you, 'Here's another local authority. Falkirk want a scheme, why not bash on?' We'd say, 'If you can come, you can see the frame coming out of the ground; if not then here's a model, and some approximate costs.' Then the authority would say, 'We can start in four weeks.' We'd say, 'Here's the block.' The authority would look at it and say, 'We do like it, but we'd like the following things, only tiny wee things, like a slightly bigger kitchen and different windows, Mr Bowie—and can we have a clothes drying area inside the block, and a play area on the ground floor?'—and so on, and so on! Also our designers and engineers were getting cleverer and cleverer, so we incorporated improvements. It always annoyed us—every time we got a job, another set of working drawings always had to be done![15]

In the integrated, commercially directed professional staffs of package-dealing firms, designers truly harnessed themselves to production, at the same time as their LCC counterparts merely talked about doing so:

> Designing high blocks was often far more an engineering problem than an architectural problem—engineering for the foundations, for the roads, for the sewers, for the blocks themselves. The architecture, bit by bit, became cosmetics, until a good engineer could say, 'Could you not move this . . . ?' Suddenly, you'd find your engineers designing your whole block for you! . . . The LCC types were very jealous about the work we were getting, but they couldn't touch us on efficiency!

In engineering, no attempt was made to 're-invent the wheel', in the LCC manner: Truscon were initially used as reinforced concrete (r.c.) structural subcontractors, while Bowie's own engineers gained multi-storey expertise.[16]

In this book, our identification of the term 'design' with the concerns and skills of LCC-style 'social-reforming artist-scientists' reflects the latter's success in defining the term to exclude and stigmatise the 'design' activity needed for routine building. But the conventions of architectural polemic, and the conflict between these groups at any one time, should not conceal the fact that the two kinds of 'designing' stood in historical succession, and were in that sense complementary. It was not the job of the architects, engineers and quantity surveyors of Wimpey to design architecturally path-breaking projects such as Roehampton, any more than it was that of LCC virtuosos to work up package-deals for a dozen assorted boroughs in the West Midlands.

The key to the 'virtuous circle' of package-deal architecture lay in its *discipline*—a discipline which originated in the contractor's need to maximise profits, and the municipalities' requirement for reliability, punctuality and lack of overspending. The 'traditional' in-situ high blocks of the late fifties and early sixties, whether to contractor's or authority's design, were relatively straightforward and often very profitable to build.[17] But the need to circumvent the building shortages, more urgent than ever, was now to lead contractors away from this familiar territory, into a new and uncertain field: prefabricated construction. Around 1961, there was, across Britain, an eruption of commercially sponsored prefabrication methods for high flats. Some were licensed from abroad, and most employed large loadbearing precast panel construction: for instance Concrete Ltd's 'Bison', built in hybrid form from 1961 by Glasgow and full 'Wall-Frame' form from 1963 by Birmingham and others; Taylor Woodrow-Anglian's licensed Larsen-Nielsen, built from 1963, initially by the LCC; and Camus, built from 1963 by Liverpool. This concrete convulsion led Kenneth Campbell to ask in October 1962, 'Why, to be extremely rude, are so many firms now leaping on a bandwagon which they have watched pass them for some considerable time?' Many airy explanations for the spread in prefabrication of multi-storey and other Modern flats were offered at the time: cost saving, faster construction and so forth. But the true cause of this 'boom' was the coincidence of the building-industry shortages with a campaign to build large numbers of an established housing-type—here high flats (cf Ch. 10).

In the same way, just after World War I and World War II, established types of dwellings—two-storey English cottages and Scots tenement flats—had been prefabricated and built in large numbers.[18] This movement had died away in the early fifties, but it had one enduring result: the development of 'no-fines' in-situ construction by the SSHA and Wimpey, with the collaboration of the Building Research Station, DHS housing architects and Birmingham Corporation. There had been no concerted experimentation in full-scale concrete prefabrication during those years—a striking contrast with the efforts under way in countries such as France and the USSR. This lack of activity may have resulted from low wages costs, or from the comparative cheapness of the lightly built brick cottages traditional in England and Wales: both might have diminished the otherwise considerable attractiveness of the building supplies industry (with its traditionally higher profit margins) to contractors as a potential field for diversification. In England, only the LCC experimented significantly with precasting in the early and mid-fifties, and then in a somewhat desultory manner. But even in Glasgow, despite the Corporation's huge interwar output of precast concrete dwellings and wartime experimentation with large-panel ('foamslag') construction, and despite the effect on building costs of the national building regulations (somewhat stricter than those in England and Wales), there was no concerted research into prefabrication of high flats. Instead, it was left to Sam Bunton to continue with his unique private research programme, which he had pursued since World War II with some help from DHS and BRS. We have seen that, in 1953, the first multi-storey block of loadbearing precast-concrete construction in Scotland, and Britain, was built to his designs in Clydebank.[19]

Later in the decade, the pace of innovation had quickened only slightly: with continuing encouragement from DHS and, to a lesser extent, MHLG, other firms began to experiment in precasting. Loadbearing large-panel concrete construction of high flats was first introduced to England in 1956 by Reema at Leeds as a main contractor, and, in 1957, by Concrete Ltd at Barking as structural subcontractor. But these experiments were still on a very small scale in comparison with even the existing modest volume of multi-storey work. As late as 1958–62, loadbearing prefabrication accounted for only 5% of all high flats approved—a mere one-fifth of the level during the following five years.[20]

However, 1959–60 saw the beginnings of a change in this position. The realisation that a really big multi-storey drive was imminent, and might perhaps coincide with building shortages, cast a sudden and unwelcome spotlight on the lack of concerted research into prefabrication in Britain. In response, contractors began hastily to look abroad—chiefly to France and Scandinavia, where models of fully developed concrete prefabrication were already available. Reliance on such foreign sources for r.c. expertise was well established in Britain: for instance, the development of the box frame in the late forties [10.4] was partly based on Arup's experience in Scandinavia. This practice continued into the prefabrication phase. In 1959–60, for instance, Concrete Ltd's managing director Kenneth Wood arranged the attachment of an engineer to the Danish consulting engineers P. E. Malmstrøm, to devise a variant of large-panel prefabrication based on Larsen-Nielsen [10.11].[21]

Yet the situation remained very fluid until, and even after, the building industry shortages began really to bite in 1961—as was discovered to its cost by the pioneer of French prefabrication, Camus, when it commenced an intensive English and Scottish sales campaign in 1959, with the aim of attracting 'bulk-order' multi-storey contracts of a minimum 2,500 dwellings. Camus's initial line of attack was to woo experimentation-minded official bodies such as SSHA, DHS and the MHLG Development Group. This campaign, however, met with no success: architects attacked the appearance of the firm's showpiece development at Pantin as 'dreadful', and DHS Housing Administrators pronounced, in relation to SSHA, that 'it is doubtful if it would be proper for an Exchequer-financed body virtually to set up a private firm in a profitable new line of business in which they could eventually charge monopoly prices'. It was also pointed out that the French schemes had benefited from local factors not easily reproducible in Britain, such as easy river transport, cheap Algerian labour, and high-quality aggregate. From 1961, with building industry overheating well under way, the focus of the firm's sales drive moved to the municipal level. Even there, however, Camus was rejected by a succession of cities (including Birmingham, Glasgow, Sheffield, Manchester, Salford and Birkenhead) on the grounds that such a 'bulk order' would give the firm an unacceptable power over housing policy. Only after two years, in 1963, did the firm finally succeed in securing a major contract, from Liverpool—and then only through a licensing agreement with a large regional contractor, Unit [10.9, 10.8].[22]

The initial failure of Camus's UK sales drive provided an important demonstration that the big cities still held the whip hand in bargaining with the contractors, whatever the severity of the building shortages or the special attributes of prefabricated construction. To other contractors considering 'leaping on the bandwagon', this served as an early warning that prefabricated construction of high flats would not in itself confer any significant monopoly status on sponsoring firms, in relation to the housing requirements of the largest authorities. It was the latter's decisions which had brought 'national' multi-storey markets into being, extending to all urban areas of England/Wales and Scotland, and which would now shape their further evolution, as housing production gathered pace into the sixties.

NEGOTIATING WITH THE CONTRACTORS

How, then, was the production of Modern flats actually organised? The remainder of this chapter will summarise the hierarchical patterns of relationships between municipalities and contractors in the various parts of Britain: client–contractor relationships in major cities will be explored in greater detail in Part B of this Section.

The major urban authorities' desire to embark on high-flat building, in the context of the building shortages, had caused them to seek large negotiated contracts. This new market became a battleground between firms competing for the custom of the cities, in many cases by investing in prefabricated construction; and these firms then tried to diversify by inducing smaller towns to place contracts. Here contractual pressure may have influenced choices of firm, but rarely affected broad choices of building type, such as whether or not to build high blocks.[23]

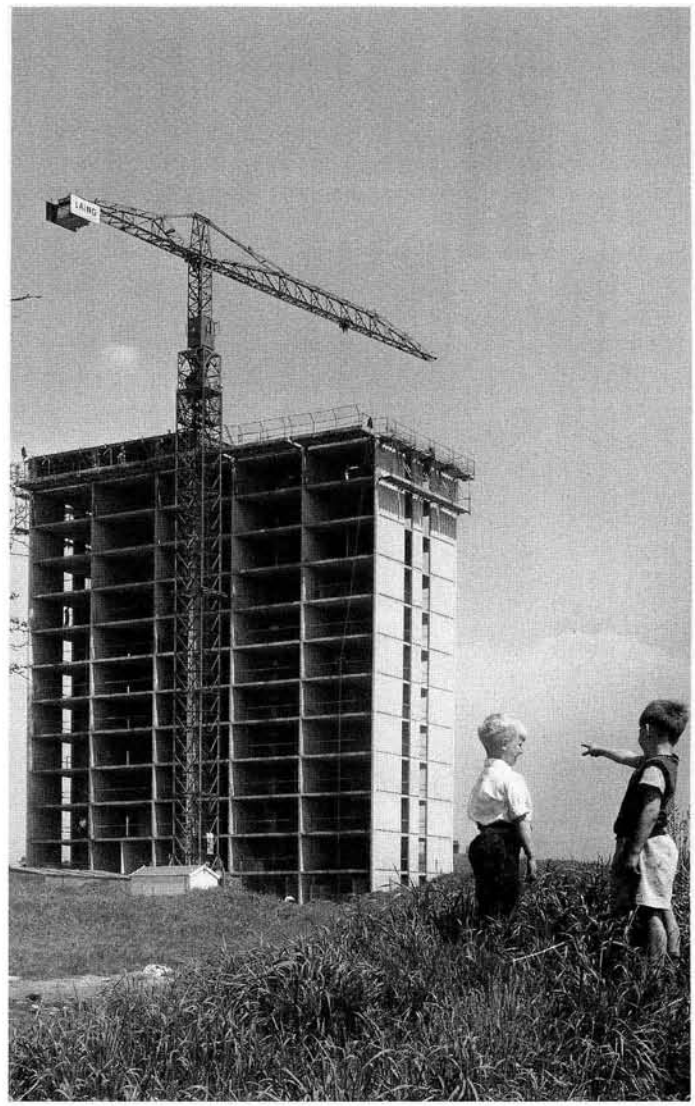
The cities pursued three broad types of negotiated contract during the sixties boom: firstly, the 'bulk order' for a given number of dwellings, unrelated to sites; secondly, staged contracts for given sites; finally, contracts for individual schemes (package-deal or authority-designed), with no guaranteed continuity. The first of these, the bulk order, with its minimum required dwelling numbers (ranging from 500 to 2,500) gave the authority the least and the contractor the most control, especially in a context of land shortage, where delays in site assembly could cause difficulty. It is revealing that such deals proved very much the exception. The most important early example was the contract for 2,486 Camus flats awarded in 1963 by Liverpool to Unit. Liverpool's Camus experience was exceptional, and bound up with the city's fiercely introverted building industry and municipal politics.

Most of the other largest cities fed their flat-building programmes more or less piecemeal to a range of contractors, in the form of negotiated repeat contracts following a successful initial performance. Only in two other big cities did one contractor attain temporary predominance in high-flat construction: Manchester and Birmingham, both parties to abortive negotiations with Liverpool in 1961–2 concerning the joint building of Camus blocks.[24] These episodes will be discussed in more detail in Chapter 26. Summarised briefly, however, there was in both cases a sudden contractual

revolution, with existing firms jettisoned as part of a wider attempt to jolt output out of a deep trough. In both cases the dominant contractor—Laing in Manchester, the major local firm Bryant in Birmingham—attained its status not through a single bulk order for prefabricated flats, but through a mixture of full in-situ and prefabricated or 'rationalised' in-situ construction. In Manchester, Laing erected various in-situ-built point blocks, including some in Sectra, a French-licensed 'rationalised' method [24.2]; blocks designed by Austen Bent's staff were used on some sites, package-deal Laing designs on others. In Birmingham, the city's power over the contractors secured use of its own designs in all cases. Bryant's contribution consisted of its own in-situ point blocks, and precast concrete and timber frame low flats and cottages (Bryant Low Rise), while the firm also acted as main contractor for Bison Wall-Frame high blocks.

This sudden revolution in contractual patterns was not repeated in cities that had already established contractually balanced multi-storey 'production-lines' to cushion their programmes from the land crisis—in Leeds and Sheffield, for instance, where output had dropped much less than elsewhere from its 1950s maximum. Livett's successor as Leeds City Architect from 1960, J. R. Sheridan Shedden, refined further the established pattern of repeat negotiated contracts. He cut the number of sites in individual contracts, changed contractors (easing out Reema and Shepherd in favour of Wimpey [24.3, 24.4] and, on Womersley's recommendation, Tersons) and replaced Livett's 10-storey block with new Departmental 12-storey and 17-storey designs. Similar patterns were established in Leeds's large contracts for cottages of YDG and other types. In Sheffield, high flats were shared out equitably between the city's powerful direct labour force, Wimpey and subsidiaries of the London firms Gleeson and Tersons; 2-storey house contracts were distributed through YDG's programme of Hallamshire, 5M and other types. Both Womersley and the Housing Development Committee Chairman, Harold Lambert (an LCC-like supporter of design) insisted on use of departmental types. Lambert claims that, in Sheffield, contractors 'couldn't throw their packages around like they could elsewhere!' [25] A similar contractual balance was found in other major cities, such as Bristol, where Laing, Wimpey and Tersons shared 96% of the 1960s multi-storey programme, and also in second-rank county boroughs such as Coventry and Portsmouth.[26]

Of all the largest authorities, Glasgow Corporation maintained the greatest contractual diversity in its flat-building during the 1960s. This pattern resulted not only from the city's size, but also, paradoxically, from the influence of a vested interest far more entrenched than the likes of Bryant in Birmingham: the Corporation's direct labour organisation (DLO), the enormous Housing and Works Department. The wider implications of direct labour operation across Britain will be discussed later. Glasgow's DLO, however, constituted a very special case. Although the LCC's DLO was larger, by virtue of its repairs and maintenance work-force, Glasgow's was by far the UK's most important in housing construction and new works. Founded in 1921, it leapt to predominance in the city's programme under Labour in the late 1930s. It combined a parochial status



24.2. The first Laing 'Sectra' 13-storey tower block under construction on Manchester Corporation's Heywood out-county estate, in June 1963. The block was commenced on 16 April, and the first flat was completed in 13 weeks. (Laing: by kind permission)

characteristic of all DLOs ('like the local builder in a small burgh—so long as you kept them busy they were happy!') with a work-force of several thousand—a key aspect of local patronage, alongside low council rents. By the end of 1962, the DLO had built 63% of Glasgow Corporation's postwar dwellings, mostly in tenements. But the urgent political demand for building of high flats challenged the DLO's complacent hegemony and cut its overall share of output from 84% in 1962 to 39% by 1967. The resulting contractual pattern during the sixties was one of fierce competition. Eventually, the DLO carved out a sizeable niche (23%) for itself in multi-storey construction, stabilising its overall annual output at around 2,000; the remaining 77% was distributed among many local, national and British contractors (the share of the largest, Wimpey, being well below

24.3. 1960 perspective of proposed 12-storey blocks, Wellington Hill, Leeds: drawn by Frank Weemys for Wimpey. (Wimpey)

24.4. Invitation to opening of 12-storey Wimpey point block at Wellington Hill development, Leeds, built in 1960–2.

ROBERT CRUTE
TOWN CLERK
TELEPHONE NO. 31301

TOWN CLERK'S OFFICE
COMMITTEE DEPARTMENT
CIVIC HALL
LEEDS, 1

IN REPLY PLEASE QUOTE
FE/PS

2nd July, 1962.

Dear Sir,

The Chairman (Councillor K.C. Cohen, LL.B.) and Members of the Housing Committee request the pleasure of your company along with the Chairman of the Housing (or other appropriate) Committee of your Council and their officer, each with one guest, at the official opening by the Lord Mayor of Leeds (Alderman H.Watson, J.P.) of "Barncroft Court", Wellington Hill, Seacroft Estate, Leeds, 14, the first twelve-storey tower block of flats to be completed in the City, at 10.30 a.m. on Monday, the 16th July, 1962.

The flats are sited at the junction of Easterly Road and Wetherby Road and are approached from the City centre by way of North Street, Roundhay Road and Easterly Road or Wetherby Road.

I enclose invitation cards, the third one blank, and would be grateful if you would have the name, etc., of the appropriate officer inserted.

Yours faithfully,

Robert Crute.
Town Clerk

The Chairman (Councillor K. C. Cohen, LL.B.) and Members of the Housing Committee of the Leeds City Council
request the pleasure of the company of

_____

At the Opening of 'Barncroft Court'
at Wellington Hill, Seacroft Estate, Leeds 14
by the Lord Mayor of Leeds, Alderman H. Watson, J.P., on
Monday, 16th July, 1962 at 10.30 a.m.

Refreshments

Please bring this invitation card with you

Please reply to—
Director of Housing,
Buckingham House,
41, Headingley Lane,
Leeds, 6

NO.

OFFICIAL OPENING OF BARNCROFT COURT
(12-STOREY TOWER BLOCK OF FLATS)

10.30 a.m. - Monday, 16th July, 1962.

YES/NO

I shall / shall not be accompanied by a lady/gentleman.

Signed .....

that of the DLO). The SSHA added its own annual contribution of up to 1,372 dwellings, partly built by its own DLO, partly by contractors.[27]

The city's direct labour tradition, along with the dramatic process of concentration in the Scots housebuilding industry since 1914, had two consequences for Glasgow Corporation's contractual policy as a whole. The first was an 'almost virginal integrity' compared with many other areas such as Merseyside, Tyneside or Dundee. Council housebuilding in Glasgow may have suffered slipshod workmanship, ruinous pilferage and vandalism, unchecked featherbedding and absenteeism, and recurrent overspending scandals, but there was no significant corruption in contract allocation. The second consequence was an outright refusal to take competitive tenders, and a resulting familiarity with negotiated contracts, which were distributed between the DLO and a 'consortium' of local contractors, such as Lawrence and Stuart.[28]

As a result, the city had from the beginning the negotiating experience to enable it to keep the upper hand in managing the 77% of multi-storey output allocated to contractors, by pursuing package-deal competition. In Chapter 25, we shall trace the detailed organisation of Glasgow's programme, including the masterful negotiation work of Lewis Cross, a senior engineer in the Department of Architecture and Planning. Glasgow's programme epitomised the fundamental principle of package-deal competition: a rigid segregation of the functions of contractor and client, which assigned 'design' to the former, and left the latter free to concentrate on the negotiating and monitoring of contracts.

Once the Modern housing boom was under way in major centres such as Glasgow, it was necessary for firms which had invested in factories, casting moulds, establishment of 'regional' offices and so forth, to maximise their return by obtaining as many further contracts as possible. There were two ways of doing this. The large authorities that had already awarded contracts were likely to remain the most prolific builders of high flats—with all the negotiating power that went with that. Smaller towns, as we shall see, could more often be drawn into the net through contractual sales pressure—but they represented a peripheral part of the multi-storey market.

The intensity of application of the mechanisms of this contractual pressure, ranging from conference fringe entertainments to informally agreed areas of influence between firms, depended on the marketing policies of individual companies. Techniques ranged from the cheerful worthiness of Wimpey's Scottish Sales Director, Brigadier Prentice, to a harder-sell approach. It was rarely necessary for national firms to engage in the openly corrupt practices which sometimes characterised the local industry. One experienced public-sector contractor claimed that this amounted to a 'two-tier industry', under which smaller firms battled with impossibly convoluted procedures created by the clients, while the more powerful and influential contractors short-circuited this by direct settlements sponsored from above. But the effectiveness of such behind-the-scenes pressure was, in its turn, greatly affected by the size and negotiating skill of the client authority.[29]

Certainly, large firms' sales pitches were shaped by their evaluation of the technical capacity of individual local authorities. Major towns could hold their own and compare the merits of different contractors, and attach irritating conditions, such as structural guarantees, to contracts. Lavish public-relations presentations, the flying of entire Housing Committees to showpiece schemes in distant towns, even abroad, became necessary if firms were to maintain their place in the market.[30] It has been asserted that these sales campaigns persuaded authorities not just to choose one contractor rather than another, but to build high flats rather than other types. Such claims are difficult to evaluate, as there is no firm evidence that multi-storey building consistently appeared to be more profitable than low blocks. The only category where this seemed to apply was the non-prefabricated, 'one-off' scheme. Such isolated schemes were characteristic of smaller towns anxious to keep up with their neighbours, as contractors well knew: 'You'd get places like Buckhaven and Methil, there's only one reason why there are multis there. They'd say, "If Kirkcaldy and Dunfermline can have multis, by God we're gauny have a couple too!"' With middle-sized or smaller towns, the firms could often recognise the influence of their own package-deal types in the 'profiles' (block shape and disposition) drawn on plans in the authorities' design briefs: 'In the design brief, you're shown a nice layout; you'd get, say, Callendar Park, Falkirk, and you'd say, "They've done our profile!" or "They've done Wimpey's profile!" It was a clue as to whose salesmen had done the best job!'[31]

By the mid-1960s, firms had absorbed into their marketing campaigns a new factor: the nebulous idea of 'system building'. Here, in the commercial field, it began to perform for contractors the same role, as a public-relations slogan, that it had been fulfilling for architects and Government Ministers. But contractors' use of this slogan was not systematically related to the organisation of building or even to the existing pattern of investment in prefabrication factories and plant:

> I always took the view that there was a time when the Government, politically, was shouting about low-labour factory-made multi-storey blocks, and they sent a lot of us chasing off to get some damn thing signed up on the Continent. We had to acquire one—but 'systems' was and is a marketing vehicle. People would come and say, 'We want your system', but they didn't get it! Lots of times when we were busy we got our precast elsewhere than in the Skarne factory. As the thing developed, I'd find us precasting ground-floor slabs in four-storey blocks, say at Whitfield in Dundee, and I'd say, 'That's rubbish!' Then very soon we said, 'Skarne—so what! We won't precast the floors any more, just the walls!' It became delightfully vague, even in the terms of the contracts, where 'Skarne' wasn't mentioned! After all... what does it really amount to—just casting large lumps of concrete!

The largest firms' initiatives were partly offset by their unfamiliarity with 'local' conditions, ranging from the strict Scottish building regulations to the 'fearsome' closed indus-

trial practices of Merseyside and Dundee, where interlopers were often kept out—or driven out.[32]

In the field of large-panel prefabrication, firms which had enjoyed mixed success with the big cities told themselves that these projects were simply the 'loss-leaders' which would bring in a deluge of orders; and they attempted to spread their coverage. In the case of Camus, for example, licensing agreements led to late-1960s contracts with medium-sized authorities such as Hackney LBC and the Lanarkshire burghs consortium. Reema, having boldly opened a Scottish factory on the basis of a single 285-dwelling Glasgow order (Broomloan Road), eventually secured repeat orders from the city [25.16] and other councils, notably Lanark County Council. Likewise, Taylor Woodrow-Anglian diversified from its designer-controlled LCC contract [22.5], to clinch more agreeable bulk orders—for instance from Sunderland (hedged with anti-unemployment clauses to appease local sensitivities). Overall, the proportion of high flats built by prefabrication was highest in the East Midlands (40%—a statistical freak, in a relatively small region) and, more significantly, Scotland (29%) and the North-West of England (27%).[33]

The potential incompatibility of output and design in middle-sized towns was highlighted by the difficulties of another Taylor Woodrow-Anglian client, West Ham CBC. West Ham's Borough Architect, T. E. North, was one of the stalwarts of the English municipal-architecture establishment. During the fifties, he had run the borough's programme in the LCC manner, insisting on individual designs and competitive tenders. When, in the early sixties, it became clear that expanded output would require adoption of a measure of prefabrication, North saw it as his first duty to ensure firm architectual control. The policy of cities such as Glasgow—to sweep away the whole apparatus of architect design and briefing in favour of package-deal competition—was quite unacceptable to him.

In 1961, a scheme of two precast-construction 22-storey blocks at Eastwood and Barnwood Roads was assigned to the architects Stillman Eastwick-Field, and negotiations began, predictably, with Laing. As in the case of Picton Street and Oldham, the firm gained valuable 'R & D' experience from the project, but it proved extremely expensive to West Ham, and construction did not start until 1964.[34] After this experience, North realised that prefabrication would have to proceed on the basis of grouped sites, involving repeat use of standard plan-types. This made it all the more vital, in his view, that his department should be closely involved in the design process. Impressed by Morris Walk and the alleged architectural flexibility of Larsen-Nielsen, North became determined to secure a Taylor Woodrow-Anglian contract for West Ham: 'That was why he went for Larsen-Nielsen, because we could make an impact. Camus was a terrible, crude design, there was no possibility of changing it, you either took it or left it, whereas with Larsen-Nielsen, he felt you could have some aesthetic input!'[35]

But whereas the size of the LCC had allowed the Council to hold down Taylor Woodrow-Anglian output well below its capacity, the smaller size of West Ham and its successor, Newham LBC, and North's determination that Larsen-Nielsen should be used, conferred on the firm an artificial local monopoly status. This only underlined the Glasgow view, that designer control of contracting policy weakened an authority's negotiating position. Even the role of North's architects, which had initially dictated the contractual arrangements, was eventually undermined by the sheer size of the commitment [24.5]. North's deputy, K. Lund, recollects that 'we had to make so many sites available so quickly—and, because their factory could churn panels out so fast, we ended up racing and racing to get the sites ready, getting into a kind of merry-go-round!'[36]

A large municipality could thus seriously trip up only if

24.5. London: Clever Road, Mortlake Road and Eldon Road developments, Newham; nine 23-storey Taylor Woodrow-Anglian (Larsen-Nielsen) point blocks, built from 1966. Photograph taken in 1988, following the demolition of one block (Ronan Point).

it insisted on narrowing its contractual options for output expansion to a prefabricated bulk order with one particular firm. But the predicament of contractors reliant on large-panel concrete construction was far more serious: they soon found that there would be no sudden breakthrough to profitability. The reason for this was that the economic basis of prefabrication was fundamentally unsound, given patronage which was concentrated yet uncoordinated—in the hands of powerful authorities, each determined to secure its own individual solution. Many contractors 'convinced themselves that the system was far quicker than it really was: they'd been looking through rose-tinted spectacles'. In fact, most big prefabricated schemes such as Kidbrooke or Thamesmead lost money or barely broke even. Losses resulted both from investments in new factories and from professional staff costs. Bowie recalls:

> To start off with, precasting something took a tremendous amount of work anyway . . . [T]he volume of drawing-board staff work for precast is 10 or 15 times that for in-situ, the cost of providing documentation is enormous compared to in-situ—and you always get mistakes! At its maximum in the late sixties, the engineering drawing-board staff in our office went up to 250 or 300 people, apportioned between various jobs. But changes multiplied this work even more—the tiniest of little changes, like changing the edge detailing, spat out all sorts of new requirements for redrawing![37]

The investment of firms who threw all their eggs in the 'systems' basket was to prove little more than an expensive gift to the housebuilding drives of the largest local authorities. By contrast, the three firms which made most profitable and extensive use of prefabrication, Laing, Wates and Concrete Ltd, were well aware of the problems of exclusive reliance on big contracts in large-panel construction. All three maintained a flexible balance with in-situ work or smaller contracts. The success of Wimpey was also associated with a continuing reliance on in-situ building, here in the form of no-fines construction.[38]

During the mid-1960s, Laing expanded its high-flat output in many towns by building point blocks either in Sectra or in more conventional in-situ construction. For instance, when Southend CBC, a longstanding 'Easiform' client, found itself in sudden need of additional old people's accommodation, Laing built in-situ 'Storiform' point blocks to the Borough Architect's design (along with 5M cottages) [24.6]. These blocks so impressed neighbouring Thurrock UDC that they asked if they could have some too. Other significant clients for in-situ blocks included Manchester, Bristol and the Northern Ireland Housing Trust.[39]

But Laing was also anxious not to miss the prefabrication bandwagon. The firm closely pursued the MHLG Oldham project and development programme for a 'non-proprietary' variant of Jespersen (12M), and it secured the status of nominated contractor to the West Pennine Group—a consortium formed in 1964 partly as a result of the Oldham project, partly as a result of the 'progress chasing' activity of P. L. Hughes, head of MHLG's Northern Regional Office. By 1965, quiet persistence brought further progress: MHLG's 'open system' initiative had been almost absorbed into Laing's marketing machine, and the Principal Regional Officer openly invited towns such as Stockport and Macclesfield to give Jespersen contracts to the firm. In 1966, Crossman declared, 'You have used John Laing for traditional building—now use him for industrialised building. The Ministry is backing his system'. But other 12M Jespersen factories were less successful: Livingston in Scotland, for instance, was dogged by problems with suppliers [24.7].[40]

Wates also balanced prefabrication and in-situ construction. The former was concentrated in the firm's London operation, the latter in the work of its Midlands subsidiary. It was only in Greater London and the West Midlands that Wates accounted for more than 15% of regional multi-storey starts. In Greater London, Wates's LCC contracts were of great help, both to the firm's engineers, who gained invaluable experience of prefabricated design and on-site precasting techniques in schemes such as Warwick Crescent (1961), and to the marketing staff, who used it as a springboard for contracts with authorities such as Leyton MBC or Croydon CBC, and as the basis of an 'architectural' sales pitch. This misfired in the case of a standard prefabricated point block built to the designs of Lambeth MBC/LBC. There the tenacity of the Borough Architect, Ted Hollamby, in securing the maximum architectural freedom for his project architect, George Finch, resulted in a distinctive, craggy visual profile, but also in a substantial loss for Wates [24.8, 24.9].[41]

In the Black Country, Wates established itself as a trusty mainstay of medium-sized boroughs (as Wimpey did in Scotland) by constructing in-situ blocks and building up a local work-force. In large and active boroughs such as West Bromwich and Walsall, package-deals for 8-storey point blocks on the Roehampton and Sheppard Fidler model were the starting points of big negotiated programmes. West Bromwich augmented Wates's contribution at the height of its housing drive, in 1964, by placing a 604-dwelling contract with Gilbert-Ash in French 'Tracoba' large-panel construction; this was balanced by the award of five 17-storey blocks to Wates. A similar move to test the market against Wates in Walsall by Conservative leader Sir Cliff Tibbits failed, as 'Wates were giving such good service that nobody wanted to leave them!' Wates's only significant use of prefabrication in the West Midlands, for point blocks at Wolverhampton's Heath Town redevelopment, came about by accident. Discussions on a pilot Midlands Housing Consortium multi-storey scheme with Bryant broke down, and there was a need to fill the earmarked site quickly, without drawing labour from other projects.[42]

In the field of out-and-out prefabrication, the firm of Concrete Ltd was the only contractor to make a significant impact in all parts of Britain. This firm's reputation as the 'Rolls-Royce of Systems' had little to do with the structural attributes of its 'Bison Wall-Frame' prefabrication [10.11, 10.12, 24.10]. Concrete Ltd's advantage derived from a simple organisational fact—it was, by origin, a supplier of precast concrete and a subcontractor rather than a main contractor, and the firm relentlessly exploited the fact in their marketing, whereas other major structural subcontractors such as Truscon jumped straight from frame-

CHILTERN
40

24.7. Livingston New Town: Craigshill (Southern Section) development, view during construction by Laing in 1965, immediately following opening of the 12M Jespersen factory by the Secretary of State for Scotland in July of that year. (Laing: by kind permission)

24.8. London: Lambeth LBC, Hurley Road development; photograph of 1989. These three 22-storey prefabricated tower blocks were built from 1966 as part of a bulk order from Wates. Wates's managing director recalls, 'Those were very, very complex designs—they should never have been built in system!'

24.6. (Opposite page) Southend-on-Sea: Prittlewell Street Redevelopment; four 16-storey Laing blocks, seen in 1967 immediately following completion. (Laing: by kind permission)

When you're in the market for a better building

Perhaps it's because Romford Market is the Mecca of suburban Essex bargain hunters that Romford Borough Council have such a keen eye for a good buy. In the market for a solution to their housing land shortage, they went to Wates, the high building specialists. Result was this 11-storey block of 53 flats, plus another one just like it. Wates worked from the outset in closest collaboration with Borough Engineer and Surveyor, Hugh Hurd, and Deputy Borough Architect, Stanley Stewart, preparing site reports, surveys, plans, drawings, specifications, and bills of quantities. Wates also conducted negotiations with public service authorities and submitted a firm price, inclusive of all charges and fees . . . and Romford got two better buildings, in a shorter time, at a lower cost.

WATES build

a better building in a shorter time at a lower cost

24.9. Wates advertisement from *Architect and Building News*, 13 September 1961. (Wates)

24.10. London: 22-storey Bison Wall-Frame block under construction by Concrete (Southern) in 1966 at Monteith Road, Tower Hamlets. The first two blocks at Monteith Road were the initial instalment of a bulk-order from Concrete. (London Borough of Tower Hamlets)

only subcontracts to main contracts. Concrete Ltd, rather than treating the local authority demand for small variations from standard plans as an obstacle, instead emphasised two complementary points. In the case of authorities wanting architectural flexibility, it was stressed that 'Bison' allowed a wide variety of plan variations. Those worried about cost, on the other hand, were told that standard plans were available (mostly worked out by the company's consultant architect Miall Rhys Davies) and that 'if you stick to the plans in the book, they're the most economical'. Concrete's Scottish Sales Director at the time recollects: 'It was sound commercial sense for us to be seen to be all things to all men . . . to work with the local people—local builders, local architects. Local allegiance went a long way.'

Although the initial spread of Bison and the setting up of 'regional' subsidiaries were made possible by big-city contracts from Birmingham, Glasgow and others, the firm's subsequent strategy was to avoid blockbusting assaults on individual localities, but instead, in the Wimpey manner, to establish footholds the length of Britain. Bison Wall-Frame was suitable for smaller-scale orders than its 'parent', Larsen-Nielsen; and the firm's sales pitch emphasised its divergence from the 'bulk order' pattern. Developments of only twenty-four dwellings were possible—although it was stressed that the smaller the contract, the higher the price of each dwelling. Bison multi-storey locations varied from inner-London boroughs and Midlands country towns to the village of Kincardine-on-Forth, Fife, overshadowed by an outcrop of 16-storey point blocks built in 1969 for the County Council.[43]

Concrete's normal practice was to build in conjunction with local main contractors, which gave it the flexibility to infiltrate a region rapidly: 'any small builder could get a Bison contract!' This practice differed from that of, say, Camus, who licensed local contractors to construct blocks to their all-in designs. In some English regions, Concrete reached agreements with a range of local main contractors. In Greater London and the South-East of England, four principal firms were used—Llewellyn, Farrow, J. M. Jones and Carlton—and some schemes were completely built by Concrete Southern. Usually the same main contractor was used for most Bison schemes built by any one authority.[44]

Bison had three major strongholds—the East and West Midlands (where it accounted for 27.2% and 15.8% of multi-storey starts) and Scotland (11.3%). In the West Midlands, Bryant played a special role, as the main contractor covering the vital Birmingham market from 1963, but small firms were also used to allow flexibility.[45] Concrete's Scottish

subsidiary, when acting as structural subcontractor, either worked on a nominated basis (as in Glasgow, with the DLO and Laidlaw) or in association with competing main contractors, as in the case of Aberdeen's Seaton scheme in 1972 [24.11]. But Concrete (Scotland) also often served as main contractor, perhaps as a result of the complexity of the structurally reinforced Scots variant of Wall-Frame. On occasion, Concrete (Scotland) even went through the motions of competing for a contract against itself, in the guise of a quoting subcontractor! Concrete, along with Reema and others, had first been lured into building a factory in Central Scotland by Glasgow's aggressive strategy of package-deal competition. It is indicative of the firm's marketing skill that it was the only one of these prefabricated construction incomers to succeed in breaking out of Clydeside and establishing a nationwide presence across Scotland.[46]

Wimpey, in the early 1960s, attempted desperately to secure official recognition as a 'system', by marketing a new dry-lined point-block type, the '1001' [10.15]: the prototype, at Manston Road Allotments, Ramsgate, was completed in 1964. But the firm's no-fines in-situ construction was also a great asset, in defending its existing coverage across Britain against the incursions of prefabrication. The firm's three main selling points were its overall first place in reliability, in the opinion of many authorities, its employment of local semi-skilled labour (with the itinerant regional pouring gang the only fixed work-force), and its flexibility of layout—although Wimpey's Scottish 'Region' had exceptional success in persuading authorities to accept the relatively standardised model '1001' [24.12]. Unsurprisingly, much of its established strength lay in cities that were half-hearted about prefabrication—Edinburgh, Bristol, Leeds—and in smaller towns. Overall, Wimpey built between 20 to 35% of high flats in all parts of Britain except Greater London (only 2%) and the North-West of England (12%). During the sixties boom, while the firm lost ground in some existing strongholds such as Coventry, it readily took on major new commitments. These included Nottingham, where eight point-block contracts were won in 1963–7, or Hull, where the Housing Committee, anxious to get output moving while YDG types were evolved and large cottage schemes built, commissioned Wimpey in 1965–7 to build 997 high flats at Orchard Park.[47]

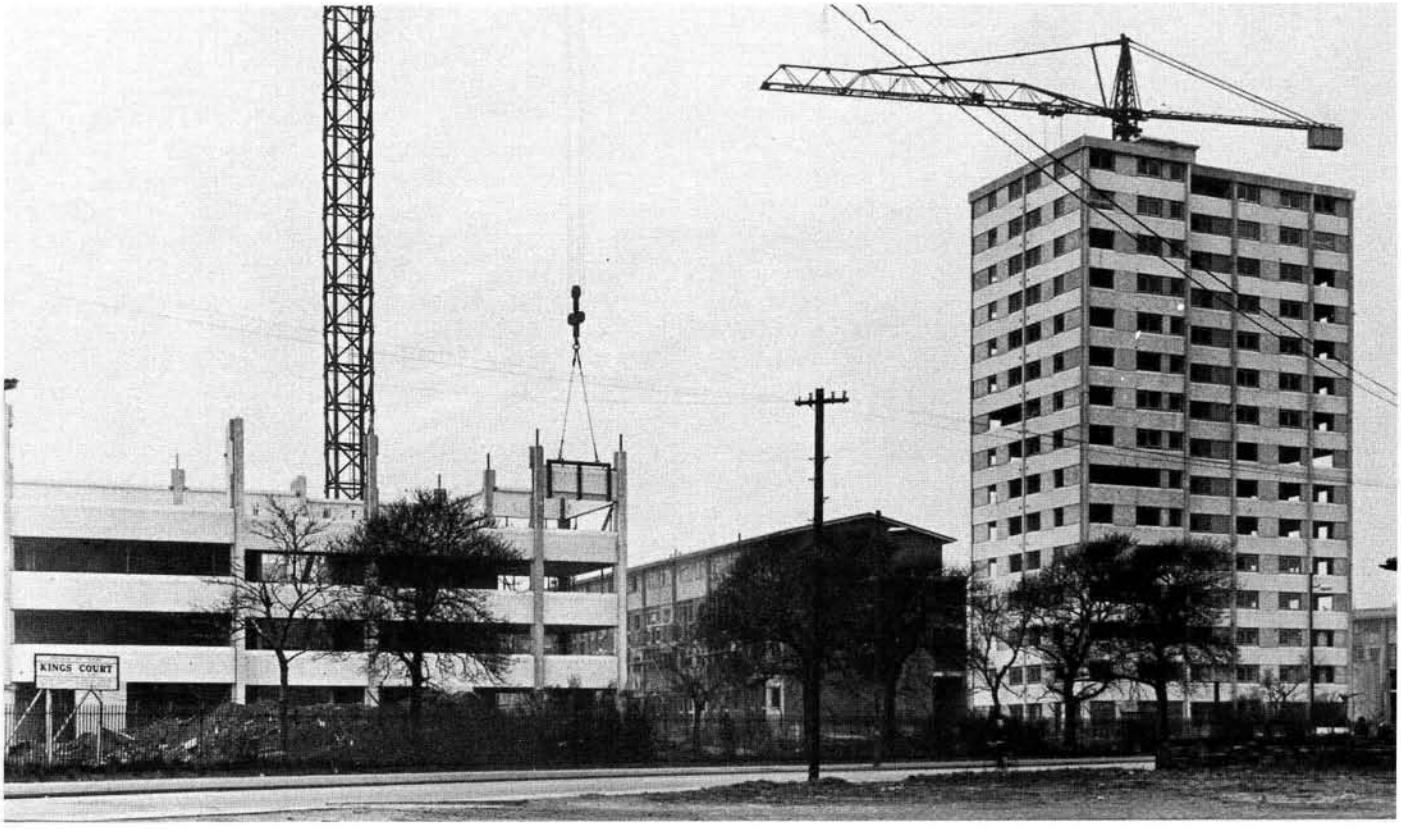
The most aggressive contractual element in the spread of the Modern housing drive to medium and small-sized municipalities was the local industry. Even here, however, pressure concentrated on the choice of contractor or the type and size of contract, rather than broad issues of building policy—such as whether or not to start building high flats. In some authorities, considerable power was wielded by local builders, sometimes associated informally with councillors and officers by Masonic or other links. Local or regional building industry influence was often indicated by a fragmented or old-fashioned contractual pattern: this was particularly characteristic of the South-East of England and (up to 1965) the London area. Lubetkin recalled his experiences in obtaining tenders for Tecton's Finsbury schemes: 'There were many rings—behind the doors, they were all agreeing who was going to do what!'[48]

24.11. Aberdeen: Seaton Areas B, C and D development, photographed in 1989. Phase 1 (comprising three 10-storey blocks in in-situ construction) was built from 1971 by a local contractor, P. Cameron; this firm also acted as main contractor for the seven 19-storey Bison Wall-Frame blocks of Phase 2, built from 1972. (RCAHMS)

The innovative side of the local industry showed itself, for instance, in the building policy of Aberdeen Corporation, with its tradition of self-reliance and incorruptibility; here a multi-storey drive was initiated and carried through almost entirely by local firms. In Stoke-on-Trent, after a local consortium had persuaded the Housing Committee to negotiate an initial multi-storey contract with their members rather than national firms, a remarkable series of load-bearing brick point blocks, designed by the architect Neil Hambleton, was erected between 1965 and 1977. In another

24.12. Kirkcaldy: Pathhead development, seen in 1988: three 15-storey '1001/6' blocks, built in two phases in 1964 and 1968. In Scotland, the widespread enthusiasm for package-deal contracts allowed Wimpey to secure acceptance, in most cases, of the firm's standard designs. In England and Wales, the firm often had to build instead to the designs of local-authority architects. (RCAHMS)

24.13. Crosby (near Liverpool): 1965 view of Barracks Site (Kings Court). Three 15-storey blocks and low flats under construction; the prototype of Matthews and Mumby's multi-storey 'system'. (Sefton Library Service)



forceful local initiative, the Manchester firm Matthews & Mumby in 1963 persuaded Conservative-controlled Crosby MBC to sponsor its own precast-frame 'system', a miniature equivalent of Liverpool's Camus contract which supplied prototype 3-storey maisonettes and standard 15-storey point blocks [24.13]. Some ambitious 'regional' firms exploited the 1960s boom to acquire a Britain-wide status: Crudens, for instance, expanded from the Edinburgh area to Dundee and Glasgow, then to Tyneside and the North of England, and finally on down to London. But it was necessary to set up subsidiary offices before subcontractors and suppliers would take an incoming firm seriously. This was discovered, for instance, in 1967 by the London firm Tersons, which took on a major multi-storey scheme at Clydebank, only to encounter serious delays owing to non-delivery of cladding by a local supplier.[49]

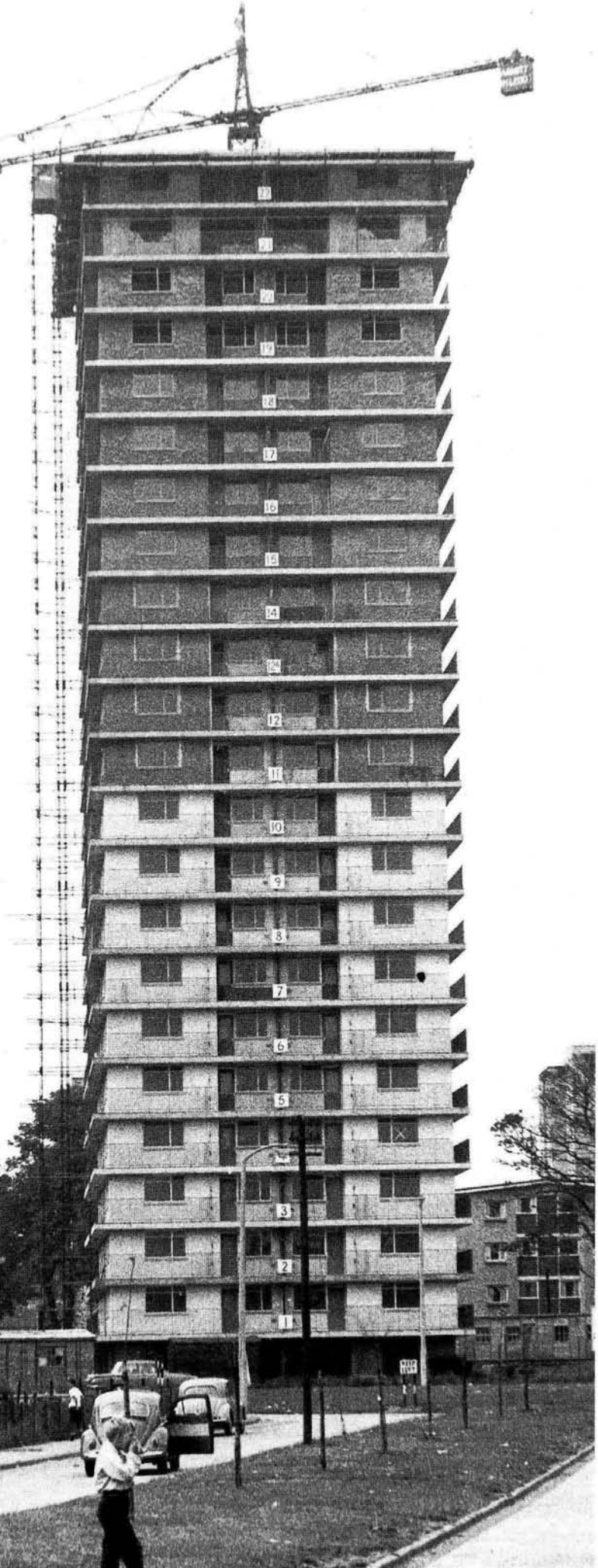
But such innovativeness was less characteristic of local building interests than a kind of defensiveness, a preparedness to take the initiative only when it perceived itself to be under threat. In Newcastle-upon-Tyne, after a coalition of interests had unseated T. Dan Smith from the housing chair following the 'Crudens Affair', the housing drive became dominated by local contractors. In Brighton, whose multi-storey building was dominated by the local firm Rice, the town's contractors combined in 1964 to see off a proposed Laing 12M Jespersen scheme.[50] In some towns, the local contractors ceded the multi-storey jobs to national firms, but attempted to retain the cottages and low flats. Elsewhere, the situation was reversed. In Oldham, a local builder, T. Partington (nominated by a consortium of local firms), was awarded a series of point-block contracts as a counterweight to Laing's success at St Mary's; and in Norwich, whose in-situ-construction high blocks were mostly built by local firms, the importation of prefabricated timber cottages in 1967 stirred up a hornet's nest: councillor apologists for the local industry claimed that Medway's Philadelphia Lane scheme 'looked as if it had come out of the forests of Germany, probably with the leaves on, and had been soaked in the North Sea'. Councillor Len Stevenson recalled that when he mildly reminded one very prominent Council member, during a debate on the Medway contracts, that '"Your job is to consider what the Council needs, not to represent the builders!"—he turned round and nearly punched me in the face!' It was in areas such as East Anglia that most high flats were built by local or 'domestic' contractors; the lowest proportion (18%) was in Scotland.[51]

In contrast to large regional contractors such as Bryant, smaller local firms generally had difficulty trying to cope with multi-storey or other big contracts. There were exceptions—for instance in Edinburgh, with its insular building industry. Here a local builder and Dean of Guild Court member, A. R. ('Sandy') McLeod, was able to persuade the City Architect that he should be allocated a tiny gap-site on the Muirhouse II development, previously earmarked for a small Wimpey point block. On this site he erected, in 1963–4, at considerable cost and no great speed, the city's highest block: the 23-storey Martello Court [6.11, 24.14, 25.21].[52]

Open corruption in selection of contractors, however imprecisely related to broad questions of building type, was more common in a local context than in the case of the national industry: it displayed itself, for instance, in the conduct of smaller firms' representatives at the annual Scottish National Housing and Town Planning Conference at Peebles: 'I've seen Conveners of Housing Committees almost crawling up the stairs at night, being stroked and patted on the head by builders!' These characteristics were even more pronounced at subcontractor and supplier level: all schemes, even if outwardly controlled by reputable contractors and architects, depended to some extent on an intricate and informal local supporting network.[53] The potential irregularities of local subcontractual relationships were unearthed, for instance, by the young, LCC-trained job architect of a multi-storey redevelopment scheme which was assigned by a borough in the North-East of England to a prominent firm of consultant architects in the early 1960s. His suspicions were initially aroused by the unforthcoming behaviour of officers such as the Borough Engineer and his chief assistant architect: 'My first perception was that the Engineer was acting oddly—I thought it was just he was a dour Northerner . . . then he said he'd been told to keep off by the Housing Committee. His assistant was an almost retired guy who used to come in—he had an alcohol problem.' But it was only once the main contractor, a very respectable major firm, had been appointed and selection of suppliers began, that the job architect began to appreciate the pervasiveness of petty corruption within the Council. During one Housing Committee meeting, for example, at which the Chairman pushed through a subcontract in connection with television supply following a £1,000 bribe from an interested party:

> I got a message smuggled into my hand that I had to see the Mayor in his parlour afterwards. He had fallen out with the rest of the Labour Group and had been excluded from the Housing Committee. So I was escorted along to the parlour, sat down, and out came a bottle of whisky and tumblers. Then, Glug! Glug! Glug! 'How're you doing there?', one or two pleasantries, and down to business! The Mayor wanted one make of paint specified, and if I did so this firm would supply free for the painting of an old folks' home with which he was associated. There was a charity involved, and so forth—he was really laying it on, although it was 'nothing to do with me, mind!' I refused—the matter had already been dealt with. 'But couldn't you see your way . . . ?' then more Glug! Glug! and the Mayor's car was waiting to take me to the station—which was only a couple of street-blocks away! But on site, it's very difficult for a young job architect to keep tabs, with paint slopping over tins—so, at the end of the day, I really don't know what paint they *did* in fact use.[54]

We have now seen that the building industry, 'national' and local, played a subsidiary role in the spread of Modern housing types. What, however, was the position of building labour? Did it exert any influence in this process, or was it, rather, a passive instrument? The answer does not clearly point in either direction. There seems little evidence that the building of complex high buildings, even by national firms and in prefabricated, supposedly mass-produced form,



caused 'deskilling' of the labour force—despite the fact that the end of the multi-storey boom, around 1970, did coincide with widespread militancy on many sites. We have to remind ourselves that, in the prefabricated schemes of the mid-sixties, architectural theories of mass-production were unrealised in the face of municipal demands for limitless minor variations.[55] And during the building shortages of the early sixties, the large contractors made every effort to appease their work-force: for instance by consulting the trade unions on introduction of prefabrication, or through the national agreement that precasting factory workers should receive building rates of pay. In certain Labour Party strongholds, such as South Wales and the North-East of England, the power of the building unions over conditions and rates of pay was reinforced through initiatives orchestrated with local authorities, which stipulated, for instance, engagement of given numbers of local workers or apprentices. Ironically, 'national' firms accommodated these restrictive conditions more easily than the local industry. In other areas, such as Merseyside, it was claimed that building labour was involved in closed building practices and exclusion of 'outsiders'. But such activities were not directly relevant to building policy.[56]

The only area where building labour exerted indirect power over the type of housing erected was that of direct labour contracting: this strongly influenced building policy in many towns, Labour-controlled or not, often by blocking organisational and constructional innovation. The LCC's force was the largest in Britain, but it was mainly employed on rehabilitation and maintenance, and only built around 600 dwellings annually. The other principal DLO to avoid new building was that of Leeds, which devoted itself, instead, to the city's unique programme of area improvement. Glasgow's was by far the largest new-works force; many other Scots large burghs and counties also maintained strong DLOs with little Government interference.[57] In England, Henry Brooke, when Minister of Housing, pursued a dogged campaign against them: between 1959 and 1963, MHLG attempted to force councils to put at least one in every three contracts out to tender. But even this did not get to the root of the problem. Where a DLO tendered in open competition, many firms, fearing local authority favouritism, would not bother to submit quotations: prices thus remained artificially high.[58]

The largest and best established DLOs were all associated with prolonged Labour Party municipal rule. In North of England cities such as Salford or Manchester or London-area authorities such as Bermondsey MBC or West Ham CBC, an entrenched DLO built a high proportion of council housing, and often acted as a powerful brake on involvement of national firms, or innovative policies such as prefabrication and high flats. However, DLOs accounted for a sizeable

24.14. Edinburgh: Muirhouse Phase II development; the City's tallest multi-storey block, the 23-storey Martello Court, seen under construction (by W. Arnott McLeod) in 1964. The Muirhouse II scheme was one of the largest of Edinburgh's many prefab-site redevelopments (see ill. 6.11). (Scotsman Publications)

percentage of multi-storey output in Scotland, Yorkshire and Humberside, the North-West and Greater London (all between 8% and 16%).[59] Under a competently run DLO, the chief management problem was to maintain a balancing act between efficiency and continuity of employment: it was risky to take on large contracts at irregular intervals. Very often, in the absence of rigorous profit-motivated management (including the ability to hire and fire as necessary), massive DLO flagship projects got out of hand, resulting in serious delays and overspending. A guaranteed succession of smaller jobs tailored to the work-force level was preferable. This well suited many DLO strongholds—metropolitan boroughs such as Bermondsey, which could only carry out redevelopment in small sections, or Scots county councils, with their piecemeal village slum-clearance. There were adventurous exceptions to this worthy but lacklustre rule. Glasgow's gigantic force, always a law unto itself, naturally saw itself as duty-bound to keep up with the times, but, lacking managerial discipline, it was fascinated to an unhealthy degree with gimmicky and politically showy gestures. There were periodical spending sprees, in which costly plant, such as precasting factories and tower cranes, might be acquired on the merest whim and just as quickly discarded once their novelty had worn off. The same was partly true of the SSHA's DLO, which prided itself on its advances in no-fines building, but whose efficiency was questioned by observers: Edinburgh's Housing Chairman, Pat Rogan, blasted it as a 'cemetery' for second-rate workers.[60]

For a go-ahead DLO to avoid disaster, it had to innovate in a measured and cautious manner, not unlike a private company such as Laing. The exemplar of this approach was 'EDLO': the DLO of Edmonton MBC and (from 1965 to 1971) Enfield LBC. This, the longest established force in England, had since 1925 carried out all building work for Edmonton, including construction of some 10,000 dwellings. After World War II, under the encouragement of Housing Chairmen Tommy Joyce and Eric Smythe, and the skilful management of the Borough Architect, Tom Wilkinson, it launched itself vigorously into multi-storey building. In the 1960s, EDLO evolved, in collaboration with the Building Research Station, its own technique of battery-cast prefabrication. Following the successful erection (from 1963) of a prototype 18-storey block at Angel Road South [23.2], the organisation was expanded by 50% under Enfield LBC [23.3]. After 1965, it constructed in Lower Edmonton a succession of rugged, battery-cast towers, culminating in the chequer-patterned Barbot Street group [27.12] and the gigantic Edmonton Green redevelopment, which comprised three 26-storey slab blocks and shopping centre [24.15]. In Enfield's programme, EDLO co-existed with Wates and a local contractor; but Smythe saw the London Housing Consortium North Group as a 'predator' and refused to join. After the Conservatives won the 1968 municipal election, however, the multi-storey programme was halted; as a result, in 1971, EDLO was closed down.[61]

24.15. London: Stage I of EDLO's Edmonton Green redevelopment, Enfield (three 26-storey blocks and shopping centre) seen under construction in 1968. (London Borough of Enfield)

To summarise: with the occasional distinguished exception, such as EDLO or Sheffield CBC's force, most DLOs resembled local contractors in their hostility to outside firms, their preoccupation with programme continuity, and their defensive or erratic response to radical changes, such as the political demand for large-scale production of Modern flats.

Part B
Scottish, English and Welsh Housing in the 1960s: National, Regional, Local Variations

Introduction

PART A EXPLAINED why Modern flats, introduced first to England by avant-garde architects, were enthusiastically taken over by municipal 'housing crusaders' in all parts of Britain, against the background of opposition from many designers. In Part B, we shall consider Modern housing production across Britain in its fully developed form, and will acquaint ourselves in greater detail with those that chiefly sustained it: the councillors and officers of active authorities. We have seen that the organisational structure of Modern house-building took a double-pyramidal form, divided between England and Wales on the one hand, and Scotland on the other. The apex of this structure was occupied by the great cities. They, during the 1950s, had begun the crusade to revive the 'numbers game' in the face of the 'land trap' and other officially endorsed obstacles. The political drive of these municipal housing leaders, and the energy of their officials, was supported by contractors, and by output-orientated circles within Central Government. Now a renewed push for production became possible, expressed not through vast swathes of cottages or tenements, but through the new shapes of Modern blocks of flats. The cities' example then inspired the leaders of second-rank authorities to embark on their own 'crusades'. Hutchison Sneddon, Motherwell's Council leader during the sixties [25.18], recalls that, during those years, 'many people thought I was daft. For instance, I was once at a meeting, describing our proposal for Muirhouse, with its seven 18-storey blocks and so on, when one of the ward councillors got up and said, "All that sounds very nice, but Hutchie Sneddon's made it all up!" He was an older man, who didn't have much vision!' At the base of this dual organisational pyramid was the mass of smaller urban authorities, their participation (in Mellish's words) a 'spin-off effect' from the 'great drive' of the cities, egged on in the sixties by professional and contractual campaigns such as 'system building'.

In Part A, we considered the origins and establishment of Modern housing production chronologically and thematically, tracing the influences which cumulatively contributed to this process. In Part B, the aim is to describe the particular characteristics—constraints, key groups and individuals—of the countries, regions and conurbations within Britain where most Modern flats were built; towns and areas where few were built—including Wales as a whole—will be much more summarily treated. In examining the local, regional and national driving forces of this loosely federated, yet mighty movement, it is only appropriate to start, in Chapter 25, with the most dramatic episode of the entire adventure: the sudden counter-attack by which Glasgow Corporation's Housing Committee parried the onslaught of decentralism, and, in so doing, set in motion a great Modern housing drive across Scotland. Then we shall pass on to examine the looser, more polycentric patterns of England and Wales: the 'provinces' in Chapter 26, Greater London in Chapter 27. Here there were complicated regional groupings of dominant and secondary authorities, each with its own rivalries and alliances, variations in output levels and building policies.

From this patchwork, 'national housing drives' took shape within England and Wales, and within Scotland—fuelled by a constant cross-fertilisation among the 'crusaders', at events such as conferences. Alf King, a former leader of Hounslow LBC, recalls, 'I would talk to people from Birmingham—our problems were the same! There was a great mingling and a great talking to each other, in the bar at night—that's when the hairs get let down! You'd get tips, you'd come back and say to the officers: "Let's have a report on this!"' Contrary to the criticisms made by designers and other professional groups, English and Scots municipal housing leaders did not regard the results of their energy as any kind of debasement, perversion or half-realisation of the grand postwar aspirations of reconstruction. Instead, the housing they had built seemed, within the many constraints of the time, to represent a fulfilment of what had long seemed their chief mission: to provide as many new, Modern dwellings as possible for 'their' people, as quickly as possible, within their own boundaries.

The 'housing problem'—or, rather, the unending effort to solve it—was the lifeblood of the mid-twentieth-century city in Britain, the stimulus of much of its municipal pride and sense of independence. Housing was different from other 'social' building programmes, such as hospitals or schools, which were tightly controlled by national professional groups. In Britain (almost uniquely in the 'Western' world), working-

class housing since 1919 had been inextricably bound up with municipal power. The more dwellings cities built, the more autonomy they gained, in building and letting. This 'virtuous circle' was most pronounced in Scotland, where the close interrelation between municipal patronage and housing since 1919 ensured, at all times and all locations, a near-unfettered drive for numbers. In the words of R. E. Nicoll, cited above in Chapter 21: 'Glasgow Corporation was *the* power in the land—no Minister sitting in Edinburgh could do much about Glasgow . . . No one would dare interfere with this great machine producing houses!' Correspondingly, one might speculate, the atrophying of the housing drives in the seventies and eighties also drained away much of the cities' power. Whatever the future may now hold for local authorities or public housing, the Modern flats built in such large numbers in the fifties and sixties will remain monuments to a golden age of municipal endeavour.

CHAPTER 25

'Give the People Homes!' Scotland's Housing Blitzkrieg

I can remember an endless stream of older women coming to the office around 1957-9, all with the same question: 'When's ma hoose comin down?' They just couldn't get out of the old condemned houses fast enough!

Ian M. T. Samuel, 1990[1]

DURING THE 1940s and 1950s, the powerful planning alliance within the Department of Health for Scotland and Glasgow Corporation had sought to box in the city's Housing Committee. Their efforts, part of a grand, Government-endorsed movement of regional reconstruction, culminated in the 1957 *Report on the Clearance of Slum Houses, Redevelopment and Overspill.* This proposed to squeeze the Committee's building programme in a pincer movement: on the one hand, a vast redevelopment programme under close planning control; on the other, sweeping overspill provisions to abstract virtually all the decanted population. By thus winning control over the city's programme, they hoped, in the process, to establish effective hegemony over housing at a national level.

Seven years into this plan's programme period, around 1965, Glasgow's housing had certainly undergone an extraordinary physical change. As anticipated in the 1957 Report, large areas of the slum belt had been demolished, and developments comprising high and low blocks of flats were in course of erection in their place. But beyond the Comprehensive Development Area zone, there was a startling and awesome sight. Away into the far distance, groups of colossal multi-storey blocks were rising—twenty, twenty-five, thirty or more storeys high [COLOUR X]. These were not located in planned redevelopments but were thrown haphazardly on gap-sites anywhere in the suburbs: on pockets of waste-ground, corners of golf-courses, redeveloped prefab-sites. If Manchester had been the 'shock city' of the Industrial Revolution, Glasgow was the new 'shock city' of the Modern housing revolution. Nowhere else, at such an early date, were so many large, high blocks completed or under construction at once.

This tremendous forest of multi-storey blocks openly defied the planners' prescriptions in its form and, more important still, its effect. The 1957 Report had recommended the building of 40,000 new dwellings in Glasgow and 60,000 overspill houses by 1980: but, by 1972, no fewer than 48,000 new dwellings would in fact be built within the city boundaries, while a mere 25,000 planned overspill dwellings would be provided. Of course, very many higher-income households were also leaving the city in 'unplanned' overspill, largely to commuter suburbs—but this movement was equally opposed by the planners. As we saw in Chapter 20, direct movement of people from clearance areas to receiving authorities was in any case impeded by the slowness of the town development procedure. But now there was a new and direct challenge from within Glasgow.[2] In 1964, the young English architectural critic Nicholas Taylor, later to become a vehement opponent of Modern 'mass housing', hailed the city's astonishing multi-storey rebuff to the ideal of planned redevelopment: 'The fight back in the past three years has been exhilarating. No visitor to Glasgow this year can fail to marvel at the towers of flats shooting up in every direction.'[3]

DAVID GIBSON: GLASGOW'S HOUSING CRUSADER

In the next three years the skyline of Glasgow will become a more attractive one to me because of the likely vision of multi-storey houses rising by the thousand . . . The prospect will be thrilling, I am certain, to the many thousands who are still yearning for a home. It may appear on occasion that I would offend against all good planning principles, against open space and Green Belt principles—if I offend against these it is only in seeking to avoid the continuing and unpardonable offence that bad housing commits against human dignity. A decent home is the cradle of the infant, the seminar of the young and the refuge of the aged!

Councillor David Gibson, 1962[4]

What was the cause of the eleventh-hour reversal to the Abercrombie pincer strategy, which banished the notion that much of the population of this great city could be scattered by Government edict into an array of garden suburbs or New Towns? Astonishingly, the recovery of momentum by the Housing Committee resulted, in the first instance, from the initiative of one man: David Gibson, its Convener from 1961 to 1964 [25.1, 25.2]. The replacement of the fragmented, although highly efficient, Victorian building process by the municipal leviathan had created the possibility that influential individuals might alter the entire course of the city's housing policy. But it was only now, with Glasgow's whole programme in the balance, that this potential was at last to be realised.

The irony of the career of David Gibson—arguably the most remarkable of Western Europe's postwar municipal housing leaders—was that he was an outsider, a 'rebel' even, within Glasgow Corporation's Labour political apparatus. He seemed something of an anachronism, as one of the last Independent Labour Party stalwarts to capitulate to modern

Socialism, joining the mainstream Labour Party only in 1954. He had spent the previous thirty-three years steeped in the fiery idealism of the ILP, holding its UK national chairmanship in the fifties, losing innumerable Parliamentary election deposits, authoring countless obscure tracts on global disarmament and land nationalisation, and serving as councillor from 1934 until 1949, when the Dollanite 'Murphia' finally succeeded in sweeping the ILP off the Corporation. But Gibson's own passion was the housing question, and had been ever since his arrival in Glasgow from Springside in Ayrshire in 1919 at the age of sixteen, when he was plunged into the city's slumdom, living in huts and overcrowded tenements in the East End. Unlike the theoretical preoccupations of the intelligentsia of the LCC Architect's Department, Gibson's radical, but fiercely anti-Communist, Socialism was built on direct involvement in the housing problems of his fellow working-class Glaswegians. They flocked in their hundreds to his weekly ward advice bureau, or to his home in a modest three-room East End council house, situated in an appropriately noxious setting cheek-by-jowl with a bone-boiling works and a piggery.[5]

By the late 1950s, the impassioned yet homespun values of the ILP now seemed a thing of the past, even in Glasgow. The Labour Group and Corporation leadership under Peter Meldrum had come, on balance, to accept Abercrombie's grand framework of decentralisation, and to view housing as just one facet of the planned 'development' of Glasgow, and Scotland as a whole. Typically, Meldrum had participated in the concerted attempt in 1958 by the Corporation–DHS planning grouping to 'puncture the Bunton thesis' of anti-overspill multi-storey building. Gibson stood completely aside from this 'vertical coalition' of 'regional' planning. He focused solely on what was still *the* local-political issue—the housing question—bringing to bear on this single subject all the uncompromising intensity of the ILP tradition. In contrast to the ILP's original housing campaigns, Gibson's 'crusade' was almost exclusively concerned with slum conditions. In his view, 'the unpardonable offence that bad housing creates against human dignity' made it morally imperative to build as many new dwellings for slum decanting as quickly as possible, whatever the effect on any scheme of 'regional development'.[6] He was implacably opposed to the 1957 Report's redevelopment and overspill programme, because he believed that it would not only fail to rehouse slum-dwellers directly into new houses (at least until the mid-1960s), but would also prevent the Housing Committee from doing so. To Gibson, wholesale planned overspill seemed a cruel fantasy dreamt up by a dirigiste Westminster/Edinburgh élite: 'To delete a quarter of a million people from the city, he was completely opposed to that, he thought it was *ridiculous*!' But, fantasy or not, he was determined to fight back. 'There *is* enough land in Glasgow to build all the houses we need—if only we can find it!'[7]

25.2. David Gibson, photographed in 1950. (*Glasgow Herald and Evening Times*)

25.1. David Gibson and his wife Sadie, seen on an ILP Guild of Youth ramble in 1930. (Mrs S. Gibson)

Gibson occupied a rather isolated position within the Labour Group as an ex-ILP 'rebel', standing aloof from blocs such as the trade unions and the Roman Catholic

Church; but the unrivalled power of the Housing Committee enabled him rapidly to build up sufficient support to launch a counter-strategy opposed to overspill, whatever the leadership's views:

> Glasgow Corporation was a big pond with a lot of big fish: it had a problem as to who was its most important person. Housing, because of its spending requirements, invariably assumed an importance out of all proportion to other departments. You get councillors clashing: some people don't emerge in debates, and they attach themselves to those who do. When they want something for their area, they'll speak to that guy sideways and he'll help, fixing a tenancy and so on. He then expects them to follow him in his wider cause—rebuilding Glasgow housing!

It was an irony of municipal Labour's fostering of housing provision as a power-base, that, in crisis, a housing 'expert' outside the control of party bosses might seize this power-base and use it for purposes not to their liking. Such a crisis had now arrived, and the city leadership, their policy of appeasing overspill facing a dead end, were forced to yield up their housing 'machine' to an unreconstructed 'rebel'.

Gibson's fusion of ILP zealotry with incisive intellect set him apart from the stolid Conveners of the 1950s. A DHS Administrator recollects: 'I remember that eloquence. It was impossible not to admire it, and impossible to stand out against it!'[8] His rise to ascendancy within the Housing Committee was meteoric: by 1958 Sub-Convener, by 1960 acting Convener, and finally full Convener the following year. Where Bunton's many proposals had failed to deflect decentralism's advance, Gibson had by 1961 built up a power-base from which he could launch a stunning blow against the planners' position. They immediately sensed the danger:

> Gibson was the man we regarded as the frightening one—a white-faced, intense, driving idealist, absolutely fanatical and sincere, of a kind you couldn't help admiring in a way. He was white with passion about the housing problem—one knew he was a man in a hurry! He saw only the one thing, as far as we could see: how to get as many houses up as possible, how to get as many of his beloved fellow working-class citizens decently housed as possible. We all agreed, but the question was, where, how, and at what speed![9]

Gibson's counterblast took shape during the heated debates which followed publication of the planners' 1957 report. The initial outcry was led by Councillor James Duncan, who raged against overspill: 'We won't get 60,000 houses out of Glasgow—and we don't need to do so! We should use every available site in the City at all costs—including all the gap sites!' The interim response was a compromise, which fudged the issue a little longer. The planners were promised Comprehensive Development Areas (CDAs) would be designated, beginning with Hutchesontown-Gorbals; but Duncan and the old-guard 'housers' were appeased by the promise of a new drive to exploit every available gap-site. But in 1958, it became clear that the planners would seek not just to maintain but to reinforce their hold over the CDAs: DHS refused a Corporation request to relax the 165 p.p.a. ceiling for the Anderston Cross CDA, and Grieve began to lobby for a cut in the density of Hutchesontown from 165 to 135 p.p.a.[10]

From that point, Gibson, exasperated, began to press for a revolution in land policy. Outside the planner-controlled CDAs, there were no blanket density maxima, but merely ineffective 'cartograms' expressing notional population figures for entire districts, including *existing* housing. Gibson intuitively grasped that, if the multi-storey blocks proposed by the planners for mixed development use in the CDAs were instead built by the Committee *outside* those areas on gap-sites, much higher blocks would be possible, unfettered by planning restrictions and acquisition delays. This would allow a cycle of decanting within the city, without resorting to overspill. Gibson hoped to decant slum families to underoccupied interwar cottages, and the inhabitants of the latter to smaller flats in nearby multi-storey blocks. Later, when this proved impracticable, slum-dwellers were decanted directly to high blocks. But the overall strategy remained the same: to bypass overspill by bridging the critical five to six year gap before worthwhile cleared areas became available.[11]

The Committee's embrace of high flats, and its temporary abandonment of building in the CDAs, were one and the same policy. In 1962, after several years when most multi-storey approvals were located in CDAs, this figure plummeted to only 2%. But in the suburbs there were few large sites available, while the smallest gap-sites were needed for tenement construction, to sustain the DLO workforce. By mid-1958, use of point blocks on outer suburban sites was already under discussion with DHS. However, the real breakthrough in the Committee's land supply came with the evolution of a new policy in 1959. This involved the rezoning of some public open spaces such as golf-courses, and the demolition of the city's large estates of 'prefabs': the sites released would be developed as intensively as possible with high blocks [25.3, 25.4].[12] The original impetus behind this rezoning policy came from Gibson, who won the support of the Parks Committee Convener in September 1959. The committee structure could not be used to obstruct Gibson's reforms: 'If the Housing Committee approved it, the Labour Group would tell the Planning Committee to endorse it—Planning was a weak committee!' But even Gibson entertained no hopes of securing release of further Green Belt land, and so it was suggested that the latter could accommodate displaced golf-courses. Archibald Jury provided Gibson with architectural justification for the importation of multi-storey blocks into Knightswood—that they would add visual variety to a sprawling cottage estate. Gibson endorsed this view; to him the arresting Modernity of high flats signalled the sharpest possible break from the squalor of the slums. But appearance was a side-issue, alongside the cry of Glasgow's slum-dwellers for new houses. An official recalled: 'In those days, he was threatening to fire us about once a fortnight!'[13]

To get his multi-storey drive under way, Gibson not only had to convince the Corporation but also DHS (Scottish Development Department from 1962). Negotiations with the Government were handled jointly by Gibson and a few senior Corporation officials (such as Jury or the Housing Town Clerk Depute, Jim Hood) [25.5]: 'DHS were in awe

25.3. Glasgow: Scotstoun House development, 1961 perspective by Frank Weemys. This and the nearby Lincoln Avenue scheme, each comprising six 20-storey tower blocks, were built from 1962 by Wimpey. (City of Glasgow District Council)

25.4. Glasgow: Wimpey multi-storey developments, Knightswood: view from north in 1989. From foreground to background, Lincoln Avenue (1962), Kirkton Avenue (1965), Scotstoun House (1962) and Blawarthill (1964). (RCAHMS)

of Gibson, they saw him as some kind of crusading angel, bulldozing his way through Glasgow!' Administrators' reservations about high flats and general-needs building in the late 1950s were only a show of restraint, to appease the Treasury. Once the economy improved around 1961–2, these worries were replaced overnight by fresh anxiety to raise output. In the absence of a strong private housebuilding industry, any renewed Government emphasis on completions could only underline its dependence on Glasgow to deliver much of the required total. Gibson's own hand was soon strengthened by statistics showing the failure of overspill to offer direct help in decanting the slums; and he found ready cooperation from the DHS Housing Under-Secretary, J. Callan Wilson, in securing release of controversial sites. Several hundred dwellings were added to the city's annual total from 1963, as a result of DHS's success, in 1960, in persuading the Treasury to allow the SSHA to build 3,500 dwellings in Glasgow. This Exchequer-financed programme, tightly controlled by the Housing Committee, was a welcome gift to the city's hard-pressed ratepayers.[14]

Although there had been much agonised discussion in 1958–9, the Committee's attachment to the tried and tested tenement formula had impeded change to multi-storey building on gap-sites. But, the next year, Gibson's argument had been won for him by an electrifying demonstration of the potential of point blocks in rapid piecemeal development: Wimpey's erection of the structure of three 20-storey blocks at Royston, Area A, in just eight months [25.7, 25.8]. Commenced at the same time as Spence's elaborate Hutchesontown slabs [20.15], which contained roughly the same number of flats, these were finished and let before even Spence's foundations were complete! Now Gibson could unleash the most concentrated multi-storey drive experienced by any city in the UK, with high flats making up nearly 75% of all completions between 1961 and 1968, compared with less than 10% for all other postwar years. Far more of Glasgow's multi-storey flats were in very large and high blocks than elsewhere: the proportion in blocks over 20 storeys high was three times that of London and eighteen times that of Birmingham. Through Gibson's multi-storey campaign, completions now gradually began to recover, from 1,902 in 1962 to 4,318 in 1964; starts soared to 6,309 in 1963 (74% multi-storey). Now, at last, Glasgow's first concerted counter-attack against the forces encircling her was under way. The immediate adversary, of course, was the Clyde Valley Plan 'land trap' [COLOUR VIII]. But, beyond that, the entire anti-urban enterprise charted out in the 1917 Royal Commission report was now in jeopardy. In a striking irony, the great engine of municipal housebuilding—the vehicle originally groomed for the suppression of the national housing tradition—was now being employed to defend and develop it vigorously.

25.5. Bailie Gibson, accompanied by (left) Progressive Party member Bailie James McClure and (right) Town Clerk Depute James Hood, arriving at St Andrew's House, Edinburgh, on 20 September 1961, for a meeting of local government representatives with the Secretary of State for Scotland, J. S. Maclay, to discuss new housing subsidies. (City of Glasgow District Council)

LEWIS CROSS: HOUSING PROGRESS OFFICER

He was the one, he was the key man . . . he was the person who did all the beavering away behind the scenes . . . he was given carte blanche!

Former Glasgow Corporation planner, 1987

Lewis would say, 'If you want work, you've got to get your finger out!'

Tom Smyth, 1987[15]

Gibson's counterparts in English cities such as Leeds, Sheffield and Birmingham were fortunate in that their multi-storey programmes had already eased land supply by the time that building shortages began to bite in the early 1960s; thus they were only faced with one serious problem at a time. In Glasgow, by contrast, owing to the gravity of the city's housing situation and the delay in turning to high flats in the 1950s, Gibson simultaneously faced a serious building capacity shortfall, and the worst postwar land crisis in Britain.

Luckily, however, the Convener had available to him, in both these problem areas, the outstanding services of Lewis Cross, a senior engineer in the Architecture and Planning Department who oversaw all housing sites and contracts [25.6]. Cross was perhaps the most skilful chief negotiator employed by any large postwar housing authority. He ensured, with integrity as well as relentless efficiency, that Gibson's demands for maximum production were given priority over all other considerations affecting the location, design and building of housing—even Gibson's own pre-

ference for blocks which would be really and truly 'Modern'. If the city's housing as a whole represented (within Britain) an extreme of concern for output, Cross represented the apotheosis of 'Anti-Design'. Ironically—in the context of Glasgow, citadel of Scotland's housing drive—Cross was himself English: a Yorkshireman whose native bluntness was spiced with a mischevious sense of humour. His administrative drive, and Gibson's fervent political advocacy of high flats, were to prove an irresistible combination. In this area, Jury, well aware of the power of the Housing Committee, balanced his planners' authority by allowing Cross great autonomy: he was promoted to Depute rank (along with Nicoll) and designated 'Housing Progress Officer' around 1961. Jury only had to intervene occasionally in matters of detail: for instance, to curb the small jokes and facetious observations which peppered Cross's correspondence.[16]

Of Gibson's two key problems—land and building—the first was the more fundamental, as nothing could be done without sites. In this vital area of land assembly and exploitation, Cross brought to bear a remorselessly matter-of-fact competence acquired in road and bridge building in the Royal Engineers and his early colonial service in Kenya. During the 1950s, he had exercised day-to-day responsibility for the building of tens of thousands of flats on Glasgow's peripheral schemes, laying out roads and sewers on which standard three or four-storey tenement types could be erected as fast as possible in the required numbers. Now the Housing Committee's call was for high blocks: so Cross simply translated his tried and tested approach to this new field. While Gibson's multi-storey 'crusade' represented, in some ways, a striking break with the past, Cross's organisational policies showed much continuity with the tenement-building years. Gibson, fired with enthusiasm for the new soaring blocks, shared some common ground with the early postwar ideals of Modern design we traced in Section I. Of course, like Bunton's conception of unadorned 'public building', Gibson's vision seemed to relate more to the contemporary late-CIAM Zeilenbau-urbanism prevalent in much of Europe, than to anti-monumental 'British' norms such as Mixed Development; and his homespun ILP rhetoric was very different in language from, say, Shankland's praise of towers in the city (see Chapter 17), let alone the poetic speculations of the Smithsons. But Cross, by contrast to all these, saw blocks of dwellings, whether in the form of tenements or point blocks, as being no more complicated than his own field of technical knowledge: drains and roads. He had risen to power over Corporation housebuilding not through expertise in the structural engineering of dwellings (let alone LCC-Modern 'scientific research'), but through administrative competence, through an ability to marshal other people—designers and builders—so as to fill gaps with numbers as quickly and simply as possible. There were thus surprisingly few links between his outlook and skills, and the ideas discussed in Section I—including even the most matter-of-fact, technical aspects of 'Modern Dwelling' design. In his capable hands, Gibson's demand for the large-scale building of plain, monumental Modern high blocks was fulfilled. Yet these blocks were built in a manner which consciously discarded key aspects of LCC-style Modernity, and harked back to older, more elemental ways of municipal flat-building.[17]

From 1958, with political pressure for high flats starting to emerge, Cross quietly began to prepare for this change, selecting viable sites from the Committee's piecemeal land supply. His response to Gibson's cry for no-holds-barred multi-storey building was straightforward. An increasing number of specific 'multi-storey sites' were designated: their 'yield' would be maximised by use of 100% high flats, between twenty and thirty storeys in height. Sites which were too small or awkwardly shaped even for point blocks, in daylighting or sunlighting terms, were used for tenements (usually of three storeys). Especially outside the CDAs, there was little attempt to design mixed developments for different household sizes. Instead, there was a policy of segregation: most one and two-bedroom flats were grouped separately in point and slab blocks, most larger dwellings in the scattered tenements.

We shall see in the following pages that Cross chose to neglect, even to attack, many of the key values or 'standards' of Modern design, when they threatened to stand in the way of output. He accepted unquestioningly only the most estab-

25.6. Lewis Cross (far right) with colleagues following his move to the SSHA as General Manager in 1965; photograph taken in 1972. Far left: Harold Buteux, Chief Technical Officer—the SSHA's senior architect, and an advocate of 'system building'. (SSHA)

lished constraints, such as daylight and sunlight factors—which, on their own, did not actually tip the scales in favour of Modern high blocks, as opposed to Glasgow Corporation's tenements of the fifties. But the standard which most threatened the exploitation of 'multi-storey sites' was 'density' itself. In contrast to designers' use of density levels as precise recipes of building type and location, Cross saw density simply as a potential obstruction to output—as, in his view, multi-storey blocks could equally well be built on any available site within the city boundaries, central or suburban. The planners' density controls over redevelopment areas were powerful and unambiguous, through strict enforcement of the 165 p.p.a. blanket maximum—although this could partly be outmanoeuvred by redefinition of the phasing of a CDA. In the outer suburbs, the cartogram system, and various tricks of site redefinition, allowed Cross to muddy the impact of high blocks; but the planners could still argue that they were 'inappropriate' in these 'low density' areas.[18] His lack of regard, even contempt, for 'density' must be distinguished from the arguments of those architects and planners who began, during the early 1960s, to question the usefulness of notions such as density or light angles. To them, density had come to seem yet another quantitative obstruction to the pursuit of creative 'design'; to Cross, all theoretical definitions of the relationship of buildings to land were obstacles to output.[19]

In his single-minded pursuit of production, Cross saw not only the values of design, but designers themselves, as a potential obstruction. Around 1950, the LCC's Valuer had seemed impotent in the face of the attacks by Richards and by Matthew's architects; at the end of the sixties, younger design critics would achieve the same power—now by ridiculing the 'Failure of "Housing"' as a whole. But in Glasgow, for a few years in between, the tables were turned, as one hard-nosed engineer succeeded in throwing the architectural and planning establishment—including Sir Robert Matthew himself—on the defensive. Cross set out to polarise output and design, to exclude or subordinate designers adhering to the external, 'national British' values of their professions, and to entrust the entire design process as far as possible to contractors' staffs, who 'spoke the same language as him'. By the late fifties, he had acquired oversight of the Architecture and Planning Department's own housing architects, engineers and surveyors. After a period of innovativeness in the forties, these architects' role and status had become somewhat limited. A senior quantity surveyor in the Department recalls: 'They were a small section, virtually run by the Clerk of Works, Joe McGuinness . . . [A]ll they'd been doing was taking the standard tenement types and shoving them on to the road patterns built by the DLO.' This well suited Cross, who 'certainly didn't want any comments from his own designers!' The first stirrings of change only came in 1963–4, when one chief housing architect, A. A. Wood, challenged the policy of massed towers, and advocated the building of brick deck-access blocks. The first of several such schemes was authorised at Springburn 'B', but otherwise Cross overrode Wood's ideas, and the latter eventually left for private practice, and, later, to take up the newly-created post of City Planning Officer at Norwich.

The Corporation planners themselves, under the forceful direction of Nicoll, were a far more organised force, and were outside Cross's control. Here it seemed best to go round rather than over. Although the planners produced many impressive reports on 'strategic' matters, they had no independent power to challenge or obstruct housing proposals. Under the system of 'joint reporting', their observations and Cross's were combined by Jury into single reports to the Housing Committee. Cross tried to choke off even this advisory role, by starving the planners of information—for instance by excluding them from the gap-site review meetings with DHS, at which he habitually dealt alone with a bevy of Government Administrators and professional staff. When planners had to be invited, Cross warned his allies, such as contractors or Administrators, that this was a formality: 'He would hardly have them in the room. He'd say to you, "Well, I suppose I'll have to get those idiots up here now—but don't pay any attention to what they say. It'll get built!"' The planners reciprocated the sentiment: 'He had no conscience, no soul, no heart—just a machine for producing numbers!'[20] Cross was equally distrustful of outside designers. After the overspending of the early multi-storey projects, he was able to postpone the next batch of private-architect-designed schemes to create as much room as possible for package-deals. The architect Baron Bercott, designing point blocks in 1962 for the Sandyhills House site, recalls that 'we were told to put the drawings back into the drawer and forget about them—we were never told why!' Cross was particularly unhappy about a proposal that repeats of Matthew's costly Hutchesontown blocks should be built by the DLO on gap-sites at Springburn 'A' (Wellfield Street) and Royston 'B'. The Housing Progress Officer was alarmed not only by the delays and overspending of Hutchesontown, but by Matthew's voracious attempts to extend the scope of the Springburn project to encompass 'comprehensive' redevelopment of a much larger area: this, he felt, threatened to sterilise all gap-sites in the district. Such was Cross's power by this stage, that he was able in 1963 to persuade the Housing Committee (despite the DLO Manager's stiff opposition) that Matthew should be unceremoniously sacked from both projects in favour of Reema package-deals—in the Royston case, after the piling for the first two blocks had been commenced! The Corporation paid Matthew enormous fees for the abandoned work, and 25-storey Reema blocks rose on the foundations designed for the Hutchesontown repeats.[21]

While Gibson handled most 'strategic' contacts with DHS/SDD, the Housing Progress Officer was responsible for many day-to-day negotiations. He made it his business to form a tactical alliance with the Administrators territorially responsible for Glasgow in the early 1960s, who were both of a temperament congenial to him: an Assistant Secretary, H. F. G. Kelly (a no-nonsense Roman Catholic Glaswegian), and a Principal, Ian Hamilton (an efficiency-minded accountant). This was of great importance, as, with internal opposition neutralised, the only remaining potential obstacle to Cross's multi-storey 'site cramming' was posed by the Government loan sanction procedure, which stipulated that DHS planners and housing architects should appraise the

plans of proposed schemes. The only way to get round this was to befriend the Administrators. Cross won their trust through his combination of efficiency and an apparently easy-going negotiating manner. One of them recalls: 'Lewis was a great joker: he could never resist a wisecrack. But the flippancy was superficial, and belied the strength of the underlying purpose.' And another recalled: 'A languid style—with steel beneath!'[22]

With the assistance of Kelly and Hamilton, Cross was able to circumvent hostile DHS/SDD designers, in the same way that he had bypassed their counterparts within the Corporation. The main vehicle of Cross's collaboration with Administrators was the joint gap-site review procedure, which Kelly's predecessor, Ronald Fraser, had established in 1957, with the aim of providing a restraint on Glasgow; this was chaired by the territorial DHS/SDD Principal (Hamilton, or his predecessor Jack Fleming). Cross, however, soon managed to turn the procedure to the city's advantage. The principle of suburban high flats had already been conceded in 1958 by Fleming, who clearly did not realise the site-cramming potential implicit in cartogram zoning. He merely commented that the use of high flats to infill suburban gap-sites 'will not, in general, make very much difference to the densities, although they may enable the Corporation to get in a few more houses than they would otherwise do. The main justification for them would seem to be that they will provide some relief from the deadly monotony of the ordinary Glasgow housing development.' A year later, the possibility of rezoning open space for housing was broached by Cross at the gap-site meetings: the Administrators did not demur, although aware of the furious objections of Nicoll's planners.[23]

By the early 1960s, the review procedure had become a vehicle for Cross's manipulation of the Department. He might, for instance, secretly race ahead with preparations for a major scheme, such as the gigantic Sighthill development, keeping Kelly and Hamilton informally appraised but, publicly, saving it up to be lobbed at them in the form of an indignant last-minute ultimatum at the gap-site meetings. This pressure was then transmitted onwards through the Department as Administrators browbeat the architects and planners to pass the schemes quickly.[24]

Among DHS designers, the planners, led by West Coast men, such as Grieve, who were well aware of Glasgow's problems, were at first less inclined towards confrontation with the Housing Committee—partly because they naively assumed that the Committee would play the multi-storey game according to planning rules, by only building in the CDAs! Some DHS Architects, on the other hand, attempted more vociferous opposition. Cross's aim of neutralising any obstruction from them was assisted by the existing strains between the Administrators and architects over Glasgow high flats, concerning matters such as the latter's handling of correspondence and allegedly 'child's guide' vetting of proposals. At first, the architects did not appreciate the violence of the storm which was about to break about their heads. In their appraisal of proposals, some adopted an amusedly patronising attitude to Gibson's emerging housing drive: 'It is doubtful if much serious planning damage would be done by letting the Housing Committee loose in this area'. The DHS-SSHA Joint Development Unit (JDU), at its foundation in 1959, was allocated several of Cross's suburban multi-storey sites, but its architects turned these down and demanded instead central 'high-density' sites where high flats would be more 'appropriate'. Then, when several such sites were offered to them, these in their turn were scornfully rejected as being too piecemeal in character. Apparently believing that, if they turned down a site, the Housing Committee would then respectfully leave it vacant, the JDU architects dismissed, for instance, the Wellfield Street and Bluevale Street sites (part of future CDAs proposed by the planners): 'This site is not suitable for the group as it would be unfortunate to prejudice a comprehensive redevelopment . . . by casually filling in an arbitrary gap.' Ironically, of course, the Wellfield Street site was then offered to Matthew, with the consequences already outlined above.[25]

From 1961, however, the DHS architects suddenly became aware of their exposed position. Cross's first big package-deals were beginning to funnel through, while even more extravagant ideas, including 41-storey steel-framed towers, were gushing from that rival power-bloc, the DLO–Bunton axis. With or without their approval, Glasgow's housing drive was now accelerating into top gear, as massive multi-storey blocks erupted from sites all over the city—including those rejected by the JDU (two 31-storey blocks at Bluevale Street and two 26-storey Reema blocks at Wellfield Street). Now open conflict flared, with the initiative taken not by the architects (as in the case of Cleeve Barr and Salford) but by Cross himself. His increasingly strident denigration of design and designers was largely indiscriminate: Glasgow's Housing Progress Officer was familiar, on the whole, with the 'national' values and language of only the first phase of Modern architecture in Britain, up to around 1950.

To DHS architects such as Stuart Gourlay, it seemed intolerable enough that Glasgow's programme was in key respects being shaped by an engineer, who was set on building as many tower blocks as he could, on any site, in defiance of what they saw as the most basic principles of good design and planning. But, worse still, this man had the effrontery to argue back, even to poke fun at their careful appraisals of schemes. 'He'd say, "We're Glasgow, we're the biggest, we're not going to be shoved around by little tinpot architects in Edinburgh!" Then you'd get the Department's people taking the architect line back, standing on their dignity: "Upstart Cross!", and so on. But Lewis was a man of action—he had no time whatever for people like that!' In June 1961, for instance, Gourlay was asked to appraise plans by Wimpey for twelve 20-storey blocks at Scotstoun House and Lincoln Avenue [25.3, 25.4]. He prepared a memorandum alleging certain shortcomings of design, which resulted, he felt, from lack of prior architectural briefing. He pointed to shortage of space, lack of kitchen equipment, cramped dwelling plans, blocks set too close together, insufficient daylight, and inadequate fire-escape provisions. True to his refusal to dilute package-deals by 'briefing', Cross did not even bother to reply to this note. Instead, he

sent Wimpey a sarcastic commentary on it, with a copy to DHS Administrators. The Modern 'standard' that high blocks should be set in light, open settings, he flippantly discounted: 'I do not see, with the panoramic views they get, why the higher flats should not be just as close as four storey blocks . . . [overshadowing] is accepted by the majority of Glasgow folk: in fact they seem to enjoy it.' In response to Gourlay's assertion that omission of a wash tub would have to be approved by the Medical Officer of Health, Cross quipped that 'this is as much outside the province of the Medical Officer of Health as the question of whom in the Corporation administration structure we consult is outside the province of the Department of Health'. When a copy of this report reached Gourlay, he exploded in frustration:

> The tone of his letter is even more needling than we have come to expect of him of late . . . [T]here would seem to be something very wrong with an engineer expressing opinions on matters, some of which are very largely those of design, acting as a progress officer-cum-postbox and behaving in what can only be described as a high-handed fashion![26]

By 1961, therefore, it had become starkly obvious that the alliance of designers and sympathetic Administrators, which had seemed so strong only a few years before, was now, unexpectedly, fighting for its life: 'We were nearly having apoplexy every week!' Now a new alliance, between Gibson, Cross and Kelly, was making much of the running. In 1961, Kelly went so far as to condone openly Cross's rule-bending, and hailed 'the energetic approach of the Housing Committee to the solution of Glasgow's immense problem . . . [T]he Committee are scouring the city for sites and building on them at the highest density they can get away with.'[27]

If Cross's inexorable pursuit of site 'yield' laid the groundwork for the city's great surge in Modern housing production, his hard-headed negotiation of contracts ensured that these sites were filled with dwellings as rapidly as possible. Gibson's multi-storey revolution seemed a heaven-sent opportunity to break the grip of the DLO and the local consortium, whose members had showed themselves ill-prepared for high building in such schemes of around 1960 as Blairdardie South and Hutchesontown 'B'. Cross aimed to introduce efficient firms from outside the West Coast, even outside Scotland, without departing from Glasgow's tradition of negotiated contracts. He was flatly opposed to oversight by architects over the building process or detailed briefing of contractors: these he saw as weakening the authority's hand in negotiation with the contractor—a view only reinforced by the delays and overspending of the Spence and Matthew Hutchesontown schemes.

Package-deal competition was, rather, Cross's preferred approach: to specify numbers required on each site, at a figure which often made difficult any pattern other than 100% multi-storey blocks, but otherwise to allow contractors complete freedom. This, he hoped, would attract as many firms as possible—national, local, or consortia of both—to invest in initial contracts, enabling him then to weed out those that failed to come up to his standards of efficiency, and establish a range of reliable contractors as the basis for a long-term programme. Initially, Cross had some difficulty in persuading the Committee to admit outside firms, especially those from south of the border: 'Lewis took the Committee with him, though they didn't like it at times—an Englishman among Scots! But he had a dilettantish way of speaking, he made jokes with them. A very blunt man, but very charming—he could get away with telling them, "You're a load of fools!"'[28] Among 'national British' firms hoping to break into the closed Glasgow market through high flats, Wimpey had had a head start, through its spectacular progress at Royston 'A' [25.7–25.8]. This initial contract had been secured through negotiation in 1958–9. Wimpey had previously tried, vainly, to get into the Glasgow 'consortium', suggesting the building of experimental point blocks based on its Kirkcaldy and Birmingham 'Y'-plan prototypes. But in 1958, with multi-storey building now being advocated by prominent councillors, the firm had tried its luck again. The firm's then Scottish Principal Architect, Tom Smyth, recollects:

> I went along to Glasgow one day with our Public Relations Officer, Brigadier Prentice, a highly respected man—he got the front door open to many town halls! He knew Macpherson-Rait [an influential Progressive Party ex-Housing Convener], who felt that the city was having problems with its proposed multi-storey housing—it hadn't really got off the ground! The prototype scheme, Moss Heights, was plagued by problems and scandals, and the Glasgow consortium were ganging up to shut out other firms. Through his good offices, we had an off-the-record interview with Jury. He asked us what we could do for Glasgow. So we did some work at our own risk, and designed a new point-block type. Then finally we were asked to submit a scheme for Royston 'A'.

Wimpey was the first 'national' firm to leap aboard Glasgow's multi-storey bandwagon, and gave it, in its turn, a further powerful push.[29]

With a crack now opened in the armour of the consortium, Cross decisively took the initiative, riding roughshod over DHS's worries about overheating, and lured a range of other large firms to enter the Clydeside market. Such moves included the construction of Reema and Bison factories: the latter was built as part of a staged contract negotiated in 1961 by Cross, against the opposition of DHS architects, for over 900 dwellings at Pollokshaws CDA Unit 2.[30] In July 1961, Cross crisply summarised the progress of his tough negotiating strategy:

> We have a number of package deals and negotiated tenders for large projects under way, for whole multi-storey schemes and for frames only. All of them except two are initial projects. I think that all these agencies must prove themselves capable of getting reasonable progress and costs on these large initial schemes before getting repeat orders. The . . . two exceptions are Lincoln Avenue and Scotstoun House, which are repeat orders negotiated with Wimpey because of their good progress and costs for Royston 'A'. Even in this case a repeat of this firm's previous good performance is to my mind an essential prerequisite for a further repeat order.

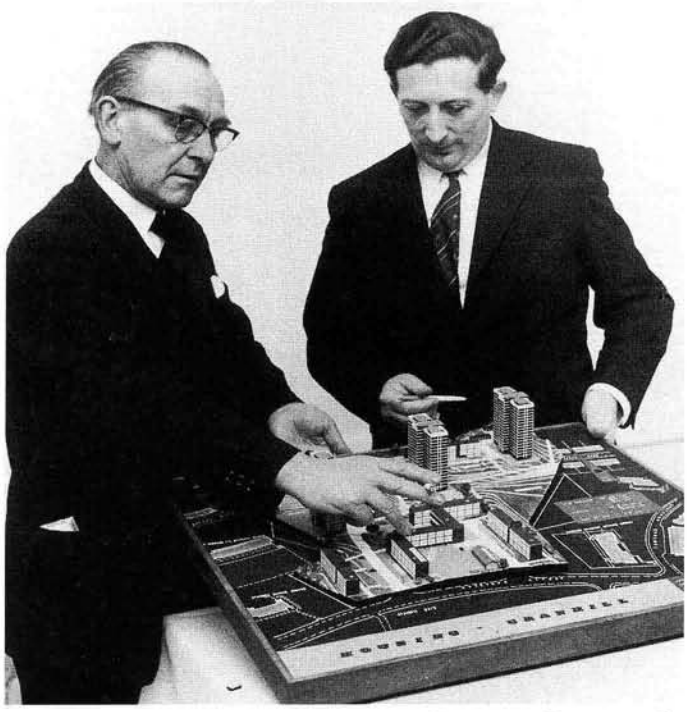
25.7. Royston Area 'A', Glasgow: existing buildings prior to clearance in January 1960. (Wimpey)

25.8. Royston Area 'A': the same view eight months later, with three 20-storey Wimpey point blocks under construction. (Wimpey)

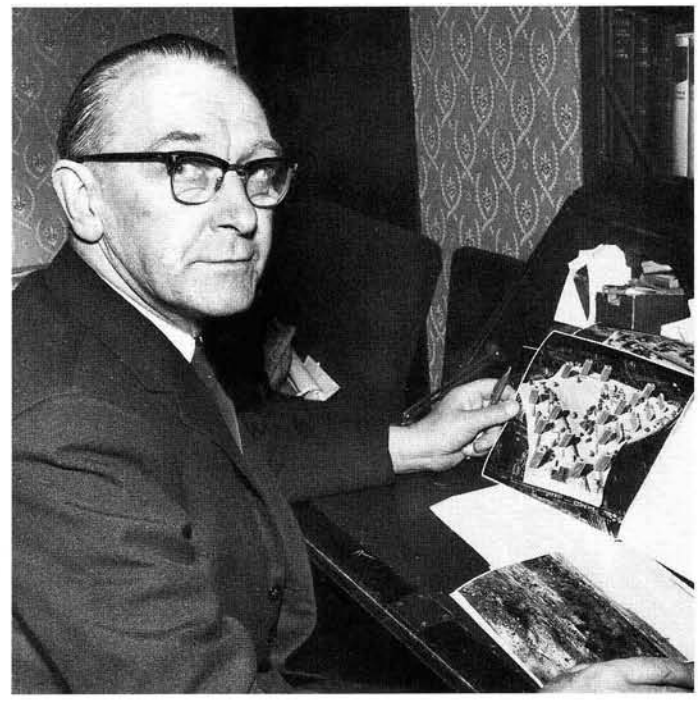
> The only reasonable exception to this general rule, to my mind, is where a contractor offers a site.[31]

Within five years, a 'stable' of reliable contractors had been established, leaving Cross and his successor from 1965, James Kernohan, in a position of great power. Kernohan recalls: 'I had five large-panel firms situated round the perimeter of Glasgow—all sitting on my doorstep demanding a chance to build flats . . . What Glasgow wanted, it got!' While Cross preferred to expand the share of private contractors at the expense of that of the DLO, the former were hardly free from problems. In his attempt to play local and 'national' firms against one another, Cross balanced the lower productivity, conservatism and higher costs of the Clydeside industry against English firms' inexperience of Scottish building regulations and conditions. Among the Housing Progress Officer's favoured contractors, Wimpey remained 'in a class of their own', followed by Crudens [25.9] and Bison; other English firms such as Tersons and Laing, unfamiliar with Scotland, came and went away again.[32]

Even in the case of his established contractors, however, Cross kept near-absolute control. He dealt with each personally and in isolation, and kept them all in ignorance of his land bank. Smyth recalls, 'We never discussed any overall programme. Each site came out of the blue, was almost a job by that stage. Cross would ring up: "We've got a site, there's going to be multi-storeys on it, can you do it?"' Cross's 'briefing' technique with contractors was very simple:



25.9. Councillor David Gibson, Housing Committee Convener of Glasgow Corporation (left), and George Bowie, Chief Architect of Crudens Ltd, inspecting a model of Cranhill Extension development in 1962. This scheme, comprising three 18-storey blocks and low flats, was built from 1963. Development of the site, a former industrial wasteground acquired by Crudens, was rapidly pushed through to compensate for delays in the preparation of the much larger Sighthill site. (*Glasgow Herald and Evening Times*)

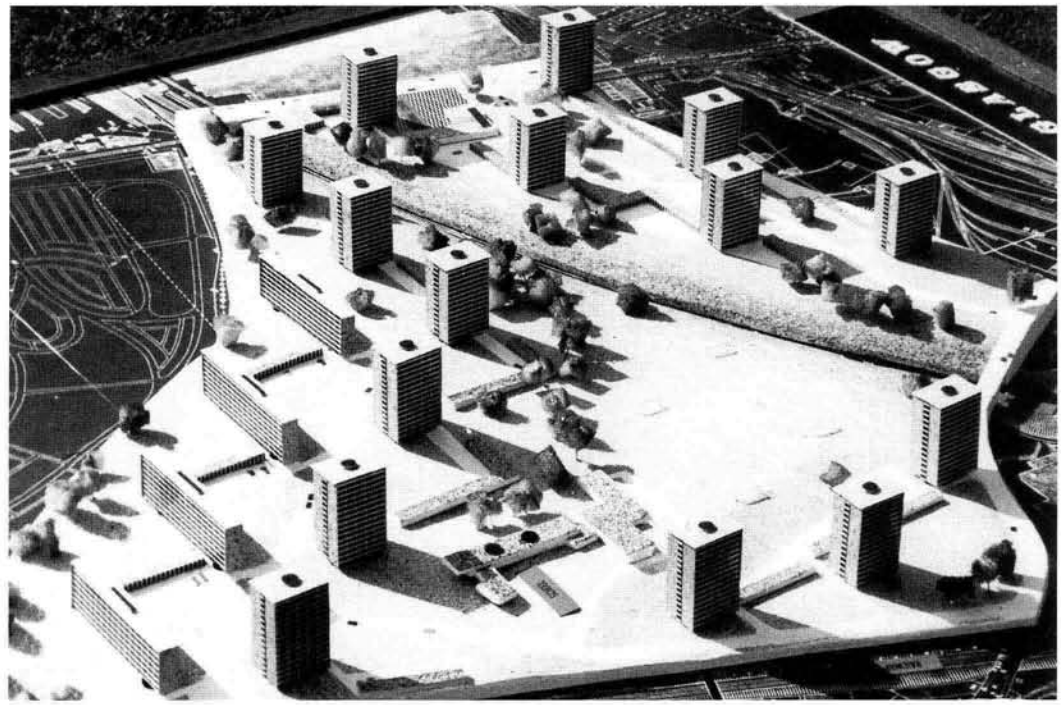


25.10. Bailie Gibson examining proposed and existing views of Glasgow's Sighthill site at his home, 5 Cardowan Road, in June 1961. (City of Glasgow District Council)

> He'd give you an Ordnance Survey map and he'd say, come back in a month! Then all he did when I produced a layout with say five multi-storeys—he just looked at the box with the figures in the corner, took out his slide rule and if it was wrong he'd just finish a meeting there and then—he'd say, 'Come back when you've got it right!' You might say, 'What about the layout, Mr Cross?' But he'd reply, '*You're* the designers!'

In the case of gap-sites, Cross might string several contractors along for a while and then drop all but one. Smyth again recalls: 'He would never tell you he was negotiating with someone else about a job. Management would hit the roof and say, "Someone else has got that big multi-storey job! How did that happen—you're in touch with Lewis Cross!" I'd say, "He's the last person to tell me!"'[33] In the case of large staged developments, Cross might reach an initial informal understanding with a single firm and would then feed the job stage-by-stage, to keep as much negotiating leverage as possible. Such a case was Crudens's Sighthill development, a majestic array of ten 20-storey slab blocks in the stark setting of a reclaimed chemical wasteground [25.10–25.12]. This job arrived from Cross in the usual precipitate manner. George Bowie, Crudens's former Chief Architect, recollects:

> My Managing Director came along with a piece of tracing paper, with what turned out to be the final shape of Sighthill on it, and a scale—it was ridiculous!—and he said, 'How many dwellings can you put on this site?' I replied, 'You've got access roads, daylight and sunlight to consider!' He said: 'Just put multis on it and some low rise.' So in a day I



25.11. Sighthill: initial model prepared by George Bowie's staff in 1961. This vast site was a former chemical dumping-ground (the 'soda waste' of Charles Tennant Ltd). (City of Glasgow District Council)

25.12. Glasgow: Sighthill development; corresponding view (from east) as built; photographed in 1989. In place of the originally envisaged point blocks, ten colossal 20-storey slab blocks, and several lower buildings, containing a total of nearby 2,500 dwellings, were built by Crudens between 1963 and 1969. (RCAHMS)

25.13. Glasgow: Red Road development under construction, 1966. (*Glasgow Herald*)

knocked together some thoughts, and then he asked, 'Could you make a model?' I said, 'There's nothing to make a model of!' But we put together this thing with matchboxes, and he went away with it. A few days later, he took me over to Sighthill in his Jag, and asked, 'What do you think?' I said, 'Jesus Christ!!' . . . [So the project] went on ahead, and when the first multis were done, providing we weren't naughty boys, there were several phases. So . . . [in due course] you'd say, 'It's about time we were thinking of Phase 3, Mr Cross.' He'd say, 'Just leave it with me', then he'd ring up one day and say, 'If I were you, I should be putting in Phase 3 submissions now.'[34]

But one substantial area of contracting policy eluded Cross's control: the activity of the DLO, a separate department of the Corporation. Here the turn to multi-storey building was to have dramatic and unexpected results. The DLO Manager, George Campbell, was worried that Gibson's turn to multi-storey building might lead to large-scale redundancy among bricklayers, and undermine his department's patronage and power base. Impressed, but also frightened by the 'literally fantastic' progress of that legendary Wimpey scheme, Royston 'A', he pleaded with Gibson that he should be allowed to devise a package-deal of his own, using modest cross-wall blocks to be developed by Sam Bunton, a second local architect and some of the consortium firms. Gibson's relations with the DLO were delicate, as his ILP background distanced him from the city's Labour Party and trade union establishment; but, despite his misgivings at the DLO's inefficiency, he acceded to Campbell's demands.[35] The prototype scheme for this package deal, Red Road, soon took on a spectacular life of its own. In 1962, it was discovered that poor site conditions had reduced the area suitable for building. The local steel industry was jostling to enter the housing market, and Bunton saw an opportunity to import the New York skyscraper to Glasgow and 'build the highest blocks in Europe'. The unglamorous cross-wall proposals were jettisoned in favour of a mighty outcrop of stark, steel-framed towers between 26 and 31 storeys high (41 storeys having at first been proposed) [25.13, 25.14,

25.15. Red Road development under construction, 1966.

25.14. Red Road: opening of first block on 28 October 1966. From left to right: George Campbell, Manager of Glasgow Corporation Housing and Works Department (DLO); Sam Bunton, architect; and William Ross, Secretary of State for Scotland. (*Glasgow Herald*)

25.16. Glasgow, Coll Street development: three 18-storey blocks built from 1967 by Reema—part of a continuing campaign of package-deal multi-storey building after Cross's departure from the Corporation in 1965. Photographed in 1988 after recladding; the Red Road development is visible at left background. (RCAHMS)

25.15, COLOUR X]. This, the consummation of Bunton's vision of unadorned 'public building', at one bound leapt well beyond even the grandiloquent urbanism of its Continental equivalent—the 'grands ensembles' of France's cities.

Gibson at first tried to keep control of Red Road—'He made sure it went through the Corporation like a dose of salts!'—but the autonomous status of the DLO stopped anyone from bringing Campbell to heel as calamitous over-spending mounted. This resulted not only from Red Road's grandiose scale and experimental nature, but also from the fact that it was made into a scapegoat to conceal more general DLO disorganisation: 'The millions of feet of copper pipe that disappeared off that job . . . [W]e know that materials arrived at our site on a lorry, were signed for, and went straight out of the gate at the other side off to another site!' From the mid-1960s the DLO, chastened by this debacle, scaled down its expectations: its bricklayers were now satisfied by new, modestly scaled types, including the stumpy 8-storey 'Block 84' tower for gap-sites.[36]

But it was Cross that remained the organisational mainstay of the building programme—not just because of the efficiency of his meticulous black notebooks and filing systems, but because he alone could stand up to the Convener's passionate argumentation: 'They had some blazing rows!' His everyday circumstances—his avoidance of public life in order to look after a handicapped wife, his journeys to work or site meetings on a small sputtering motor-scooter—were as ascetic as those of Gibson himself.[37] While the Housing Progress Officer left design work to contractors or his own subordinates, he and Gibson all the time collaborated closely on the tactics of defining, negotiating and pushing through schemes, of increasing site 'yield': 'Gibson would discuss everything in detail with Lewis Cross. There's no doubt Lewis would say to him, "If you do this, you can get X number of houses here"—and then Gibson would say to

him, "All right, go ahead!" They lived in each other's pockets for years!'[38] It was ironical that Cross's package-deal point and slab blocks were types which, only a decade previously, had been devised and vigorously promoted by avant-garde London architects. His position in Gibson's housing drive was antithetical to that of Matthew's designers, who insisted on individual architect design and mixed development. Cross's down-to-earth endeavours, in sometimes uneasy conjunction with Gibson's and Bunton's advocacy of massed building of elemental Modern blocks, would allow Glasgow to use simplified CIAM-urbanism (already repudiated by the 'UK' design establishment by 1960) as a potent weapon for revival of the national tradition of monumental flat-building [25.16].

BREAKTHROUGH! SPREAD OF THE MUNICIPAL CRUSADE

By late 1961, as a result of the continuing shortfall in completions during the changeover to multi-storey flats, public unease was growing, and Gibson's postbag was bulging with letters demanding action. For instance, a slum-dweller in Whiteinch pleaded with him to 'demolish prefabs all over the city, get on with the high flats—never mind gardens. Homes are what the people want. Let us see some action in 1962 for God's sake and let mothers have peace of mind with a decent home!' Although now offered the chance he had been waiting for all his life—a Parliamentary nomination, for a by-election in the safe seat of Bridgeton—he refused it. He realised his destiny now lay in his own country. But first, he had to secure his reforms in Glasgow. Within the city, Gibson believed, public opinion was not concerned with building-type issues such as 'flat versus cottage', but exclusively with output; indeed, the only voices now publicly raised against high blocks, as such, were those of Glasgow's interwar Garden City apostles, Jean Mann and Patrick Dollan (in 1959–60). The old ILP 'rebel' seized with relish the opportunity to slap down his Labour adversary of the thirties, by pointing to the land profligacy of her cottage estates: 'I don't want to be uncharitable, but Mrs Mann should remember that she was housing Convener at a time when we should have been foreseeing these things.'[39]

By now, although Gibson was by nature animated and gregarious, his relentless pursuit of his strategy, and the myriad individual problems of his constituents, had drawn him into a gruelling, monk-like existence. Other than when helping out in his wife's Springfield Road sub-post office, or carrying out his occasional duties as a magistrate, his weekdays were spent at the City Chambers until late at night: 'He cut himself off, didn't occupy himself with anything else, even eating—just cups of tea, with plenty of sugar.' His wife admits, 'He was a very heavy smoker and ate next to nothing—all David ever had was tea. At night he'd come home starving and I'd make him a plate of porridge.' Even from his post office counter, he maintained a hawk-like vigilance. The foreman of the nearby Summerfield multi-storey site was once startled to receive a telephone call from the Convener, who demanded: 'One of those cranes hasn't moved for twenty minutes—what's the problem?' Early mornings, late nights and weekends were spent in his old car, checking on existing contracts and prospecting for new sites: 'Glasgow is facing a shortage of land, and I spend my weekends looking round the city for gap-sites and any odd bit of land that we can put a house up on . . . My idea of fulfilment is to draw up the car and see the lights of Knightswood or some other scheme shining out and think of all the families translated from gloom to happiness!'[40]

During 1962, the Housing Committee launched itself into the building of very high blocks, on a scale unprecedented in any part of Britain. In that single year, contracts for 3,783 flats in blocks of twenty or more storeys were let—well over half the cumulative total of dwellings in such blocks, built or authorised to that date in the whole UK! Throughout the year, Gibson relentlessly forced through scheme after scheme, against often strong opposition. For instance, in April, despite vehement protests from SDD planners, he won approval for a large multi-storey development at Toryglen North, immediately adjacent to railway sidings, clay workings and a refuse destructor [25.17]. In meetings with Housing Administrators, he argued that the failure of overspill made it 'absolutely essential' to develop Toryglen North, even if its physical setting fell short of his own conception of basic 'standards' of Modern housing layout:

> The Convener emphasised that . . . Glasgow in its present shortage of sites could not afford the luxury of avoiding the development of places like Toryglen North. Glaswegians had been accustomed to living within walking distance of industry and would tolerate similar conditions in their new houses. While he appreciated the ideals motivating the criticism of the Toryglen North site, he said that as a practical man he must bear in mind that conditions there, if not ideal, were infinitely better than those being endured by the families living in slums.[41]

By August 1962, SDD was already aware that this tremendous burst of contract-letting had pushed Glasgow's housing drive past the point of breakthrough: 2,900 dwellings had reached tender stage since January, compared with only 803 in the whole of 1961. But, in the political world, the figures which mattered were those of completions; and, as it emerged that those for 1962 would drop below 2,000 for the first time since 1947, heated debates occurred in Glasgow, within the Labour Group, the City Labour Party and elsewhere. In May 1963, Gibson stood for the Group leadership in competition with William Taylor, a 'lay planner' who had vehemently tried to persuade him to reduce the height of Red Road to twenty storeys. The shortfall in completions undermined Gibson's argument for a self-contained, rather than 'regional', solution to Glasgow's housing problems—and Taylor won the contest. By autumn 1963, however, the rapid progress of Gibson's first big schemes had brought about a miraculous about-turn in his political and public standing. In September, a public talk he gave at Perth Street School on the Anderston Cross redevelopment drew over four hundred 'eager, excited people' rather than the twenty expected. He commented, 'You'd have thought there were tickets for the Real Madrid–Rangers game on sale!' With a five-year programme of 30,000 starts now firmly in view,

two-thirds of these multi-storey, prospects for Glasgow's Housing Committee now appeared bright.[42]

During 1963, with Glasgow's multi-storey programme well established, Gibson's restless mind began to range further afield. He had renounced a Parliamentary career the previous year, and now a new 'crusade' was taking shape: to disseminate beyond the city, right across Central Scotland, his own uncompromising strategy of municipal multi-storey building. This was, in effect, an attack on the grandiose proposals of 'regional' reconstruction evolving within SDD. Where the Department's mandarins believed in a 'rationally' planned solution imposed on the obsolete old towns, Gibson (recalling the ILP's long-held advocacy of a federal UK constitution) instinctively sought to build his housing strategy from the foundations upwards, by forming an alliance with other municipalities. Where planners looked on locally based housing as an awkward anachronism standing in the way of Scotland's destiny as a fully 'developed' province of a centralised Union, he and his counterparts, being in some respects the residual heirs of the pre-1707 state structure, saw this British planning strategy as an assault on the heart of their duties and their power: the provision of new dwellings for their own people.

The chief forum of this municipal world-view was the annual conference of the Scottish National Housing and Town Planning Council at Peebles. In 1964, Gibson was appointed conference chairman. Although this was normally a ceremonial position, he used his opening address to launch a withering denunciation of 'regional development': SDD was 'floundering around in White Papers and hot air!' Mercilessly, he exposed the implications of the SDD philosophy of centralised planning: not only anti-municipal, as in England and Wales, but anti-national as well: 'Unless it pays the people of Scotland, it's a dead loss! The Central Scottish Programme for development is based on "growth points"—that's good, indeed marvellous if your town happens to be a "growth point"! But few if any would relish living in the towns and burghs for whom the bell tolls, and . . . which are to see only decay and stagnation!' Gibson was moving from a defensive to an offensive stance. Having for the moment blocked the planners' advance within Glasgow, he was now seeking to spark off a locally based revival of housing production across the nation, with the aim of knocking away one of the main supports of the entire 'regional' planning movement.[43]

There was little tension between Glasgow and the other major Clydeside towns, as the Corporation had shown no interest in boundary extensions since the war. Nor would there be difficulty in rapidly cranking up output outside the city: no other authority faced planned overspill or wholesale building land sterilisation. So, his own programme secure, Gibson began to encourage and orchestrate higher production throughout Clydeside and beyond, in alliance with a handful of other key local politicians. Of these, the most dynamic was Hutchison Sneddon, Motherwell's Council Leader and Housing Convener from 1960. Sneddon pushed through a house-by-house survey of the entire burgh, followed by redevelopment of a swathe of land south of the town centre; for decanting purposes, a 1,344-dwelling scheme, including seven 18-storey point blocks, was built in 1963–4 by Wimpey at Muirhouse, the burgh's last virgin site [25.18]. As a result, 'we could pull people out from the tenements and immediately demolish and rebuild on site!'[44]

Gibson, Sneddon and other housing 'leaders' were in frequent contact. 'All these people were on very familiar terms—we were friends, we picked up the telephone, we

25.17. Glasgow: Toryglen North, developed from 1963 by Laing; photograph taken in 1989. (RCAHMS)

25.18. Motherwell: Muirhouse Area development, 18-storey point blocks and low flats built from 1964 by Wimpey; photographed in 1989. The most ambitious achievement of Hutchison Sneddon's period as Housing Convener and leader of the Burgh Council. At left: part of the Flemington Area development, built by Wimpey from 1966. The Ravenscraig steelworks can be seen in the background. (RCAHMS)

talked—I was always invited by Davie to the Glasgow housing inspection, for instance!' In the opinion of a senior SDD Housing Administrator, 'These were the leaders of their generation!' The spearhead of Gibson's wider drive was created in October 1963: the Scottish Local Authorities Special Housing Group (SLASH). SLASH was to be no architect-dominated 'consortium', but was to be dedicated to one ideal only: maximum production. The immediate aim was to use jointly-ordered prefabricated high flats to raise national housing output by 10%. Gibson explained: 'No-one is going to invest money in a factory to build component parts unless he has a steady demand. Our Group will give this guarantee.'[45]

Despite the East–West divide, the influence of Gibson's campaign spread like wildfire across the country. In Edinburgh, as a result of a politically deadlocked Town Council, the housing chair passed in 1962 for the first time to a Labour member, Councillor Pat Rogan, a bricklayer determined to emulate Gibson's crusade against the slums, and intoxicated by the boldness of Red Road: 'I thought that was really something—terrific!' The Corporation's somewhat meagre previous output, which repeatedly dropped below 1,000 annual completions, had left Edinburgh a substantial legacy of eighteenth and nineteenth-century slums in Leith and elsewhere: the waiting list had risen rapidly, from 6,000 in 1958 to a peak of 11,000 in 1964. In opposition, Rogan had harried the Corporation on behalf of his Holyrood ward constituents, securing in 1959 the declaration of two extensive clearance areas (Carnegie Street 'A' and 'B'), and the rehousing of 101 families in nine days after a gable-end collapse in Beaumont Place: 'It was a magnificent thing to watch, as I did many times, whole streets of slum tenements being demolished—all those decades of human misery and degradation just vanishing into dust and rubble!' Once in office, he found that the Progressives' financial cautiousness had left scope for the substantial rises in rate-fund contributions necessary to support a sudden acceleration in the housing drive. There was little land problem, as Edinburgh had the largest 'prefab' estates in the country: 3,616 bungalows were demolished and replaced by 9,272 permanent houses, many in high blocks, by 1967. Accordingly, in his single term of office, ending in 1965, Rogan was able almost to treble the city's programme: dwellings under contract soared from 700 in 1961 to 2,700 in 1962, and completions from 960 to 2,363 by the following year. Rogan also took Edinburgh into SLASH in 1963 as a founder member. Edinburgh's equivalent of Cross, Deputy City Architect (Housing) Harry Corner, recalls that 'we had a wonder-

25.19. Edinburgh: Leith Fort redevelopment, seen in 1989. This scheme, the result of a competition won in 1957 by the young architects Shaw-Stewart, Baikie and Perry, was constructed in 1960–5: it includes two 21-storey point blocks, courtyard housing and an extensive 7-storey deck-access group. (RCAHMS)

25.20. Tour of slum housing at Jamaica Street, Edinburgh, by Harold Wilson, Leader of the Opposition, on 2 April 1964, with Edinburgh Corporation's Housing Chairman, Councillor Pat Rogan (centre foreground). (Scotsman Publications)

25.21. Topping out of Martello Court, Muirhouse, on 14 August 1964. From left to right: T. Kelly (ganger), A. McLeod (Managing Director of the contractor, W. Arnott McLeod), Councillor Pat Rogan (Edinburgh Corporation Housing Committee Chairman), R. Mackie (general foreman), and R. Williams (joiner) (see ills. 6.11, 24.14). (Scotsman Publications)

ful book of contracts when Pat left the chair!' Rogan's Progressive Party successor as Chairman, Councillor Adolf Theurer, proved to be anxious, against uncertain support from his colleagues, to sustain momentum and enlist Rogan's advice [6.11, 25.19–25.21, 24.14; COLOUR XI].[46]

Thus, by the mid-1960s, a range of authorities in Central Scotland was beginning to follow in Glasgow's wake, by commencing large multi-storey programmes—and the country's overall per-capita rate of high building had almost caught up with that of Greater London. This was a trend which SDD Housing Administrators were only too happy to accommodate, allowing Gibson, in effect, to take the lead in housing policy. Their goodwill partly stemmed from Ministers' political anxieties concerning the housing figures. However prominent 'regional' planning rhetoric was in their public pronouncements, Ministers were now caught in a cycle of dependence upon Gibson and his counterparts. The campaign to nudge rents upwards had fallen flat, and numbers were the only policy left: 'The Tories were frightened—they'd never tackled low rents! The one thing the Government could do was dole out the multi-storey subsidy—and multi-storey flats were *the* symbol of local authority independence!'[47]

However, many officials, such as R. D. Cramond, Assistant Secretary in charge of the Division handling public housing in the mid-1960s, also felt an instinctive sympathy for Gibson's crusading ideals:

> To someone coming out of the slums of the Gorbals or Leith—and I was born in a tenement in Leith—the idea of going into a house with a bathroom, a proper kitchen, hot water—it was the millennium for them, it was their dream, and it didn't matter a damn to them if it was in a multi-storey block or a cottage—they wanted as many dwellings as quickly as possible!

And there was the sheer difficulty of imposing any contrary view:

> In the Department, we were in a reactive situation . . . [I]t wasn't for us to tell the local authorities where to build houses—we put out standards and subsidies but what they did was up to them. Authorities built according to their inclinations, and most of the big authorities were building hell for leather because that was the thing to do. I can remember going through to Ayr Burgh. We'd rejected a tender for a series of multi-storey blocks on the grounds that the price was excessive, and I went through to explain to the Town Council. I was filleted at that meeting! They pushed the argument: 'We're building houses for the people—we know what the people of Ayr want—why the hell shouldn't we build in multi-storey, everybody else is! You're holding us back, what's it to you if it costs too much?' I came out of that meeting feeling as if I'd been put through the washing-machine and wrung dry! And that was just *Ayr*! If we'd thrown out Red Road the ceiling would've come in—we wouldn't've dared![48]

Glasgow's and Gibson's broad sphere of influence failed to encompass only four important groupings across the nation: the New Towns, the larger County Councils, and the cities of Aberdeen and Dundee. The New Towns, being largely exempt from local housing pressures, were much more influenced than the municipalities by professional groups, especially architects. Four of them—East Kilbride, Cumbernauld, Glenrothes and Livingston—built on a substantial scale in the 1960s, but only the first two constructed many high flats. In East Kilbride, these mostly comprised scattered groups of Wimpey point blocks for higher-rent letting, built in 1965–70. In Cumbernauld, high flats were envisaged from the start: groups of Bison point-blocks were built on an escarpment along the north-west edge of the town, and six and seven-storey slab blocks were incorporated into other areas. Geoffrey Copcutt's megastructural tour-de-force, the Town Centre Phase One (built 1963–6), at first included penthouse flats [COLOUR XII]. Most of the rest of Cumbernauld's housing was made up of two-storey terraces of 'traditional' appearance.

Many of the County Councils ran substantial and co-ordinated housing programmes, in deliberate isolation from the activity of the large burghs and cities: for, in contrast to the sporadic, hole-in-corner rural housing of England, Wales and Northern Ireland, the counties saw themselves as being superior in status to the burghs dotted within their territory, and there was much tension: 'The burghs were inclined to look on us as Big Brother!'[49] Lanark County Council was by far the most populous and powerful of the big, Labour-controlled counties of Central Scotland. Under the energetic direction of Hugh Brannan, Housing Convener from 1958 and Council Leader from 1963, it embarked on the most vigorous housing drive of any rural or semi-rural area in the UK. Lanarkshire regarded itself as a first-tier housebuilding authority, equal in importance to Edinburgh, the SSHA, even Glasgow. It was dotted with dilapidated mining villages, and its population was in slight decline. Most active counties pursued piecemeal redevelopment of village slums, and building of new cottage schemes in villages or just outside burgh boundaries. Lanarkshire, however, also built a number of multi-storey blocks, all in the town of Cambuslang: the latter's councillors had persuaded Brannan to undertake first a town centre 'urban renewal' scheme in 1963, including two Laing high blocks, and then a package-deal in 1967–8 for eleven 13-storey Reema point blocks. SDD had pressured Brannan to join the consortium of Lanarkshire large burghs, with its bulk order for Camus low and high blocks. He flatly refused, and instead pursued a separate package-deal with Reema (which, like Mitchell-Camus, also had a precasting factory in Lanarkshire): 'I was approached, they tried to draw me into it. But I said, as Housing Convener, "We're not interested!" We had the means to deal with our own problems, on our own!' Most other Lanarkshire schemes were either package-deals, or designed by the County's own architectural staff, under Samuel McColl (County Housing Architect and Engineer to 1968), and D. G. Bannerman (County Architect from 1968).[50]

Although its population was no higher than cities such as Coventry or Leicester, Lanarkshire maintained a standing 2,000 annual target. By 1966, it had built the eighth largest stock of postwar local authority housing in the UK (28,627—

exceeded only by Birmingham, Glasgow, Liverpool, Manchester, Leeds, Sheffield and the GLC). Then, in 1967–71, annual output accelerated to a staggering 2,200. By the time the County was abolished in the 1975 reorganisation, Brannan could boast that 'we'd completely solved the housing problems of our villages—we were housing young people a month or two after they'd moved! You'd find it hard now to discover a "slum" in rural Lanarkshire. We'd almost completely cleared the old miners' rows, and most pre–World War I property that wasn't owner-occupied!'[51]

The two smaller cities, Aberdeen and Dundee, also stood apart from the Glasgow-centred national housing drive. Neither was subject to overspill pressure; both Tayside and the North-East were regarded by the planners as 'growth' areas during the 1960s, so both cities' populations could expand slightly in the early postwar years, to just under 200,000. Yet both pursued energetic multi-storey building during the 1960s and later—highlighting again the now 'routine' status of high flats. The negotiating skills of Aberdeen's formidable City Architect, George McI. Keith, and the financial acumen and 'sea-green incorruptibility' of Councillor Robert Lennox, the longstanding City Treasurer, provided an exceptionally sound basis for the city's programme. Although Aberdeen had no overcrowding or slum problem on the scale of Clydeside or Dundee, its Housing Committee, generally Labour-controlled but every so often led by the popular Tory 'Battling Baillie' Frank Magee, had set their hearts on a major multi-storey drive after visits to Roehampton and Glasgow in 1959. The city's high flats, almost all designed by Keith's staff rather than contractors, fell into two distinct categories: suburban point blocks, and slab blocks in inner clearance areas. The former commenced in 1959–61 with the isolated schemes at Ashgrove VIII and Mastrick 1, building up to larger mixed developments at Hazlehead (explicitly modelled on Roehampton), Cornhill-Stockethill, and Tillydrone-Hayton; it culminated at Seaton (1969–74; including 1,247 high flats). The clearance schemes began with Chapel Street/Skene Street in 1961 and built up to the massive 15 and 19-storey blocks of the Hutcheon Street CDA (1973); these were clad with distinctive pebble-faced slabs. Aberdeen's only real 'housing problem' was its waiting list: the multi-storey programme halved this to 3,700 in 1971. Even so, the Committee's most 'crusading' Convener, Councillor Jock Greig, would still accost the Depute City Architect: 'Here's a bit of ground, Tom, how about a multi-storey here?'[52]

The separateness of Dundee was slightly different in character; for the city had long enjoyed (or suffered) a colourful reputation as 'the Chicago of the North', and its business community had 'learned to grit its teeth against all the tired jokes from their counterparts the length and breadth of Britain'. A former senior SDD Administrator quipped that 'you always took a witness when you went to Dundee!' Allegations concerning the allocation of contracts and subcontracts for public building projects—the so-called Dundee Dossier—culminated in a much-publicised court case of 1980. But, at the same time, the city's Modern housing drive was by far the most vigorous, in per capita terms, of any UK authority over 100,000 population—exceeding its

25.22. Dundee: Bailie James Stewart seen canvassing in a municipal election in 1969. (D. C. Thomson)

nearest challengers (Lanarkshire and Salford) in the sixties by 23% and 44% respectively, and, during the city's most dynamic period of output, 1967–71, by 53% and 82%![53]

The story of Dundee's Modern housing is an unparalleled example of the way in which multi-storey blocks, originally introduced to high-output use in the 1950s by land-starved authorities, were then exploited by cities with no such problems, purely in order to raise production further. Although Dundee had a severe slum problem, accentuated by the steeply sloping topography of its inner areas, there was ample peripheral building land within its boundaries, so it could provide for both a steadily rising population, and vigorous slum-clearance. This fortunate situation had resulted from the defeat of a postwar overspill proposal. In 1950, the removal of 17% of Dundee's population to 'satellite' towns had been proposed by the *Tay Valley Plan*, a Tayside equivalent to Abercrombie. But the Corporation hit back immediately with an advisory plan prepared in 1952 by its own consultants, W. Dobson Chapman & Partners: this flatly ruled out overspill, claiming industry and working-class inhabitants were reluctant to move, and advocated the zoning of large peripheral housing areas within the city boundaries to permit retention of the entire population. Dobson Chapman's recommendations were pushed through by a new City Engineer, John Armour, and were incorporated in the Development Plan (approved in 1959).[54]

Dundee Corporation's 'turbulent' political life was characterised by an even balance between Labour and Moderates.

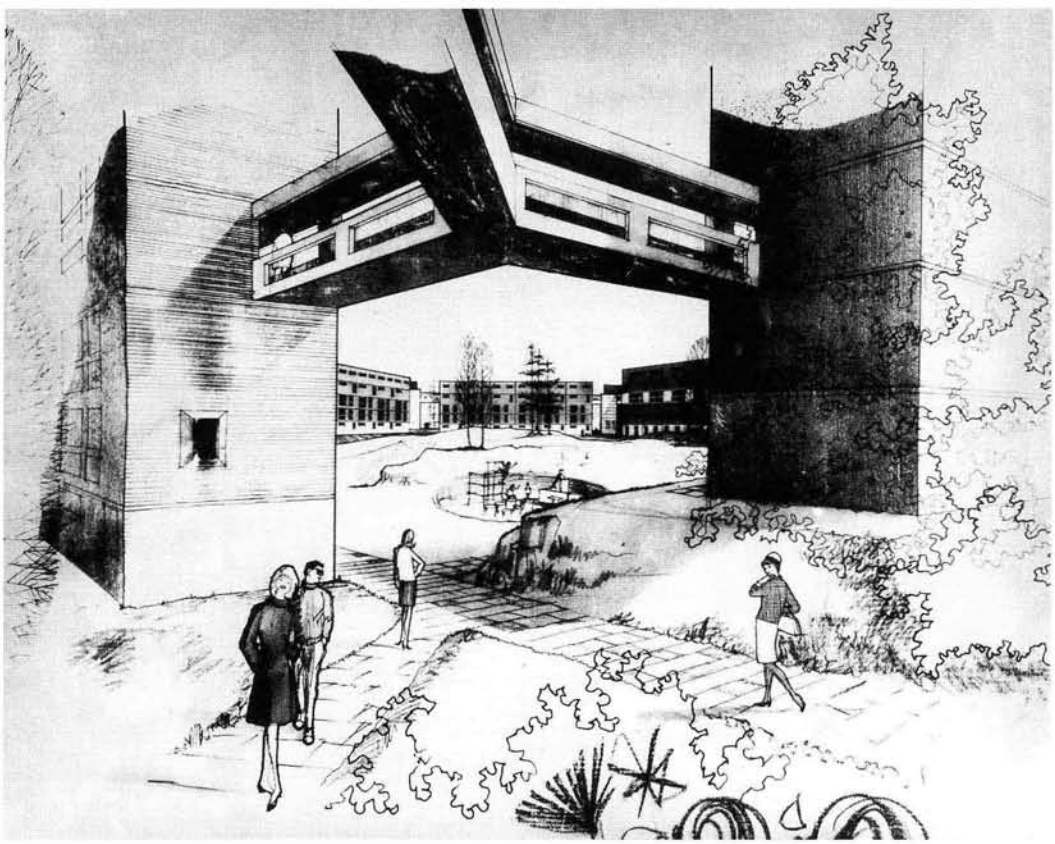
Labour held power from the mid-1950s until 1967, for most of which time the Labour Group was dominated by three exceptionally forceful Housing Conveners, Bailie Harry Dickson, Bailie James Stewart and Councillor Tom Moore. The executive power wielded by these members, in Glasgow terms, amounted to a combination of Gibson and Cross. It was made possible, and essential, by shortages of qualified staff in the City Architect's Department, which even made it necessary at one point to reappoint a former City Architect, Robert Dron, after five years' retirement.[55]

Between the wars, and in the 1950s, a high output had been maintained through suburban tenements and cottages. In the late fifties, however, with the complexity of slum-clearance on the horizon, Dundee's Labour triumvirate began to consider multi-storey building. Isolated blocks were erected during Dickson's Convenership, in 1959–62, and large-scale clearance was commenced in the Hilltown area. But the most daring steps were taken under Stewart and Moore (Conveners in 1962–4 and 1964–6). The controversial and flamboyant Stewart [25.22] was a unique driving force on the Council: 'brilliant in debate, without equal in his municipal lifetime'. During his convenership a series of dramatic projects was undertaken, which would treble the city's building rate from well below 1,000. Large schemes were started on CDA gap-sites, such as Maxwelltown and Derby Street. In the suburbs, several large multi-storey schemes were awarded to Crudens—culminating in the six mighty 17-storey slab blocks of Ardler Phase I [25.23], each of which contained no fewer than 298 flats![56]

Crudens was the mainstay of Dundee's multi-storey

25.23. The zenith of Zeilenbau: the six 17-storey blocks of Dundee Corporation's Ardler Phase I development, built in 1964–6; photographed in 1988. (RCAHMS)

25.24. Whitfield: view from north-west in 1971. This view shows the staggering scale of this development—in the context of a city of fewer than 200,000 inhabitants—and its dramatic urban-edge setting. At foreground and centre are the hexagonal patterns of the newly completed Industrialised Phase 1, with Phase 2 under construction at left background. At right background is the non-Skarne housing, including the Central Precinct slab blocks (also by Crudens, built 1967–8). (Aerofilms)



25.25. Whitfield Industrialised (Skarne) development, Dundee: 1967 perspective by Crudens. (Crudens)

building drive, as was Bryant in Birmingham. But the firm's in-situ capacity in Dundee was insufficient to satisfy the city's voracious demands in the mid-sixties. So the firm offered a prefabricated supplement: a Skarne contract negotiated in 1966 by Moore. The Housing Committee envisaged a 5,000-dwelling addition to 'traditional' output, and confidently undertook to build 'approximately 750 Crudens Skarne houses per annum . . . for as long as possible'. With this assurance, the firm immediately built a Skarne factory in the city at Longhaugh Quarry, and construction began of the city's most prodigious project: Whitfield.[57]

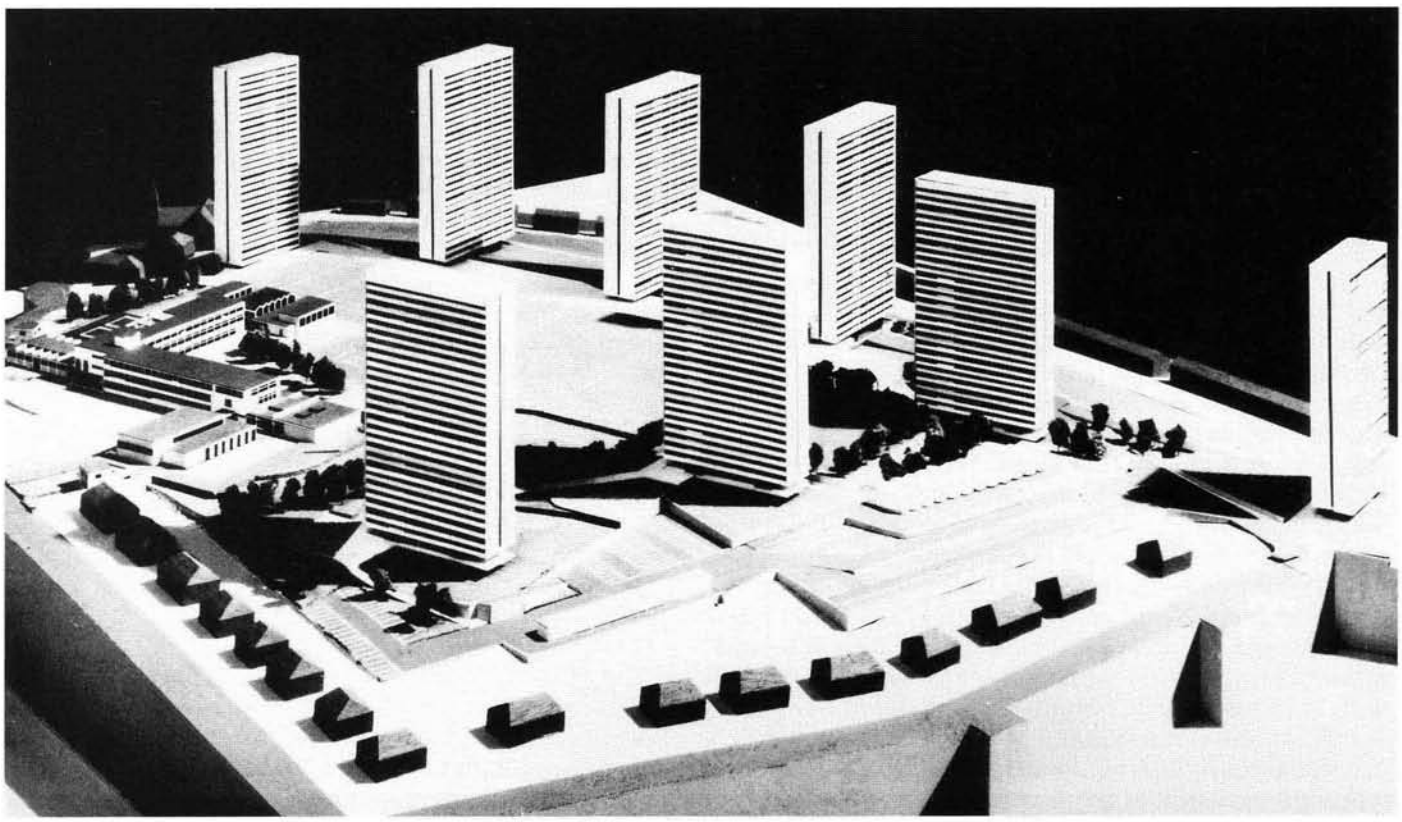
The Whitfield development was built at the north-east edge of the city, adjacent to the Skarne factory; the site, originally owned by Crudens, was transferred to the Corporation as part of the scheme. Its 'traditional' component, divided between Crudens, the DLO and local builders, was substantial enough: 360 flats in two 16-storey slabs and 1,700 in low flats and cottages. But the scheme was dominated by the two-stage Skarne contract [25.24, 25.25], built in 1968–72: over 130 deck-access blocks of 4, 5 and 6 storeys (containing 2,459 dwellings), arranged in an extraordinary and relentless honeycomb of hexagonal courtyards, and dramatically juxtaposed with the stark, open country to its north. As a direct result of this vast scheme—unparalleled in cities of comparable size—Dundee's output surged to a tremendous peak of 2,794 in 1970: 88% higher, proportionally, than even Maudsley's best in Birmingham.

CHANGE OF COURSE?

In the mid-1960s, the national housing drive experienced a convulsion and a change of leadership, but nevertheless emerged intact and largely secure for a further decade. This crisis was sparked off by a public controversy in Glasgow concerning Gibson's high blocks, prompted by their sheer size and sudden appearance, and their close association with slum-clearance tenants. We shall see in Chapter 32 that the policy of building new flats for slum-clearance was eventually undermined by its own success, as the lessening political urgency of the 'housing problem' allowed management problems in the new blocks to come to the fore.

The first, ominous pointer in this direction came in 1963, when Gibson's policy of slotting point blocks into suburban gap-sites first threatened to import slum-dwellers into a middle-class district. The matter came to a head in the case of Hillpark, a sedate area of bungalows where a proposal to erect eight massive tower blocks by direct labour was refused in 1964 at public enquiry [25.26]. This was the first instance where the cartogram method of density determination outside the CDAs rebounded against Gibson—for the cartogram in which the site was located was so small (264 acres) that the eight blocks would have raised its density enormously, from 33 to 47 p.p.a.! No longer could it be assumed that enormous multi-storey developments could simply be made to 'disappear' into the suburbs. The scheme's articulate local opponents echoed Jean Mann's warning that high flats would put different classes too close together:

> They will naturally form themselves into a separate community and resist integration. They were going to be a different sort of people from those who lived in houses with their own gardens. They would be people coming from a different way of life, coming from Glasgow's tenements, into houses which were the modern concept of the tenement . . . [T]his



25.26. Glasgow: Hillpark development, 1962 model of initial proposal for 1,404 dwellings in eight 26-storey blocks. This proposal, and a later thinned-out version, were both rejected by Scottish Office planners. (City of Glasgow District Council)

25.27. Hillpark development as built: five 8-storey 'Block 84' point blocks and three 6-storey deck access blocks, built from 1966 by the Glasgow DLO in loadbearing brick construction; photographed in 1989. (RCAHMS)

> was an attempt to mix oil and water and is a bad planning project.

Such arguments now read ironically, in view of later claims that high blocks suppressed rather than perpetuated working-class 'community'.[58]

In defence, Gibson was silent about the site-cramming potential of high blocks: he deployed the very same Modern architectural arguments questioned by Cross. The project would provide the clearest visual contrast to the old tenements, with a minimum of overshadowing: it made 'the most intelligent and tasteful use of the site . . . [I]t had none of the solid four-storey type of development for which [the Committee] had been criticised in the past. It used slender high blocks, so that there was minimum interference with daylight, amenity, and privacy of the adjoining proprietors.' But the inquiry inspector rejected the scheme, and called for greater planning control over Glasgow's programme [25.27].[59]

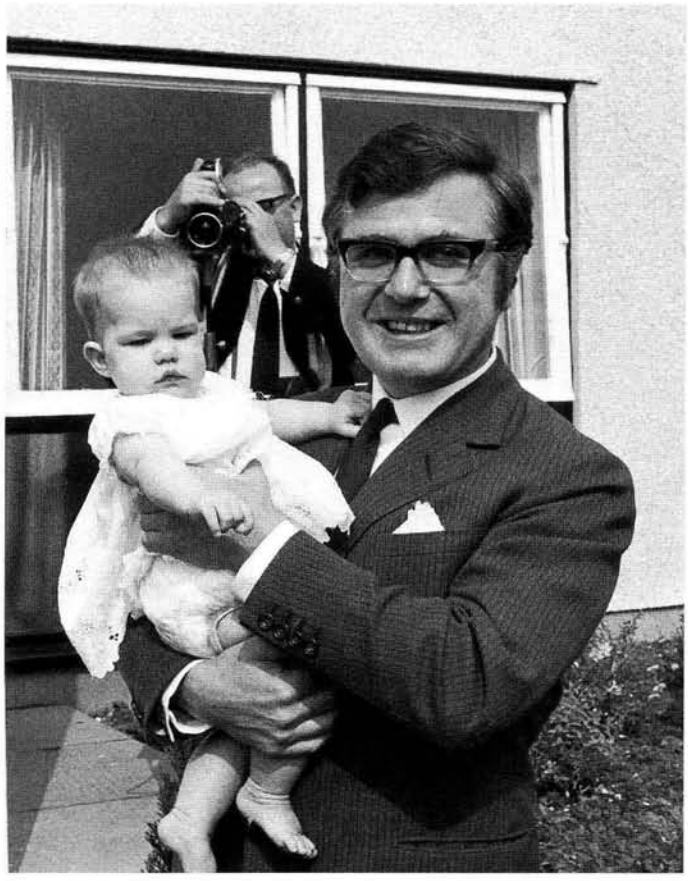
This outbreak of public controversy and middle-class opposition brought welcome relief to SDD and Corporation planners, who had been battling, with little success, against Gibson's high flats. The opposition of men such as Grieve, Wylie and Nicoll was visceral. 'I felt an unscientific hatred of them and was looking for scientific material to use against them: it was their appearance, they were inhuman!' Grieve commented. 'Too high density is too high a cost in social morality, in my opinion.' Now the planners, with TCPA support, devised a new strategy to regain their lost ground and secure even greater overspill. The promised rosy future of regional economic growth was linked with a new Osbornite league table of 'provincial' centres, with Glasgow, now just as in 1917, in bottom place. The 'competitive social environment' now required was derived from the assumed preferences of the new, affluent English 'common man', rather than the outmoded Scots tenement-dweller:

> The problem . . . is not the artificial nightmare of academic planners. It turns on what people want or will accept . . . If Birmingham, Leeds and Sheffield do this better than Glasgow, the best efforts of the Secretary of State to help Glasgow to secure its proper place in the economy can be only very partly successful . . . It may well be that, for the time being at least, many Glaswegians like their flats, but we must not be misled by initial acceptance on the part of people who have only emerged from the worst of existing slums.

The main thrust of the city's housing drive was rejected, by the argument that, if it took the form of high blocks, the investment might be 'wasted' in simply building 'new slums'.[60]

If the 'housers' had continued to enjoy Gibson's leadership, these arguments might have been parried and the Hillpark setback reversed. But a second, more shattering blow fell on 27 March 1964. On that afternoon, Gibson, admitted to hospital following chest pains, died suddenly of a heart attack—the result of both chain-smoking and sheer overwork. In the opinion of Motherwell's Hutchison Sneddon,

> he was very strict in respect of the morality of people living in terrible conditions—typical ILP in his absolute sincerity. He saw the clear need that this had to be altered, and



25.28. Dr J. Dickson Mabon (then Minister of State for Scotland), opens the first house completed by Irvine Development Corporation (18 Ardmillan Square, Pennyburn) on 15 August 1969. (Scotsman Publications)

> worked night and day to this end. Always agitated, always a cigarette in his hand—that was his style. Gibson killed himself trying to solve Glasgow's housing problem!

Now not only Gibson's national drive, spearheaded by SLASH, but also the continued building of multi-storey flats in Glasgow itself, was suddenly thrown into doubt. A seven-month interregnum saw SDD's housing and planning factions still at odds over high flats; in Glasgow, approvals plummeted and Cross held the fort.[61] At the end of this period, the threat of a permanent decline in output was averted when a new national housing leader finally emerged, eager to resume the Gibson 'crusade', but now under Ministerial direction. After Labour's Westminster election victory, Dr J. Dickson Mabon was appointed Joint Parliamentary Under-Secretary of State, with responsibility for housing and planning [25.28]. More even than Mellish in London, Mabon was given autonomy in housing, by the Secretary of State, William Ross. He won the admiration of housing Conveners of all political persuasions up and down the country, not only for his infectious enthusiasm ('a great little guy!' recalled Edinburgh's Progressive Party housing Chairman, Adolf Theurer) but also because, unusually among postwar Scottish housing Ministers, he had devised a coherent housing strategy, and was determined to put it into effect. Like Sandys in England in the mid-fifties, Mabon believed output should be kept up, even expanded, but that quantitative success made desirable some changes of emphasis.[62]

Mabon's plan was to redirect slightly the efforts of the cities, to accommodate the planners' objections, but at the same time to broaden the campaign beyond Glasgow and the central belt to give an immediate 20% increase across Scotland, and, by 1970, an annual level of 50,000 completions (of which some 38,000 to 40,000 would come from the public sector): between 1965 and 1968, public-sector output increased from 27,500 to 33,500. Mabon's campaign resembled Gibson's in combining the rhetoric of the day—system building, five-year plan, SLASH, consortia, and so forth—with an underlying reliance on organisational and personal factors. The most important of these were Mabon's own personal charisma and willingness to undertake barnstorming tours of local authorities right across the country; and the 'absolutely crucial' administrative support of Assistant Secretary R. D. Cramond and his staff.[63] The impact of this policy was much assisted by the centralised character of national housing administration—similar to that in Northern Ireland, but strongly contrasting with the polycentric, even chaotic pattern in England and Wales. Mabon's nationwide drive against rural slums, through the powerful County Councils, chiefly took the form of cottage-building. However, unlike Crossman, with his disapproval of 'American' prestige-building of multi-storey blocks in small towns, Mabon was quite happy within reason to allow high building by small burghs such as Saltcoats, whose Town Council pleaded with him at least to sanction a 'wee multi-storey'; he believed this might be a valuable competitive spur. Many burghs below 50,000 population also began energetic construction of four and five-storey blocks—a kind of nationwide 'tenement revival' in Modern form. In 1965, for instance, the Ayrshire burgh of Kilmarnock, encouraged by Mabon, decided to embark on a highly ambitious 4,000-dwelling crash programme. The Housing Committee, chaired by Police Judge Maisie C. Garven, was fortunate in having available a very large outer suburban site at New Farm Loch, which was immediately developed with no fewer than thirty-one 5-storey slab and point blocks, and swathes of terraced cottages—some built by the burgh's own DLO.[64]

But the growing planning conflict over multi-storey flats could not be ignored—especially as Mabon's own party publicly trumpeted planned growth. Mabon's solution was to compartmentalise the problem: to settle the current setpiece battles between housers and planners in the latter's favour, and from then on to prevent friction, but not at the expense of output. Thus, he came down on the planners' side in two key disputes: in Glasgow, over Hillpark (which he saw as 'not quite King Charles's head, but an absolute pain in the neck!') [25.26, 25.27], and in Edinburgh, concerning Rogan's proposal to build 22-storey Wimpey blocks beside Holyrood Park.[65] In Glasgow, Grieve attempted a more general counter-attack. Along with Nicoll's team in the Corporation, a matchstick model was prepared of the 'forest' of high blocks built and planned in Glasgow. Mabon was staggered: 'That was a dramatic piece—it looked unbeliev-

able!' Grieve trumpeted: 'I had belled the cat—and that was it!' But the truth was different: for while Mabon satisfied the planners' immediate demands, by reining in the most confrontational aspects of Gibson's policy, he took equal care to ensure that municipally based production—Gibson's paramount aim—was safeguarded: 'I could've come in with Davie Gibson and I'd've been building multi-storeys as fast as him! I happened to come in when things had almost peaked and we were beginning to see the consequences!' He conceded the planners some influence over housing location, and authorised studies into a further expansion of overspill. But undiminished, even increased multi-storey building was allowed on gap-sites in less sensitive locations, and on piecemeal cleared sites in CDAs—the latter supposedly to be balanced by the lower density of later stages, often destined never to be built! By the later 1960s, the proportion of Glasgow high-flat approvals in CDA locations jumped to 82%, from only 43% earlier in the decade. Mabon adopted a pragmatic approach to these new negotiating devices on the part of the Housing Committee: 'I didn't mind that. I didn't mind the gap-sites being filled, so long as they did the things I wanted as well!'[66]

While Mabon's redefinition of the housing drive preserved the essentials of Gibson's policy, the Convener, had he still been alive, would undoubtedly have fought even these nominal extensions of planning controls. But his reticent successor Clark was not disposed to confront SDD, and Glasgow's resolve during the turbulent year after Gibson's death was instead maintained by Cross. He filled the political vacuum by arguing with Mabon for the sanctioning of a further five years' multi-storey output; his aim was to get high-flat starts securely back above 3,000 in 1965, to secure the city 'elbow room'. Cross was only too happy that much of the planners' fire had been drawn by Hillpark: this, as a DLO scheme, would hardly have been of assistance in terms of rapid output. Behind a smokescreen of indignant protest over Hillpark, he quietly pursued with Kelly a vital series of Wimpey gap-site schemes. Of these, the site promising the easiest yield was a narrow and sinuous strip of ground at Kirkton Avenue, in the centre of the suburban Knightswood scheme. Here, Cross proposed to build a line of 24-storey towers, at a notional density of 196 p.p.a. The newly confident SDD planners tried to cut these nine blocks to two, or even none, claiming that open space was inadequate, and that they would exert a 'dominating effect on the surrounding development': the revised density would be a more 'appropriate' 59 p.p.a. Cross conceded deletion of four blocks, but doggedly held out for the remaining five, which would realise 690 dwellings. SDD's Housing Administrators obligingly reported to planning colleagues that Cross 'simply cannot understand on what basis we arrive at the conclusion that the scheme fails on amenity and space for ancillary purposes'; they suggested a 'tactical' compromise to safeguard SDD's position on Hillpark and avoid a 'head-on clash'. By January 1965, Cross accurately sensed resistance was crumbling. Jauntily, he told Kelly that, if final clearance could be expedited, 'I will promise not to make nasty remarks about the Department for six months.'[67]

In July 1965, with output stability largely restored, Cross moved to the less stressful post of SSHA General Manager [25.6]. His stern monitoring had raised the percentage of Glasgow multi-storey contracts running on time or early from 33% in 1961 to 83% in 1965. Cross's successor, James Kernohan, as an architect, was disinclined to continue his unbending pursuit of numbers, and the Corporation's designers began to regain some of their confidence. The architects were able to divert some output into deck-access form, although Kernohan personally preferred towers, and regarded some of the Department's deck-access designs as 'hideous'. From 1966, Mansley's newly created Planning Department hurried to impose blanket density limits and other restrictions on schemes in the pipeline such as Townhead 'B': 'At the meeting, the planning girl started telling us, "You should have York stone cladding!" I asked her, "What qualification do you have?" She said, "I'm a geographer." I said, "You've a damned impertinence telling the chief architect of Wimpey what to do!"'

But, despite these minor vicissitudes, Gibson's chief legacy, Scotland's national Modern housing drive, was now broadly secure—for the rest of the 1960s and well beyond. Mabon's skilfully balanced interventions had made this certain. In Glasgow, he had with great ceremony begun easing shut the stable door, just as the last horses stampeded past to freedom; while across the country as a whole, he had not only put an end to the idea that housing could be taken away from local authorities, but had elevated an urban municipal campaign into a great nationwide movement, imbuing county councils and small burghs across the land with the crusading ideals first formulated by Gibson. We shall see in Chapter 28 that a similar achievement was recorded in Northern Ireland—but almost entirely as a result of Central Government initiative, with relatively little municipal contribution. In Mabon's hands, Gibson's dream of a locally generated national housing drive was realised. At the end of the decade, this stable programme would provide a striking contrast with the sudden, almost theatrical repudiation of Modern flats elsewhere in the UK.[68]

CHAPTER 26

The Curate's Egg: Provincial Initiatives in England and Wales

As we were leaving, at the exit, Harry Watton suddenly said, 'Right! We'll take five blocks'—just as if he was buying bags of sweets!

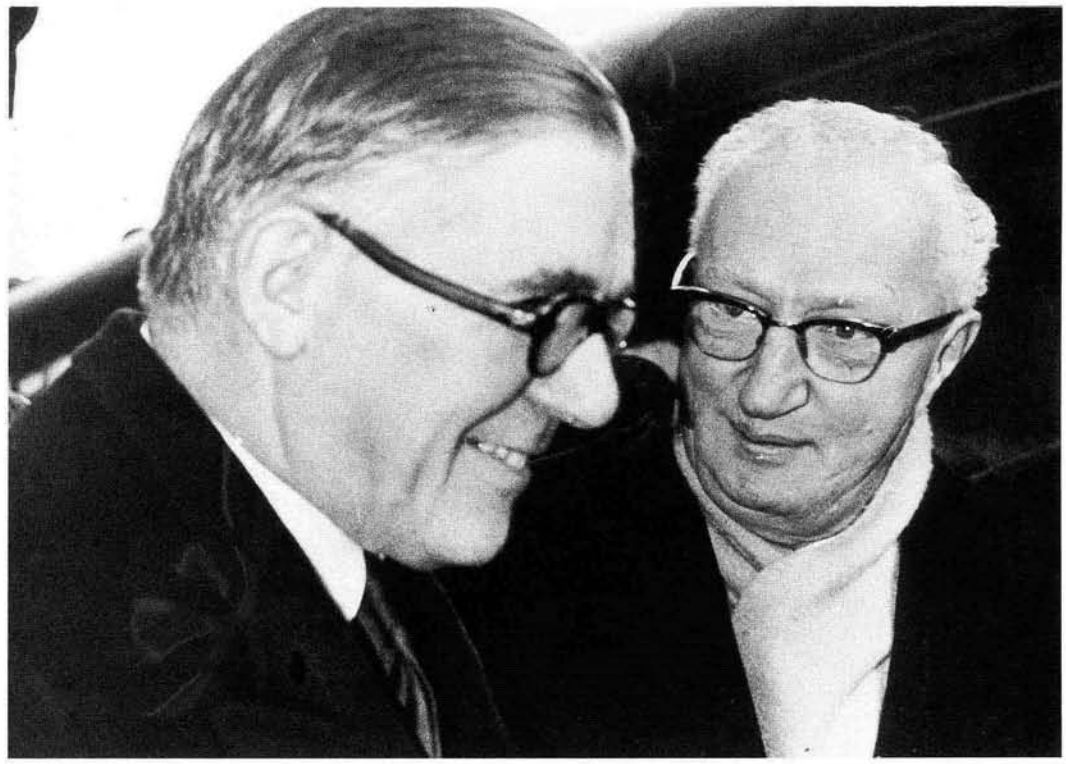
A. G. Sheppard Fidler[1]

IN COMPARISON WITH the unified, almost monolithic character of urban public housing production in Scotland and Northern Ireland, the position in England and Wales was a polycentric, individualistic jumble. The 1960s housing drive proceeded in two distinct compartments: the 'provinces', and Greater London (to be discussed in the next chapter). During the sixties, the largest cities, their worst land shortages overcome, settled down to sustained production of multi-storey blocks and other Modern flats. In some cases, such as Manchester, this resulted from a sharp policy change. In others, such as Liverpool, it represented policy continuity. Many smaller cities and large towns in the main conurbations now also embarked on wholesale building of high flats, often as rivals; elsewhere, however, building of Modern flats was much more erratic—especially in Wales and East Anglia.

Neither the common ground between municipalities—their pragmatic appreciation of the production yield realisable through use of Modern high blocks—nor the variations between them, have been adequately represented in recent historical accounts of Modern housing in England and Wales, which have insisted that local policy-making was 'pre-structured' in a homogeneous fashion by external pressures.[2] But the multi-storey drive was in fact pushed through by each active authority on its own account, at its own pace and in response to its own circumstances and pressures. Some of the largest cities collaborated, such as Sheffield and Leeds, but others ploughed their own furrow—above all, Birmingham, with its colossal burst of output in the later sixties.

BIRMINGHAM AND THE WEST MIDLANDS

The closest English equivalent to Gibson's multi-storey revolution was the housing drive initiated in 1963 by Alderman Harry Watton, the 'little Caesar' of Birmingham [26.1]. This Labour leader's initiative was motivated by the Chamberlain municipal efficiency ethos rather than the crusading tradition



26.1. The Minister of Housing and Local Government, Richard Crossman (left), is welcomed by the leader of Birmingham Corporation, Alderman Harry Watton, during a visit in December 1965 to open a prototype block at Druids Heath, and to discuss the Corporation's Chelmsley Wood project. (*Birmingham Post and Mail*)

of Red Clydeside. But it was built on the same two sturdy pillars as Gibson's: opposition to overspill, and subordination of design to rapid production. In contrast to Glasgow's national influence, Birmingham's activity remained compartmented, even from that of the Black Country authorities.[3]

Watton's rise to power in the late fifties came as the Corporation began to lose its patience in the face of mounting pressure for overspill. This process culminated in April 1960, when Brooke refused a boundary extension at Wythall and urged the city to adopt a New Town strategy, following a public inquiry manipulated by Osborn through his local satellite, the Midlands New Towns Society. In 1959, Watton declared: 'Birmingham people are entitled to remain in Birmingham if they wish, and Birmingham industry has the right to remain in the city it has done so much to make great.' After the humiliation of Wythall, he settled on a two-stage strategy to realise this aim. Initially, he set out to reverse the decline in output within the city, by pressing for faster development of gap-sites and the redundant Castle Bromwich Airfield. In the medium term, he began to bring the strongest political pressure to bear on MHLG for the release of another Green Belt site to make up for Wythall.[4] But Watton's plan immediately ran up against a substantial obstacle: the determination of Sheppard Fidler to develop both gap-sites and Castle Bromwich in his own meticulous way. At Castle Bromwich, the latter took great exception to the imposition of a non-Radburn layout by Manzoni and his successor, Neville Borg. The row dragged on for a year, into 1963:

> The Public Works Committee was a very powerful committee, the House Building Committee not so powerful, but we thought: 'This is where we dig our heels in!' The City Engineer said, 'We'll do the layout and you can fit the houses in.' We said, 'You damned well won't, you know—we'll design the area and you'll put in the drains!'—and we won![5]

Sheppard Fidler's victory at Castle Bromwich was, however, to prove Pyrrhic. There was now 'a growing lack of confidence among the leaders of the Labour Group in his department's ability to produce houses in sufficient numbers': 1962 completions had totalled just 1,161 (less than 25% of the 1950s maximum). This disquiet could not simply be brushed off, as Watton himself was 'the most powerful leader the Birmingham Labour Group ever had—he ruled with a rod of iron!' Watton began to set his face not only against Sheppard Fidler's elaborate mixed developments, but also against the awarding of contracts for high flats to national firms attuned to design. He finally decided to act when the City Architect, 'looking for a system you could mould, could design', and attracted by the 'deluxe engineering' of Camus (the arguments used *against* Camus by North at West Ham!), proposed in early 1963 with Cleeve Barr's support that 47% of the massive Castle Bromwich development should go to the French firm. In contrast to Camus in Liverpool, there was no early attempt to find a West Midlands firm to act as licensee contractor. Watton saw this as a challenge to the local industry. Sheppard Fidler recalls, 'I honestly think that some Aldermen and Councillors thought I was going to import hundreds of Frenchmen into Birmingham, which would not do at all!'[6]

In 1963, the Labour leader decided that if Sheppard Fidler would not comply with his wishes, he himself would assume effective control of site development and contractual policy, and would construct an alternative, production-dominated short-term housing strategy, based around the rapid development of gap-sites and Castle Bromwich, as far as possible by local building firms. In the contractual field, Watton's riposte to the Camus proposal was uncompromising. He redirected almost the entire multi-storey programme, despite Sheppard Fidler's opposition, to C. Bryant & Son; non-multi-storey contracts were divided between Bryant, Wimpey and the remainder of the local industry. In contrast to other local builders such as Stubbings or Morris & Jacombs, who were perfectly competent in the construction of cottages or isolated point blocks, Bryant was eager and able to attain a predominant role. Sheppard Fidler himself observed that most other local firms simply 'couldn't cope with the multi-storeys'. In 1964, grasping the opportunity with both hands, Bryant boldly put in low tenders to secure the first big multi-storey contracts at Castle Bromwich. This gamble paid off, and secured Bryant continuous negotiated contracts thereafter: 'Things mushroomed at Small Heath—we started building wooden offices, putting pretty senior people in wooden sheds—it was like Nissen huts in the war!'[7] During its hectic expansion, Bryant not only saw off Camus, but also supplanted most of Sheppard Fidler's existing stable of national high-flat contractors. This was achieved by a twin-pronged policy. Firstly, twenty-eight in-situ concrete point blocks were built at Castle Bromwich, to get substantial progress at this vital site [26.2]; further such blocks were built on several smaller contracts. A second, simultaneous advance was made possible by the embrace of prefabrication. For low blocks, Bryant promoted its own 'system', while for high flats the firm became chief West Midlands main contractor for Concrete's Bison Wall-Frame [26.3, 26.4, COLOUR XIV]. When building Bison blocks, where its work was largely confined to siteworks and finishing trades, Bryant saved more than half the staff needed for 'traditional' blocks. Now, despite the severe labour shortage, the net could be spread much wider, to take in most available gap-sites, parts of Castle Bromwich and most subsequent large developments.[8]

To Sheppard Fidler, the proposal to build standard Bison blocks on gap-sites seemed the most abhorrent feature of Watton's new policy—and the Labour leader added insult to injury by the peremptory way in which he ordered the first batch, during a visit on 6 November 1963 to inspect Bryant's prototype Bison point block at Hurcott Road, Kidderminster. This visit was organised by Watton's ally, the Labour elder member and Bryant director Alderman W. Bowen. Sheppard Fidler recalled:

> Chris Bryant took Harry Watton out for lunch—it must have been a marvellous lunch!—and Watton came back and said, 'Bryants have the most marvellous type which they can put up in a few weeks—can you please find half a dozen

26.2. (Opposite page) Birmingham: Castle Bromwich Airfield (Castle Vale) Group 1 and Area A developments, 11-storey in-situ concrete blocks under construction by Bryant in 1965. (Bryant)

26.3. Birmingham: Bell's Lane development, seven 13-storey Bison Wall-Frame point blocks and Bryant Low Rise housing under construction in 1965. (Bryant)

26.4. The same development seen immediately after completion in 1966. (Bryant)

sites where we can put them up straight away.' I thought this was a funny way of proceeding with design, choosing sites and so on. Then Bryant said, 'We'll take the Committee to see a block at Kidderminster.' But in order to get to the block we passed through a marquee which was rolling in whisky, brandy and so on, so by the time they got to the block they thought it was marvellous—they wanted to change over the whole programme!

[Then,] As we were leaving, at the exit, Harry Watton suddenly said, 'Right! We'll take five blocks'—just as if he was buying bags of sweets! 'We'll have five of them', he said, 'and stick them on X'—some site he'd remembered we were just starting on! Well, I can tell you, I almost walked out on the spot. I mean, all architects get this done to them from time to time, but this! That was Watton trying to please Bowen you see!

Sheppard Fidler went on to recall that, 'after leaving Kidderminster, the coach called at various hostelries on the way to the Civic Centre. What a day! I can't forget it even now![9]

One might at first glance conclude from this colourful episode that Birmingham's 1960s multi-storey drive was entirely motivated by contractual pressure. In fact, however, the real driving force was Watton's determination to start large-scale building of point blocks on gap-sites and at Castle Bromwich—and, as it turned out, the city was to be the real beneficiary of his forceful initiative.[10] Although Bryant won the lion's share of Birmingham's multi-storey contracts after 1964, the firm's continuity of work led not to substantial overspending, as, say, in the case of Glasgow's DLO, but to a £600,000 saving on final costs, out of Bryant's total housing contract figure of £83.3 million for 1961–73. Bryant later paid a high price for committing its output to Birmingham in this way (to the extent of imposing a fifty-mile tendering radius): 'When the troubles came we had to go and knock on all the doors of people who'd been begging us to do work for them before!'[11]

In 1964, infuriated at Watton's 'starting to dictate what I could build, and where', Sheppard Fidler resigned and went into private practice: 'I said, "I've had enough!"' This was duly recognised in the world of public architecture as a devastating setback to the cause of design in the provinces.[12] To replace him, Watton imported Leeds's City Architect, J. R. Sheridan Shedden, who had achieved a formidable track record of type-standardisation and production, and could be relied on to boost numbers, even if he had to ruffle designers' feathers. Cutting across normal demarcation lines, Shedden was made directly answerable to the House Building Committee, rather than the General Purposes Committee. One young LCC-trained architect, who worked for a time under Shedden in Leeds, recalled with bristling indignation his single-minded pursuit of output: 'That was an appalling mediaeval baron of an architect, a man of zero architectural quality, a primeval creature who could have gone to work for Wimpey or some other contractor—he could have been a Soviet general, with a huge hat and a coat buttoned up to his chin!'[13] Shedden immediately reorganised the City Architect's Department along the lines of a large contractor's design team. Fifty per cent more staff were allocated to housing and top priority was given to contract letting. There was initially no attempt to design new plan-types. Nor—in contrast to Glasgow—was there much use of package-deal contracts. Rather, Sheppard Fidler's range of high blocks and cottages was thinned out and made the basis of negotiated repeat contracts. In December 1964, Watton's lobbying of the new Labour Minister bore fruit, when Crossman released a large chunk of Warwickshire Green Belt at Chelmsley Wood [26.1].[14]

By 1965, Watton and Sheridan Shedden had virtually completed the reorientation of Birmingham's programme towards production. Now output skyrocketed, from 2,542 completions in 1964 to 4,036 in 1965, 4,728 in 1966 and an astonishing maximum of 9,023 in 1967: more than the total of all Birmingham overspill dwellings built to 1971, and three times the per capita figure for the whole of Greater London! Over the same period, the Corporation's waiting list was cut by one-third. This sudden and spectacular surge in the city's housing production was not, however, the direct responsibility of Shedden, who was incapacitated by illness during 1965 and died in April 1966, or even of Watton, who gave up the leadership, also after illness, in that year. Watton had set the framework for a decisive revival in multi-storey building, and output as a whole, but the task of carrying through his building policy now passed from the councillors to a new chief officer. Shedden was succeeded by one of England's organisationally most outstanding postwar public

26.5. Alan Maudsley (Birmingham City Architect 1966–74), seen in 1976. (*Birmingham Post and Mail*)

architects: Alan Maudsley, Birmingham's City Architect from 1966 to 1974 [26.5, 26.6]: 'A man who saw what needed to be done and did it—a real goer!'[15]

Maudsley's pivotal executive role in Birmingham's housing drive resembled that of Cross in Glasgow during the brief political power vacuum between Gibson's death and Mabon's appointment. But in contrast to the inimical land situation which always faced Cross, Maudsley's arrival coincided with almost a glut of sites. So he never had any need to create elbow-room for decanting, and was able to devise a methodical plan for the implementation of the strategy sketched out by Watton. His plan was to satisfy the most immediate political demand for numbers by two or three years' energetic building of Sheppard Fidler plan-types for point blocks, low flats and cottages, at Castle Bromwich and other windfall or gap-sites. As in the case of Dundee, a plentiful suburban land supply would, paradoxically, fuel a short-term multi-storey boom. Having secured large numbers of extra staff on the basis of these results, he could then devise new plan-types and patterns of layout and landscaping; high blocks could be largely confined to redevelopment areas, and, at last, the City Engineer and outside architects could be excluded from involvement in layout design. Maudsley realised that the Department could only expect to involve itself in architecturally innovative work once it had expanded its staff levels through achievement of output. In contrast to Cross, who pursued output by attacking 'good design', Maudsley, as an architect, wanted to have both. His self-declared aim was 'to get the team by producing the goods'.[16]

Despite the initial indispensability of high flats to his strategy, Maudsley, like most English architects, still assumed that cottages were the norm, and flats an expedient: he embraced the late-1960s move to housing improvement with enthusiasm. From its 1964 maximum of 59% of all approvals, the proportion of high flats fell to 21% in 1967, 11% in 1970 and nothing thereafter—in marked contrast to the buoyancy of Glasgow's multi-storey output. Maudsley's deputy, Bill Reed, recruited because of his New Town work at Harlow and Basildon, concentrated on increasing the range, and reducing the cost, of 'low-rise' types. These made up over 85% of the 14,000-dwelling Chelmsley Wood project [26.7], and all of the later Woodgate Valley and North Worcestershire developments.[17]

In 1969, Maudsley summed up his cardinal principles of organisation: 'The first is to keep the number of dwelling types down to as narrow a range as possible, and the second is that one should be prepared to reward a contractor's efficiency with negotiated continuity.' In the first area, he had no aspirations to compete with avant-garde public architects elsewhere, and only contributed a few quirky personal touches, such as a passion for mosaic facing: 'He liked white buildings: he wanted them self-cleansing!' Unlike his counterparts in many other large cities, he refused to have anything to do with deck-access blocks, and eliminated medium-height maisonettes altogether. Instead, the city remained faithful to point-blocks. In suburban developments, Maudsley's gleaming white-tiled towers were dotted, increasingly sparingly, in a sea of two-storey cottages and flats.[18]

In the second area of organisation pinpointed by Maudsley, that of contractual policy, his special gift (like that of Cross) was:

> an uncanny way of cutting through red tape . . . [H]e was autocratic, but he didn't half get things going! You'd go into

26.6. Alan Maudsley (left) and W. G. Reed, Deputy City Architect (right), inspecting a development site at the Gas Street Basin, Birmingham, in October 1969. In the background are two newly completed 16-storey blocks of Phase I of the Civic Centre site. (*Birmingham Post and Mail*)

26.7. Birmingham: Chelmsley Wood in course of development in 1968: 'the size of a Mark I New Town—but built in five years!' Almost all dwellings in this view, covering Areas 6 and 7, were built by Bryant; the negotiated contracts for high and low blocks were let separately. At left is the M6 motorway under construction. (Bryant)

> the city, there'd be plans on his wall, and he'd pencil people in for them—Bryants—Stubbings—Morriss and Jacombs. Those who achieved, and were on programme, got more work. You'd finish a job and he'd just walk up, rub 'X' out and put 'Y' in: 'They can't produce—you can!'

Impressed by Maudsley's production achievements, the Conservative-controlled House Building Committee, under Alderman Ernest Apps, ceded him almost total autonomy; and, at the same time, his power over the contractors harnessed to his housing drive also steadily grew: 'he'd tell the *councillors* what to do . . . while we'd end up doing jobs at *his* behest and *his* price!' Yet, despite the scale of Maudsley's negotiated contracts, the city was never afflicted by overspending and lack of cost-consciousness. Partly, this resulted from Birmingham's municipal efficiency culture, which would chop off a redundant branch rather than see fat nests of patronage and dependency proliferate on it. Unlike Cross, Maudsley never had to grit his teeth at the sight of 31-storey blocks being built, with luxuriant inefficiency, by a separate, indeed hostile, department of the Corporation. Watton's daring abolition of the rate subsidy in 1963 made essential the strictest monitoring of building costs, and a fierce regime was maintained by Maudsley's Chief Quantity Surveyor, David Bergman. Bryant's Ken Harvey ruefully recalls: 'Prices were very thin always. It was Maudsley who cut through the red tape, and Bergman who controlled the finances. Birmingham had very strict control—it was *the* best.'[19]

Chiefly, however, it was Maudsley's own dynamism which

was responsible for breaking the back of the city's housing problem, above all through the lightning construction of Chelmsley Wood, 'the size of a Mark 1 New Town—but built in five years!' This achievement, rather than the highly colourful corruption scandal in which he and several Bryant directors became embroiled, constitutes his historical legacy: 'It was exciting to be part of that particular period. There may have been things going on in the background—graft and so on—but they weren't the things at the top of people's minds. What was in people's thoughts was—'"For God's sake get on and build those houses, and get these people out of the slums!"'[20]

During this period, the city's building and that of the rest of the West Midlands remained distinct, with Maudsley's jagged graph set against the latter's plodding line: of the regional increase in public housing construction between 1964 and 1966, 98% was accounted for by the City! The year 1966 saw a municipal reorganisation which welded this clutter of disparate authorities into powerful county boroughs: the major beneficiary was Wolverhampton, which suddenly found itself a city of over 250,000 inhabitants. It embarked on a belated building spree: by 1969, nearly 1,300 dwellings were being built, including the set-piece Heath Town project. Other boroughs such as West Bromwich and Walsall, previously among the most active in England, now steadily declined in output.[21]

THE NORTHERN CONURBATIONS

During the 1960s, the North-West of England remained, after the West Midlands, the area most active in building of big Modern blocks. Here Liverpool and, increasingly, Manchester, pursued a policy of consistent output expansion: at the same time, however, several second-rank authorities began to push forward strongly under Ministry encouragement. Liverpool's decision to embark on its Camus programme had stemmed from a consensus decision in 1961 that the annual housing target should be raised to 5,000. The Housing Committee had been shaken by the sudden decline in output following the completion of Kirkby, from 2,408 in 1958 to a mere 1,517 in 1961, and was anxious to restore its established production record. Several agreements were under negotiation, including an annual programme of 1,000 dwellings with Wimpey; but Entwistle's Conservative administration was set on crowning this counter-attack by a single extravagant gesture, before their likely defeat by John Braddock [26.8] in the 1963 elections: 'They wanted to put their mark on Liverpool!'[22]

In June 1962, therefore, a Liverpool party of inspection to Paris reached an on-the-spot verbal agreement with Camus on a large bulk order. Sheffield's Housing Chairman, Harold Lambert, was there with a more sceptical delegation at the same time, and recalls his reaction: 'That was bloody silly

26.8. Liverpool's Labour leader, Alderman John Braddock (right), arriving at the Town Hall in November 1961 for a debate on the rent policies of Entwistle's Conservative administration. (*Liverpool Daily Post and Echo*)

I thought, rather than coming back and taking it to the Council!' But as Braddock was also present, Entwistle and his Housing Chairman, L. H. Sanders, were not in danger; as always, there was covert consensus. Bradbury got round the city's building xenophobia by securing the agreement of Unit, his most trusty local firm, to act as licensee contractors, and by emphasising that the deal was a bonus which would not abstract land or building resources from the existing drive. After rapid revision of Camus's plan-types, a prototype four-storey block was built at Classic Road. However, following Labour's victory in May 1963, it became clear that the Camus deal had had a hidden flaw. Braddock's Housing Chairman, W. Smyth, made the disquieting discovery that there were no sites on which to build the twenty-five blocks ordered, owing to MHLG planning obstruction of the rezoning or Green Belt release of land at Sheil Park, Quarry Green and Cantril Farm Extension.[23]

Liverpool's Conservative administration had sought not only to revive housing output, but also to bring housing under a degree of planning control, by establishing a separate City Planning Department in 1962. The arrival of the first City Planning Officer, Walter Bor, was not, however, welcomed by Braddock, who was distrustful of the possible impact on output of planning ideas of density or height regulation. In fact, the Labour leader was so concerned that he decided, in his inimitable way, that he would have no contact whatsoever with Bor, either in person or in writing. This ostracism continued after Braddock's return to power, until his own sudden apoplectic death, six months later, during a supper party to celebrate the opening of the annual John Moores Exhibition at the Walker Art Gallery.[24]

Following Braddock's unexpected demise, the Group and Council leadership passed to his younger rival, Councillor Bill Sefton, who eagerly took up the planning cause. But initially Sefton chose to leave the Housing Committee undisturbed. He was preoccupied with a grand strategy intended to reverse decades of municipal introversion and allow the city to compete effectively with Manchester in the regional development league-table: 'I saw my job, as Leader of the Council, as being to reestablish Liverpool in the national framework.' Municipal housing, with its old-fashioned connotations of local religious politics and patronage, seemed out of place in his vision of thrusting modernity. Sefton was glad, for the time being, to skirt this massive, encrusted boulder: 'I used to leave housing to Housing.' So, politically, the housing scene was still dominated by the Housing Committee's Chairman, W. Smyth, a staunch Braddockite, who showed granite obduracy in resisting any proposals by Bor to establish guidelines for gap-site point-block development, or to interfere with the rubber-stamping of Corporation housing projects by 'deemed planning permission'.[25]

A compromise solution to the Camus site-shortage problem had already been tentatively agreed under Braddock: to build some blocks in the suburbs, but to relocate three 22-storey blocks to slum-clearance sites in Everton, where they might perform a useful political function, in relation to existing ward boundaries. As Deputy Leader, Sefton had been particularly unhappy about the proposal to build one block, Logan Towers, at Boundary Street. This, in a setting of the starkest industrial dereliction, adjacent to a gasworks, canal and power lines, was dictated by a requirement to preserve a small Roman Catholic residential enclave on that spot; a group of lower flats and cottages had already been built nearby. The inhabitants, and their councillors, had lobbied Braddock that the area should be redeveloped on the same site with a high block, and he readily agreed: 'If that's what they want, that's what they're going to get!' Sefton felt compelled to uphold this decision, despite his own preference for decanting to another site, and his more general desire to help redirect the focus of Liverpool Labour politics away from religion towards economic modernisation. Logan Towers was therefore built, in 1964–5 [10.9].[26]

The balance of power only tilted in the Liverpool planners' favour once the housing camp was weakened by further post-Braddock reforms. In December 1963, Bradbury's production empire was fragmented, with housing design allocated to the less vehement J. W. Boddy; in 1965, Sefton removed Smyth from the housing chair. From 1966, Bor's successor, Jim Amos, was able to establish some control over housing policy, and to divert building away from the scattered towers detested by his planners, into large deck-access schemes such as Netherley. Starting from a fairly high base, Liverpool's output could not match the spectacular increases of cities such as Birmingham or Salford; but the city was able to build around 3,000 dwellings a year during the mid and late 1960s.[27]

In Manchester, the city's dilatoriness and overspill fixation had, by 1960, depressed the level of completions below 1,000—only one-third of the 1950s maximum. Over the 1960s, however, there was increasing convergence with Liverpool's more consistent policies: a burst of tower-block building was followed by a turn to designer-inspired deck-access blocks. But there remained one key difference: the absence of any strong, production-minded housing faction. The decisive turning point—the Council's acceptance in 1961 of a 4,000 annual building target—was brought about by pressure, not from the Housing Committee or Austen Bent, but from the Medical Officer of Health and the Town Clerk, with Ministry backing. These two officials wished to increase the rate of clearance to 4,000 but realised that it would be politically awkward simply to overspill the inhabitants and leave the resulting sites empty.[28] Having at last been coaxed into raising output, the Housing Committee, whose previous neglect of piecemeal development had left a glut of sites inside and outside the city boundaries, sensibly decided to obtain maximum yield from these by a crash drive of multi-storey building. But it soon became clear that the local contractors and DLO, immured in the Simonite Garden Suburb tradition, were floundering hopelessly in the multi-storey field. Large negotiated contracts were awarded to Laing and Wimpey (in one case, Hollyhedge Roundabout, simply by deposing a local firm which had already put in the lowest tender); but, by mid-1962, output was still lagging well behind site availability.[29]

It was now a matter of great urgency to secure some further addition to multi-storey construction. At this point, there converged the conservatism of Austen Bent (who had

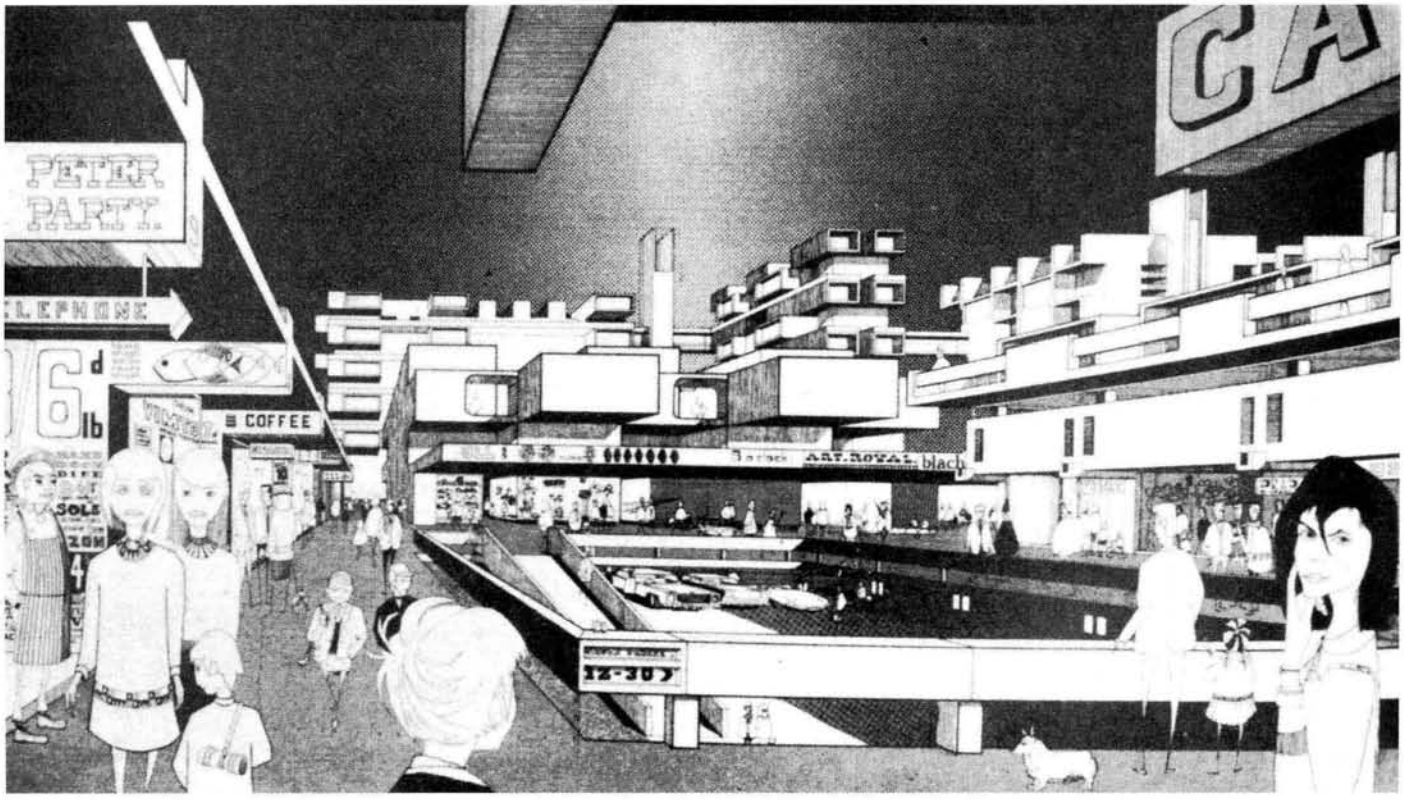
never been an eager participant in the Camus discussions with Bradbury and Sheppard Fidler) and that of Laing, anxious not to be left behind by the 'systems' bandwagon but cautious about large-panel prefabrication. When the Camus negotiations fell through in August 1962, therefore, a substitute deal was ready: Laing would build four point blocks on the Heywood overspill estate as prototypes of the in-situ Sectra 'system' [24.2]. Over the next four years, Laing provided the backbone of the city's programme while, at the same time, contractual diversity was also built up. Laing erected thirty-five point blocks, some package-deal and some Department-designed: construction was Sectra or normal in-situ reinforced concrete frame or box frame.[30]

The only real obstacle to Manchester's multi-storey building drive had been the Housing Committee's own half-heartedness. Once large-scale point-block construction at last began (punctuated by occasional attempts to reverse the policy in the Housing Committee), the city's favourable land supply allowed rapid progress. There was such an abundance of large sites as to prevent the Committee from ever seeing the 90 h.r.p.a. blanket density as an onerous constraint. Gibson's site-prospecting would have seemed incomprehensible here: 'Gap-site availability would be seen as a very minor matter . . . [T]his density maximum governed the whole thing—there were so many of these big clearance and overspill sites available!' Decanting was so easily absorbed, however, that even the increased rate of building began to fall behind the Medical Officer of Health's activities—a discrepancy of which Joseph reminded the Council in 1963, and which, over a year later, caused members some embarrassment during a visit by Mellish to the Hulme clearance area: 'I said, "Why are you showing me this desolation?" They replied, "This is our showpiece." I said, "I'm absolutely ashamed—why don't you put some bloody houses on it!"'[31]

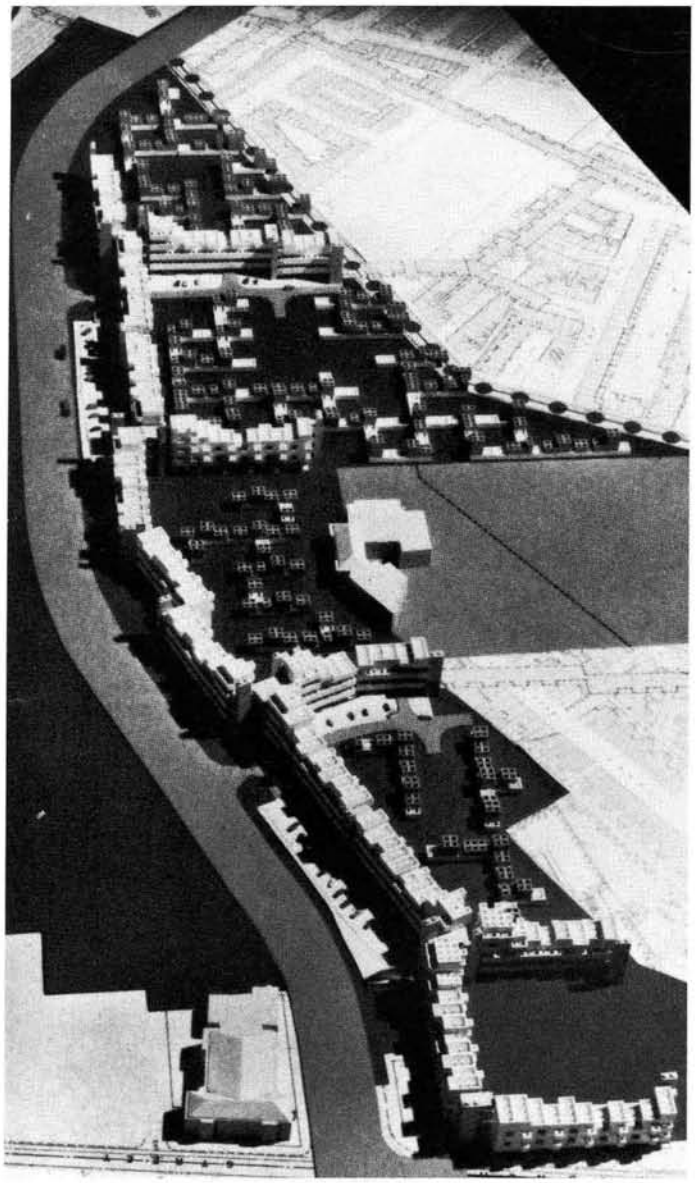
In the end, the initiative towards a final break from the Simon tradition came not from Manchester's politicians but from the designers. Bent's staff, under his Chief Assistant Architect, Robert Stones, were already chafing at the Department's approach to design and landscaping:

> That nine-storey slab, you banged it down in Wythenshawe, you banged it down elsewhere, I got sick of seeing it! There it was in the drawer and you just kept reusing it! It was a pretty miserable thing to have to do . . . Then some foreman from Parks would turn up twelve months later in a lorry and say, 'Right, Bill, chuck out a couple of trees here!'

After the appointment of J. S. Millar as City Planning Officer in 1966, a united designers' front briefly emerged. But after Stones succeeded, with Millar's help, in setting up a semi-autonomous Development Group within Bent's department, the two groups began working on separate lines. Millar (with Womersley as consultant) planned Hulme under the constraint of a little-altered density ceiling. Stones's team devised an inventive, megastructure-like range of deck-access and cottage types for the other CDAs; Gibson Street was the only scheme built (in 1968) to the Group's designs [26.10–26.11]. Until these large projects were realised, pushing completions back towards 4,000 in 1971, Stones's successor as Chief Assistant, H. Combs, held the fort by routine



26.9. Perspective of imaginary neighbourhood centre (based on Gibson Street) prepared by Manchester Housing Development Group in 1966. (Manchester City Council)



26.10. Manchester: Longsight CRDA Stage 1 (Gibson Street), Lego model prepared by Manchester Housing Development Group, 1966. HDG members involved in the design of Gibson Street included Robert Stones (Group Leader), Wolf Pearman, Terry Kennedy and David Millard. (Manchester City Council)

26.11. Longsight CRDA Stage 1 (Gibson Street): 573 dwellings built from 1968 by Drury and Concrete Northern (Bison); north façade of 10-storey barrier block, seen in 1988. Demolished 1992.

output—as at Victoria Avenue East, where the DLO built eight 17-storey blocks in 1967.[32]

While Manchester had to be dragged backwards into vigorous building, MHLG's regional office found greater receptivity among surrounding authorities. The early showpieces were Salford and Oldham, England's most slum-ridden second-rank county boroughs, and both implacably opposed to overspill. Oldham had postponed the latter threat by its St Mary's redevelopment and local point-block schemes; but it was only conclusively removed in 1966, when MHLG capitulated to the borough's longstanding demand that it be allowed to build on a large peripheral site at Sholver. Salford perceived a double menace, from overspill and from next-door Manchester: 'They have always looked over their shoulders at their neighbour—they were certainly concerned that Manchester would swallow them up!' This anxiety was exploited by Cleeve Barr and the regional Assistant Secretary, P. L. Hughes, who allowed Salford to pack the 89-acre Ellor Street–Broad Street CDA with high flats, preventing any need for overspill and preserving Exchequer Equalisation Grant, rateable value and municipal prestige; MHLG saw Salford's drive as a stick with which to beat the sluggards of Manchester's Housing Committee. Percy Johnson-Marshall's visionary redevelopment plans for a 'regional centre' had by then run aground, and McWilliam eagerly stepped back in to fill the breach with local package-deal towers. Kick-started by Ellor Street [19.7, 26.12], Salford's output accelerated dramatically from

its very low base—from a mere 30 completions in 1962, to 465 in 1963, and 1,468 in 1966! From then until the early seventies, Salford kept up the highest per capita output of any English city—higher even than Maudsley in Birmingham.[33]

During the mid-sixties, MHLG's North-Western Office began to exert considerable influence on medium-sized authorities—less through the formal machinery of consortia and 'systems' than through the personal pressure of officials. And the nature of that influence was subtly changing, in response to local perceptions. During the office's setting-up period, Hughes had been the chief proselytiser, faithfully relaying Joseph's and Cleeve Barr's preference for lower blocks or mixed developments. But as MHLG's regional structure mushroomed and offices 'went native', these nationally directed tendencies faded from view, and were replaced by echoes of the established municipal production ethos. Within the North-Western Office, the Principal Architect, J. Clay, LRIBA, came into prominence, fomenting output-orientated initiatives among lesser boroughs. Manchester's housing architects, busy abandoning point blocks for lower deck-access patterns, saw him as a Cross-like bogeyman: 'an absolute high-rise nutter—the entire solution of Britain's housing problem was point blocks with garages around!' But Clay left Manchester well alone. Instead, 'his staff would sit down with the smaller authorities next door to us and more or less tell them how to do their schemes. They would be dealing with some borough engineer who ran the housing programme through a junior architect, and they'd lean on them—whereas Manchester was one of the big boys!'[34]

For instance, in the wealthy adjacent borough of Stretford, successive Conservative and Labour administrations had fostered a consensus policy of self-contained redevelopment—'to keep the life in the borough'—and an enthusiasm for building of point blocks. Their showpiece was 'Perry's Folly', an obelisk-like 25-storey tower at Chapel Lane, commanding the southern approach to Stretford: 'an imposing block of flats to give character to this entrance to the Borough'. This lavish scheme, built from 1966, was partly inspired by a former Borough Engineer, A. H. Perry [26.13]. More controversially, a clutch of 15-storey blocks was erected in the Clifford Ward Redevelopment, a Stretford salient jutting into Hulme. Manchester's designers were not pleased by this (in their view) retardataire intrusion:

> We were doing Hulme at 110 p.p.a., leaving some space, but Stretford had this programme, they had three blocks and were going to put more in at about 200. What infuriated me was that there was a nice church, a very nice spire—they were going to wall it in! Stretford's Borough Engineer wasn't

26.12. Salford: Ellor Street and High Street Redevelopment Areas, view from south immediately following completion in 1972. The Salford Shopping City development, built by Bryant from 1968, is located at top centre. (Salford City Libraries) (cf. 19.7, 20.5, 22.6)

26.13. Official opening of Chapel Lane development (Stretford House), Stretford, on 20 April 1968. From left to right: Councillor David W. Homer (Housing Committee Chairman), Harold Goodwin (North-West Electricity Board District Sales Manager), Councillor Anne Kirkbright, JP (Mayor of Stretford), and Frank Vickers (Housing Manager). This 25-storey point block, nicknamed 'Perry's Folly' after a former Borough Engineer, was built from 1965 by Matthews and Mumby. (Trafford Library Services)

> a bad guy, but it was Clay who came down on it, and let them go ahead. My feeling was: 'They're using up the open space, which we created to breathe!'

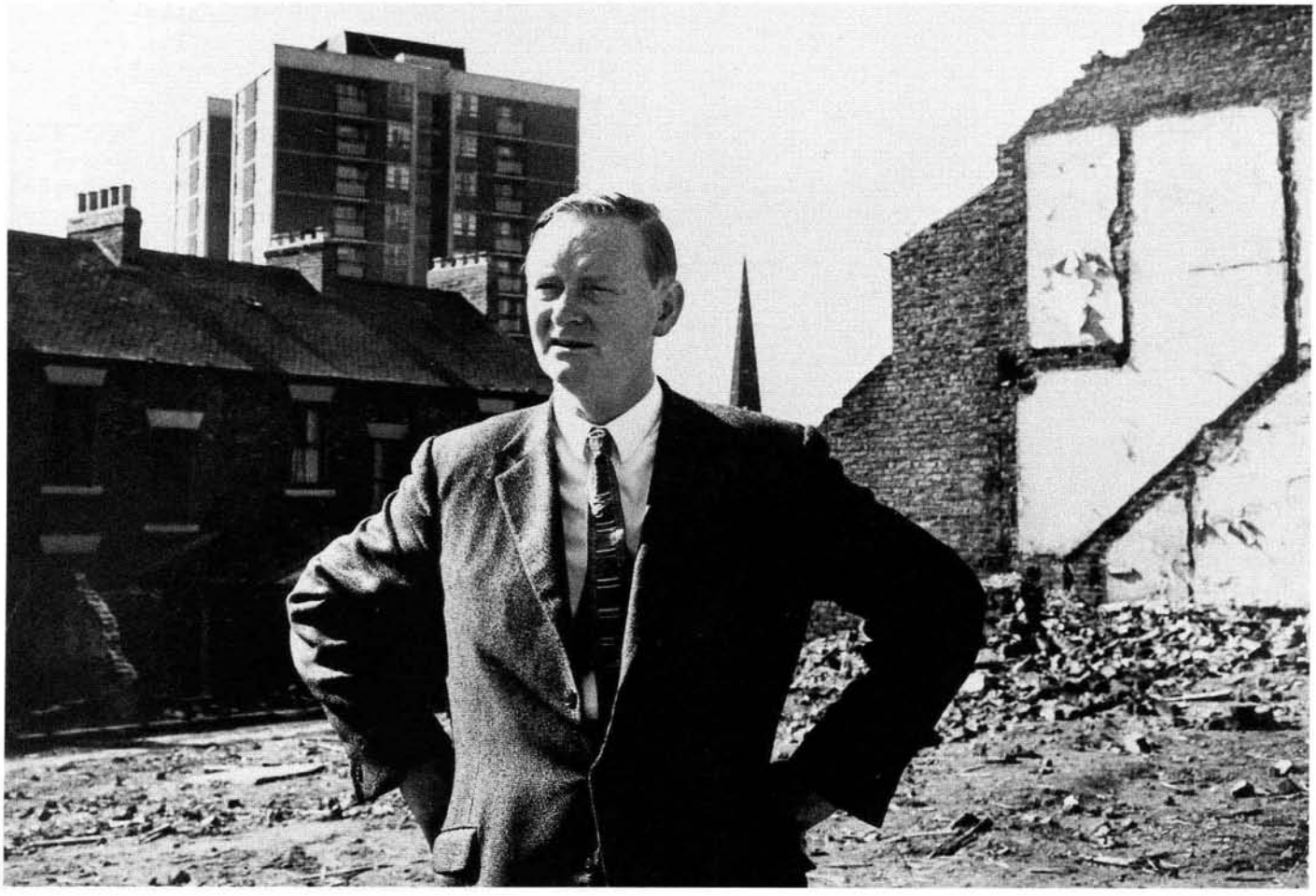
But Clay could only reinforce, not override: Burnley CBC, for instance, rebuffed his 'strong recommendation' that two point blocks should be added to their Trafalgar Street deck-access scheme.[35]

Lancashire's experience was echoed in other conurbations —notably the North-East and the West Riding of Yorkshire. In the former case, activity revolved around the polarised extremes of Newcastle-upon-Tyne CBC and Sunderland CBC. Sunderland, a solidly Labour-held authority, had maintained a high output, often more than Newcastle's at only two-thirds of its population, without significant resort to high blocks: this resulted from good land supply and willingness to levy a high housing rate. The arrival of a new, 'systems'-minded Borough Architect in 1964, Harvey Bishop, coincided with the temporary raising of the annual target from 1,200 to 2,000, and the commencement of large multi-storey schemes, including the Taylor Woodrow-Anglian contract at Gilley Law, and a central redevelopment.[36] Newcastle's Modern housing drive was very different in character—not least because it was conjured out of the city's worst output slump (in 1958), by the most outstanding leader of postwar Northern English local government —Councillor T. Dan Smith, whose energy as Housing Chairman from 1958 to 1962 provided his 'ladder to power'. Smith's political origins lay with the ILP, and he was on friendly terms with Gibson. But this was no single-minded 'housing crusader'; rather, Smith shared the Glasgow planners' view of housebuilding as the trigger for a wider drive of regional 'development'. Yet his vision was far more complex than the simplistic Osbornite framework of the Clyde Valley Plan: he trenchantly rejected overspill and reduced densities, and advocated the concentrated building-up of Newcastle as regional centre of the North-East.[37]

Elected to the housing chair in May 1958, Smith needed immediately to raise output from the rock-bottom level of 611 dwellings under construction. But that would not in itself suffice to set in motion the transformation of the city which he sought—or, as part of that plan, to secure him the leadership of the Council. He had to make immediate impact on a salient housing problem. One in particular stood out as 'a perfect target for vigorous attack': Newcastle's slums, manageable (at 8,184 households) by Liverpool or Glasgow standards. In view of the city's dire land situation, any redevelopment would be 'ring-fenced'; so Smith, who had in 1953 opposed a multi-storey scheme on the periphery at Longbenton, now enthusiastically began building newly designed point blocks on cleared and landscaped gap-sites near the centre, at Shieldfield, at Heaton Park Road, and at Cruddas Park (his showpiece) [26.14, 26.15]: 'With discreet floodlighting we were able to carry the greenness of the lawns and the dappled shadows of the trees into the North-East night.'

By mid-1959, the use of high blocks on prominent, central sites had dramatically reversed the decline in the programme (raising numbers under construction by 150% in a single year), and had provided a curtain raiser for Smith's

26.14. Newcastle-upon-Tyne, Scotswood Road Redevelopment Area (Cruddas Park) seen in 1992.



26.15. Newcastle-upon-Tyne's Council Leader, Councillor T. Dan Smith, inspecting progress at the Scotswood Road Redevelopment Area (Cruddas Park) in 1963. (Jonathan Green-Armytage)

wider reconstruction plan, focused not on housing but on 'renewal' of the city's commercial heart.[38] Subsequently, Smith's programme was delayed by site shortages and contractual controversies; he himself moved on to wider planning fields and alternative housing strategies (such as the 'Operation Revitalise' improvement initiative). But the city persevered with the building of point blocks of one and two-bedroom flats, largely on gap-sites; these remained oversubscribed, and popular with councillors.[39] For instance, Councillor Mrs Abrahams hailed a new 18-storey Wimpey point block at Adelaide Terrace in 1966:

> We have had to wait, but the results I assure you are well worth waiting for. We are going to have three blocks of 18-storey flats eventually, not just one 11-storey block. We are going to have a shopping parade, landscaping, and when this is finished our little suburb of Elswick Ward will be one of the smartest places in the City.

Most other active authorities in the North-East, such as Gateshead [26.16] or Felling, resembled the unglamorous production-orientated Sunderland model rather than that of Newcastle. However, two major outbreaks of prestige-building disturbed this pattern. The first was Whickham UDC's imposing 30-storey block at Ravensworth Road, a suburban scheme at a notional 100 p.p.a. which the council justified on grounds of soil conditions. The second was the 'castle town' of Killingworth, where Longbenton UDC built an enormous Skarne deck-access scheme [26.17] as an agent for Northumberland CC, which was trying to build up rateable value in rivalry with the city: the daring architectural pattern was designed by the semi-autonomous Director of Development, R. Gazzard.[40]

In the West Riding of Yorkshire, Leeds and Sheffield formed an increasingly close alliance until 1968 under the design-minded chairmanships of Cohen and Lambert; they jointly formed the focus around which some smaller authorities such as Rotherham (energetically led by Alderman Bill Beevers) began to push forward.[41] Unlike Liverpool and Manchester, Leeds and Sheffield maintained parity in production. Sheffield's two 'housing leaders', Albert Smith and Harold Lambert, had secured Womersley great autonomy. Lambert passionately supported the LCC-like pluralism of Womersley's department, whose designs ranged from mixed developments and deck-access blocks to suburban swathes of YDG cottages. The Chairman and City Architect liaised closely, and Lambert protected the programme from contractual pressure or tinkering by the City Engineer: 'a two-storey man—he couldn't address his mind to the kind of

26.16. Gateshead: Chandless Area Redevelopment Phase I, seen under construction in 1962. Three 16-storey slab blocks designed by the Borough Surveyor and built in 1960–3 by contractor S. Miller, as part of a massive rebuilding drive pushed through by railway supervisor Alderman Ben Nicholson Young, the town's long-serving (1945–74) Housing Committee Chairman. (Gateshead Metropolitan Borough Council)

26.17. Killingworth Township Contract B19 development, built from 1967 by Crudens (Skarne): photographed in 1987 prior to demolition.

26.18. Sheffield: Park Hill Part Two (Hyde Park) development, built in 1962–6 by direct labour. A sheer, citadel-like group crowning the city's skyline; includes one 19-storey block which contains no fewer than 678 dwellings. England's only multi-storey development approaching the degree of monumentality of Scottish schemes such as Red Road, Sighthill and Ardler: however, its blocks are grouped in a picturesque, rather than formal, manner (see ill. 18.10).

development we were moving to!' Using language similar to that of the 1950s Townscapists, Lambert recollects his feelings at the time:

> Like Rome on its seven hills, Sheffield's redevelopments were built on three hills. Park Hill was the first to be developed; then there was a completely different design for Netherthorpe—a spine of point blocks, using old grindstones and ponds as features. Then Woodside—I reckon, one of the finest developments built in the city. It was a fantastic thing—it reflected even on a layman such as me—walking along the Infirmary Road area, the changing view of Woodside on its hill as you move round. To have put Park Hill on each of these three sites would not have been on at all. You'd have got fed up looking at them![42]

Following the narrow defeat of a proposal, strongly backed by Lambert, to transfer responsibility for town planning to his department, Womersley left for private practice in 1964. Before then, however, his dual policy of deck-access and mixed developments attained its highest level of grandeur, in the the Park Hill Part Two (Hyde Park) project, a 19-storey decked acropolis containing well over a thousand dwellings [18.11, 26.18], and the Norfolk Park scheme, a group of fifteen 17-storey towers with low blocks dotted around on undermined ground. Lambert comments: 'At night, looking over from the other side of the valley, Norfolk Park is a marvellous sight—when the lights are all lit on the point blocks, it looks like a great Christmas tree!' This major push secured Sheffield a bonanza year of completions (3,651) in 1965, and so diminished the waiting list that annual output from then on barely needed to exceed 2,000.[43] Leeds's vigorous building of Wimpey and Tersons point blocks enabled a similar output to be maintained, with an annual average of 1,800 completions in 1961–5, rising to nearly 2,000 in the late sixties. But by then, as we shall see later, Cohen's attention was moving decisively away from high flats towards area improvement.

OUTSIDE THE CONURBATIONS

Away from the pressures and rivalries of the big cities and their satellites, the building of multi-storey flats proceeded at a much lower level of activity. For instance, the per capita output of high flats in Wales and East Anglia in 1963–7 was less than one-fifteenth of that in Scotland. Large 'free-standing' authorities often embarked on energetic housing

and clearance drives in a once-for-all manner. One of the most compressed of all multi-storey programmes was that of the Labour stronghold of Swansea CBC. This authority had, by 1960, built some 7,800 postwar dwellings, all cottages and low flats, but then embarked on a brief but energetic redevelopment drive under its Housing Chairman, Councillor T. S. Harris, awarding in 1961 five multi-storey contracts for a total of thirteen tower blocks. This sudden glut was followed, in 1963–4, by vandalism and letting difficulties in the newly completed blocks; no more high flats were built. Similar policies were pursued in Bristol: here, by 1960, a large 21,000-dwelling postwar drive had mastered the general-needs problem, and so the incoming Citizen Party administration diverted all effort into a five-year burst of multi-storey building and redevelopment (with high flats soaring from 34% of total approvals in 1959 to 99% in 1962). Likewise, in Brighton, the powerful Conservative administration of Councillor S. W. Theobald, 'the King of Brighton', came under sudden pressure in 1961–2 to increase output to cope with the problems caused by the 1957 Act's decontrol of privately rented housing. Theobald responded by suspending the Council's low-output and house sales policies, and unleashed a multi-storey crash drive.[44]

In coastal towns in the South-East of England, the phasing out of general-needs building in the early 1960s coincided with a sudden demand for old people's housing. This was often met by the building of cottages and low flats; but, in the notable case of Southend CBC, it sparked off a spate of point blocks in a previously cottage-dominated programme. Vigorous production was more difficult for the non-county boroughs and districts, although some go-ahead urban districts such as Thurrock pushed ahead, using delegated planning powers.[45] However, in non-conurbation authorities free of the worst housing problems, the new Modern types were mostly introduced for reasons of design. The New Towns, whose overspill role left them initially free of local housing demands, were encouraged by Dame Evelyn Sharp to view themselves as centres of excellence in housing design and landscaping [20.3]. Some New Towns, such as Harlow and Stevenage, built a few point blocks in the 1960s for mainly visual reasons, but the focus of their architectural innovation had now moved on to 'low-rise high-density' patterns.[46]

Among those provincial cities and towns committed to the LCC orthodoxy of designer-controlled mixed development, the unchallenged standard-bearer was still Coventry CBC, which had long regarded itself as a privileged authority duty-bound to innovate for the benefit of more hard-pressed places. Its City Architect and Planning Officer, Arthur Ling, on succeeding D. E. E. Gibson in 1955, had found few slums and a waiting list reduced since 1945 from 13,000 to 4,500 (45% of which were one-bedroom cases). He was thus able to declare that 'slum clearance could be coped with, but spec building was a worse problem'—a definition of the housing problem in more or less aesthetic terms, which would have seemed incredible in Glasgow or even Manchester.[47] Ling rapidly embarked on a three-pronged Modern housing programme in Coventry. Its first element was the redevelopment of two seedy but not unfit 'twilight areas' at Hillfields and Spon End; these schemes, including LCC-like 10-storey slab blocks, Ling saw as prototypes for urban renewal. Secondly, he began building one-bedroom point blocks, mostly of 17 storeys, around the city centre and at suburban focal points; these were intended to realise his own multi-storey aesthetic (closely allied to Gibberd's 'church spire' planning at Harlow) and to provide conveniently situated flats for small households and higher-income groups. Thirdly, after the formation of the Midlands Housing Consortium (MHC) in 1961–3, many of Coventry's extensive suburban sites were developed with prefabricated timber-framed cottages. Despite the city's relative lack of emphasis on production, Coventry's favourable land situation paradoxically made possible a very respectable output during the mid-1960s, with annual completions edging well above 1,000.[48]

The Coventry example was widely copied in smaller cities in Southern England. For instance, D. E. E. Gibson's deputy, David Percival, appointed as Norwich's City Architect in 1955, attempted to introduce Modern patterns to this low-density Labour stronghold, in the form of four-storey point blocks and maisonettes. Only when the anti-flat diehard George Carver was dislodged from the housing chair in the early sixties by councillors such as Len Newton and Freda Hartley, was Percival able to add a few judiciously sited high blocks, some in slum-clearance areas and others to break the 'monotony' of suburban estates.[49]

During the late fifties and early sixties, medium-sized Conservative-held boroughs such as Gosport, Bedford [COLOUR XIII] or Hove were prone to embark on urban-renewal multi-storey schemes in their town centres, on the model of luxury private developments. Gosport MBC's high flats, the cherished creation of its Housing Committee Chairman, shipyard worker Alderman A. R. Nobes, were an especially lavish example of prestige-building. The gaily tiled slab blocks of high-rent flats in Nobes's South Street development (built by Wimpey from 1958) substantially offset Gosport's housing land shortage and reduced the borough's waiting list, while cocking a snook at Portsmouth across the harbour.[50]

One of the most complex of all the provincial 'progressives' of the 1960s was Leicester CBC, whose 1960s Modern housing programme was shaped by two powerful designers, the City Planning Officer (CPO) and the City Architect. This position, in a city with no land problem, no 'slums', even by Coventry's modest standards, and a Conservative–Labour consensus on most housing and planning issues, was not caused by a policy change within the Housing Committee, which remained wedded to the cottage pattern. Instead, it came about through the decisive seizure of initiative by the Town Planning Committee, whose forceful Conservative leader, Alderman Kenneth Bowder, was set on modernising the city in the Coventry manner. Under such a plan, a strong city planning officer was necessary, and in 1962, therefore, W. Konrad Smigielski, an ebullient Polish academic attracted by Leicester's prosperity, was appointed first CPO [26.19]: 'I said: that's my city!—because there were possibilities!'[51]

The Town Planning Committee, as part of its plan to establish dominance over all aspects of development, had

26.19. W. Konrad Smigielski, seen at home in 1973, a short time after his retirement as Leicester City Planning Officer. (*Leicester Topic*)

demanded an increase in housing output. So Smigielski evolved a strategy like Smith's in Newcastle, intended to use housing to get quick and highly visible results, while his staff worked on the centrepiece of his reconstruction proposals —a complex traffic plan. As a first initiative, he scrapped the previous City Architect's old-fashioned layout for the suburban Rowlatts Hill scheme, and substituted a mixed development with point-blocks to provide a Gibberdian 'accent' and one-bedroom flats [COLOUR XIV]. This, he felt, should also be the pattern for the more complex inner redevelopments: 'Any idea had to come first from my Department. I wasn't interested in buttonholes and details. We decided the master plan, the density, the broad layout. As for detailed design, I was interested in that too, but it was the City Architect's job. Urban design is the town planner's job.'[52]

With Smigielski's expansive world-view, there was a potential overlap in the area of housing layout and design between his department and that of the new City Architect (from 1963), Stephen George. But in contrast to the case of Birmingham, no significant differences between the two emerged. George's interests and initiatives were concentrated in another, altogether different direction: the involvement of the architect in the building process, and the promotion of technical experimentation and architect-controlled 'system' building. Already, as Deputy, he had persuaded the Department to join CLASP; now, as City Architect, he participated in the founding of the Midlands Housing Consortium. George was perfectly happy with the mixed development and 'landmark' point-block formula, and made relatively few changes to Smigielski's outline schemes for major developments. Instead, the two officers jointly directed their fire at the City Engineer, seen by Smigielski as 'a troglodyte—banging black tarmac on pavements!'[53]

George's aim was to 'get a new horizon' for his department by establishing it as an LCC-like centre of research. In October 1964, he made a successful bid for control of a new DLO set up by an incoming Labour administration: his intention was to use the force as a vehicle for constructional innovation. The DLO first built three schemes of standard MHC houses, with few problems. The next hurdle was to evolve a battery-cast 'system' for low and high blocks, in the Edmonton DLO fashion, and to build a large prototype scheme in the Highfields North redevelopment area. Unfortunately, unlike Edmonton, Leicester experienced constant fluctuation of political control. There was agreement between the parties on even such normally contentious matters as cost rents: but direct labour building was one issue guaranteed to upset even the most harmonious consensus. By 1967–8, the Highfields North scheme had begun to run into major teething problems (exacerbated by the effects of Ronan Point). By then, political control of the Council had once more changed. Unlike Birmingham's Tories, who keenly supported Maudsley's drive, Bowder was less committed to the 'numbers game'; in late 1967, the Council had acquiesced in a MHLG allocation cut from 900 to 500 (doubtless to allow redistribution to Birmingham or Nottingham). So Bowder reallocated Highfields North to Wimpey and shut down the DLO in 1969–70, and George left for private practice.[54]

CHAPTER 27

Break-up of an Empire: Reorganisation in London

The whole of the Housing Division seemed like a giant nursery school, whose main object was the happiness of architects!

Martin Richardson, interview, 1989

THE INCREASED LEVEL of building and gradual easing of the 'land trap' in provincial English cities, by the mid-1960s, only served to highlight the worsening housing and land shortage in Greater London. This stemmed from a prosperity-related population influx, and its much-publicised manifestations: homelessness, 'Rachmanism', higher land cost, tenement unfitness. But the effect of this deep-seated demographic pressure was greatly amplified by organisational shortcomings in the housing drive, caused by the fragmentation of local government in the region, and by the dilatory attitude of the LCC towards housing production.[1]

The Government's remedy was the reorganisation proposed in the 1963 London Government Act: its implementation was completed in April 1965. This retained but rebalanced the two-tier system, parcelling out the English capital into quasi-county boroughs virtually autonomous in housebuilding, and replacing the LCC by the larger, but far less powerful, GLC. What was the success of this initiative? The output figures speak for themselves. Public housing completions per 1,000 population stood in 1964 at 2.8 for the County of London (the LCC accounting for half) and 1.8 for the entire 1963 Act Greater London area, compared with 6.3 for the most active borough, Shoreditch. By 1967, Greater London output had bettered the 1964 figure by 55%: much less than Maudsley's fourfold jump in output in Birmingham, but nevertheless a remarkable achievement, given the appalling site and building shortages of the capital.

LCC: DEAD HAND AT THE HELM

'A very difficult body.'

Sir Milner Holland, 1964

'Colin Lucas would crumple up memos about money and throw them out of the window, if he didn't like them!'

Andrew Saint, 1992[2]

In the County of London, the LCC's claims to overall authority over public housing production were fatally undermined in the 1950s and early 1960s. Before the war, Herbert Morrison's authoritarianism towards the boroughs had been combined with forceful output by the LCC itself. But the removal of housing design from the Valuer in 1950 [FRONTISPIECE] severed this link. Now the Council's centralist regime, headed by Sir Isaac Hayward, backed the designers: LCC 'coordination' became not a spur but a deterrent to production, whether by the LCC itself or by active boroughs. This created a vicious circle of resentment, which gradually destroyed the Council's authority in housing matters. Yet there was no single force which could push aside the LCC, and resuscitate output.[3]

What was the source of the sclerosis within the LCC's own programme, once so strong a production force under Walker? The most immediate cause was the fact that, within the Architect's Department, an anti-production bias had become entrenched by the mid-1950s. Abhorrence of standardisation, exemplified in the so-called standard designs (such as the label 'PF' or, more coyly, 'PF mod.' applied to one-off point blocks), was the central guiding principle: 'Nothing would make them use the same design twice, or, worse, someone else's design! For them, life was a series of designing an answer for each particular problem. As long as it had any resemblance to any of the "standard designs" we could get it accepted.'

Associated with this presumption in favour of an individual tailor-made 'solution' for each site was a lack of both production discipline and cost-consciousness, encouraged by the Council's freedom from MHLG loan sanction controls: it was assumed that the LCC had an example to set, whether in constructional innovation or in patronage of the arts. In contrast to its worldwide reputation in design and 'R & D', the Housing Division's attitude to the production context of housing, like that of its Arts and Crafts predecessors at the turn of the century, was curiously introspective. Martin Richardson recalls his reactions as a young architect joining Colin Lucas's renowned group in the late fifties:

> I could hardly believe it! In our section of twelve architects, we all had little projects—the last bits of Roehampton, and some sites in the East End. I and two others were given a little project of sixty flats in one block at Pelling Street. The care and talent we expended on designing those sixty dwellings was prodigious! We even designed the kitchen fittings, the knobs on the kitchen cupboards! The attitude in Colin Lucas's group was that you didn't even consider whether it would please councillors. Architectural quality was the only criterion to Colin. If we came across a problem, he'd say, 'Why don't you think about it over the weekend?' Time, cost, politics, even social appropriateness were hardly considered at all. Colin was a very contemplative man, a follower of Gurdjieff's teachings—he believed that you should be true to absolute qualities.[4]

The distancing of the Housing Committee from immediate local demand, because of the LCC's regional status, deprived the architects' project schedules, however efficient, of any external pressure which might have checked the luxuriant spread of design thinking. And the Council's commitment to overspill encouraged the anti-flat leanings of the architects and Housing Committee, and the planners' zealous enforcement of density maxima. The inconsistencies of the Committee's position, fluctuating between support for overspill and lukewarm pursuit of the 'numbers game', could not be reconciled even by the remarkable abilities of Evelyn Denington, its long-serving Vice-Chairman (and Chairman of the key housing-planning Joint Development Sub-Committee) [27.8]. Denington combined a passionate belief in population dispersal and designer freedom, with consummate executive skill—witnessed, for instance, in her ability to push schemes through committee once they were approved at her 'call-in'. One junior LCC architect around 1960 recalls the Committee's consideration of 'his' scheme, a mixed development at Grove Park Road, Lewisham: 'She started a lengthy ding-dong argument about overnight lorry drivers, then suddenly said, "Right! Time's getting on! All those in favour . . . !"'[5]

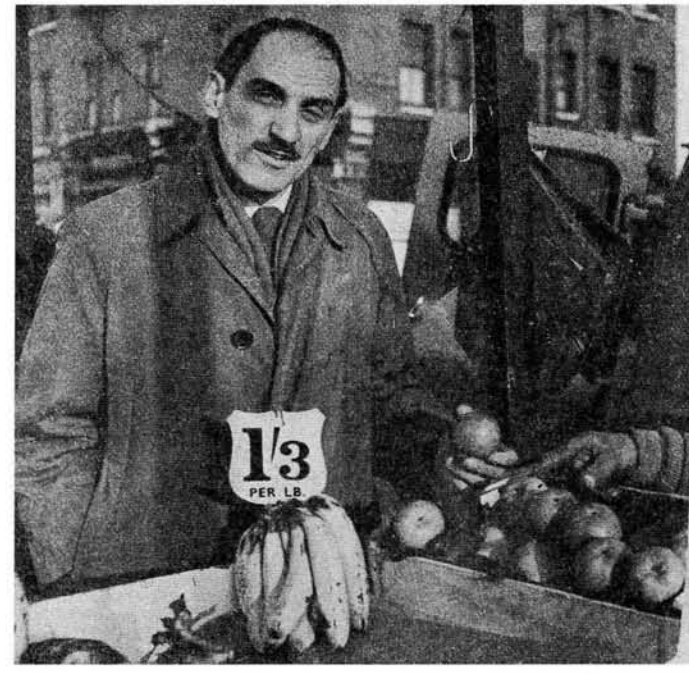
From around 1960, internal pressure to reverse the LCC's falling output had two results: firstly, the contractual and staffing changes discussed in Chapter 22; secondly, moves to increase densities on the Council's own schemes. During the fifties, the Valuer's staff had encouraged the architects to develop small sites as and when they came up, but the latter had fended off this pressure, and had managed to accumulate some big areas, such as Royal Victoria Yard [19.16], Brandon [8.2] or Warwick Crescent. The architects were sometimes compelled to develop the first part of large staged developments with point blocks; but multi-storey gap-site development pure and simple remained taboo. Oliver Cox recalls, 'We'd advise the Committee that this was madness. If it had to be developed piecemeal, you did an overall plan!'

In the early sixties, there came pressure from the Finance Committee for higher densities and, by implication, more multi-storey blocks—calls which were justified by reference to site cost, nearby open space and so forth. But Denington was in general opposed to densities above 100 p.p.a.: so any proposals for development above zoned density were watered down by the Housing Committee before the latter would itself agree to ask the Town Planning Committee for zoning relaxations.[6]

THE COUNTY AND THE BOROUGHS: CONCURRENT HOUSING POWERS

The LCC's attitude towards the Metropolitan Boroughs' programmes was even more damaging to London output than the Council's own lack of production drive. It and the boroughs had always enjoyed overlapping responsibilities in land acquisition and housing construction. The creation of concurrent powers will always, in time, lead to quarrelling over their use; but this kind of conflict remained latent during the 1940s, while Walker closely controlled both the LCC's own programme and the boroughs' 'local housing operations' (through his vetting of loan sanction applications). Even after 1950, patron–client relations of a sort were maintained for five or six years, while the LCC maintained its longstanding allocation of 25% of new lettings to the boroughs. But after MHLG began to delete suburban areas zoned for council housing from the Development Plan, and to push for slum-clearance, these traditional links sprang apart. The LCC's increased decanting liability, as clearances gathered pace, caused it to revoke the 25% allocation at the end of 1955; from now on, the County Council and the boroughs would be in competition for the same, increasingly scarce slum-clearance land. This situation was eased for a while by the LCC's renunciation of sites under two acres and its offer of decanting help to the boroughs. But the latter then suffered a devastating new blow: an order by Brooke that their many requisitioned dwellings, inherited from the war years, should be released by March 1960—pushing up waiting lists at a stroke.[7]

Steadily, the borough share of public housebuilding in London rose from its 1956–60 level of roughly a quarter; but the LCC tried to cling to its imperial past, by exercising its prerogative of acquiring any site it wanted, irrespective of borough boundaries, and continuing its grand crusade of 'rippling-out' inner populations through radial decanting and overspill. The LCC's interpretation of concurrent powers assumed that a coordinating role could be preempted at any opportunity: in clearance, in overspill, and even in early sixties negotiations with British Railways over surplus land—although this railway land issue had initially been raised by Paddington MBC as a *borough* initiative![8] The most grandiose expression of LCC trans-borough thinking, as well as the last foothold of its planners in post-1950 housing design, was the Stepney-Poplar Reconstruction Area, established in 1944 to cover bombed districts of the East End. The Planning Division achieved a show of control here through its spon-



27.1. Percy Johnson-Marshall, pictured in 1957 when LCC Group Planning Officer; photograph taken at Watney Street Market, Stepney. (*AJ* 16-1-1958, p. 86)

27.2. Royal tour of newly completed housing schemes in Stepney on 18 July 1962: the Queen viewing Stepney MBC's Clichy Estate (the Smithy Street development, built from 1959) from the roof of the 17-storey Wickham House on the LCC Stifford Estate (Clive Street development, built from 1958) (see ill. 8.3). (LCC)

sorship of the much-publicised Lansbury project and the able propagandising of Percy Johnson-Marshall's Reconstruction Areas Group (set up in 1949) [27.1, 27.2]. But, unlike Manzoni's department in Birmingham, the LCC had not taken the wartime opportunity of buying outright all land in the area; so it could in practice only redevelop through piecemeal schemes, such as Walter Bor's St Anne's project. The LCC's pervasive presence nevertheless sapped much of the initiative of the two borough councils, which faced a constant battle to secure transfer of compulsorily purchased sites from the County Council: their shares of total council housing output in their areas, relative to that of the LCC (27% in Poplar and 31% in Stepney), were by far the lowest in London.[9]

A few other Labour-controlled boroughs, such as Southwark and, latterly, Wandsworth, also took the same line, derided (with some exaggeration) by Mellish: 'We'll do nothing, we'll let the LCC do it!' But others began to carve out their own multi-storey programmes, often as a result of acute local perceptions of slum-clearance need. Such cases included Bethnal Green's vigorous tenement redevelopments, Battersea's dogged fight for the Battersea Park Road area, or the bruising ten-year campaign of 'Mr Hammersmith', Councillor Ted Woods, to wrest the southern part of the Latimer Road site [27.3, 27.4] from the LCC, in order to rescue the borough's housing drive in the nick of time from land starvation:

> In his early days, Mr Woods came face to face with acute poverty in his own ward, Latimer. He entered homes which were hovels and saw children walk barefoot to school. These sights helped mould his life and made him determined to improve the lot of the ordinary man and woman. It could not be done by waving a magic wand. It took years of hard work, for in the 1950s he had an enormous fight on his hands to get the site accepted as a clearance area.[10]

Aggressive site-acquisition underpinned London's most forceful borough housing drive: that of Shoreditch MBC. This authority was fortunate in its plentiful industrial rate revenue and its relatively low slum decanting requirement. Under its Housing Chairman, J. Samuels, and its Borough Surveyor, J. Sharratt, Shoreditch launched vigorously into the building of repetitive slab blocks (from 1948) and point blocks (from 1955) [27.5]. Astonishingly, during the late 1950s the per capita building rate of this tiny, densely built-up borough exceeded that of the most active 'provincial' cities, such as Sunderland. At abolition in 1965, its cumulative completions total, per head of population, was far higher than that of the LCC or any other borough; it was only bettered by the City of London, whose miniscule population and vast resources echoed its situation in a more extreme form [8.2].[11] The City Corporation not only excluded the LCC from its small territory, but also built outside it—as at

27.3. E. E. Woods (at centre), the leader of Hammersmith MBC from 1951 to 1964, opening Blocks 5 and 7 of Hammersmith's Latimer Road Area (South) Redevelopment (Edward Woods Estate) on 17 December 1966. (London Borough of Hammersmith and Fulham)

27.4. Hammersmith: Latimer Road South Redevelopment, 1967 view, showing Blocks 1 and 2 (Stebbing and Poynter Houses) nearing completion. (London Borough of Hammersmith and Fulham)

27.5. Shoreditch: Kingsland and St Mary's Estates, 1991 view showing 11-storey point block and other flats built in the mid and late 1950s.

Avondale Square, Camberwell (1960), with its three 20-storey blocks. Its further progression to the heroic, 45-storey scale of the high-rental Barbican scheme was the result of pressure from various sources: notably its Public Health Committee Chairman, Eric Wilkins, and his allies, the architects Chamberlin, Powell & Bon [COLOUR XV; 17.4].[12]

THE COUNTY AND THE BOROUGHS: PLANNING CONTROLS

It's the thin end of the wedge—you're either trying to keep a decent city, not just 'boroughs', or each one comes with special pleading, and where do you get in the end? Too high densities!

E. Denington, 1989[13]

If the LCC's use of its concurrent housing powers was the cause of friction with the boroughs, its planning activities, particularly in relation to densities, created offence, even outrage. It was ironical, in view of Walker's ruthless imposition of the Abercrombie density rings as minima on boroughs anxious to build cottages in the forties [6.8], that Ling's planners should in the fifties have embarked on an opposite policy with equal sternness. Now those same density rings were employed as *maxima* in determining applications: the diminishing returns argument was used to deter boroughs from multi-storey 'site cramming', while the LCC itself built high blocks mostly in mixed developments. This volte-face was another result of the LCC's rejection of Walker's production ethos, and its espousal of overspill. From the early fifties, the Town Planning Committee began to refuse many borough schemes on grounds of excessive density, fiercely resisting any attempts to ease its grip.[14]

The first challenge took the form of a head-on charge against the density zonings. The LCC's opponent was Paddington, a severely 'ring-fenced' borough whose Conservative Housing Chairman, R. J. Burrell, and Director of Housing, Major R. A. Jensen, nursed a long-term aspiration to build large commercial–residential developments (presaged in Kadleigh's 'High Paddington' project) [17.2] and an immediate intention to break the LCC's planning stranglehold. The County Council had begun systematically harassing Paddington since it had passed to the Conservatives in 1949—for example by building a school at the Bishop's Bridge Road development [6.19] without consulting the borough. Jensen's test-case challenge, the 1954 'Perkins Heights' proposal for three 15-storey blocks at Paddington Green (at a notional density of 124 p.p.a. if the adjacent open space were included, 320 p.p.a. if not), was vigorously opposed by the LCC as an attack on planning controls, which, Arthur Ling contended, might provoke the 'complete collapse' of overspill: it was defeated at a public inquiry in October 1954 [7.4]. Burrell and, later, Jensen resigned as a result; but the LCC kept up its relentless obstruction of the borough's housing programme, and succeeded by further refusals in whittling it down to a mere eight dwellings under construction by 1957. Icy relations continued right up until municipal reorganisation: as a final snub, the LCC Town Planning Committee rejected Paddington's scheme for the British Railways Mileage Yard site in 1964 on grounds of excessive density.[15]

With frontal assault by individual authorities revealed as unproductive for the time being, the boroughs then attempted to apply joint pressure on zoned densities, through their collective mouthpiece, the Metropolitan Boroughs Standing Joint Committee (MBSJC). The MBSJC's first, unsuccessful campaign of protest had followed the LCC's abolition of the 25% allocation to the boroughs in 1956. In 1959–60, however, by exploiting MHLG's new leaning towards higher density, it persuaded the Ministry to issue Circular 37/60, which advocated the raising of densities; now the LCC was forced to concede selective increases. But Comprehensive Development Areas were excluded from these revisions, as a result of an ingenious contention by LCC planners. This ran as follows: within CDAs, the ratio of residential to non-residential land had already been fixed by the planners themselves. Higher net densities, with their diminishing returns, would therefore *reduce* the land available for housing! Such reasoning, piling one theoretical sophistry upon another to fend off the political pressure for numbers, would not have been countenanced for an instant by the likes of Gibson or Cross. But the entrenched position of designers in the LCC allowed them to put forward unchallenged these self-confirming arguments.[16] In the early sixties, the LCC Town Planning Committee (TPC) began to allow the boroughs some flexibility in calculating densities of staged developments—including retrospective determination—although this was no more than the TPC was by then compelled to allow the LCC's own Housing Committee. It also came under MHLG pressure to move the density goalposts, by a reduction of 18% in assumed occupancy rates of new dwellings—which would allow more to be packed on to any particular site at a given density.[17]

But it was only at the very end of its existence that the LCC's density 'empire' suffered its most traumatic defeat, administered by another Conservative-controlled borough set on confrontation. The borough was Chelsea MBC, and the 'test case' was an ingenious scheme by the architect Eric Lyons for the West Chelsea Extended Area (World's End) redevelopment. Chelsea, with its lack of slums and grossly inflated land costs, was a borough that had been driven to despair by the LCC's termination in 1956 of its annual quota of lettings. Although it had been able to make some impact on the 'distressed gentlefolk' problem created by rent decontrol in the borough, the Council could offer no hope to its 1,200 waiting list applicants. Rapidly the Housing Committee, under the determined leadership of Elisabeth Stockwell, came to the view that the LCC's density zonings were the main obstacle to a resolution of its problems. So in 1961, the Committee mounted a head-on challenge, by proposing the redevelopment of an extension to the Cremorne Estate at 338 p.p.a.: this would achieve 200 p.p.a. over the combined area, which had been zoned at 136. Predictably, the proposal was rejected by the LCC Town Planning Committee, overruling the favourable inclination of Stamp and the officers; and Stockwell instructed the Borough Engineer, E. Goldring, to find a national architect who could fight and win the ensuing public enquiry. Eric Lyons was selected [19.8], being already seasoned in battle with the LCC over the density of developments by the private company SPAN.[18] By 1964, after two years of proposals and negotiations, Stockwell and Goldring began to scent victory; for the LCC now

deployed increasingly desperate last minute 'red herrings', including a suggestion that development should be delayed pending comprehensive redevelopment of the entire district at an unspecified future date, or a claim that the proposed point blocks would be subject to serious smoke pollution from Lots Road Power Station. Lesser boroughs might now have meekly yielded to the LCC's assumed primacy in matters of science. Stockwell, however, straight away set out to neutralise the smoke emission argument, by engaging a consultant chemical engineer, Dr G. Nonhebel, to produce for her a counter-report rebutting the LCC's calculations. Ironically, Chelsea's final victory was posthumous: it was in August 1965 that the inquiry inspector approved the World's End project, and recommended that Development Plan zonings should now be treated as 'average' density levels rather than 'a maximum limit for any particular development'.[19]

While the LCC's defence of the density rings was the main area of dispute with the boroughs, the County's exercise of its planning powers as an aesthetic control also caused delay and friction. It was only to be expected that the planners would, where possible, impose their own preference for mixed development and point blocks on architecturally backward boroughs which clung to elements of the block-dwelling formula. However, they also attempted on occasion to check the architectural assertiveness of those boroughs, such as Finsbury or St Pancras, which saw design of 'social building' as a vehicle for municipal status.[20] Among these 'progressive' authorities, the pace had been set before the war by Finsbury's Labour administration (from 1934), whose leader, Alderman Harold Riley, engaged Tecton to design the pioneering Pine Street Health Centre and high flats at Busaco Street [6.16] and Rosebery Avenue [6.15]. After Riley's expulsion from the Council in 1945, following maladministration allegations, Finsbury continued to commission innovative designs from Tecton, and later from Emberton, Franck & Tardrew. But during the 1950s, the latter's predilection for ever more massive blocks began to provoke hostility from LCC planners. This began to cause delay in 1955–7, when the Galway Street project was caught in a two-year dispute between the LCC, which wanted slim point blocks, and Bellamy's staff at MHLG, who insisted on more economical blocks with six flats on each floor. Then, in 1962, LCC planners rejected a gargantuan, square-elevation 25-storey block at Clarke's Close, containing 300 flats, because of its 'sheer bulk'. Such disputes, over design as much as output, held back Finsbury's drive while nearby Shoreditch raced ahead, building its staid but uncontroversial blocks on all available sites.[21]

The LCC planners often tried to indulge in detailed aesthetic tinkering. Lubetkin recalled that, compared with the 1930s, their power had 'grown considerably, and they intended to make use of that. Previously, architects' plans were simply checked by the LCC. Now they had aesthetic preferences: "We want a different window, a slightly flatter roof, a slightly steeper roof!"' While this was accepted by some boroughs, it was rebuffed by others: for instance when Ling tried to impose 'softer, more Swedish' detailing on the Lupus Street elevation of Powell & Moya's Pimlico scheme for Westminster.[22] Many felt that the LCC was applying double standards, choking the boroughs with its planning arm while securing itself maximum freedom—in both cases relying on MHLG support at any appeal. The LCC assumption that notification of 'lower-tier' authorities about its own projects was an irritating formality, caused smouldering resentment among active boroughs, Labour and Conservative alike. When the LCC peremptorily assigned an unwanted road on its Eugenia Road Estate to Bermondsey MBC, the Borough's Town Clerk erupted in fury:

> The County Council had, with every apparent indifference and discourtesy, entirely ignored the Borough Council's viewpoint and wishes in the matter; at no time during the period of correspondence had the County Council shown even the slightest desire to discuss, with the Borough Council, the merits or demerits of the Borough Council's objection, but had simply adopted what, on the surface, would appear to have been an arrogant, overriding attitude in the full knowledge that—relying upon precedent—the Minister would automatically reject the Borough Council's objection.[23]

In short, the boroughs felt that the LCC designers, with MHLG support, were set on keeping them in their place—especially if they were committed to energetic high building. In 1957, the LCC discouraged Finsbury and Camberwell from erecting 19 and 21-storey blocks in case they stole the limelight from its own first 19-storey block, at Tidey Street, Poplar [8.4]—itself planned in defiance of strong objections from Poplar MBC! The only true emancipation for the boroughs would be the acquisition of planning powers over housing. However, Woolwich MBC, long used to viewing itself as London's foremost housebuilding borough, was able to persuade the LCC to delegate to it the planning powers of a fully fledged CDA (St Mary's)—the only such area in London not reserved by the LCC itself. Woolwich's luck provided the foundation for the expansive redevelopment plans of its successor, Greenwich LBC.[24]

BUILDING IN GREATER LONDON: FRAGMENTATION AND OPPORTUNITY

Prior to local government reorganisation in 1965, there was no concerted mobilisation of the housebuilding industry in London. The LCC, with its dominance by architects and its contractual conservatism, accepted prefabrication and the other implications of higher output in the 1960s with little enthusiasm. Most Metropolitan Boroughs, on the other hand, never sufficiently resolved their land problems and raised output to a level where building-industry shortages could really begin to bite. This was discovered by Wandsworth MBC in 1959 when it approached Reema and other prefabrication firms, only to be told that its sites were too small to be of interest. Greater London's pre-reorganisation multistorey building was dominated by local and regional firms to an extent unparalleled in the UK (42%). The situation inside and outside the County was fragmented and without consistency. On the one hand, there were experienced boroughs such as Shoreditch MBC, precocious in negotiated contracting, or Edmonton MBC, with its remarkable direct labour tradition. On the other hand, there were authorities such as Stepney MBC, whose inexperience led it in 1964 to

make a disastrous mistake in its first ever point-block scheme, a 24-storey block at Bede Road [27.6]: the tender of Rye-Arc Ltd, a local ship-repairing and marine engineering firm, was accepted, with predictable consequences (Rye-Arc's withdrawal) when the firm's bank refused to lend them the necessary money. Similar rashness was shown by Heston and Isleworth MBC, which, on the eve of its abolition in 1965, awarded four 19-storey blocks at Ivy Bridge Farm to an obscure Warwick contractor whose London subsidiary was later found to have an issued share capital of £1.[25]

OUTSIDE THE COUNTY: INTROVERSION AND INERTIA

The ineffectiveness of housing production in Greater London before 1965 was the result not just of the situation within the County, but also of the fragmentation of metropolitan Essex, Middlesex, Surrey and Kent. The industrial north-eastern boroughs appeared, on the map, as mere arbitrary subdivisions of a single sprawling suburban mass; but their culture and municipal politics were parochial in the extreme. West Ham CBC was the most powerful of these authorities, and the most forceful in housing matters, but it was typically 'insular... West Hammers were very cliquey—they felt themselves a race apart!' Its entrenched Labour administration and housing drive had been tightly controlled, since 1946, by a 'troika' of members—Sam Boyce (the Leader), Terry Macmillan and Arthur Edwards—none of whom ever served as Housing Chairman. Boyce and Macmillan, along with several key officers, were Freemasons; Edwards recalls that West Ham's introverted political life, for many years, revolved around battles between 'the two factions—the Masons and the Roman Catholics!' He also reveals that in 1963, when the London Government Act established that the Council was to merge with neighbouring East Ham CBC (also Labour controlled) in 1965, 'I couldn't have recognised a single member or officer of East Ham!'[26]

In this outer metropolitan area, the LCC exercised no planning or other controls over the local housing authorities. Here, following the winding-down of out-county building through the 1950s, the LCC's power was experienced less through its housebuilding, than through the 'sons and daughters' problem: the cumulative letting burden imposed by its existing estates on the authorities in whose territory they were located—particularly Essex boroughs such as Barking MBC and Dagenham MBC. However, the LCC's seizure of 70% of the Croydon Airport housing site in 1963, with MHLG support, appeared an ominous portent of fresh LCC expansionism outside the County, attracted by an increasing number of large windfall sites. Although any such threat would clearly be cut short by the 1964–5 reorganisation, the metropolitan Surrey authorities took no chances in the meanwhile, and kept up a shrill chorus of opposition to the Croydon Airport land allocation: a Sutton councillor declaimed in 1963 that 'many a Town Council had awakened to find that large areas of the borough were in the possession of the LCC'.[27]

Throughout the out-county metropolitan area in the early 1960s, output was very low. In 1964, before reorganisation, completions in the area of the future Outer London boroughs totalled only 1.2 per 1,000 inhabitants: this per capita level was only 25% of that of the whole of Northern Ireland in that year, and a mere 15% of that of Lanark County Council. This stagnation was broken by the energetic but isolated drives of the three county boroughs, Croydon, West Ham and East Ham (in Croydon's case a once-for-all burst, typical of an active Conservative authority, in the early sixties), and a few thrusting non-county boroughs in Essex and Middlesex, such as Barking, Leyton or Tottenham. As the counties around London had no concurrent housebuilding powers—although Middlesex County Council made occasional desultory efforts to acquire them—their exercise of planning controls over borough housing lacked the imperial edge of the equivalent LCC activity. So they happily went along with MHLG's suggestion of higher densities in Circular 37/60. Middlesex, for instance, raised permitted densities in redevelopment areas by 25%, and elsewhere by approximately 10 p.p.a., allowing boroughs such as Wood Green and Tottenham to build many high flats.[28]

Middlesex was undoubtedly the most complex county in the outer zone of Greater London. Its municipalities ranged from suburbs with little perceived housing problem such as Ruislip-Northwood UDC, to Willesden MBC, with an acute problem and no immediate outlet. In between these extremes stood vigorous Labour boroughs such as Edmonton and Acton, which had secured enough out-borough land to enable their decanting and redevelopment programmes to begin building up a surplus, and lively Conservative boroughs such as Harrow, which, under its Housing Chairman, Horace Cutler, combined active building with council-house sales.[29]

The achievement of Willesden, however, was in some ways the greatest of all Middlesex authorities. This borough had commenced its postwar redevelopment programme in 1952, in the shadow of a sweeping overspill proposal set out in the County's Development Plan: this advocated a 17% reduction in Willesden's 180,000 population, and 50% overspill of the inhabitants of its only redevelopment area at South Kilburn. But Middlesex did not enforce density maxima as strictly as the LCC, and, in some areas, cartograms were used: these overall district densities, as in Glasgow, lumped new developments in with existing housing. In the thirteen years from its first South Kilburn contract for 64 flats, the borough was able stealthily to depart from the Development Plan by gap-site development in South Kilburn and the suburbs, and by adding storeys to already approved blocks: a strategy barred to its southern neighbours within the County of London, such as Paddington![30]

By 1963, the momentum of South Kilburn was now such that a phase of 283 flats, including three 12-storey slabs, was started. Even that could not achieve sufficient decanting to satisfy Willesden's forceful leader, Reginald Freeson. He wished to expand redevelopment into two new areas, Lower Place and Stonebridge, and knew the 1965 reorganisation was set to drop a huge 'land-bank' into Willesden's lap, in the form of the whole of the adjoining Conservative-controlled borough of Wembley, with which Willesden (much the larger) was to be amalgamated to form the new London Borough of Brent. But Freeson was impatient to step up decanting, and decided to act unilaterally in the meanwhile. His attention

27.6. Stepney: Bede Road development, seen in 1989. Stepney MBC's one and only point block scheme: the contract was awarded in 1964 to local ship-repairing firm Rye-Arc, who subsequently withdrew and were replaced by Tersons.

27.7. Brent: Chalkhill Redevelopment Area; over 1,250 Bison deck-access dwellings built by Farrow from 1966. This view, taken in 1989, shows Claw F (an extension contract, built from 1968) and one of the two multi-storey car parks.

was drawn to a large area of decayed nineteenth-century villas at Chalkhill, Wembley Park, then in the first stages of piecemeal speculative redevelopment. To the consternation of Wembley's sedate councillors, he decided, without consulting them, on compulsory purchase of the entire area, to obtain a housing gain of well over a thousand dwellings [27.7] and allow commencement of decanting from Lower Place and Stonebridge: 'They were wettish Tories, quite nice people, and I was a bit thick-skinned. Instead of talking to them, the Town Clerk and I drafted a letter which went to every individual owner up there, and the thing blew! It was a bit insensitive, but it got the bloody thing moving—about the biggest single piece of land assembly in London!'

But the output gains of this bold gesture would only be realised after 1965. To the end, Middlesex output as a whole remained very sluggish: even in 1964, the overall per capita completion rate was only 43% of that in the County of London, with its far worse land supply. By that date, of course, the impending upheaval was preoccupying most members and officers in the area—with one or two exceptions. A former Middlesex official recalls that the County Education Officer:

> simply wouldn't believe, or accept, that this was in fact going to happen, and acted as if it wasn't. But the months ticked steadily by, and eventually, as 1965 dawned, it began to sink in that not only was Middlesex, this ancient county going back to the Middle Ages, one of the Home Counties, about to be erased completely from the map, but that he himself, one of the chief officers of the County, was going to be finding himself without a job of work in three months' time![31]

GAMEKEEPER TURNED POACHER: THE GREATER LONDON COUNCIL

> By and large . . . the answer was: 'We don't want to know you—go away!'
>
> Lady Denington, 1989[32]

Sir Keith Joseph's decision to continue London's divided housing system after 1965, by allocating reserve housing powers to the new Greater London Council, stemmed not from some grand redistributive strategy but from the Government's political vulnerability on the housing question in the early 1960s. Bizarre though it may now seem, there was indeed a fear, assiduously exploited by the 'LCC lobby', that a complete transfer of housing to the new 'quasi-county boroughs' might actually reduce output. But Labour's 1964 GLC victory, the result of the Government's incomprehensible capitulation to the pressure of some suburban towns for exclusion from the reorganisation area, brought Evelyn Denington to the housing chair at last. It was to be her unique achievement to conjure a plausible programme out of responsibilities acquired by default [27.8].[33]

The new two-tier balance between the London Boroughs and the GLC was quite different from the old MBC–LCC relationship. On the planning side, the tables had now turned: the new boroughs were virtually full planning authorities in the housing field. They therefore could delay or turn down GLC proposals, and soon began to do so in important cases, such as Downs Road, Hackney; by 1967, this was seriously affecting the programming of GLC building. On the acquisitions front, boroughs showed an aggressiveness unknown before 1965—as Denington discovered when Spencer (Fred) Fagan, Lambeth's Development Committee Chairman, on hearing of GLC plans for compulsory purchase of a site off Leigham Court Road, convened a committee meeting on the spot to secure a blocking compulsory purchase order: 'I said: "We want it for Lambethans, not anyone you care to take off the London housing list." She said, "You wouldn't dare!" I said, "You just wait and see!"'[34] So the GLC's share of output in Greater London began at a low level, and steadily declined (falling from 31% of local authority completions in 1965 to 24% in 1967 and 20% by 1972). Even if some officers saw the GLC as the LCC writ large, Denington realised that the Council could not impose its will, but would have to win cooperation.[35]

In formulating a strategy, Denington, as former chairman of the LCC New and Expanded Towns Committee, would have dearly loved to resurrect the old 'rippling-out' crusade of population and density redistribution. Yet, as a pragmatist, she knew only too well that the GLC's limited, ill-defined powers made this quite impossible. Any intervention in the outer boroughs, any attempt to start large-scale land-acquisition there would be ferociously resisted. The reality was that all significant 'rippling out' would in future take place within, and under the control of, the new radial boroughs—between Willesden and Wembley (within Brent), Acton and Southall (within Ealing), and so forth. The GLC could only hope to establish a toehold in Outer London building, by claiming a few large windfall sites (ex-railway, ex-airport or ex-Service) as a 'strategic reserve' to assist decanting: 'We were looking to do the big sites, and let the boroughs do the rest!' As a further token gesture, Denington also asked outer boroughs to make small letting allocations to the GLC. Despite these highly publicised 'strategic' initiatives, everyone recognised that the routine bulk of GLC building would remain concentrated in well-disposed inner boroughs: above all, Tower Hamlets (building on the LCC's previous friendship with Stepney), but also others such as Islington. Such cooperation took the form of joint tenement redevelopment, and other 'partnership proposals'.[36]

With windfall sites, Denington's greatest successes concerned ex-Service land, where Mellish cut through bureaucratic prevarication on her behalf. He insisted on the immediate transfer of the Kidbrooke Depot site (Greenwich), for instance, when he discovered at a meeting with the Service departments on 14 December 1966 that the warehouses there were used for the storage of Royal Navy chamberpots. Railway surplus land, however, was a more contentious issue,

27.8. Barnet: Hendon Aerodrome Redevelopment (Grahame Park), inspection of model in March 1966. From left to right: J. Balchin (GLC Housing Department), D. Blackhurst (GLC Clerk's Department), Mrs E. Denington (GLC Housing Committee Chairman), Alderman C. Sheill (Barnet LBC General Purposes Committee Chairman), R. H. Williams (Barnet LBC Town Clerk), Councillor W. G. Hart (Barnet LBC Housing Committee Chairman), and L. Hugh Wilson (architectural and planning consultant). The scheme was built from 1969 by Wates (and, after Wates's later withdrawal from the contract, by the GLC's DLO). (Hulton)

as Denington found in the case of the Marylebone Goods Yard (Lisson Green) site, where the bitter legacy of the LCC's persecution of Paddington returned to haunt its successor. This site had been sought by St Marylebone MBC since 1950. When, in 1964, Denington laid claim to it as a strategic 'reservoir' for West London, Westminster's Housing Chairman, Councillor J. Gillett, a hardened ex-Paddington member, brusquely rebuffed her demands, noting 'the absurdity of treating Westminster, with its huge overspill problem, as a receiving authority for the overspill from other boroughs where the problem is not so great'. Denington was eventually obliged to cede the site to Westminster, to abandon any ideas that she could attach conditions as to density, occupancy factor and Parker Morris standards, and to settle for a percentage of first lettings. In Outer London, once the GLC had come to terms with the near impossibility of unilateral land acquisition, a successful formula of collaborative development was evolved, and applied in the Lee Valley and at Hendon Aerodrome (Grahame Park), Barnet [27.8].[37]

The policy of seeking allocations from outer boroughs was less important. Here even Denington's tactful approach made little headway: 'By and large the answer was: "We don't want to know you—go away!" I thought, "You'll be thinking, like the expanded towns at first did, that you'll be getting the worst of Londoners, throwing their dirty fish and chip papers around your leafy borough, but you won't—they are the ones who'll never move—you'll get the best!"' Denington managed in the end to secure offers of around 10 to 15% of each outer borough's output; these generally materialised as poor-quality and remote relets, even less popular than overspill had been in the 1950s. The only substantial break in suburban ranks was the case of Hounslow, a marginal Labour-held borough whose leadership saw its enormous land glut as a political opportunity, and so, in place of nominations, offered the GLC two large sites at Brentford Dock and Heston Farm.[38]

In the organisation of the housing programme, there was at first little change from LCC days. The continuation of Money Bill block financing (which obviated any need for individual loan-sanction applications), and the influence of the architects, allowed approval of ambitious projects such as Woolwich-Erith (Thamesmead). On almost all other sites, the fragmented LCC contractual tradition was preserved. During Denington's three-year chairmanship, the old mixed development pattern still held sway; densities over 150 p.p.a. were allowed only 'in exceptional circumstances'. But the old LCC esprit de corps had somehow gone: architecturally ambitious boroughs such as Southwark or Lambeth were seizing the limelight with their initiatives, and there was a 'diaspora' of talented ex-LCC architects. In the view of a senior Southwark architect, 'we were waxing and they were waning!' The push for higher output made it necessary to allocate a still higher proportion of work to private architects; GLC designers were concentrated on major schemes such as Kidbrooke. In 1966–7, however, new restraints, such as unofficial loan-sanction vetting and mandatory cost yardsticks, were applied. And always lurking in the background was the *memento mori* of Macey's Housing Department: the 1963 Act's provision for eventual division of the GLC's letting empire among the boroughs.[39]

Following the Tory victory in the 1967 GLC elections, the housing chair passed for the first time to a man outside the charmed LCC circle, the iconoclastic Horace Cutler. Now, the axe was unsheathed and the Housing Department's holding operation became a rout. Architecture was less affected by Cutler's reforms, as he was happy to leave Denington still in day-to-day charge of the subcommittee covering this politically less sensitive subject. Despite his experience as an estate developer, Cutler had his work cut out forcing through even his main initiatives—transfer of housing stock to the boroughs and ending of large-scale land acquisition. So he had neither time nor inclination to challenge the Council's architectural establishment in design matters: 'People like me are always at a tremendous disadvantage in being able to dissect the plans of an estate, or a high block—you've got dozens of skilled, expert people around. You had a call-over meeting every week, and you could only scan them. No man has all knowledge!'[40]

CITIES WITHIN THE CITY: THE NEW LONDON BOROUGHS

> I thought, 'My God—these people are good!' Housing was their spearhead—they knew they only had small sites, but they had enormous ambitions!
>
> Ted Hollamby, 1988[41]

The creation of the new boroughs unleashed a varied building campaign, ranging from the modest activity of some suburbs to the city-sized programmes of Southwark and a few others. For the most ambitious, housebuilding was a means of creating civic identity—just as cities such as Glasgow or Salford had used it to defend their autonomy.

Like provincial county boroughs, the new authorities were now free to act almost autonomously. Only for their first two years of existence were their programmes overseen, to some extent, by MHLG. For their first year of building, the Ministry set cautiously low allocations, influenced by informal GLC evaluations of borough needs. These limits were purely for Treasury consumption: Housing Administrators had no intention of holding back authorities wishing to exceed them. During this period Mellish concentrated on pulling conspicuous suburban laggards such as Kingston or Redbridge into line, and encouraging his old inner-borough Labour associates to raise their sights—including extreme cases such as Islington, 'that rotten borough of the London Labour movement', whose leadership required a bruising visit from him before they would commence multi-storey building and tenement clearance: 'In some boroughs I was welcomed, in others dreaded!'[42]

After boroughs' relative capabilities had become clear, MHLG straight away abandoned the initial allocation figures, which were based on the low achievements of the pre-1965 authorities, and on pessimistic GLC evaluations of the new ones; there was a risk that the Treasury might use these artificial limits to keep down the output of active boroughs. Mellish now let it be known that he viewed the allocations not as maxima but as minima, or even as 'targets': 'I set up

what was tantamount to a league table, and said the people at the bottom would be relegated!'[43] Within MHLG, negotiations with boroughs and GLC on public housing were handled by Housing Division B: from 1966, this was overseen by Deputy Secretary Ronald Brain, and, more directly, by Assistant Secretary Douglas Milefanti. Unlike the assembly-line procedures elsewhere in England, where short-staffing necessitated streamlining of compulsory purchase order processing and other vetting duties, and redistribution of aggregate regional allocations to active authorities, Milefanti's staff kept a close personal eye on the programmes of all active boroughs; underperformers were now left in comparative peace.

The Ministry made no attempt to influence active boroughs' policies, but merely concerned itself with output. In this area, Greater London's low building level before reorganisation had left it a long way behind provincial cities in the 'numbers game'. Therefore, active authorities' allocations were supplemented without balancing cuts in the declared programmes of others. Post-1966 London, in its lack of aggregate allocations, was the closest English equivalent to the flexibility of Scotland and Northern Ireland, neither of which ever resorted to allocation systems. Milefanti described his negotiating technique: 'With underperforming borough X, I'd say, "Look, you must get on!"—knowing full well they wouldn't. Then I'd go to high-performing borough Y and would say, "Yes, you can have the extra 300 next year!"... I'd repeatedly tell them, "The sky's the limit!"' Mellish stoutly supported his 'wildly enthusiastic' Administrators: 'I'm a very poor economist. I never took allocations off authorities. I'd say, "Get ahead, full steam ahead—get bloody building!"'[44]

Once the new boroughs were fully established, any GLC influence over allocations and borough programmes at once ceased. In planning terms, the difference from the weakness of the former boroughs could hardly have been greater. Now, although the GLC's observations on skyline and location considerations had to be sought in certain circumstances, including proposed high buildings, its only executive planning role was preparation of the Greater London Development Plan. But the latter's interim drafts, proposing the replacement of the outer-London cartograms by annular blanket densities (as in the former County of London area), were rejected in 1966–7 by the boroughs. Meanwhile, the so-called Initial Development Plan simply spatchcocked together all the existing arrangements. The GLC's Planning and Communications Committee could only intervene over densities indirectly (by complaining to Mellish) on the rare occasions that boroughs proposed excesses so flagrant that they could be argued to constitute substantial departure from the IDP—as in the case of Waltham Forest's Cathall Road scheme in 1966.[45]

While the GLC's building policy at first closely resembled the LCC's, in its reliance on mixed development, the boroughs' programmes were of kaleidoscopic variety. It was as if the capital had been parcelled out among the Housing Committees of a random group of 'provincial' cities, from Salford to Plymouth, and each had imported its own range of national package-deals and local firms, monumental prestige projects and gap-site infills, and its own balance between production and design. In contractual organisation, the vigorous programmes of some boroughs were a particularly dramatic departure. This was avidly exploited by Concrete and by some other large firms prepared to make the necessary investment and establish reliable local connections. Crudens, for instance, was able to vault straight down from Scotland and the North of England to build Lewisham LBC's two setpiece schemes, at Evelyn Estate and Milton Court Road III. Occasionally, unscrupulous contractors tried to take advantage of this sudden glut of London work. In 1966, for example, the housing chairman of a South London borough negotiating with several large contractors for standard multi-storey blocks suddenly discovered that one of these, a very prominent London firm,

> was trying to con us... [T]hey'd put a tender in, we'd accepted it—then I got a frantic telephone call from the Borough Solicitor, saying they were trying to up the tender by half a million pounds! I got the Borough Architect round, and said, 'Look, we've wasted a lot of time with this crowd, but that's too bad. Tell'em to get stuffed, and as long as I'm Chairman, they're banned from tendering!'[46]

Each new London Borough was roughly equivalent to a second-rank county borough in its potential attractiveness to contractors. Active boroughs' multi-storey work was normally distributed between two or three large contractors and the DLO (if any); other housing was left for local firms. For example, Enfield LBC's Housing Committee set out to divide work three ways between EDLO (50%); Wates, principal contractor to the former Enfield MBC (25%); and Townsend & Collins, seen as the best of the local firms (25%: the firm's entire output was promised to the borough). In some cases, adoption of 'system building' formed part of a self-conscious post-1965 expansionism. Wandsworth's monumental 961-dwelling 12M Jespersen contract with Laing for Doddington Road [19.4] was seen by the corrupt but visionary Housing Chairman, Sidney Sporle, as a springboard for complete rebuilding of his borough: 'This is the largest IB project yet undertaken in the London area and we are proud that we are sponsoring it. A modern estate will soon rise upon the site now occupied by a squalid collection of old and worn-out houses.'[47]

By 1968, the highest cumulative completion totals were recorded by the former county borough areas, whose freedom within the previous structure had given them a head start. These comprised 3,500 completions by Newham, with the faltering aid of its 'winged Pegasus', the Taylor Woodrow-Anglian bulk order [24.5, 27.9], and 3,200 by Croydon, which was now putting the finishing touches to its Wates point-block programme and preparing, in typically self-contained fashion, to wind down its housing drive below an annual rate of 100 by 1970 as others expanded. These ex-county boroughs had little time for the previously LCC-dominated London Labour establishment or for Mellish's initiatives ('if it was good for the LCC area, it was good for London, the country, Timbuctoo!'). They set an example of self-sufficiency, and adaptability to package-deals and serial contracts, that other outer boroughs were quick to follow.[48]

27.9. Newham: Queen's Road Market development; one 23-storey and one 10-storey block, built from 1968 by Gilbert Ash. Photographed in 1990.

27.10. Hounslow: Official opening of Brentford Waterworks Stage 1 development on 15 October 1971. The scheme comprised six 23-storey blocks, built from 1967 by Wates. From right to left: Michael Wates (director, Wates Ltd), Councillor R. Foote (Housing Committee Chairman), Alderman Alfred King (Council Leader), Mrs Dora King, and Councillor and Mrs Fred Powe (Mayor and Mayoress). (London Borough of Hounslow)

Within five years, a jumble of parochial towns and suburbs had transformed itself into an array of forceful, city-like authorities. For example, by 1970, Willesden's and Wembley's combined 1964 completions of 267 had been multiplied into an annual Brent output nudging 1,900—twice that of Newcastle-upon-Tyne! In the west, a grouping of Labour controlled outer boroughs had emerged. Most comprised traditionally Labour inner nuclei—such as Acton in Ealing, Willesden in Brent—and new outer 'land banks'. However, this pattern was not universal. For instance, the composition of Hounslow LBC contained an unexpected twist. The Council's Labour majority was provided largely by the outer areas, especially by industrial Feltham. Yet the leader of the housing drive which was to imbue this ungainly geographical assemblage with municipal purpose, the Development Committee Chairman, Alf King, had up to then spent his entire political career in opposition, in the inner suburban, but Conservative-controlled Brentford and Chiswick MBC [27.10]. Likewise, in the north, Enfield and Waltham Forest each built nearly 3,000 dwellings by 1968 through energetic letting of multi-storey contracts, in the former case to Wates and EDLO, in the latter to Wates and local firms [27.11]. In Enfield, a Conservative majority in the 1968 municipal elections had always seemed likely. However, Eric Smythe's determination that Edmonton and EDLO should go down with all guns blazing [23.3, 27.12] was handsomely rewarded in the 1968 completions figures, as Enfield's total of 1,345 was 37% higher than that of any other borough![49]

Some Conservative outer boroughs such as Harrow, Sutton or Merton ran fairly active programmes, but avoided all but isolated high flats.[50] Certain Labour middle-ring boroughs pursued extensive slum-clearance. Within the wider framework of Lewisham LBC, Deptford at last grasped the nettle of wholesale multi-storey redevelopment: the Metropolitan Borough's last Leader, Bob Lowe, gained the new authority's housing chair, and struck up a fruitful alliance with the Planning Chairman, Ron Pepper. Greenwich's sociologist Housing Chairman, Joyce Carroll, highly struck by Park Hill, pushed through a bulk order for 24-storey Bison point blocks to decant central areas of Woolwich for redevelopment

27.11. Waltham Forest: Cambridge Road Redevelopment Area; three 22-storey blocks and low flats built by Wates from 1965; photographed *c.*1968. (Vestry House Museum, Waltham Forest)

27.12. Enfield: Barbot Street Redevelopment; four 23-storey blocks (built using battery-casting), and integral multi-storey car park, erected by EDLO from 1966. In the foreground, Block A (Lancelot House), opened by Robert Mellish in April 1968; photographed in 1990.

with deck-access housing; while Haringey developed its large windfall site at Broadwater Farm with a massive Taylor Woodrow-Anglian contract, to get its housing drive (exclusively slum-clearance) off to a flying start [27.13].[51]

Among the new inner London boroughs, there was much muscle-flexing, to emphasise their emancipation from the LCC and to compete with one another [27.14]. Unlike the outer areas, many members and their GLC counterparts, and officers such as Town Clerks, knew each other well. Several authorities saw accelerated slum-clearance as their route to greatness. However, internal decanting within boroughs was impeded by the same local attachments among residents, and the reluctance to move, that had earlier dogged overspill. This led Westminster, in 1968, to take the drastic step of officially dividing its programme into north and south halves. All London Boroughs were required to appoint a Borough Architect of chief officer status. However, in practice, the active inner boroughs fell into two broad categories: those which had moved some distance towards LCC emphasis on design as well as output, and those which adhered more or less to production-line thinking.[52]

The architecturally 'progressive' category included the richest—the City, Westminster and Camden—all of which at first made much use of outside architects [19.11]. By contrast, Lambeth LBC set up a strong architect's department, on the LCC model. Its leadership regarded housing design, not just housing output, as their municipal flagship: 'What we wanted to do was to rebuild the bits of Lambeth that needed rebuilding—but we wanted to do it in such a way that people going past in a bus would look at it and know they were in Lambeth because of the design quality!' Lambeth MBC had been the only Metropolitan Borough facing not a full merger but an enlargement of territory (at the expense of Wandsworth) in 1965. The Council was able to make an early start on the organisational foundations of its enlarged building programme; its Leader, A. Cotton, and chairmen Ewan Carr and Spencer Fagan astutely secured Ted Hollamby from the LCC in 1963 as their first Borough Architect. This was widely seen, in the public-architecture world, as a 'landmark appointment'.[53]

Hollamby, who combined experience of the pluralistic LCC group-system with forceful skill in site-acquisition and negotiation, was ideally suited to this borough of high architectural aspirations but scarce land [27.14]. Of the Lambeth Towers project in Lambeth Road, he recalls that 'we'd been offered it in the LCC, where I gave the brief back to the Valuer saying, "Don't make me laugh with this small site!"—and it was the very first site that landed on my desk when I started at Lambeth!' He knew that he would have to earn the design autonomy that he and the Council leadership sought by raising output well above the 400 annual target of the early 1960s. But Carr and Fagan readily accepted his argument that the new target should be set at 800, and that no attempt should be made to compete with the 2,000 target of Lambeth's neighbour Southwark. Even this relatively modest figure would not be achieved until the early 1970s; in 1968, Lambeth's per capita total of dwellings under construction was the second lowest of any Labour inner borough. Thus, in some ways, Lambeth perpetuated the designer preeminence of the LCC—but

27.13. Haringey: Broadwater Farm development; two 19-storey point blocks and deck-access housing, built from 1966 by Taylor Woodrow-Anglian. Photographed after refurbishment in 1990.

27.14. Opening of 'Tomorrow's Lambeth Today' Exhibition at the Royal Festival Hall on 9 November 1965 by the Minister of Housing and Local Government, Richard Crossman. Seen here inspecting a model of the Clarence Avenue development are (from left to right) Marcus Lipton, MP; Councillor Ewan Carr; Richard Crossman, MP; Mrs Betty Carr; Councillor Spencer Fagan; and E. E. Hollamby (Borough Architect). (Lambeth London Borough Council)

now within the context of a strong *local* political base.[54]

To build up a cycle of decanting, building of high blocks on gap-sites was an obvious first step: Hollamby settled on parallel bulk orders with two firms, Wates and Sunley (later Wimpey, after the Sunley negotiations proved abortive), for blocks to highly individual departmental designs. These, he envisaged, would provide landmarks as well as fill gaps with numbers. But Hollamby was also fully conversant with, and sympathetic to, the change in architectural climate against high blocks. Therefore he had 'low-rise high-density' plan-types designed (from the mid-1960s) as the long-term basis of the slum-clearance programme, and brought with him an LCC colleague, Rosemary Stjernstedt (veteran of the pioneering mixed developments at Portsmouth Road and Trinity Road) to evolve a low-height scheme for the borough's prime site at Central Hill—having dissuaded Fagan from imposing his own cherished vision for that site: a line of point blocks proudly marching along the ridge. Equally vital in Fagan's vision of 'Lambeth for Lambethans' was the exclusion of the GLC: 'The LCC, in our borough, it had annoyed me—it wasn't for Lambethans—we had a big enough housing list without them coming in nicking stuff and bringing people in from their general waiting list! So when we got to 1965 I thought: Right! From now on it's going to be for Lambethans!' So Hollamby kept the GLC on their toes, exploiting to the full his duty, as planning officer, to scrutinise their proposals, and keeping up a constant barrage of suggested amendments.[55]

While Lambeth creatively adapted the LCC tradition, other energetic inner boroughs embraced production. These included Islington, whose Housing Development Area programme pushed it to the top of the league by the early 1970s [27.15]; Hackney, whose Borough Architect, J. Sharratt, the former Shoreditch Borough Surveyor, imported his assembly-line methods through a large Camus bulk order; and Wandsworth, where Sporle conceived exceptionally bold plans to tear down the twilight areas [19.4], and forced the takeover of the GLC's megastructural Wandsworth Stadium scheme.[56]

However, the programmes of some inner boroughs were less effective. In a few cases this stemmed from lack of impetus or organisation. The worst was Tower Hamlets, where a few able officers, notably an 'outstanding' Town Clerk, J. Wollkind, struggled valiantly but vainly to weld together a disparate jumble of members and staff inherited from three of London's most parochial Metropolitan Boroughs: 'The quality of a number of the councillors there was very low—some could hardly read or write!' Of the three constituent authorities, Bethnal Green had been a reasonably energetic small inner borough, although neither as wealthy nor as active as Shoreditch, Finsbury or St Pancras: its traditions were more than counterbalanced by the comparative inertia of Poplar and Stepney. Tower Hamlets's housing drive was hardly assisted by the passion for cottages among East End councillors, as evinced in the anti-flat rhetoric of the Council's Leader and housing 'strongman', Councillor Joe Orwell: 'He used to say, "Wouldn't it be wonderful if everybody in Tower Hamlets could have a little house with a garden and there weren't any flats!"' It soon became clear that Tower Hamlets was unable to attain its 1,000 dwelling annual completions target; and it was forced, like Stepney and Poplar before it, to fall back on outside assistance, in the form of GLC building and an NBA organisational survey: 'We said, "for God's sake, come on in!"—we never said, "this is our patch, keep off!"' Horace Cutler recalled that, in the late 1960s, Mellish once jokingly offered to prorogue the Labour-controlled borough's housing powers and appoint the Tory GLC Leader as a special proconsul for Tower Hamlets![57]

A second major problem impeding building in some inner boroughs was, of course, land shortage. This was concentrated in boroughs with few slum areas and little scope for building up a cycle of redevelopment and decanting. The worst-affected was Hammersmith, where the dearth of clearance sites after Latimer Road South [27.4] forced completions below 100 in 1967, obliging it to look to 'twilight-area' redevelopment. By contrast, Conservative-led Kensington and Chelsea devised an improvement-based solution for its North Kensington slum problem, involving rigorous enforcement of Housing Acts compulsory repairs provisions.[58]

London's multi-storey boom reached a tremendous climax in the housing drive of the capital's most forceful new borough: Southwark LBC. In both design and production, Southwark pursued a breadth of scale unique in Greater London. In architectural style, this took the form of an uncompromising monumentality, decried by others as 'gigantomania', which emphasised massive, horizontally accentuated groups. In output, the borough's push for numbers was tackled through the letting of enormous contracts with outside contractors and with its own DLO.[59] Although Bermondsey was the most powerful element in the new borough, its housing drive was largely complete; the initiative in this field was left with Camberwell, whose 'grandiloquent' aspirations had been built up during the late 1950s and early 1960s by its Borough Architect, Frank Hayes, and the Housing Chairman, Wally Allen. Camberwell's cycle of decanting and building had gathered pace following development of its first major windfall site, the Sceaux Estate. Over this period Hayes's deputy and 'architectural mastermind', the enigmatic Austrian-born Felix Trenton, moved away from the LCC mixed development formula of freestanding high and low blocks, towards various kinds of medium-height agglomerations, ranging from slab blocks to complicated courtyard plans [19.9, 19.14; COLOUR VII]. By the early and mid-1960s, developments of this type, such as Acorn Place or Bonamy-Delaford [19.12; COLOUR I], were achieving contracts of several hundred dwellings. But, as with Freeson's programme at Willesden, the position was still one of potential rather than actual achievement, as average annual completions still barely exceeded 300.[60]

Following the passing of the 1963 London Government Act, Hayes and Allen, and Camberwell's Leader, Ron Brown, cast a new and imperial eye to the north. On the formation of the new borough in 1964, Hayes moved quickly and ruthlessly to absorb the staid architects' sections of Bermondsey and Southwark MBCs. In particular, he assumed control of the latter's Aylesbury redevelopment area, where he removed consultant architects and snuffed out an unadven-

27.15. Islington: Peregrine House; a 27-storey block forming part of Islington LBC's City Road A and B development, built from 1968 by Laing; photographed in 1990.

turous (by 1960s architectural standards) Southwark MBC point-block scheme, even although the contract had already been let. Now this extensive but fragmented area would be shaped in accordance with Trenton's 'Germanic' aesthetic, at its most uncompromising. The Aylesbury site had the plan of a sinuous letter L, and was dotted with numerous existing buildings, including block dwellings, whose retention was stipulated; furthermore, it could only be acquired in widely separated stages. Into this unpromising setting, sheer slab blocks, no more than 14 storeys in height but immense in length, were inserted, and the remaining irregular spaces were filled by low terraces. On a strung-together hotchpotch of bomb-sites and small clearance areas, a colossal monument to the aspirations of the new borough now began to rise, section by section. [27.16, 27.17].[61]

A coordinated acquisitions policy for Southwark LBC was established by Hayes's chief property surveyor, John O'Brien, and the Town Clerk, Frank Dixon-Ward: this was a vital prerequisite for the exceptionally ambitious redevelopment cycle demanded by the political leadership. Secure in the knowledge that Mellish, the local MP, would keep a benevolent eye on allocations and CPOs, Hayes could begin letting very large contracts. In 1967, the 1,400-dwelling North Peckham development was awarded to the DLO and the Aylesbury contract of 2,127 units to Laing—a welcome fillip for the latter's ailing Jespersen campaign. Now starts went through the ceiling: from 62 in 1966 to 3,573 in 1967![62]

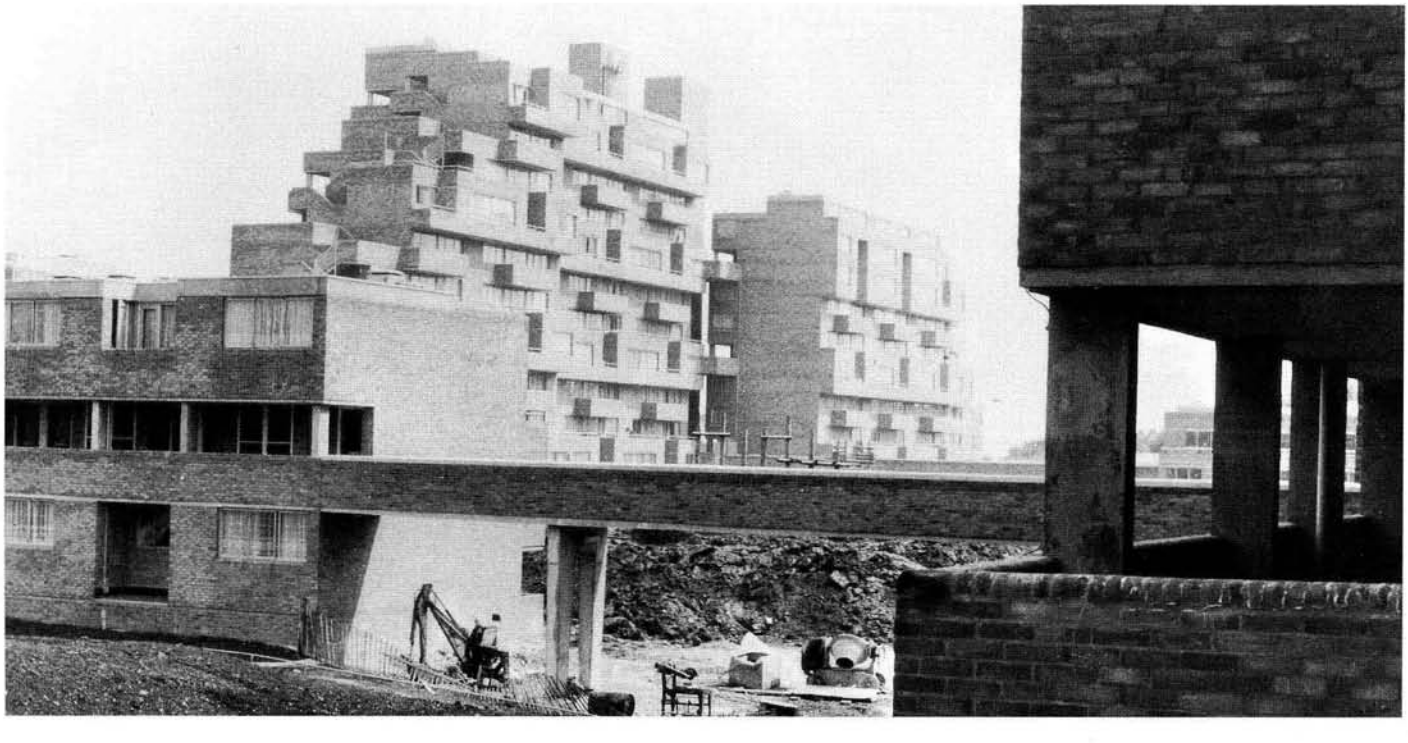
Compared to his 'old friend and rival' Ted Hollamby, Hayes had had a decade's head-start in clearance and accumulation of a 'land-bank', but there was a also a difference in attitude on the part of members and officers, a conscious sense of mission, a search for grandeur both in output and in architecture. The contrast with Lambeth was most strikingly displayed in the developments designed in 1966 for commanding sites on the South London ridge: Stjernstedt's large but low-scaled Central Hill project, with its avoidance of skyline breaks, and the proud, bristling outcrop of Southwark's Dawsons Hill, designed to soak up much of the local Dulwich waiting list in a single grand gesture [27.18]. But Hayes was not averse to lavish 'low-rise high-density' developments intended to 'beat the yardstick': some of these, from the late sixties, were designed for him by the private architects Neylan & Ungless.[63]

By the end of the sixties, although Laing was pursuing Aylesbury and the follow-up Heygate contact with remorseless efficiency, DLO difficulties at North Peckham were beginning to slow Southwark's programme. After the 1968 elections, Labour retained power (alone in South London), but there were changes within the Labour Group, and control gravitated back to the tightly disciplined Bermondsey members: the new Leader was Councillor John H. O'Grady, and the new Housing Chairman, Councillor Charles Sawyer. Yet even the letting problems and the disillusionment which followed the great surge of completions—with an annual rate of almost 2,000 sustained as late as 1972—only served further to underline the heroic scale and daring of Southwark's achievement: 'We were housing, rehousing more people, letting dwellings to people that hadn't had them before: not just nibbling at the problem, but taking massive great bites at it!'[64]

27.16. Southwark: Aylesbury Development Area, built by Laing from 1967: view of the 10-storey Block B9 (1-240 Wendover) under construction in 1969. (Laing: by kind permission)

27.17. Block B9, Aylesbury Development Area: topping-out ceremony on 12 December 1969. In centre foreground are (from left to right) Councillor Charles Sawyer (Southwark LBC Housing Committee Chairman), Councillor Charles Halford (Southwark LBC Planning and Development Committee Chairman: wearing spectacles), and H. P. (Felix) Trenton (Deputy Borough Architect: standing slightly back). (Laing: by kind permission)

27.18. Southwark: Dawsons Hill development, built from 1968 by the contractor Sir Lindsay Parkinson: photographed under construction *c.*1972. (Southwark London Borough Council)



Part C
Northern Ireland's Housing Revolution

Introduction

In Northern Ireland, the quarter-century following World War II witnessed a far more dramatic transformation in housing policy than anything we have discussed in relation to England and Wales, or Scotland. For reasons bound up with the Province's uncertainties of national affiliation, there occurred a revolution in low-income housing provision, in which previous autonomous policies were, for better or worse, progressively replaced by 'UK' norms. So thoroughgoing was this revolution that it required the closest supervision by the Government. Thus Part C will tell not of the 'crusading' of municipal leaders, but of the centralised power of a civil service elite. Here the running conflict was not between design and production, but between pressures for convergence with Britain ('parity') and deeply rooted inhibiting forces; between reformist Government Administrators and reluctant local authorities. Northern Ireland was not a country studded with industrial cities: 600,000 of the total population (45%) lived in its single conurbation, the Belfast area, and 55,000 in the city of Derry; but the rest were scattered in small towns and villages.

Such radical changes could not come overnight; this was a revolution in two instalments. Chapter 28 discusses its first stage, during the forties and fifties: the acceptance of 'parity' and the start of concerted building and slum-clearance. Over these years, production was held back by organisational and financial constraints. Only in the sixties, the subject of Chapter 29, was the second, decisive stage in Northern Ireland's housing revolution reached: consistent high output. But even here, compared with Britain, relatively few multi-storey flats were built.

CHAPTER 28

The Pursuit of 'Parity'

The historical background which in Ireland necessarily conditions the local authorities' approach to housing has little counterpart in England and none at all in Scotland.

Ronald Green, 1958[1]

THROUGHOUT THE INTERWAR period, the newly created Northern Ireland Government, despite political instability and limited resources, had boldly attempted to implement a housing policy similar to Continental (and Southern Irish) practice, but very different from that of Britain. The population having fallen by 25% between 1841 and 1911, there was no general housing shortage; Northern Ireland's urban terraces, although cramped, were mostly of recent byelaw types. So the prewar private enterprise system was maintained, through substantial subsidies to speculative builders and owner-builders, who provided 82% of all new interwar housing. While Scotland and parts of England energetically plunged into council housing, Northern Irish local authorities accounted for only 15% of overall production, and a mere 6% in urban areas. There seemed no need to build more. Stormont's private house subsidy was 'such a simple scheme, and it worked like a charm! Ordinary people could build themselves a nice house, and get a subsidy for it. It had no politics in it, and it cost very little money!'[2] But this independent strategy was incomplete in one key respect. Rent control, imposed before Home Rule, remained in force, diverting private building from rental to owner-occupation and pushing existing terraces into a cycle of decline—just as the urban population, especially in poorer areas inhabited mostly by Roman Catholics, began to experience sudden growth. The spread of unfitness and overcrowding might have been checked by slashing rent controls and subsidising new private low-rent housing; but any such policy, with its unknown financial and electoral consequences, was impracticable for the Unionist Government.[3]

By 1946, this growing imbalance within Stormont's housing policy left it unable to resist the importation of the 'British' conception of public housing as a social service. In that year, it was agreed that there should now be 'parity' of services and taxation between Northern Ireland and Britain, under overall Treasury guidance. Parity of particular services was not directly imposed by Westminster or Whitehall, nor did it result from Stormont's pursuit of 'cash benefits'. Rather, it was powerfully influenced by a climate of opinion which 'pervaded society'. Northern Ireland's professional, administrative and commercial life was, after all, bound up with cross-channel culture in innumerable ways.[4]

Now the Rubicon had been crossed. Parity required Stormont's Ministry of Health and Local Government to assume a much more interventionist role. This welfare-state policy was embraced by the new Minister of Health, William Grant, and by several innovative younger Administrators working under E. W. Scales: notably Ronald Green, who was eventually to mastermind the Province's postwar housing drive [28.1]. Grant felt State intervention in housing was now unavoidable. Overcrowding had not yet reached overall English levels; but it was highly concentrated in parts of Belfast and Derry. Unfitness, exacerbated in Belfast by severe air raids, was now worse than in England. Grant, a shipyard worker and trade unionist, was a forceful and practical man. His intention, in the Housing Act (N.I.) 1945, was to revive building for rent through a strong public housing programme, subject to strict financial controls.[5]

Grant's housing drive was divided between three main agencies. Private builders would still provide a high proportion of output, with the aid of generous building licensing and subsidies. But their contribution was now to be surpassed by public housing. This was to be built by local authorities, and by a new, autonomous, Exchequer-financed body, the Northern Ireland Housing Trust. NIHT was set up in 1945 to build 2,000 houses annually for rent (roughly 25% of the total). Whereas the British Government trailed in the wake of the large cities, Northern Ireland's Ministry of Health took the initiative on housing production, cajoling the local authorities and acting through the Trust.[6]

28.1. Ronald Green (right) seen with Ministry colleagues, *c.*1970. (J. A. Oliver)

The Ministry's hope was that new public housing could be built to a fixed rent, initially 14*s*. weekly (exclusive of rates); the balance of finance would derive from openly declared subsidy. To this end the statutory one-to-three division of subsidy contributions between Exchequer and rates was retained, even after its abolition in Britain in 1956. This avoided any suggestion of deficit financing; but (as we shall see below) subsidy levels had to be amended by statutory order with bewildering frequency, to match interest rate fluctuations. As with Scots small burghs, it proved difficult to secure any sustained effort from the several dozen local authorities, many being rural or urban district councils which were either disorganised or politically averse to housebuilding. So by the mid-1950s, public housing still accounted for only 19% of all existing dwellings in the Province. Ironically, in view of the even lower emphasis on public housing south of the border, the most forceful drives in Northern Ireland were those of nationalist-controlled authorities such as Newry UDC or Downpatrick UDC.[7]

The Ministry's thorniest problem, however, was the fact that the Province's worst-performing urban authority (in terms of per capita output) was also by far the largest. Belfast Corporation was vastly preponderant in population and wealth: it had three times the rateable value of all other boroughs put together, despite the collapse of its staple industries, linen and shipbuilding, in the fifties and sixties. It referred loftily to other councils as 'the local authorities', and assumed a level of direct political influence at Stormont, greater even than that of Glasgow at St Andrew's House: 'We only dated from 1921—they were a big city, we were a small Government!' Yet between 1944 and 1969, Belfast built just 30 dwellings per 1,000 population, compared with 92 by Glasgow, and 39 even by Londonderry Corporation![8]

After the war, Belfast's population had continued to rise—from 503,000 to 530,000 during the 1950s alone. In response, the Corporation expended much energy on fruitless calls for a boundary extension, claiming that this would accommodate the increase and cut Belfast's overall density (now the highest of any UK city). It is questionable, however, whether the city truly did intend to channel its great resources into a vast housing drive, or whether its real motive for seeking expansion was municipal pride. After all, Belfast Corporation was highly efficient in administration of utilities such as transport or electricity supply, but it had no deep-rooted tradition of social provision. Its standing in the housing field was not enhanced by controversy in 1954 over the administration of its points system, nor by suspicions that some senior members were involved in extensive land speculation: 'The Corporation was stiff with estate agents and small builders—it was not a *corrupt* council, but wrapped up in property and who owned what!'[9]

Since Belfast and other local authorities would not fill the gap caused by the drying up of private building for rent between the wars, the Northern Ireland Housing Trust was set up in February 1945. This was 'Ronald Green's personal idea—if any one man was responsible for one single idea, it was that. He came in with a proposal for a sharp, clearcut Housing Trust!' The Trust was modelled in some ways on the SSHA, but its role was far more decisive: it rapidly became an indispensible support to Grant and his successor Dame Dehra Parker (Minister 1949–57) in their efforts to raise output. This applied particularly in areas adjoining Belfast, where the Trust built big estates and coordinated local authority allocations to city families. But while private building settled at an annual rate of around 2,000, public output fluctuated wildly, as in Britain. A mid-1950s peak of 6,000 was followed by a trough of 2,400 in 1959, and a recovery to more than 6,000 by 1964. Of the 200,000 postwar houses built by 1971, the Trust had accounted for just under 25% and the local authorities and private builders just under 40% each.[10]

As in the case of the SSHA, the Trust's external financing was entirely derived from the Exchequer. However, in contrast to the ill-concealed deficit financing of the Association, Stormont set a frugal regime for NIHT's work, which was overseen by men such as Lucius O'Brien (Chairman 1945–60, Board member 1960–7), J. G. Calvert (General Manager 1946–67), and Herbert Bryson (Board member from 1945, Chairman 1960–7). O'Brien and Bryson, well-established figures in the Province's embryonic social services, were 'slotted into' their Trust roles at Green's instigation. 'Bryson was a very precise man, like a typical Victorian employer—you could imagine everyone having to bring their own lump of coal to the office in the morning . . . The style of the Trust reflected the virtuous, austere, if sometimes puritanical, characteristics of the northern Protestant work-ethic.' NIHT had available to it neither rate subsidies nor subsidy pooling from prewar estates, and it had to balance its books every year, unlike the SSHA, whose substantial annual deficits were quietly written off by the Treasury. The three ways in which it attempted to counter the interest rate rises of the late forties and fifties were to cut output, to trim standards, and to raise rents progressively beyond the 14*s*. target.[11]

During the late 1950s, the Ministry continued publicly to applaud NIHT's prudent policies, but Administrators privately grew uneasy at its ready acceptance of output cuts, and apparent eagerness to raise rents at any opportunity: 'The little ways of the Trust, when it comes to rent calculation, are beyond all understanding.' The possible political implications of its rent policy and strict Octavia Hill management system gave pause for thought to a Department by now firmly committed to assimilating substantial chunks of 'British welfare-state' thinking. They agreed that NIHT's activity counterbalanced politically influenced allocations and aversion to building in some rural districts: 'It had the courage to build for Catholics in areas where the local councils were too frightened to build in case they were turned out by their supporters.' But while the large new estates around Belfast were of mixed religious composition, their high rents kept them as a preserve of 'filtering', allowing them to be unofficially ranked in desirability, and precluding letting to unskilled working-class tenants—a policy uncontentious in many English towns but sensitive in the Northern Ireland context: '[The Trust] felt that their policy of offering cheaper type houses to persons who had less capacity to pay was a limited but practical way of catering for this type of tenant. The Housing Managers did quite a lot of unofficial segregation of this sort both within estates and between estates'.[12]

Such issues were, however, only fully to emerge in the 1960s, once slum-clearance was under way. In the meanwhile, urban and suburban housing in Northern Ireland remained true to 'traditional' low-density patterns, assisted by the lack of statutory planning restrictions on peripheral or ribbon development, and the absence of any general land shortage. If attitudes among councillors in England were influenced by anti-urbanism, reacting against large blocks of flats in favour of a Merrie-England village Utopia, there was, among politicians and officials in Northern Ireland, much genuine continuity with rural values: virtually no flats had been built before World War II. The tradition of terraced housing persisted—built previously by speculative builders, but now by public authorities [28.2]. The Trust's Cregagh Estate of 1945, for instance, was entirely terraced, one group containing no fewer than 175 houses.[13]

The largest developments of the 1950s, such as the Trust's Rathcoole Estate [COLOUR XVI], resembled English Mark 1 New Towns of five years earlier; their brick or roughcast terraced cottages and flats were designed by the staff of James Cairncross, the NIHT Chief Technical Officer. In this velvety Gibberdian context, the building of isolated point blocks was soon suggested. From 1954, the addition of high blocks to Rathcoole and Braniel 'for reasons of design and layout' was intermittently debated by the Ministry and Cairncross's staff, despite Bryson's reservations. By 1959, Ronald Green (now Permanent Secretary), and his deputy, John Oliver, were looking to see a prototype scheme started, although they were certainly 'not burning with any great zeal to cover the place with big blocks of flats'. For such an experiment NIHT, as always, seemed the obvious choice. So after much discussion, the Trust commissioned two 11-storey blocks at Cregagh from Unit in 1959–61, and Green's staff asked the Ministry of Finance to agree to an ad-hoc subsidy:

> There is a great deal to be said for encouraging the Trust, who are, as you know, the only housing body in Northern Ireland which employs fully trained management staff, to go ahead with this project and make available the results of what will be for Belfast people a most interesting experiment in living.[14]

While discussions concerning the prototype multi-storey blocks at Cregagh were proceeding, an issue which was of more immediate relevance to the building of Modern flats had pushed its way to the fore: slum-clearance. In 1956, Northern Ireland's first redevelopment powers, and 50%

28.2. The continuing terrace tradition in Northern Ireland: Easiform three-bedroom houses built by Laing for Carrickfergus Borough Council at Woodburn Road in 1966–9; photographed in 1967. (Belfast Newsletter)

slum-replacement grants, were introduced. Superficially, the reason for this seemed only too clear. By the mid-1950s, the pre-1914 working-class areas of Northern Ireland's towns and cities presented a daunting slum problem: in 1956–8, 25% of its housing was pronounced unfit, compared to 5% in England. Overcrowding, in Belfast and Londonderry, was still localised, and was gradually diminishing—not because of clearance, but as a result of peripheral housebuilding. However, there were still pockets above 200 p.p.a. in religious ghettos such as Falls Road or the Lower Shankill: overcrowding in Roman Catholic areas was rather more persistent, owing to larger family sizes and doubling-up of households. Yet the most urgent motive for Stormont's sudden onslaught on the slums was neither unfitness nor crowding, but parity: Britain, as we saw in Chapter 21, had legislated for slum-clearance in 1954.[15]

In some areas, such as the Province's highly effective tuberculosis eradication campaign, parity worked to Northern Ireland's advantage. Elsewhere, it forced the pace in unpredictable ways. Thus the Ministry of Commerce's costly drive to attract artificial fibre factories, on the model of 'British regional' development, was speedily followed by serious retrenchment in those industries. At times, parity conflicted sharply with the now thirty-year-old process of 'nation-building': the replacement of Protestants' narrow pre-1921 'colonial' outlook with an embryonic consciousness of 'national' identity. Here the decision to embark on municipal slum-clearance and decanting was to prove almost uniquely controversial, both socially and politically. Westminster's announcement of a new slum-clearance drive in 1954 hit Stormont as 'a shock—people realised it would have unforeseeable consequences!'[16]

Redevelopment had always been a live political issue: as early as 1910–17, nationalist councillors had held up Belfast Corporation's first clearance scheme. But the availability of copious peripheral land kept the problem in check during the 1950s, by easing the worst overcrowding—subject always to the constraints of electoral boundaries. Unlike the relatively simple controversies in Britain's cities, such as whether or not to overspill, slum-clearance in Northern Ireland was associated with a more complicated equation of political and social influences, which made both redevelopment and overspill far more difficult. Firstly, some existing local authorities were reluctant to build, or allow the Trust to build, new houses for the decanting of tenants from Roman Catholic slum areas: such houses might be opposed by the urban council if building within the existing boundary were proposed, by the rural district if overspill were envisaged. Secondly, residents and councillors from all slum-clearance areas (of whichever religious complexion) demanded accelerated redevelopment, but strictly on the existing sites, to preserve infrastructure and voting patterns. Finally the Trust, with its powers of compulsory purchase, could intervene; but it was discouraged from direct decanting of slum-dwellers by its rent policy. It became clear that many more flats, even multi-storey flats, would be needed if any clearance were to be achieved; yet the equation included influences which favoured nothing at all being done.[17]

After the passing of the 1956 slum-clearance Housing Act, Belfast Corporation at first attempted to put off the evil day, by developing a West Belfast outer-suburban site at Turf Lodge (attacked by nationalist MPs as a 'ghetto') and prevaricating over the unfitness survey required by the Act. Northern Ireland's first redevelopment area, Upper Library Street Area A, Belfast (containing 1,314 houses in adjacent areas of different affiliation, to be separated by an inner ring road), was declared only in November 1958 and vested in December 1962; a small adjacent area, Artillery Street Area B, was declared shortly later. Over the whole Province, in fact, a mere 3,500 out of 95,000 unfit properties identified by the 1956 Act surveys had been cleared by 1962.[18]

The potential contribution of NIHT to slum-clearance was also qualified in important respects. Green could not persuade the Ministry of Finance to allow the Trust to organise schemes itself: it could only act as a receiving authority or an agent of the local authority, with the latter paying its own 50% contribution. The Trust's attitude to letting reflected this restrictive context. It became clear, for instance, that it would not be prepared to accept displaces from the first stage of Upper Library Street [28.3], a group of 250 dwellings occupied by Roman Catholics, on its newest peripheral estates. In response to a request from Belfast's Housing Committee Chairman, Alderman W. Oliver, for allocations at the highly landscaped new Trust estate at Belvoir Park, 'Mr Bryson explained that this estate would not be suitable as the rents were somewhat higher than in other estates, and that it would seem more suitable to offer relets on some of the old estates, such as Cregagh, which were close to the centre of Belfast... [T]here might well some tenants whom the Trust was not prepared to take.' In the end the Trust agreed to take 100 of the 250 families: the Corporation would accommodate the balance at Turf Lodge.[19]

While some local authorities criticised uncontrolled decanting, those within the slum areas opposed any decanting whatsoever. People's attachment to tiny areas, after forty years of the stultifying influence of rent control, seemed if anything even stronger than in Britain: 'People weren't even prepared to move from one side of the street to the other: "We've always lived on the left hand side of the street and we're not going to move!"' The political–religious division, while of negligible importance in mixed peripheral estates, was a very real force in slum areas, a fact which councillors were quick to exploit. The particular vehemence of Roman Catholic political opposition to decanting was fuelled by its financial and organisational implications for the Church. Unlike, for instance, Presbyterian congregations, who could call on centrally organised finance for relocation, this responsibility in the Roman Catholic Church largely devolved to individual priests and their parishioners, and was more onerous, owing to the Church's involvement in education. Decanting to the suburbs could be a financial catastrophe: 'I can remember the PPs telling me: "If you move people up to Andersonstown we'll have to set up an entire new parish!" Each parish was self-contained, and they had to provide the new school out of their own resources!'[20]

In its opposition to decanting outside existing slum areas, the Roman Catholic Church exploited a readily available

weapon: the Government of Ireland Act 1920. This, the Home Rule legislation which had set up the Northern Ireland Constitution, was outside the control of Stormont. Section 5 forbade compulsory acquisition of religious-owned property, a category which included not just churches and schools but numerous other commercial and domestic properties across the affected areas. In the face of Church opposition, co-ordinated redevelopment was impossible. 'As soon as you went to look at some street you'd declared unfit, you found the ground rents were owned by the Elim Tabernacle or the Baptist Church, and you could not acquire that ground compulsorily. However, it was only the Catholic Church that exploited it.' Even by 1959, the problem had become only too obvious at Upper Library Street Stage I; Green explained to the Ministry of Finance that 'we are already running into very heavy weather on our first major slum-clearance scheme in Belfast . . . [T]he problems are of law and compensation.' By 1961, the second scheme, Artillery Street, was also being delayed by the 'uncompromising' opposition of the Roman Catholic Church. The legal restrictions were eventually lifted by Westminster's Northern Ireland Act 1962, but the Church had made its point, and had established itself as a key participant in negotiations on future slum-clearance.[21]

Might these special political constraints on slum-clearance in Northern Ireland have provided a particularly strong incentive for building of high flats? Certainly, Belfast's Housing Committee had considered the use of high blocks in this context as early as 1955, and had visited developments in Glasgow and Clydebank. In 1959, a pilot scheme of two 13-storey point blocks was approved for construction at

28.3. Belfast's first slum redevelopment scheme: Upper Library Street Area A Stage I ('Unity Flats'), as eventually built from 1965 by Unit; photographed in 1971. (*Belfast Newsletter*)

Victoria Barracks, a 'windfall site' whose development at 200 p.p.a. permitted the immediate decanting and clearance of the immediately adjacent Roman Catholic area of Carrick Hill. The Ministry indirectly acknowledged the political implications of multi-storey building: it 'can be especially useful in redevelopment areas since it enables a housing authority to avoid asking more of the tenants to move perhaps considerable distances from their familiar surroundings'.[22] But the continued postwar building of terraces gave unusual strength to the anti-flat faction in Belfast; there was opposition to high blocks within the Housing Committee, especially at the steep rents anticipated: 'As one would expect, having paid £40,000 to purchase and clear a site of about 10 acres at Victoria Barracks, the Corporation was concerned to ensure that the best use was made of it . . . in spite of stiff opposition from the diehards who would have preferred to see the whole area covered with cheaper two-storied kitchen houses.' It was clear that even the small terraced houses or two-storey flats permitted by Stormont's housing standards could not cope with piecemeal development at 200 p.p.a., and fears about rent levels were calmed by new subsidies in 1961; but anti-flat rhetoric was still regularly heard within Parliament, the Corporation and local Unionist Associations.[23]

In 1960, the even more delicate matter of slum clearance in Derry was raised: here it was suggested that NIHT should be responsible, in an agency role, for the first redevelopment area, covering 1,030 houses at Rossville Street/Lecky Road, so as to circumvent any political opposition within the city. It seemed clear to the Ministry that high blocks would be necessary, and the Principal in charge of Housing Branch No. 1 commended to the Ministry of Finance NIHT's initial proposals, which included an 11-storey block similar to those at Cregagh: 'For various reasons, as you will appreciate, it is desirable that the people who are dispossessed in this area should be offered accommodation in the immediate neighbourhood. The best use, in terms of high density with maximum open space, will have to be made of the available land—Londonderry is notoriously difficult for building.'[24]

PUBLIC HOUSING AT STORMONT: ORGANISATION AND FINANCE

So far, we have traced in outline the first stage in Northern Ireland's housing revolution: the postwar importation into the Province of two radical policies, a public housing drive and State-sponsored slum-clearance. But how were these offspring of 'parity' incorporated into what was there already: a recently established system of devolved government? In the remainder of this chapter, we shall examine in more detail the varied financial and administrative mechanisms by which this was done. First, however, we must stand back a little, and look at the broader consequences of the 1946 parity agreement.

The acceptance of parity created a complex series of governmental relationships, between and within Stormont and Whitehall. Some went so far as to claim that, after 1946, 'regional self government . . . has in some measure become a fiction . . . Northern Ireland is subject to Treasury control.' All new spending initiatives or departures from parity were subject to vetting by the Treasury: so the Ministry of Finance's activities took on a somewhat schizophrenic character.[25] In the overall UK context, the Ministry acted as an intermediary between Stormont spending departments and the Treasury. Although prevented, by the demands of parity, from autonomous or long-term planning of the Province's economy, the Ministry of Finance was always much more than a mere postbox: its coordination of expenditure demands gained Northern Ireland more favourable treatment at the hands of the Treasury than English regions, or even Scotland. The Treasury's oversight was passive in nature, reacting to demands from Stormont departments for new spending initiatives, and hardly ever intervening with its own suggestions: 'If we went to them, they were very helpful—sometimes they said, "We can't agree this year!" '[26]

Within Northern Ireland, and within the limits defined by parity, the Ministry of Finance acted as the Treasury of Stormont, in which capacity it behaved as a kind of guardian of traditional Ulster principles of financial prudence and frugality, in the face of demands by welfare-spending departments. This cautiousness was also influenced by the 'Dublin Castle element' within Stormont—civil servants transferred at the time of the 1921 split. In the housing field, there were sharp differences with the Ministry of Health over the role of the NIHT. Finance had opposed the Trust's original establishment as an importation of 'pure socialism', and (with some support from the Trust's Board) had resisted subsequent enlargement of its role, while Health pressed for output expansion, and a turn to slum-clearance. In 1960, the year that O'Brien demitted the chairmanship, Ronald Green rammed home the view that 'the Trust should do what suits the Government, rather than what might be done by a Victorian business man imbued with Gladstonian ideals'. On subsidies, we shall see below that Health's dogged campaign to secure protection for output against interest rate fluctuations gradually prevailed over Finance's view that subsidies amounted to '"bribing" the local authorities to do their jobs', and that it would do no harm to let them periodically lapse, to ensure they were not taken for granted.[27]

The continuity of Unionist government, whatever its wider political implications, enabled stable Departmental policies in matters such as housing output and subsidies to be evolved, whatever the personal views of any particular Minister. In housing, the closest 'British' equivalent was the strength of some Scottish Office Administrators. But, in contrast to the running conflict within DHS between 'housers' and 'planners', the lack of local pressure for production would later enable Green's team to introduce high-output and regional-planning initiatives in tandem. Although this Administrator-led system of housing policy-making was, in a way, undemocratic, it made possible the implementation of ideas consistently more 'progressive' than the consensus view within the ruling party or majority opinion within the Province: 'You've got to push on—the administration was ahead of the politicians, and things were being done which wouldn't have been approved if put to a plebiscite every week!'[28]

Just as the Ministry of Finance involved itself in more detailed policy discussions with individual departments than did the Treasury in Great Britain, so the Ministry of Health

(from 1965, the Ministry of Development) coordinated and directed the housing efforts of the Province's sixty-seven local authorities much more closely than did MHLG in England and Wales. The pattern of control resembled Scotland, except that the disparity between the largest housing authorities (Belfast CBC and the NIHT) and the rest was much more pronounced. The latter were 'poor and weak, and couldn't stand up to bullying. The Town Clerk would be a poor little person, the Surveyor would be a poor tiny person, and the Architect would be a little part-time person!' In such a context, close Ministry supervision was essential.[29]

The small size of Northern Ireland ensured that both Ministers and senior Administrators were more accessible, and more involved in matters of detail, than their English counterparts: 'You could see it all from the windows of Stormont!' Partly as a result of the polarisation of politics concerning national affiliation, successive Ministers of Health (or Development) delegated to Administrators their policy-formulation responsibilities as heads of welfare spending departments, in order to concentrate on the down-to-earth political representations of the daily stream of local delegations, who regarded direct access to the Minister as a matter of right. The cosmopolitan Dame Dehra Parker, for instance,

> when receiving a deputation from Belfast or Fermanagh . . . could be a lot less charming and relied rather less on elegant phrases. She could grasp, every bit as well as we officials could and perhaps a lot better, the arguments in favour of changes in electoral affairs or in housing allocations or (more aptly) in the relationship between the two; but she could grasp even more clearly the political case for leaving such sensitive matters as they were.

The etiquette of lobbying in Northern Ireland was less rigidly defined than in England. In 1965, for instance, a promoter of prefabricated timber bungalows sent the Minister of Development, William Craig, a cheerful letter inviting him to inspect a prototype on a 'semi-social basis': this offer, regarded by Administrators as 'extraordinary', was tactfully refused on the excuse of the Minister's 'crowded' timetable. While Ministers coped with the daily round of 'political' visits from, or to, local authorities, senior Administrators shouldered the heavy burden of day-to-day policy negotiations with them and the Housing Trust. The Ministry's Second Secretary during the sixties, John Oliver, 'was able to say that I had stood in every town hall, county hall and council office in the Province and was on personal terms with every Mayor, chairman, town clerk and chief officer'.[30]

Within the Ministry, administrative and professional groupings were less rigidly defined than in British Government departments. Planning was slow to separate from the architects, under J. M. Aitken, and only gained chief officer status in the early 1960s, when Aitken was redesignated Chief Planning Officer. The lack of driving pressure for output from large municipalities, and the late establishment of statutory planning powers, prevented the emergence of any polarisation between 'housers' and 'planners'. But the eventual adoption in 1961 of a subsidy regime closely related to building cost—an initiative, to be discussed shortly, which almost by itself made possible the enormous output of the sixties—would place a special responsibility on the shoulders of the Department's Superintending Quantity Surveyor, Wolf Sacharin: 'A first-rate fellow, with us in everything, in on all our discussions!' The Ministry of Development's highly efficient cost appraisal system would continue in operation during the troubled seventies, cushioning output from financial restrictions during that period.[31]

What was the position of the new public housing drive within the Stormont administrative framework? During the fifties, the Ministry of Health and Local Government's housing drive, supported by progressively more generous subsidies, faced scepticism on the part not only of local authorities but also of the Ministry of Finance, which still saw it as a transient extravagance. The vital area of contention was financial policy and, in particular, subsidies. On his return to Health from a stint in Finance in 1958, Ronald Green summarised this situation:

> The two Departments have a completely different mental approach to the problem . . . [T]he historical background which in Ireland necessarily conditions the local authorities' approach to housing has little counterpart in England and none at all in Scotland. There was no tradition of local authority urban housing in Northern Ireland and in fact, apart from the working of the Labourers' Acts, there was virtually no public authority house building between the world wars. When in 1945 we came to persuade local authorities to undertake a major building programme we promised them that with prudent administration they would be able to build at reasonable rents and that the subsidies would be so operated as to keep their Housing Revenue Accounts in approximate balance. The general rent level in those days was taken at 14/- for a minimum family house and between changes in subsidy rates and cuts in housing standards it was still broadly possible to maintain that rent level until in 1955 the Government started to control the economy through major changes in the interest rates. Since then the housing programme has staggered from crisis to crisis. Blood transfusions of subsidy have been given when the patient was at death's door, but he is still pretty shaky and only engaged in light work . . .

Green concluded:

> The conception of a 14/- rent is dead and rightly so; but in the climate of Trust and local authority opinion in Northern Ireland there is no use looking for a substantial housing programme unless it hinges on a rent which is regarded as reasonable to both authorities and tenants.[32]

In fact, with no cushioning through rate subsidies, and no fat to be trimmed from housing standards, Northern Ireland's public housing rents fluctuated dramatically during the late 1950s, in direct reaction to interest rate changes: from an average of 9*s.* 7*d.* in February 1955 to £1 19*s.* 11*d.* in September 1957, and back to 19*s.* 8*d.* a year later. By 1963, Belfast Corporation's weekly rents ranged from 18*s.* for cottages to 35*s.* for the Victoria Barracks point blocks, compared to Glasgow's average of 12*s.* 3*d.*—although incomes in Northern Ireland were only two-thirds of those in Britain. However, Green's analysis endorsed the overall financial structure of public housing in the Province:

> The Scottish system of rents wildly below cost is no credit to anyone and the English arrangements by which Council rents are fixed and varied according to the political outlook of the local authority is almost equally unsatisfactory. The cost of housing here is met from rent and direct subsidy. There is no concealed cancer eating at the local authority rate system or running up an enormous half hidden bill to the Exchequer as in the Scottish Special Housing Association.[33]

Over the period of establishment of the public housing programme during the late forties and early fifties, Grant and Parker pegged the Ministry's housing subsidies to those of DHS; many rural councils, distrustful of sixty-year loans, chose to commute these subsidies to a lump sum payment. However, the Scots levels were always too low, in view of the greater construction cost of dwellings in Northern Ireland, and the lack of rate subsidy beyond the one-quarter statutory contribution. The reluctance of authorities to build, and the smaller size of the average council house, contributed to the much lower actual housing expenditure per head of population in the Province—for instance 12*s.* 10*d.* (compared to £1 3*s.* 10*d.* in Britain) in 1951–2, by which date some of the more recalcitrant authorities began to threaten to stop building altogether. When, in 1955, interest rates rose sharply, and Sandys announced the phasing out of general-needs subsidies in England and Wales, parity suddenly seemed less of a good idea; even in the Trust, J. G. Calvert began 'wringing his hands and saying "We're done for!"'[34]

However, this crisis proved a blessing in disguise for the Ministry of Health: it enabled Northern Ireland to cut free from DHS's subsidy levels. The Treasury gave the Province favourable consideration, and, in March 1956, Dame Dehra Parker was able to announce new subsidies at about the same rate as the old. The immediate crisis having been resolved, a new unofficial Ministry convention was then set: that its subsidies should always be higher than the highest in Britain, on the basis that Northern Ireland had to make up 'leeway' in housing conditions. At first, between 1957 and 1961, this was done by a succession of ad-hoc supplements to the basic subsidy, which were designed to offset interest rate fluctuations; but these created great uncertainty on the part of local authorities, and compelled Health incessantly to lobby Finance: 'The subsidies jiggered up and down—it was terrible! The local authorities never knew where they were, trying to run their little schemes. You'd have an estate on one side of the road at £1 a week rent, whereas an older one on the other side would be on 15*s.* a week!' By 1960, although the public sector completions rate was nudging the 4,000 target advocated by Green in 1958, Northern Ireland was still a long way 'behind' Britain in actual per capita expenditure on housing: Scotland, for instance, was spending 60% more, even before the effect of her enormous rate-fund subsidies was taken into consideration. Adoption of the English 1961 Bill two-tier system was dismissed out of hand, not least because it was calculated that all local authorities would qualify for the higher rate; the differentiation would thus be meaningless. A new, more consistent subsidy regime was now clearly required.[35]

It also appeared that the building of multi-storey flats would require additional financial provision as a result of their higher building cost than cottages or low flats. The £48 ad-hoc supplement negotiated with the Ministry of Finance for the Cregagh blocks was divided notionally between the cost of lifts, extra height and site acquisition (the smallest element). However, it was felt that, in Upper Library Street [28.3] and subsequent slum-clearance schemes, this supplement would not be 'sufficient to permit rents to be fixed at a low enough level. Inevitably the majority of high flats in schemes so far projected will be allocated to slum-clearance tenants'. Higher subsidies and lower rents might also, it was hoped, counteract popular distrust of flats: 'It is all the more important that people who have been compelled to move should not be asked to pay a high rent for accommodation which they may feel now, without experience of it, is quite unsuitable for them.' In mid-1961, Administrators evaluated the respective merits of the English and Scottish high-flat additional subsidies. Their conclusion was that the Scots two-thirds deficit-based supplement was preferable, even though DHS was then in the process of abandoning it, as a result of its administrative complexity. Green explained to the Ministry of Finance that this complexity was less of an obstacle in Northern Ireland, with its tradition of close central control:

> We would not wish to adopt the English system which seems to emphasise height, but would prefer to follow the much more flexible system of Scotland. A system which is based on cost may well create extra work in a British Department in that it involves the Department very closely in prices and specification as well as design, but we are already very closely involved in these things and I do not regard that as a disadvantage.[36]

It was at this stage that Belfast Corporation, stirring briefly from its usual torpor in housing, provided the Minister, William Morgan, with the political impetus needed to expedite approval of the new multi-storey subsidy—just as Birmingham had done in England in 1953. In 1960, when the Corporation obtained tenders for the first Victoria Barracks blocks, 'we received a terrible shock; they were a very dear duck and we were perturbed. The rents to be charged would be from 35*s.* to £2 a week. A deputation from the Corporation approached the Minister for a further subsidy, and the subsidy now given for multi-storey flats to any authority has decreased the rents.' The meeting with the deputation, on 12 December 1961, took place just as the Ministry of Finance was negotiating the proposed subsidy with the Treasury. The implied threat of a fresh relapse in Belfast's faltering housing effort could not have failed to help in overcoming any Treasury objections. Early in 1962, Finance agreed to apply the new subsidy retrospectively to the few existing multi-storey developments, including Cregagh and Victoria Barracks (Carlisle Development).[37]

In the next chapter we shall see that, a year later, the deficit-based principle was to be dramatically extended in Northern Ireland, to form the basis of a wholly new system of standard subsidies linked to interest rates and building cost levels. And this very effective structure, as we saw in Chapter 23, would then substantially shape the new subsidy system introduced in Britain in 1966–7.

CHAPTER 29

The Great Leap Forward: Production in the 1960s

'If the interest rate goes up, the subsidy will automatically go up. Local authorities, therefore, can go forward with real strength, knowing that subsidies are going to meet their commitments . . . That is one of the big measures which we have taken over the past year to increase our house building. It is there to be seen. We are seeing the finished article: we are getting the houses built and completed.'

W. J. Morgan, Minister of Health and Local Government, 1962[1]

THE 1960S SAW the second, decisive stage in Northern Ireland's housing revolution: the establishment, for the first time in the Province, of consistent, high production of publicly built dwellings—including a sizeable proportion of Modern flats, and some high blocks. As before, this initiative was pushed forward not by powerful local politicians but by Administrators within the Northern Ireland Government—or, more precisely, the Ministry of Health team led by Ronald Green. 'Anything that needed doing, Ronald was into it, and pushed it along—he was very courageous, but at the same time very witty—he could carry people along!' The Department's innovations were wholeheartedly endorsed, from 1963, by the new Prime Minister, Terence O'Neill, and made a centrepiece of his programme of physical reconstruction and political reform. But, just as Crossman's 'Housing Plan' in England was largely a public-relations repackaging of municipal housing production, so also O'Neill's reformist Unionism, in housing, simply put a political gloss on a longstanding Departmental policy now reaching maturity [29.1].[2]

Green's strategy was naturally grounded in the principle of parity. He aimed to achieve cross-channel levels of output in public housing, while setting production, for the first time, within a comprehensive system of statutory planning: quantity and 'quality' in a single package. Consistent output was to be secured by a new system of subsidies which would provide financial stability in the face of interest rate rises. In contrast to the SDD and MHLG subsidies introduced in 1966–7 under pressure from the big cities, Northern Ireland's new measures formed part of Green's own strategy. His aim was to allow the local authorities to build steadily for the first time, and to coax the Trust into building much more, even into running up a deficit: 'Ronald pushed and pushed the Trust—there were frightful rows. They said they couldn't go beyond 2,000 houses a year. He'd say, "They won't break the sound barrier!"' By early 1959, the outline of the system required—a variable subsidy calculated to produce a suitable rent—was clear, but the Ministry of Finance cautioned that the Treasury might 'look askance at this, as being a device

29.1. Northern Ireland Government Ministers photographed at Unionist Headquarters in 1965. From left to right: B. McConnell, H. V. Kirk, W. J. Morgan, Captain T. O'Neill (Prime Minister), W. Craig, B. Faulkner, W. Fitzsimmons, Major J. D. Chichester-Clark, and H. West. (*Belfast Newsletter*)

for circumventing the interest rate'. The next year, the Minister, John Andrews, warming to the theme, contrasted housing with the hospitals programme, whose subsidy, 'free from the vagaries of the British money market... has enabled us not only to match but to outstrip the British programme'. In June 1962, with a twenty-year target of 200,000 dwellings (45% by local authorities and 25% by the Trust) now official policy, the Ministry of Finance and the Treasury bowed to the inevitable, and Andrews's successor, William Morgan, announced the first deficit-based standard subsidies in the UK since the 1919 Acts.[3]

The new subsidy system, devised personally by Green, was introduced in November 1962 at the same basic levels as the old (ignoring a recent 0.75% drop in interest rates), but reduced the previous fourteen gradations, dependent on house size, to only five. Now subsidies were to be reviewed quarterly: the entire effect of interest rate changes would be taken into account, as would half of any variations in building costs. The aim was not to give authorities a blank cheque (as had the 1919 Acts), but to provide them with stability. Now, Morgan promised, 'local authorities can go forward... with real strength'.[4]

The new subsidy system was an unqualified success. Stability was immediately achieved; only three changes in basic rates were necessary between 1963 and 1966. Output, already recovering from its trough of 2,436 completions in 1959, accelerated to 6,000 in 1964. But only in the late 1960s were the full benefits of a subsidy system focused on continuity felt: as English output collapsed, production in Northern Ireland surged uninterruptedly, to a maximum of 9,215 in 1971. This remarkable figure, across the entire Province, approached the per capita levels earlier achieved by the most dynamic English cities, such as Birmingham—despite the political storm-clouds now fast gathering over Northern Ireland. There was no equivalent to Britain's indicative-cost or yardstick controls, and so the disparity between generous subsidies and meagre actual expenditure could be steadily reduced: by 1968, England was only spending 39% more in subsidies than Northern Ireland (compared with 86% in 1952). The Ministry also succeeded in its standing aim of keeping 'ahead' of 'British' subsidies. Administrators briefly fretted in 1965 that their lead might be jeopardised by the introduction of Britain's derivative, partly deficit-based subsidy system; but after computing 'British' subsidies for various Belfast schemes, the Province's subsidies came out ahead by margins of 4 to 14%.[5]

In the field of multi-storey building, the lack of yardstick controls ensured that there was no architecturally inspired discrimination against high blocks, as in the case of MHLG; indeed, by 1969, the multi-storey subsidy had begun to exceed the basic subsidy in some later phases of the Cullingtree Road redevelopment in Belfast. In working out the standard building-cost formula, high flats were excluded from calculation, to avoid double-counting their two-thirds extra subsidy: here, administrative and quantity-surveying staff resources within the Department were sufficient to enable the complex calculations, involving 'core' and variable elements, to be efficiently handled without resorting to rule-of-thumb controls.[6]

In addition to encouraging higher output, Stormont's Administrators also aimed to set the Province's housing within a new system of 'regional' planning—yet another expression of parity. Like Abercrombie, they aimed to cut the big city down to size—but here with every expectation that output would *rise* as a result! This planning component of the Ministry's strategy was the brainchild not of Green, but of his deputy, John Oliver, Senior Assistant Secretary in charge of housing and planning since the late 1950s, and Second Secretary from 1964. Just as Abercrombie had linked Glasgow slum redevelopment with 'regional' planning, Oliver had first begun to consider a statutory planning framework for the Belfast region after the passing of the 1956 Housing Act, with its slum-clearance repercussions. But in this, he was not motivated by a desire to curtail the power of Belfast's Housing Committee: this was hardly a significant factor, in view of the Corporation's meagre output. His concern, like the London Green Belt pioneers of the thirties, was visual: to protect Ulster's countryside from unrestrained urban sprawl, by fencing in the city with development controls and overspill proposals. Belfast's housebuilding inertia ensured there would be little opposition to Oliver's ideas within the Ministry, especially as Green gave them his uncompromising support: 'If they'd had a vigorous programme, our arguments would have fallen down: they'd have been able to say, "These chaps are holding us back!"'[7] Oliver summarises the negotiations with Belfast which resulted:

> Building outside the city boundary was the crucial issue... The Ministry wanted them [Belfast] to do much more in the way of new housing, to plan their estates more generously and to refrain from using up every square yard of available land in the city. They argued that this was impossible without a boundary extension. The Ministry argued that neither the surrounding local authorities nor Parliament would grant them one. They argued that there was therefore nothing they could do. The Ministry argued that the latest housing act gave them fresh powers to undertake slum clearance and then to redevelop the land. They argued that this would create untold problems in the religious and party political arenas. The Ministry argued... And so it went on, endlessly, bitterly and unprofitably, until one day in an unguarded moment a Belfast city deputation went so far as to say that they might be agreeable to build a few houses outside the boundary provided the Ministry appointed an independent advisor to select the sites and advise upon them. We seized on their suggestion immediately. We approached Robert Matthew of Edinburgh, a leading national and indeed international figure in architecture and planning. Our chief architect and town planner, James Aitken, and I travelled at once to Edinburgh in March 1960 in order to settle the arrangement.[8]

The immediate crisis that led to Matthew's appointment was precipitated by Andrews's refusal of Belfast's latest application for a boundary extension, in November 1959. Despite cross-party criticism within the Corporation and Parliament, the Ministry stuck by its decision. In January 1960, Green piled on the pressure with a devastating memorandum, which urged the city to expand its rather modest annual programme of 300 completions to a level of 2,000.

Andrews explained to the Cabinet that while some progressive Corporation members, such as Lord Mayor Kinahan, willingly accepted the implications of the boundary refusal, 'a few still hanker after the prestige of a greater Belfast . . . But the faction which worries me comprises those who are determined—for private reasons—that the Corporation will not build houses if they can possibly avoid it . . . The nub of the matter is the failure of the Corporation to carry out their statutory housing duties'.[9]

The first hint that a solution might be to engage a consultant from across the water, came at a meeting between Minister and Corporation on 29 February 1960—and, ironically, the suggestion was made by one of the members most trenchantly opposed to the Ministry's housing policy, Alderman Sir Cecil McKee. Over the ensuing months, as Matthew commenced his survey, the Ministry began to negotiate with NIHT for the building of overspill housing outside the city, and drew up appropriate legislation, to be implemented in November 1961. But by mid-1960, Belfast, having second thoughts, began 'deliberately setting out to pick holes in the arrangement' under discussion with the Trust. The Assistant Secretary dealing with the negotiations, C. D. Hoey, commented: 'Presumably after their burst of "enthusiasm", the Corporation have now reverted to their normal pace'.[10]

Matthew's Interim Report appeared in January 1961, and his Final Report in October 1962. His key recommendation was that a 'stop line' should be established, outside which further piecemeal development would be forbidden, to avoid repetition of the 'early mistakes' of Great Britain. This had several consequences concerning housing land. Firstly, it sterilised several big sites already bought by the Trust. Then, by overlapping the city boundary in several places, it enraged Belfast. McKee roared that Matthew was 'cutting off from the city part of its own territory'. The stop line also hit the speculative builder: land prices rocketed, and public and private housing were thrown into competition for the same land. However, as Belfast Corporation had only managed to build 283 dwellings during 1961, despite having sites for 3,000, this constraint was less onerous than it seemed! Unlike Glasgow, housing land shortage around Belfast could never cause a major dispute between city and Government. But all accepted that remaining sites in the Belfast urban area would now have to be developed more intensively. The Trust spoke of a need for 'much higher density', and Belfast predicted that use of high flats in redevelopment areas would offset overspill.[11]

In the Abercrombie tradition, the imposition of the stop line was matched by proposals to 'de-magnetize the centre'. Matthew advocated 18% overspill from the Belfast Urban Area and 12% from the city itself, and the establishment of a 'new city' taking in the existing towns of Lurgan and Portadown and the rural districts of Lurgan and Moira. This choice of site, however, unwittingly fuelled 'the fire of the "west of the Bann" grievance that was then beginning to burn', especially when coupled to the later, politically controversial decision to name the new authority 'Craigavon'. Political opposition to the Ministry's planning policy was not, as in Scotland, a result of the opposition of powerful local authorities which felt threatened, but instead reflected the wider differences which underlay political life in the Province.[12]

Although the scope of Matthew's Plan was officially confined to the east of the Province, he strongly believed that 'regional' planning should eventually be applied to Northern Ireland as a whole: this would achieve parity with Scotland's new Development Department. Matthew proposed the setting up of a similar Government department in Northern Ireland to coordinate all planning and 'development'. Such central interventionism was controversial in many Unionist political circles—not least within Belfast Corporation. But O'Neill enthusiastically supported Matthew's recommendation. In 1965, he set up the Ministry of Development, under the heavyweight political direction of William Craig: Health's housing and planning responsibilities formed part of the new Department.[13]

The Matthew plan was the spearhead of the Department's drive for 'quality' as well as quantity in public housing: 'It was all-consuming—the biggest thing we'd done. "Matthew" passed into the language—towns were "Matthew towns", and you said of housing schemes, "Have they been Matthewed?"' The demands of parity dictated that other cross-channel trends, such as Parker Morris, could not be ignored; but Northern Ireland's response was of a somewhat mechanical character. MHLG planners' higher densities policy was emulated in a circular of June 1963, but the Deputy Principal who prepared it freely admitted to the Superintending Architect that 'without any background knowledge, I have had to rely quite largely on Planning Bulletin No. 2 and, of course, I have cogged from it quite extensively'. However, in 1965, Housing Architects succeeded in seeing off an attempt by an Antrim industrialist to lobby the Minister, on visual grounds, for reduced densities on future NIHT developments in the town.[14] Parker Morris seemed to pose more of a problem, as its standards conflicted with the tradition of small houses, around which the Province's official housing standards and subsidies were constructed; but the introduction of the deficit subsidy removed most worries that output might fall. Eventually, to avoid being 'left out on a limb', the replacement of Northern Ireland standards by Parker Morris was reluctantly conceded by the Ministry, and by the semi-official Committee on Housing Research, a quasi–Development Group set up in 1965 by the Ministry, Belfast CBC, Craigavon DC and Queens University. By the end of the sixties, however, the full standards had only been adopted by Craigavon Corporation.[15]

During the mid-1960s, the construction of Modern flats in Northern Ireland reached its fleeting climax. Under the pressure of the Matthew stop line, the two patterns of multi-storey construction—the slow and difficult redevelopment of inner slum areas, and the adding of point blocks to peripheral estates—were both stepped up. Blocks were built by Belfast on remaining suburban sites within its boundaries, and by the Trust elsewhere in the Belfast urban area. The physical patterns of Modern housing here were little different from those of some provincial areas of England. Dwellings were still somewhat smaller, but estate layouts and architecture were similar. This applied particularly to suburban developments [29.2, 29.3]: the Gibberdian groups of 15-storey point

29.2. High flats in the Belfast suburbs: two 15-storey blocks built at Rushpark for NIHT in 1963–5 by F. B. McKee. Photographed in 1988.

29.3. Belfast Corporation's Mount Vernon Estate Extension development: one 13-storey and one 11-storey block built in 1963–5 by Unit. Photographed in 1965. (*Belfast Newsletter*)

29.4. NIHT's Rathcoole Development 14 (four 15-storey Sectra blocks); photographed under construction in 1965.

blocks dotted among the terraces of Rathcoole [29.4], Seymour Hill or Braniel, often in lavish landscaping, were not unlike the suburban or overspill projects of Manchester Corporation; however, the Trust's Tullycarnet development incongruously included one massive 9-storey Sectra deck-access block, built from 1967. While virtually all these estates were of mixed religious composition, the multi-storey blocks themselves contained small flats at relatively high rents, and were mainly occupied by Protestant tenants. One point block at Dundonald (Ardcarn), immediately adjacent to the Stormont Estate, was finished to luxury standards, for the occupation of civil servants and nurses.[16]

As the sixties housing drive gathered pace, it soon became clear that this Modern production revolution would not extend to building organisation—despite a severe labour shortage, the UK's highest skilled building wages (outside London), an introverted and conservative industry, and a need to import materials from Britain. The likely output of Modern flats was simply not enough to attract much investment or debate. There was a much easier shortcut whenever higher output was needed: just to bring in firms from across the channel.[17] In the cottage-building years of the forties and fifties, this had been done by Belfast Corporation and NIHT—the only authorities operating on a big enough scale to encounter shortages. The Trust built 6,700 Laing [28.2] and Wimpey no-fines cottages, 5,000 Unit dwellings and 900 of Bunton's 'Orlit' houses. O'Neill recalled that NIHT 'did sterling work. It introduced new firms from Britain who helped to bust the building ring which inevitably existed in a small place like Northern Ireland.' Belfast Corporation built Unit flats on the Annadale Embankment, and 800 permanent aluminium bungalows. Later in the fifties, advised by Belfast and the Trust, Unit sponsored the erection of a factory at Ballyclare to make 'Wilson' blocks (small precast blocks made by a Clydeside firm connected with Lawrence and Sam Bunton). Visits to Clydebank and, doubtless, discussions with Bunton, led to the idea of using Wilson blocks to build high flats, and, indirectly, to the Cregagh project.[18]

Once it had become clear, in the early 1960s, that increased production of high blocks was in the offing, both Belfast and the Trust began again to seek increased capacity—and, as before, they looked across the water for it. Farrans and F. B. McKee were working flat out on NIHT contracts for suburban point blocks, and Belfast's contractor for Victoria Barracks, Carvill of Warrenpoint, had gone bankrupt. In 1965–6, the city's next multi-storey contracts, for two blocks at Clara Park and Artillery Street, went to Concrete (with McKee as main contractor) and Laing; NIHT, between 1964 and 1972, awarded 1,500 flats to Laing, including Sectra deck-access blocks on redevelopment sites in Belfast and Londonderry, and various Sectra blocks on the periphery of Belfast [29.5, 29.7–29.9]. The Trust defended its decision not to enter the field of prefabrication on the grounds that its programme was too small, but this argument was undermined by the fact that a small authority such as Larne Borough Council was able (in 1966) to commission three 16-storey Bison blocks. Most likely, the parsimonious Trust's main motive was fear of the well-established extra cost of large-panel construction.[19]

At Stormont, too, the consensus within Green's team was that Northern Ireland's housing programme was too small to justify large-scale prefabrication, especially in the multi-storey field. So the discussion of 'system building' in the Province, from 1965 onwards, was almost exclusively concerned with one and two-storey houses [29.5]. By 1967, a formal procedure was established, under which the Ministry of Development coordinated approval of 'systems' for use in Northern Ireland, on the basis of NBA technical evaluations: twelve were approved, of which only three were for high blocks and two for large-panel prefabrication.[20] Relations with the NBA were uneasy, as the Agency adopted a rather haughty attitude in its dealings with Northern Ireland. In 1968, the Ministry sent the NBA, for comment, a modest booklet on 'dimensionally coordinated' fitted furniture prepared by the Committee on Housing Research; the simple line drawings depicted unpretentious cupboard and kitchen units which had been in actual use by NIHT for some time. They were astounded to receive back a withering broadside from a very senior architect-administrator within the Agency: 'The work is so bad we hardly know where to begin to comment . . . [T] he units look terrible . . . crude construction . . .' and more in a similar vein. The CHR's Architect, R. W. Laughlin, suggested in a tactfully worded reply that the NBA criticisms of 'Fitted Furniture' might have derived from a misconception of the role of the Committee, which was not a high-powered academic body but a discussion and information forum for professional people from all parts of Northern Ireland's fragmented local authority housing world.[21]

Green's new subsidy structure had secured high output; but this on its own would not be enough. It was now imperative to confront the task of rebuilding the slums, as demolitions had totalled 12,000 between 1962 and 1967, compared with 3,500 over the previous five years. In some smaller towns, redevelopment was easy and politically uncontentious: the average late 1960s slum-clearance scheme in Northern Ireland created a dwelling overspill of only 2.4%. The Ministry's model scheme was that of Larne, where a big industrial development scheme was linked to road building and central redevelopment, including 16-storey Bison blocks: 'They were very ambitious, a good council with a first-class Planning Officer. The new industries gave a tremendous impetus, and they bashed on. They consulted us, they were up in our office half the week, we wanted it to succeed—whereas Belfast Corporation were far too big for their boots, and didn't do anything like that!'[22]

In Belfast and Londonderry, the situation could not have been more different from that of 'go-ahead' Larne. The religious polarisation of the inner wards, and the overcrowding and multi-occupation of some Roman Catholic areas scheduled for early clearance, had created a twofold problem: a concealed decanting liability, and a lack of elasticity in the phasing and location of new development. It is in this context that the building of Modern flats should be evaluated. A visitor to Belfast in 1970 from Scotland, Northern England or, for that matter, Eastern Europe might have been surprised not at how many, but at how few multi-storey blocks had been built in the inner districts of a city of 400,000 inhabitants, and so might have concluded that 'mass housing' was not assisted, but impeded by the political–religious constraints

on redevelopment. After all, very often the most pressing consideration in these areas was not so much which type of housing to build, as whether any housing could or should be built at all. The very fragmentedness of the few big Modern redevelopments in Belfast and Derry reflected the special difficulties and urgency of slum-clearance in those cities.

In Belfast, the main obstacle to vigorous redevelopment was the Corporation's continuing dilatoriness, clearing only 1,500 of 27,000 unfit dwellings by 1966 and building at about half the per capita rate for the Province as a whole. In 1961, as a result of Ministry pressure, the Corporation had revised its plans for the first stage of Upper Library Street Area A to conform more closely to the household structure of the Roman Catholic inhabitants: point blocks containing small flats were deleted, and larger dwellings in blocks of no more than five storeys were substituted. By 1965, construction of Stage I of the east side (the 'Unity Flats') by Unit was in progress, but Corporation proposals for the accelerated decanting of the remainder aroused suspicion among the residents; many refused to move out to Turf Lodge until they were explicitly promised that they would be allowed back to occupy Stage I on its completion. The delays continued, and in 1968, despite the recent appointment of Building Design Partnership to draw up a development plan, the Ministry blasted 'the highly unsatisfactory circumstances bearing on the City's redevelopment programme generally'.[23]

During the 1960s, a further obstruction arose, when nationalist politicians resurrected the now hackneyed Ulster tradition of anti-flat rhetoric as a weapon against Corporation slum-clearance. In 1962, Gerry Fitt, the Irish Labour M. P. for Dock, attacked the first completed point block at the Carlisle development (the 'Artillery Flats') as

> a monstrosity of a building . . . [T]he insidious, sinister movement behind the erection of this kind of building is that two bedrooms will suit only people with small families. It is an attempt to induce the Catholic people in the area, who are going to be moved under slum clearance, to indulge in the Malthusian practice of birth control . . . [T]hey are attempting to shift the anti-Unionist voters to the fringes of the city.

Thus Modern redevelopment in Belfast had become a political football almost before it started, with both sides vying in condemnation. In reply to Fitt, the city's Housing Committee Chairman, Alderman W. Oliver, emphasised that he too preferred terraces, and regarded flats as no more than a distasteful expedient. Further controversy arose from the Housing Committee's decision to name the point blocks of the Carlisle development after field marshals of the British Army.[24]

By 1965, Green had realised that controversy, rather than new dwellings, would be the main product of the Corporation's snail-like redevelopment programme. To cut through this tangle, he decided to bring in NIHT as a neutral agency to get things moving. The city was left to finish the areas where it had started building, but was persuaded to delegate to the Trust a large new clearance area in the Lower Falls: Cullingtree Road Area F1. Here, between 1966 and 1972, Laing erected the most grandiose redevelopment scheme in the Province. Land supply in West Belfast was not so tightly constricted as in the South Ward of Derry, so the Trust

29.5. Prototype two-storey Sectra terraces built by NIHT at Monkstown, Newtownabbey: photographed following completion in 1970. The dwellings, each one Sectra tunnel wide, were timber-clad (the ground floor being coated with SBD Stonepaint). (*Belfast Newsletter*)

29.6. Most Reverend Dr William J. Philbin, DD, Bishop of Dean and Connor; photographed *c.*1970. (*Belfast Newsletter*)

could build expansively, with 700 dwellings in Sectra deck blocks up to eight storeys in height, and 95 flats in a nineteen-storey Storiform point block (later collectively labelled the 'Divis Flats'); Unit added a small group of six-storey blocks to the west in 1971–3.[25]

Cullingtree Road's great size, and its deck-access pattern, were explained by the Trust in social or sociological terms, as an attempt 'to preserve, as far as possible, the existing community with its long-established social and family relationships'. But it is clear that the project was also shaped by a complex political equation. Local nationalist politicians such as Henry Diamond, Stormont M. P. for Falls, and Gerry Fitt, just elected Westminster M. P. for West Belfast in 1966, may well have wished to protect their vote base against the threat of overspill. Their feeling of insecurity was illustrated by Diamond's sweeping accusation in 1966 that the city had postponed the rebuilding of the loyalist Sandy Row and Lower Donegall Road areas, while still pursuing slum-clearance at Cullingtree Road, as part of a political strategy to capture West Belfast. Fitt's energy in demanding a start to the rebuilding of the slums—a striking contrast to the negativeness of older nationalist politicians—sat somewhat incongruously alongside his equally vehement rejection of tower blocks and praise of terraces. The deck-access pattern, for some time justified by its English architect protagonists as a revival of the 'traditional street', offered the Trust a way through all this conflicting rhetoric: Laing breathlessly declared that the deck blocks had 'captured a genuine community atmosphere as self-contained and humanitarian as a village'.[26]

The second element in the Cullingtree equation was the Roman Catholic Church. Bishop Philbin had organised a major programme of church and school building in the early 1960s, and had no wish to see his congregation dispersed [29.6]. His representative, Canon Murphy, robustly defended these interests in negotiations with the city and the Trust: 'I can remember many meetings with Canon Murphy and the councillors. The Church had all the infrastructure, and they thought, "We don't want to lose our people". But the reasons they'd give you were the usual stuff: "They've been born and brought up here!"' The final influence at work was, it hardly needs to be said, Belfast Corporation; despite Diamond's claims, the city could not have been unhappy to see the population of the area consolidated *in situ* [29.7, 29.8].[27]

If the slum-clearance problem in Belfast was troublesome, in Derry it was eventually to prove intractable. The uniquely difficult housing circumferences of the 'Maiden City' did not result from its size (a mere 55,000 inhabitants) or its overall density. Rather, the problem was political: it resulted from the discrepancy between the city's symbolic importance to the nascent Unionist nation-state, and the fact that a large majority of its population were Roman Catholics (63% even among electors—compared to 26% in Belfast).

The existing crowding of the Bogside area had been compounded by an unbalanced Corporation housebuilding policy, under which new houses for Catholics were erected only in the nationalist-controlled South Ward, ensuring continued Unionist control of the North and Waterside Wards. Around 1960, it became evident that slum-clearance could no longer be avoided, and that the only remaining politically acceptable greenfield sites were ever more remote extensions of the Creggan Estate. Now the piecemeal rebuilding of the Rossville Street/Lecky Road area by the Housing Trust, as agent of the Corporation, was authorised.[28]

Although the original redevelopment plans, for 1,200 new dwellings, indicated only a small overspill of 84 families, the occupancy of some houses by several households had already created a substantial concealed problem; and there were no Victoria Barracks-like windfall sites available nearby to allow a start to be made on decanting. Therefore, to build up some momentum, the Trust at first erected several blocks of low flats on small public open spaces. Next, from 1964, a scheme of two (later three) Sectra deck-access blocks was built on the Cattle Market site [29.9]—the first example of the 'three level' Sectra variant later repeated by the Trust at Tullycarnet, near Belfast, and built in England at Hahnemann Street, Sunderland, and Lefevre Road, Tower Hamlets.[29]

By 1965, the immediate capacity of the Rossville Street area for self-contained decanting and redevelopment was almost exhausted. The number of surplus households had, since 1960, risen steadily from the original 84 to more than 600, as a result of formation of new households by marriages

29.7. Belfast: NIHT's Area F1 Cullingtree Road Redevelopment Area ('Divis Flats'); 1970 view during construction by Laing, showing the 20-storey point block (Phase 1A) and several Sectra deck-access blocks (Phases 1B and 1B Extension) completed or part completed. (*Belfast Newsletter*)

29.8. Cullingtree Road, Belfast: view of upper deck in 1988.

29.9. NIHT's Rossville Street and Lecky Road (Cattle Market) development, Derry: 1966 view showing Block 3 (a 6-storey Sectra deck block) under construction, and Blocks 1 and 2 (10-storey) already completed. (Laing: by kind permission)

within existing family groups (which added 200), and Corporation road proposals and planning restrictions on the height of the multi-storey blocks (adding over 400). Further pressure on the Trust's operations within the area began in 1965, when a grouping led by the Attorney-General and City M. P., Edward Jones, vigorously lobbied the Ministry of Development to redefine definitions of residential qualification so as to exclude newly married households: 'The mischief is that children of a family in a house put forward their marriage date and then bring their wives to live in the house . . . I am told it is objected to by people of both political parties in as much as the other side complain that such people jump the column—their column as much as ours.' The Minister was able to deflect this proposal by pointing to its potentially damaging political consequences, and to the fact that Edward McAteer, Leader of the (nationalist) Opposition, had frequently pressed the claims of these new households. The Trust, caught between McAteer's demands for acceleration of redevelopment and local Unionist pressure for delay, once more found itself in the role of go-between. In response, it slightly stiffened its rehousing qualifications—which were less stringent than those applying to its ordinary estates—in order to discourage single persons and new households; while, to placate nationalist opinion, it granted relaxations to these same regulations in individual controversial cases, such as that of Brian Friel.[30]

One possible way out of this increasingly complex situation was to arrange some modest level of overspill, and in 1965, at the suggestion of the Corporation (doubtless happy to see the problem pass elsewhere), the Trust approached Londonderry Rural District Council for permission to build on a site at Shantallow. The answer was a flat refusal.

> We were being pushed by the Nats to do the Bogside redevelopment, and the RDC didn't want us . . . 'We've got two seats here, and we'll lose one of them if you bring this crowd out of Derry!' But they disguised it, it was waffling: 'We've got to pay for the services, put in the infrastructure at Shantallow!'—there were 1,001 reasons they thought of, as to why they shouldn't![31]

By early 1967, it was clear that mounting political pressures, inside and outside the city, had effectively blocked any further progress on the redevelopment, whether or not high blocks were to be used. A proposed relaxation in NIHT's rehousing rules now seemed irrelevant: 'While a decision on these lines would have seemed, a year ago, to be jeopardising the successful conclusion of the scheme, we know now that it will make little difference as the scheme will grind to a halt in any case before long, as we are not being allowed to build enough houses to keep the scheme going.' The Assistant Secretary in charge of the Housing Division ruefully concluded that little more could be done by the Ministry in the

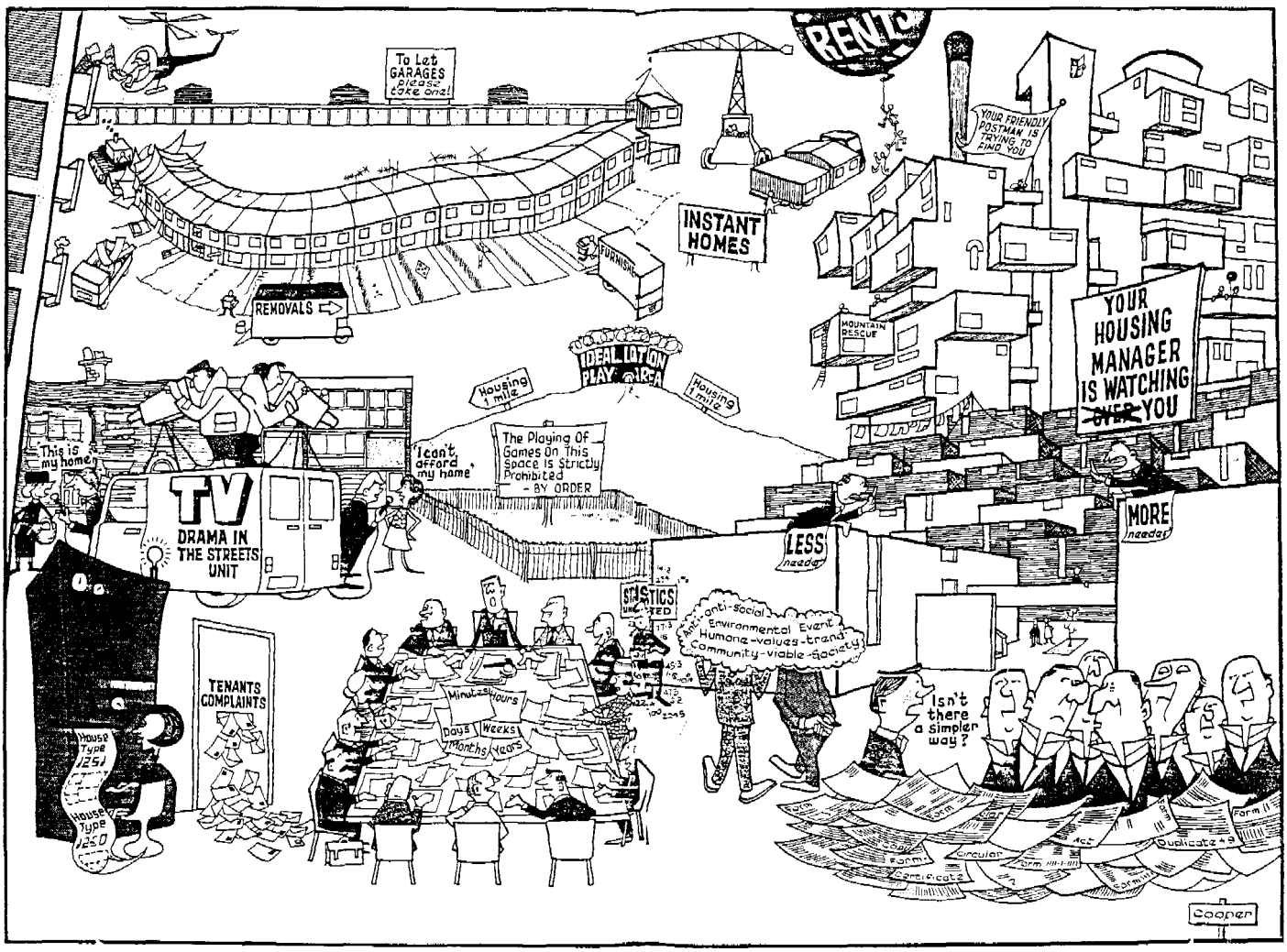
short term, and that the Trust would have to be left to reconcile the conflicting demands of McAteer and 'the Attorney-General's supporters': 'I suggest we take no further action and leave the Trust to do the best they can to strike a reasonably fair balance between those within and without the redevelopment area.'[32]

To sum up: the level and location of building of Modern flats in Northern Ireland, within the framework of Green's housing drive, was shaped by the political constraints particular to the Province. High flats in the outer suburbs were built for the same reason as their counterparts in Scotland and England: the desire for large-scale output of Modern dwellings. The inner-area redevelopments of Belfast or Londonderry, by contrast, were a case of 'political building', or, as often, 'political lack of building'. Use of high blocks to permit redevelopment of particular small residential areas on exactly the same sites seemed essential, if any progress were to be made. Yet, as we have seen in the case of Rossville Street, there were many further, partly disguised political pressures—restrictions on development or on decanting—which also threatened to bring such schemes, multi-storey or not, to a grinding halt. These constraints did not, however, result in any dramatic divergences in architectural style from the patterns established in England and Scotland. The main practical difference between slum redevelopment in Belfast and Derry and that in Britain lay in its day-to-day problems of territorial inelasticity. There was less divergence in the overall political and planning context of redevelopment, in the resistance to slum overspill from within and without. The Shantallow dispute in Derry was echoed in many English cities—for instance in the resistance to the GLC's attempt to secure sites or allocations in the outer London boroughs. But the controversy which dogged slum-clearance, in Northern Ireland, was shaped not by class-based party politics, but by the interaction between the external demands of parity, and the internal differences over national affiliation which underlay political life within the Province.

A striking irony underlay Northern Ireland's vigorous drive for 'development' within the framework of parity: the fact that in some respects, such as slum-clearance and regional planning, it helped undermine—in the end fatally—the reformist Government which created it.

SECTION III: BREAKDOWN

SECTION III: BREAKDOWN



30.1. 'Breakdown' of Modern housing: the designers' view. Cartoon, entitled 'Housing in the Public Sector', by Peter Cooper—a senior architect in Norwich Corporation. (*Municipal Review*, 1971, pp. 188–9)

Introduction

By the late sixties, you could feel that the run thereafter ought to be a lot easier.

J. E. Beddoe, 1988

We always reap the whirlwind of the bright ideas of a generation ago . . . [T]he present harvest of tower blocks comes at the moment when progressive architectural opinion has moved decisively on again.

Nicholas Taylor, 1967

We have seen one of the great fantasies of our time burgeon forth from the minds of a few visionaries to make a hell on earth for millions of people. And now it is over, leaving only what remains of our wrecked, blighted, hideously disfigured cities behind.

Christopher Booker, 1977[1]

THE FIRST TWO sections of this book have told the story of the enthusiasm for the building of large blocks of flats. They seemed the simple, the obvious, solution to the 'housing problem' of cities and towns in all the countries and regions within the UK. But as soon as we began to examine this story in more detail, we discovered not so much simplicity as complexity: an intricate story of the devising of plans and fittings, and of never-ending arguments—arguments regarding the design and function of the surroundings of the Modern flat, and the ways and quantities in which these flats were to be built.

As we all now know, during the 1960s and early 1970s the widespread enthusiasm for these blocks changed into an equally widespread hatred of them. This, too, on the face of it, appears a simple, straightforward matter: Modern blocks are simply bad, they are obviously the wrong solution of the 'housing problem'. But in reality these arguments were, and are, as complex as those which once held that Modern blocks were good. Take just one aspect of this debate: the definition of the 'housing problem' itself. For housing reformers from the late nineteenth century to the 1950s, the housing problem consisted chiefly of the fact that too many people lived not in new dwellings but in what were seen as cramped, dark terraced houses or tenements. From around 1970, for many commentators, the housing problem appeared the reverse: too many of the terraces and tenements had been pulled down, and too many people lived in Modern blocks of housing.

There is insufficient space in this book to continue our detailed account into the years of the decline and fall of Modern housing. A summary of the beginnings of this rejection must suffice. Throughout our sections, we have encountered early doubts, the beginnings of opposition: for instance abandonment of multi-storey blocks in favour of 'low rise high density' by some designers even in the late fifties. Now, in Section III, we shall trace the way in which rejection spread across the whole field of endeavour—design and production alike. But we shall also see, more surprisingly, that many high blocks continued to be built into the seventies and even eighties. There was much overlap between the Modern and the 'Late Modern' or 'Post-Modern' phases of design.

During the 1960s, many housing designers and critics began to turn sharply away from Modern design, and from that overarching social and moral aim of the postwar reformers—the planned creation of community life. At the same time, a crisis of commitment also arose in the field of production. The impetus behind output was sapped by its very success in attaining, at last, a rough housing surplus, after half a century of large-scale public housebuilding; and this housing 'glut' threw into prominence the increasing controversies about Modern flats at both a political and housing-management level. We shall see that, just as the growth and flourishing of housing production had been characterised by considerable regional variations and disjunctions, the same applied in the case of its decline. Equally, divergences of interest among the various 'agents' also continued to play a powerful role. However, the dichotomy between 'producers' and 'designers' became weaker, as the impetus behind output began to slacken altogether, and designers became interested in completely different theories, concerning preservation of old housing and greater involvement of tenants, or 'users' of housing.

This parallel questioning and rejection of the values of 'production' and 'design' had the effect of discrediting and exposing to ridicule the whole ethos of public housing provision [30.1]. Now a fresh professional and political consensus, which took for granted 'The Failure of "Housing"', sprang into being: its assumptions were moulded by the rhetoric of a new generation of forceful architect-journalists and housing pressure groups. By September 1970, for instance, the *Architectural Review* felt able to attack, openly, the sheer scale of Birmingham's housing drive as 'self-defeating . . . who is all this building for?'

CHAPTER 30

The Rejection of Modern Design

Just before leaving Leeds, I drew up at Leek Street in my grey car, in my grey suit and grey socks, and I looked at the grey buildings and thought, 'Is it just because I like grey?' Before, I'd felt, 'What's wrong with grey buildings set on green grass, like the Dales villages?' Now I wondered, 'Is this iron consistency enough?'

Martin Richardson, interview, 1989

THE SHAPES OF the dwellings discussed in this book could be said to have resulted from architectural research, formulated by designers and housing reformers with the assistance of some other professions. If there is one basic and simple characteristic of architects' research and preferences, it is the fact that they keep changing, quickly and radically. Take Modernism itself. In 1980, Barry Russell wrote: 'What we need is not an architecture of fit but an architecture of tolerance.'[1] Modern values of 'fit' from the thirties to the sixties were enshrined in the term 'standard'. To provide 'good', or 'adequate' standards of housing for all formed part of the ethos of the Welfare State. Precisely defined needs, precisely fitted forms: for instance the 'Kitchen for the *Existenzminimum*'. Investigation proceeded according to simple logic, and results appeared universally valid. Zeilenbau blocks provided optimal conditions, such as daylight, in equal measure for all dwellers. Classic Mixed Development supplied a different type of dwelling for each kind of household. There was a belief, if not in perfection, then at least in perfectability: 'If present day building technique were in itself sufficient, a perfect home could be achieved.'[2] A prototype bungalow erected in 1944 outside the Tate Gallery was held to be 'scientifically correct'.[3] Of course, simple logic could easily turn into rhetoric; and verbal rhetoric could, of course, be copiously supplemented by visual rhetoric, by pictures of shiny new blocks, soaring among old, dense, dark tenements and terraces.

Yet a closer inspection reveals that one could never speak of a complete agreement of method in Modern design. There was, on the one hand, a measure of satisfaction with the new housing and its high standards, as in the case of the new LCC point blocks, with their internal bathrooms, 'as in luxury flats'.[4] By about 1960, it was the general level of quality that some found most impressive; in the later sixties, at least the satisfaction with internal planning seemed to be holding up.[5] But during the same decade, a new and much more pervasive scepticism began to thrust forward. Its roots went back a long way. Not all 'standards' had been clearly defined. In one of the most thorough investigations of heating in the forties, the Egerton Report, we read of 'average', 'minimum', 'theoretical' and 'customary' standards, and the Report concludes that it is 'difficult to define human needs for warmth and comfort'.[6] In the sixties, new research on heating concentrated not on provision as such, but rather on the attitudes of tenants. Scepticism also arose about the ever more complicated prescriptions for the use of Modern housing—for instance in the case of playgrounds, where designers attempted to divide children rigidly according to age groups: 'Must children be forced to play according to the supervisor?'[7] The simple logic of classic mixed development hardly lasted for a decade. Taken to its logical conclusion, it implied that households had to be constantly on the move: as soon as size and circumstances changed, you should move to a different type and size of dwelling. By the mid-sixties there was a renewed belief that a single type of dwelling, the two or three-bedroom English house or Scots tenement flat, was suitable for the vast majority of households.[8] Finally, 'the question of the flat', that is, precisely who 'needed' flats rather than cottage-houses, was never answered definitively.

In the sixties, we find investigations of the dwelling prefaced by an assurance that they contain 'no attempt to lay down general standards'.[9] Indeed, when a measure of progress had been achieved for a considerable number of tenants, the fight for standards seemed to become less urgent. 'Progress' now implied the overtaking of the previously defined 'standards'. 'Consumers' (a relatively new word) seek change and new kinds of gadgets with ever increasing frequency; 'wants', not 'needs', should be considered.[10] What mattered now was the study of 'user opinion'.[11] A kind of 'user study' could, of course, be found in earlier research, especially in the well-known Mass Observation publications of the early forties. But later critics considered these methods crude and superficial.[12] 'Design methodologists' who doubted the simple need-fit theory, welcomed the formula of Behaviourism (life as a series of instinctual reactions to external stimuli): behavioural processes 'can be regarded as a link between people and things', as 'man-environment interaction'.[13]

By the later sixties, we encounter a wide variety of design methods and theories. Many pursued commercial, 'motivational' consumer research: some designers of the Pop School argued that our domestic environment is largely determined not by architects but by the commercial designs of the gadget makers. Others, such as Habraken, demanded a radical division between the constructional framework, or infrastructure, and the spaces in between, which the users should be free to fit out according to their own changing

circumstances. Similarly, Martin and March devised sets of universal square grids adaptable to all varieties of use. The catchword 'modularity' implied both a set of abstract measurements as well as flexibility. A faction around Reyner Banham held that the essence of building is not structural solidity but the provision of flexible environmental services. Flexibility and tolerance were concepts which could even cover the aim of the preservationists: adaptation of old buildings.[15] In construction itself, however much conceived in the spirit of pure science and technology, there was a similarly rapid change of preferences: from the solid-looking block structures of the thirties and forties to the equally solid-looking frameworks of the fifties, then to the light-weight frames of the sixties, and finally a return to solid-looking cladding in brick, harling or concrete. In short, the previous kind of thinking, the logic of need and fit, now appeared simplistic. Instead of the earlier method of juxtaposing a limited number of factors and connecting them through a simple uni-directional logic, we now find a new theory of planning and design: the attempt to establish 'operational systems', comprehensive, abstract, but able to accommodate any number of wants or needs.[16]

A further negative key term of the sixties was 'architectural determinism': the question of the influence of design on socio-political and socio-psychological values. This term had largely originated in designers' discussions about 'community': we charted in previous chapters their ever-varying attempts to realise 'community'—through 'neighbourhood', 'townscape', 'association on street decks', and so forth.[17] We then noted that sociologists had begun to doubt the possibility of old-type close-knit communities in contemporary towns, while architects had little faith in sociology, claiming for instance that researchers had faced them with 200 different suggestions as to the best shape of a neighbourhood.[18] Moreover, the new value of mobility led away from the desire for density—somebody even coined the phrase 'non-place community'.[19] In England, Wales and Northern Ireland, the new desire for private outdoor spaces for all dwellings led to a curtailment of public open space, previously deemed essential for communal activities. By the late sixties, we find complete scepticism regarding 'community design'.[20] The ascendant science within architectural research was now psychology. There was a new stress on 'mental' factors. What matters here especially is that both the behaviourist and the 'mentalist' branches of psychology emphasised the relative independence of the user's 'free will' vis-à-vis the planner and designer. 'Need-fit' Functionalism, as well as socio-functional 'determinism', had assumed a simple causal relationship between design and actions, behaviour or actions. The criticism of the sixties was directed against this basic belief.

The demand for the freedom of the individual user was paralleled by an equally new demand for the freedom of the group of users, notably within the planning process: 'participation'.[21] Affected groups had to be asked before plans were finalized. Earlier, that kind of communication had not normally taken place, because both the planners and the 'planned', the professionals as well as the laymen, were deemed to be guided by the same notion of progress. Progress had seemed to be something uni-directional; if anything had to be provided for the recipients of progress, it was information about use of the new kinds of dwellings. Now the users, or tenants, were put into a new category, a category of their own, a category that existed separately from those of the 'expert regimes'. This could lead to the idea that what mattered most was what was already there, that which the residents of, say, an older area of housing had got used to. The chief assets were time and locality, that is, continuity of residential location; further factors of 'entitlement' lay with class, customs, reminiscences, images and the like.

Young and Willmott's *Family and Kinship in East London*, published in 1957, described the Bethnal Greeners as a homogeneously working-class group, whose social contacts were satisfactory, even happy. The fact that their houses were, to all intents and purposes, slums, did not seem to matter much. The influence of the book on designers was limited at first, precisely because of the seemingly minor role played by the physical fabric, by the 'design'. The important factor was that the houses and streets, in conjunction with the inhabitants, had been there for a long time. To crown it all, the authors compared this old, well-worn and well-liked district with an estate of new, salubrious and comfortable housing in an outer suburb, which, however, appeared dull and not conducive to sociability. In 1961, Jane Jacobs's basic message was the same, but the emphasis was now on the surroundings themselves, as the determinants: study the old style of inner urban residential districts, it was that which led to the 'close interaction' of people, houses, pavements, and so forth. For so many years, designers of 'community space' had searched for an ideal shape and size for this elusive commodity. Now the answer appeared eminently simple: look no further than the ordinary old street. Sociologists and psychologists now concluded that individuals or small groups felt comfortable within a space because they could consider it their own ('identity', 'territoriality'), not because a Modern architect had provided them with a new architecture.

We cannot discuss further the question to what extent those trends were influenced by new sophisticated sciences, or whether it all formed part of the 'decomplication' in design discussed previously. Our chief interest here is the sudden spread of the fervent, even brutal condemnation of Modern design in housing. By the late sixties and early seventies, we encounter a new kind of journalist in housing matters, such as Christopher Booker, who essentially offered one basic juxtaposition: Old and New. To put it into the most simple terms: that which already existed was almost automatically good. 'Community' became completely redefined: it was applied to a group of people who were settled in an environment thoroughly familiar to them.

Tracing the permutations in the very term 'community' provides another way of describing the fundamental changes of values which took place in the sixties. In his *Keywords*, Raymond Williams distinguished three kinds of Community. Firstly, there was society as a whole, under the State or a municipality: the postwar consensus for renewal. Secondly, there was 'service to the community': this has overtones of charity, but could also be used for describing the efforts of

most of our housing providers and professionals. These two concepts of 'community' were, on the whole, predominant during the heyday of Modern housing. It is difficult, today, to think oneself back into that climate of opinion. Then, tenants appeared happy and united in their appreciation of their community—synonymous with their new housing scheme—precisely because of the fact of being moved out of dense, old surroundings. For, although their new Modern dwellings might be of a shape that was not at all familiar to them, they included many hitherto unattainable amenities, including specially designed bright, open, communal outdoor spaces. All this was provided through the larger 'community', and appeared as a step towards 'equality'. Today's designers have not forgotten about health and 'mod cons', but they are reduced to inconspicuous features of 'environmental control' which can be accommodated in new and old buildings alike. Williams's third kind of 'community' was, broadly, today's definition: 'participation' or 'community action', which usually means defending what had been there as of old: as such, this third version of 'community' can actually be directed *against* the first two. From all this, one might draw the conclusion that the term 'community', covering as it does, such divergent notions as equality among a very large number of people and the special nature and status of small groups, might hardly recommend itself for use today. Yet, even now, it seems to have lost none of its power in discussions about planning.

From the early 1960s, we find the first sociologists researching the pathology of new estates comprising high blocks of flats. Cooney found little community spirit in some recent high London blocks.[22] Numerous subsequent investigations culminated in *Defensible Space: People and Design* (1972) by the American Oscar Newman—a fairly narrow book, in that it deals chiefly with the prevention of crime in the public and semi-public spaces between blocks of flats. Newman assumed a very simple, one-way causal relation between design and behaviour. Although low social class was acknowledged as a contributing factor, the shape of the dwelling was branded the chief culprit. Thus the questioning of 'architectural determinism' had proved to be a passing phase of the late sixties. Implicit in most of the earlier design policies we discussed in previous chapters, this theory was reapplied with full force after 1970—but now as a weapon with which to *attack* Modern housing.

We have, in various parts of our book, discussed 'language': that is, we have attempted to analyse not just the content of designers' and critics' pronouncements, but their style of writing and rhetoric in its own right. Each phase of Modern design seemed to be accompanied and spurred on by its own kind of language. Lack of understanding between the various agents involved in housing reform—for example between designers and producers—often seemed in no small measure due to the use of different 'languages'. In the immediate postwar years we noticed, on the one hand, rousing statements about general renewal and Modernity, and, on the other hand, the narrowly scientific reports of the building technologists. A little later came another specialised language, the architects' socio-stylistic terminology. A new kind of architectural journalism from the sixties attempted to bypass professional debate and engage directly with tenants and 'public opinion': this greatly helped the 'participation' movement.[23]

However, a more powerful debating weapon than all words or 'languages' put together was the message conveyed by pictures. We have referred to the *Architectural Review*'s tradition of selecting unflattering pictures of buildings it wanted to condemn—for instance in the 1953 'Prairie Town' campaign. Similar methods were used in the equally influential onslaught of 1967 on high blocks, entitled 'The Failure of "Housing"', and edited by Nicholas Taylor.[24] The new key words were the highly complex terms 'image' and 'symbol'. In the forties and fifties, there was a consensus, certainly among Modern Movement Functionalists and even among more cautious apologists such as Arnold Whittick or J. M. Richards, that there could be no place for 'symbols' in the design of the dwelling—although symbols might be needed in public architecture.[25] Functionalism entailed a way of designing that professed to be strictly factual. One might argue, though, that the whole of Modern design had in fact been accompanied by strong image-making, that large Modern blocks were always photographed and seen as 'images'. But the blocks, and their images, consistently served as signs of 'progress', and thus there appeared to be a strong correspondence between visual and factual elements. By the later fifties, Lasdun and the Smithsons had begun to use the concept of image or visual metaphor with greater emphasis: for instance 'cluster' or 'image of a community',[26] implying that an image could be something that existed by itself. In the early sixties, we notice a further split: in Banham's vision of non-style, non-place, non-solid-shape design, consisting essentially of service mechanisms, tangible images are provided *only* by something else, by advertisements and by collectors' objects, by the imagery of the mass media.

To Nicholas Taylor in 1967, the 'Corbusieran Towers in a Park' (Hutchesontown-Gorbals, Glasgow), the 'Mill Town' (Stirling & Gowan's Avenham scheme, Preston) and the 'Italian Hill City' (Bishopsfield, Harlow) all seemed 'visual images of community', but it was precisely because they were only 'images' that they did not work, according to Taylor; the image seemed a mere 'substitute for reality'.[27] Taylor also refers, in this list of images of communities, to the 'English Country Village'. In his book of 1973, *The Village in the City*, he left no doubts as to the power of *that* image. We have witnessed, at times during our account, the often hegemonic status within 'British' housing debates enjoyed by specifically English values and assumptions. In the designers' and critics' invective of the late sixties and the seventies, the same familiar pattern applied. For it was, above all, the renewed spread of the images of old English villages, and Georgian and Victorian streets, which hardened the polarisation with the new bad images of the 'tower blocks' [30.2]. Again, we must remember that the actual dwelling behind the differing images might in most respects be the same. It was precisely this lack of connection between fabric and image which, from the seventies, did not seem to matter any more; it no longer interfered—as Taylor still believed in 1967—with the effectiveness of the image, or the architecture. Are the problems we experience with the polarisation of dwelling types chiefly problems of 'images'?

30.2. 'Tomorrow's Slums'. (*Surveyor* 11-12-1970)

CHAPTER 31

End of the Drive: The Collapse of 'Production'

The 'numbers game' had backfired on its well-meaning participants.
L. Esher, 1981[1]

EARLIER IN THE century, the Government had discarded the self-regulating ability of the privately rented housing market, and had substituted the blunt instrument of public house-building. In doing so, it had committed itself to overcoming slums and shortages by brute-force building. In place of the fragmentation and anonymity of market-directed building cycles, there emerged powerful individuals and organisations dedicated to the continuous, open-ended construction and management of dwellings in accordance with political, architectural, social and other aims. A new, much longer-term pattern replaced the abrupt cycles of speculative development: the largest of the new public authorities kept up a generally high production (with subsidiary peaks and troughs). But even this more protracted building campaign had to come to an end sometime. This happened when a politically perceived 'housing glut' was attained, across the UK, at varying times in the late sixties and seventies. Now councillors became aware that the public clamour for output was at last ebbing. Previous swings in housing production had been temporary: by the mid-seventies, it had entered a seemingly final decline. In this and the next chapter, we shall trace the reasons for the collapse of output. We shall see that the very success of production in creating new housing diminished its own political urgency, and allowed other concerns, new and old, to come to the fore. Of these problems, the most startling was associated with recently completed Modern estates: the spread of management difficulties, vandalism and even a kind of general squalor previously associated with the old 'slums'.

ENGLAND, WALES, NORTHERN IRELAND: MODERN HOUSING REJECTED

During the late 1960s, Modern housing throughout most of England and Wales, and in Northern Ireland, experienced outright rejection at local-political level. Might the violence of this reaction, in England, have stemmed from a latent conflict between Modern housing and one key aspect of that country's cultural predominance within the UK? Earlier in the century, it had seemed as if the 'national' UK housing agenda was to be set by English norms, progressively extended to Scotland so as to choke off the latter's links with mainstream European urban housing. Yet the 'national' Modern production drive, in the event, had an opposite outcome: the bolstering of the flat in Scotland, and the extension of the Scots–European pattern of apartment blocks across urban England.

A potential link between production's very success in England, and its future political eclipse, had already been brutally revealed in 1965 by a dramatic volte-face on the part of that most driving 'crusader', Karl Cohen [20.8], when confronted with a glut of new housing in Leeds. Cohen had already commenced a bold policy of area improvement; but now, with the worst slums gone, and their occupants decanted into high blocks, he openly challenged the city's twenty-year slum-clearance programme and hitched England's time-honoured cottage Utopia to the Victorian terrace house and its preservation (an idea experimented with, several years earlier, by LCC 'soft' architects, at the Brandon Estate). To the bewilderment of the Town Planning Committee and key officers, who continued to blast back-to-backs as a self-evident 'social evil', Cohen noted that many actually preferred them to his own new Modern blocks at Whinmoor, and declared that the improvement drive would be expanded. 'The Housing Committee', Cohen proclaimed, 'would not in future accept layouts which were not two-storey dwellings and three-storey houses.'[2]

Leeds's policy reversal, which took several years to implement, might credibly seem to us, today, a striking harbinger of the dilemma which the Modern housing glut would set English 'housers': whether to abandon output themselves, or to cede power to others able to dress up old anti-flat slogans in the new rhetoric of 'participation'. At the time, however, it was an isolated exception. From the end of the war until the late 1960s, the Government had incessantly called for an improvement drive, to match production of new dwellings, and had tried one financial and administrative expedient after another to encourage this. But all had foundered on the rock of municipal indifference and opposition. The problem of decanting 'unfit' dwellings which were also overcrowded (thus *adding* to the waiting list), the inherent difficulties of speed and coordination, and an almost total lack of interest on the part of councillors and, seemingly, the slum-dwellers themselves, had deterred all but the most determined Housing Chairmen, such as Cohen: 'If you're committed to the numbers game, it's easier to do that by building your houses new on greenfield sites than to go in for the much more laborious, architect-intensive, quantity surveyor-intensive business of doing up houses!'

The chaos which these obstacles could cause, in combi-

nation, was demonstrated by the spectacular failure of Newcastle's ambitious improvement drive, 'Operation Revitalize', launched by T. Dan Smith in 1960. Here, the Housing and Town Planning Committees spent six years bombarding a prototype area (Rye Hill) with competing initiatives, whose only results, it was then discovered, were rocketing costs and rampant dereliction. Residents and councillors pleaded for demolition—'We believe these streets are fit only for slum clearance!'—and bitterly contrasted their terraces with Smith's proud new high flats: 'One only has to climb to the top of the new tower blocks in the area to see the whole of the Cruddas Park development, which is really beautiful seen from that angle, then look up . . . Beech Grove, Warrington and Kenilworth Streets. They are past 'modernising'; they don't want pulling down, they want blowing up, my Lord Mayor.'[3]

However, around 1967–8, the new ideas of improvement suddenly began to acquire general local-political currency in England and Wales—a change that paralleled the activity of the designers and critics of the period (discussed in the previous chapter) in propagating novel ideas of 'conservation' and 'user participation'. The ebbing of perceived public pressure for output, the drying-up of the queues in councillors' gardens, allowed dormant anti-flat sentiments to revive, which by implication increased the attractiveness of improvement. At the same time, many councillors had started to feel uneasy at the scale and pace of the demolitions of privately rented 'unfit' housing; disquiet was transformed into open opposition, in many places, when clearance operations began to move into owner-occupied areas. This change of local-political opinion against the Modern housing drive was not gradual, but burst into the open, in the context of the sweeping victories of Conservative and other non-Socialist groups in the 1967–8 municipal elections. In the first systematic party-political use of issues concerning the architectural form of housing, Conservatives in many municipalities branded large-scale clearance and multi-storey building a 'Socialist' policy, and, on their accession to power, moved quickly to cut output and increase the number of improvement schemes.[4]

In 1968, MHLG came into line with this local groundswell. Lord Kennet drew up a national policy of improvement, motivated by two beliefs: firstly, that improvement was now cheaper than building new (vital in an economic crisis); secondly, that fit houses were being cleared which could more easily be improved. With the White Paper 'Old Houses into New Homes' as a catalyst, redevelopment areas were replaced by General Improvement Areas across England and Wales. This process, as always in our story, was uneven in character: even in the late sixties, many English authorities were still vigorously building high flats, now the line of least resistance for rapid production, as had been block dwellings and cottage estates in the forties. To jolt them out of this would need an external stimulus: and it was here, as we saw in Chapter 23, that MHLG architects now for the first time took a decisive role, exploiting the mandatory yardstick. Initially, in 1967, the latter had been used to stop prestige-building of high blocks by small towns, while loopholes were found for cities such as Birmingham and Manchester. But in May 1968, the severe jolt to public opinion administered by the Ronan Point disaster gave high flats' Government detractors the opportunity to snuff them out altogether, while achieving painless expenditure cuts.[5]

Their initial strategy was simply to hold down yardstick levels despite inflation: by 1969, this had begun to squeeze out costly patterns, especially prefabricated high blocks. Any major multi-storey programme now had to be carefully justified by association with small sites and high notional site densities. The attacks became bolder: in 1975, the Department of the Environment openly called on authorities not to build any more multi-storey blocks, or developments exceeding 100 p.p.a. Although public housing completions in England and Wales, outside London, fell by 58% between 1967 and 1973, output was to some extent preserved in cities which turned to large-scale medium-height deck-access housing of the type encouraged by the yardsticks. Manchester CBC maintained output above 2,500 for several years from 1968 as a result of large deck-access schemes such as Harpurhey or Beswick-Bradford, reaching a maximum of 3,991 completions in 1971; while Birmingham CBC, whose point blocks were penalised by the architect-defined yardsticks, saw its programme plummet from 9,033 completions in 1967 to 1,444 in 1972.[6]

Greater London was a weighty exception to the collapse of Modern housing production in England. Energetic building was prosecuted by the few Labour councils to survive the 1968 local elections, such as Southwark and Newham, and by some Conservative authorities such as Lambeth and Islington. In some outer boroughs, such as Barking, tower blocks and open-space layouts were built even in the early 1970s. Inner London now favoured deck-access blocks around four to six storeys in height; these benefited from regional adjustments to the yardstick in 1969. Although annual GLC output remained static at around the 5,000–6,000 level in the late 1960s, the boom in building by the boroughs ensured that London completions continued to rise until 1970, when a maximum of 27,235 was recorded. Between 1970 and 1973, the capital's output fell by 42% to around 15,500, but then recovered sharply to around 19,000 in 1974–5. This first trough in output reflected municipal election fortunes, with a Tory landslide in 1967–8 followed by a Labour clawback in 1971. The brief 1970s recovery mainly comprised 'low-rise high-density' building (especially in design-minded authorities such as Camden or Lambeth) and even 'traditional' terraces. In contrast to the ferocious anti-output rhetoric of some municipal Conservatives, at Ministerial level the post-1970 Tory junior housing Minister, Paul Channon, maintained the Mellish tradition of wholehearted support for London production.[7]

At the GLC, unaccustomed to cost curbs, the new loan-sanction and yardstick controls demoralised staff; the Council automatically made use of the full 10% unsubsidised allowance above yardstick level. The administrative complexities of the yardstick compounded overcommitment of architectural resources, and produced a state of chaos on large sites such as Grahame Park, Barnet [27.8].[8] Many of these problems eased following Horace Cutler's repudiation of the LCC imperial tradition during his period as Housing Chairman between 1967 and 1970. His land acquisition cuts rattled the

housing architects, fearful of intrusions on their comfortable world: 'Campbell used to say, "You can't do this!" I'd say, "You just watch me, mate!"' Following Labour's recovery of the GLC, completions rose by 39% within two years, from their 1972 minimum of 3,821. However, the drying up of windfall sites, which resulted from Cutler's policy, prevented Labour from reestablishing any 'strategic' GLC housing programme in the 1970s. Tensions with the boroughs persisted during the chairmanship of Gladys Dimson, whose 'Strategic Housing Plan' was suffocated at birth in 1975 by borough opposition.[9]

In Northern Ireland, the late 1960s witnessed an extreme political reaction against the building of Modern flats—at the same time, paradoxically, as overall output continued to climb sharply. Helped by the variable subsidy and a rising rate fund contribution, completions nearly doubled between 1965 and 1971: 29% of dwellings in the Province were now publicly owned (compared to 19% throughout the 1950s). By the early 1970s, per capita production, astonishingly, had even edged ahead of Scotland! In housing, as in road construction and other areas of public enterprise, the evolutionary policies of Green's team at the Ministry of Development were at last bearing fruit. Yet this programme, with all the talent and effort which went into formulating and implementing it, was fundamentally shaped by the Westminster constraint of parity, and its realisation would coincide with the breakdown of O'Neill's attempt to reach a self-contained resolution of the Province's political problems.[10] The attacks against Modern flats in Northern Ireland rose to a crescendo at the same time as broader political complaints about housing: nationalist politicians alleged that the building and allocation policies of smaller local authorities, especially in rural areas, were politically motivated. Although the Trust's allocations were still believed to be fairer, there was discontent at their secrecy; on the other hand, some Unionist-controlled authorities complained at the alleged propensity of Trust managers to take the 'best' tenants.[11]

The most direct connection between Modern flats and the general politicisation of the housing question in Northern Ireland was the continuing controversy about slum redevelopment. Among councillors in both nationalist and loyalist 'ghetto' areas, there was now extreme suspicion of any redevelopment. In 1965, multi-storey blocks had been attacked in Parliament as 'the slums of tomorrow'; but the real turning point came the following year, when Belfast's Housing Committee threw out a proposal to build seven 24-storey Tracoba blocks at Black Mountain for decanted loyalist slum-dwellers: the alleged unpopularity and social problems of high flats were cited.[12]

Northern Ireland's production reached its height in 1971. By then, the Ministry of Development had remedied most immediate political grievances concerning housing, and had mapped out fundamental reforms. In early 1969, Londonderry CBC was replaced by a quasi–New Town Corporation, and the Ministry brought in a Province-wide model points system, closely paralleled by contemporary reforms in Scotland. Meantime, two White Papers prepared by Oliver in 1967 and 1969 heralded the Macrory reforms, which were to sweep away the Province's antiquated and politically vulnerable clutter of local authorities in 1973.[13] But the Ministry's careful reform programme could do nothing now to break the escalating cycle of lawlessness. In 1969, there had started widespread intimidation in the Belfast suburbs, and peripheral estates such as Rathcoole and Suffolk rapidly changed from a mixed to a homogeneous or polarised religious composition, as did some districts of Craigavon, where 2,500 dwellings were completed or being built by 1971. In the redevelopment areas such as Cullingtree Road [29.8] and the Lower

31.1. The repudiation of Modern flats: Area A Redevelopment West Side, Peter's Hill, Belfast (built from 1969 by McKee), under demolition in 1981. (*Belfast Newsletter*)

Shankill, the new Modern blocks were racked by vandalism, and some became the scene of battles between rioters, paramilitaries and the security forces [31.1].[14]

In 1971, a reform was hastily implemented which brushed away the last vestiges of Ulster's frugal, private-enterprise-orientated pre-1945 traditions—while, at the same time, lessening somewhat the force of the existing public housing drive. In that year, the Northern Ireland Housing Executive was set up under intense political pressure from Westminster: a single body which would deal with all public housebuilding, allocation and management. The chief motive for, and achievement of, this reform, was to put a decisive end to the rumbling political controversy over allocations. Its production implications, by contrast, were perhaps less well considered: here, a solution based on the new Macrory local authorities, and redefined NIHT operations, might have protected output better against the disruption of the troubles.

Events, however, were now moving at breakneck speed in the opposite direction. Indeed, the founding of NIHE in some ways foreshadowed the imposition, the following year, of British direct rule—a step which would bring to an end the Northern Ireland statelet itself. Within the field of housing production, some of the Executive's policies, such as introduction of Parker Morris standards and a blanket ban on multi-storey building, can hardly have been helpful: an optimistic annual target of 10,000 was set, but in the event output, far from attaining this level at all, declined by 44% over the four years following its 1971 maximum.[15]

SCOTLAND: STAY OF EXECUTION

In contrast to Northern Ireland, England and Wales, the decline in Scotland's Modern housing programme was undramatic, and characterised by fewer violent swings of evaluation. Its peak was in 1970—between the English and Northern Irish maxima—when just under 35,000 public sector completions were recorded: this coincided with a marked revival of multi-storey building. Thereafter completions declined to 13,016 in 1974 and 9,119 in 1977. Mabon's strategy of redirecting output towards smaller authorities and the counties was reflected in the fact that, by 1974, the proportion of public completions located in the four cities and the large burghs had fallen to one third, compared to one-half in 1945–66. Of the counties, Lanark fell back from its great programme of the late sixties, while others surged forward through energetic building of cottages: for instance Aberdeenshire, whose forceful Housing Convener, Sandy Rennie, pushed through a prefabricated timber building drive in 1973–5, in anticipation of an oil-related housing shortage which never materialised. During the mid-seventies, the New Towns, particularly Livingston, took up an ever greater proportion of the public housing programme (over one-third by 1977). Housing improvement was also hesitantly embraced: from 1968 to 1970, Housing Treatment Areas were designated, with varying success, and a Glasgow housing association improvement drive began to emerge. Earlier, Gibson, like Cohen, had yearned to begin large-scale 'municipalisation' and rehabilitation of nineteenth-century dwellings (here, tenement flats), as a complement to high-flat construction. But this plan had been blocked by persisting unfitness and overcrowding, and by the apparent lack of support for improvement among councillors and tenants in the early 1960s: 'People didn't say: "Can you rehabilitate this tenement?" They said: "Can you get me out of this tenement—the roof's leaking—it's verminous!"'[16]

Yet the beginnings of 'rehab' in Scotland did not neatly coincide with any political repudiation of multi-storey building. Indeed, once the mid-1960s planning confrontations in Edinburgh and Glasgow had been resolved, there was no further general public onslaught against high flats—despite the fact that (as we shall see in the next chapter) severe management difficulties had by then emerged in some key schemes. Within SDD, the planners' energies had been diverted into a fresh round of New Towns, and the Grieve anti-high-flat tradition was carried forward by only a few researchers, such as Pearl Jephcott, who were pursuing projects on the sidelines of the Planning Division.[17] In the mid and late 1960s, English or Anglo-Scottish architectural critics began to intervene: in 1965, Colin McWilliam savaged Red Road's 31-storey towers as 'cynical population-containers' and, in 1967, Nicholas Taylor attacked the same scheme's 'nightmare sublimity'. However, the local-political support for production of Modern high blocks remained solid, even in the early seventies. After an initial panicky dip after Ronan Point, high building gathered pace again from 12.7% of approvals in 1968 to 21.8% in 1970, and only finally declined in the mid-1970s. Relatively little deck-access housing, with its connotations of English 'traditional' terraces, was built. Instead, there was a fairly undramatic continuity: continuity in the municipal support for the building of point and slab blocks, particularly in Aberdeen; and continuity between the 'tenement revival' of the nascent rehabilitation movement and the 'tenement survival' of Edinburgh Corporation's massive Wester Hailes project of 1967–74, with its 4,800 staircase-access flats in blocks up to ten storeys high [31.2]. The crushing dominance of Anglocentric norms and assumptions within Scots housing debates—as evinced in the earlier acceptance by 'public opinion' of Garden City rhetoric—now, at last, seemed to be on the wane.[18]

HOUSING CONSTRUCTION: FROM BOOM TO BUST

The fall in the level of high-flat construction in the late 1960s was paralleled by a steep decline in the fortunes of prefabrication. In the field of practical building, it had become obvious from the start that organisational problems and demands for minor variations, would vitiate the airily predicted advantages of 'factory building'. But, despite downturns in the general building cycle (in 1966) and in speculative housebuilding (following the 1967 Callaghan credit squeeze), public housing still remained cushioned from output cuts well into 1968.[19]

Only later in 1968 did council housing starts in England and Wales finally record a significant fall. This, in combination with a further downturn in building activity across Britain, turned boom into bust, sending prices through the floor and destroying the last remnants of the economic rationale of prefabrication for the contractors. Overextension of resources

was now cruelly exposed—as Crudens found in the case of their Skarne 'system', which turned from a handy marketing gimmick into a very expensive liability. At Killingworth, Longbenton UDC without warning rescinded Phase 2 of a major contract for Skarne deck blocks: 'I said "Do you know how much money has been spent on designing the second phase?" They said, "Oh, don't worry!" I said, "What the hell do you think two dozen engineers have been doing for six months!"' Local firms who had proudly commissioned their own 'systems' were even worse hit. They now had to grasp at small contracts anywhere, in order to recoup some of their investment. Matthews and Mumby, after Crosby's cancellation of their serial contract for point blocks in 1967, moved the moulds and assembly gang down to St Albans to erect a single 13-storey block as a structural subcontractor. The curtailment of some 'system' contracts was a by-product of the changes of political control at the 1967 and 1968 municipal elections. Sheffield's and Nottingham's withdrawal crippled YDG Mark I, already in deep trouble as a result of Shepherd's rashly low initial tender. And the Ronan Point disaster in May 1968 only accelerated the withdrawal of local authority goodwill.[20] Contractors large and small had

31.2. Re-convergence with the tenement tradition: Wester Hailes Contract 5, Edinburgh (seven 9-storey blocks built from 1969 by Crudens), seen in 1989. (RCAHMS)

leapt aboard the bandwagon set in motion by the big cities, and many were left seriously exposed when it suddenly ground to a halt—although the proportion of high flats erected by prefabricated methods actually continued to increase for a while. The collapse of prefabrication showed that the multi-storey boom of the sixties had not created significant monopolies within the building industry.

In the field of building labour, too, disruption dogged many large projects in the late sixties and early seventies. This was caused by a wider malaise in the industry. The sixties had been marked by a decline in real building wages and an increased reliance on subcontracts and complex bonus agreements. Labour-only subcontracting (the 'lump') spread following the introduction of Selective Employment Tax in 1966, and became particularly prevalent in Greater London council housing during the mid-sixties commercial building boom. Falls in membership led to the consolidation of building unions in one organisation, the Union of Construction and Allied Trades Technicians (UCATT: founded in 1968).[21] During the late sixties, the labour climate, especially in London, became more and more volatile. The trouble was not caused by prefabrication, as off-site workers were exempted from Selective Employment Tax, yet received building pay rates; instead, unrest spread exactly when it was in steepest decline. In the turbulent years around 1970, some schemes ground to a halt through simple mismanagement, while others were subject both to official trade union action, culminating in the 1972 national building strike, and to unofficial disruption orchestrated by Communist agents-provocateurs. Trade union dislocation of contracts—often focused on escalating wage claims—was long established in some 'provincial' centres, especially Merseyside. By contrast, most of the Modern housing projects selected for the second pattern of agitation were in London, as were certain non-housing 'targets', such as MHLG's Marsham Street headquarters. To provide the most public demonstration of 'radicalised' labour-power, some of the largest and most prominent housing schemes, including big blocks, were singled out by the Communist-backed 'Joint Sites Committee' of shop-stewards: for instance the Cubitt developments at World's End and Thamesmead, or Myton's Barbican Phase IV. Other cases, such as Crudens's schemes at Lewisham, Turriff's Ivybridge

31.3. Contractual chaos: Ivy Bridge Farm development, Hounslow, seen abandoned in February 1970, nine months after the termination of Turriff's disastrous, strike-plagued contract. The job was subsequently reassigned to, and completed by, Mowlem. (Hounslow London Borough Council)

for Hounslow LBC [31.3], or McInerney's at Alsen Road for the GLC, were less famous, but equally disruptive to production.[22]

The situation was equally unstable in the direct labour forces which had proliferated since Brooke's restrictions were lifted by Circular 50/65. Some soon slid into chaos. In Southwark LBC, for instance, the DLO rapidly became the Achilles' heel of Hayes's housing drive. Unlike his small Camberwell force, the London Borough's DLO was made a separate department, under the command of William Rapier, previously DLO Building Manager of (ominously) Dundee Corporation. Despite 'Mr Rapier's do this, do that, rushing here, rushing there', concern soon mounted that the latter had failed to establish a firm grip on his unwieldy new Department. This general concern was compounded by alarm over the matter of a Kango hammer which, according to the District Auditor, had been hired in June 1966 by Rapier, allegedly 'lent for the weekend' to the son of the then Council Leader, and never returned. Although the Town Clerk and Borough Architect manfully attempted to extend their own project programming procedures to cover DLO contracts, they were impeded by the illness and retirement of Rapier in August 1967. Matters were further complicated by the Labour Group's bizarre decision, on NBA advice, to set up a second, autonomous DLO to build the large North Peckham project. Not surprisingly, that scheme, too, was soon in a state of turmoil. Ringing the changes, the Council then abolished the main DLO and transferred its work to the North Peckham force; finally, Bovis was appointed management contractor, with instructions to arbitrate between the various competing departments and officers. While the Labour Group blundered from one makeshift plan to another, the North Peckham project architect was left as 'piggy in the middle', between the two DLOs, Bovis and the members: 'It was an extremely unpleasant experience, and it went on for six years—like going through a tunnel without any light at the end!'[23]

But the discrepancy between Modern ideals of technically and organisationally advanced building, and disorganised practice, seemed most glaring in the case of Glasgow's Red Road development of 1962–9 [COLOUR X]. Here, behind Bunton's soaring rhetorical façade of steel-framed American scientific prowess, there was the reality of a gigantic project in a continual state of crisis, improvisation, and structural redesign, and locked into the wider context of the institutionalised chaos of DLO work-practice. The project architect, Sam Bunton Jnr, recalls:

> On a visit to Sweden, we saw blocks with parquet floors, where all the workers who came in after the floor-layers had to wear sandals, and they had a very nice restaurant they went to. At Red Road, we put in a small canteen every ten floors that people could go to, but the workmen just sat around in them, threw tea-bags out of the window, trod their pieces into the floor, and wrecked the place. In Sweden and Denmark, they were putting in electric controls to the doors—but at Red Road, you'd see spring-loaded doors installed, and when you came back the next day, the spring was out and the door had gone![24]

On the building materials front, too, the changes of the late 1960s, above all architects' repudiation of concrete in favour of 'traditional' or hand-made brick as a facing material, brought their own problems of organisation. This became clear even in the case of precursors of the main trend. For example, the design of Darbourne's architecturally innovative Lillington Street development [19.13] required use of facing bricks from Guestlings Brickworks, Hastings, but the latter's entire output later proved to be only just sufficient for this one project. After mounting delays, Darbourne eventually had to substitute slightly darker facing bricks on subsidiary elevations of Phase III. But by the late 1960s, there had been compensating improvements in the productivity of brick building, through organisational rationalisation.[25]

By the early 1970s, a fresh commercial building boom had begun to develop, especially in the South-East of England. Now, however, local authorities' dependence on brick construction and low-height building types was firmly established [COLOUR VII]. Therefore much greater difficulty was experienced in getting tenders, even on a fully fluctuating basis, than had been the case between 1960 and 1965, while jobs in progress were subject to calamitous shortages of bricks and bricklayers.[26]

CHAPTER 32

'New Slums': Management Problems and the Undermining of Production

I remember going round the Heygate Estate in Southwark on the opening day. I went to the highest flat in the highest block, and there was this old lady there, who had ribbon all over her kitchen taps. I asked her why, and she said, 'It's the first tap I've ever had in my life!' Previously, in Queen's Buildings, she'd had to share one with five other families! It gave her a great deal of happiness—a lovely flat with its own toilet, bathroom, it all looked fine on paper. A year later, she came to me and begged me to get her rehoused—vandalism had broken the lifts, muggings had started, she was virtually a prisoner in her own flat!

Lord Mellish, 1989

What they call slums now, with their vandals and dampness and so forth, is not the same as what we thought of as slums then: tenements literally falling to pieces, places with no toilet, no water even, full of rats, with the roof falling off!

Pat Rogan, 1990[1]

WE HAVE SEEN that the swing away from Modern housing production towards rehabilitation was surrounded by party-political controversy and accusations of 'failure'—despite the fact that, in some ways, it resulted from a housing glut, and thus from 'success' in its own terms. Perhaps the most powerful argument contributing to this rejection was that which cited the sudden rash of housing-management problems in newly completed Modern blocks, as evidence that the blocks themselves were inherently defective, and indeed that their design contributed to the management difficulties. We have already touched indirectly on this problem, when discussing sociologists' and architects' investigations of the pathology of new housing schemes. Later, in the hands of writers such as Alice Coleman, the arguments of Oscar Newman came to be used as a kind of crude historical tool to 'prove' that multi-storey flats, or all flats, were a 'failure'. We will return to these polarised historical evaluations in the Conclusion. Here, we are interested in the beginnings of this argument—and in the context not of architectural theory but of municipal housing management. We cannot attempt any general analysis of the history of housing management or dwelling habits, or systematically investigate management problems in their own right, whether from the viewpoint of tenants or from that of managers. Our concern here is the debilitating effect on the municipal 'production machine' of management controversies, or of claims that new housing might in itself contribute to problems such as vandalism, and that the particular shape or equipment of Modern flats, particularly multi-storey flats, might be, as such, to blame.[2]

Ever since the nineteenth century, the traditional, simple argument of housing reformers (including postwar 'crusaders' such as Gibson) had been that old, squalid slum dwellings cause social deprivation and thus produce difficult tenants. At the same time, there was also a notion that slum-dwellers were inherently a group apart, a 'residuum' with its own unruly and incorrigible culture. At first, the disparity between these two ideas seemed unimportant, as the identity of stigmatised dwellings and stigmatised groups was total. In the interwar years, however, when local authorities first began to build new dwellings specifically for slum-cleared tenants, such as Glasgow's Rehousing tenements, it was held that the unruliness and social problems of the old slums might be transplanted lock, stock and barrel to these schemes. To counterbalance such problems, a comprehensive framework of strict management and public health regulation was maintained: the salubrious openness of the slum-clearance developments was seen as a precondition for this control. The workings of this management apparatus were not regarded as a subject for public debate or concern. A decisive shift seemed to occur during World War II. Delinquency and social controversy began to spread to many more new schemes: in some places, even blocks under construction suffered severe vandalism. These problems were concentrated in traditionally cosmopolitan industrial heartland areas, notably Merseyside and Clydeside, above all in large, remote peripheral schemes of the 1950s such as Kirkby and Easterhouse [32.1].[3]

However, so long as the need for new homes still seemed overwhelmingly pressing, the idea that new or fairly new council dwellings might themselves be, or become, 'slums', stood no chance of gaining general political support, as constituting a part of the general 'housing problem'. As late as 1964, Sir Keith Joseph, for all his private reservations about the 'numbers game', made this fact perfectly clear at a Housing Centre conference, even in relation to interwar houses. A councillor from Newcastle under Lyme complained that:

> his authority had 9,000 properties of which 3,000 were prewar. Without special attention these houses would deteriorate

into slums. In fact local authorities throughout the country would soon be faced with the same problems as private landlords.' [In reply,] Sir Keith suggested that . . . if this was his worst worry he must be a lucky man. The worst things must be dealt with first, and the improvement of prewar council houses was not among the most urgent problems.[4]

The first significant changes to this situation occurred in the late 1960s, following the achievement of, very roughly speaking, a housing surplus in Britain (although not Northern Ireland). Just as the years following any downturn in the private market in the late nineteenth century were characterised by a high proportion of 'empties', concentrated especially in the most recently built, remote dwellings, so the end of Modern housing production took on a 'last in, first out' character, in management terms. As we saw in the case of Southwark, the more active and forceful the authority in pushing through grandiose late redevelopments (particularly for slum-clearance purposes) in the teeth of tightening Government restrictions, the more dramatic was the turnaround, from urgent demand to letting difficulties and even dereliction. In schemes let to large numbers of slum families at one time, such as Glasgow's Springburn 'B' (rehousing the many people displaced by the 1968 Great Storm), the spread of letting difficulties and stigmatisation as 'new slums' might be immediate. At the same time, the greater availability of new dwellings in the late sixties and early seventies allowed waiting list applicants to become much more choosy, and thus difficulties also arose in the letting of large schemes not directly linked to slum-clearance.[5] It may have been in response to the sixties production 'success' in building unprecedented numbers of new dwellings for direct occupation by slum-dwellers, that that decade saw a sudden strengthening in the association of council housing and indices of 'poverty': a jump of a quarter in the proportion of unskilled household heads in England and Wales who were housed in municipal dwellings, and a leap of 110% in the percentage of public-renting households with no income earner (compared to only 37% for all tenures).

32.1. Cartoon from Glasgow Corporation Housing Department newsletter *Housing News*, May 1947: drawn by Charlie Baird, plasterer in Maintenance Section. (City of Glasgow District Council)

What was the cause of this sudden rush of management controversy regarding Modern flats? Could it have been that the 'crusade' of councillors such as Gibson to rehouse slum-dwellers directly into large developments of new dwellings at low rents—and not just the new but spartan tenements of the interwar years, but Modern dwellings replete with 'mod cons'—carried with it the seeds of its own eventual demise? Were the dwellings themselves to 'blame', or were the characteristic sixties Modern blocks, such as deck-access housing, simply victims of circumstance—the dwellings that *happened* to predominate in new public housing construction during the decade when council housing's overall social status took a nosedive? Questions about the alleged 'failure' of Modern flats will be briefly touched on in the Conclusion. At any rate, to the 'providers' at the time, this new controversy, at the very moment of triumph, seemed deeply disheartening. To 'break the back of the housing problem', massive batches of dwellings had had to be built—but these could only quickly be filled by more-or-less random lettings! The completion of Sheffield's massive Park Hill Park Two (Hyde Park) scheme in 1966, for instance, solved much of the city's 'housing problem' as then defined, yet its very size seemed immediately to bring new management difficulties to the fore [26.18]. Harold Lambert, then Housing Development Committee Chairman, recalls ruefully:

> Now, we'd broken the back of the slum problem in Sheffield—and we'd brought a twelve years' waiting list down to six months, if you were prepared to take what was building! But allocation of these big developments was difficult. If you get one or two families in there that were not prepared to toe the line, it's like putting the proverbial bad apple in the barrel![6]

The effect of these management difficulties in newly completed estates, sapping municipal political support for large-scale production, was amplified by the shock-tactics of a new generation of housing reformers, who were prepared to make full use of the 'mass media' and popular journalism in order to stir up political controversy and discredit the traditional structure of housing provision. In the vanguard of this movement were Jeremy Sandford's television programme 'Cathy Come Home', broadcast in November 1966, and the initiatives of the housing charity Shelter, established the following month.

Ironically, the stated policy objectives of the new reformers at first differed very little from the values of the traditional municipal 'producers', and in no way questioned public housing provision as such—at a time when some Conservative politicians such as Horace Cutler were making far more novel proposals! Shelter flatly demanded that much more new public housing should be built, for those hitherto excluded by their inability to pay high council rents—a category defined to include not only the inhabitants of privately rented 'slums' (whose landlords Shelter lambasted in time-honoured terms) but also that recently identified group, the 'homeless'. The policy prescriptions put forward by Shelter's Director,

Des Wilson, who closely controlled all the charity's campaigns, seemed like an uncanny throwback to Gibson's 'crusade': lower rents, higher Government subsidies, higher output by the big cities, all 'to be pushed through with ruthless determination'. Only slightly later did Shelter discover, and enthusiastically embrace, the emergent user-participation and rehabilitation movements. However, it was the campaigning techniques of groups such as Shelter which were important in our context—techniques which paralleled the unconventional methods of young architectural journalists such as Nicholas Taylor. Beginning with 'Cathy Come Home', the new polemic ridiculed the established agencies of municipal housing provision as clumsy and outmoded, fit only to be rejected or bypassed.[7]

As we saw in the previous chapter, there was a particular vehemence about the rejection of Modern flats in England, Wales and Northern Ireland—even by former supporters, such as Karl Cohen—which cannot be entirely explained by the lessening in the general impetus of public housing production and provision. This rejection combined elements of the traditional distrust of flats in those areas, with new complaints common to all parts of the UK, concerning the specifically *Modern* features of the new blocks. Councillors in the 1950s had opposed multi-storey blocks because of their unfamiliarity or the possible difficulties with children or loneliness that young mothers might experience. Now, there was an equal concern about delinquency and malicious damage—especially in relation to those very 'luxury' fittings, derived from private blocks, that had previously been seen as irreproachable emblems of Modernity. Gradually the older logic that vandalism was caused by the moral deficiencies of the vandals or by the influence of their previous slum conditions, began to lead to the idea that the particular type or shape of new blocks might, itself, encourage vandalism. As early as 1960, alarming levels of vandalism by teenagers were being recorded in newly completed schemes: most spectacularly, at Birkenhead's Eldon Street/Oak Street scheme, where the litany of destruction included the fouling and jamming of lifts, the smashing of windows, the blacking-out and flooding of entire 10-storey blocks through sabotage of communal electrical and firefighting equipment, and repeated acts of arson [32.2].[8]

In Scotland, too, large Modern developments began to attract management problems. The habits of slum life overcame even the dramatic physical change to multi-storey housing: within months of completion, point blocks of twenty or thirty storeys were transformed into teeming microcosms of the slums of Cowcaddens or Garngad. Continuity with the tenement tradition was also symbolised by the fact that, in contrast to the English-derived practice of assigning high blocks individual names, the great majority of Glasgow's were merely given street numbers, in the normal European manner. In 1962, SDD Housing Administrators had cautioned Gibson on the management implications of the proposed Blocks 1 and 2 at Red Road—31-storey towers each containing 120 three-bedroom flats. He conceded there was a need for a 'social welfare survey' of Glasgow high blocks, to take in questions such as 'tenants' attitudes to specialised fittings, e.g. ash-chutes, incinerators and the like'. But he felt that potential difficulties with children could be ameliorated by the appointment of play wardens or 'rangers', and that prospective tenants' existing 'slum' surroundings posed a far worse problem: 'The Corporation . . . had had no difficulties with children living in high flats, and many families welcomed such accommodation.'

To Gibson, preoccupied to the point of obsession with eradication of the traditional nineteenth-century 'slum', the emergent pathology of *Modern* housing would have seemed incomprehensible.[9] But the managing of Red Road was to be as stormy as its building. On letting of Blocks 1 and 2 [25.14 and COLOUR X], the high proportion of children, in 31-storey towers with only two lifts, created a reputation for juvenile delinquency which blighted the entire scheme even before its completion. Block 2 (33 Petershill Drive) was stigmatised as the 'worst' on the scheme by residents, management and the police; for example, a tenant complained to the Corporation that an old lady's hat had been 'pulled from her head because she had the temerity to check boys who were stoning the watchman'. Similar problems occurred in Edinburgh's Martello Court, which, within a year of its completion in 1964 [25.21], was attracting 'continual police attention' in response to complaints of hooliganism and prostitution, and had become locally known as 'Terror Tower': 'This place will be a slum in another month. None of them lives here. They come to Pennywell every night. People up this court give them tea and chips. As I write, two men are at the foot of the balcony challenging those up on

32.2. 1959 perspective of the Eldon Street and Oak Street development, Birkenhead: two 10-storey slum-clearance blocks built from 1956 by Thornton in 'Prometo' construction.

the 17th floor to fight.' Yet, as we saw in the previous chapter, there was no sudden swing of 'public opinion' against high flats in Scotland during the late sixties; so it was only after 1970 that these controversies began progressively to affect building policy. Glasgow's massive Darnley deck-access scheme, commenced in 1972, was subjected to drastic surgery during its construction: some deck blocks were only built to a height of two storeys, while other blocks were deleted even after their foundations had been built.[10]

The 1970s also saw, throughout the UK, the growth of controversy about the material conditions of some blocks, focusing not so much on the Ronan Point issue of 'progressive collapse' but on more mundane concerns, such as condensation and equipment malfunction; a few celebrated cases, such as the YDG Mark I schemes or Glasgow's Hutchesontown 'E', sparked off vigorous debates as to whether design, management, poverty or tenant lifestyle was the main 'culprit'.[11] While some authorities such as Birkenhead and Glasgow seemed relatively unconcerned about what happened to their high flats after completion, others tried to protect their multi-storey programmes from the corrosive local-political effects of uncontrolled management and maintenance problems. Motherwell's Housing Convener, Hutchison Sneddon, lists the main policies which supported his second great push of high-flat construction [25.18], well into the early 1970s:

> Firstly, a high standard of supervision—a caretaker's office in every block. Secondly, no young children in blocks and no flats bigger than three apartments [two bedrooms]. Thirdly, a high standard of finish. We spent a bob or two on finish, and it was successful—people polish their floors in Motherwell blocks! Whereas Glasgow would spend their money on the highest specification of lifts, electrics, plumbing, things you couldn't see, then just leave the blocks to the vandals! A man coming into one of my houses in Motherwell didn't look and say, 'My ballcock isn't stamped! My cylinder isn't a grade 1 cylinder!'[12]

Only one large municipality in the UK—the City of Aberdeen—managed to bypass completely the political and professional rejection of high flats, and carry on building them right until the very end of public housebuilding on any significant scale in Britain. Although several authorities (especially in Inner London) built isolated high blocks after the early 1970s, Aberdeen was the only city to continue with a systematic programme of multi-storey construction—linked to intensive management and a very strict letting policy, designed to exclude 'problem' tenants from high flats. Here, during the late seventies, the very buoyant demand for tenancies in the city's existing multi-storey blocks [24.11], and councillors' insistent clamour for the erection of more of these (in their opinion) 'five-star hotels', prompted the Housing Committee, led by Councillor Robert Robertson, to launch itself enthusiastically into the building of a new series of 10 and 11-storey point blocks containing old people's sheltered housing during the late seventies and eighties; the most recent scheme, an 11-storey point block at Jasmine Place, was erected in 1985 by Wimpey. By contrast, those same years, the early and mid-eighties, were witnessing extraordinary acts in England: many authorities, such as Liverpool or the YDG cities, had embarked on the frenzied destruction of thousands of allegedly 'unlettable' high blocks, while another town, Rochester, took the scarcely credible decision to blow up its entire multi-storey stock for purely aesthetic reasons—to 'rid the skyline' of high flats! Yet, just as this demolition mania was sweeping England (and spreading to Scotland), avant-garde London reformists were venturing the first positive reassessments of high flats from a housing-management point of view—and a group of London tenants (The Society for Action for Children in Tower Blocks) had even challenged that most sacred of multi-storey shibboleths, their supposed 'unsuitability for children'.[13]

Why was Aberdeen, a geographically isolated and culturally self-contained industrial and commercial centre, able to achieve a seemingly undramatic continuity of multi-storey building, while other cities were locked into a violent cycle of enthusiasm, rejection and tentative revival? Why, more generally, did some authorities encounter severe problems of 'management' while others succeeded in avoiding them, even in expanding multi-storey building in the face of a gathering national political consensus of hostility?

This limited account has purposely steered clear of the history of habitation, management and maintenance; but we can here at least tentatively suggest that the 'successful' authorities achieved some kind of balancing act between the various constraints on the perceived 'success' of a housing scheme: first of all, skilful management and letting, but also high-quality finish, and a local culture of respect and care in the habitation of dwellings. Although we have not set out to investigate systematically the experience of Modern flats by their inhabitants, many informal comments and stories related to us by tenants (encountered, for instance, during the compilation of the Gazetteer) suggested that some 'users' have also arrived, over time, at the same conclusion. To epitomise these many conversations and snippets of recollection, we will conclude this chapter by citing just one of these informal testimonies: that of Andrew Balderstone, a sheet metal worker who lived for twenty years in a maisonette in John Russell Court, a 20-storey point block on Edinburgh's Couper Street development, Leith. His story, told very much from the viewpoint of the 'traditional' skilled working-class council tenant of the years up to around 1970, seemed to encapsulate the life-story of a Modern 'New Slum'—from cherished, sparkling newness in 1964, the heyday of Rogan's 'housing crusade', to squalor and stigmatisation in 1984 (following which, in the event, this block was emptied and rehabilitated). Balderstone recalled:

> It wasn't anything to do with the block itself, really, it was a change in the kind of people who lived there, and how people behaved. When we first went in, we were introduced to the Caretaker, a retired seaman. He was very enthusiastic about his job. And for the first five or ten years, things were really great, everybody kept the block spotless, you were really proud of having such a nice new house. There were one or two practical problems, kids having to play outside, that kind of thing—but nothing's perfect in life, and in general we all loved it!

The problems only started after about five or ten years, when they started putting a different kind of tenant in. It began with one couple especially, really rough-looking people straight from the worst slums. Well, to start off with it was just him beating her, but soon she got the hang of it, and started beating him back even worse! They were four storeys above us, but it was deafening—they'd come in steamin, well after midnight, loud music straight away, shouting the odds, great thuds and bangs, inside and out—you'd lie there in bed listening—crash, that's all their plates on the floor—clatter, that'll be his record collection landing in the street! After that, things started to go gradually downhill—soon there was four or five families like that, spread up and down the block. This was the idea of the Corporation housing management. 'Management'—what a sick joke! They had this crazy idea that by spreading the bad ones out among the normal tenants, you'd bring them up to your level—but what happened, especially in a big block like that, it was the opposite—*they* brought *us* down!

It was like a kind of cancer. At first you still tried to keep your standards up, but you soon learnt it was a waste of time. I remember there was a rattling storeroom door on our landing, which I used to keep shut with two nails and a string. But some sneaky bastard started coming, every night, and cutting the string, just out of sheer malice—so I gave up. Lots of little things like that started happening. Things started to vanish from the rooftop drying green, so people stopped using it—then the same happened with the launderette, and the drying cupboards. The lifts had always been fine before, but now they started breaking down all the time, and it took longer and longer to get someone out to mend them. Then one year there was a rubbish strike, and some of these new families, they wouldn't take their bags downstairs, oh no, first they jammed the chute, and then they just started tipping rubbish bags out of a window in the chute room, straight on to my balcony. Can you imagine it! Rotting rubbish, waist high! At first I thought, let's not have a row, so I tried cleaning it up myself, but then the next few nights more bags just came crashing down. So in the end I got really mad. I lugged all these bags back up, dozens of them, and emptied them all out on the floor outside their doors—old tin cans, tomatoes, fish-heads, the lot! I shouted: 'Here's yer rubbish back, ya shower of scummy bastards!' Then I ran back downstairs as fast as I could, and back into my house. I could hear screaming and swearing up there—but that was the end of those people chucking down their rubbish-bags. The awful thing was, though, you realised now you'd become the same as them!

Well, the Caretaker couldn't cope with all this, so he left, then more and more of the neighbours got fed up and got out—and all the Housing Department could do was fill the vacant flats with single parent families. So it got worse and worse, faster and faster. After they started putting the druggies in, about the late seventies, the vandalism and the break-ins really got going, all-night parties with idiots using the rubbish chutes at 3 a.m., masses of bottles crashing down. That was the time when the craze for throwing things out suddenly started. I came out one morning and found my car's rear light broken, and my rear bumper bent down at ninety degrees. I couldn't work out how someone could have hit it there, as it was still in its parking space. A woman came up and said: 'I know how your car got like that.' She said one of the families at the top had been chucking doors down, and one of them had been caught by the wind and landed on my car. Then, after that, we had a bus-stop, with a lump of concrete on the end, hurled down like a spear through the roof of a parked van, and embedded in the road beneath it. There were live cats, as well. Finally somebody up on the 18th floor chucked a whole motorbike down one night, during an argument apparently. How they even got it out through the window I can't imagine. That's the real dregs for you! Respectable working-class folk, like we had at first in our block, wouldn't do that kind of thing. Then we had our first suicide—an addict took a header through a window on the nineteenth floor, and splatted in the car-park—and then there was a murder in the block, about 1980, a guy got his face stamped in. Then some of these new people started agitating to get the block pulled down, saying it was a hell in the sky and all that stuff—well, of course that's what it was by then, after they and the Council had done their worst! By that time all I wanted was to get out. At last I managed to get rehoused—I shouldn't imagine there's any of the other original people left there now. It all seems such a terrible waste—they were perfectly good houses, if the Council had only bothered to look after them, rather than using them as a dumping ground![14]

CHAPTER 33

Conclusion: 'Utopia' on Trial?

[From] the desolation that is felt at the realisation of the maddest of all Utopian schemes, the open-planned housing complex, where streets are replaced by empty spaces from which towers arise, towers bearing neither the mark of a communal order, nor any visible record of the individual house, and demonstrating in their every aspect the triumph of that collective individualism from which both community and individual are abolished . . . it is surely absurd to think of the popular outrage at these things as no more than a 'matter of taste', rather than a re-affirmation of injured moral feeling.

Roger Scruton, 1979

Blocks of flats are very similar to prisons.

Roderick Gradidge, 1991[1]

By the early 1970s, Modern public housing seemed to have lost its validity across the entire spectrum of endeavour, theoretical and practical. In place of the broad consensus of the 1940s, there was now a total and unbridgeable schism. On the one side, the great intentions of designers and producers, driven by a messianic enthusiasm to 'clear the slums'; on the other, a crescendo of complaints by critics and tenants. And the strongest of all the new negative images of Modern housing was that which had previously appeared as the most powerful symbol of optimism: the multi-storey block. Now came the final confrontation, over whether Modern housing itself was good or bad.

As historians, we might be tempted to duck altogether the issue of 'success' or 'failure' by claiming that we, unlike designers, builders, journalists or politicians, have no vested interest in such judgements, and are not compelled to make them. But historians of housing, unlike historians of many other types of buildings, are in the curious position that their objects do not belong in some detached 'theme park', but are still in everyday use. We do not seek to make prescriptions as to what should or should not be built in the future. Yet we cannot completely avoid the simple question: are Modern blocks good or bad? Impartiality or complete relativity are not feasible or desirable here; but we do wish to avoid, and believe we can avoid, evaluations which are reduced to stark statements of 'all good' or 'all bad'. This, we feel, has been the chief shortcoming of previous accounts of this subject.

Any book on the provision of housing deals with values throughout. 'Values' refer to feelings, attitudes, opinions, convictions—in short, motivations—which prompt the enunciation of specific theories, directions of research, images and ways of designing; these in turn propel councillors, officials and contractors into action. Lastly, the propagation of 'values' is meant to persuade recipients of the desirability of the kinds of solutions provided. We have seen it as our first task, as historians, to analyse the origins of these values, to differentiate them according to the various 'agents' that held them. We have noted throughout the fluctuation in their use, the clashes between them: how some values were abandoned and others replaced them.

But, of course, historians, like everybody else, entertain their *own* values. In the process of investigating and writing, the historian selects values of the past and relates them to those of the present. How, then, do our own values relate to those of the providers? Firstly, there was a sense of discovery: it was the general rejection of large Modern blocks which spurred our desire to analyse the intentions of their creators. No longer can one encounter 'committed' Modern architects and 'driving' councillors in full cry [1.2, 25.2]. In a period of hostility towards mass housing provision and much Modern design, we felt impelled to take a closer look at the aspirations of a period of fervent belief in both of these values. Present-day 'Post-Modern' scepticism concerning technological 'progress' also led us to identify specifically Modern attitudes towards technology.

Yet we believe that today, in the early 1990s, it would be a rash historian who would claim to have succeeded in analysing the general wartime and early postwar climate of opinion of State provision—that is, the Welfare State as a whole—in a completely detached way. We began our account by stating that we could not question the need for public housing as a whole, nor attempt to judge the precise numbers and sizes of dwellings that were 'needed' at any given time.[2] Nor have we questioned the general assumption of most housing 'providers' during the decades from the 1930s to the 1960s that the results of their endeavours had to be, and look, 'Modern'. Any attempt to judge whether these pervasive values were or were not appropriate, would go far beyond our frame of reference and our capabilities. Neither do we think we are in any position to challenge the apparently general postwar belief in the problem solving power of politicians, organisers and technical or design experts—nor to discuss whether rented or publicly owned housing was then, or is now, generally more desirable than owner-occupied or other private dwellings. We have thus avoided the 'criticism of ideologies' practised by some recent researchers such as

Dunleavy—especially where this takes the form of unearthing 'hidden agendas', or ideologies of which the 'actors' were not conscious at the time. Nor have we systematically analysed the effects on public housing of the cultural tensions within the centralised, yet multi-national UK polity. This is a history of housing, not of the British state or 'Britishness' in general, and (despite the geographical arrangement of Chapters 25–29), we have on the whole limited our specific treatment of national-cultural issues to the reporting of individual instances of striking commonality or divergence. In this account, our intention has been to record and analyse key policies and actions, characterising the personalities involved and the way they acted, with expediency, passion, ambition, rancour, even irregularity. Our chief definition of the political driving force of Modern housing production is that it stemmed from the personal motives and decisions of the individual 'patron', or local group of 'patrons' (such as the political leaders of a large city), and from the constraints and opportunities surrounding each major decision. There was, however, evidence that external pressures, such as the overspill campaign, exerted an indirect effect on policy.

Then we pass to the values of technology. Many of these we still share: there seems no need for argument about the choice between a fast lift or a slow one, nor about the desirability of self-containedness in dwellings. Although, in recent years, environmentalists have begun to warn against too stringent a pursuit of cleanliness, few today would venture disagreement with one of the basic aims of Modern housing: to provide bathrooms for all. A much more contentious question, however, is that of the technical performance of Modern blocks' construction over the years since they were completed. Claims of structural inadequacy first became commonplace after the Ronan Point collapse of 1968, almost at the end of the Modern housing boom. Although these arguments fall outside the scope of our account, it is at least worth pointing out that they are, in their present form, riddled with anomalies. To take just one example: while the many deaths through the collapse of 'traditional' dwellings each decade (after gas explosions, etc.) go almost unreported nationally, we constantly hear of multi-storey blocks as 'unsafe' or 'liable to fall down'. Yet in fact, over the quarter century since Ronan Point's four fatalities, nobody in any part of the UK has been killed in the collapse of a high block—because none has actually collapsed. Many blocks, of course, have been deliberately demolished by local authorities, often on grounds of 'poor construction': for instance two supposedly 'badly built' 15-storey Bison blocks at Niddrie Marischal, Edinburgh, which in 1991 survived unscathed the detonation of over 2,000 charges of high explosive, and eventually (carrying over twice their designed collapse load) had to be smashed down by a giant battering ram! What the historian can confidently state, however, is that emphases and expectations concerning Modern technology have changed. We no longer see the need for special visual emphasis on the presence of technology, and on the New in technology. Today, we would not deliberately build a lift shaft as a separate unit on the outside of a block of flats. We have today become used to accommodating Modern conveniences into all kinds of structures, irrespective of whether or not they *look* Modern.

The third group of issues which we must re-emphasise here, was that of the complex socio-political and socio-psychological ideas which dwellings or groups of dwellings were, and are, held to express. Today, the word 'community' is used as much as at any previous time in the postwar period; we have attempted to trace the changes in its meaning from the 1940s to the 1960s as cautiously as possible. Much subsequent housing psychology, such as that of Oscar Newman or Alice Coleman, attempted to identify negative links between building form and behaviour. Lastly comes the area of purely aesthetic values, or visual formal preferences; it is here, and only here, that we advocate complete relativity. Thirty years ago, one of the authors of this book liked simple, slim high blocks—whatever their use—and, in the sixties and seventies, long, low and complex blocks; it is quite possible that before long some will like slender high blocks again.

But is there not one other set of key values concerning housing in the UK, or rather in England, Wales and Northern Ireland, which bypasses all the arguments so far: the assumed general preference for houses, or 'cottages', over flats? In this book, we have been at pains to avoid assumptions of the inferiority of the flat, after all, considered the 'normal' type of inner urban dwelling in virtually all Western countries, including Scotland. The 'flats versus houses' debate appears to us simply flawed—not just because it obscures deep national-cultural divisions beneath a blandly Anglocentric 'British' formulation, but also because of the imprecision, even within a specifically English context, of the very term 'house'. Today's proponents of the blanket 'English House' formula have overlooked the fact that it contains two major components which differ greatly, and even conflict with each other: first, the 'countrified-cottage-as-every-Englishman's-birthright' formula of the early twentieth-century Garden City reformists; and second, the later twentieth-century notion that the densely packed terraces of Georgian and Victorian England constitute the ideal dwelling for most types of household. To have realised the Garden City ideals would have required nothing short of political revolution (to allow land nationalisation and density redistribution), and relocation of vast numbers of people to far-flung cottage suburbs or colony-like New Towns. Yet, as we saw above, very considerable opposition was stirred up by the limited overspill actually implemented; one might also recall the rioting in 1991 at that earlier garden suburb for slum-dwellers, the Meadowwell Estate, North Shields. Moreover, the gigantic upheaval of planned 'dispersal' would also have entailed the destruction of precisely those densely packed old terraces most cherished by England's 'Everyman' today! The particular advocacy of the latter type is of very recent origin: indeed, along with the 'tenement revival' movement in Scotland, it stemmed from the 'Urbanity' movement of the late fifties and sixties, which has of course also featured prominently in our own account of dense, medium-height Modern patterns, such as deck-access blocks. Correspondingly, a passion for air and greenery linked the advocates of Garden City cottages with those of widely spaced high blocks of flats!

Is all this, however, anything more than academic nit-

picking? If everybody from the average terrace-house Saxon yeoman to the Prince of Wales insists 'tower blocks' were a 'failure' when they were built, are a 'failure' now, and will remain a 'failure' for ever more—then surely there can be no real argument? This claim, however, overlooks the fact that it itself, and much other present-day rhetoric, represents a simple continuation of a longstanding polarised framework of English-British debate concerning housing, within which even the most impressive consensus enjoys very little security of tenure. Before the mid-1960s, to praise Victorian terraces or tenements and attack the Modern dwelling, however complex one's arguments, could only have seemed sophistic, if not incomprehensible. Then within a decade, professional and public opinion, and the burden of proof in argument, were all thrown into reverse. From now on, the 'failure' of Modern flats was seen as so obvious, that it only needed to be stated in crude slogans. A few raucous blasts from Coleman's *Utopia on Trial* (1985) illustrate the point: 'If houses predominate, their benign effect upon social structure may dilute the effect of isolated blocks of flats among them.' 'Council housing is definitely worse designed than private.' 'No more flats should be built.' Or, Alison Ravetz in *Remaking Cities* (1980): 'The appropriate architecture for domestic life is the vernacular and not the monumental.' Here, apart from the mischievousness of the polarisation between 'monumental' and 'vernacular', Ravetz continues the grand old English architectural tradition of authoritarian rhetorical prescriptions: we conclude that everyone should live in converted farmhouses deep in the countryside, and that all flats should be done away with.[3]

But, it will impatiently be countered, who cares about the polemical excesses of critics and historians? It's the 'users', after all—women and men, adults and children—who *really* count! We noted, in the Introduction and Chapter 30, the complexity of present-day arguments concerning 'participation'. Will the present-day sacrosanctity of this concept secure its exemption, alone and for ever, from the polarised conventions of housing debate, or merely store up for it an even more ignominious fall from favour? Will we hear it proclaimed one day that the physical degradation of Modern estates such as Aylesbury or North Peckham is not evidence of betrayal of 'recipients' by 'providers'—but of the reverse? Or are today's 'enabling' champions of participation, whether 'community architects' or People's Princes, destined to be reviled as a new and immoral kind of 'provider', whose power is expressed not openly in reports and committee meetings, but in behind-the-scenes manipulation? A few of the surviving 'providers' of the fifties and sixties dared to express views to us which pointed in this direction. It is not our fault, they complained, that vandalism emerged as a major problem in the fifties and sixties. Yet where we did attempt to build in a vandal-resistant way, we were subsequently accused of inhuman 'brutalism'! We are charged with destroying 'traditional communities' by clearing the slums—yet the delinquency and disregard for rules and regulations which underlies so much of the present-day squalor of Modern estates surely cannot be separated from 'slum culture' and, thus, from that same sense of 'community'! As to Modern technology: people buy Modern gadgets and know that they will break if not used carefully; why, then, have the costly Modern fittings in and around some flats, for instance in Liverpool or Southwark, been so persistently mistreated—especially when there are no equivalent problems in high council flats in other places, such as Aberdeen or Newcastle, or in blocks transformed through management initiatives or transfer to housing associations and private developers? Is it any more meaningful, councillors complained, to speak of 'failure' in the case of multi-storey flats let to the most poverty-stricken or disorderly tenants, or located in cities with a general culture of disrespect towards public property, than it would be in the case of a luxury car driven over a cliff, or a television set hurled from a speeding train? One architect, formerly involved with the controversial YDG Mark I project, acidly suggested a 'controlled experiment': 'Someone should have bussed a set of English tenants from Leeds to Copenhagen, and Danish tenants from Copenhagen to Leeds!'[4]

Already, there are isolated signs which may herald a change in critical and public opinion: for instance, as mentioned above, various campaigns by multi-storey tenants to resist setpiece demolitions and 'design disadvantagement' alterations, and to argue for sympathetic improvement; and a growing number of research projects and practical schemes centred on management reforms. During our own investigations, we visited all multi-storey blocks of public housing in the UK, and were surprised to discover how few were in a state of serious dilapidation—in contrast to high flats' general 'media image', and the detailed claims of Alice Coleman's survey of council housing in two of the poorest boroughs of London. The miraculous effect of proper management and, especially, on-the-spot concierge/caretaker provision (even in an area of poverty and deprivation) can be attested to personally by one of us—for the past two years, a contented occupier of a cosy twentieth-floor flat in that former 'New Slum' and 'Terror Tower', Edinburgh's Martello Court [6.11, 25.21]. In a further development, some women's groups have also begun to question whether it is any longer legitimate for architectural and planning critics to treat gender issues as a subordinate branch of their own campaigns. Might this, in due course, spur researchers to take a fresh look at the thorny matter of 'families in high flats', and further call into question the status of that fighter against the 'Norman Yoke': cottage-loving, flat-hating 'Everyman'? May we in due course expect to see the cultural connotations of this revered symbol disentangled from the views and interests of 'Everywoman' and 'Everychild' (not least, outside England)?[5]

In the course of writing this book, we came to find it more and more unacceptable that so much of today's discussion of the history of Modern housing is focused on polarised values. Of course, much of the English-British architectural debate for over a hundred and fifty years, since A. W. Pugin, has been conducted in this turbulent manner, and is hardly likely to be deflected from it now. But is it appropriate that historical or academic analysis of such an immensely large and complex subject as Modern housing should follow the lead given by simplistic architectural polemicists? What seems most reprehensible about such polarisations is the assumption that one of the 'poles' is hopelessly,

irremediably bad. This might not be so disruptive if we were to settle on one particular polarisation, and adhere to it for all time. But, as already pointed out, polemics are inherently unstable. Only thirty years ago, the cry was that 'all Victorian private housing is bad—pull it down and build Modern public housing!' Now we hear that 'all Modern public housing is bad—pull it down and preserve Victorian private housing!'

We have been cautious in using the term 'Utopia' in this book, and have largely limited ourselves to discussing the complexities of the 'community' idea. More generally, Utopia has in recent years had a very confused and unhappy history. In the work of English writers such as Coleman, the continued flourishing of Utopian dreams is casually mingled with vigorous condemnations of the very concept of Utopia, identifying the word exclusively with the most recently rejected Utopia: that of Modern housing. But whatever one's definition of Utopia, we would do well to try to shake off the language of polarised extremism, and the ready embrace of sweeping and simplified judgements: this can only lead the historian deeper and deeper into a quagmire of overlapping and contradictory value judgements, as is all too clear in the following general evaluation of Modern housing by Dunleavy:

> After 1950, accommodation which would previously have been rejected as offering unacceptable improvements in housing amenity came to be seen instead as inevitable and unexceptional . . . [O]verall, families rehoused by urban authorities in the 1950s and 1960s probably received worse forms of accommodation than those rehoused in some earlier periods, despite improvements in design standards, heating and domestic equipment.[6]

This, then, is the fundamental message of our book: a plea, at least to historians, to stand back from the endless clashing of Utopias of housing. But is it possible for anyone to break completely free of the circularity of Utopia and counter-Utopia? Is not this very book a continuation of the endless cycle, nothing more than an inevitable attempt to reverse the polarity once again? Or can history win us at least a temporary respite from the empty cut-and-thrust of 'debate'? Our advice is: break out of this increasingly sterile cycle, by reassessing the 'Dystopia' of the seventies and eighties—Modern Housing. And aim, in this reassessment, to create something more than a mere stick to beat the next, Post-Modern Dystopia, something more than just another Golden Age to bolster a new architectural Utopia, or fuel a further extension of cumulative 'Heritage'. We cannot hide our belief that the polemics of the seventies and eighties, however exciting their style, have had, all in all, a destructive influence. If it is proper to speak of any kind of 'failure' or 'blame' in respect of Modern housing, then in our view the major 'culprit' must be the polarisation of Utopia itself.

POSTSCRIPT (September 1993) The 'controlled blowdown' of Glasgow's Hutchesontown 'C', by raining death and injury down on the celebrating 'spectators', also seems likely to have dealt a fatal blow to that most conspicuous ritual of Anti-Modernism—the demolition of tower blocks as public theatre. Might this, in turn, presage a more general change in attitudes towards Modern housing in Scotland, England, Wales and Northern Ireland—a progressive weakening in the demand for ever more theatrical slogans and gestures, and the emergence of a new preference for reflective evaluation?

GLASGOW CITY COUNCIL

Marketing and Public Relations Department

Blowdown of
Queen Elizabeth Square, Gorbals
Glasgow

MEDIA PASS

The bearer of this pass is authorised to enter Ballater Street, Gorbals, Glasgow, from 1100 hours on Sunday 12 September 1993 to view the controlled explosive demolition of Queen Elizabeth Square scheduled for noon of that day.

Anyone seeking admission to the viewing area MUST have a pass.

City Chambers
Glasgow
September 1993

Robert Colquhoun MIPR
Head of Marketing and
Public Relations

33.1. 'Blowdown' of Sir Basil Spence's Hutchesontown/Gorbals Area 'C' blocks on 12 September 1993: pensioner Helen Tinney died from 'blunt force trauma' and four other onlookers were injured by falling debris, as 400 dwellings were blasted to rubble. (Cf. 20.14, 20.15, 24.4)

APPENDIX

High Flats in the Channel Islands

ALTHOUGH THIS BOOK is devoted to the UK, public housing has also been built elsewhere in these islands—but, in all cases, to a much smaller extent than in the UK. Very few high flats were built in the Republic of Ireland, whose housing production relied overwhelmingly on the private builder.[1] As far as Crown dependencies were concerned, no high flats were built in the Isle of Man. In the Channel Islands, by contrast, there was significant public housing production, including—in the case of Jersey—many multi-storey flats. Unlike the UK, this housing was directly built and let by Central Government. Both Channel Islands Governments (the States of Jersey and Guernsey) had fought the postwar shortage of low-rent housing, caused by higher-income immigration, chiefly through draconian controls over sale and letting of dwellings, and through grants to private builders; however, this was supplemented by a vigorous programme of direct Government building.

In Jersey, the Housing Committee of the States, under the energetic presidency of Senator J. E. Gaudin (and, later, Senator John Averty), embarked during the 1960s on a slum-clearance and multi-storey building drive in and around the capital, St Helier. The first high block of States flats was commenced at Green Street in 1962, but it was only in the late sixties and early seventies that the programme really got under way, with the letting of seven contracts for blocks up to 16 storeys in height, including the bold Samarès Marsh development: by the late 1970s a total of 639 multi-storey flats had been built, accounting at one stage for over 29% of all States rental housing on the Island. Details of high blocks of States flats in Jersey and Guernsey are included in Gazetteer 1.[2]

Interviewees

Note: only positions significant in the context of this account are listed; dates are not included.

F. J. C. AMOS City Planning Officer, Liverpool CBC
CLLR J. ARMITAGE Housing Committee, Oldham CBC
I. ARNOTT architect, RMJM
A. BALDERSTONE tenant, Couper Street development, Edinburgh
J. E. BEDDOE senior Administrator, MHLG
B. BERCOTT private architect, Glasgow
D. BLACK senior DHS/SDD architect
C. BON Private architect, London
W. BOR senior planner, LCC; City Planning Officer, Liverpool CBC
G. BOWIE Chief Architect, Crudens Ltd
H. BRANNAN Housing Convener and Leader, Lanark County Council
R. BROWN planner, Glasgow BC
L. C. H. BUNTON son of Sam Bunton
S. BUNTON JNR. job architect, Red Road development
W. BUNTON brother of Sam Bunton
H. BUTEUX Chief Technical Officer, SSHA
K. CAMPBELL Principal Housing Officer, LCC
E. CARPENTER architect, Hounslow LBC
A. W. CLEEVE BARR senior architect, LCC/MHLG/NBA
H. CORNER senior architect, Edinburgh BC
O. J. COX senior architect, LCC/MHLG
R. D. CRAMOND senior Administrator, DHS/SDD
T. CROSBY private architect, London
SIR H. CUTLER Housing Chairman and Leader, Harrow MBC and GLC
J. DARBOURNE private architect, London
LADY E. DENINGTON Housing Vice-Chairman, LCC/Chairman, GLC
F. DIXON WARD Town Clerk, Southwark LBC and Lambeth LBC
R. DRON City Architect, Dundee BC
J. C. EASTWICK FIELD private architect, London
A. F. G. EDWARDS member, West Ham CBC and Newham LBC
S. FAGAN Development Committee Chairman, Lambeth MBC/LBC
J. B. FLEMING senior Administrator, DHS/SDD
R. P. FRASER senior Administrator, DHS/SDD
RT HON. R. FREESON Leader, Willesden MBC; DoE Housing Minister
CLLR D. E. GABB Housing Committee, Leeds CBC
S. GEORGE City Architect, Leicester CBC
MRS S. GIBSON widow of Cllr. David Gibson
A. GILMOUR architect, LCC/RMJM/Edinburgh University ARU
SIR R. GRIEVE senior planner, DHS/SDD
MRS E. GULLICK (formerly Stockwell) Housing Chairman, Chelsea MBC
J. GUNN senior quantity surveyor, Glasgow BC/DC
MRS F. HARTLEY Housing Chairman, Norwich CBC
A. C. HARVEY senior manager, Bryant Ltd
E. HEFFER MP, Works Committee Chairman, Liverpool CBC
E. E. HOLLAMBY senior architect, LCC; Borough Architect, Lambeth LBC
PROF. P. JOHNSON-MARSHALL senior planner, LCC
LORD JOSEPH Minister of Housing and Local Government
A. G. JURY City Architect and Planning Officer, Glasgow BC
LORD KENNET junior Minister, MHLG
J. KERNOHAN Depute Housing Officer/City Architect, Glasgow BC
CLLR A. KING Development Committee Chairman/Leader, Hounslow LBC
D. KO senior architect, Hong Kong Housing Authority
CLLR H. LAMBERT Housing Development Committee Chairman, Sheffield CBC
D. LASDUN private architect, London
R. LENNOX Housing Convener and City Treasurer, Aberdeen BC
A. LING principal planner, LCC; City Architect, Coventry CBC
J. LITTLEWOOD social researcher, MHLG/DoE
P. LORD senior manager, Wates Ltd
B. LUBETKIN private architect, London/Bristol
K. LUND Borough Architect, Newham LBC
RT HON. DR J. DICKSON MABON junior Minister in charge of SDD
LORD MELLISH junior Minister, MHLG
D. C. MILEFANTI senior Administrator, MHLG
A. MITCHELL senior manager, Concrete Scotland Ltd
T. MORGAN Housing Chairman, Edinburgh BC
R. W. NAISMITH senior architect, DHS/SDD
L. NEWTON Housing Chairman, Norwich CBC
NEYLAN & UNGLESS private architects, London
P. E. NIXON senior architect, Liverpool CBC/NIHT
PROF. R. E. NICOLL senior planner, Glasgow BC and SDD
DR J. A. OLIVER senior Administrator, NI Government

J. PARTRIDGE architect, LCC, and private architect, London

J. L. PATERSON architect, RMJM

D. PERCIVAL senior architect, Coventry; City Architect, Norwich CBC

F. PERRY private architect, Edinburgh

G. POWELL private architect, London

SIR P. POWELL private architect, London

N. RAITT architect, Edinburgh University ARU

W. REED Deputy City Architect/City Architect, Birmingham CBC/CC

A. REIACH private architect, Edinburgh

J. REID senior planner, East Lothian County Council

P. C. RENDLE senior Administrator, DHS

M. RICHARDSON architect, LCC; development architect, YDG

PROF. C. ROBERTSON architect, Spence Glover Ferguson

CLLR C. ROBERTSON Housing Convener and Leader, Aberdeen BC/DC

P. ROGAN Housing Chairman, Edinburgh BC

D. H. ROSS senior architect, Wimpey (Scotland)

I. M. T. SAMUEL planner, Glasgow BC; senior architect, RMJM

C. SAWYER Housing Chairman, Southwark LBC

LORD SEFTON Leader, Liverpool CBC

A. G. SHEPPARD FIDLER City Architect, Birmingham CBC

K. SMIGIELSKI City Planning Officer, Leicester CBC

PROF. I. SMITH architect, Sheffield CBC

M. SMITH social researcher, London

T. DAN SMITH Housing Chairman and Leader, Newcastle upon Tyne CBC

A. SMITHSON private architect, London

T. SMYTH Principal Architect (Scotland), Wimpey Ltd

CLLR E. SMYTHE Housing Vice-Chairman/Chairman, Edmonton MBC/Enfield LBC

H. SNEDDON Housing Convener and Leader, Motherwell BC

W. SOLMAN senior architect, Southwark LBC

L. STEVENSON Housing Chairman, Norwich CBC

R. STJERNSTEDT senior architect, LCC/Lambeth LBC/MHLG

D. STONEHAM senior architect, Wimpey Ltd

R. C. STONES senior architect, Manchester CBC

N. TAYLOR journalist/critic; Planning/Housing Chairman, Lewisham LBC

W. TAYLOR Planning Convener and Leader, Glasgow BC

G. A. THEURER Housing Chairman, Edinburgh BC

F. TINDALL County Planning Officer, East Lothian County Council

T. TYSLER senior architect, Wimpey (Scotland)

A. C. VINSON Housing Chairman, Ealing LBC

CLLR J. WALSH Housing Chairman, Leyton MBC

T. WATSON City Architect, Aberdeen BC

C. WEGG-PROSSER Housing Committee, Paddington MBC

H. J. WHITFIELD LEWIS Principal Housing Architect, LCC

J. D. WINN Housing Chairman, Walsall CBC

J. WOLLKIND Deputy Town Clerk, Stepney MB/Town Clerk, Tower Hamlets LBC

C. J. P. WOOD Housing Committee, Walsall CBC

R. YOUNG private architect and Housing Corporation architect, Glasgow

Statistical Tables

1 Total public housing completions in various UK countries/regions/cities, over successive 5-year phases between 1945 and 1975

2 Postwar multi-storey approvals/starts in various UK areas/cities

3 Postwar multi-storey public housing: level of building/block heights in various UK areas/cities

4 Proportion of all postwar multi-storey housing in various UK areas
(a) in blocks over 20 storeys in height
(b) built in prefabricated construction

5 County of London: local authority housing completions between 1-4-1965 and 31-12-64

6 Greater London: local authority housing completions between 1-4-1965 and 31-3-1968
local authority housing under construction 31-3-1968

TABLE 1

UK Public Housing Completions, 1945–75: Countries/Regions, Selected Authorities

Each column lists dwelling totals followed by (in brackets) totals per 1,000 population

	1945–50		1951–5		1956–60	
COUNTRIES:						
UK public housing	676869	(13.6)	1119393	(22.0)	769714	(14.7)
E/W public housing	577864	(13.3)	940413	(21.2)	622319	(13.6)
Sc public housing	85478	(16.8)	153834	(29.9)	129482	(24.9)
NI public housing	13526	(10.0)##	25146	(18.2)	17913	(12.7)
SCOTLAND/N.I.:						
Glasgow BC	12965	(11.9)	23006	(21.2)	18635	(17.7)
Edinburgh BC	3306	(7.1)	7129	(15.2)	5688	(12.1)
Dundee BC	1972	(11.1)	4366	(24.5)	5439	(29.1)
Lanark CC	4711	(15.4)	7362	(23.9)	8622	(25.8)
SSHA	12636	(2.5)	20470	(3.9)	14110	(2.7)
NIHT	1944–55	total:	15172	(11.2)	7075	(5.0)
ENGLAND/WALES (EX-LONDON):						
Newcastle CBC	2628	(8.9)	7020	(25.0)	5369	(20.0)
Sunderland CBC	4377	(24.2)	6182	(34.0)	4837	(25.7)
Leeds CBC	3548	(7.0)	8565	(16.9)	9794	(19.0)
Sheffield CBC	4389	(8.5)	8960	(17.9)	7756	(15.5)
Manchester CBC	6405	(9.1)	11357	(16.4)	6808	(10.2)
Salford CBC	480	(2.7)	1246	(7.4)	2327	(14.4)
Liverpool CBC	5600	(7.0)	13814	(17.7)	11265	(14.9)
W Bromwich CBC	1862	(21.4)	2228	(24.9)	1978	(21.1)
Wolverhampton CBC	2959	(18.5)	3036	(19.5)	2164	(14.9)
Birmingham CBC	6073	(5.5)	19021	(17.0)	11689	(10.7)
GREATER LONDON:						
Greater London	79712	(9.9)	116188	(14.2)	82294	(10.3)
LCC	30033	(9.3)	45740	(13.8)	25297	(7.9)
County of London	43897	(13.6)	71969	(21.7)	48798	(15.3)
Middlesex	16543	(7.3)	19664	(8.7)	11575	(5.1)
Shoreditch MBC	552	(12.3)	1562	(34.0)	1291	(30.1)
Camberwell MBC	345	(1.9)	1457	(8.1)	1791	(10.2)
W Ham CBC	1248	(7.2)	1951	(11.6)	2737	(16.7)
Croydon CBC	1555	(6.2)	2757	(11.0)	2576	(10.3)
GLC	n/a		n/a		n/a	
Southwark LBC	n/a		n/a		n/a	
Newham LBC	n/a		n/a		n/a	
Hackney LBC	n/a		n/a		n/a	
Croydon LBC	n/a		n/a		n/a	
all Met. Boroughs	13864	(4.3)	26229	(7.9)	23501	(7.4)
all LBCs	n/a		n/a		n/a	

TABLE 1 (Continued)

	1961–5		1966–70		1971–5	
COUNTRIES:						
UK public housing	723793	(13.3)	954612	(17.1)	688273	(12.3)
E/W public housing	579538	(12.1)	752303	(15.4)	546495	(11.1)
Sc public housing	117727	(22.6)	164596	(31.7)	108202	(20.8)
NI public housing	26528	(18.3)	37713	(25.1)	33576	(21.8)
SCOTLAND/N.I.:						
Glasgow BC	16134	(16.1)	18581	(20.5)	12784	(15.3)#
Edinburgh BC	8281	(17.5)	9934	(21.4)	4782	(10.7)#
Dundee BC	4533	(24.5)	9514	(52.4)	4434	(24.5)#
Lanark CC	6852	(24.0)	9535	(33.1)	4410	(14.5)*4
SSHA	7735	(1.5)	12843	(2.5)	10254	(2.0)
NIHT	8826	(6.1)	14045	(9.1)	n/a	
ENGLAND/WALES (EX-LONDON):						
Newcastle CBC	4417	(17.1)	6344	(26.8)	4052	(19.1)#
Sunderland CBC	5251	(27.9)	4962	(22.8)	1078	(5.0)#
Leeds CBC	9020	(17.7)	10619	(21.1)	6900	(13.7)#
Sheffield CBC	9657	(19.8)	11137	(21.2)	8713	(17.0)#
Manchester CBC	15383	(24.1)	13879	(23.5)	15223	(28.7)#
Salford CBC	1884	(12.7)	4581	(33.8)	4481	(35.8)#
Liverpool CBC	11922	(16.5)	15215	(22.8)	11122	(19.4)#
W Bromwich CBC	2183	(22.3)	5076	(29.3)	667	(4.1)*3
Wolverhampton CBC	1660	(11.1)	4252	(16.1)	2230	(8.3)
Birmingham CBC	12227	(11.1)	34923	(32.2)	11706	(11.7)

	1961–5		1966–70		1971–5	
GREATER LONDON:						
Greater London	70888	(8.9)	115084	(15.1)	96498	(13.3)
LCC	15506	(4.9)*4	n/a		n/a	
County of London	31908	(10.0)*4	n/a		n/a	
Middlesex	8031	(3.6)*4	n/a		n/a	
Shoreditch MBC	857	(20.0)*4	n/a		n/a	
Camberwell MBC	1179	(6.7)*4	n/a		n/a	
W Ham CBC	2135	(13.1)*4	n/a		n/a	
Croydon CBC	1787	(7.2)*4	n/a		n/a	
GLC	n/a		27104	(3.6)	24036	(3.3)
Southwark LBC	n/a		3292	(11.6)	6565	(26.5)
Newham LBC	n/a		4942	(20.0)	4805	(20.8)
Hackney LBC	n/a		4352	(18.6)	3685	(17.3)
Croydon LBC	n/a		3467	(10.6)	1359	(4.1)
all Met. Boroughs	16402	(5.1)*4	n/a		n/a	
all LBCs	n/a		87980	(11.6)	72462	(10.0)

NOTES: *: incomplete period (in years)
#: includes post-1974/5 local government reorganisation figures
##: 1944–50 figures

Population used for each 5-year period is that at/near end of period. Under 'COUNTRIES', the term 'public housing' is taken to include local authorities, New Towns, SSHA and NIHT, housing associations, Government Department. Source: Government Housing Returns/Statistics.

*Continued:*TABLE 1

TABLE 2

Postwar Multi-Storey Approvals/Starts

	Pre1948	1948–52	1953–7	1958–62	1963–7	1968–72	Post1972
COUNTRIES/REGIONS:							
East Anglia	—	—	—	132	722	65	—
East Midland	—	—	39	255	4321	1374	—
Northern	—	—	—	3846	7289	2125	53
N Ireland	—	—	—	188	2428	877	—
North-West	—	—	935	10932	27805	7137	156
Scotland	—	396	563	10887	36858	13396	2052
South-East (excl. GL)	—	316	828	4076	11965	2770	770
South-West	—	—	594	2814	2886	391	221
Wales	—	—	225	1111	807	309	—
West Midland	—	806	4225	10604	27016	4688	288
Yorks/Humbs	—	—	3214	8157	16089	3566	280
Gtr London #	3212	12652	20830	24052	62291	28925	7299
UK total	3212	14170	31453	77054	200477	65623	11119
CITIES/CITY AUTHORITIES:							
County of London	2538	11413	18249	17960	15056*	n/a	n/a
GL out-county	674	1239	2581	6092	7325	n/a	n/a
LCC	355	3857	7592	8747	7179*	n/a	n/a
GLC	n/a	n/a	n/a	n/a	9270*	8422	1448
B/ham CBC	—	806	3204	5031	12381	2892	—
Glasgow BC	—	308	—	5937	15354	4444	947

* incomplete period (to/from April 1965 only)
\# area defined according to post-1965 boundary

TABLE 3

Postwar Multi-Storey Public Housing in the UK

COUNTRIES/REGIONS:	DWELLINGS (PER 1000 POP.)		BLOCKS (AV. NO. OF DWELLS.)	
East Anglia	919	(0.6)	19	(48)
East Midland	5989	(1.8)	93	(64)
Northern	13313	(4.0)	188	(71)
Northern Ireland	3493	(2.5)	59	(59)
North-West	46965	(7.0)	692	(68)
Scotland	64152	(12.3)	863	(74)
South-East (excl. GL)	20725	(2.3)	328	(63)
South-West	6906	(1.9)	107	(65)
Wales	2452	(0.9)	37	(66)
West Midland	47627	(9.6)	848	(56)
Yorks/Humbs	31306	(6.6)	512	(61)
Greater London	159261	(20.0)	2789	(57)
United Kingdom approvals/starts pre-1948	3212	(0.1)	81	(40)
1948–52	14170	(0.3)	324	(44)
1953–7	31453	(0.6)	694	(45)
1958–62	77054	(1.4)	1309	(59)
1963–7	200477	(3.7)	2935	(68)
1968–72	65623	(1.2)	1037	(63)
post-1972	11119	(0.2)	155	(72)
total	403108	(7.4)	6544	(62)
CITIES/CITY AUTHORITIES:				
County of London (pre-65)	65216	(20.6)	1279	(51)
GL out-county (pre-65)	17911	(3.7)	381	(47)
London County Council	27730	(8.7)	549	(51)
Greater London Council	19140	(2.4)	339	(56)
Birmingham CBC	24314	(22.0)	458	(53)
Glasgow BC	26990	(26.5)	261	(103)

Source: Gazetteer.

TABLE 4

Proportion of All Postwar Multi-Storey Public Housing:
(a) In Blocks Over 20 Storeys in Height
(b) Built in Prefabricated Construction

COUNTRIES/REGIONS:	(a) PERCENTAGE IN BLOCKS OVER 20 STOREYS HIGH	(b) PERCENTAGE PREFABRICATED CONSTRUCTION
East Anglia	0	0
East Midland	19.4	40.0
Northern	9.1	13.9
Northern Ireland	0	9.3
North-West	7.8	26.8
Scotland	20.9	29.0
South-East (excluding Greater London)	3.2	13.2
South-West	0	0
Wales	3.3	15.9
West Midland	4.4	17.2
Yorkshire and Humberside	1.7	15.8
Greater London	13.5	19.8
United Kingdom (approved/started) Pre-1958	0	3.1
1958–62	5.0	5.3
1963–7	16.1	26.2
1968–72	11.4	36.9
Post-1972	6.2	10.2
Total	11.0	20.5
CITIES/CITY AUTHORITIES:		
Count of London (pre-1965)	7.6	2.8
Greater London out-county (pre-1964)	10.3	14.1
London County Council	11.4	5.1
Greater London Council	19.5	17.6
Birmingham CBC	2.3	23.9
Glasgow BC	41.3	26.5

Source: Gazetteer, other primary local-authority sources.

TABLE 5

County of London: Housing Completions 1/4/45 to 31/12/64

AUTHORITY	COMPLETIONS	COMPLETIONS PER 1,000 POPULATION
Metropolitan Boroughs:		
Battersea	1887	18.3
Bermondsey	2370	46.9
Bethnal Green	2158	46.9
Camberwell	4772	27.3
Chelsea	866	17.8
Deptford	1446	21.1
Finsbury	1802	56.0
Fulham	1899	17.3
Greenwich	2282	27.1
Hackney	4902	30.0
Hammersmith	1497	13.9
Holborn	578	27.9
Islington	4163	18.3
Kensington	1795	10.4
Lambeth	4920	22.1
Lewisham	4475	20.1
Paddington	1436	12.6
Poplar	1865	27.4
St Marylebone	1293	19.2
St Pancras	5497	44.5
Shoreditch	4244	110.8
Southwark	2220	25.8
Stepney	2847	31.7
Stoke Newington	2176	41.2
Wandsworth	6319	18.1
Westminster	2210	25.5
Woolwich	5491	36.8
Total Met. Boroughs	78853	24.8
City of London	1143	248.4
London County Council	116576	36.7
COUNTY TOTAL (inc. LCC)	196572	61.8

Source: MHLG Housing Returns.

TABLE 6

Greater London:
(a) Local Authority Housing Completions 1/4/65–31/3/68;
(b) Local Authority Housing Under Construction 31/3/68

Each column lists, firstly, London Borough, then GLC dwelling totals in each borough area, followed by (in brackets) totals per 1,000 population.

	HOUSING COMPLETIONS				HOUSING UNDER CONSTRUCTION			
Barking	1354	(8.0)	30	(0.2)	1037	(6.1)	—	
Barnet	961	(3.0)	—		680	(2.2)	–	
Bexley	933	(4.3)	175	(0.8)	566	(2.6)	1557	(7.2)
Brent	1048	(3.6)	—		1794	(6.1)	–	
Bromley	1125	(3.7)	77	(0.3)	1145	(3.8)	12	(0.1)
Gamden	1735	(7.3)	123	(0.5)	1455	(6.1)	62	(0.2)
Groydon	3206	(9.8)	32	(0.1)	797	(2.4)	–	
Ealing	1807	(6.0)	323	(1.1)	1394	(4.6)	33	(0.1)
Enfield	2824	(10.6)	—		1332	(5.0)	–	
Greenwich	1568	(6.8)	1807	(7.8)	1633	(7.1)	172	(0.7)
Hackney	1476	(5.9)	1177	(4.7)	1525	(6.1)	1675	(6.7)
Hammersmith/F	924	(4.4)	242	(1.1)	538	(2.5)	96	(0.5)
Haringey	1445	(5.7)	—		2266	(8.9)	–	
Harrow	553	(2.7)	45	(0.2)	124	(0.6)	–	
Havering	1731	(6.9)	99	(0.4)	665	(2.6)	307	(1.2)
Hillingdon	1575	(6.7)	44	(0.2)	998	(4.3)	–	
Hounslow	1608	(7.8)	12	(0.1)	1733	(8.4)	–	
Islington	1529	(6.0)	666	(2.6)	1691	(6.6)	738	(2.9)
Kensington/Ch.	306	(1.4)	107	(0.5)	279	(1.3)	–	
Kingston	476	(3.3)	—		133	(0.9)	–	
Lambeth	861	(2.5)	1834	(5.4)	1155	(3.4)	1037	(3.1)
Lewisham	1133	(3.9)	2526	(8.7)	1369	(4.7)	579	(2.0)
Merton	672	(3.7)	9	(0.1)	204	(1.1)	–	
Newham	3514	(13.7)	221	(0.9)	1762	(6.8)	–	
Redbridge	648	(2.6)	18	(0.1)	738	(3.0)	164	(0.7)
Richmond	929	(5.2)	—		228	(1.3)	–	
Southwark	2443	(8.1)	2062	(6.9)	3973	(13.2)	1767	(5.9)
Sutton	667	(4.1)	—		718	(4.3)	951	(5.8)
Tower Hamlets	1161	(5.9)	2042	(10.3)	1173	(5.9)	2239	(11.3)
Waltham Forest	2834	(11.9)	29	(0.1)	1482	(6.2)	22	(0.1)
Wandsworth	1822	(5.5)	1415	(4.3)	1781	(5.4)	161	(0.5)
Westminster	541	(2.1)	292	(1.1)	893	(3.4)	777	(3.0)
City Corporation	151	(33.5)	—		2225	(494.4)	–	
TOTAL LBC/ GLC	45570	(5.8)	16243	(2.0)	39486	(5.0)	12903	(1.6)
(LBC total includes City Corporation; GLC total includes out-county building)								
TOTAL GREATER LONDON			61813	(7.8)			52389	(6.6)

Source: MHLG Housing Returns.

CENTRAL CLYDESIDE

MILES

0 1 2 3 4 5

0 1 2 3 4 5 6 7 8

KILOMETRES

BOUNDARIES

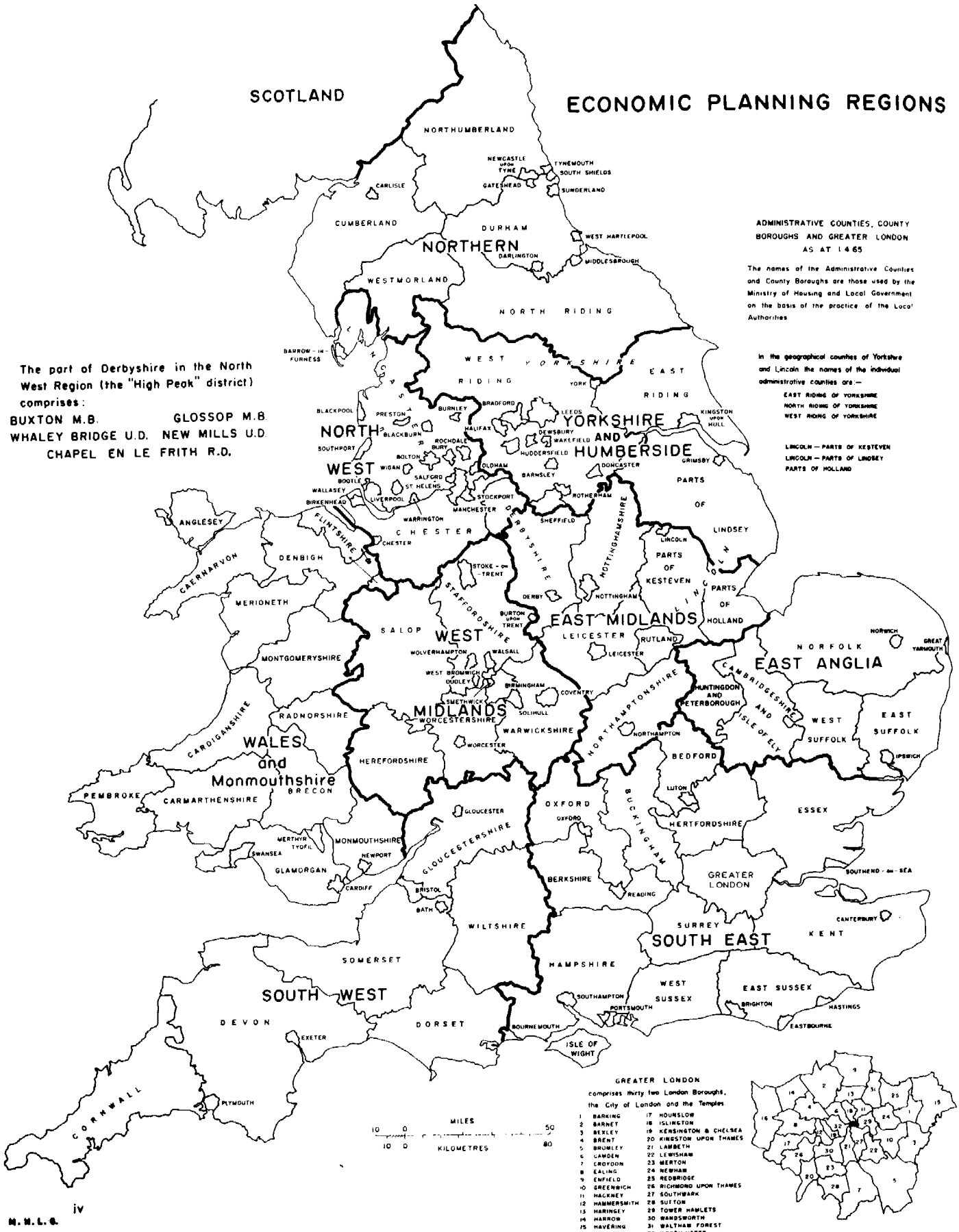
District, Burgh, and County of City

County

Conurbation

East Kilbride New Town

ECONOMIC PLANNING REGIONS



ADMINISTRATIVE COUNTIES, COUNTY BOROUGHS AND GREATER LONDON AS AT 1.4.65

The names of the Administrative Counties and County Boroughs are those used by the Ministry of Housing and Local Government on the basis of the practice of the Local Authorities

In the geographical counties of Yorkshire and Lincoln the names of the individual administrative counties are:—

EAST RIDING OF YORKSHIRE
NORTH RIDING OF YORKSHIRE
WEST RIDING OF YORKSHIRE

LINCOLN — PARTS OF KESTEVEN
LINCOLN — PARTS OF LINDSEY
PARTS OF HOLLAND

The part of Derbyshire in the North West Region (the "High Peak" district) comprises:

BUXTON M.B. GLOSSOP M.B.
WHALEY BRIDGE U.D. NEW MILLS U.D.
CHAPEL EN LE FRITH R.D.

GREATER LONDON

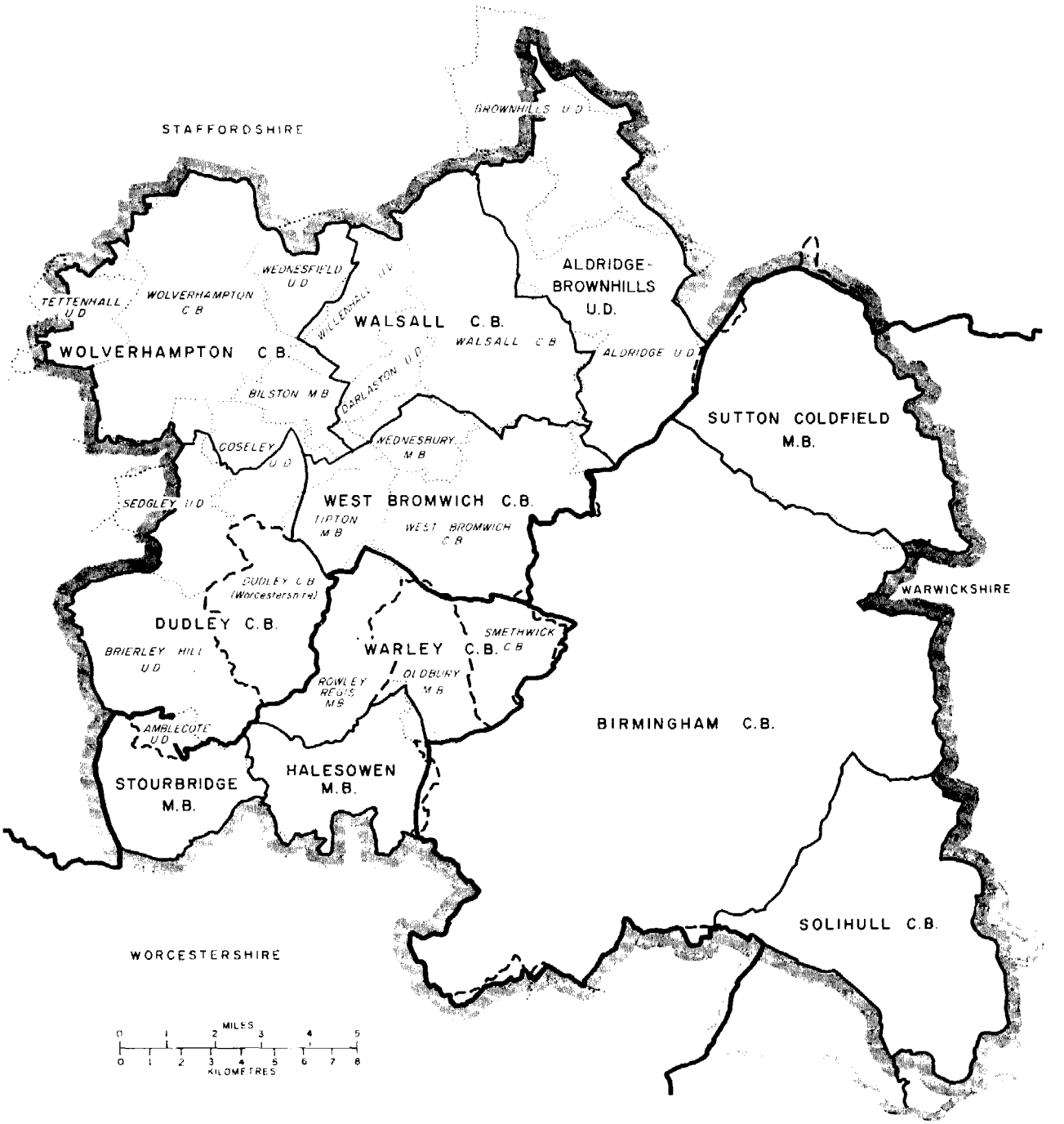
comprises thirty two London Boroughs, the City of London and the Temples.

1 BARKING
2 BARNET
3 BEXLEY
4 BRENT
5 BROMLEY
6 CAMDEN
7 CROYDON
8 EALING
9 ENFIELD
10 GREENWICH
11 HACKNEY
12 HAMMERSMITH
13 HARINGEY
14 HARROW
15 HAVERING
16 HILLINGDON
17 HOUNSLOW
18 ISLINGTON
19 KENSINGTON & CHELSEA
20 KINGSTON UPON THAMES
21 LAMBETH
22 LEWISHAM
23 MERTON
24 NEWHAM
25 REDBRIDGE
26 RICHMOND UPON THAMES
27 SOUTHWARK
28 SUTTON
29 TOWER HAMLETS
30 WANDSWORTH
31 WALTHAM FOREST
32 WESTMINSTER

CITY OF LONDON

WEST MIDLANDS

Showing the local authorities established on 1st April 1966 by the West Midlands Order 1965, and the former authorities in the area.



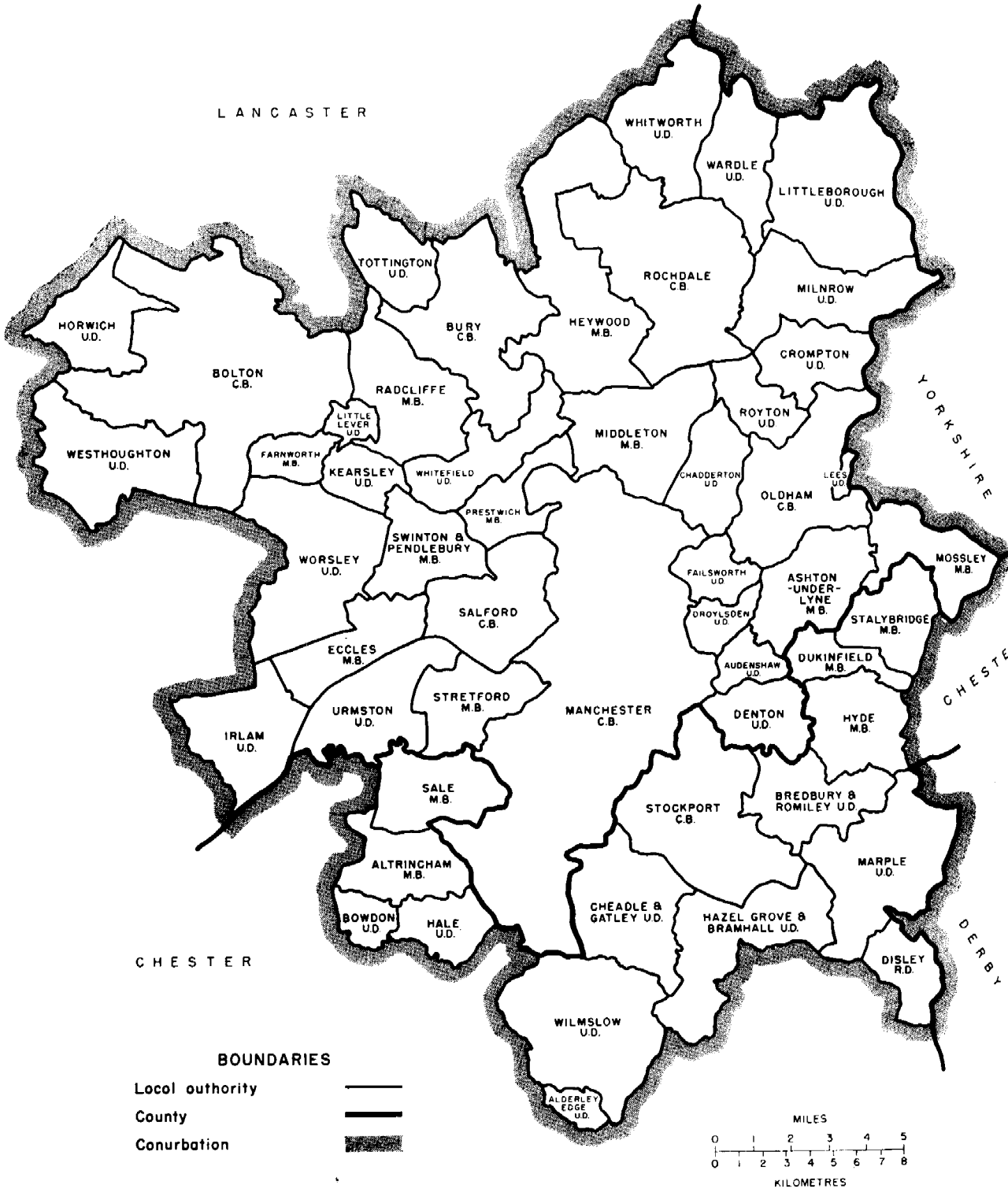
BOUNDARIES ESTABLISHED ON 1st APRIL 1966

- Local Authority
- County
- Conurbation, as defined in the 1966 Census

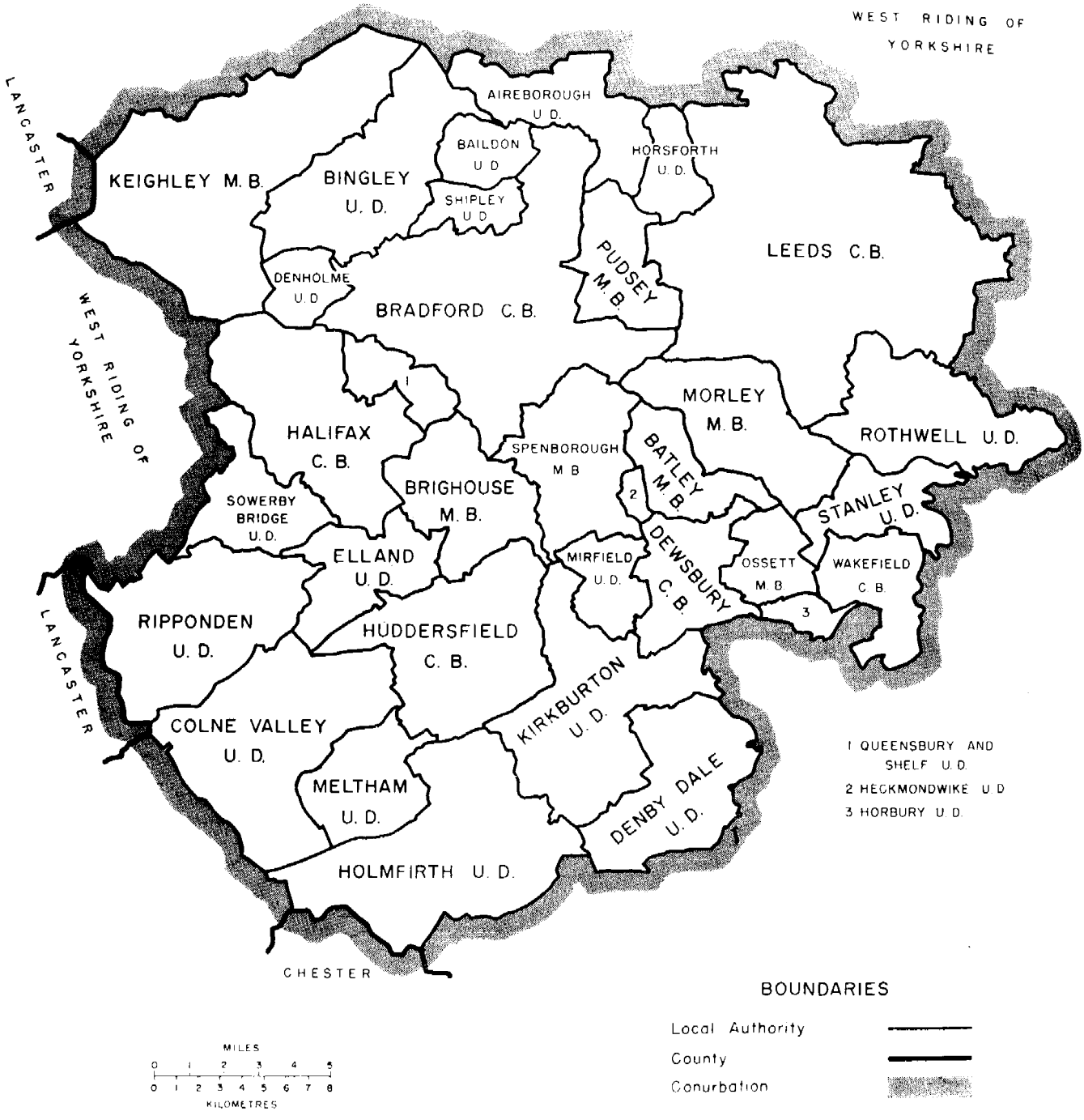
BOUNDARIES BEFORE 1st APRIL 1966

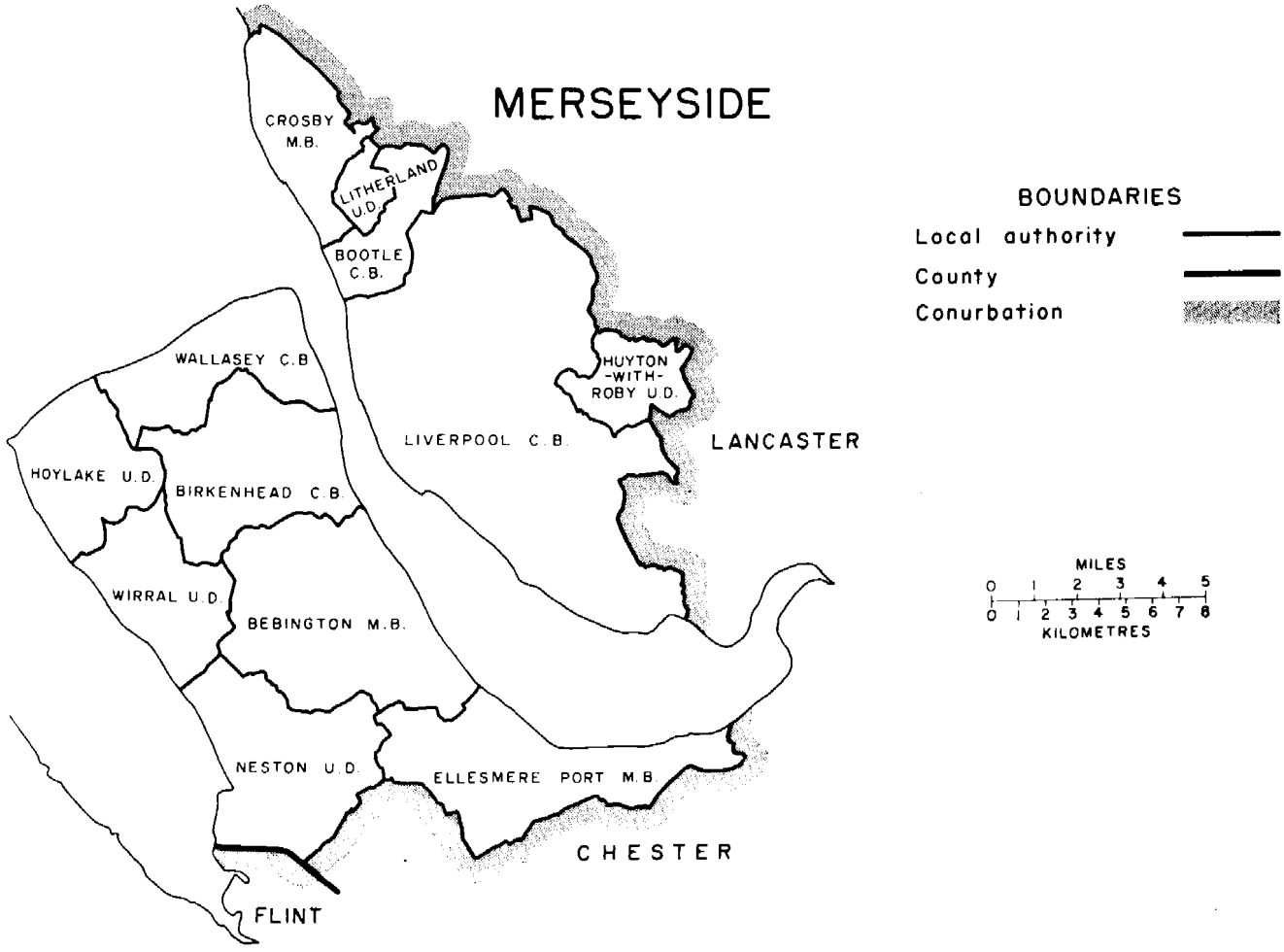
- Local Authority
- County
- Conurbation, as defined in the 1961 Census.

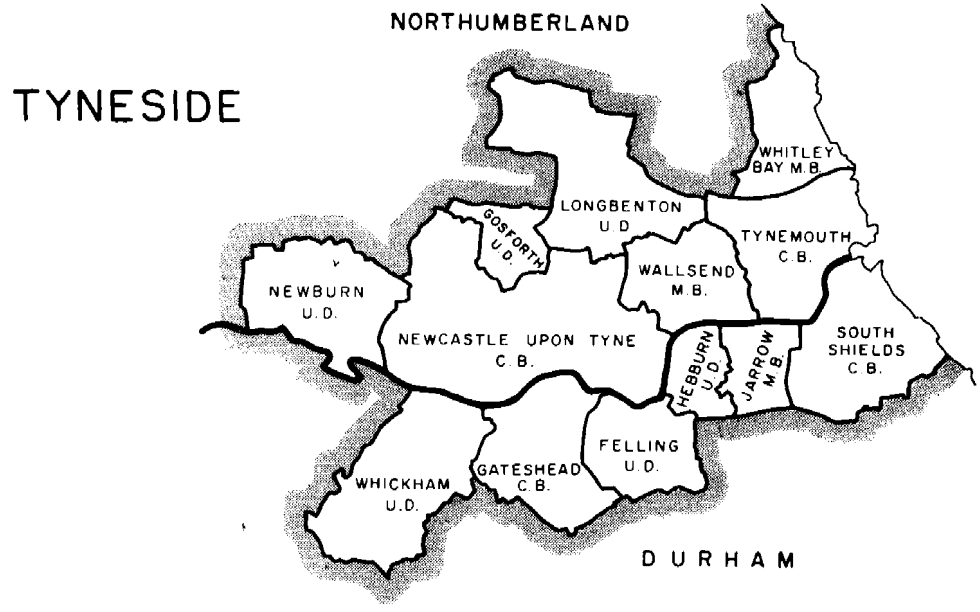
SOUTH EAST LANCASHIRE



WEST YORKSHIRE

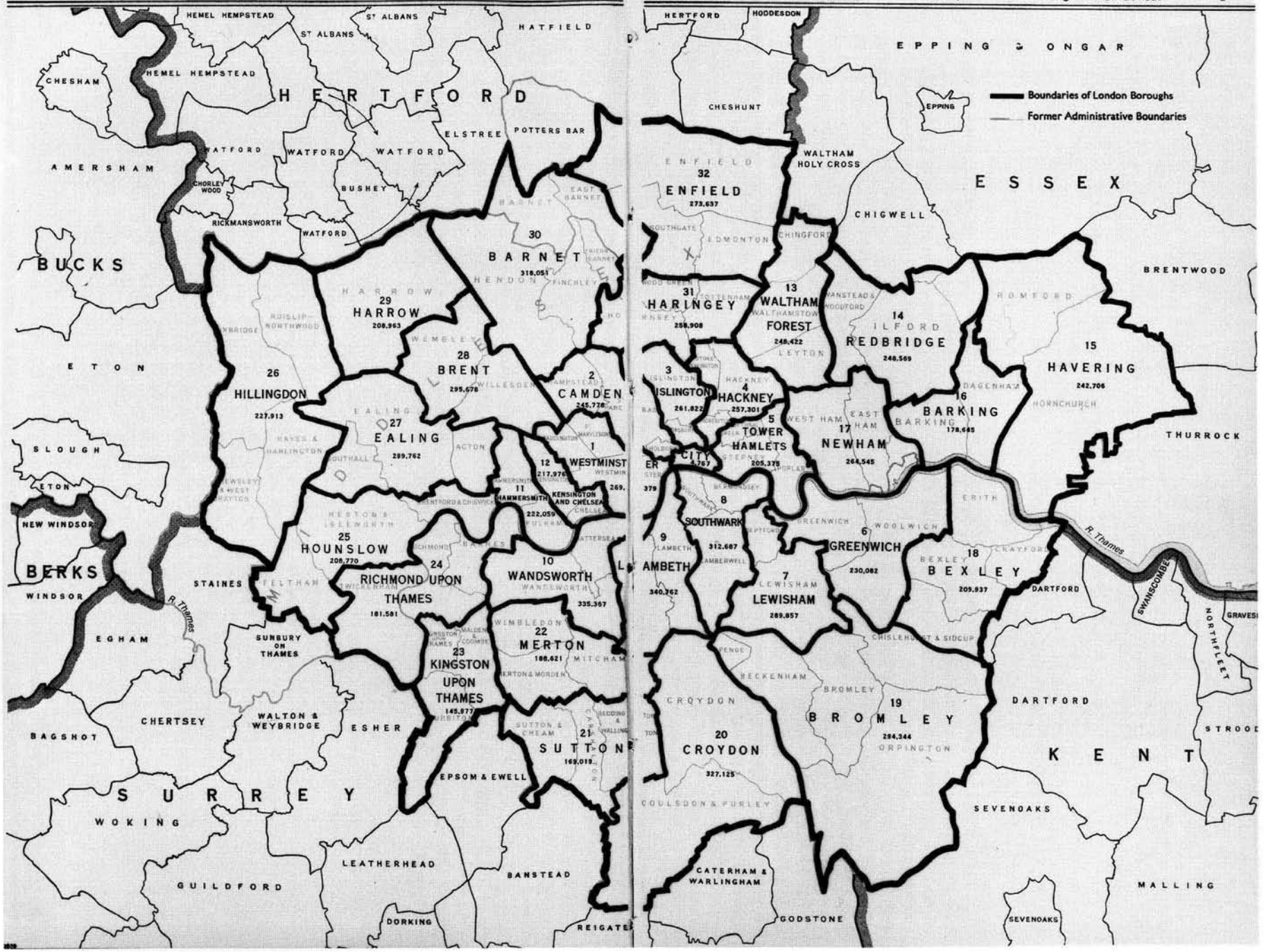



MERSEYSIDE
CROSBY M.B.
LITHERLAND U.D.
BOOTLE C.B.
WALLASEY C.B.
HOYLAKE U.D.
BIRKENHEAD C.B.
WIRRAL U.D.
BEBINGTON M.B.
NESTON U.D.
ELLESMERE PORT M.B.
LIVERPOOL C.B.
HUYTON -WITH- ROBY U.D.
LANCASTER
CHESTER
FLINT
BOUNDARIES
Local authority
County
Conurbation
MILES
0 1 2 3 4 5
0 1 2 3 4 5 6 7 8
KILOMETRES


NORTHUMBERLAND
TYNESIDE
WHITLEY BAY M.B.
LONGBENTON U.D.
GOSFORTH U.D.
TYNEMOUTH C.B.
WALLSEND M.B.
NEWBURN U.D.
NEWCASTLE UPON TYNE C.B.
HEBBURN U.D.
JARROW M.B.
SOUTH SHIELDS C.B.
FELLING U.D.
GATESHEAD C.B.
WHICKHAM U.D.
DURHAM

GREATER LONDON AND OUTER AREAS

Populations according to 1961 Census



GAZETTEER

General Introduction

THIS GAZETTEER IS made up of two separate parts. The first, and larger, is a list of all multi-storey developments erected or acquired by public housing authorities in the UK and Channel Islands since 1945, together with summary statistical information; the second comprises brief periodical references concerning architecturally noteworthy developments of *c.*1945–70, whether or not containing multi-storey blocks.

The first gazetteer is divided into geographical areas: those in England outside London are identical with mid-1960s MHLG regions. Each area is subdivided alphabetically into individual housing authorities and, within each authority, individual multi-storey developments, with additional locational information or cross-references to later estate names following in square brackets. The development name is followed in each case by committee approval (a) or start (s) date, number of blocks and dwellings in buildings of particular storey heights, and contractor's name. Thus, for instance, 'a1964, 6/17 (1788)' denotes a development of six 17-storey blocks containing a total of 1,788 flats, approved by committee in 1964. Individual contracts within a large, staged development are separated by semi-colons. Storey heights include only full storeys covering the entire area of the blocks concerned, or part-storeys (say, on sloping ground) which include dwellings or parts of dwellings. Multi-storey blocks acquired rather than built by the authority are listed separately at the end of each entry. Blocks known to have been demolished when the gazetteer was first compiled (1989) are indicated.

It should also be noted, firstly, that the multi-storey gazetteer contains no statistics on non-multi-storey dwellings contained within the same contracts as the high flats; and, secondly, that any particular area may fall under several authority areas, as a result of local government reorganisation, concurrent housing powers or building outside boundaries (in the case of reorganisations, as, for instance, in Greater London in 1965 or the West Midlands in 1966, 'before' and 'after' authority names are cross-referenced). The programmes of five national/regional housing authorities—the SSHA, the LCC, the GLC and the States of Guernsey and Jersey—are subdivided under the relevant localities (burghs, etc.); NIHT contracts are arranged in a single list.

The second gazetteer is laid out in the same overall manner, with authority's name followed by development name: after these general headings, bibliographical references are listed, along with the names of architects (and, in some cases, other key individuals) involved in the design.

Chief abbreviations are set out in the main abbreviations list for this book.

While every effort has been made to ensure the comprehensiveness of these Gazetteers, the authors would be very grateful to receive emendations and updates.

GAZETTEER 1

Multi-Storey Developments Erected by Public Housing Authorities in the UK and Channel Islands Since 1945

UNITED KINGDOM
England: East Anglia
East Midland
Greater London: Corporation of London
Greater London: pre-April 1965 Boroughs and Districts
Greater London: London County Council (to 1965)
Greater London: post-April 1965 London Boroughs
Greater London: Greater London Council (from 1965)
Northern
North-West
South-East (excluding Greater London)
South-West
West Midland
Yorkshire and Humberside

Northern Ireland

Scotland

Wales

CHANNEL ISLANDS
Bailiwick of Guernsey
Bailiwick of Jersey

ENGLAND: EAST ANGLIA

CAMBRIDGE MBC
RDA Newtown I [Hanover Ct, Coronation St], s1966, 1/8 (78), Coulson.

IPSWICH CBC
Wellington St Flats RD Scheme [Cumberland Towers, Beaufort St], s1965, 1/12 (72), Gerrard.

LOWESTOFT MBC
Thurston Ct RDA [St Peter's Ct, Factory St], s1966, 1/15 (90), Wimpey.

NEWMARKET UDC
Icewell Hill RD, a1965, 3/6 (60), G. Calverley.

NORWICH CBC
Arthur St, a1964, 1/16 (95), Wimpey. Boundary Rd, a1964, 3/11 (132), R. G. Carter. Heartsease, Watling Rd, a1962, 3/11 (132), R. G. Carter (Truscon). Heathgate, a1965, 1/6 (30), R. G. Carter. Vauxhall St, a1964, 1/16 (95), Wimpey. Vauxhall St CPO 3, a1968, [Johnson Pl], 2/7 (44), [Suffolk Sq], 1/6 (21), R. G. Carter.

PETERBOROUGH MBC
St Mary's St RD [City Rd], a1964, 1/12 (70), Mitchell Construction.

ENGLAND: EAST MIDLAND

DERBY CBC
#[Rivermead Hs, Bath St], s1963, 1/12 (94), DL/GKN Reinforcement.

LEICESTER CBC
Highfields RD (St Peter's Area RD) [Maidstone Rd], a1970, 4/18 (340), Wimpey; Single Persons' Project [Goscote Hs], a1971, 1/22 (132), TWA (Larsen-Nielsen). Rowlatts Hill [Oxon Way], a1964, 2/24 (264), Bryant (Bison). St Matthews, Phase II [Malabar Rd], a1965, 2/24 (271), Laing. Victoria Pk Rd, a1965, 1/11 (31), Johnson & Bailey.

LINCOLN CBC
Ashby Ave, a1963, 1/15 (87), Truscon. Stamp End [Cannon St], a1963, 1/17 (130), Truscon. Stones Farm [Queen Mary Ave], a1963, 1/15 (88), Truscon.

NORTHAMPTON CBC
Adelaide St, a1968, 1/6 (54), Wimpey. Central Area RD (chron. entries) [Castle St], a1954, 1/10 (39), Tersons; (Horsemarket), a1958, 1/6 (24), Branson & Jones; (Althorp St and Herbert St Area), a1960, 2/12 (141), Tersons. Cooper St RD [Grafton St], a1971, 2/7 (141), 2/6 (100), Wimpey. Devonshire St RD [Abbey St], a1969, 3/6 (143), Wimpey.

NOTTINGHAM CBC
Balloon Wood Site No. 1 [Wollaton Vale], a1966, 14/7 (430), 9/6 (217), Shepherd (YDG) (demol). Burrows Gdns, Sneinton [Mill Ln], a1966, 1/21 (130), Wimpey. Colwick Crossing [Colwick Rd], a1965, 1/16 (90), Wimpey. Denman St RDA [Alfreton Rd], a1960 [Highurst Ct], 1/11 (45), Rostance; a1961 [Clifford Ct], 1/11 (45), Rostance; Independent St [Highcross Ct], a1963, 1/15 (112), A. G. Clower; Phase 4 [Norton St, Hartley Rd], a1967, 1/21 (164), 1/16 (106), 1/9 (16), Wimpey. Farnborough Rd, Clifton, a1967, 1/20 (130), Wimpey. Hartley Rd, Radford [Bampton Ct], a1966, 1/18 (102), Wimpey. Hyson Green Area RD [Noel St], Stage I, a1966, 2/6 (32), Concrete Northern (Bison) (under demol); Phase II, a1967, 1/18 (104), Concrete Northern (Bison). Lower Eldon St, Sneinton [Kingston Ct], a1965, 1/16 (90), Wimpey. Old Basford [Percy St/Lincoln St], a1967, 4/20 (291), 3/8 (104), 6/7 (209), 6/6 (148), Drury (Bison) (demol). Sherwood Station Site [Winchester St], a1964, 2/16 (180), Wimpey. Sneinton RDA, Manvers St [Manvers Ct, Bentinck Ct], a1963, 2/16 (180), Wimpey. Victoria Centre [Glasshouse St/Milton St], a1968, 1/22 (464), Taylor Woodrow. Willoughby St Area [Derby Rd], a1965, 5/17 (480), Gregory Housing (Bison).

OADBY UDC
Manor Hs Site, Chapel St [Churchill Cl], a1964, 1/7 (41), Morton Potter.

ENGLAND: GREATER LONDON

GREATER LONDON: CORPORATION OF LONDON

Avondale Sq I [Old Kent Rd], a1960, 3/20 (216), 1/11 (156), Pauling. Barbican RD (entries in chron. order): Public Services Bldg [Milton Ct], a1962, 1/7 (13), J. Jarvis; Phase II [Lauderdale Tower, Defoe, Seddon, More, Mountjoy Hses], a1963, 1/43 (120), 2/10 (482), Turriff; Phase III [Cromwell Tower, Speed, Willoughby, Andrewes, Gilbert Hses], a1964, 1/45 (114), 1/10 (542), Laing; Phase IV [Ben Johnson, Breton Hses, Bryer, Bunyan, J. Trundle Cts], a1964, 4/10 (573), Myton; Phase VA [Shakespeare Tower], a1968, 1/45 (116), McAlpine. Golden Ln [Great Arthur, Bowater, Bayer, Basterfield, Cohen Hses], a1954, 1/16 (120), 2/6 (146), Wimpey. Golden Ln Ext [Goswell Rd], a1959, 1/7 (287), GWS. Great Suffolk St [Collinson St], a1956 [Bridge Hs Ests scheme], 1/8 (72),

W. Lawrence. Middlesex St Est RD [Petticoat Ln], a1967, 1/24 (80), 4/7 (101), G. E. Wallis. Sheep Lairs Site, Metropolitan Cattle Market [York Way/Market Rd], a1966, 1/9 (88), 2/8 (145), Humphreys [later Gilbert Ash].

GREATER LONDON: PRE-APRIL 1965 BOROUGHS AND DISTRICTS

ACTON MBC (FROM 1965: EALING LBC)
East Acton Ln, a1958, 1/7 (30), Perrys. Enfield Rd, a1960 [Anstey Ct], 1/6 (39), W. J. Marston; a1964 [Webb Ct], 1/6 (24), J. Cartwright. Hanbury Rd East Side [Grahame Tower], a1955, 1/9 (62), Perrys. Hanbury Rd West Side, a1956 [inc. Meredith Tower], 2/9 (124), Rush & Tompkins; a1959 [Caine Hs], 1/6 (46), W. J. Marston. Junction Rd [Woolf Ct], a1952, 1/6 (34), G. Young. Osborne Rd North Side [Buchan Hs], a1958, 1/8 (37), Rush & Tompkins. Osborne Rd, Stage 6 [Jerome Tower], a1961, 1/17 (94), Tersons. Palmerston Rd [Blackmore Tower], a1962, 1/17 (94), Tersons. Palmerston Rd/All Saints' Rd [Kipling Tower], a1963, 1/13 (91), Tersons. Palmerston Rd/Stanley Rd, a1961, 1/7 (41), W. J. Whittall. Strafford Rd/Park Rd North [Barwick Hs, Hocking Hs], a1964, 2/13 (195), Y. J. Lovell. The Steyne [Lexden Rd], a1965, 2/22 (200), Wates. Vincent Rd [Wodehouse Ct], a1954, 1/6 (24), G. Young.

BARKING MBC (FROM 1965: BARKING LBC)
Blake Ave, a1963, 1/7 (25), DL. Hepworth Gdns and Southwold Dr, Contract I, a1960, 1/9 (32), DL. John Burns Dr, a1963, 2/7 (52), DL. King Edward's Rd/Alfred's Way, a1963, 1/9 (32), DL. Linton Rd and Church Rd RD, Contract II, a1960, 1/16 (157), 5/7 (217), Hawker Smith (Concrete Southern). Mayesbrook Meadow, Contract II [Upney Ln], a1960, 1/7 (64), Hawker Smith (Concrete Southern). Thames View, Contract IIIA [Curzon Cres, Maybury Rd, Alderman Ave], a1956, 3/9 (144), Carlton; Contract VIIB [Abridge Way], a1958, 4/9 (96), W. J. Jerram.

BATTERSEA MBC (MET.) (FROM 1965: WANDSWORTH LBC)
Battersea High St No. 1. North Section [Lindsay Ct], a1961, 1/12 (60), Stuart (Contractors); South Section [Meecham], a1962, 1/10 (40), DL. Battersea Pk Rd (entries in chron. order): Rollo St [Rawson, Ravell, Alfred], a1950, 1/8 (64), 2/6 (68), M. J. Gleeson; Anerley St, a1954, 2/10 (172), Rush & Tompkins; Dagnall St [Dresden/Farnhurst], a1956, 1/11 (93), Rush & Tompkins; Austin Rd No. 1 [Walden/Langhurst], a1959, 1/11 (93), M. J. Gleeson; Austin Rd No. 2 [Atkins], a1959, 1/11 (77), M. J. Gleeson; Henley St [Jay Ct], a1963, 1/22 (80), R. Hart. Southlands [Winders Rd], a1963, 1/17 (80), DL. Tyneham Rd, a1948, 1/6 (48), Wilson Lovatt. Wilditch St [Weybridge Point], a1964, 1/16 (61), DL. Winstanley Rd: Livingstone Rd Section, a1963, 1/23 (106), 3/11 (132), Wates.

BERMONDSEY MBC (MET.) (FROM 1965: SOUTHWARK LBC)
Contractor: all high blocks built by DL except Lower Rd. Abbey St (North): Phase I Block 2 [St Lawrence], a1956, 1/7 (28); Phase II [Attilburgh, Thetford, Tomson], a1958, 2/7 (84), 1/6 (18); Phase III [Wharton, Preston, Rufus], a1960, 3/8 (96). Abbey St (South) [St Owen, Valoise, Woodville, Breton, St Vincent], a1959, 1/8 (36), 4/7 (176). Ainsty St, 1st Development [Beech Hs], a1953, 1/6 (52); Block 6 [Pine Hs], a1955, 1/7 (28). Alexis St [P. Hills Hs], a1962, 1/6 (12). Arnold Est, Block 13 [Gedling St], a1956, 1/6 (18). Bush Rd, Block A [A. Starr Hs], a1957, 1/7 (35); Block C [W. Evans Hs], a1961, 1/7 (34). Camilla Rd [Pope, Ramsfort, Trappes], a1964, 1/11 (88), 2/6 (72). Cherry Garden St, Block A [Morriss Hs], a1957, 1/8 (32). Cranham Rd and Parfitt Rd Phase I [Trevithick, Landman], a1963, 2/14 (104); Phase II [Fitzmaurice, Barry], a1965, 1/8 (32), 1/6 (15). Dunton Rd Block 1 [Dartford Hs], a1955, 1/7 (41); Blocks 2, 3 [Fawkham, Hartley], a1954, 2/7 (70). Lower Rd, a1959, 1/6 (24), Thomas & Edge. Luxford St [Balman Hs], a1959, 1/7 (53). Moodkee St [Ritchie Hs], a1954, 1/6 (36). Raymouth Rd [Bradley Hs], a1955, 1/7 (77). Roseberry St [Southwell Hs], a1955, 1/6 (25). Slippers Place, Block 1 [Arica Hs], a1958, 1/11 (88); Blocks 7, 8 [Moreton Hs], a1960, 1/6 (54); Block 2 [Matson Hs], a1962, 1/6 (48). Staples Rents, 2nd Phase [60–103 Pynfolds, Paradise St], a1951, 1/6 (44). Wolseley Bldgs Site [Wolseley St], a1954, 1/7 (35).

BETHNAL GREEN MBC (MET.) (FROM 1965: TOWER HAMLETS LBC)
Approach Rd (No. 1) [T. Hollingwood Hs], a1958, 1/12 (47), DL. Arline St (No. 1) [Dorset Est], a1954, 2/11 (218), Speirs. Bacton St, a1965, 1/15 (52), Wates. Bishop's Way (No. 1) Site [Reynolds Hs], a1951, 1/6 (60), Halse. Claredale St [Keeling, Bradley], a1956, 1/16 (64), 2/6 (96), Wates. Columbia Sq [Sivill Hs], a1963, 1/20 (76), TMI. Cranbrook St [Offenbach, Puteaux, St Gilles, Mödling, Velletri, Alzette], a1960, 2/16 (120), 2/14 (104), 2/12 (88), Wates. Mayfield Hs/Odeon Cinema Site [Cambridge Heath Rd], a1962, 1/6 (54), A. E. Symes. Old Ford Rd (No. 1) [Lakeview], a1955, 1/11 (44), DL. Roman Rd (No. 2) [Knottisford St, Slough, Bevin, Clynes, Windsor], a1955, 1/7 (12), 3/6 (66), GWS. St Peter's Ave, a1964, 5/6 (174), Tersons. St Simon Zelotes (Extended) Site, and Usk St (No. 2) Site, a1954, 2/8 (48), Rush & Tompkins. Thoydon Rd (No. 1) Site [Hooke Hs], a1950, 1/6 (48), Halse.

BRENTFORD & CHISWICK MBC (FROM 1965: HOUNSLOW LBC)
Albany Rd RD, Block A, a1962, 1/8 (28), W. J. Whittall. Brentford High St and Albany Rd RD Scheme, Phase 1, a1959, 1/8 (72), Humphreys. 1–16 British Grove, a1964, 1/6 (24), W. H. Streeter. Ealing Rd Joint Scheme, a1955 (joint development with Ealing MBC), Brentford portion: 3/6 (75), N. Sinclair. Hogarth Ln RD, Block 5, a1955, 1/6 (50), M. Howard; Block 9, a1956, 1/6 (28), Perry's. St Thomas's Est [Sutton Ct Rd, St Thomas's Rd], a1950, 3/6 (96), N. Sinclair; a1951, 1/6 (42), E. & L. Berg.

CAMBERWELL MBC (MET.) (FROM 1965: SOUTHWARK LBC)
The Abbey Site, Honor Oak Rise, a1960, 1/7 (28), Rooff. Denmark Hill [Basingdon Way, Blanche Downe], Blocks D, E, F, G [Cross, Torrens, Mayhew, Shaftesbury], a1950, 4/6 (144), Wates; Blocks A, B, C [Tayside, Perth, Swinburne], a1953, 3/6 (234), Unit. Development Areas: No. 1 (Astley St), Stage II [Rowcross St], a1957, 1/11 (90), Wates; No. 2 (Coopers Rd), a1957, 2/13 (96), 2/6 (88), Wilson Lovatt; No. 3 (Acorn Pl) [Meeting Hs Ln/Peckham High St], a1960, 1/7 (317), Token; No. 17 (Brayards Rd), a1958, 2/7 (54), Laing; No. 18 (Mansion St) [Castlemead, Blucher Rd], a1961, 1/18 (117), Wilson Lovatt. Lordship Ln, Blocks A, B, C, D [Bew, Byron, Campbell, Glennie], a1950, 4/6 (186), Kirk & Kirk. Pelican Yard [Heron Hs, Pelican Est, Lyndhurst Way], a1954, 1/9 (52), Wates; Pelican Est Ext [Crane Hs], a1962, 1/15 (70), Laing. Sceaux Est [Peckham Rd, Southampton Way], a1957, 2/15 (196), 4/6 (174), Laing. Sydenham Hill [Attleborough Ct], a1952, 1/6 (57), F. Troy. Woodland Rd, a1958, 2/7 (55), Laing.

CHELSEA MBC (MET.) (FROM 1965: KENSINGTON & CHELSEA LBC)
Cadogan Ave Area [Wiltshire Cl], a1946, 5/6 (214), Holloway Bros. Elm Pk Gdns, Stage 10 [site of nos. 66–70], a1963, 1/6 (25), #c/u. Lucan Pl Area RD [Keppel Hs], a1951, 1/6 (15), W. Willett. New Elm Pk Hs [Elm Pk Gdns], a1963, 1/12 (60), Tersons. Wandon Rd, a1959, 1/11 (40), Wates. West Chelsea (No. 1) Area, 1st Stage [Cremorne Est], a1950, 4/8 (128), Holloway Bros.

CRAYFORD UDC (FROM 1965: BEXLEY LBC)
Arthur St and Boundary Rd, a1960, 3/13 (231), Wimpey. Northend Rd [Orchard Hs], a1962, 1/13 (76), Wimpey.

CROYDON CBC (FROM 1965: CROYDON LBC)
Ashburton Est, Stroud Green Way, a1961, 2/8 (64), Hawker Smith. Belgrave Rd (Wates Croydon I), a1962, 1/11 (44), Wates. Bramley Hill (Wates Croydon III), a1964, 1/11 (44), Wates. Bridge Pl (Wates Croydon I), a1962, 1/11 (40), Wates. Central Parade, New Addington, a1959, 1/8 (31), GWS. Chertsey Cres, New Addington (Wates Croydon III), a1964, 1/11 (44), Wates. College Green Est, 2nd Stage RD, a1962, 2/10 (79), Federated Developments. Elmwood Rd, a1957, 1/9 (26), Croudace. Grosvenor Rd (Wates Croydon III), a1964, 1/11 (44), Wates. Lower Addiscombe Rd and Grant Pl, a1958, 2/8 (60), H. Webb. 161 Lower Addiscombe Rd, a1963, 1/8 (32), Hawker Smith. Mayday Rd, a1959, 1/8 (32), Hawker Smith. New Addington Roundabout (Wates Croydon II) [Castle Hill Ave], a1963, 2/11 (88), Wates. Old Town/Duppas Hill Terr, a1956, 1/11 (55), Wates. Regina Rd (Wates Croydon I), a1962, 1/11 (44), Wates; (Wates Croydon II), a1963, 2/11 (88), Wates. 'Skola', Heathfield Rd, a1954, 1/8 (32), J. Gerrard. Violet La and The Waldrons (Wates Croydon I), a1962, 1/11 (44), Wates. The Waldrons, a1955, 1/8 (32), J. Gerrard; (Wates Croydon III), a1964, 2/11 (88), Wates. Wingate Cres, a1959, 2/8 (64), Hawker Smith.

DAGENHAM MBC (FROM 1965: BARKING & DAGENHAM LBC)
Rainham Rd and Cadiz Court, a1961, 1/11 (44), Wimpey.

DEPTFORD MBC (MET.) (FROM 1965: LEWISHAM LBC)
Breakspears Rd No. 2, s1956, 1/6 (24), H. C. Richardson. Brockley Rd/Wickham Rd, Block A [Holly Tree Hs], s1957, 1/6 (26), H. C. Richardson; [Conifer, Poplar Hses], s1959, 1/6 (56), S. Varney; 1/6 (26), Rowley Bros. Etta St [Citrus Hs], s1962, 1/6 (30), J. Cartwright. Evelyn St, Nos. 1, 2 [Magnolia Hs], s1954, 1/6 (30), H. Howard; No. 1 Extension [Mulberry, Laurel Hses], s1957, 2/6 (40), A. A. Stuart; No. 3, s1964, 3/6 (86), A. A. Stuart. Milton Court Rd No. 2 [Milton Ct], s1964, 2/9 (56), J. Cartwright. Wickham Rd and Glensdale Rd [Jasmin, Syringa, Veronica Hses], s1958, 3/6 (63), S. Varney.

EALING MBC (FROM 1965: EALING LBC)
Ealing Rd Joint Scheme [Clayponds Gdns], a1955, (joint scheme with Brentford & Chiswick MBC), Ealing share: 3/6 (75), N. Sinclair. Gurnell Grove, a1962, 2/11 (129), Wimpey; a1964, 1/11 (65), Wimpey. Northolt Pk [Newmarket Ave], a1954, 1/8 (40), Wimpey; a1963, 1/14 (83), 1/8 (47), Wimpey.

EAST HAM CBC (FROM 1965: NEWHAM LBC)
Aldersbrook [Brading Cres: out-borough], a1956, 1/8 (32), W. J. Cearns. Burgoyne-Burbidges Site [Melford Rd], a1958, 2/8 (64), F. Bilton. Durban Hs Site [Katherine Ave, Plashet Grove], a1958, 1/6 (30), H. Richardson. Florence Rd [Redclyffe Rd], a1962, 1/8 (46), Bates. Grantham Rd, Little Ilford, a1965, 2/15 (112), Bates. Heigham Rd, a1964, 1/8 (32), Wates. 76–78 High St South, a1957, 1/8 (46), Bates. Hollington Rd, a1963, 1/8 (32), Wates. Holloway Rd, a1961, 1/8 (32), Wates. Katherine Rd (Labour Hall Site) [Victoria Ave], a1962, 1/8 (32), Wates. Little Ilford Phase I [Parkhurst Rd, Walton Rd], a1965, 3/8 (96), Bates. Lonsdale Ave North Site, a1958, 1/8 (46), H. Richardson. Milton Ave [The Firs], a1964, 1/6 (35), London Cooperative Society. North Woolwich RD [Woodman St], a1960, 2/8 (64), H. Richardson, and 1/8 (30), W. J. Jerram; a1962, 3/8 (96), Wates. Park Rd, a1962, 1/8 (46), Bates. Priory Rd, a1951, 1/8 (96), Bates. Priory Rd and Boleyn Rd, a1964, 3/8 (96), Wates (2 contracts). Queens Factory [Redclyffe Rd], a1962, 1/15 (56), Bates. Shakespeare Cres, a1963, 1/15 (56), 5/8 (160), Bates. Walbrook Works, Stevenage Rd, a1964, 1/8 (32), Bates.

EDMONTON MBC (FROM 1965: ENFIELD LBC)
Contractor: all Edmonton blocks built by DL.
Alpha Rd and Fore St, a1959, 1/11 (61). Angel Rd South, Block A, a1963, 1/18 (101). Fore St RD, Block 1 [Durbin], a1953, 1/6 (18), DL; Blocks 4, 7 [Anvil, Walton], a1953, 2/6 (36); Block 10 [Alma], a1953, 1/7 (45); Block 13 [Chiltern], a1955, 1/7 (84). Goodwin Rd RD, Blocks A, B, a1962, 2/9 (90). Snells Pk (entries in chron. order), Block 15, a1956, 1/9 (45); Block 17, a1957, 1/9 (45), Block 19, a1957, 1/9 (45); Block D, a1959, 1/9 (45); Block A [Boundary], a1959, 1/9 (48); Block B [Isis], a1960, 1/9 (45); Block C, a1960, 1/9 (45); Block J, a1961, 1/9 (45); Block K2, a1963, 1/14 (72).

ENFIELD MBC (FROM 1965: ENFIELD LBC)
Green St Nursery [The Ride], a1962, 4/13 (200), Wates. Royal Nurseries [Cambridge Rd], a1962, 2/11 (176), 1/6 (30), Wates. Turkey St, a1963, 1/9 (34), Wates.

ERITH MBC (FROM 1965: BEXLEY LBC)
Larner Rd Phase I [Sara, Cambria Hses], a1964, 2/15 (168), Wimpey. University Pl [Becton Pl], a1962, 3/9 (103), Wates.

FELTHAM UDC (FROM 1965: HOUNSLOW LBC)
Bedfont Ln, a1962, 1/11 (52), Wates. Highfield Development, High St Feltham, a1964, 2/12 (174), Wates.

FINCHLEY MBC (FROM 1965: BARNET LBC)
East Finchley RDA, Phase II [Prospect Ring], a1958, 2/11 (88), Tersons; Phase IV [Park Rd], a1962, 1/11 (44), Tersons.

FINSBURY MBC (MET.) (FROM 1965: ISLINGTON LBC)
Brunswick Cl [Percival St], a1956, 3/14 (207), Y. J. Lovell. Busaco St [Priory Green Est, Collier St], a1947, 2/8 (188), F. G. Minter. Donegal St, a1962, 1/10 (58), Pitchers. Finsbury Est (Clarke's Close Est RD) [Skinner St], a1965, 1/24 (185), 1/9 (143), Tersons. Galway St [Radnor St], a1958, 2/17 (201), 1/6 (29), Wates. Holford Sq [Cruickshank St], a1950, 1/8 (118), Tersons. Killick St, a1949, 1/6 (24), Y. J. Lovell. King Sq, a1961, 1/20 (163), 1/17 (97), 1/9 (65), 1/6 (94), Y. J. Lovell. Old St, a1951, 3/12 (180), Y. J. Lovell. Priory Green Ext, a1953, 1/8 (48), Tersons. Rosebery Ave [Spa Green Est], a1946, 2/8 (96), Moss. Tompion St, a1960, 1/6 (37), Y. J. Lovell.

FULHAM MBC (MET.) (FROM 1965: HAMMERSMITH & FULHAM LBC)
Alice Gilliatt Ct, Block C and Wing C [Star Rd], a1955, 1/6 (38), Laing. Cassidy Rd Area [61–106 Barclay Cl], a1957, 1/8 (46), W. J. Marston. Cobb's Hall [Silverton Rd, Fulham Palace Rd], a1961, 1/6 (30), Tersons. Dieppe St RDA [39–100 Gibbs Green], a1958, 1/8 (62), Tersons. Field Rd [Horton, Cox], a1963, 5/6 (103), W. J. Marston. 'The Grange' Site, North End Cres, a1960, 1/9 (36), Simms, Sons & Cooke. Lillie Rd (South) Area, 1st Stage [subsequently Clem Attlee Ct: Cripps, Gaitskell], a1955, 1/7 (39), 1/6 (78), Tersons; Clem Attlee Ct 2nd Part [Dalton, Griffiths, Williams], a1957, 3/11 (259), Tersons; Clem Attlee Ct Ext [Morrison], a1963, 1/18 (68), M. J. Gleeson. St Thomas' Way and Estcourt Rd [Summerskill], a1963, 1/18 (65), M. J. Gleeson. Sulivan Ct [Peterborough Rd: entries in chron. order]: Block 8 [nos. 316–351], a1951, 1/6 (36), Laing; Block 19 [nos. 298–315], a1952, 1/6 (18), Laing; Block 17 [nos. 372–443], a1952, 1/8 (72), Laing; Block 18 [nos. 444–484], a1954, 1/6 (37), Laing. Wandsworth Bridge Rd and De Morgan Rd (Bluebell Works) [Barton, Coomber], a1963, 1/21 (76), 2/7 (68), Tersons.

GREENWICH MBC (MET.) (FROM 1965: GREENWICH LBC)
Greenwich High Rd [Maitland Cl], a1956, 1/8 (24), Rowley Bros. Haddo St [Thornham St], a1962, 1/18 (70), Stewart. Lansdowne Ln [Valleyside], a1961, 1/10 (27), J. Cartwright. 'Springfield' (Charlton Rd) Housing Site, a1949, 2/8 (62), 7/7 (168), Kirk & Kirk. Vanbrugh Pk, a1961, 1/8 (64), Matthew James.

HACKNEY MBC (MET.) (FROM 1965: HACKNEY LBC)
Amhurst Pk (No. 1) [Joseph Ct], a1960, 1/11 (60), 1/6 (42), DL; (No. 2) [Goodrich], a1962, 1/6 (29), DL. Amhurst Rd [Marlow Ct], a1956, 1/6 (47), DL. Bakers Hill, a1958, 1/6 (18), DL. Buccleuch Terr [Clapton Common], a1949, 1/6 (84), Unit. Cazenove Rd (No. 2) [G. Downing], a1962, 2/13 (96), DL. Clapton Common (No. 5) [Webb], a1955, 2/6 (84), DL; (No. 6) [Tower Ct], a1955, 1/9 (51), DL. Graham Rd and Wilton Rd [Boscobel], a1959, 1/12 (46), DL. Homerton High St [Marian Ct], a1956, 3/6 (75), DL. Homerton High St and Ponsford St [Bridge Hs], a1962, 1/6 (60), DL. Kenninghall Rd (No. 3) [Gooch Hs], a1960 (s1962), 1/17 (80), DL. Lansdowne Dr [Moorland, Fields], a1958, 2/12 (92), DL. Paragon Rd, a1957, 3/15 (186), DL. Portland Ave [Summit Est], a1954, 1/6 (63), DL. Presbury St [Nye Bevan], a1959, 1/12 (46), DL. Rectory Rd [The Beckers], a1956, 2/11 (84), DL. Richmond Rd [1–80 Wyman], a1964, 1/17 (80), DL. Tottenham Rd [Kingsgate Est], a1958, 1/11 (44), Ford & Walton. Upper Clapton Rd [The Mount], a1957, 1/9 (51), DL.

HAMMERSMITH MBC (MET.) (FROM 1965: HAMMERSMITH & FULHAM LBC)
Becklow Gdns Ext, Block I, a1947, 1/6 (42), Tersons. Blythe Rd [Springvale Est], Block 1 [Thackeray], a1952, 1/8 (48), DL; Blocks 2, 3 [Calcott, Elgin], a1950, 2/6 (48), DL; Block 4 [Walpole], a1954, 1/6 (24), DL; (Springvale Est, Aynhoe Rd) [Bronte], a1961, 1/6 (11), DL. Sulgrave Rd [1–48 Sulgrave Gdns], a1956, 1/8 (48), DL. 218 Goldhawk Rd [The Grange], a1959, 1/8 (16), DL. Goldhawk Rd and Hammersmith Grove, Block D [Verulam Hs], a1964, 1/8 (56), DL. Latimer Rd Area (South) RD, Blocks 1, 2 [Stebbing, Poynter], a1964, 2/24 (352), DL. Mardale and Southbrook St Area [Drake Ct, Shackleton Ct], a1963, 2/11 (76), DL. Riverside Gdns Ext [Aspen Gdns], Block A, a1946, 1/6 (56), Tersons; Block B, a1947, 1/6 (32), Tersons.

HAMPSTEAD MBC (MET.) (FROM 1965: CAMDEN LBC)
Abbey Est, Blocks B, C [Abbey Rd], a1965, 2/20 (204), Laing. 97–115 Adelaide Rd, a1965, 1/20 (72), Truscon. Finchley Rd and Harben Rd, a1955, 1/9 (24), 3/7 (110), Unit. Fleet Rd Area RD, a1962, 2/15 (112), Laing. King Henry's Rd, a1948, 3/6 (92), Simms Sons & Cooke. Shoot-Up Hill [Templar Hs], a1950, 1/7 (90), F. Troy. Springfield Ln, a1955, 1/6 (24), Rowley Bros.; a1962, 1/9 (24), W. Lilly. West End Ln, a1949, 1/6 (50), Myton.

HAYES & HARLINGTON UDC (FROM 1965: HILLINGDON LBC)
Uxbridge Rd (South Side), a1964, 2/13 (96), Tersons.

HENDON MBC (FROM 1965: BARNET LBC)
Belle Vue Phase 1 [Stratford Ave], a1963, 1/16 (128), Wimpey. Claremont Rd Section B, a1956, 3/11 (132), Laing. Granville Rd, Phase 1, a1960, 2/15 (120), Wimpey; Phases 2, 3 (Block F), a1962, 1/15 (60), Wimpey.

New Brent St Phase 1, a1958, 2/11 (88), Wimpey. Spur Rd, a1955, 6/11 (264), Wimpey.

HESTON & ISLEWORTH MBC (FROM 1965: HOUNSLOW LBC)
Green Ln, Hounslow, a1962, 1/13 (78), Wimpey. Old Isleworth RD, Unit No. 2 [North St], a1963, 1/11 (40), Wimpey. Wentworth Rd, a1965, 1/13 (74), Wimpey.

HOLBORN MBC (MET.) (FROM 1965: CAMDEN LBC)
Endsleigh St [in St Pancras MB], a1953, 1/6 (30), Pitchers. Great Ormond St Area [Dombey St], a1946, 1/10 (50), 4/7 (112), W. Moss. Laystall St, a1962, 1/12 (33), Pitchers. Leather Ln/Hatton Gdn, a1961, 1/12 (44), Rush & Tompkins (joint development with Brixton Development Co.). Mount Pleasant & Poole's Bldgs, a1958, 1/10 (30), H. Richardson. Ormond Cl [Orde Hall St], a1959, 2/14 (112), Laing. Red Lion Sq, a1952, 2/6 (56), Allen Fairhead. Red Lion St and Eagle St, a1955, 1/7 (14), W. J. Marston. Tybalds Cl Ext [Dombey St: annexe to 'Falcon'], a1954, 1/7 (14).

HORNCHURCH UDC (FROM 1965: HAVERING LBC)
Mardyke Farm Est [Lower Mardyke Ave], a1962, 6/12 (269), Wates.

HORNSEY MBC (FROM 1965: HARINGEY LBC)
Campsbourne RDA Stage VIII [Boyton Rd], a1964, 1/6 (75), #c/u. Connaught and Carlton Rds [Carlton Lodge], a1947, 1/6 (46), Globe Contractors. Haringey Grove RDA [Dylan Thomas Hs], a1964, 1/16 (90), B. Sunley (Allbetong). Hillcrest, North Hill, a1947, 3/7 (84), Globe Contractors.

ILFORD MBC (FROM 1965: REDBRIDGE LBC)
Beehive Ln, s1950, 1/7 (38), GWS. The Glade (Stage III) and Fulwell Ave, s1962, 1/12 (61), W. & C. French. Ilford Ln, s1956, 2/6 (36), Hammond & Miles. Oaks Ln, s1962, 1/12 (61), W. & C. French.

ISLINGTON MBC (MET.) (FROM 1965: ISLINGTON LBC)
Basire St, a1954, 1/6 (21), GWS. Dame St, a1954, 2/10 (64), GWS. Douglas, Marquess and Clephane Rds, a1957, 2/10 (60), Rowley Bros. Essex Rd [E. Fletcher Ct], a1956, 1/6 (75), H. Richardson. 257–77 Essex Rd, a1964, 1/6 (55), Pitchers. Goldsmith Pl [Dixon Clark Ct, St Pauls Rd and Canonbury Rd], a1964, 1/15 (60), Pitchers. Highbury New Pk (No. 2), a1952, 1/8 (52), Patman & Fotheringham. Hilldrop Ln, a1956, 1/6 (42), H. Richardson. Mildmay Centre [Newington Green Rd], a1953, 1/10 (40), Rowley Bros. Naish Ct, Blocks C, J [Bemerton St], a1952, 2/8 (64), Allen Fairhead. Newington Green Rd [J. Kennedy Ct], a1963, 1/10 (50), Rowley Bros. Oakley Cres, a1959, 1/6 (36), GWS. Rotherfield Ct, Blocks C, D [Rotherfield St], a1955, 2/8 (76), GWS; Block M [Mclndoe Ct], a1959, 1/10 (40), Rowley Bros. St John's College Site [Avenell Rd], a1949, 1/9 (81), GWS. Sussex Way, a1950, 1/8 (42), Simms Sons & Cooke. Tufnell Pk Rd, a1956, 1/6 (72), H. Richardson. Wilton St and Baring St, a1955, 1/8 (30), Allen Fairhead.

KENSINGTON MBC (MET.) (FROM 1965: KENSINGTON & CHELSEA LBC)
Denbigh Rd and Westbourne Grove [Longlands Ct], a1952, 1/6 (81), R. Mansell. Henry Dickens Ct, Phase III [Becher St], a1951, 2/10 (94), Holloway Bros. Kensal New Town RD, Stage 1, Phase I [Hazelwood, Adair Towers], a1958, 2/14 (156), Unit; Phase 2 [1 Appleford Rd], a1965, 1/6 (19), Y. J. Lovell. Portobello St [Lonsdale, Adelaide, Ledbury], a1949, 1/8 (110), Y. J. Lovell. Treverton St Area Phase 1, a1956, 2/11 (110), Leslie. Westbourne Pk Rd [Clydesdale Hs], a1956, 1/6 (30), R. Mansell.

KINGSTON UPON THAMES MBC (FROM 1965: KINGSTON UPON THAMES LBC)
Acre Rd, Block D, a1964, 1/11 (35), Holdyne. Cambridge Homes [Cambridge Rd], a1947, 1/7 (144), Speirs. Kingston Hill (The Grange, etc.) Site, a1949, 1/8 (44), 1/7 (40), 1/6 (36), Speirs.

LAMBETH MBC (MET.) (FROM 1965: LAMBETH LBC)
Bentons Ln, 2nd Contract, a1950, 1/7 (28), Wilson Lovatt (later Jarvis). Bonham Rd [Beatrice Hs], a1950, 1/6 (24), Clarke Barton. Canterbury Cres, a1959, 1/16 (69), 2/6 (72), W. Lawrence. Endymion Rd, a1960, 1/7 (52), J. Jarvis. Hartington Rd, Stage I [Longley, Sudbury, Tait, Walden, Benson, Cornwallis], a1954, 2/11 (203), 1/9 (16), 1/6 (82), Rice; Stage II [Stafford, Sumner, Tillotson, Kemp, Bancroft], a1955, 2/11 (180), 1/6 (59), Rice; Stage III [Thorncroft St], a1957, 1/6 (141), Tersons. Leigham Ct Rd [Hawthorne, Hazel Cts], a1951, 1/8 (42), W. Lawrence. Opal St, a1955, 3/9 (156), Tersons. Salters Hill, a1965, 1/6 (21), F. J. Moreton (later DL). Somers Rd, a1960, 2/7 (74), J. Jarvis. Studley Rd, Stage 1, 1st contract [Fishlock, Glover, Hayward, Holmes, Jephson, Knox: incl. 37 dwellings in 1952 ext], a1951, 4/7 (275), J. Jarvis; Stage 2 [Squires, Strudwick, Sandham], a1953, 3/7 (182), J. Jarvis; Stage IV [Whittaker, Laker], a1959, 2/11 (110), Wates. Woodland Rd [Wiseman Ct], a1964, 1/7 (28), Thomas & Edge. Wyvil Rd, Stages I Ext, II, a1950, 4/6 (96), J. Jarvis. ACQUIRED: Dumbarton Ct, Brixton Hill, 1/6 (230), built 1930s, acq. 1959.

LEWISHAM MBC (MET.) (FROM 1965: LEWISHAM LBC)
Baring Rd [Sandstone Rd], a1958, 4/6 (72), H. Kent. 36–56 Eltham Rd, a1958, 3/11 (132), Costain. Honor Oak Rd, a1958, 1/9 (49), A. Roberts. Honor Oak Station, a1963, 2/9 (64), Kirk & Kirk. Ladywell Pk (2nd Stage) [Hither Green Ln], a1954, 1/6 (21), Rush & Tompkins. Lewisham Pk, a1962, 3/18 (204), B. Sunley. Porthcawe Rd, 2nd Stage, a1961, 7/8 (224), Griggs (later Gleeson).

LEYTON MBC (FROM 1965: WALTHAM FOREST LBC)
Albany Rd, a1962, 2/11 (88), W. J. Cearns. Beaumont Rd RDA, Stage 1 [All Saints' Tower, Osborne Ct], a1963, 1/21 (120), 1/6 (36), J. & J. Dean; Stage 1 Ext [St Paul's Tower], a1965, 1/21 (120), J. & J. Dean. Crescent Rd RDA, Stage 1 [Church Rd], a1959, 1/11 (42), J. & J. Dean. Hutchison House Site [Browning Rd], a1965, 1/22 (100), Wates. Market Site, [Leyton Green], a1961, 1/11 (49), W. J. Marston. Montague Rd, a1962, 2/18 (234), Kirk & Kirk. Livingstone College [Essex Rd], a1961, 1/17 (100), Wates. Oliver Close [Collins, Hicks, Punshon Towers], a1963, 3/22 (300), Wates.

MERTON & MORDEN UDC (FROM 1965: MERTON LBC)
High Path RD, Phase IV, a1964, 2/12 (132), Tersons.

MITCHAM MBC (FROM 1965: MERTON LBC)
Baron Hs [London Rd], Section I, a1952, 2/6 (66), E. H. Smith; Section II, a1953, 1/6 (36), E. H. Smith. Elm Nursery [Armfield Cres], Section I, a1950, 1/6 (56), Speirs; Section II, a1950, 1/6 (56), Speirs; Section III, a1951, 1/6 (54), Speirs. Glebe Est [Glebe Ct, London Rd], Section 1, a1948, 1/7 (44), P. Bilton; Section II, a1951, 2/6 (117), Speirs. Laburnum Rd [Lammas Ave], Section I, a1952, 3/6 (114), Wates; Section II, a1953, 1/6 (36), Wates. Phipps Bridge RD, Stage 1, a1960, 1/11 (73), A. A. Stuart; Stage II, a1962, 1/11 (146: incl. 4-storey spur), A. A. Stuart; Stage III, a1963, 1/11 (64), Federated Contractors; Stage IV, a1965, 2/11 (128), Tersons. Pollards Hill [Lancaster Ave], a1950, 1/6 (60), Wates; Section III, a1950, 1/6 (72), Wates; Section IV, a1950, 1/6 (72), Wates; Section V, a1951, 1/6 (72), Wates.

PADDINGTON MBC (MET.) (FROM 1965: (CITY OF) WESTMINSTER LBC)
Adpar St [Hall Pl/Crompton St], a1964, 2/22 (160), Tersons. Bishop's Bridge Rd [Hallfield], 1st Contract [Pembroke, Marlow, Worcester, Tenby, Clovelly, Bridgwater], a1949, 2/10 (160), 4/6 (88), W. Lawrence; 2nd Contract [Exeter, Caernarvon, Windsor, Reading, Taunton, Newbury, Lynton, Brecon], a1953, 4/10 (320), 4/6 (88), F. G. Minter. Church St [Gilbert Sheldon], a1951, 1/8 (32), J. M. Hill. Fulham Pl [Howley Pl], 1st Stage [1–115 John Aird Ct], a1948, 2/8 (115), Dove Bros.; John Aird Ct 2nd Stage [116–228], a1953, 1/8 (113), Y. J. Lovell. Hall Pl, Stage 2 [Crompton], a1953, 1/6 (36), W. B. Towers; Stage 3 [Hethpool], a1955, 1/6 (36), R. Hart; Stage 6 [Cuthbert], a1960, 1/6 (36), Rowley Bros. Peach St [Ilbert St], a1947, 2/6 (60), Holloway Bros.

PENGE UDC (FROM 1965: BROMLEY LBC)
Groves Area RD, Phase 1 [Woodbine Grove], a1961, 2/12 (142), Truscon; Phase II, Stage II [Jasmine Grove], a1965, 1/17 (97), Truscon. Laurel Grove, a1955, 1/8 (38), S. G. & A. Agombar.

POPLAR MBC (MET.) (FROM 1965: TOWER HAMLETS LBC)
Abbott Rd [Braithwaite Hs], a1946, 1/6 (105), DL; Blocks 11, 12 [Currie Hs], a1952, 1/9 (88), McAlpine. Tetley St, Block E [Langdon Hs], a1952, 1/7 (45), McAlpine. Teviot St Area, a1951, 5/9 (258), P. Bilton.

RICHMOND UPON THAMES MBC (FROM 1965: RICHMOND UPON THAMES LBC)
Peldon Ave, a1957, 2/9 (72), Kirk & Kirk.

ROMFORD MBC (FROM 1965: HAVERING LBC)
Highfield Rd, Section 5 [Highfield Towers], a1964, 1/16 (76), Selleck Nicholls Williams. Upper Brentwood Rd Phase 1 [Durham Ave], a1963,

2/11 (106), Wates. Waterloo Rd RDA [Waterloo Gdns], a1960, 2/11 (106), Wates.

ST MARYLEBONE MBC (MET.) (FROM 1965: (CITY OF) WESTMINSTER LBC)
Barrow Hill, a1946, 1/7 (168), Demolition & Construction Co. Broadley St and Penfold St [Elmer], a1961, 1/6 (30), W. Moss. Chapel St [38–47A], a1956, 1/6 (20), Y. J. Lovell. Church St, a1946, 1/7 (53), Prestige & Co. Church St Ext [Kennet], a1959, 1/16 (60), GWS. Townsend St [entries in chron. order], Section II, a1950, 1/7 (28), Perrys; Block 8, a1953, 1/7 (42), R. Fairweather; Block 7, a1954, 1/7 (28), Perrys; Block 9, a1955, 1/7 (42), Perrys. Wellington Rd, a1952, 4/8 (121), W. Moss.

ST PANCRAS MBC (MET.) (FROM 1965: CAMDEN LBC)
Allcroft Rd [Bacton], a1965, 1/22 (120), M. J. Gleeson. Ampthill Sq, a1965, 3/21 (240), DL. Camden High St [Fairfield, Foxfield], a1952, 1/9 (95), DL. Camden Town (No. 1) [Agar Grove], a1962, 1/19 (137), Wilson Lovatt. Castle Rd [Castlehaven Rd], a1960, 1/8 (35), M. J. Gleeson. Clarence Way (No. 1) [Candida, Loraine, Terry], a1950, 2/8 (132), Tersons: Candida extended by 16 dwellings a1953, Tersons. Clarence Rd, Block G [Torbay Ct], a1952, 1/8 (56), Tersons. Cromer St (No. 1), a1947, 11/6 (256), Stewart & Ptns. Cromer St, Block 5, a1948, 1/6 (18), Stewart & Ptns [extended by 2 dwellings 1957]. Curnock St [Mexborough], a1964, 1/6 (66), DL. Ferdinand St (Nos. 1, 2, 3), a1946, 2/8 (64), 2/7 (56), J. Jarvis. Ferdinand St Ext [Broomfield], a1961, 1/6 (42), DL; Block A [Hardington], a1962, 1/11 (64), DL. Goldington Cres [Crowndale], a1955, 1/8 (62), DL. Goldington St, a1949, 1/10 (72), 1/8 (32), DL. Highgate Rd [Haddo Hs], a1962, 1/9 (40), DL. Judd St, a1953, 1/9 (46), GWS. Lamble St Stage 1, a1952, 1/10 (50), McAlpine. Oakley Sq [Godwin Ct], a1949, 1/8 (114), F. Troy. Peckwater St (Nos. 1, 2, 3), a1946, 1/8 (51), 1/6 (24), A. Roberts. Peckwater St Ext [Applefield, Arborfield], a1955, 1/8 (51), 1/6 (24), DL. Plender St [Faversham, Brockham, Rainham], a1953, 1/10 (29), 1/6 (32), Costain. Plender St No. 2 [Westerham], a1958, 1/6 (66), DL. Prince of Wales Rd [Shipton Hs], a1949, 1/6 (24). Regent's Pk [Osnaburgh St: entries in chron. order], Area A [Augustus, Mackworth, Harrington], a1950, 3/9 (180), Tersons; Area A, Blocks A5, A6 [Langdale, Eskdale], a1952, 2/9 (120), Tersons; Area A Ext [Silverdale], a1953, 1/7 (67), Tersons; Area C [Borrowdale, Patterdale, Grasmere, Ennerdale, Grisedale], a1953, 3/11 (132), 1/8 (39), Laing; Area B [Ambleside, Kendal], a1954, 2/6 (84), H. Neal; Area A 5th Contract [Cartmel], a1956, 1/7 (67), M. J. Gleeson; Areas E, F, G [The Combe, Englefield, Swallowfield], a1957, 1/19 (70), 2/11 (88), H. Fairweather; Area C Ext [Waterhead, The Tarns, Derwent, Rydal Water], a1959, 2/11 (88), 1/8 (60), DL. Regent Sq [Glynde Reach, Bramber, Northiam], a1955, 1/11 (40), 1/7 (38), 1/6 (24), Tersons. St Pancras Way (Nos. 1, 2), a1946, 3/6 (126), H. Neal [Woollett Ct. extended by 28 dwellings a1949, H. Neal]; Block G [Inwood], a1951, 1/6 (34), H. Neal. Sidmouth Mews, a1957, 1/7 (61), DL. West Kentish Town (2nd Contract) [Hawkridge], a1961, 1/15 (71), Reema. Willingham Terr, a1951, 1/6 (32), GWS.

SHOREDITCH MBC (MET.) (FROM 1965: HACKNEY LBC)
Acton Est, Block 11 [Angrave Ct, Queensbridge Rd], a1960, 1/11 (44), H. Richardson. Aske St [Fairchild Hs], a1949, 1/6 (59), W. Lawrence. Bracklyn St Area, Block 1 [Linale Hs, Murray Grove], a1948, 1/7 (42), H. Richardson. Britannia Walk, Blocks 1, 2 [Catherwood Ct], a1952, 2/6 (96), Tersons. Charles Sq, Block 8, a1961, 1/16 (55), Tersons. Colville Est, Block 11 [Whitmore Rd: Norris], a1951, 1/6 (36), Tersons. Fleming St Area, Stages 1, 2 [1–34 Geffrye Est, Stanway St], a1952, 1/6 (34), W. Lawrence. Geffrye Est, Block 4 [35–68 Geffrye Est], a1953, 1/6 (34), W. Lawrence; Blocks 7, 8 [1–88 Stanway Ct], a1957, 2/11 (88), H. Richardson. Hobbs Pl [1–48 Clinger Ct, Pitfield St, Hoxton St], a1952, 1/6 (48), H. Richardson; Block 2 [49–92 Clinger Ct], a1956, 1/11 (44), W. Lawrence. Kingsland Est & St Mary's Est [Whiston Rd], Blocks 14, 15 [21–64, 65–94 Laburnum Ct], a1955, 1/11 (44), 1/6 (30), H. Richardson; Blocks 17, 19 [95–138, 37–78 Bryant Ct], a1957, 1/11 (44), 1/7 (42), Tersons. Pitfield Est, Block 2 [Fanshaw St: Burtt Hs], a1951, 1/6 (60), H. Richardson; Blocks 3, 4 [Royal Ct], a1952, 2/6 (72), Tersons; Block 5 [Royal Ct], a1953, 1/6 (36), Tersons. Regent's Row, Blocks 1, 2 [Regent's Ct], a1959, 1/11 (44), 1/6 (90), Tersons. St John's Est [Crondall St], Blocks 2, 3 [Cherbury Ct], a1959, 2/11 (88), Tersons; Block 4 [Crondall Ct], a1960, 1/11 (44), Tersons; Block 12 [52–113 Buckland Ct], a1960, 1/6 (62), H. Richardson. St Mary's Area [Thurtle Terr: Godwin Hs], a1950, 1/7 (42), W. Lawrence. St Mary's Est: Block 8 [81–132 Queensbridge Rd], a1952, 1/7 (52), W. Lawrence; Fellows St Area [63–162, 339–428 Fellows Ct], a1963, 1/17 (100), 1/15 (90), Tersons; 2nd Stage [211–298, 465–552 Fellows Ct], a1963, 2/6 (176), Tersons. Stonebridge Est: Lee St [Acton Hs], a1950, 1/6 (36), Tersons. Wenlock Barn [Murray Grove/Cropley St: entries in chron. order]: Block 2 [Murray Grove: M. Lloyd], a1949, 1/7 (42), Tersons; Block 10 [45–104 Evelyn Ct], a1953, 1/10 (60), W. Lawrence; Block 14 [Wenlock Ct], a1954, 1/6 (36), Tersons; Blocks 17, 18 [Bletchley Ct], a1954, 1/10 (60), 1/6 (24), H. Richardson; Block 22 [Britannia Walk], a1955, 1/6 (24), H. Richardson; Blocks 23, 31 [Wimbourne Ct], a1955, 1/11 (44), 1/6 (30), W. Lawrence; Block 19 [41–82 Shaftesbury Ct], a1956, 1/7 (42), W. Lawrence; Block 28 [Parr Ct], a1958, 1/11 (44), H. Richardson; Napier Grove Site [Napier Ct], a1963, 1/8 (69), W. Lawrence; Blocks 24, 26, 27, 29 [Cropley Ct], a1964, 1/11 (44), 1/8 (64), 1/6 (64), H. Richardson. Windsor Terr, Block 6 [Micawber St], a1956, 1/6 (24), W. Lawrence; Block 7, a1958, 1/6 (24), W. Lawrence.

SOUTHALL MBC (FROM 1965: EALING LBC)
Golf Links Est [Baird Ave, Fleming Rd], a1964, 2/13 (142), Laing.

SOUTHGATE MBC (FROM 1965: ENFIELD LBC)
New Southgate CRDA Sub-area 9 [Upper Pk Rd], a1964, 1/13 (78), Reema. Palmers Rd Phase 1 [Highview Gdns], a1959, 2/13 (102), Wates.

SOUTHWARK MBC (MET.) (FROM 1965: SOUTHWARK LBC)
Alberta St, Stage IV [A. Westcott, H. Madison Hses], a1962, 1/12 (48), 1/10 (48), SLP. Barlow St, Stage I [E. Cotter Hs], a1964, 1/6 (63), W. Willett. Bethwin Rd [Boundary Hs], a1958, 1/8 (24), Stewart. Borough High St [1–52 Redman Hs], a1965, 1/12 (52), W. Willett. Congreve St, Stage III [Offham Hs], a1961, 1/8 (40), W. Willett. Doctor St, Stage III [St Matthew's Ho, Queen's Row], a1958, 1/7 (29), SLP. Doddington Grove (Ext) [Kean, Jephson Hses], a1947, 2/7 (49), H. Neal. East St No. 2 [Trafalgar, Ringsfield, Walsham Hses], a1951, 1/8 (62), 2/6 (48), W. Willett. Eccles Pl [Styles Hs], a1963, 1/12 (44), W. Willett. Goschen St [Horsman, Day Hses], a1953, 1/7 (68), 1/6 (24), W. Willett. Inville Rd [Soane Hs], a1963, 1/10 (30), W. Willett. Kennington Theatre Site [Kennington Park Pl], a1952, 1/10 (40), Costain. Morley St [Amigo Hs], a1950, 1/8 (30), Taylor Woodrow. Nelson Square [R. Hill, Applegarth, 1–51 Vaughan Hses], a1953, 1/9 (105), 2/8 (104), Spiers. Nelson Sq Ext [222–269 Helen Gladstone Hs], a1963, 1/13 (48), W. Willett. New Kent Rd [A. Barnes Hs], a1963, 1/18 (99), W. Willett. Penrose St, 1st Contract [37–132 Penrose Hs], a1948, 2/8 (96), W. Moss. Portland St, a1965, 4/14 (216), W. Willett. St Agnes Pl [1–56 Conant Hs], a1946, 1/7 (56), H. Neal.

STEPNEY MBC (MET.) (FROM 1965: TOWER HAMLETS LBC)
Bede Rd [Lewey Hs], a1964, 1/24 (92), Tersons. Bigland St Scheme, Cornwall St Site, s1952, 2/6 (106), M. J. Gleeson. Martineau Est, 1st Stage [Thorsmill, etc.], a1959, 1/6 (75), M. J. Gleeson; Stage II [Vogler], a1962, 1/6 (24), R. Hart. Sidney St, Portion A, Blocks 1, 14, 15, 16 [Ansell, Jarman, Beckett, Wingrand], a1951, 1/8 (98), 1/7 (80), A. E. Symes. Portion A, Blocks 11, 11B [Colverson], a1953, 1/6 (60, not incl. 4-storey spur added 1954), Symes; Portion C, Blocks 3, 4 [Kerry, Longford], a1954, 1/8 (41), 1/7 (37), Rowley Bros.; Portion A, Blocks 10, 10A [Wexford, Mayo], a1957, 1/6 (44), A. E. Symes; Portion C, Block 5 [Anne Goodman], a1958, 1/7 (38), M. J. Gleeson. Smithy St, 1st Stage [Clichy Est, Jamaica St], a1959, 1/9 (52), Simms Sons & Cooke. Spital St Stage III [Shuttle Hs], a1960, 1/7 (28), W. J. Marston. West India Hs [West India Dock Rd], a1945, 1/6 (31), Haymills.

STOKE NEWINGTON MBC (MET.) (FROM 1965: HACKNEY LBC)
Alexandra Theatre Site [Belgrade Rd, Stoke Newington Rd], a1960, 1/11 (29), R. Hart. Bethune Rd [St Andrew's Mews], a1954, 1/6 (36), DL. Burma Mews and Green Lanes [Chindit], a1953, 1/6 (24), Stewart; Extension [Orde], a1954, 1/6 (24), Stewart. Green Lanes (East) [Patten, Charlwood], a1948, 2/7 (104), Wilson Lovatt. 132–138 Green Lanes, Block B [Arakan], a1960, 1/10 (36), DL. Howard Rd CPO [1–40 Cheviot Hs], a1964, 1/11 (40), Rooff. Lordship Park and Queen Elizabeth's Walk, a1954, 3/7 (63), M. J. Gleeson. Lordship Rd [Nos. 239–335], a1955, 1/7 (49), DL. Milton Grove, Stage II, Block B [Herrick Hs], a1962, 1/7 (41), DL (extended by 16-dwelling wing, 'Jonson', a1963, DL). Portland Rise, a1952, 4/6 (111), McAlpine. Portland Rise Ext [Fleming], a1956, 1/10 (40), W. Willett. Queens Dr [66–121 St John's Ct], a1954, 1/7 (56), M. J. Gleeson. 35–39 Stamford Hill [Gaitskell Hs], a1962, 1/10 (44), Y. J. Lovell. Yoakley Rd, Block C [31–66 Lister Ct], a1958, 1/9 (36), DL.

SUTTON & CHEAM MBC (FROM 1965: SUTTON LBC)
Chaucer Rd, a1963, 1/17 (96), Wates. Collingwood Rd (Gas Works Site), Phase 1, a1964, 1/16 (60), 1/7 (53), Tersons.

TOTTENHAM MBC (FROM 1965: HARINGEY LBC)
Albert Rd and Richmond Rd [Oatfield, Twyford, Bournes Hses], a1963, 2/17 (256), 1/8 (40), DL. Gaywoods Factory Site [Reed Rd], a1958, 1/6 (39), TMI. The Hale RDA, Phase I Contract A [Warren Ct], a1956, 1/9 (40), C. J. Manning. 672–4 High Rd [Campbell Ct], a1958, 1/9 (63), Drury. Markfield RDA [Stamford Rd], Phase I [Markfield Hs], a1954, 1/6 (60), Hoad; Contract D [Cordell Hs], a1961, 1/13 (48), TMI. Northumberland Pk (No. 2) [Trulock Ct, Woodmead], a1960, 1/10 (60), 1/6 (24), Hawker Smith. Rectory Farm [Weir Hall Rd], a1957, 2/7 (112), Drury. Tewkesbury Est, Phase III [1–67 Remington Rd], a1954, 1/6 (67), Thomas & Edge; Contract VI [J. Masefield Hs], a1959, 1/6 (30), DL; Contract VII [Eckington Hs], a1959, 1/10 (60), TMI. White Hart Ln, a1959, 3/10 (180), M. J. Gleeson. Willoughby Ln [Haynes Cl], a1958, 1/6 (25), P. G. Evans.

TWICKENHAM MBC (FROM 1965: RICHMOND UPON THAMES LBC)
Seymour Gdns, a1959, 1/7 (44), Y. J. Lovell.

WANSTEAD & WOODFORD MBC (FROM 1965: REDBRIDGE LBC)
Eastern Ave, a1962, 1/11 (64), 1/8 (31), Wates.

WALTHAMSTOW MBC (FROM 1965: WALTHAM FOREST LBC)
Countess Rd [Priory Ct], a1946, 19/6 (400), GWS.

WANDSWORTH MBC (MET.) (FROM 1965: DIVIDED BETWEEN WANDSWORTH AND LAMBETH LBC; BLOCKS TRANSFERRED TO LAMBETH LBC IN 1965 ARE MARKED: *L*)
Allfarthing Ln [128–162 Melody Rd], a1959, 1/7 (18), Speirs. Clapham Cres *L*, a1948, 3/6 (68), Unera (later Trollope & Colls). Clapham Rd *L* [Chelsham Rd: Towns, Pickering, Collingham, Greener], a1952, 4/6 (120), E. H. Smith. Edgecombe Hall [Beaumont Rd], a1961, 2/14 (110), 1/6 (77), Pauling. Gay St, Phase 1 [Phelps Hs], a1963, 1/10 (29), M. J. Gleeson. Iron Mill Place [Wendelsworth Est, Garratt Ln], a1946 [Bowyer, Domelton], 2/7 (116), Walker (Tooting); 3rd Phase [Boxted, Bembridge], a1951, 2/7 (116), Wilson Lovatt. Notre Dame Est, 3rd Stage *L* [Worsopp Dr], a1949, 2/8 (232), W. Moss. Nutwell St [13–43 Gravenal Gdns], a1949, 1/6 (36), Kirk & Kirk. Portinscale Rd No. 2, a1962, 1/8 (14), 1/6 (11), W. J. Marston. Rinaldo St [Caistor Rd], a1950, 1/8 (63), Rowley Bros. Roupell Pk [Redlands Way/Brixton Hill] *L*, 2nd Phase [Tilford, Outwood, Dunsfold], a1950, 1/8 (40), 2/7 (84), W. Moss; Phase III [Witley, Tanhurst], a1952, 2/7 (98: incl. 14-dwelling 1956 extension), W. Moss; 4th Phase [Elstead, Thursley, Brockham], a1953, 3/8 (152), W. Moss; Phase VII [Warnham], a1960, 1/7 (49), Pauling. Southcroft Rd [243 Nimrod Rd], a1960, 1/7 (21), Greenaway & Son (later, R. Hart). Southmead [Southmead Rd], Phase I, a1954, 3/8 (72), E. H. Smith; Phase II, a1954, 2/8 (48), E. H. Smith. Sutherland Grove Phase II [40–71 Strathan Close], a1963, 1/8 (32), Hawker Smith. William Willison Est [Keevil Dr, Princes Way], Phase II, a1955, 2/11 (84), 3/9 (102), J. Jarvis; Phase IV, a1957, 4/9 (136), Pauling; Phase V [146–256 Keevil Dr], a1961, 1/15 (56), Pauling. Wimbledon Pk Rd, Phase 1 [20–51 Wimbledon Pk Ct, Wimbledon Pk Rd: extension to existing block], a1949, 1/6 (32), M. J. Gleeson; 2nd Phase [Albert Dr], a1953, 3/9 (169), W. Moss.

WEMBLEY MBC (FROM 1965: BRENT LBC)
Sudbury Heights Ave [Allen Ct, Ridding Ln], a1963, 1/11 (65), H. Farrow (Bison).

WEST HAM CBC (FROM 1965: NEWHAM LBC)
Abbey Ln, Stage 1, s1964, 2/22 (193), J. R. Rooff. Adamson Rd, s1959, 1/11 (44), A. E. Symes. Andrew St [Silvertown Bypass], s1960, 1/11 (44), Rowley Bros. Ascot St [Barking Rd, Star Ln], s1958, 3/8 (135), Tersons. Boundary and Inniskilling Rds, s1961, 1/11 (44), W. J. Jerram. Brooks Rd [Stratford Rd], s1964, 5/15 (280), Tersons. Capel Rd, s1959, 1/11 (44), Tersons. Carpenters Rd I, s1965, 1/22 (168), A. E. Symes. Claremont Rd, s1955, 1/11 (43), Tersons. Eastbourne Rd [Abbey Rd], s1963, 2/22 (248), Kirk & Kirk. Eastwood and Barnwood Rds [N. Woolwich Rd], s1964, 2/22 (264), Laing. Field Rd [Eric Rd], s1960, 1/11 (44), DL. Fife, Totnes and Exeter Rds [Beckton Rd], s1962, 3/15 (180), Nox. The Green [Romford Rd], s1963, 1/22 (125), A. E. Symes. Gurney Rd, s1959, 1/11 (44), DL. Haig Rd and New City Rd, s1964, 1/16 (64), W. J. Jerram. Henniker Rd [Leyton Rd], s1962, 2/15 (118), A. Fairhead. Hermit Rd and Blake Rd, s1956, 1/8 (53), W. J. Jerram. High St, Plaistow, s1962, 1/15 (58), DL. Hollybush St [Greengate St], s1963, 1/11 (41), A. Fairhead. Portway and Leabon St, s1961, 2/11 (88), 3/8 (127), W. J. Jerram. Queens and May Rds [Plaistow], s1963, 2/15 (116), Gilbert-Ash Eastern. Rathbone St I, s1961, 3/11 (132), DL. Rathbone St Market, s1961, 1/11 (80), Nox. Settle and Atlas Rds [Plaistow Station], s1964, 2/16 (120), Laing. Water Lane, s1955, 1/11 (43), Tersons. West Ham Ln, s1957, 1/8 (45), DL.

(CITY OF) WESTMINSTER MBC (MET.) (FROM 1965: (CITY OF) WESTMINSTER LBC)
Berwick St and Hopkins St, a1959, 1/18 (57), Wates. Cambridge St and Alderney St, a1947, 1/9 (74), Stewart & Ptns. Dufours Pl, a1964, 1/16 (72), W. Moss. Ebury Bridge Est Ext [Edgson], a1953, 1/9 (56), Taylor Woodrow. Hide Pl, a1959, 1/21 (162), Laing. Lillington St, Phase I [Wise, Charlwood, Morgan, Repton, Fairchild, 1–24 Forsyth], a1964, 1/9 (194, plus integral 62-unit old people's home), 1/7 (56), Rush & Tompkins. Pimlico (Churchill Gdns from 1951; entries in chron. order): Section I, Block 1 [Chaucer], a1947, 1/9 (104), Holloway Bros.; Section I, Block 5 [Shelley], a1948, 1/9 (97), Holloway Bros.; Section I, Blocks 2, 6 [Coleridge, Keats], a1948, 2/9 (169), Holloway Bros.; Section I, Block 7 [De Quincy], a1950, 1/7 (39), Rowley Bros.; Section II Contract 1, Block 20 [Sullivan], a1951, 1/10 (60), GWS; Section II Contract 1 Ext, Block 17 [Gilbert], a1952, 1/10 (80), GWS; Section II Contract 1 Ext, Block 21 [Sheraton], a1953, 1/11 (42), GWS; Section II Contract 1 Further Ext, Block 18 [Chippendale], a1953, 1/10 (80), GWS; Section II Contract 2 [Ripley, Lutyens, Williams, Nash], a1954, 1/11 (42), 2/10 (146), 1/7 (56), M. J. Gleeson; Section III, Block 35 [Anson], a1955, 1/11 (42), M. J. Gleeson; Section III, Blocks 33, 34, 38 [Littleton, Blackstone, Branwell], a1957, 2/10 (116), 1/7 (48), M. J. Gleeson. Warwick Way Phase A [Abbots Manor], a1952, 6/6 (183), J. Gerrard.

WILLESDEN MBC (FROM 1965: BRENT LBC)
'Frontenac', Donnington Rd, a1957, 1/11 (30), 1/6 (24), DL. Kilburn Sq [Kilburn High Rd], a1961, 1/17 (85), Tersons. 'The Oaks', Donnington Rd, a1960, 1/11 (44), DL. Priory Pk Rd, a1963, 1/10 (40), Pitchers. 17–25 Shoot-Up Hill [Watling Gdns], a1957, 3/10 (123), Wates. 43–53 Shoot-Up Hill [Summit Ct], a1958, 1/10 (40), A. T. Chown. South Kilburn RD (entries in chron. order), 1st stage (Alpha Pl), Blocks A, B [Alpha Hs], a1952, 1/8 (64), DL; Phase II (Alpha Pl), Blocks C, D, E [Gorefield Hs], a1954, 1/8 (113), DL; Blocks F, G (Canterbury Rd) [Canterbury Ct], a1957, 1/9 (51), DL; Blocks P, Q (Canterbury Rd) [Dunbar, Savile], a1959, 2/13 (147), DL; Block N [Wells Ct], a1960, 1/11 (44), DL; ABC Cinema Site [Tollgate Hs], a1961, 1/11 (53), Pitchers; Area B, Blocks 1–6 [Craik, Crone, Winterley], a1963, 3/12 (227), Ruddock & Meighan. Stonebridge RDA 1st Stage, Blocks 1–5 [Explorers Est: Shackleton, Amundsen Hses], a1965, 2/9 (130), Wimpey. Willesden Ln, Block A [Mapes Hs], a1962, 1/9 (63), A. T. Chown.
ACQUIRED: 'Pharamond', 258–262 Willesden Lane, 1/7 (36), bought 1965 (just completed) from private developer.

WOOD GREEN MBC (FROM 1965: HARINGEY LBC)
Commerce Rd Phase I [Spence, Butler Hses], a1961, 2/7 (52), R. Hart; Phase II [Finsbury, Newbury Hses], s1963, 2/15 (168), #c/u. Winkfield Rd and Acacia Rd, Phase I [Acacia Hs], a1959, 1/6 (36), Stox; Phase II [Cedar, Daphne Hses], a1961, 2/7 (52), Stox; Phase V [Blackwell, Lansbury Hses], s1965, 2/15 (168), Ruddock & Meighan (later Pitchers).

WOOLWICH MBC (MET.) (FROM 1965: GREENWICH LBC)
Bexley Rd and Southend Cres, a1958, 1/7 (42), DL. Bostall Est, Stage VI [140–202 Bostall Ln], a1963, 1/8 (32), DL. Coldharbour Est [Gt Harry Dr], a1954, 1/7 (42), DL. Glyndon RDA, Stage I [90–176 Robert St, 113–199, 233–319 Villas Rd], a1961, 3/11 (132), DL (Wates); Stage III [1A-21D Robert St], a1965, 1/11 (44), DL. Kirkham St RDA [21–67 Kirkham St, 18–64 Ravine Grove], a1963, 1/6 (48), DL. 'The Oaks' [Burrage Rd], a1963, 1/15 (84), Halse. Prince John Rd [Tattersall Cl], a1964, 1/6 (80), DL. St John's Vicarage Site, Eltham [Sowerby Cl], a1964, 3/10 (109), DLO. St Mary's CDA [entries in chron. order], Kingsman St, a1957, 1/9 (50), DL; Samuel St and Frances St, a1959, 1/15 (57), 3/14 (162), Wates; Belson Rd, a1959, 3/6 (71), DL; John Wilson St, a1964, 2/8 (88), H. Farrow (Bison). Strongbow Rd, a1959, 2/9 (72), DL. Well Hall Rd Stage II [381–403 Well Hall Rd], a1963, 1/12 (45), DL.

GREATER LONDON: LONDON COUNTY COUNCIL (TO 1965)

BATTERSEA MB

Aegis Grove Area & Site [Aegis Hs, Savona Est], a1960, 1/11 (54), Reema (demol). Ethelburga St, a1963, 1/17 (98), 3/7 (119), Tersons. Falcon Terr [Este Rd], a1958, 3/6 (72), DL. Handley St Site [Battersea Church Rd], a1963, 2/21 (160), Tersons. Patmore St, Blocks 1, 2, 3 [Beattie, Cudworth, Bonsor], a1950, 3/6 (156), Stewart & Ptns; Blocks 6, 8, 9 [Marsh, Kirtley, Crampton], a1951, 3/6 (156), Stewart & Ptns; Blocks Q, R [Drury, Mills], a1953, 2/6 (107), Wilson Lovatt. Tidbury St Areas, Block 1 [Tidbury Hs, Savona Est], a1962, 1/11 (54), Reema (demol); Block 2 [Savona Hs, Savona Est], a1963, 1/11 (54), Reema (demol).

BERMONDSEY MB

Abbeyfield Rd, a1965, 1/26 (145), Wates. Brandram's Works Site [Canada Est, Neptune St], a1962, 2/21 (160), Tersons. Dickens Est, Llewellyn St Site [Wrayburn], a1959, 1/6 (72), Thomas & Edge. Eugenia Rd and Corbett's Ln Site, a1955, 1/6 (51), Kirk & Kirk; Eugenia Rd Site Ext (Silwood Est) [Lambourne, Somerfield, Alpine Rd], a1959, 2/11 (196), 1/6 (30), Kirk & Kirk; Blocks 26, 27 [Oldfield Ct], a1959, 2/11 (202), Kirk & Kirk (partly in Deptford MB). Jamaica Rd Site [1–57 Spenlow Hs, Dickens Est: extended by 24 dwellings 1955], a1951, 1/6 (57), Rowley Bros. Marine St [Casby, Bowley Hses, Dickens Est], a1962, 1/21 (81), 1/6 (43), Tersons. New Jamaica Rd Site [Rudge Hse, 1–32 Tupman Hse, Dickens Est: 33–47 Tupman = later ext], a1956, 2/6 (59), Tersons. Oxley St [Wade], a1949, 1/6 (42), GWS. Plough Est (Chilton Grove Site) [Plough Way], a1959, 2/6 (68), Unit. Rotherhithe New Rd, Blocks A, C [Addy, Brydale], a1958, 2/16 (188), Wates; Block B [J. F. Kennedy], a1962, 1/16 (94), Wates. Storks Rd [St James's Rd], a1957, 1/6 (34), Tersons. Weston St [Burwash, Simla], a1964, 2/21 (156), B. Sunley.

BETHNAL GREEN MB

Bandon Rd Site (later Park View Est) [St James's Ave], a1950, 1/6 (66), Lavender McMillan; Park View Est, Block D, a1952, 1/6 (60), Lavender McMillan. Collingwood Est, Block 1 [Coventry Rd: Orion], a1962, 1/11 (75), Griggs; Blocks 4, 5 [Cambridge Heath Rd: North portion of Sovereign, South portion of Donegal], a1962, 2/7 (45), Griggs (later Tersons). Coopers Gdns [Columbia Rd, Dunmore Point], a1964, 1/14 (51), TMI. Hereford St [Vallance Rd] Blocks 2, 3, a1956, 2/10 (120), Rush & Tompkins; Hereford Est (Vallance Rd Site), Block 6, a1958, 1/6 (48), H. T. Oliver. Minerva Est Ext [Treadway St, Lysander Hs], a1955, 1/6 (60), Stewart & Ptns. Newling St [Chambord St], a1961, 3/6 (72), Rowley Bros. Rapley Pl [Rapley Hs, Turin St], a1964, 1/6 (33), H. Fairweather. Squirries St, Blocks 9, 10 [Cobden Hs, Old Bethnal Green Rd; 1–71 Pollard St], a1956, 2/6 (69), Rush & Tompkins; Blocks 7, 8 [Yates, Johnson], a1957, 2/11 (128), Rush & Tompkins. Teesdale Est [Jersey St: Stockton, 2-84 Clarkson], a1960, 1/11 (33), 1/6 (42), W. Lawrence.

CAMBERWELL MB

Brandon Neighb. Areas, Stage I, Blocks 22-24 [Coniston, Crossmount, Otterburn Hses], a1964, 3/22 (240), TMI. Champion Hill (No. 1) Site [Ruskin Pk Hs], a1949, 1/6 (120), Thomas & Edge (sold 1972); Extension [Allport, Hannen], a1953, 2/6 (48), J. M. Hill. Crawford Rd, Block 3 [Widecombe], a1951, 1/6 (36), A. T. Rowley; Block 7 [Keswick], a1952, 1/6 (36), A. T. Rowley. Denmark Rd [Crawford Rd], a1954, 3/8 (96), Gilbert Ash. Elmington Est Ext [New Church Rd: Masterman], a1962, 1/17 (67), Tersons. Friary Est, Block 6 [Ednam], a1954, 1/6 (72), Unit. Friern Rd, a1961, 4/6 (96), Griggs (later DL). Garsdale Rd [Angelina, Bunbury, Edwin], a1957, 1/9 (66), 2/6 (66), Tersons. Kinglake St, Blocks A, J, R [Tenterden, Hadlow, Faversham], a1946, 3/6 (105), HHC. Leyton Sq, Block 7 [Greystoke], a1952, 1/6 (35), H. Boot. Lindley Est, Blocks 1, 2 [Collinson], a1949, 1/6 (27), Tersons. Oliver Goldsmith Est Ext (Hardcastle St Site) [Jarvis], a1952, 1/6 (35), H. Boot. Peckham High St, Block 2 [Purdon], a1952, 1/6 (35), H. Boot. Picton St Site, a1955, 4/11 (320), Laing. Rosemary Rd [Willowbrook Rd: Tonbridge], a1961, 1/12 (112), Kirk & Kirk. Rye Hill Est [Rye Hill Pk], a1960, 3/11 (132), Rowley Bros.; Extension [Medina Hs], a1957, 1/6 (30), Tersons. Southampton Est (Wells Pl Area) Blocks 3, 4, a1959, 2/11 (124), Tersons; a1961, 3/6 (60), Tersons. Sumner Est Ext [Lisford St, Aberdare], a1949, 1/6 (47), Tersons. Sydenham Hill Est, a1954, 1/7 (42), 6/6 (270), Rush & Tompkins (7-storey block in Camberwell MB, others in Lewisham MB). Tustin St [Tustin Est, Old Kent Rd], a1964, 3/20 (225), TMI.

DEPTFORD MB

Czar St [Sayes Ct], a1961, 3/11 (129), Rush & Tompkins. Eugenia Rd Site/Silwood Est: see under Bermondsey MB. Giffin St Ext [22–80], a1963, 1/6 (30), Stewart (later F. R. Hipperson). Heston St [Tanners Hill], a1964, 1/16 (60), Rowley Bros. Kender St [Gerrard Hs], a1963, 1/13 (51), Rowley Bros. Royal Victoria Yard Site, Grove St Areas & Site, and Windmill Ln Site & Ext [Pepys Est]: Stage I, Blocks 2, 12, 13, 14, a1962, 1/24 (145), 3/8 (159), Tersons; Block 3, a1963, 1/24 (144), Tersons; Stage III, Blocks 10, 11, a1963, 2/8 (106), Tersons; Blocks 1, 8, 9, a1964, 1/24 (145), 2/8 (106), Tersons.

FINSBURY MB

Banner St [Braithwaite Hs, Bunhill Row], a1963, 1/19 (108), Tersons. Percival St [Earnshaw, Tompion Hses], a1946, 2/6 (90), W. H. Gaze; Ext [Grinthorpe], a1950, 1/8 (128), A. E. Symes.

FULHAM MB

Bulow Rd [21–75 Pearscroft Ct], a1954, 1/9 (55), Unit; Bulow Rd, Block B, a1962, 1/18 (67), B. Sunley.

GREENWICH MB

Lewisham Rd & Orchard Hill Sites [Orchard Est], a1962, 4/13 (200: incl. 4 dwellings in 3-storey wing), Kirk & Kirk. Norman Rd, a1965, 1/10 (190, in linked group comprising Gordon, Abercorn, Lockhart, Haddington), B. Sunley (Allbetong). Shooters Hill Rd, a1961, 4/11 (172), Rush & Tompkins.

HACKNEY MB

Bentham Rd, a1955, 2/11 (210), Rush & Tompkins. Berger's Works Site, Morning Ln [Latimer], a1962, 1/9 (80), Carlton. Broadway Est [Ada St], a1949, 1/6 (60), G. Parker. Frampton Pk Est (East), a1951 [Sloane, and the north-west section of Woolridge Way], 2/6 (105), E. H. Smith; Blocks 4, 6 [South half Vanbrugh, SE section Woolridge Way], a1959, 2/6 (53), Rowley Bros.; Block 9 [49-131 Well St], a1961, 1/6 (42), Rowley Bros. Frampton Pk Est (West) [Loddiges, Danby, Bridgeman, Parkinson], a1952, 4/6 (160), Halse; Extension [Pitcairn], a1960, 1/10 (93), Rowley Bros. High Hill Est Extension [Harrington Hill], a1962, 1/8 (16), T. Bates. Marlow Rd [Berger Rd, Gilby], a1962, 1/9 (80), Carlton. Rivaz Pl [Chatham Pl, Rowe], a1962, 1/9 (77), TMI. Trowbridge Rd, a1964, 3/21 (240), J. M. Hill (Cebus) (3 blocks demol. on this site and extension). Welshpool St, a1963, 1/18 (69), Humphreys. Wyke Est (Daley St Site) [21–60 Anderson Rd], a1955, 1/8 (40), Rush & Tompkins.

HAMMERSMITH MB

Butterswick Cottages Site [Linacre Ct, Gt Church Ln], a1963, 1/18 (69), J. M. Hill. Caroline Est Ext [Henrietta, Joanna Hses], a1953, 1/10 (40), 1/8 (32), Wilson Lovatt. White City Est Ext [21-56 Batman Cl], a1952, 1/6 (36), GWS.

HAMPSTEAD MB

Ainsworth Est (Boundary Rd), a1950, 3/6 (140), W. Moss. Finchley Rd (No. 1) (East) Site [Adelaide, Avenue Rds], a1953, 2/9 (107), W. Moss (later sold). Finchley Rd (No. 1) (West) Site [Alexandra Rd, Finchley Rd], a1955, 2/9 (108), 1/6 (39), E. H. Smith. Hilgrove Est, North Section [Hilgrove Rd, Finchley Rd], a1958, 1/9 (54), Kirk & Kirk.

HOLBORN MB

Bourne Est Ext, Block 2 [Gooch Hs, Portpool Ln], a1955, 1/6 (30), Token.

ISLINGTON MB

Barnsbury Est: Ext [Messiter, Molton, Blackmore], a1953, 1/9 (30), 1/8 (45), 1/6 (33), Tersons; Fife Terr [50–132 Muriel St], a1961, 1/10 (42), Rowley Bros. Baxter Grove [Dovercourt Est, Southgate Rd: Ilford, Warley], a1964, 1/11 (80), 1/6 (30), H. Neal. Bemerton Est [Caledonian Rd: Perth, Selkirk Hses], Blocks 5, 8, a1961, 2/10 (136), Tersons. Caledonian Market [North Rd], a1964, 3/8 (159), Tersons. Camden Rd [Moulsford, Pangbourne Hses], a1961, 2/11 (86), Rowley Bros. Lowther Rd [Widnes Hs, Mersey Est], a1960, 1/6 (24), DL. Newbery Hs Est [Hersfield Hs, Northampton St], a1955, 1/6 (24), Thomas & Edge.

KENSINGTON MB

Latimer Rd and Silchester Rd [Frinstead, Whitstable Hses], a1964, 2/22 (160), Wates.

LAMBETH MB

China Walk Est Ext, Blocks 7, 8 [Poole], a1953, 1/6 (32), F. Troy; Blocks

10, 11 [Dresden, Longford], a1954, 1/6 (28), F. Troy. Ethelm St [Windmill Hs, Windmill Walk], a1958, 1/9 (34), Kirk & Kirk. Flaxman Rd [Winterslow Hs], a1958, 1/6 (36), DL. Loughborough Rd, a1954, 9/11 (602), 1/6 (63), Tersons. Mumford Rd [Meath Hs, Dulwich Rd], a1957, 1/8 (44), Simms Sons & Cooke. Old Paradise St [Gabriel Hs], a1955, 1/6 (30), DL. Portland Grove [Mursell Est], a1963, 1/6 (36) [Portland], Wilson Lovatt; 1/22 (82), 1/7 (208), 3/6 (44), Tersons (2 contracts). Robsart St [Wayland Hs], a1963, 1/15 (86), Tersons. St Matthew's Rd, a1955, 2/8 (100), Stewart & Ptns. South Lambeth Est [Cobbett St: Wimbourne], a1959, 1/11 (100), Kirk & Kirk. South Lambeth Est Ext (Richbourne Terr Site) [Oval Pl], a1960, 1/6 (24), G. Ward. Stockwell Gdns Est, Blocks 7–10 [Cassell Hs], a1958, 1/6 (81), Rowley Bros.; (Bricknall Pl Area) [Birrell Hs], a1964, 1/18 (68), TMI. Tanswell Est Ext (Baylis Rd Site) [M. Lang Hs], a1963, 1/11 (37), Humphreys. Tulse Hill Est Ext, Block 3 [Eccleston Hs, Tulse Hill], a1961, 1/6 (24), DL. Upper Tulse Hill Site [High Trees], a1955, 10/6 (381), E. H. Smith. Vauxhall Gdns Est [Kennington Ln], a1963, 2/11 (86), 1/7 (26), Tersons.

LEWISHAM MB

Blacklands Rd [Melfields Gdns], a1962, 1/7 (25), DL. Blessington Rd, a1964, 1/14 (51), Tersons. Dacres Rd, a1960, 4/11 (168), Wilson Lovatt; a1963, 1/11 (42), Ward & Paterson. Derby Hill [Windley Cl], a1957, 2/6 (54), Rowley Bros. Eliot Bank Site [Forest Est], a1956, 4/6 (84), Wates. Grove Pk Rd Site [Chinbrook Est], Block 16 [Kingsfield], a1962, 1/11 (42), DL; Ext [Merryfield], a1963, 1/11 (41), DL. Hillcrest Rd, a1963, 5/11 (210), HHC (value-cost). Ladywell Lodge [Foxborough Gdns, Chudleigh Rd], a1957, 2/6 (56), Tersons. Mayow Rd and Wynall Rd Site [Bampton Est], a1963, 3/10 (120), HHC (value-cost). Perry Hill [Ardley Cl], a1960, 1/6 (24), Thomas & Edge. Springfield Rise Site [2–56], a1958, 1/6 (28), Tersons. Sydenham Hill: see under Camberwell MB. Watermead Est [Bromley Rd], a1963, 1/8 (24), Ward & Paterson.

PADDINGTON MB

Barrie St [Gloucester Terr, Brook Mews], a1955, 1/11 (70), 2/6 (60), Wates (sold 1972). Maida Vale Site (later Est), Blocks 1-3 [Dundee, Atholl, Braemar], a1960, 3/6 (119), Rowley Bros.; Blocks 4, 5, 6 [Edinburgh, Falkirk, Glasgow], a1961, 3/18 (321), Tersons; Maida Vale Est (North), Carlton Vale Site, Blocks 8, 9 [Helmsdale, Invergarry], a1961, 2/6 (60), Tersons; Maida Vale Est (North), Blocks 5, 6 [Keith, Melrose], a1963, 2/6 (42), DL. Warwick Cres Site [later Warwick Est] Blocks 2, 3 [Woodchester Sq: Princethorpe, Wilmcote], a1961, 2/21 (250), Wates; Warwick Est, Block 1 [Bourne Terr], a1962, 1/21 (125), Wates; (Brindley Rd Site), Blocks 1, 2 [Polesworth, Oversley], a1963, 2/21 (250), Wates.

POPLAR MB

Alton St, a1958, 6/11 (244), W. & C. French. Arcadia St, Block 1 [1-94 Cotall St], a1961, 1/6 (94), F. Bilton. Arrow Rd [Rainhill Way: Warren Hs], a1961, 1/11 (42), B. Sunley. Barchester St [Brabazon St, Chrisp St], a1955, 2/11 (84), 4/6 (104), Rush & Tompkins. Birchfield Est (Morant St Site) [Thornfield Hs, Birchfield St], a1960, 1/11 (75), W. & C. French. Cottage St [St Matthias Est, Storey Hs], a1958, 1/7 (58), Simms Sons & Cooke. Devas St (Coventry Cross Est), a1949, 4/6 (207), Kent & Sussex Contractors. Hawgood St [2-108 Gale St], a1963, 3/6 (54), TMI. Jodrell Rd Site, Stage I [Locton Est, Parnell Rd], a1963, 2/20 (152), B. Sunley. Lansbury, Site No. 1 [Canton St], Blocks 1, 4 [Baring, Granville], a1950, 2/6 (60), Tersons; Blocks 5, 8, a1951, 2/6 (42), Tersons. Locton St [Locton Est, Parnell Rd], Block 1, a1959, 1/16 (62), M. J. Gleeson. Pelling St [Anglesey Hs, Hind Grove], a1958, 1/10 (58), J. & M. Hill. Regal Cinema Site, Bow Bridge Est [Bow Rd], a1963, 1/7 (22), H. Webb. St. Leonard's Rd School Site [Tweed Hs, Teviot St], a1960, 1/11 (53), TMI. Samuda's Wharf Site & Ext, Contract A [Manchester Rd: Kelson, Talia], a1964, 1/25 (145), 1/6 (45), Tersons. Schooner Est [Galleon Hs, Manchester Rd], a1962, 1/11 (80), Rush & Tompkins. Spanby Rd [Fern St: Gayford], a1962, 1/19 (99), J. & M. Hill. Tidey St [Sleaford], a1962, 1/19 (99), J. & M. Hill.

ST MARYLEBONE MB

Lilestone Est: (Aberdeen Pl Site) [Pointer], a1950, 1/6 (39), A. T. Rowley; (Ashbridge St Site), a1955, 1/6 (24), W. J. Marston; (Boscobel St, Area No. 3) [Wyatt], a1951, 1/6 (28), A. T. Rowley.

ST PANCRAS MB

Maitland PK Site, Blocks 1, 2, 3 [Rowan, Hazel, Whitebeam], a1959, 2/8 (54), 1/7 (26), DL. Raglan St Site [Monmouth Hs], a1963, 1/13 (50), Tersons.

SHOREDITCH MB

Arden Est (Crondall Pl Site) [Malcolm Hs, Bradlaugh Pl], a1952, 1/6 (56), Rowley Bros. Buckland St [Cranston Est], a1949 [Wilkinson, Vinson], 2/6 (36), GWS; a1950, Marshall, Trafford, 18-57 Nevitt], 3/7 (118: incl. 40-dwelling ext to 5-storey block], GWS; a1952 [Daniell, Kinder], 2/6 (44), A. T. Rowley. Ivy Walk [Macbeth Hs], a1956, 1/8 (35), Rowley Bros. Shrubland Rd, a1962, 1/11 (42), TMI. Suffolk Est (Ipswich Rd), a1963, 1/6 (283), Simms Sons & Cooke. Whiston Est Ext [Marsworth], a1958, 1/9 (35), Rowley Bros.; Block 1 [Debdale], a1958, 1/6 (30), Rowley Bros. Whitmore Est Ext, Orsman Rd Site, Block 1 [Tiller Hs], a1957, 1/6 (24), Tersons.

SOUTHWARK MB

Alpha Sq [Empress St], a1960, 2/6 (78), DL. Alvey Est Ext [Alvey St: Dunnico], a1958, 1/6 (24), DL. Brandon Est [Cooks Rd], Blocks 1–6, a1957, 6/18 (408), Wates; Blocks 7, 11, 13, a1958, 1/11 (36), 2/7 (99), Tersons. Browning Est (Townley St Site) [Newbolt], a1963, 1/6 (26), H. T. Oliver. Dickens Sq Area [Harper Rd, Deverell St: Symington, Newall, on 2 sites], a1957, 1/11 (104), 1/6 (24), Rush & Tompkins. Dodson St [Dodson, Jurston], a1965, 2/6 (83), TMI. Elephant & Castle CDA, Draper St Area [Hampton St], a1962, 1/25 (133), 1/8 (33), 1/7 (34), Wates. Haddonhall St, Block 1 [Prioress St: Peverill], a1961, 1/11 (41), TMI. Lancaster St, Block 1, a1952, 1/6 (24), W. J. Marston. Lawson Est (Lawson St) [Paliant], a1957, 1/6 (57), W. Willett; Block 6 [Nashe], a1959, 1/12 (41), Laing. Long Ln Area, Crosby Row Site [Eynsford], a1964, 1/7 (25), DL. Mardyke Est [Townsend St], a1963, 1/13 (50), Tersons. St George's Rd [Gaywood St], a1962, 1/11 (63), DL. Tabard Gdn Est (Mermaid Ct Area), Block 5 [Brenley], a1951, 1/6 (40), Speirs. Tabard Gdn Est Ext [Dorking, Godstone], a1964, 2/6 (44), Thomas & Edge.

STEPNEY MB

Antill Rd [Newport], a1957, 1/9 (52), J. & M. Hill. Barnardo St [38–92 Barnardo Gdns], a1956, 1/8 (56), Tersons. Berner St (Umberston St Area) [Delafield], a1953, 1/8 (79), Tersons. Bigland St, a1960, 1/6 (69), H. Webb; a1963, 1/22 (81), Tersons. Burdett Est, Block 3 [St Paul's Way: Printon], a1952, 1/6 (30), Stewart & Ptns. Chicksand Est [Bloomfield], a1964, 1/6 (43), Simms Sons & Cooke. Christian St Ext [Berner Est: Halliday], a1961, 1/8 (29), Stewart & Ptns. Cleveland Way [Galsman Ho], a1956, 1/11 (75), Rush & Tompkins; Cleveland Est, Block 3 [F. Charrington], a1957, 1/6 (24), H. Webb. Clive St [Stifford Est, Jamaica St], a1958, 3/17 (291), Wates. Crowder St [Swedenborg Gdns: Bruckner], a1962, 1/6 (69), Griggs (later Tersons). Farrance Est, Block 1 [Farrance St: Leybourne], a1957, 1/6 (22), A. T. Rowley. Fulbourne Est [Durward St: Lister Hs], a1958, 1/9 (34), Wates. Glamis Rd [Gordon Hs, The Highway], a1963, 1/22 (97), Tersons. Hobson's Pl [Hanbury St], a1964, 1/6 (66), Allen Fairhead (later DLO). Leopold St, a1965, 1/21 (76), Kirk & Kirk. Locksley St [Copenhagen Pl: Gatwick, Redbourne], a1954, 2/8 (112), Rush & Tompkins. Mountmorres Rd Area & Site [Latham Hs, Chudleigh St], a1960, 1/17 (97), Kirk & Kirk. Norfolk Est, Leatherdale St Site [Raynham Hs, Globe Rd], a1958, 1/11 (75), Tersons. Ocean Est (entries in chron. order): Block 25 [Bengal], a1949, 1/8 (95), W. H. Gaze; Blocks 26, 27, 28 [Bothnia, Malacca, Tunis], a1950, 3/8 (222), Tersons; North Section, Blocks 2, 4, 7, 11, 13 [Bantry, Magellan, Hawke, Biscay, Galveston], a1953, 5/6 (166), GWS; Block 9 [Genoa], a1953, 1/6 (24), GWS; Blocks 8, 12 [Formosa, Levant], a1956, 2/6 (60), Simms Sons & Cooke. Osier St [Alderney Rd: Withy], a1959, 1/11 (81), Tersons. Pitsea Est [Pitsea St], a1964, 1/8 (40), Rooff. St George's in the East Hospital Site [Prusom St], a1964, 1/14 (60), 1/8 (16), 1/6 (18), Kirk & Kirk. St Paul's Way [Bredel, Linton, 64–90 St Paul's Way], a1950, 2/6 (92), Stewart & Ptns. Skidmore St [Ocean Est: James], a1962, 1/6 (52), M. J. Gleeson. Spring Walk [Chicksand Est: Pauline], a1960, 1/19 (73), Rush & Tompkins. Treby Est [Treby St: Beckley], a1961, 1/11 (44), B. Sunley. Troon St, Block 1 [Troon Hs], a1961, 1/6 (53), F. Bilton. Wallwood St [Butler Hs], a1962, 1/10 (69), DL.

STOKE NEWINGTON MB

Kennaway Est Ext [Garland Hs, Stoke Newington Church St], a1951, 1/6 (36), J. M. Hill. Woodberry Down Est: Blocks 23, 24 [Needwood, Nicholl], a1947, 2/8 (160), HHC (value-cost); Blocks 38, 39 [Ashdale, Burtonwood],

a1948 , 2/8 (160), HHC (value-cost); Northumberland Hs Site, a1958, 4/10 (160), W. & C. French.

WANDSWORTH MB (BLOCKS IN AREA TRANSFERRED TO LAMBETH LB IN 1965 ARE MARKED *L*)

Argyle Est (entries in chron. order): Wimbledon Pk Side No. 1 Site, [1–36 Chobham Gdns], a1951, 1/6 (36), M. J. Gleeson; Albert Dr Site [1–21 Winterfold Cl], a1952, 1/6 (21), Tersons; 3rd Section [Greenfield, Oakman, Limpsfield Ave], a1953, 2/6 (106), M. J. Gleeson; Wimbledon Pk Side, No. 1 Site Ext [Bisley Hs], a1959, 1/13 (52), W. & C. French (Bittner); 4th Section [Limpsfield Ave], a1965, 3/10 (120), TWA (Larsen-Nielsen). Barn Elms Pk [Ranelagh Est], a1952, 5/6 (139), GWS. Clarence Ave *L*, Blocks 7, 8, 10, 13 [Moberly, Bennett, White], a1951, 4/6 (149), Wates; Blocks 12, 14, 15 [Muller, Rodgers], a1952, 3/6 (114), P. Bilton. Gauden Rd *L*, a1962, 2/7 (50), SLP. Newlands Est Ext [Barringer Sq], a1958, 1/8 (32), Wates. New Pk Rd [Brindley, Parsons, Perry], a1959, 3/6 (72), DL. North Drive Site & Ext [Fayland Est], a1961, 5/7 (130), Tersons; a1964, 1/7 (26), G. Ward. Portsmouth Rd [later Alton Est (East)], a1953, 9/11 (381), Kirk & Kirk; 'Myddleton' Site [Cadnam], a1955, 1/11 (43), Kirk & Kirk. Princes Way & Wimbledon Pk Side (Nos. 2 & 3) Sites [Ackroydon Est], a1952, 3/11 (96), 1/8 (23), Tersons. Putney Pk Ln [Ashburton Est: Cortis Rd, Hayward Gdns, Innes Gdns], a1951, 8/6 (355), Kent & Sussex Contractors. Roehampton Ln (Nos. 2 & 3) Sites [later Alton Est (West)], a1955, 15/12 (660), 5/11 (375), Wates; Block 21 [Allbrook Hs], a1960, 1/10 (45), Wates; Ashley Cottage Site [Lyndhurst, Woodcott], a1964, 2/12 (88), Rush & Tompkins. Thornton Gdns *L* [200–262 Hydethorpe Rd], a1959, 1/8 (32), Simms Sons & Cooke. Trinity Rd, Blocks 1–5, a1953, 5/11 (214), Wates. Upper Tulse Hill Sites 2, 3, 4 *L* [Gwynne, Kynaston, Tillman], a1962, 3/7 (78), DL. Westbury St & Gonsalva Rd Areas *L* [Wandsworth Rd: Amesbury, Durrington], a1963, 2/21 (160), TMI.

WOOLWICH MB

Abbey Est, Main Shopping Centre [184-254 Eynsham Dr], a1960, 1/11 (38), Unit (ext to value-cost contract). Armstrong Pl, a1964, 4/11 (168), Tersons. Bassant Rd [81–167], a1957, 2/6 (44), M. J. Gleeson. Milne Est [Milne Hs], a1952, 1/6 (36), Rush & Tompkins. Morris Walk Areas & Site, a1963, 7/10 (280), TWA (Larsen-Nielsen). Pier Rd, North Woolwich (in Newham LB from 1965), Blocks 1, 2 [Dunedin, Westland Hses], a1963, 2/20 (148), B. Sunley; Block 3 [Queensland Hs], a1964, 1/20 (73), B. Sunley. Polthorne St, a1965, 1/8 (30), Tersons. Rockmount Rd, a1962, 1/12 (42), 3/11 (130), Tersons. Walpole Est, a1964, 1/8 (87), DL. Woodrow Areas & Site [Carew Hs, Godfrey Rd], a1962, 1/6 (26), Kirk & Kirk.

OUT-COUNTY

(Chislehurst & Sidcup UD) St Paul's Cray, Cotmandene Cres, a1960, 1/8 (32), Croudace. (Eton Rural District) Britwell Est, Farnham Royal [Wentworth Ave], a1956, 1/7 (33), HHC (value-cost). (Slough MB) Langley Est: Site No. 2, Langley High St [Trelawney Ave], a1961, 1/11 (42), HHC (value-cost); 'Langley Broom', a1961, 1/11 (42), HHC (value-cost).

GREATER LONDON: POST-APRIL 1965 LONDON BOROUGHS

BARKING & DAGENHAM LBC

Beacontree Heath RD Contract 1 [Laburnum Hs, Althorne Way], a1965, 1/17 (93), 1/6 (36), Symes; Contract 2 [Markswell Hs, Gosfield Rd], a1966, 1/17 (93), 1/6 (40), Symes; Phase IV [Peverell Hs, Stour Rd], a1967, 1/17 (93), 1/6 (40), Symes. Bell Farm Ave, a1966, 1/17 (101), Symes. Castle Green [Goresbrook Rd], a1967, 3/17 (282), Concrete Southern (Bison). Church Elm Ln, a1965, 1/17 (96), Sunley. Exeter Rd, a1972, 1/9 (52), Bates. Gascoigne RDA [entries in chron. order], Contract 2B [St Paul's Rd], a1966, 3/17 (204), Carlton (Bison); Stage V [St Margaret's, St Mary's], a1969, 3/17 (300), 4/12 (280), 1/6 (30), Concrete Southern (Bison); Stage VI [Wheelers Cross, Dove Hs Mead, The Coverdales], a1970, 5/12 (350), Concrete Southern (Bison); Stage 4B [The Shaftesburys], a1971, 1/12 (70), Bates. Harts Ln, a1968, 2/17 (200), Bates. Loxford Rd, a1965, 1/9 (34), DL. Marks Gate, a1965, 1/17 (96), Bates. Vicarage Rd, a1971, 1/9 (52), Bates.

ACQUIRED: Heathway RD, acq. 1978 [newly built], from Norwich Union Insurance Group, 1/10 (156). King Edward's Rd, acq. 1970s [built 1950s], from Metropolitan Police, 1/6 (18).

BARNET LBC

Grahame Park, a1969, joint devt: see GLC. Stonegrove [Orchard Dr], Phase 1, a1965 [Chichele], 1/8 (47), H. Neal; Phase 2, a1966, 1/8 (47), H. Neal. West Hendon [Cool Oak Ln/The Broadway], a1969, 1/14 (76), 7/6 (192), H. Neal.

BEXLEY LBC

Erith Town Centre RD, Phase V [Erith High St], a1967, 1/14 (56), 1/13 (52), N. Sinclair. Larner Rd II, a1967, 5/16 (420), Wimpey. Lincoln Rd, a1966, 2/9 (135), Wimpey.

BRENT LBC

Chalkhill RDA [Chalkhill Rd], Phase 1, Claws A-E, a1966, 16/8 (753), 7/7 (307), 2/6 (56), Farrow (Bison); Stage 1 Ext, Claw F [Blocks F1-F4], a1968, 2/7 (86), 2/6 (55), Farrow (Bison). Kilburn Sq, Phase 2 Part 1, a1966, 1/7 (28) [Sandby Hs: later extended by 29 5-storey dwellings], 1/6 (48) [Barrett Hs], W. Moss; Phase III [Rathbone, Varley Hses], a1967, 2/7 (84), W. Moss. Kingsbury Rd, Ritz Ballroom Site [369 Kingsbury Rd], a1965, 1/9 (16), Perry's. 31–35 Shoot-up Hill, a1965, 1/17 (138), DL. South Kilburn RDA [entries in chron. order], Area C [Gloucester Hs, Carlton Vale], a1966, 1/18 (135), Farrow (Bison); Extended Area Stage I, Park Mews [Bronte, Fielding Hses], a1968, 2/18 (272), Farrow (Bison); Area C Phase II [Hereford Hs], a1970, 1/18 (135), Carlton (Bison); Extended Area Stage II Phase I [Austen, Dickens, Blake, Wordsworth Hses], a1971, 2/18 (270), 4/6 (103), Concrete Southern (Bison); Extended Area Stage III Phase I [Chippenham Gdns], a1976, 1/9 (64), Kirk & Kirk. Stonebridge RDA [Hillside], Stage III [Longlents, Mordaunt, Wilmers, part of Palmer and Fitzsimmons], a1967, 2/13 (270), 1/9 (39), 6/7 (163), Farrow (Bison); Stage IIIA [part of Fitzsimmons], a1968, 2/7 (69), Farrow (Bison); Stage IIIB [part of Palmer and Fitzsimmons], a1970, 1/8 (49), 1/6 (41), Farrow (Bison); Stage IVA [Haskell, Hiscocks, Prothero, Jefferies, Clark, Donovan, Cowan, Gardiner], a1972, 1/22 (168), 1/17 (169), 2/16 (318), 2/8 (105), 2/7 (47), 5/6 (131), Concrete Southern (Bison). 186-194 Willesden Lane, a1976, 1/6 (30), HHC.

BROMLEY LBC

Masons Hill, s1969, 1/11 (60), Galbraith. Petten Grove, s1966, 1/11 (54), Truscon. Ramsden Est, Chelsfield Ln II, s1967, 2/11 (108), Truscon. Turpington Ln, s1966, 1/11 (54), Truscon. Vicarage Site [Okemore Gdns, St Mary Cray], Stage I, s1965, 1/14 (52), Sunley; Stage II, s1966, 1/14 (52), Sunley.

CAMDEN LBC

Abbey Est, Stage II [Langtry Rd], a1966, 1/20 (102), Laing; Stage V [Priory Terr], a1971, 1/8 (54), Kirk & Kirk. Alexandra Rd, 2nd Contract [Langtry Walk], a1973, 1/7 (478), TMI. Ampthill Sq, Stage II [Barnby St], a1966, 6/6 (84), DL; Phase 3 [Holmrook], a1969, 1/7 (42), DL. 41–43 Belsize Ave, a1977, 1/6 (23), H. Fairweather. Burghley Rd, Phase 2 [Ingestre Rd], a1968, 1/8 (43), DL. Castle Rd, Stage 2 Phase I [Heybridge], a1966, 1/8 (35), A. T. Chown. Chalcots Est [Fellows Rd], Blocks A, B [Dorney, Bray], a1965, 2/24 (315), Trollope & Colls; Stage II, Blocks C, D [Burnham, Taplow], a1966, 2/24 (320), Higgs & Hill. Dane St and Eagle St, a1966, 1/6 (34), Pitchers. Dudley Hs, Stage I [Endell St], a1977, 1/6 (93), H. Fairweather. Foundling Est [Brunswick Centre], a1968, 2/7 (398), Marchmont Properties. Gamages Development [Hatton Gdn, Leather Ln, Greville St], a1976, 1/14 (194), Costain. Gort Est, Block B [Gresse St], a1978, 1/10 (92), Bovis. Gospel Oak Area 5 [Haverstock Rd], a1968, 1/9 (48), Simms Sons & Cooke; Areas 6, 9 [Mansfield Rd], a1970, 1/6 (180), #c/u. Mill Ln [West Hampstead], a1971, 1/12 (32), M. & F. Foster. Netley St [Robert St], a1971, 1/7 (107), DL. 2–8 Newton St RD, a1977, 1/14 (50), Costain. Oakley Sq, a1968, 2/7 (143), Marshall Andrew. Oppidans Rd, a1968, 1/6 (75), TMI. Prince of Wales Rd South [1–91 Denton], a1969, 1/20 (91), TMI. Regent's Pk Areas E, F, G [Bucklebury, Munster Sq], a1966, 1/20 (70), Tersons. 44-46A Regent Sq, a1977, 1/6 (20), #c/u; ext, a1978, (12), H. Fairweather. St Silas St [Shipton Pl], a1966, 3/6 (125), Pitchers. St Silas St North [Southfleet, Marsden St], a1971, 1/7 (152), Crudens. Tolmers Square, 1W [North Gower St, Hampstead Rd], a1979, 1/6 (66), DL; 1X, 1Y [Tolmers Sq,

Hampstead Rd], a1980, 1/8 (35), McAlpine.
ACQUIRED: Maples Development, 141–150 Tottenham Ct Rd, Blocks C, D [30–40 Grafton Way], 1/8 (135), leased 1975. Purchese St, 1/6 (39), acq. 1965.

CROYDON LBC
Little Rd, a1969, 1/11 (43), Wates. Lodge Ln, New Addington, a1965, 2/12 (132), Laing. Morland Rd, a1966, 4/11 (175), Wates. Penge Rd RD, a1965, 2/11 (79), Wates. Pridham Rd [Gillett Rd], a1967, 2/12 (132), Laing. The Waldrons [N block], a1969, 1/11 (44), Wates.

EALING LBC
Ealing Dean Allotments [Sherwood Cl], a1973, 3/8 (140), B. Sunley. Golf Links, Stage 1 Ext [Baird Ave], a1965, 1/13 (72), Laing; Stage II [Fleming Rd], a1966, 4/6 (149), Laing (Jespersen). Green Man Ln [Singapore Rd], Phase 1A [Tintern Ct], a1972, 2/8 (91), H. Farrow (Bison); Phase II [Melrose, Buckfast Cts], a1975, 1/8 (47), 1/7 (41), P. Williams (Bison); Phase III [Evesham, Lacock, Wigmore Cts], a1979, 3/8 (141), R. Durtnell (Bison). Medlar Farm Est [Gainsborough Tower, Academy Gdns], a1966, 1/12 (90), TMI. Mount Pleasant Allotments [Lovell Rd], a1968, 1/13 (75), J. & J. Dean. Old Oak Rd, a1966, 1/12 (94), J. M. Jones (Bison). Park Rd North (South Acton, Stage 14) [Barrie Hs], a1965, 1/21 (100), a1965, Y. J. Lovell. Rectory Pk West [Rectory Pk Av], a1971, 1/6 (48), L. Telling. South Acton, Stage 15 [Corfe, Harlech, Beaumaris Towers], a1968, 3/13 (228), TMI; Stage 16 [Ludlow, Carisbrooke Cts], a1971, 2/7 (108), A. E. Prowting; Ext Phase 2 [Barrington, Frampton, Arlington Cts], a1973, 3/11 (193), Sindall. Yeading Green, Stage II Phase II, [Woburn Tower, Broomcroft Ave], a1966, 1/10 (78), Tersons.

ENFIELD LBC
Alma Rd CDA, Phase I, a1966, 2/23 (258), Wates; Phase II, a1967, 2/23 (258), Wates. Barbot St RD, Phase I, Block A [Lancelot Hs, Victoria Rd], a1966, 1/23 (130), DL; Phase II, Blocks B, C, D [Camelot, Pendragon, Tintagel Hses], a1967, 3/23 (378), DL. Bolton Rd and Silver St, a1967, 1/14 (50), Wates. Brettenham Rd East, Phase II [Cavendish Rd], a1968, 2/18 (204), 2/8 (48), DL. Bury St, a1967, 1/12 (44), Wates. Eastfield Rd, Phase I [Guernsey, Jersey], a1966, 2/13 (100), Wates; Phase II [Herm, Sark], a1967, 2/13 (102), Wates. Edmonton Green CDA [Market Sq], a1966, 3/26 (561), DL. Goodwin Rd RD, 2nd Stage, Block C, a1965, 1/22 (126), DL. Heaths Yard/Goat Ln, a1966, 2/13 (144), Wates. Hood Ave, a1965, 1/9 (72), Reema. Lavender Hill, a1965, 4/12 (368), Wates. Sherborne Ave, a1967, 1/14 (51), Wates.

GREENWICH LBC
Beasley's Brewery [92–276 Conway Rd], a1966, 1/25 (93), J. M. Jones (Bison). Cardwell Cottages, a1966 [Cardwell Rd: Hereford, Maclean, Lloyd, Farrington, Fidler, Drummond, Norton, Tuffield, Edmunson], 1/9 (268), Laing; a1966 [Hastings Hs], 1/24 (89), J. M. Jones (Bison). Connaught Barracks MT Lines [Connaught Est], a1966, 9/8 (276), Simms, Sons & Cooke. Gavestone Cres [11–30, 138–157 Gavestone Rd], a1965, 2/6 (40), DL. Glyndon RDA, Phase I Stages IV, V [1–275 Elmley St], a1966, 5/7 (126), 1/6 (12), DL, and 2/24 (182), J. M. Jones (Bison); Phase II Stage I [Clayhall Hs], a1966, 1/24 (91), J. M. Jones (Bison); Phase II Stage IV [Redwood, Willows], a1974, 1/6 (54), DL. Herbert Rd, Phase I Stage 2 [38–156 Edge Hill], a1973/s1975, 1/8 (60), Croudace. John Wilson St [Elliston Hs], a1966, 1/24 (90), J. M. Jones (Bison). Maze Hill, Stage 2 RD [Tom Smith Cl], a1978, 3/6 (72), DL. Red & Cambridge Barracks, Stage IIA [K. Rance, T. Williams: attached to Cardwell Cottages 9-storey group], a1972, 1/9 (60), DL. Rudd St, Stage I [98, 100 Bloomfield Rd], a1975, 2/8 (62), W. E. Caller. St Margaret's Church Site [Vicarage Pk], a1974, 1/13 (74), Laing. St Mary's CDA, Bowling Green Row Area, Stage I [395–497 Frances St], a1965, 1/14 (52), DL (Wates). Valley Grove [Valiant Hs], a1974, 1/17 (93), Miller Bros. & Buckley. The Warren [Coutts Hs], a1972, 1/10 (122), DL. Woolwich Common RDA, Stage I [Nightingale Vale], 3/6 (74), DL, and 1/25 (93), J. M. Jones (Bison); Stages II, III [Mabbett, Lawson, Petrie, Ruegg], a1974, 3/6 (260), Costain; Stages IV, IVA [Siedle, Watling, Wordsworth: S block joined to Stages II, III], a1975, 1/6 (188), Costain. Woolwich Dockyard [Leda Rd], s1974, 1/12 (100), 1/9 (58), 1/8 (49), DL.

HACKNEY LBC
Bethune Rd, a1965, 3/16 (198), DL. Blackstone Rd, a1970, 1/8 (30), Rowley Bros. Clapton Pk [Mandeville St], Stage 1B, Block 6 [Repton Ct], a1967, 1/20 (114), Fram Higgs Hill (Camus); Stage 2B, a1968, 4/20 (456), Fram Higgs Hill (Camus); Stage 2A [Wharfedale], a1970, 1/7 (36), DL; Stages 3, 4 [Heanor, Longford, Ilkeston], a1970, 3/6 (156), DL; Stages 6, 7 [Bakewell], a1972, 1/6 (74), DL. De Beauvoir Cres, Part 1, Block A [17 De Beauvoir Rd], a1965, 1/19 (90), DL. De Beauvoir Town [Downham Rd], Part 1 (West), a1966, 2/15 (112), DL; Part 2 [Lancresse, Fermain, St Martins], a1967, 1/19 (90), 2/7 (78), 1/6 (49), DL; Part 3 [Portelet, St Laurence, St Brelades, St Aubins], a1968, 1/19 (90), 1/6 (220), DL. Fairbank St [Murray Grove], a1966, 1/20 (72), 1/6 (30), DL. Geffrye Est, Harman St [Sara Ln], a1966, 1/11 (53), DL. Haberdasher St, a1966, 1/18 (68), DL. Holly St, Stage 1, a1966, 4/20 (456), Fram Higgs Hill (Camus). Kings Cres, Stage 1, a1967, 1/20 (114: Sandridge), Fram Higgs Hill (Camus), and 1/6 (82), DL; Stages 2, 3, a1969, 1/20 (114: Barkway), Fram Higgs Hill (Camus), and 2/6 (272: S block = extension of Stage 1), DL. Landfield St [1–60 Ottaway Ct], a1970, 1/6 (60), Carlton Contractors. Penn St, a1966, 1/12 (44), W. Lawrence. St Philips Rd [Marsh, Collins], a1965, 3/6 (69), DL. 11 Springfield, a1966, 1/6 (23), DL.

HAMMERSMITH & FULHAM LBC
Charecroft RD, Phase I [Shepherds Bush Green], a1968, 2/20 (204), Tersons; Phase II [Woodford, Roseford], a1971, 2/20 (226), Kirk & Kirk. Estcourt Rd and Coomer Rd RD [M. Stewart], a1971, 1/8 (104), H. Fairweather. Eternit Wharf [Ash Lodge, Stevenage Rd], a1976, 1/6 (20), W. Lawrence. King St Development: Housing Content [Ashcroft Sq], a1973, 1/9 (223), McAlpine. Latimer Rd Area (South) RD, Block 3 [Norland Hs], a1965, 1/24 (176), DL. Margravine Rd, Stage II [Muscat Hs, Field Rd], a1971, 1/12 (59), Kirk & Kirk. Moore Pk RD, Stage 1, Zone A [5–48 Walham Grn Ct], a1967, 1/13 (44), B. Sunley. Standish Hs, 327–343 King St, a1968, 1/8 (28), E. J. Lacy. West Kensington Goods Yard [Marchbank Rd], a1970, 1/11 (176), 1/10 (160), 1/9 (52), Gleeson.

HARINGEY LBC
Broadwater Farm [Gloucester Rd], a1966, 2/19 (204), 8/7 (808), TWA (Larsen-Nielsen). Commerce Rd RD Phases III, IV [Hardy, Keats Hses], a1965, 2/15 (168), DL. 83–87 Hornsey Ln, a1978, 1/10 (37), #c/u. Northumberland Pk, Stage IV [K. Robbins Hs], a1966, 1/17 (128), DL. Roslyn Rd [21–32, 109–116 Edgecot Grove], a1969, 1/6 (20), HHC. Union Row [Stellar Hs], a1969, 1/19 (102), Stox. Uplands Rd [Chettle Ct], a1967, 1/7 (138), Laing.

HAVERING LBC
Dovers Farm Est, Rainham [Dunedin Rd], a1965, 2/13 (96), Wates. Heaton Ave, Phase II [Kipling, Dryden Towers], a1966, 2/15 (114), HHC. Sunrise Lodge [Abbs Cross Ln], a1966, 1/12 (52), 2/11 (96), Wates. Upper Brentwood Rd, Phase 2 [Durham Ave], a1965, 2/11 (106), Wates.

HILLINGDON LBC
Austin Rd, Hayes [Silverdale Rd], s1971, 1/15 (75), Fassnidge Son & Norris. Birchway Est, Hayes [Avondale Dr], a1966, 3/13 (144), H. Farrow (Bison). Chiltern View Rd, a1965, 1/13 (78), H. Farrow (Bison). Uxbridge CDA, Block 1 [Pantile Walk], Phase I [Fairlie Hs], s1968, 1/9 (72), Tersons; Phase II, s1970, 1/9 (72), Higgs & Hill. Yeading Green Section 1 Stage B [Yeading Ln], s1966, 1/13 (96), M. J. Gleeson.

HOUNSLOW LBC
Brentford Waterworks Stage 1 [Green Dragon Ln], a1967, 6/23 (528), Wates. Butchers Institution [Staines Rd, Cromwell Rd], s1971, 1/12 (45), Croudace. Feltham Centre 2B [Homecourt], a1968, 1/16 (128), 1/10 (100), F. G. Minter. Heston Farm [Bellamy, Fenton Hses], a1968, 2/15 (168), B. Sunley (Allbetong). Ivy Bridge Farm [Mogden Ln], a1965, 4/19 (432), Turriff (later Mowlem).

ISLINGTON LBC
294–300 Essex Rd, a1966. 1/6 (30), Pitchers. Finsbury Pk Empire Site [St Thomas's Rd], a1966, 1/9 (36), Tersons. Haden Ct Ext [Playford Rd], a1965, 1/19 (68), Tersons. Holly Park I Ext, a1967, 1/6 (66), Pitchers. 'Housing Development Areas': HDA 2, Pooles Park and Playford Rd, a1967, 1/12 (78), 1/6 (72), Laing (Jespersen). HDA 6, Mildmay Stage II, a1969, 1/13 (73), H. Farrow (Bison). HDAs 7, 10, City Rd A & B, a1968, 1/27 (228), 1/18 (106), Laing. HDA 8, Harvist Est [Citizen Rd, Hornsey Rd], a1967, 4/19 (435), H. Farrow (Bison). HDA 11, City Rd C, Stage I [Mora St], a1967, 1/20 (115), H. Farrow (Bison); Stage II Phase I [Ironmonger Row], a1968, 1/6 (24), G. E. Wallis. HDA 13, Hornsey Ln,

a1968, 1/8 (67), 2/7 (58), 1/6 (29), Pitchers. HDA 25/29/30, Carleton Rd [Daren Ct], a1970, 1/9 (90), TM1. HDA 33, Compton Flats [Cyrus St, The Triangle], Stage 1 [nos. 56–130], a1969, 2/6 (75), Pitchers; Stage II [nos. 1–55], a1973, 1/6 (45), and 10 dwellings added to Phase I S block, Scott Hale. HDA 50, Holly Pk, Stage II [Ilex Hs], a1969, 1/17 (97), H. Farrow (Bison). HDA 57, 317–321 Holloway Rd [Pollard Cl], a1971, 1/8 (62), SLP. HDA 70, Hillside, Stage I/II [Louisa White Hs, Hazellville Rd], #a1972/3, 1/6 (69), Kirk & Kirk. HDA 88, Regina Rd, a1975, 1/6 (42), J. A. Elliott. Newington Green, a1966, 1/7 (28), 2/6 (41), Wates. Packington Est [Packington St], a1966, 27/6 (538), Wates. Pleydell St Ext, a1965, 40-dwelling ext to existing 6-storey Gastigny Hs, Pitchers. 85 Sunnyside Rd, a1966, 1/10 (40), Rooff. Whitecross St, a1966, 1/14 (65), Tersons.
ACQUIRED: HDA 132, Whitbreads Development [Errol St, Whitecross St], 1/6 (138), leased c1982 [under constr.] from Whitbread Ltd.

KENSINGTON AND CHELSEA LBC
Convent Site, Ladbroke Grove/Westbourne Pk Rd, a1970, 1/10 (64), A. E. Symes. Elm Pk Gdns, Stage 11 (site of 3–31), a1965, 2/7 (80), W. Moss; Stage 12 (site of nos. 57–67), a1968, 1/7 (39), Rush & Tompkins; Stage 13 [no. 93], a1971, 1/7 (40), Kenny & Reynolds; Stage 14 [no. 95], a1974, 1/7 (40), R. Hart [later sold]. 343–379 Kings Rd (Moravian Corner Site), a1967, 1/15 (50), F. G. Minter [later sold]. Lancaster Rd (West) RD, Bldg Stage 1, a1970, 1/23 (120), A. E. Symes; Bldg Stage 3 Phase 1 [Clarendon Walk], a1973, 1/6 (96), M. J. Gleeson. Oxford Gdns, a1968, 1/6 (40: with residential home), R. Hart. Tregunter Rd [62 Finborough Rd], a1969, 1/6 (52), R. Hart. Warwick Rd & Pembroke Rd Depots RD [Chesterton Rd, Broadwood Terr], a1972, 1/7 (91), 1/6 (24), Mowlem. West Chelsea Extended Area RD [World's End], a1969, 1/20 (linked point blocks: 742 dwellings total), HHC (later Bovis).

KINGSTON UPON THAMES LBC
Cambridge Rd RDA Stage 1, a1967, 2/16 (120), 2/17 (120), Wates.

LAMBETH LBC
Binfield Rd, a1966, 1/22 (80), Wates. Christchurch Rd, a1965, 1/7 (28), Thomas & Edge. Clapham Rd, a1966, 1/22 (80), Wates. Clarence Ave, a1966, 1/16 (60), 1/14 (52), 1/12 (44), Wimpey. Fern Lodge Est Ext [Crown Ln, Winton Way], a1965, 1/8 (32), Thomas & Edge. Grantham Rd, a1966 [Beckett, Arden], 2/22 (160), Wates; a1967, 1/22 (80), Wates. Hamilton Rd, a1966, 1/14 (52), Wimpey. Hurley Rd [Kennington Ln], a1966, 3/22 (240), Wates. Hurst St, a1966, 2/19 (144), Wimpey. Kennington Pk Rd (NAAFI Site) [Falmouth, Penryn, Penzance, Saltash], a1974, 1/9 (192), 3/6 (202), A. Roberts. Lambeth Rd [Lambeth Towers], a1966, 1/12 (35), Pitchers (later Fairweather). Loughborough Pk 1B, 1C, 2 [Southwyk Hs], a1973, 1/9 (173), W. Sindall. Solon New Rd, a1966, 1/16 (60), Wimpey.

LEWISHAM LBC
Adolphus St, a1965, 1/6 (24), Thomas & Edge. Carston Cl, a1967, 1/11 (42), Mekron. Evelyn Est, 1st Phase, a1967, 4/17 (256), Crudens (Skarne). Hazel Grove, a1966, 1/8 (32: excl. 2-storey wings), B. Sunley. Midway Pl [Trundleys Terr], a1967, 1/8 (50), H. Kent. Milton Ct Rd, Stage III, a1969, 3/24 (276), 5/15 (280), Crudens (Skarne). New Cross Rd [Reaston St], Stages I, II, a1968, 2/13 (96), Y. J. Lovell (2 contracts). Vulcan Rd, a1966, 1/6 (18), H. Kent.
ACQUIRED: Catford Town Centre [Holbeach Rd], 1/8 (276), acq. 1970 from Lancaster Holdings; (while under constr.: contractor = Rush & Tompkins). Rushey Green, 1/13 (40), leased 1969 from Capital General Investment Trust (when completed).

MERTON LBC
High Path RD [High St, Merton], a1968, 1/12 (66), Gaze. Mitcham North-West Quadrant RD, Phase 1 [Sadler Cl], a1972, 6/6 (287), Stanley Hugh Leach.

NEWHAM LBC
Carpenters Rd II [J. Riley Point], s1967, 1/22 (132), A. E. Symes; III [Dennison Point], a1968, 1/22 (134), A. E. Symes. Clever Rd, Stage 1 [Freemasons Rd], s1966, 4/23 (440), TWA (Larsen-Nielsen) [one block, Ronan Point, demol. 1986]. David St and Waddington St, a1967, 1/22 (80), Humphreys. Denmark St I [Newbarn St], s1965, 1/22 (108), DL. Dongola Rd RDA, a1967, 1/12 (50), A. E. Symes. Eldon Rd [Lansdowne Rd], s1966, 1/23 (110), TWA (Larsen-Nielsen). Leytonstone Rd, a1967, 1/23 (91), Gilbert Ash. Little Ilford [Romford Rd, Church Rd], 2A [S. Rainbird], s1966, 1/8 (32), T. Bates; 2B, 2C [Willis, Wallis], 2/12 (92), T. Bates; 3A, s1967, 3/12 (138), T. Bates. Mortlake Rd [Prince Regent Ln], s1967, 4/23 (440), TWA (Larsen-Nielsen). Priory Rd, a1966, 1/15 (56), Wates. Queen's Rd Market [Green St, Rochester Ave], s1968, 1/23 (215), 1/10 (92), Gilbert Ash. Temple Mills, Stage 2 [Clays Ln], a1979, 2/12 (190), T. Bates. Trinity St I, s1966, 1/24 (115), DL.
ACQUIRED: 187–9 Hermit Rd, 1/7 (12), acq. 1967 (when under constr.). 55–59 Upton Lane, 1/7 (27), acq. 1966 (when under constr.).

REDBRIDGE LBC
Broadmead Rd, a1966, 6/12 (484), Wates.

RICHMOND UPON THAMES LBC
Cromwell Rd, Teddington, a1966, 1/7 (24), E. J. G. Morgan. Hounslow Heath [Simpson Rd, Hanworth Rd], a1965, 2/15 (168), Wimpey.

SOUTHWARK LBC
Aylesbury Devt Area [Thurlow St: Taplow, Chiltern, 1–240 Wendover, 42–256 Bradenham, 76–165, 166–255 Missenden], a1967, 3/14 (502), 1/10 (240), 2/8 (180), Laing (Jespersen); Stage 3, R. White's Site Ext [241–271 Wendover, Ravenstone], a1974, 1/8 (231), 1/6 (81), Laing (Jespersen). Bankside Section II (Edger Site) [Falcon Point], a1976, 1/9 (110), Wates. Camden RD [12–83 Camden Sq, 4–7, 15–57 St James's Walk, 54–127 Chepstow Way, 1–48 Crabtree Walk], a1972, 1/8 (72), 2/6 (170), Wates. College Rd [Crystal Ct], a1968, 1/9 (34), DL. Cranham Rd and Parfitt Rd, Stage III, a1965, 1/8 (32), DL. Dawsons Hill [Overhill Rd], a1968, 2/12 (140), 2/9 (90), SLP. Heygate Devt Area [Heygate St: Kingshill, Ashenden, Swanbourne, Claydon, Marston, 1–49 Wingrove], a1969, 4/12 (796), 1/9 (104), 1/8 (49), Laing (Jespersen). New Place Devt Area [Four Squares Est, Drummond Rd], a1969, 2/7 (300), 2/6 (307), Wates. North Peckham Devt Area [Hordle Promenade West/East/South, 87–112 Wallford Way], a1967, 4/6 (169), DL. Silverlock Devt (Tissington St), a1967, 1/17 (62), 3/7 (72), J. & J. Dean; Stage II [Millender Walk], a1973, 1/6 (78), J. Murphy.

SUTTON LBC
Roundshaw, Area G [1–60 Shaw Way, 22–119 Carter Cl], 2/6 (158), a1967, Wates.

TOWER HAMLETS LBC
Edwards St, Stage II [Wentworth Mews, Eric St: annexe to 39-dwelling Edwards St I scheme, Stepney MBC], a1967, 1/9 (54), Prestige. Grove Bldgs, Stage II and English St Areas [Southern Grove], a1970, 1/19 (90), 1/7 (32), 1/6 (56), W. Willett. Lefevre Rd, Stage I, a1967, 2/10 (144) Laing (Sectra); Stage II, a1968, 3/7 (153), Laing (Sectra); Stage III, a1969, 2/10 (168), 2/7 (102), Laing (Sectra). Leslie St, Stage II [O'Leary Sq, Mile End Rd], a1973, 1/8 (48), Rooff. Malmesbury Rd, Stage I [Howcroft Hs, Heylyn Sq, 33–74 Sheffield Sq], a1974, 3/7 (176), Rooff. Manchester Rd, a1967, 1/10 (72), Laing (Sectra). Mansford Bldgs Area, Stage I, a1967, 1/22 (130), Concrete Southern (Bison). Monteith Rd [Old Ford Rd], a1966, 2/22 (260), Concrete Southern (Bison); Stage II Part I, a1967, 1/22 (130), Concrete Southern (Bison). Repton St [Camdenhurst St], a1966, 1/17 (66), W. J. Jerram. Rhodeswell Wharf [Carr St], a1966, 1/17 (66), W. J. Jerram. Roman Rd, Stage IA [Stafford Rd], a1966, 1/22 (130), Concrete Southern (Bison). Salmon Bldgs [Angel Hs, Salmon Ln], a1966, 1/17 (66), W. J. Jerram. Sidney St and Clark St, a1969, 1/10 (70), Whyatt. Tredegar Rd, a1974, 7/7 (463), T. Bates (Bison). Tuscan St and Portman Pl, a1965, 1/12 (48), Rowley Bros. Wellington Way Area, Stage I, a1967, 2/22 (260), Concrete Southern (Bison).
ACQUIRED: 9–48 Harriott House, Stepney Way, 1/8 (40), built *c.*1955, acq. later.

WALTHAM FOREST LBC
Avenue Rd RDA, a1968, 11/8 (598), J. & J. Dean (Bison). Beaumont Rd RD, Stage II [St Catherines, St Marks, St Matthews], a1966, 1/21 (120), 1/6 (52), J. & J. Dean. Bridle Path, a1965, 1/14 (44), Rooff. Cambridge Rd RDA, a1965, 3/22 (300), Wates. Cathall Rd, a1966, 2/21 (200), 1/9 (642), Fram Higgs & Hill (Camus). Chingford Hall, Stage II [Westward Rd], a1966, 3/22 (300), 12/7 (396), Wates. Gosport Rd, a1966, 1/22 (100), 1/6 (70), Wates. Higham Hill and Oatland Rise, a1967, 1/21 (100), Rooff. Oliver Rd and Auckland Rd [Messenger, Horstead Towers], a1967, 2/22 (200), Wates. Selwyn Ave, a1965, 1/13 (50), DL. Whipps Cross [Lea Bridge Rd], a1965, 1/13 (50), Rooff. Wood St and Forest Rd, a1966, 1/12

(46), Rooff. Wood St and North Rd [Northwood Tower], a1968, 1/21 (99), DL (Rooff).

WANDSWORTH LBC
Almshouse Site, Stage I [Hazelhurst Rd], a1967, 1/8 (86), A. Roberts. Beaumont Rd No. 1, a1966, 1/15 (56), DL. Doddington Rd, a1967, 5/13 (525), 1/11 (120), 5/10 (278), 1/6 (21), Laing (Jespersen). Gay St, Stage II, a1971, 1/6 (72), H. Fairweather. Hazelhurst Est, Stage V [Hazelhurst Rd], a1968, 2/15 (112), R. Hart. Home Rd, Stage I [Goulden St], a1970, 1/6 (269), Headway Construction. Livingstone Rd, Stage IV, a1968, 2/19 (170), DL/Bovis (later sold). Lurline Gdns Housing Site, a1977, 1/7 (38), J. E. Wiltshier. St James's Grove [Castlemaine], a1969, 1/21 (114), W. Lawrence. Surrey Ln, a1969, 4/21 (400), 1/14 (103), HHC; Stage II [Musgrave Ct], a1971, 2/6 (48), DL. Upper Richmond Rd (No. 2) [101–107 Upper Richmond Rd], a1966, 1/9 (48), R. Hart. Wandsworth Stadium RD [Arndale Centre: jointly with Arndale Developments Ltd], a1966, 3/21 (216), 1/10 (168), Token; Stage II, a1970, 1/25 (132), W. Willett. York Rd, Stage I, a1966, 2/17 (135), 3/9 (384), DL/Bovis; Stage II Phase 2, a1968, 1/17 (75), DL/Bovis; Stage II [Totteridge], a1969, 1/24 (138), 4/7 (171), Laing.
ACQUIRED: Victoria Dr [Stephen Ct], 1/6 (20), acq. 1975.

(CITY OF) WESTMINSTER LBC
Abbots Manor, Phase B [Warwick Way: Glastonbury, Furness, Dryburgh], a1966, 1/21 (162), 1/8 (36), 1/6 (30), W. Moss. Bishop's Bridge Rd [Brewers Ct], a1973, 1/7 (80), G. E. Wallis. Brunel Est (Mileage Yard), a1969, 1/20 (99), 13/7 (293), Gilbert Ash. Clipstone St, a1967, 1/6 (244), W. Moss. Great Titchfield St [Carburton St], s1982, 1/7 (82), J. A. Elliott. Hall Place [Parsons], a1967, 1/21 (120), GWS. Herries and Mozart St Devt, (North) [Onslow, Severn, Tolhurst], a1971, 2/7 (93), 1/6 (57), GWS; (South) [Grover, Farnaby, Naylor], a1972, 2/7 (183), G. E. Wallis. Ingestre Bldgs RD [Ingestre Pl], a1971, 1/16 (52), W. Lawrence. Lillington Gdns, Phase 2 [Vauxhall Bridge Rd: Parkinson, 25–60 Forsyth, 1–38 Stourhead], a1966, 1/7 (172), Kirk & Kirk. Lisson Green [Lisson Grove, Rossmore Rd], a1969, 1/8 (94), 24/7 (1095), 1/6 (54), TWA (Larsen Nielsen). Newport/Sandringham [Charing Cross Rd, Vale Royal], s1981, 1/7 (118), Laing. Queensway Junior Library Site [219 Queensway], a1966, 1/8 (20), W. J. Marston. Regency St and Vincent St, a1968, 2/6 (84), W. J. Marston. St Stephen's Gdns [Casterbridge, Sandbourne, Angleby], a1975, 2/7 (149), 1/6 (40), Higgs & Hill. Shirland Rd [Oaktree Hs], a1966, 1/8 (28), Rowley Bros. Vauxhall Bridge Rd, Phase I [Eliot], a1975, 1/9 (53), W. Moss; Phase IIA [Conrad, 17–44 Beardsley, 1–44 Coward], a1976, 1/9 (86), 1/7 (44), 1/6 (28), W. Moss. 49–67 Westbourne Pk Rd, a1973, 1/6 (42), A. T. Chown.

GREATER LONDON: GREATER LONDON COUNCIL

BARKING LB
Lodge Ave Site, Becontree Est, a1970, 1/6 (43), DL.

BARNET LB
Grahame Pk [The Concourse], a1969, 1/8 (45), 3/7 (126), 4/6 (142), Wates (later DL) (joint devt with Barnet LBC).

CAMDEN LB
Maitland Pk [Aspen], a1965, 1/8 (39), Rowley Bros.

EALING LB
Laurie Rd, Hanwell Est, a1968, 1/6 (60), DL.

GREENWICH LB
Kidbrooke Depot Site [Ferrier Est], Site A [Gallus Sq, 1–102 Dando, 25–47 Moorhead, Ebdon Way, Pinto Way, Lebrun Sq], a1967, 5/12 (260), 20/6 (583), Wates; Site B [37–54 Elford Cl, 1–152 Ryan Cl, 34–103 Telemann Sq, 2–140 Lambert Way, Romero Sq], a1970, 6/12 (312), 16/6 (506), Wates. Renbold Pl Area (Site B, Royal Hill Est), a1966, 1/6 (24), DL. Woolwich & Erith Site [Thamesmead] (also in Bexley), Stages I, II, III, a1966, HHC (Balency) (single value-cost contract, built 1967–73): Stage I [Wolvercote Rd, Hartslock Dr, Binsey Walk], 10/13 (576); Stage II [Alsike Rd], 9/13 (432); Stage III [Carlyle Rd], Area D, Blocks G1-G9, 5/9 (352), 4/7 (204); Stage III Local Centre, Blocks H1, H2 [Harold Wilson Hs], 1/8 (72).

HACKNEY LB
Bacchus Walk [Pitfield St], a1968, 1/14 (54), Pitchers. Bradstock Rd, Stage 1 [Wick Rd], a1967, 4/10 (160), TWA (Larsen-Nielsen). Church Cres [Chelsfield Point, Penshurst Rd], a1966, 1/12 (44), DL. Downs Rd [Nightingale Est], 1st Phase, a1968, 6/22 (504), Rush & Tompkins; Phase II, a1970, 4/8 (360), Rush & Tompkins. Elsdale St, Stage 1 [Exbury, Scotney], a1969, 5/6 (204), W. Willett; Stage 2 [Barbrook], a1973, 2/6 (70), Kirk & Kirk. Frampton Pk [Tradescant], a1965, 1/11 (60), Rowley Bros. Hedgers Grove [Selman Hs, Cassland Rd], a1966, 1/13 (53), DL. Howard Rd, a1969, 1/6 (36), DL. King Edward's Rd and Balcorne St [Kingsland and Shore Est], a1966, 2/23 (252), Wates. Trowbridge Rd Ext, Stage I, a1967, 4/21 (320), J. M. Hill (Cebus).

HAMMERSMITH & FULHAM LB
Hartopp Ave, a1967, 2/14 (112), TWA (Larsen-Nielsen). Laundry Rd [16-58 Lampeter Sq], a1968, 1/8 (43), T. R. Roberts.

HOUNSLOW LB
Brentford Dock, a1972, 1/7 (260), 2/6 (174), SLP.

ISLINGTON LB
Alsen Rd [Andover Est, Mingard Walk, Corker Way], a1972, 2/10 (122), 1/9 (50), TMI. Balls Pond Rd [Dovercourt Est, Southgate Rd], a1968, 1/10 (54), Rowley Bros. George's Rd [Ringcross Est], a1969, 1/8 (231: comprising 32-dwelling tower integral with low block], DL. Gifford St Site, Bemerton Est [1–45 Carnoustie Dr, 80–204 Pembroke St], a1970, 1/6 (108), B. Sunley. Graham St [Jessop Ct], a1966, 1/6 (41), DL. King Henry St [Mayville Est], a1965, 2/11 (80), J. Jarvis. Luard St [Orkney Hs], a1967, 1/10 (64), Rowley Bros. St Luke's Printing Works Site [St Luke's Est, Old St], a1965, 1/21 (120), 2/10 (129), 2/9 (108), Kirk & Kirk. Weston Rise [Penton Rise], a1966, 1/10 (38), 1/9 (32), 1/8 (38), 2/7 (39), DL. Wynyatt St [Moorgreen, Midway Hses], a1971, 1/10 (76), 1/9 (61), DL.

KENSINGTON & CHELSEA LB
Edenham St: Blocks A, B [Trellick Tower and 19 Golborne Rd], a1967, 1/31 (180), 1/7 (42), F. G. Minter; Block E [51–80 Edenham Way], a1970, 1/6 (30), F. G. Minter; Ext [15–50 Edenham Way], a1972, 1/6 (36), M. J. Gleeson. Silchester Rd, Stage II [Dixon, Merkland Hses], a1968, 2/22 (160), Rush & Tompkins.

LAMBETH LB
Brixton Hill & St Matthews Rd, a1965, 4/7 (196), TWA (Larsen-Nielsen). Crown Works Site [Ashmole Est, Ebbisham Dr], a1969, 1/18 (89), C. Miskin. Dorset Rd [Benville Hs], a1971, 1/8 (42), Simms Sons & Cooke. Ethelred St Site: Stage I [Kerrin Point, Gaysley, Baltimore, Tolpaide, Nainby, Sambrook, Beckham Hses], a1967, 1/22 (88), 1/8 (41), 1/7 (117), F. G. Minter; Stage II [Brittany, Elkington, Ward Points, Cannon Hs, Sugden Hs: the latter including 188–202 Lambeth Walk], a1970, 1/22 (113), 1/20 (98), 1/18 (88), 1/7 (80), 1/6 (18), F. G. Minter. Jonathan St, Blocks 1, 2 [Tyers St], a1966, 2/13 (144), M. Howard. Meadow Mews [Sirinham Point, Ashmole Est], a1971, 1/18 (88), Rowley Bros. 30–32 Palace Rd [Dykes Ct], a1971, 1/6 (29), Kirk & Kirk. South Lambeth Rd [Spurgeon Est], a1966, 1/21 (82), Rush and Tompkins. Tindal St Ext [Lothian Rd], a1966, 1/11 (41), Rowley Bros.

LEWISHAM LB
Besson St, a1971, 1/7 (50), Carlton. Drysdale Rd Areas & Site [Lethbridge Cl], a1969, 7/7 (196), 1/6 (50), TWA (Larsen-Nielsen). Pepys Est, Stage V, a1968, 3/8 (159), Wilson Lovatt (later DL). Tyson Rd [1–39 Shirburn Cl], a1965, 1/6 (20), DL.

REDBRIDGE LB
Hainault Est (The Copse Site) [Romford Rd], a1966, 2/11 (84), DL.

SOUTHWARK LB
Bells Gdn Rd [1–99 Leontine, 1–42 Wilmott, 22–103 Neville], a1976, 3/6 (224), Mowlem. Brandon Neighb. Areas, Stage II [Wyndham Rd/Comber Gr], Blocks 25, 26 [Kevan, Laird], a1965, 2/21 (160), TMI; Comber Grove Site, a1967, 2/6 (48), Kirk & Kirk. Brandon Neighb. Areas, Stage III [Camberwell New Rd, John Ruskin St: partly in Lambeth]: Contracts A, B [Aberfeldy, Trevelyan], a1967, 1/8 (155), 1/6 (63), Kirk & Kirk; Stage III Ext [Hanworth], a1968, 2/8 (140), Kirk & Kirk. Camelot St, Blocks 1, 2, 3, 10 [Commercial Way], a1968, 4/14 (224), TWA (Larsen-Nielsen). Dodson St Ext [Guthrie], a1966, 1/6 (34), TMI. Elephant & Castle CDA, Site 4 [Princess St], a1967, 1/10 (92), Lavender

McMillan (later Hawkins). Gloucester Grove [St George's Way], a1972, 1/10 (176), 3/8 (248), 15/6 (568), M. J. Gleeson. Lancaster St [Tadworth], a1967, 1/9 (27), F. G. Minter. Lindley Est, Site 2 [Sidmouth], a1966, 1/7(51), DL. Long Lane [Cluny Est, Decima St], a1965, 2/6 (68), DL. Madron St [Ifield, Leysdown, Kinglake St], a1967, 1/7 (61), Rowley Bros. Parkers Row [Lupin Point, Abbey St], a1969, 1/21 (82), Truscon. Smyrks Rd, a1967, 1/7 (81), DL. Tustin St, Block 5, a1966, 2/6 (96), Ford & Walton. Tyne Terr, Stage III [Clifton Est, Consort Rd], a1967, 1/20 (76), 1/6 (39), TMI.

SUTTON LB
Roundshaw, Stage II [Mollison Dr], a1967, 1/11 (190), 1/6 (81), Wates.

TOWER HAMLETS LB
Alpha Grove & Malabar St Sites [Barkantine Est], a1965, 4/22 (348), J. M. Hill. Alpha Grove Ext, Stuarts Granolithic Works [Tiller Rd], a1966, 1/10 (40), TWA (Larsen-Nielsen). Aylward St, Stage I [Jamaica St, Clovelly Way, Musbury Way, Cornwood Dr], a1968, 5/6 (201), TMI; Stage III [1-55 Summercourt], a1975, 1/6 (55), Kirk & Kirk. Barley Mow Site [Ropemakers Fields], a1967, 3/14 (174), TWA (Larsen-Nielsen); Ext Site A [Kiln, Oast], a1974, 1/7 (63), 1/6 (42), W. J. Cearns. Baythorne St, a1973, 3/7 (253), B. Sunley. Beale St [Tait Ct, Allen Rd, Armagh Rd, Pulteney Cl], a1971, 7/6 (318), TMI. Bow Rd Site 1 [Bromley High St], a1967, 3/11 (122), TMI. Bow Locomotive Works Site, Blocks 4, 5, 6 [Campbell Rd], a1968, 3/25 (274), B. Sunley. Burcham St [Glenkerry], a1971, 1/14 (79), Kirk & Kirk. Cayley St, a1965, 3/10 (120), TWA (Larsen-Nielsen). Collingwood Est Ext, a1966 [North portion of Donegal], 2/7 (63), DL; a1967 [South portion Sovereign], 1/7 (56), DL. Cuff Place [Cuff Point], a1972, 1/15 (55), H. Webb. Eastman St [Heathpool Hs, Brady St], a1966, 1/6 (45), DL. Eileen Mansions Site [Berner Est: Harkness], a1968, 1/9 (28), E. J. Lacey. Ford Rd, Blocks 1, 2, 3 [Driffield Rd], a1966, 3/20 (240), J. M. Hill; Phase II [Hitchin Sq, St Stephen's Rd], a1970, 4/6 (129), TMI. Frimley St [Globe Rd, Alderney Rd], a1966, 1/6 (18), DL. Furze St [Mollis Hs, Gale St], a1972, 1/6 (15), DL. Galt St, a1973, 5/6 (147), W. J. Jerram. Granby St [Bentworth Ct], a1974, 1/7 (117), Wates. Jefferson St, a1966, 2/10 (80), TWA (Larsen-Nielsen). Juniper St [Roslin Hs], a1972, 1/8 (88), DL. Lansbury Market Ext, Phase 1 [Fitzgerald], a1968, 1/20 (73), F. G. Minter; Phase 2 [Ennis, Kilmore], a1971, 2/9 (32), F. G. Minter. Manilla St [Spinnaker], a1973, 1/6 (42), DL. Robin Hood Ln, a1968, 1/10 (110), 1/7 (104), W. Lawrence (Sundh). Rowland St, a1971, 2/6 (83), DL. Rowlett St [Balfron Tower], a1965, 1/26 (146), F. G. Minter; Ext [Carradale Hs], a1967, 2/11 (88), F. G. Minter. Rowsell St, Stage I, a1968, 7/6 (146), Rush & Tompkins (Bison). St Katherine Docks RD, a1975, 2/7 (300), Taylor Woodrow (joint project with Taylor Woodrow Property Co.). Samuda's Wharf Site Ext, Contract B [Samuda Est: Hedley, Pinnace, Reef], a1966, 3/6 (117), Tersons. Simms Depot [Pitsea St: Ogilvie, Billing, Dawson, Lipton Rd], a1974, 1/8 (48), 1/7 (36), DL. Solander Gdns Ext, a1968, 1/7 (56), W. Lawrence (Sundh). Somerford St, a1971, 1/7 (25), 1/6 (23), DL. Spring Walk, Blocks 3, 4 [Hanbury St, Greatorex St], a1967, 2/6 (92), Rush & Tompkins. Swedenborg Sq [Cable St, Swedenborg Gdns], Stage 1 [Stockholm], a1965, 1/18 (65), Tersons; Stage 2 [Shearsmith, Hatton], a1968, 1/28 (107), 1/23 (85), TMI. Thirza St [Farrell Hs, Lake St], a1969, 1/14 (52), Y. J. Lovell. Tyne St [Denning Point], a1968, 1/22 (82), Wilson Lovatt (later Jarvis). Watney St Market, Stage 1, Block 1 [Winterton Point], a1966, 1/24 (95), F. G. Minter (Indulex); Stage 2, Block 7 [Gelston Point], a1968, 1/24 (95), F. G. Minter (Indulex).

WANDSWORTH LB
Alton Est (West): Manresa Site [Chilcombe, Kimpton, Crondall, Rushmere, Farnborough, Sombourne], a1965, 6/12 (288), Rush & Tompkins. Priory Mental Home Site [Priory La, Lennox Est], a1968, 1/13 (48), 2/12 (86), DL. Ryde Vale Rd, a1965, 2/7 (56), Rush & Tompkins (Bison).

WESTMINSTER LB
Amberley Rd Stage I [Charfield], a1969, 1/7 (105), B. Sunley; Stage II [Clearwell, Downfield], a1972, 2/6 (74), Kirk & Kirk. Luxborough Lodge RD [Luxborough St], a1966, 1/23 (115), Taylor Woodrow. Maida Vale Est, Carlton Vale Site, Block I [Torridon Hs, Randolph Gdns], a1966, 1/10 (98), DL. Walterton Rd, Rodborough Mews Site, Blocks 1, 2 [Chantry, Hermes], a1965, 2/22 (202), F. G. Minter (Indulex). Warwick Est, Brindley Rd Site, Block 3 [Brinklow], a1966, 1/21 (125), Wates.

OUTSIDE GREATER LONDON
(Elstree RD) Borehamwood Est, Aycliffe Rd Site, a1967, 1/8 (42), Wimpey. (Hastings CB) 34–46 Warrior Sq, a1973, 1/9 (41), Stoneleigh Developments (later sold to housing association). (Huntingdon MB) Mayfield Rd, a1967, 1/7 (25), W. French.

ACQUIRED (INCLUDING OUTSIDE GREATER LONDON)
(Barnet LB) Cat Hill [Desmond Hs], 1/9 (32), acq. before constr. 1967 from James Development Co. (sold 1973). (Camden LB) *Adelaide Rd [Bridge Hs], 1/7 (36): date of acq./source unknown. Winter Garden Theatre Site [Macklin St], 1/14 (62), leasehold acq. before constr. 1967 from Rodwell Group. (Herne Bay UD) 'St Anne's', St George's Terrace, 1/12 (41), acq. before constr. 1971 from Morrell-Ixworth. (Sutton LB) 174-180 Woodcote Rd, 2/6 (48), acq. under constr. 1967 from Morrell-Ixworth. (Waltham Forest LB) 60–64 Chingford Ave, 1/6 (22), acq. under constr. 1967 from Morrell-Ixworth. (Wandsworth LB) Aldrington Ave, 2/6 (72) [9–80 The Alders], acq. 1965. (Westminster LB) Ebury Bldgs Site, Semley Pl, 1/11 (104), leasehold acq. before constr. 1966 from Regent Lion Properties.

ENGLAND: NORTHERN

BILLINGHAM UDC (TO 1968; THEREAFTER TEESSIDE CBC)
Low Grange [Grange Ave], a1968, 2/12 (132), Wimpey. Town Centre Devt [Kingsway], a1962, 3/11 (225), T. G. Construction.

FELLING UDC
Crowhall Ln RD, a1966, 1/16 (88), 6/7 (185), TWA (Larsen-Nielsen). Nursery Farm [Balmoral Dr], a1966, 4/17 (381), Crudens (Skarne) (demol). Split Crow Rd, a1970, 2/9 (136), TWA (Larsen-Nielsen) (demol).

GATESHEAD CBC
Allerdene, Phase II [Trafford], a1968, 2/13 (194), S. Miller. Ann St Site [High West St], a1957, 1/10 (160), Wimpey. Barn Close, 1st Stage [Mulgrave Terr], a1953, 4/10 (196), Wimpey. Beacon Lough East [Beacon Rise], a1965, 4/12 (192), S. Miller. Bensham Rd and Rectory Rd, a1961, 1/16 (127), Wimpey. Chandless Area RD Phase 1 [Lindisfarne Dr], a1960, 3/16 (384), S. Miller. East St [Hopper St], a1954, 3/8 (135), Wimpey. Harlow Green, Phase II [Harlow Green Ln, Waverley Rd], a1968, 4/13 (308), S. Miller. St Cuthbert's Village [St Cuthbert's Rd], a1967, 1/18 (85), 3/8 (96), 10/6 (144), S. Miller (part demol). Sunderland Rd RD, Phase II, a1972, 2/12 (136), S. Miller. Teams RDA, Phase 1 (Bolam St and Derwentwater Rd), a1963, 2/21 (334), S. Miller.

GOSFORTH UDC
Aln Cres, a1965, 2/6 (72), A. Craigie. Rydal Rd, a1965, 1/6 (36), Cussins.

HEBBURN UDC
New Town RD [West Victoria Rd], a1971, 1/19 (111), 1/17 (89), 1/11 (133), 1/8 (114), S. Miller.

JARROW MBC
Central Area RD [North St], a1964, 3/12 (132), Laing.

LONGBENTON UDC
Killingworth Township, Contract B19 [West Bailey], a1967, 7/10 (240), 5/9 (160), 2/8 (64), 1/7 (24), 12/6 (252), Crudens (Skarne) (demol).

MIDDLESBROUGH CBC (TO 1968; THEREAFTER TEESSIDE CBC)
Longlands Rd, a1963, 4/10 (224), Shepherd. Netherfields Section D [Roworth Rd], a1967, 3/16 (270), Wimpey. Priestfields [Balmoral Rd], a1966, 1/16 (91), Wimpey.

NEWCASTLE-UPON-TYNE CBC (TO 1974)
Adelaide Terr, a1966, 1/19 (108), Wimpey. Betts Ave, Benwell, a1967, 1/9 (49), S. Miller. Blakelaw Shopping & Neighb. Centre [Blakelaw Rd], a1965, 3/12 (198), Wimpey. Byker RD, Phase 1 Perimeter Block, Stage 1 [W block: Dalton Cres, Shipley Walk; E block: Raby Gate, Long Headlam], a1971, 2/8 (217), S. Miller; Grace St [Felton Walk, Byker Cres], a1972, 1/8 (104: built as annexe to E block of Stage 1), S. Miller. Church St, Walker RDA [Titan Rd], a1959, 3/15 (270), Leslie; a1965, 2/16 (180), Brims; a1966, 1/12 (58), S. Miller, and 1/15 (90), Cussins. Cruddas Park [Elswick Dene, Kings Meadows], a1959, 2/12 (144), Leslie. Cruddas Park Shopping & Neighb. Centre, Stage II [Westmorland Rd], a1965, 1/20 (159), Gilbert-Ash Northern. Eastfield Ave, Walker, a1960, 3/15 (270), Leslie. Fawdon [Fawdon Pk Rd], a1963, 1/9 (72), Cussins. Gloucester St

RDA, Phase 2 [Mather Rd], a1969, 1/8 (75), 1/6 (48), S. Miller. Heaton Pk Rd [Malcolm St], a1959, 1/12 (72), Leslie. High Heaton [Newton Pl], a1963, 1/15 (98), Brims. Hindhaugh St Area [Derby St], a1951, 1/8 (96), S. Miller. Jesmond Vale [Lansdowne Gdns], a1966, 1/28 (138), S. Miller. Longbenton Est, Unit 4 [West Farm Ave: out-county], a1960, 2/15 (180), Leslie. Melbourne St RDA, Stage I [Howard St], a1968, 3/7 (152), Laing. Molineux St [North View], a1964, 2/15 (180), Wimpey. Montagu Est, Section D [Burnfoot Way], a1963, 1/11 (70), Brims. Morpeth St, a1963, 1/15 (98), Brims. Park Rd, Rye Hill Revitalisation Area, Area 2 (Middle) [Warrington Rd], a1970, 1/6 (37), Kendall Cross. Pottery Bank [Yelverton Cres], a1960, 1/15 (90), Wimpey. Scotswood Rd (Hawes St) RDA [De Grey St], a1960, 6/15 (540), Wimpey. Scotswood Rd (Park Rd) RDA [Park Rd], a1962, 2/15 (180), Laing. Shieldfield Clearance Area [Shield St], a1959, 3/15 (270), Leslie; [Stoddart St], a1966, 1/26 (128), S. Miller. Walker Central RDA [The Parade/Titan Rd], a1967, 4/6 (284), S. Miller (Bison) (three blocks demol). Westerhope and West Denton CDA [West Denton Way: out-county], a1967, 2/14 (164), Brims. Westgate Rd [Vallum Way], a1961, 2/20 (240), Leslie; a1962, 1/20 (120), Leslie. Wyndham Ave, Montagu Est, a1965, 1/15 (116), S. Miller.

NEWCASTLE-UPON-TYNE CITY COUNCIL (FROM 1974)
Byker RD (Dunn Terrace), a1975, 1/13 (53), Shepherd.

SUNDERLAND CBC
Abbs St RDA, a1965, 2/14 (104), DL. Coronation St RDA [Borough Rd], a1961, 2/11 (80), G. M. Pearson. Dame Dorothy St RDA [Dock St], a1962, 5/14 (260), Laing. Gaiety Cinema Site [Lambton Tower, Walton Ln], a1964, 1/19 (74), Sir Lindsay Parkinson (Bison). Gilley Law [North Moor Ln], a1964, 7/17 (674), TWA (Larsen-Nielsen). Hahnemann St [Thompson Rd], a1964, 4/7 (208), Laing (Sectra). Hendon Rd RDA [Hedworth Sq], a1963, 1/20 (95), 2/14 (211), Wimpey. Town Central Area [Middle St], a1967, 3/19 (270), Gilbert-Ash Northern. Walton Ln RDA, Phase II, a1967, 1/19 (72), 1/18 (68), Sir Lindsay Parkinson (Bison).

TEESSIDE CBC (FROM 1968)
Cargo Fleet Lane, Middlesbrough, a1971, 2/17 (264), Wimpey. Church Lane, Eston [Tawney Rd], a1968, 4/6 (89), Tarmac. Queen's Pk South [Alma St, Stockton], a1971, 2/17 (264), Wimpey. Spencerbeck, Ormesby [Allendale Rd], a1970, 1/10 (76), Wimpey. West Precinct, Billingham [Kingsway], a1973, 1/15 (89), S. Miller.

THORNABY MBC (TO 1968; THEREAFTER TEESSIDE CBC)
Airfield Housing Devt, Site B [Wheeldale Cres], a1962, 2/12 (184), Shepherd.

WALLSEND MBC
Low Willington Farm Est, a1958, 3/14 (210), Wimpey (demol).

WHICKHAM UDC
Ravensworth Rd RDA, a1967, 1/30 (196), G. M. Pearson.

ENGLAND: NORTH-WEST

ASHTON-UNDER-LYNE MBC
Charlestown [Oldham Rd/Wellington St], s1961, 1/10 (90), J. Gerrard. Ellison St RDA [Stockport Rd], s1962, 3/12 (208), Fram. Katherine St RDA [Brook St East], a1964, 4/13 (301), Fram.

BIRKENHEAD CBC
Back St Anne St [Vittoria St, Cathcart St], a1963, 1/14 (83), Wimpey. Bebington Rd, a1968, 1/11 (41), W. Hall (Bison). Chapel St [Lord St], a1965, 1/13 (50), Crudens. Conway Hs [Knowsley Rd], a1964, 1/14 (53), Wimpey. Eldon St, Oak St, a1956, 2/10 (240), W. Thornton (Prometo) [demol]. Grosvenor St, Contract 4 [Thorsway], a1959, 1/11 (42), Wimpey. Leighton Rd, a1964, 1/14 (53), Wimpey. Mersey Mount, a1959, 2/8 (120), W. Thornton. Old Bidston Rd [Neston Gdns], a1963, 1/14 (83), Wimpey. Payson St [Vittoria St, Livingstone St], a1963, 1/14 (83), Wimpey. Queensbury St RD [Park St], a1960, 1/11 (65), Wimpey. Sidney Rd, a1960, 2/11 (84), Wimpey. Sidney Terr, a1964, 2/11 (84), Wimpey. Upton Estate, Contract 3 [Ford Precinct], a1966, 4/13 (196), Sir R. Lloyd. Woodchurch, Contract 23 [New Hey Cl], a1959, 2/14 (216), W. Thornton; Contract 25 [Leeswood Rd], a1960, 3/14 (246), Wimpey. Wood St [Cleveland Gdns], a1961, 1/14 (83), Wimpey.

BLACKBURN CBC
Birley St, a1966, 3/13 (183), Laing (Sectra). Queen's Pk, a1964, 3/14 (240), Laing. Queen's Park and Shadsworth Rd, a1967, 4/8 (239), 2/7 (60), 2/6 (50), Laing (Jespersen). St Aidan's Avenue, a1966, 3/16 (270), Unit. Smithies St [Primrose Bank, Larkhill], a1963, 3/14 (240), Laing.

BLACKPOOL CBC
Queenstown and Laycock Gate RD [Healey St, Stirling Rd], a1962, 3/17 (192), J. Turner; a1964, 1/17 (64), J. Turner. Queenspark Est Ext, a1969, 1/23 (131), British Lift Slab.

BOLTON CBC
Crook St [Great Moor St], a1956, 1/6 (81), Townson. Gate St [Thornbank], a1965, 3/11 (198), Townson. School Hill RDA [Higher Bridge St], a1959, 1/8 (24), Seddon; Blocks 8-10, a1960, 1/6 (74), DL; Blocks 5-7, a1962, 1/8 (65), Townson.

BOOTLE CBC
Breeze Hill, a1966, 1/16 (91), Wimpey. Church St RD, a1963, 1/16 (91), Wimpey. Marsh Ln RD, a1958, 2/11 (132), Wimpey; Stage II, a1966, 2/16 (182), Wimpey. Strand Rd and Stanley Rd CDA No. 1 [Washington Parade], a1965, 1/22 (122), Ravenseft (Monk).

BURNLEY CBC
Trafalgar St [Burnham Gate], Phase I [Victory, Rodney, Orion], a1966, 2/7 (44), 1/6 (27), Wimpey; Phase II [Horatio, Gresham, Triumph, Dolphin, Neptune], a1968, 1/8 (30), 2/7 (68), 2/6 (51), Wimpey.

CHADDERTON UDC
Crossley Est, Phase II [Walsh St], a1968, 1/16 (88), 1/15 (87), Wimpey.

CHESTER CBC
Blacon Camp [Nevin Rd, Rhuddlan Rd], a1964, 3/13 (216), Wimpey. Francis St RD [St Anne St], a1966, 2/11 (122), Wimpey; ext contract, a1969, 1/11 (61), Wimpey. Newtown RD [Crewe St, Egerton St], a1961, 3/11 (180), Shepherd.

CREWE MBC
Mill St and Station St [Waverley Ct], a1971, 1/12 (95), G. & J. Seddon.

CROSBY MBC
Barracks Site [Kings Ct, Claremont Rd], a1964, 3/15 (174), Matthews & Mumby. Chapel St and Dean St Area [Queen St], a1966, 2/15 (116), Matthews & Mumby. Seaforth RD [Kepler St], a1966, 2/15 (116), Matthews & Mumby.

ECCLES MBC
Barton Ln (No. 3) Clearance Area [Alma St], a1965, 1/20 (118), Wimpey. Cawdor St [Trafford Rd], a1959, 4/10 (232), Wimpey. Central Area RD [Albert St], a1971, 1/13 (70), Wimpey. Clarendon Rd [Vicar St], a1964, 1/15 (85), Wimpey. College Croft Clearance Area [College Croft], a1967, 1/16 (86), Wimpey. Mee's Sq [Ermen Rd], a1960, 1/10 (58), Wimpey. St Mary St and Knowsley Ave Clearance Area, a1963, 3/15 (264), Wimpey.

ELLESMERE PORT MBC
Westminster Housing Est [Joseph Groome Towers, Westminster Rd], a1965, 3/13 (153), Townson.

HYDE MBC
Mount St, s1969, 1/16 (93), Wimpey. Town Centre RD [John Grundy Hs], s1969, 1/12 (40), Tersons.

KIRKBY UDC
Tower Hill Est, Phase IIC [Shevingtons Ln], s1969, 10/7 (425), Unit (Camus) (demol).

LANCASTER MBC
Main St and Captains Row [Mainway], a1959, 2/11 (88), 1/8 (32), Wimpey.

LIVERPOOL CBC
Aigburth Dr [Belem Tower], s1958, 1/11 (64), Townson. Altcross Rd, a1964, 1/16 (90), Norwest Construction. Anthony St RDA [The Braddocks, Arkwright St], a1955, 2/10 (120), Wimpey. Beechwood Rd, a1960, 2/11 (128), Townson. #Belle Vale [Shrewton Rd, Childwall Valley Rd], Phase 1, a1968, 1/6 (154: 'spine' block), Unit (demol); Phase 1 Ext, a1972, 1/6 (45), Unit (demol). Bluebell Lane [Huyton: out-county], a1961, 3/11 (192), W. Thornton. Boundary St [Logan Towers, Athol St], a1964,

1/22 (172), Unit (Camus). Boyd St [Cresswell Mount, Northumberland Terr], a1954, 1/10 (80), Wimpey (demol). Brock St [Medlock St], a1959, 1/11 (64), Townson. Brookside Ave, a1965, 2/11 (128), Wimpey. Cantril Farm [out-county], Phase II [The Withens], a1967, 3/22 (516), Unit (Camus) (demol); Phase VII [Little Moss Hey, Pool Hey], a1967, 6/16 (540), Unit (Camus). Cherry Ave, a1964, 1/15 (72), Peak. Cranmer St and Latimer St, a1961, 1/14 (82), W. Thornton. Cresswell St, a1968, 1/10 (102), 1/7 (63), SLP/Lockwoods Construction. Croxteth (Sceptre Rd), a1961, 1/11 (64), Townson. Robertson St, a1962, 1/15 (58), Peak [demol]. Croxteth Dr [Ullet Rd], a1963, 5/15 (280), Townson. Devonshire Pl, a1964, 1/15 (58), DL. Deysbrook Ln, a1963, 3/15 (222), Peak. East Lancashire Rd [Coronation Ct, Eaglehall Rd], a1954, 1/10 (114), Costain; [Stockmoor Rd], a1963, 1/15 (58), Peak. Edinburgh St, a1965, 3/15 (174), DL. Everton Terr, a1958, 2/10 (160), Wimpey (demol). Garibaldi St [Roscommon St], a1959, 3/14 (189), Wimpey (demol). Greenbank Ln, a1964, 1/15 (58), DL. Greenheys Rd [Croxteth Rd], a1962, 1/15 (58) Peak. Harding St, Phase I [Smithdown La], a1961, 1/22 (168), Sir R. Lloyd (Truscon) (demol); Phase II [Aigburth St], a1964, 1/11 (72), Sir R. Lloyd (demol). Hartopp Rd, Childwall Valley, a1963, 1/15 (88), Wimpey. Hartsbourne Ave, Childwall Valley, a1963, 3/15 (264), Wimpey. Henry Edward St, a1965, 2/15 (112), Truscon. Higher Rd North [Barncroft Rd: out-county], a1964, 3/15 (264), Wimpey. Jordan Pl [Mill St, Rutter St], a1965, 1/16 (60), Trollope & Colls (PAC). Kirkby [out-county; entries in chron. order): Gaywood Ave [Gaywood Green, Southdene], a1961, 4/11 (256), Unit; Gaywood [Cherryfield Heights, Southdene], a1962, 2/11 (132), Unit; Northwood [Mercer Heights, Roughwood Dr], a1963, 8/15 (704), Unit; Northwood [Quarry Green], a1964, 3/15 (180), Unit; Richard Hesketh Dr [Whitefield Sq, Westvale], a1967, 2/7 (76), Unit. Kirkdale Rd [Boundary St East], a1964, 1/15 (58), Townson. Lee Park [Kings Dr, Woolton], a1960, 5/14 (420), Wimpey. Leighton Terr [Upper Mann St, Park St, Grafton St], a1964, 1/15 (60), Townson. Longmoor Ln, a1962, 1/15 (74), Peak. Mackets Ln [Arncliffe Rd: out-county], a1961, 3/9 (96), Unit. Menlove Ave, a1960, 2/11 (128), Townson. Mill Ln Ext [Olive Mount], a1961, 3/14 (180), Peak. Mitylene St [Media St], a1955, 1/11 (40), Peak. Naylorsfield (Netherley, Phase I), a1965, 2/16 (180), Unit. Netherley, a1967, Phase II Part A [Fulshaw Cl, Bruen Cl, Paveley Bank, Yeoman Fold], 11/8 (977), Wimpey (under demol); Phase II Part B [Glebe Hey, Peckmill Green, Brittarge Brow], 5/8 (337), Unit (demol). Parkview Rd [East Lancashire Rd], a1966, 3/18 (307), Townson (Truscon). Primrose Dr [Huyton: out-county], a1961, 3/11 (192), W. Thornton. Regal Rd [Sovereign Rd, Gillmoss], a1962, 1/15 (74), Peak. Regent Cinema [Prescot Rd], a1967, 1/7 (28), Central & Suburban Property Co. Rice Ln, a1966, 2/16 (180), W. Hall (Bison). Rose Vale RDA [Conway St], a1963, 2/16 (120), Unit. St George's Hill, a1964, 1/22 (176), Unit (Camus). Sheil Rd, a1964, 3/22 (516), Unit (Camus). Stonebridge Ln I, a1965, 3/16 (180), DL (MSC). Storrington Ave, a1965, 5/16 (450), Unit (Camus). Tatlock St, a1959, 2/11 (108), Peak. Vale Rd [Menlove Ave], a1967, 2/13 (144), 2/15 (168), Townson (Truscon). Wellgreen Rd, Childwall Valley, a1961, 3/11 (192), Wimpey. William Henry St [Everton Brow], a1962, 3/11 (192), Townson; [Field St], a1963, 3/14 (210), W. Thornton (Prometo) (demol). Windsor St No.1 and Upper Stanhope St, a1961, 1/11 (65), Wimpey (demol). Windsor St No.2 and Upper Hill St, a1961, 1/11 (65), Wimpey (demol). Windsor St and Hampton St, a1963, 1/11 (70), Wimpey (demol). Woolfall Heath [Woolfall Heath Ave: out-county], a1965, 2/15 (176), Wimpey. Zante St, a1964, 1/22 (176), Unit (Camus). Zante St and Conyers St, a1964, 2/16 (123), W. Hall (Bison).

MACCLESFIELD MBC

Commercial Rd RD (Victoria Park), Phases 1, 2, a1967, 1/8 (127), 3/7 (122), 1/6 (48), Laing (Jespersen). Hurdsfield [Carisbrooke Ave], a1963, 2/16 (184), Laing.

MANCHESTER CBC

Abbey Hey Ln, a1968, 1/15 (72), Leaway. Acre Top [Acre Top Rd], a1969, 1/9 (72), Laing. Altrincham Rd and Moor Rd, a1967, 1/17 (94), Laing. Annesley Terr, a1966, 1/15 (72), Leaway. Beswick-Bradford CRDA, Stage I, Wellington St and Oliver St [Grey Mare Ln], a1969, 13/8 (593), 13/6 (290), Drury NW/Concrete Northern (Bison) (partly demol). Bickerdike Ave, a1964, 1/17 (94), Laing. Blackley New Rd, a1961, 7/12 (406), Wimpey. Boggart Hole Clough [Weybourne Ave], a1969, 2/9 (142), Laing. Bradford Rd [Varley St], a1964, 2/13 (125), Laing. Butler St [Gunson St], a1963, 5/13 (314), Laing. Chalford Rd, a1964, 1/9 (73), Tor/Fairweather. Charlestown Rd, a1961, 1/12 (58), Wimpey. Collyhurst, Rochdale Rd, a1963 [Thornton St], 1/13 (62), Laing; a1964 [Hammerton Rd], 5/13 (310), DL; a1965 [Burton St], 1/13 (62), DL. Denton [Mancunian Rd: out-county], a1963, 3/13 (189), Laing (Sectra). Fairbourne Rd, a1961, 1/12 (58), Wimpey. Glebelands Rd, a1960, 1/9 (73), Holst. Handforth [Spath La: out-county], a1962, 3/13 (186), DL (Holst); a1964, 1/9 (70), DL. Harpurhey [Kingsbridge Rd], a1963, 1/13 (62), Laing. Harpurhey CRDA, Stage 2, Turkey Ln [Lathbury Rd], a1969, 2/8 (50), 3/7 (97), 9/6 (249), Unit (Camus) (demol). Hattersley [Hyde: out-county], a1963, 7/13 (441), Wimpey. Hattersley District Centre [Hyde: out-county], a1970, 1/13 (59), Simms Sons & Cooke. Heywood [Argyle St, Darn Hill: out-county], a1962, 4/13 (254), Laing (Sectra), 5/13 (316), Laing. Hollyhedge Roundabout [Hollyhedge Rd], a1960, 1/9 (81), DL (Truscon); a1961, 3/12 (174), Laing. Hulme RDA (entries in chron. order): City Rd [Shawheath Cl], a1964, 1/13 (63), Laing (Sectra); Vine St [Bonsall St, Arnott Cres], a1964, 2/13 (126), Laing (Sectra); Stage 3 [Poynton Cl, Eden Cl], a1967, 3/9 (210), DL, and 8/6 (355), Simms Sons & Cooke (Simmcast); Stage 4 [Otterburn Cl], a1967, 10/6 (229), Laing (Jespersen); Stage 5 [Rolls Cres], a1967, 4/7 (918), Fram Russell; Stage 3 South [Arnott Cres], a1969, 7/6 (188), Simms Sons & Cooke (Simmcast). Kingsgate Rd, a1959, 1/9 (81), DL (Truscon). Langley [Bowness Rd: out-county], a1963, 3/13 (186), Wimpey. Lodge St RDA [Sedgeford Rd], a1965, 3/13 (186), Laing. Longsight CRDA, Stage 1, Gibson St [Coverdale Cres], a1968, 6/10 (241), 6/8 (215), 2/6 (51), Drury NW/Concrete Northern (Bison). Mill St [Chippenham Rd], a1964, 3/13 (188), Laing. Moss Side District Centre I, II [Moss Ln East, Denmark Rd], a1969, 1/16 (112), 1/13 (96), 6/10 (239), 1/8 (32), 1/6 (24), Matthews & Mumby. Nelson St RDA [Sawley Rd], a1965, 2/13 (124), DL. Ossington Walk, a1960, 1/9 (73), Holst. Platt Ct Site [Norman Rd], a1964, 1/13 (62), 1/9 (70), DL. Rodney St [Rigel St], a1962, 1/13 (68), Laing. Royle Green [Holly Way], a1962, 1/13 (62), DL (Holst); a1963, 1/9 (73), DL (Holst). Rusholme Rd RDA, 1st Stage [Grosvenor St], a1964, 3/9 (219), Simms Sons & Cooke; [Wadeson Rd], a1965, 1/13 (62), Laing. St George's RDA, Stage 2 [Chorlton Rd], a1961, 1/16 (78), 4/13 (200), Laing. Sale [Epping Dr: out-county], a1962, 1/13 (62), DL/Holst. Scotland Hall Rd, a1968, 4/15 (288), Leaway. Thomas St RDA [Thomas St], a1966, 3/13 (186), Laing. Victoria Ave East, a1967, 9/17 (846), DL. Wythenshawe Town Centre [Poundswick Ln], a1965, 4/8 (344), Laing.

ACQUIRED Moston Colliery Site [Teddington Rd], 1/13 (51) [Bison: built 1965], acq. 1969 from Coal Industry Housing Association.

OLDHAM CBC (TO 1974)

Crete St, a1963, 1/13 (52), T. Partington. Fir Tree Ave Scheme 19J, a1966, 1/12 (72), J. Gerrard. Hollinwood [Hawthorn Rd], a1963, 1/11 (40), Roy & Ptns. Littlemoor [Ripponden Rd], a1960, 1/12 (69), Reema. Primrose Bank RDA [Ashbourne Sq], a1964, 1/13 (52), T. Partington. Sholver, Phase II [Pearly Bank], a1968, 4/6 (91), T. Partington/Concrete Northern (Bison) (demol). Werneth RD, Phase I [Alfred St, Featherstall Rd], a1966, 1/19 (71), T. Partington; Phase II [Commercial St], a1966, 1/12 (48), T. Partington. West St RD, Phase I, a1972, 1/17 (124), 1/15 (112), T. Partington/Concrete Northern (Bison).

OLDHAM METROPOLITAN BOROUGH COUNCIL (FROM 1974)

Barker St RD Phase II [Eden St], a1975, 2/6 (61), Laing.

PRESTON CBC

Avenham CPO No.1, Charlotte St RD [Manchester Rd], s1963, 3/12 (195), Brown & Jackson. Avenham CPO No. 2, Knowsley St RD, Phase 1 [Avenham Ln], s1963, 2/19 (234), J. Turner/Concrete Northern (Bison) [sold]. Brunswick St RD [Oxford St], s1959, 2/11 (132), J. Turner. Elizabeth St RDA 2 [Moor Ln], s1960, 3/16 (288), Wimpey.

ROCHDALE CBC

Ashfield Valley, a1966, 6/8 (271), 9/7 (375), 7/6 (285), Crudens (Skarne). Falinge 'B' [College Bank], a1963, 4/21 (476), 3/17 (286), Wimpey.

RUNCORN UDC

Belvedere Comprehensive RD Scheme [Churchill Mansions, Cooper St], a1963, 1/12 (44), R. Marriott.

SALE MBC

Firs Rd and Manor Ave, s1965, 1/7 (26), W. O'Reilly.

SALFORD CBC
Brindleheath RDA [Harding St], a1970, 1/6 (60), Concrete Northern (Bison). Bury New Rd RD, Phase I [Rigby St], a1962, 1/11 (40), 1/9(43), DL; Phase III [Hilton St], a1964, 1/15 (88), DL (Fram). Ellor St RDA [entries in chron. order]: Stage I [Meyrick Rd], a1962, 3/15 (336), DL (Truscon); Stage 8 [Rowan Cl], a1964, 5/17 (480), DL (Fram); Stage 7 [Belvedere Rd], a1966, 2/12 (88), J. Gerrard; Stage 5 Phase 1 [Lime Cl], a1966, 1/10 (90), 1/8 (56), J. Bennett; Stage 9 [Sorbus Cl], 2/23 (356), a1967, Laing; Blocks 16, 32 [Mulberry Rd, Whitebeam Cl], a1967, 1/8 (84), 1/7 (84), Fram; Block 17 [Hankinson Way], a1968, 1/10 (76), J. Gerrard; Block 36 [Lime Cl], a1968, 1/10 (78), J. Gerrard; Block 35 [Whitebeam Cl], a1972, 1/7 (68), Gleeson (Sheffield). Flax St, a1961, 2/12 (144), Wimpey. High St RDA, Area 1 [Pear Tree Cl], a1967, 4/17 (400), Fram Russell; a1968 [Caxton Way], a1968, 1/17 (100), Fram Russell; Area 2 [Fitzwarren St], a1968, 3/23 (405), 2/17 (198), J. Gerrard (Bison). Hightown Clearance Area RD [Marlborough Rd], a1964, 2/15 (175), Wimpey. Islington RDA [E Ordsall Ln], a1961, 2/15 (226), DL (Truscon). Liverpool St [Buckingham St], a1954, 1/8 (110), Truscon. Lower Kersal [S Radford St], a1958, 9/11 (420), 1/10 (99), 2/9 (186), DL (Truscon, Fram, Matthews & Mumby). New Church Site (Bury New Rd), a1962, 1/16 (120), DL. Oakhill Hs Site [Tetlow Ln], a1963, 1/15 (63), Gerrard (Bison). Ordsall RDA, Stage 1 [Taylorson St], a1970, 2/18 (278), Fram Russell. Regent Rd RDA No. 1 [Ordsall Ln], a1958, 3/12 (432), Wimpey (demol). St Matthias Clearance Area No. 1 [King St], a1956, 1/8 (110), Truscon. Salford City Shopping Centre [Pendleton Way], a1968, 1/23 (136), Bryant. Silk St, a1960, 3/15 (339), DL (Truscon). Sussex St, a1961, 2/11 (80), DL. Trinity Clearance Area No. 7 [St Simon St, Bridgwater St], a1964, 3/15 (264), DL; stage 2 [St Simon St, Blackfriars Rd], a1968, 2/15 (176), DL.

STALYBRIDGE MBC
Stamford Pk Est [Astral Hs], a1963, 1/12 (44), J. Gerrard.

STOCKPORT CBC
Brinnington (Contract 100), s1963, 4/12 (270), Fram; (Moat Walk), s1963, 2/12 (136), Fram; s1966, 1/12 (68), Fram. Dodge Hill [Love Ln], s1963, 2/12 (136), J. Gerrard. East St [Hardman St], s1968, 1/16 (124), Laing. Lancaster Hill, s1967, 2/22 (198), Laing (Storiform); s1968, 2/7 (150), 2/6 (120), Laing (Jespersen). Mottram St RDA [Bosden Fold], s1964, 4/16 (490), Laing. Victoria Park, 2nd Stage [Hall St], s1963, 2/12 (136), H. Fairweather. York St [Chatham St], s1964, 1/8 (46), H. Fairweather. York St RD [Chapel St], No.1, s1955, 1/8 (40), Wimpey; Contract 3, s1958, 2/8 (80), Wimpey.

STRETFORD MBC
Chapel Ln [Stretford Hs], a1965, 1/25 (132), Matthews & Mumby. Clifford Ward RD, a1962 [Grafton, Clifford Cts], 2/15 (174), Matthews & Mumby; a1966, 1/15 (87), Matthews & Mumby; a1967, 4/15 (336), Shepherd Taylor. Cornbrook Park Rd [Empress Ct], a1961, 1/15 (87), Matthews & Mumby; [Princes Ct], a1964, 1/15 (87), Matthews & Mumby. Lostock Circle [Moss Vale Rd], a1967, 1/16 (121), Truscon.

WALLASEY CBC
Church St, a1958, 1/11 (42), Unit. Liscard CDA [Mill La], a1967, 1/13 (89), W. Hall (Bison). Mersey St [Borough Rd], a1960, 1/11 (42), Wimpey. Sandbrook Ln [Stavordale Rd, Moreton], a1964, 4/15 (340), W. Moss (Bison).

WARRINGTON CBC
Kingsway South, a1964, 1/9 (48), Wimpey. Peninsula Barracks Site [O'Leary St], a1971, 1/12 (82), F. & F. S. White.

WIGAN CBC
Douglas St [Harrogate St], a1960, 1/11 (120), Wimpey. Scholes CDA, Stage IV [Warrington Ln/School Ln], a1964, 5/13 (511), Rowlinson. Worsley Mesnes North, Stage V, a1964, 3/16 (276), J. Gerrard (Bison).

ENGLAND: SOUTH-EAST (EXCLUDING GREATER LONDON)

ASHFORD UDC
Watercress Farm [Hillbrow Ln], a1974, 5/6 (120), Appin Estates (built along with 3/6, 1/5 private blocks).

BASILDON NTDC
Barnstaple 2 [Ravensfield Ct], s1970, 1/7 (23), Globe Construction. Town Centre Block K3 [Brooke Hs], s1960, 1/14 (84), HHC.

BASILDON UDC
King Edward Est, Laindon, s1966, 1/10 (54), 1/8 (42), Wimpey.

BASINGSTOKE MBC
Oakridge 8 Tower Block [Oakridge], s1967, 1/12 (48), Gilbert Ash Southern.

BEDFORD MBC
Ashburnham Rd, s1953, 1/8 (54), Minter. Brickhill North, s1964, 5/7 (120), W. Bushby. Central RDA, Beauchamp Row RD, s1958, 1/6 (45), Warton & Goodship. Central RDA [Roise St], s1958, 3/12 (204), Drabble Construction. Goldington Bury, s1965, 1/12 (90), Truscon. RDA No. 2 [Queen St], s1966, 3/16 (342), Truscon.

BLETCHLEY UDC
Abbeys Estate II [Mellish Ct], a1965, 1/18 (136), Sunley (Allbetong). Water Eaton Devt Central Area, Phase B [Serpentine Ct], a1971, 2/6 (51), Sunley (devt in collab. with GLC).

BRACKNELL NTDC
Bullbrook Neighb. Centre [Bay Hs], a1961, 1/6 (41), J. M. Jones. Easthampstead Neighb. Centre [Point Royal], a1961, 1/19 (102), Pauling Construction. [High St], s1976, 1/7 (128), Wickens Group. Jocks Ln and Wokingham Rd, a1961, 1/6 (34), Pauling Construction.

BRENTWOOD UDC
Tower Hill [Drake Hs], a1966, 1/10 (44), J. E. Carroll. Victoria Rd and Crescent Rd, a1963, 1/14 (50), Carlton Contractors (Bison). Warley Est, Contract 4 [The Drive], a1965, 1/14 (54), 1/6 (42), W. Lawrence.

BRIGHTON CBC
Albion Hill RD, Stage 1, a1958, 4/12 (181), Rice; Stage 3, a1961, 2/12 (91), Rice; Stage 5, a1965, 1/12 (46), Rice. Blackman St RD, a1964, 1/20 (110), Rice. Bristol Gate, a1956, 5/7 (120), Wimpey, 5/7 (120), GWS. Devonshire St RD Stage III, a1964, 2/13 (148), Hawkins Bros. High St and Cavendish St Area, Stage I, a1964, 1/16 (120), Wates. Hollingdean Depot Allotments, a1964, 2/16 (174), W. Llewellyn (Bison). Sloane St, a1969, 3/7 (108), Rice. Somerset St CDA, Stages I, II, a1967, 2/17 (192), Rice. Somerset St RDA, Stage I, a1962, 2/13 (146), Rice; Stage II, a1965, 1/17 (128), Rice. Wellington Rd, Stage 1, a1963, 1/7 (37), Rice; Stage 2, a1965, 2/7 (74), Davies Construction (from 1967, Rice). Whitehawk Est Ext, a1964, 1/11 (57), 2/10 (108), 2/9 (93), Wates.

CHATHAM MBC
Bryant St, Stage I, s1967, 3/13 (144), Laing. Hardstown RDA, Stage II, s1961, 1/7 (44), Peak. Melville Barracks Site, s1967, 1/15 (56), Spiers. Ordnance St RDA, s1963, 1/12 (44), Laing. Upper Luton Allotments, s1968, 1/12 (44), Laing (Sectra).

CHELMSFORD MBC
Melbourne Est [Melbourne Ave], a1960, 1/15 (58), Thomas Bates.

CHERTSEY UDC
Central Addlestone Site, Contract 72/1 [Garfield Rd], s1963, 1/17 (97), SLP.

CHESHUNT UDC
Grove Hs Site, a1964, 1/10 (40), Gray Conoley. High St Cheshunt CDA, Stage 1, s1965, 1/14 (54), SLP (demol). Waltham New Town RDA, Stage I, s1967, 1/22 (120), 3/7 (91), Wimpey.

CRAWLEY UDC
Milton Mount Land (Pound Hill), s1969, 1/9 (146), Laing.

DORKING UDC
Goodwyns Est [Stubs Hill], a1962, 2/14 (104), Tersons.

DORKING & HORLEY RDC
#[Rutherwick Tower, Manor Dr, Court Lodge], a1964, 1/11 (56), Selleck Nicholls Williams.

DOVER MBC
The Gateway, Marine Parade, a1957, 1/10 (221), Rush & Tompkins.

EASTBOURNE CBC
Langney Village, Section 20 [Saxby Cl], a1963, 1/11 (42), W. Llewellyn (Bison).

ELSTREE RDC
Stratfield Rd Devt, Contract 204, a1966, 1/18 (102), Wimpey.

GOSPORT MBC
Forton Rd RDA, a1966, 1/11 (63), Wimpey. South St, a1958, 2/11 (130), Wimpey; a1961, 2/16 (240), Wimpey.

GRAVESEND MBC
Milton Pl, a1963, 1/9 (89), M. James. Peppercroft St RD [Parrock St], a1968, 2/9 (234), Mowlem.

GUILDFORD MBC
The Mount [Portsmouth Rd], a1963, 2/10 (80), R. Holford.

HARLOW DISTRICT COUNCIL
Netteswell Ward [Netteswell Tower], a1984, 1/12 (45), Wimpey.

HARLOW NTDC
Area 2 Mark Hall North [The Lawn], s1950, 1/9 (36), Gilbert Ash. Area 4 [Stort Tower], s1962, 1/10 (30), Kirk & Kirk. Area 16/17 Mark Hall [Pennymead Tower], s1959, 1/11 (43), Rush & Tompkins. Area 26 Netteswell [Hugh's Tower], s1955, 1/12 (45), Wimpey. Area 37 Hare St [Edmund's Tower], s1958, 1/12 (45), Wimpey. Area 43 [Brent Hall Towers], s1973, 2/7 (56), Wimpey. Area 48 [Nicholls Tower], s1966, 1/15 (58), Truscon. Area 52 [Moor Tower], s1966, 1/15 (56), Truscon. Area 66 Passmores [Willowfield Tower], s1967, 1/15 (58), Truscon. #[Spring Hills Tower], s1965, 1/9 (45), Kirk & Kirk. #[Joyners Field], s1964, 2/6 (56), Wimpey.

HASTINGS CBC
Adelaide Rd [Stonehouse Dr], a1964, 4/17 (492), Wimpey

HATFIELD NTDC
French Horn Ln, a1965, 1/15 (78), H. Fairweather. Town Centre, a1960, 1/13 (66), Wilson Lovatt.

HAVANT UDC
Havant Way [Lockerley Rd, West Leigh], Phase I, a1965, 1/10 (34), Wimpey; Phase VI, a1966, 1/10 (34), Wimpey; Phase VII, a1966, 1/10 (34), Wimpey.

HEMEL HEMPSTEAD NTDC
Adeyfield 23(1) [Eastwick Row], a1959, 2/6 (48), Lovell. Gadebridge 2B, a1959, 1/6 (24), Lovell. Leverstock Green 1(4) [Pelham Ct], a1962 (by Local Committee of Commission for New Towns), 2/10 (76), Miskin.

HERNE BAY UDC
Kings Rd, Phase I, s1964, 1/7 (27), A. B. Johnson; Phase III, a1973, 1/9 (36), Costain.

HODDESDON UDC
Tower Centre [Tower Heights, High St], a1964, 1/11 (64), Gilbert Ash (joint scheme with Heron Group).

HOVE MBC
Conway St RD, Residential Stage 1 [Conway Ct], s1965, 1/10 (72), Rice; Stage 2 [Clarendon Hs], s1966, 1/10 (57), Rice; Stages 3, 4 [Ellen, Goldstone Hses], s1967, Rice; Stage 5 [Livingstone Hs], s1968, 1/10 (54), H. J. Paris.

LUTON CBC
Leagrave Est, Phases II, III [Acworth Cres, Hookers Way], a1964, 4/15 (402), Truscon. Marsh Farm Est [Wauluds Bank Dr], c1966, 3/15 (336), Truscon. Park Town RD [Kingsland Rd], Block 1 [Kingsland Ct], a1968, 1/15 (113), Truscon; Block 2, a1969, 1/15 (114), Truscon; Block 3, a1971, 1/15 (114), Truscon; Phase V, a1973, 1/7 (49), Wimpey. Windsor St, Phase I [Spandau Ct, Hastings St], a1973, 1/7 (43), Wimpey.

MAIDENHEAD MBC
Norreys Dr, a1965, 1/11 (62), J. M. Jones (Bison).

MAIDSTONE MBC
Hayle Rd, a1960, 1/8 (47), Wates. London Rd [Hawley Ct], s1967, 1/8 (45), J. E. Wiltshier. Mote Rd, a1962, 1/13 (76), Wates. Square Hill Rd, s1964, 1/13 (76), Wates. Union St and Wheeler St, a1968, 1/8 (45), R. Corben.

MARGATE MBC
Millmead Rd, Stage II, a1962, 1/15 (89), Wimpey.

NEW WINDSOR MBC
Dedworth Manor [Sawyers Cl], a1963, 4/8 (192), Wimpey.

NORTHFLEET UDC
High St, Phase I [The Hive], a1965, 1/8 (42), Kingston Building Co. Shepherd St, a1965, 1/14 (52), W. J. Jerram.

OXFORD CBC
Blackbird Leys, s1960, 2/15 (120), Laing. Cowley Centre, Phases II, III, s1963, 1/9 (54), 1/6 (18), Laing. North Way Est, s1965, 1/15 (85), Truscon. Wood Farm Est, s1965, 1/15 (85), Truscon.

PORTSMOUTH CBC (TO 1974)
Aldwell St, RDA No. 5 [Handsworth Ho], a1966, 1/18 (153), Wimpey. Arundel St, Contract 1 [Darwin Hs], a1951, 1/8 (45); Contract 2 [Perth Hs], a1951, 1/6 (32), both Portsmouth, Gosport & Dist. Builders' Guild. Blackfriars Rd and Omega St, a1968, 1/8 (80), J. Croad. Buckland RDA, Stage II [Wingfield St, Westminster Pl], a1971, 2/7 (78), 1/6 (36), Wimpey; Phase IIIC [Grafton St, Estella Rd: Blocks A-G], a1973, 3/6 (234), F. Privett. Butcher St, a1962, 1/20 (76), Wimpey. Church St, a1963, 2/18 (272), Reema. Elm Grove, North Side, a1962, 1/6 (54), C. Claxon. Grosvenor St [Grosvenor Hs], a1951, 1/7 (54), Hawkins Bros. Henrietta St, RDA No. 5 [Cannock Lawn], a1965, 2/9 (56), Reema. Highbury, Stage II [475-545 Hawthorn Ave], a1963, 1/6 (36), John Hunt. Hyde Pk Rd, RDA No. 5 [Wilmcote Hs], a1966, 1/11 (113), Reema. Nelson Rd [Brisbane, Blackwood Hs], a1952, 1/8 (30), 1/7 (26), H. E. Collins. Nelson Rd [Pickwick Hs], a1960, 1/12 (88), Howe & Bishop. Park St [Solihull, Leamington Hs], a1963, 2/18 (272), John Hunt (Bison). Plymouth St, RDA No. 5 [Ladywood Hs], a1966, 1/24 (136), Wimpey. Portsdown Hill, a1968, 1/17 (62), 1/15 (55), 1/13 (47), 2/8 (118), 2/6 (90), Y. J. Lovell (demol). Queen St. No. 3 CPO Area [Sarah Robinson Hs], a1964, 1/21 (120), Wimpey. St George's Sq, a1951, 1/8 (39), H. E. Collins. St John's Rd RDA [Stamford St], a1968, 5/6 (108), Wimpey. Somers Town Health Centre [Arthur Pope Hs], a1970, 1/8 (24), Carruthers Davies. Somerville St, RDA No. 5 [Edgbaston, Tipton Hses], a1965, 2/18 (272), John Hunt (Bison). Wingfield St [Copperfield Hs], a1961, 1/12 (88), John Hunt (Reema).

PORTSMOUTH CITY COUNCIL (FROM 1974)
Buckland RDA, Phase IVB [Estella Rd, Blocks H-J], a1975, 1/6 (84), Warings.

RAMSGATE MBC (FROM 1974: THANET DISTRICT COUNCIL)
Hertford St, s1969, 1/9 (48), Wimpey. Manston Rd Allotments, s1963, 1/15(89), Wimpey. Newcastle Hill Devt, Phase 2, s1963, 2/16 (180), Wimpey.

READING CBC
Bath Rd, a1956, 4/8 (160), Wimpey. Coley Pk [Wensley Rd], Phase I, a1959, 2/15 (170), Wimpey; Phase II, a1959, 1/15 (89), Wimpey.

REIGATE MBC
The Dome, Redhill [Dome Way], a1968, 1/11 (60), H. Fairweather.

ROCHESTER MBC
Darnley Rd North, Stage 2A, Strood, s1965, 2/15 (180), Kyle Stewart. Fairway Site [Fairbourne Hs], s1963, 1/12 (68), Selleck Nicholas Williams. Troy Town RDA Stage 2A, s1964, 2/15 (180), Kyle Stewart (all above blocks demol).

ST ALBANS MBC
Arnold's Timber Yard RD, Alma Rd, s1968, 1/13 (61), Bradford (Matthews & Mumby).

SLOUGH MBC
Parlaunt Pk [Common Rd], a1963, 4/13 (384), Tersons. Tower Hs Site [Burlington Ave], a1965, 2/11 (120), J. M. Jones (Bison).

SOUTHAMPTON CBC
Bevois St RD [Golden Grove], a1963, 1/16 (150), Reema. Central Station RDA, a1965, 1/6 (184), Minter. Hoglands RD [King St], a1956, 3/9

(108), Wimpey. Lansdowne Hill RD [Castle Way], a1960, 1/13 (72), Hawkins Bros. Millbrook [Windermere Ave], a1963, 1/25 (144), R. Miller. Northam [Graham St], a1959, 1/16 (60), Wimpey. Redbridge Hill [Irving Rd], a1963, 1/16 (120), Reema. Redbridge Roundabout [Cuckmere Ln], a1960, 1/20 (114), Don Properties. Shirley RDA No. 1 [Church St], a1964, 1/16 (150), Reema. Thornhill [Tunstall, Warburton Rds], a1962, 3/14 (312), Wimpey. Weston Farm Foreshore [International Way], a1964, 5/14 (520), Wimpey. Weston Farm Valley [Kingsclere Ave], a1964, 1/25 (144), R. Miller.

SOUTHEND CBC
Archer Ave, a1962, 1/13 (88), Laing. Balmoral Rd RDA, a1969, 3/15 (231), Wates. Earls Hall, s1964, 1/12 (77), Laing. Hudson Rd, a1965, 1/12 (77), Laing. Pantile Ave, a1961, 2/11 (152), Laing. Prittlewell St RD, s1965, 4/16 (420), Laing. Whittingham Ave, a1962, 1/11 (76), Laing.

SOUTHWICK UDC
Central Area, Blocks L, P [Albion St], s1967, 2/6 (48), G. Comber.

STEVENAGE NTDC
Buckthorn Ave, Bedwell, a1968, 1/6 (43), Truscon. Marymead Centre, Broadwater, a1968, 1/6 (43), Truscon. Roebuck Gate, a1961, 1/13 (50), Token. Silam Rd, a1965 , 2/18 (206), Gilbert Ash. Stony Hall [Sish Ln], a1950, 1/7 (54), Gilbert Ash. Town Centre (Southgate, T. C. Park), a1961, 2/13 (100), Token.

SUNBURY UDC
Spelthorne Grove, Staines Rd West, a1962, 1/14 (83), Wimpey.

THANET DISTRICT COUNCIL (FROM 1974)
Hardres St, s1975, 1/7 (41), R. J. Barwick.

THURROCK UDC
Blackshots Pk, Grays [Laird Ave, Milford Rd], s1966, 3/12 (168), Selleck Nicholls Williams. Brentwood Rd, Chadwell, s1966, 3/14 (273), Laing. East of Broadway Sector, Tilbury [Leicester Rd], a1971, 3/16 (192), Bates. Grays South RD, Phase 1 (Echoes Site), a1968, 3/15 (174), Wimpey; Phase 2 (Argent St), a1969, 3/15 (174), Wimpey.

WALTON & WEYBRIDGE UDC
Terrace Rd, a1967, 1/9 (64), M. Howard (Bison). Vicarage Field, a1962, 3/8 (90), Wates.

WATFORD MBC
Meriden Est [Abbey View, Garsmouth Way], a1964, 2/17 (188), Truscon.

WATFORD RDC
Belswains Ln, Nash Mills [Hemel Hempstead], a1965, 1/9 (32), C. Miskin. Oxhey Pl, S. Oxhey, a1960, 2/8 (48), W. Old.

WHITSTABLE UDC
Belmont Rd, s1967, 1/12 (70), Wimpey.

WINCHESTER MBC
Winnall Manor Est, a1961, 4/8 (156), Wates.

WOLVERTON UDC
East Wolverton [The Gables], s1963, 1/11 (59), A. Sanders/Concrete.

ENGLAND: SOUTH-WEST

BATH CBC
Ballance St, Phase 1, s1969, 1/8 (75), E. Mortimer. Kingsmead RD, Phase I, a1960, 1/9 (50), E. Mortimer. Snow Hill RD, s1955, 1/12 (44), J. Long.

BRIDGWATER MBC
West St RDA, s1963, 1/11 (61), Wimpey.

BRISTOL CBC (TO 1974)
Alma St, Easton, s1967, 1/17 (132), Wimpey. Ashton Gate, Duckmoor Rd, s1961, 3/11 (187), Laing. Barrow Rd, Lawrence Hill, Block A, s1963, 1/13 (60), Tersons; Block B, s1964, 1/11 (51), Tersons. Barton Hill RDA (entries in chron. order), Stage 1, Block A [Barton Hs], s1956, 1/15 (98), HHC; Stage I, Block B [Glendare Hs], s1957, 1/10 (70), Laing; Blocks F, G [Phoenix, Eccleston Hs], s1961, 2/11 (129), Laing; Stage 2, Blocks 1–4 [Corbett Hs etc.], s1962, 4/15 (347), Laing; Block L [Ashmead Hs], s1965, 1/11 (82), Laing. Bishport Ave, Hartcliffe, s1962, 5/11 (316), Wimpey. Brislington Hill, a1969, 1/12 (47), Costain. Catharine Mead St, Bedminster, s1969, 1/18 (102), Laing. Church Rd, Redfield, s1964, 1/11 (40), Truscon. Culverwell Rd, Withywood, s1964, 3/14 (243), Laing. St Jude's, Great George St [Rope Walk Hs], s1973, 1/6 (48: extended by 12 dwellings, a1974), Nott Brodie. Hareclive Rd, Hartcliffe, s1964, 3/11 (185), Wimpey. Hotwell Rd, s1953, 1/8 (62), W. Cowlin. Jacob's Wells Rd, s1959, 1/11 (90), W. Cowlin. Kingsdown I, s1965, 3/14 (254), 3/6 (75), Laing. Lawrence Weston, s1957, 2/10 (151), Stone. Leadhouse Rd, Easton, s1966, 1/17 (129), Laing. Lion St, Easton, s1967, 1/17 (131), Wimpey. North St, Bedminster, s1963, 1/12 (67), Laing. Penpole [The Ridge], s1959, 2/11 (102), W. Cowlin; 1/6 (36), J Knox. Phipps St, Bedminster, s1964, 1/13 (148), Laing. Redcliff RDA (entries in chron. order), Block E [Ship Ln], s1955, 1/6 (37), W. Cowlin; Block A [Commercial Rd], s1958, 1/13 (79), 1/11 (74), 1/8 (22), Laing; Block H [Somerset Sq], s1959, 1/12 (100), Costain; Blocks L, M [Somerset St], s1962, 2/13 (216), Tersons; Blocks J, K [Prewett St], s1963, 2/10 (108), Tersons. St Jude's RDA [New St], s1957, 2/9 (103), Stone. School Rd, Brislington, s1963, 1/11 (61), Wimpey. Shaldon Rd, Lockleaze, s1965, 1/7 (24), Laing. Somerset Terr and Windmill Hill, Bedminster, s1965, 1/17 (59), 1/15 (57), Wimpey. Speedwell Rd, St George, s1964, 1/11 (83), Wimpey. Standfast Rd, Henbury, Blocks A, B, s1963, 2/15 (172), Laing. Summerhill Rd, St George, s1961, 1/11 (62), Wimpey. Sydney St, Easton, s1965, 1/17 (131), Laing. Walter St, Bedminster, s1964, 1/11 (102), Turriff Construction.

BRISTOL CITY COUNCIL (FROM 1974)
St Paul's, Area D [William St], a1975, 1/6 (41), C. H. Pearce.

CHELTENHAM MBC
Arle & Hesters Way Est, Scheme 26 [Coronation Sq and Marsland Rd], a1959, 2/8 (80), Wimpey.

EXETER CBC
Whipton Barton Farm, 2nd Phase [Rennes Hs], s1966, 1/11 (61), EBC and Sleeman.

GLOUCESTER CBC
Kingsholm CDA, 2nd contract, a1962, 1/11 (80), Wates. Lower Westgate CDA, Phase 1, a1956, 1/6 (29), W. Moss.

KINGSWOOD DISTRICT COUNCIL (FROM 1974)
Staple Hill RD, Phase II [Berkeley Hs], a1974, 1/6 (48), Beazer.

PLYMOUTH CBC
Ker St, a1961, 3/16 (270), Dudley Coles. Knowle Battery & Woodland Farm [West Pk], a1965, 1/12 (66), Wimpey. Marlborough St RDA, a1971, 1/13 (122), Mowlem. Western Approach [Morley Ct], a1965, 1/9 (32), Humphreys.

POOLE MBC
East St and South Rd, a1966, 1/11 (62), Daws. Green Rd, a1962, 1/11 (62), Daws. Lagland St and Drake Rd, a1962, 1/11 (62), Daws. Lagland St and East St, a1960, 1/11 (63), Wimpey. Sterte, a1959, 2/10 (114), Wimpey.

ST. AUSTELL UDC
Bridge Rd [Park Hs], s1967, 1/12 (67), Wimpey.

SALISBURY MBC
Friary Devt [Sherbourne and Dorchester Hses, Greyfriars Cl], a1972, 2/6 (45), A. J. Dunning.

SWINDON MBC
Brunel Centre, Block C Tower, s1973, 1/21 (72), Norwest Holst. Park Neighb. Centre, Block E [Cavendish Sq], a1961, 1/8 (28), A. J. Waite. Penhill Neighb. [Penhill Dr], a1962, 3/11 (123), Truscon. Walcot Neighb. [Marlowe Ave, Welcombe Ave], a1962, 3/11 (123), Truscon.

TEIGNBRIDGE DISTRICT COUNCIL (FROM 1974)
Teignmouth RD, Site H, Scheme No. 12 [Parson St Flats], a1975, 1/6 (14), Hugh Mills, Gaye & Co.

TEIGNMOUTH UDC (TO 1974; FROM 1974, SEE TEIGNBRIDGE DISTRICT COUNCIL)
Central Devt Area, Stage 1 [Douglas Hs, Bitton Pk Rd], a1965, 1/7 (30), EBC and Sleeman.

WESTON-SUPER-MARE MBC
Bournville Est [Lonsdale Ave], a1963, 2/7 (56), Laing. Town Devt Housing Site [1–32 Bruton], a1967, 1/8 (32), Y. J. Lovell.

ENGLAND: WEST MIDLAND

BILSTON MBC (TO 1966; AFTERWARDS LARGELY IN WOLVERHAMPTON CBC)
Coronation Rd, a1963, 1/10 (57), Gregory (Bison). Parkview Rd, a1963, 3/10 (171), Gregory (Bison).

BIRMINGHAM CBC (TO 1974)
Aston Hall Rd, s1954, 1/6 (24), Whittall. Aston Reservoir [Hall Rd], s1952, 4/12 (144), Whittall. Atholl Hs Farm [Monmouth Rd], a1965, 5/13 (250), DL (Fram). Bangham Pit Farm [Merritt's Hill], a1955, 1/8 (48), Wates; a1956, 2/6 (54), Wates. Bartley Green [Field Ln], 1964, 1/9 (34), Bryant. Bartley Reservoir, Sites D, E [Frankley Ln], a1964, 3/9 (102), DL. Bath Row [later Lee Bank] RDA, u301 [Grant St], s1952, 3/6 (90), Wimpey. Beach Rd, s1958, 1/8 (32), Five Oaks Est Co. Bell's Ln, Phases 1, 2, a1965, 7/13 (350), Bryant (Bison). Birchfield Rd, s1959, 3/16 (270), Stubbings. Bleakhill Dr, a1966, 1/13 (50), Bryant (Bison). Boulton CDA [Park Rd, Camden St], a1968, 3/18 (318), Bryant (Bison). Bromford Bridge [Bromford Dr], a1965, 5/20 (580), Wimpey; a1966, 5/13 (250), Bryant (Bison). Bromford Ln, a1958, 1/8 (32), DL/Truscon. Bunbury Rd, a1960, 2/12 (138), Whittall. Bushwood Rd, a1958, 3/8 (98), Bryant. Calthorpe Pk RDA [Benmore Ave], u501/2/3, a1963, 4/11 (160), DL; u502, a1963, 1/16 (92), Laing; u502/503 [Murrell Cl], a1965, 2/11 (80), DL. Castle Bromwich [Castle Vale from Jan. 1965: entries in chron. order]: Group I (part) [Farnborough Rd, W group], a1964, 6/11 (250), Bryant; Public School No. 1 [Drem Croft], a1964, 1/12 (42), Bryant; Area 1 [Tangmere Dr], a1964, 8/16 (836), Bryant; Area Ab [Farnborough Rd, centre group], a1965, 4/11 (166), Bryant; Public School No. 2 [Yatesbury Ave], a1965, 1/12 (42), Bryant; Area 5 [Watton Green, Padgate Cl, Drem Croft], a1965, 3/11 (126), Stubbings; Area Ac [Farnborough Rd, E group], a1965, 4/11 (167), Bryant; Area I [Manby Rd], a1965, 3/13 (150), Bryant (Bison); S/C Area [Park Ln, Sutton Coldfield: out-county], a1965, 1/13 (50), Bryant (Bison); Area 6 [Rawlins Croft], a1965, 1/11 (42), Stubbings; Area 4 [Hawker Dr], a1966, 1/20 (116), Stubbings (Bison); Shopping Centre, a1968, 1/16 (60), Bryant (Bison). Central Ave, West Heath, a1964, 1/11 (42), Bryant (Bison). Chamberlain Gdns, u701 [Beaufort Rd], a1961 [2 contracts], 7/9 (238), Bryant; a1963, 3/9 (156), Bryant; Phase II [Meyrick Walk] a1970, 1/9 (36), Bryant (Bison). Chelmsley Wood [out-county: entries in chron. order]: Areas 1, 2 [Chapelhouse Rd, Bosworth Dr], a1966, 5/11 (210), 1/9 (34), Bryant (Bison); Area 10 [Arran Way, Guernsey Ave/Sheppey Dr], a1966, 2/15 (116), 2/13 (100), Bryant; Areas 4, 5, 6, 7, 11, 12, a1967, 6/15 (360) [Tamar Dr], 2/13 (104), 4/11 (176), 2/10 (80), 2/9 (72) [Yorkminster Dr, Greenlands Rd, Dunster Rd], Bryant (Bison); Area 3 [Winchester Dr], a1968, 3/11 (192), Wimpey; Areas 8 Central, 8 West, 9 North, 9 South [Central Area, Forth Dr], a1968, 5/14 (410), 3/13 (228), 2/10 (116), Bryant (Bison). Civic Centre Site [Brindley Dr], a1966, 2/16 (124), Bryant; a1968, 2/15 (116), Bryant. Clay Ln, a1970, 1/11 (43), Bryant (Bison). Coleys Ln, a1959, 3/9 (108), DL. Cotterills Ln, a1966, 3/13 (150), Bryant (Bison). Cranes Pk, s1953, 2/6 (60), Wimpey. Dowry Farm [The Doweries], a1955, 3/8 (118), Wimpey. Druids Heath [Manningford Rd], a1965, 9/13 (450), Bryant (Bison). Duddeston [later Nechells Green] RDA, u1 [Little Hall Rd], s1950, 4/12 (264), Whittall; u11, a1956, 4/6 (135), Laing. Egghill Ln, a1958, 4/9 (144), Wates; a1960, 3/9 (108), Wates. Fairfax Rd, a1963, 3/10 (111), Bryant. Firs Est [Shawsdale, Berrandale Rds], site A, a1956, 5/8 (160), Stubbings (Truscon); site B, a1957, 5/8 (160), Stubbings (Truscon). Fox Hollies Hill [Pemberley Rd], a1961, 3/12 (210), Morriss & Jacombs. Genners Ln, a1962, 1/9 (36), DL. Goosemoor Ln, a1963, 2/9 (68), Stubbings. Gravelly Ln, a1964, 4/11 (210), Bryant (Bison). Grove Rd, a1962, 2/9 (67), Stubbings. Hawkesley Farm [Turves Green], s1952, 3/6 (72), Deeley. Hawkesley Farm [Walnut Way], a1966, 3/11 (126), Wimpey. Hawkesley Farm Moat [Stokesay Green], a1957, 3/8 (96), Wates. Highgate RDA, u401 [Hope St], a1962, 1/16 (93), Tersons; u402 [Vaughton St], a1959, 1/9 (34), Wimpey; u405 [Southacre Ave], a1958, 1/9 (36), DL; a1961, 1/9 (36), DL; u407 [Alcester St], a1958, 2/9 (72), DL; a1959, 1/9 (36), DL; u408 [Stanhope St], a1959, 1/9 (36), Langley; u410 [Stanhope St], a1960, 1/9 (36), Langley; u414 [St Luke's Rd], a1958, 1/9 (36), Stubbings; u439/440 [Highgate St], a1965, 2/20 (232), Wimpey; u444 [Canford Cl], a1967, 1/20 (116), Wimpey; u448 [St Luke's Rd], a1967, 2/13 (100), DL (Fram); u448/454 [St Luke's Rd], a1968, 1/13 (50), DL (Fram); u453 [Gooch St], a1968, 1/20 (81), Bryant (Bison); u454 [St Luke's Rd], a1967, 1/13 (50), DL (Fram). Hillwood Rd, a1964, 1/11 (42), Bryant (Bison). Hob Moor Rd, s1953, 3/6 (72), Cox. Holifast Grange 2nd Part [Pitts Farm Rd], a1962, 1/9 (36), Stubbings. Holly Bank Farm [Hollybank Rd], a1954, 6/6 (180), Wimpey. Ivy House Farm [Redhill Rd, Redditch Rd], a1966, 1/11 (42), Stubbings. James St RDA u1401 [Lozells Rd], a1965, 1/20 (116), Wimpey. Jiggins Ln, s1955, 3/6 (105), Wates. Kents Moat [Meadway], a1955, 3/8 (144), Wimpey; a1956, 1/7 (42), 1/6 (36), Wimpey; a1966, 1/9 (34), DL. Kingshurst Hall [Stonebridge Cres], s1959, 4/9 (144), Morriss & Jacombs; a1963, 1/9 (36), Bryant; [Over Green Dr], a1961, 1/12 (68), Wimpey. Kitwell Farm [Wychbury Rd], s1952, 2/6 (56), Stubbings. Ladywood RDA u205 [Browning St], a1957, 5/6 (152), Morriss & Jacombs [one block demol]; a1963, 1/9 (34), DL; u208 [Gilby Rd], a1957, 3/8 (148), 1/6 (36), Wimpey; u212 [Gilby Rd], a1958, 1/12 (67), Wimpey; u213/216 [St Vincent St], a1962, 2/16, (186), Tersons; u215, a1963, 1/16 (93), Tersons; u235/242 [King Edward's Rd], a1965, 2/20 (232), Wimpey; u242/264 [Summerhill St], a1968, 1/20 (80), DL (Fram). The Lea, Meadway, a1963, 2/9 (68), DL. Lee Bank RDA, u307 [Bell Barn Rd], a1958, 2/6 (57), DL; u310 [Bell Barn Rd], a1959, 1/6 (24), DL; u313 [Midford Grove], a1965, 1/12 (46), Wimpey; u315 [Bell Barn Rd], a1961, 2/9 (72), Bryant; u321, 314/327 [Cregoe St], a1963, 2/20 (232), Wimpey; u321/323 [Cregoe St], a1967, 1/20 (116), Wimpey; u325 [Cregoe St], a1965, 1/20 (116), Wimpey; u337 [Bell Barn Rd], a1965, 1/9 (36), Bryant; u340 [Bell Barn Rd], a1966, 1/9 (36), Bryant; u1331 [Springbank Rd], a1966, 3/13 (150), Bryant. Lee Bank Ext [Summer Rd], a1968, 3/13 (156), Bryant. Ley Hill, a1954, 6/8 (240), Wimpey. Long Nuke Rd, a1959, 3/9 (108), Douglas (British Lift Slab). Lyndhurst [Sutton Rd], a1958, 5/12 (335), 1/16 (91), Wimpey; Part II, a1959, 1/9 (36), DL. Manor Rd, Stechford, a1965, 3/13 (154), Morriss & Jacombs (Bison). Melville Rd, a1956, 1/8 (88), Simms Sons & Cooke. Metchley Grange [Metchley Dr], a1963, 1/16 (91), Laing; a1964, 3/11 (120), Bryant. Metchley Ln, a1965, 2/11 (84), Bryant (Bison). Middle Acre Rd, California, a1964, 1/11 (42), Bryant (Bison). Millpool Hill [Moundsley Green], a1956, 5/8 (160), Morriss & Jacombs. Nazareth Hs [Tinmeadow Cres], a1961, 1/12 (68), Wimpey. Nechells Green RDA, u4 [Cromwell St], a1959, 3/16 (270), Wates; u10 [Rocky Ln], a1959, 1/9 (33), Morriss & Jacombs; u13/17 [Bradburne Way], a1958 [3 contracts], 1/7 (51), 4/6 (162), Laing; a1959, 1/12 (71), Wates; u17/33 [Great Lister St], a1962, 2/12 (136), Wates; u18 [Duddeston Manor Rd], a1963, 1/12 (68), Wates; u22 [Vauxhall Rd], a1963, 1/9 (36), Wates; u24/55 [Willis St], a1964, 3/16 (276), Stubbings (Bison); u31 [Heneage St], a1961, 1/12 (68), Wimpey; u63 [Bloomsbury St], a1968, 1/20 (116), Wimpey. New St Station, a1965, 1/21 (80), Bryant. Newtown RDA, u102 [Great King St], a1961, 1/12 (68), Wimpey; u103/115 [New John St], a1960, 2/15 (180), Wimpey; u103/118/121/129 [New John St], a1963, 3/15 (270), Wimpey; u121/129 [Great Hampton Row], a1963, 4/11 (160), Bryant; u134 [Summer Ln, Theodore St], a1965, 3/13 (150), Morriss & Jacombs (Bison); u136 [Summer Ln, Milton St], a1965, 1/15 (58), Morriss & Jacombs (Bison); u145/148/158 [Guest Green/Pannal Croft], a1966, 6/13 (300), Bryant (Bison); u165 [Newbury Rd], a1966, 2/13 (100), Wimpey; District Shopping Centre [High St], a1966, 1/15 (144), Whittall; (North) [Gower St, Clifford St, Guildford St], a1968, 3/20 (354), Bryant (Bison). Perry Villa, s1958, 1/8 (32), Stubbings. Pool Farm [Walker's Heath Rd] a1958, 3/8 (96), Laing; a1959, 1/14 (83), Laing. Primrose Hill [Dee Green] a1965, 2/11 (84), Bryant (Bison); Phase II [Shannon Rd], a1964, 1/16 (91), Wimpey, 4/11 (168), Bryant (Bison). Priory Rd, a1966, 2/20 (232), Wates; Phase II, a1966, 1/13 (50), Wates. Queen's Rd RDA [Gladstone St], a1965, 1/16 (92), Wates. Rubery Farm, a1955, 2/8 (80), Wimpey. St Andrews CDA [Arthur St, Butler St], a1969, 1/20 (118), Wimpey. Salford Pk [Waterworks St], a1970, 1/18 (106), Bryant (Bison). The Sentinels [Holloway Circus], a1967, 2/32 (488), Bryant. Shard End [Kitsland Rd], a1955, 6/6 (210), Simms Sons & Cooke; [Shopton Rd], a1964, 2/13 (100), DL. Shardway, a1960, 1/9 (36), Stubbings. Sisefield Rd, Pool Farm, a1965, 1/11 (42), Bryant (Bison). Slade Ln, a1958, 2/8 (64), DL. Sladefield Rd, a1967, 1/15 (60), Bryant (Bison). South Aston CDA [Upper Sutton St], a1969, 2/20 (236), Wimpey. Spiers Lane, Quinton, Halesowen [out-county], a1965, 1/9 (36), DL. Staplehall Farm [Staple Lodge Rd], s1954, 5/6 (170), Wates. Summerfield GIA [Barford Rd], a1969, 1/20 (76), Bryant (Bison). Tile Cross, s1951,

8/6 (180), Wimpey. Tivoli Centre [Coventry Rd, Church Rd], a1965, 1/12 (120), Token. Tyburn Rd, a1963, 1/9 (34), Bryant (Bison). Ward End Hall [Overpool Rd], s1954, 3/6 (90), Wimpey. Ward End House [Perrins Grove], a1961, 1/9 (36), Bryant. Welsh House Farm, a1962, 3/10 (108), Wates. Woodcock Hill [Woodcock Ln], s1958, 2/8 (64), DL. Woodhouse Farm [Selcroft Ave], s1959, 2/8 (98), Wates [demol]; a1964, 4/11 (168), Bryant (Bison). Wychall Farm [Chaddesley Rd], a1955, 2/8 (96), 4/6 (108), Wates. Wyrley Birch [Gipsy Ln], a1955, 4/8 (92), Wimpey; a1962, 1/16 (93), Tersons.

BIRMINGHAM CITY COUNCIL (FROM 1974)
ACQUIRED: Abdon Ave, acq. 1975, 2/9 (72).

BRIERLEY HILL UDC (TO 1966; AFTERWARDS IN DUDLEY CBC)
Chapel St RD [Hill St], #Phases I, II, a1963, 3/13 (144), 3/6 (42), M. A. Boswall (I), E. G. M. Cape (II); #Phases III, IV, a1966, 5/16 (300), 4/6 (91), Whittall.

BROWNHILLS UDC (TO 1966; AFTERWARDS IN ALDRIDGE-BROWNHILLS UDC)
Brownhills, Block 7 [Silver Ct Gdns], s1960, 1/8 (44), Wimpey. Anchor Bridge [High St], s1964, 2/14 (150), Wimpey; Phase II, s1966, 1/18 (100), Wimpey.

COVENTRY CBC
Barras Heath [Mercer Ave], a1961, 1/17 (97), Costain (Jackblock). Bell Green District Centre [Rosebery Ave], s1963, 1/17 (94), BLS. Bell Green Rd [Pendennis Cl], s1966, 1/17 (129), Truscon. The Butts [Spon Gate Hs], s1961, 1/10 (52), Wimpey. Castle St [P. Stacey Hs, Bath St], a1965, 1/10 (58), Truscon. Cross St No. 1 [Adelaide St], a1965, 1/17 (128), BLS. Cross St No. 2 [Unity Hs], s1964, 1/10 (58), Truscon. Eden St, s1961, 1/10 (58), Wimpey. Leicester Row [W. Batchelor Hs], s1966, 1/17 (128), BLS. Lower Precinct, Block N [Mercia Hs, Corporation St], s1964, 1/20 (96), Lavender & McMillan (later W. Moss). Manor Farm, Phase III [Caradoc Cl], a1966, 1/17 (129), Truscon. Meadow St [Meadow Hs, Spon St], s1966, 1/17 (130), Truscon. Middleborough Rd [Nauls Mill Hs], a1962, 1/17 (129), BLS. Queen St [Phoenix Hs], a1959, 1/10 (56), Wimpey. Queen St (North) [Stevens Hs, Bath St], a1961, 1/10 (56), Wimpey. Queen St (South) [Pearl Hyde Hs], a1961, 1/10 (56), Wimpey. St Austell Rd [Attoxhall Rd], a1964, 1/15 (112), 1/10 (144), Wimpey. St Nicholas St [Samuel Vale Hs], s1967, 1/17 (128), BLS. Stoney Stanton Rd [Falkener Hs], a1966, 1/17 (129), Truscon. Stoney Stanton Rd No. 1 [J. Halpin Hs], a1966, 1/10 (58), Truscon. Stoney Stanton Rd No. 2 and Castle St No. 2 [Douglas, Michel Hs, Bath St], a1969, 2/10 (116), Truscon. Terminal Block, Smithford Way [Hillman Hs, Corporation St], s1962, 1/18 (39), Calgary & Edmonton Land Co. Thomas St [Givens Hs], s1960, 1/10 (52), Wimpey. Tile Hill Neighb. (North) [Ferrers Cl], a1953, 3/11 (99), Wimpey. Wellington St [T. King Hs], s1967, 1/17 (128), BLS. Weston St [S. Dix Hs], s1966, 1/10 (58), Truscon. Windsor St [G. Poole Hs], a1961, 1/10 (52), Wimpey. Yardley St [Hillfields Hs], s1960, 1/10 (52), Wimpey.

DARLASTON UDC (TO 1966; AFTERWARDS IN WALSALL CBC)
Bentley: Western Ave, s1962, 2/15 (116), Tarmac. Great Croft St and King Edward St, s1964, 2/15 (114), Tarmac.

DUDLEY CBC (TO 1966)
Old & New Dock RD [Westley St, Maughan St: two sites], a1963, 4/16 (348), Wimpey. St John St RD, Netherton, a1964, 1/12 (62), 1/9 (47), Wates. Swan St, Netherton, a1965, 2/15 (172), Wates.

DUDLEY CBC (FROM 1966)
Eve Hill RD [Occupation St, West St], Phase I, a1966, 1/17 (64), Wimpey; Phase II, a1967, 2/20 (236), Wimpey.

HALESOWEN MBC
Hagley Rd, New St and Hill St, a1965, 3/13 (149), Wimpey. Highfields Competition Site [Hales Rd], a1961, 2/9 (72), Turriff. Tanhouse Ln Devt, a1967, 2/20 (304), 1/11 (65), Wimpey.

KIDDERMINSTER MBC
Hoo Brook [Hoo Rd, Chester Rd South], a1964, 2/13 (123), Tarmac. Hurcott Rd, a1963, 3/12 (132), Bryant (Bison).

LICHFIELD MBC
Lower Sandford St [Swan Rd], a1963, 1/8 (64), J. R. Deacon (Bison). Trent Valley Est [Hob's Rd], a1961, 4/8 (128), Wimpey. Wheel Lane Est [Bloomfield Cres], a1961, 3/8 (96), Wates.

OLDBURY MBC (TO 1966)
Brandhall Neighb. Centre Unit [Foley Hs, Kingsway], a1963, 1/16 (116), Kendrick. Lion Farm, Phase 5 [Hartlebury Rd], a1960, 3/12 (210), Wimpey; Phase 8 [Albright, Threfall, Wilson Hses], a1962, 3/16 (261), Wimpey; Phase 9 [Cheviot, Chiltern, Cotswold Hses], a1964, 3/16 (261), Wimpey. Thompson Rd and Hobicus Ln, a1959, 1/10 (120), Kendrick. Titford Est, Stage V [Whiteheath Rd, Oldbury Rd], a1962, 1/10 (112), Kendrick.

ROWLEY REGIS MBC (TO 1966)
Brades Rd, a1961, 3/12 (285), Wimpey. Mincing Ln, Rowley Hill Est [Enfield Rd], a1963, 4/14 (340), Wimpey. Riddins Est [Peartree St], a1965, 3/16 (288), Tarmac.

ROYAL LEAMINGTON SPA MBC
Brunswick St, Nursery Site [Radcliffe Gdns], a1954, 1/11 (54), Clarke (Leamington). Lillington [Mason Ave/The Crest], a1959, Blocks 1, 3, 2/8 (92), Morriss & Jacombs, and Block 2, 1/15 (88), Wimpey. New Brook St, . a1958, 1/11 (33), Unity Structures. Rugby Rd RDA [Stamford Gdns], a1959, 1/8 (46), Lewis & Watters. St John's Rd RDA [Christine Ledger Sq], a1966, 1/11 (54), Wimpey.

RUGBY MBC
Clifton Rd Site [Biart Pl], a1966, 2/11 (124), Bryant (Bison). Oliver St Site [Rounds Gdns], s1964, 3/11 (189), Bryant (Bison).

SMETHWICK CBC (TO 1966)
Bearwood Rd [Bearwood Hs], s1965, 1/15 (89), Laing (Sectra). Broadmede [Pavilion Ave], s1964, 1/8 (32), Bryant. Kingsway [Kingsway, Queensway: in Oldbury MB], s1962, 2/8 (96), Whittall. Price St Shopping Centre [Exeter Rd], s1963, 1/15 (58), Bryant. RD Site No. 1 [Corbett St, Suffrage St], s1954, 2/11 (128), Wimpey (demol). RD Site No. 2 [Price St, Thomas St], s1958, 2/12 (222), Wimpey (under demol); (Egg Packing Station Site) [Baldwin St, Messenger Rd], s1961, 1/8 (48), Wates. RD Site No. 3 [Poplar St, Windmill Ln], s1963, 3/15 (270), Five Oaks Ests (Fram RC). RD Site No. 4 (Cheshire Brewery) [Windmill Ln/Ballot St], s1961, 2/20 (240), Bryant. Soho RDA, Oakfield Rd [Mile Oak Ct, Victoria Ct], s1965, 2/16 (188), Laing (Sectra). Stanhope Rd, s1959, 1/12 (68), Whittall. The Uplands [Hales Ln], s1959, 1/15 (89), Whittall. Vittoria St, s1966, 1/16 (94), Laing (Sectra).

STAFFORD MBC
Highfields Est [Milton Grove], a1965, 2/16 (122), Maxim. Pennycrofts Site [Corporation St], a1966, 1/16 (76: incl. 2-storey wing), Maxim.

STOKE-ON-TRENT CBC (TO 1974)
Bucknall New Rd, Stage I, a1965, 3/12 (138), Seddon; Stage II, a1967, 3/12 (138), Seddon. Burslem Pk [Hamil Rd], a1972, 2/9 (74), G. Percy Trentham. Honeywall and Richmond St, a1965, 1/8 (31), Seddon. Ripon Rd, Blurton, a1970, 2/9 (72), Seddon. Spark Ln, Honeywall [Hill St], a1971, 3/10 (114), A. V. Shenton.

STOKE-ON-TRENT CITY COUNCIL (FROM 1974)
Central Forest Pk [Union St], a1976, 3/10 (114), A. V. Shenton.

STOURBRIDGE MBC
Baylie's Chain Works Site [Green St], s1963, 2/14 (150), Wimpey. High St, Wollaston, a1964, 1/11 (58), Wimpey.

SUTTON COLDFIELD MBC
Boldmere Rd/Fir Tree Grove, a1961, 1/6 (35), Stubbings. Court Ln, a1967, 2/13 (102), Stubbings/Fram. Falcon Lodge Est, Carhampton Rd/Churchill Rd, a1963, 1/9 (52), Stubbings. Little Green Lanes [Florence Rd], a1966, 1/13 (50), Stubbings/Fram. 'The Mount', Reddicap Hill, a1965, 2/9 (102), Stubbings. Stephens Rd [Springfield Rd], a1963, 2/9 (104), Stubbings.

TAMWORTH MBC (TO 1974)
Riverside Devt [Lichfield St], a1965, 6/15 (348), Kendrick.

TAMWORTH BOROUGH COUNCIL (FROM 1974)
Stonydelph Devt Area 8, Phase 6A [Eringden], a1977, 1/6 (48), Kendrick.

TIPTON MBC (TO 1966; AFTERWARDS LARGELY IN WEST BROMWICH CBC)
Churchyard Rd, a1959, 1/8 (48), Wates. Glebefields Estate, Phase I

[Upper Church Ln], a1963, 3/9 (116), Wates; [St Mark's Rd], a1966, 2/13 (98), Gregory (Bison). Groveland Rd [Sedgley Rd East], a1960, 3/6 (90), Wates. High St, Bell St and Chapel St, a1956, 1/8 (48), Wates. Ocker Hill Rd, a1963, 3/13 (210), Wates.

WALSALL CBC (TO 1966)
Blakenall Heath [Valley Rd], a1957, 3/8 (96), Wates. Butts Housing Site [Upper Forster St], a1965, 1/17 (67), Wates. Fieldgate [New St], a1963, 1/6 (42), McAlpine. Field Rd, Cemetery Site [Hamilton Hs], a1960, 1/8 (32), Wates; Flats Site [Woodall St], a1960, 1/8 (32), Wates. Green Ln [Burrowes St], a1957, 2/8 (64), Wates; a1960 [Farringdon Hs], 1/8 (32), Wates; a1963, 3/7 (150), McAlpine. High St Bloxwich RDA, Phase I [Sommerfield Rd], a1964, 1/17 (61), Wates. Leamore RDA [Leamore Ln], a1961, 6/9 (204), Wates. Little London RDA, Phase 1 [West Bromwich St], a1964, 1/16 (61), Wates. Lower Farm Est [Bamford Rd], a1961, 1/7 (48), McAlpine. New St, a1963, 1/6 (42), McAlpine/Concrete. Orlando St [Newhall St], a1960, 4/8 (128), Wates. Pleck RDA [Old Pleck Rd], Phase I, a1964, 2/16 (122), Wates; Phase II, a1965, 2/17 (138), Wates. Sandbank RD [Wolverhampton Rd, Bloxwich], Phase I, a1962 [Cartwright Hs, Clarke Hs], 2/11 (128), Wates; Phase II, a1962, 1/16 (61), 1/11 (64), Wates. Stoney Ln, Bloxwich, a1963, 2/16 (122), Wates. Whitehouse St RDA, Phase 1 [Penkridge St], a1964, 1/7 (50), McAlpine/Concrete.

WALSALL CBC (FROM 1966)
Hatherton RDA, Phase 1 [Hatherton St], a1967, 2/13 (150), Wates. High St Bloxwich RDA, Phase II [Sommerfield Rd], a1967, 1/18 (69), Wates. Little London RDA, Phase II [West Bromwich St], a1966, 1/18 (69), Wates. Paddock RDA [Union St], Phase I, a1966, 3/18 (207), Wates; Phase II, a1966, 2/13 (150), Wates. Pleck RDA, Phase III [Prince St], a1966, 2/13 (150), Wates. Smith St, Darlaston, a1973, 2/17 (126), Maxim (Bison).

WARLEY CBC (FROM 1966)
Cape Hill, Phase I [Grove Ln, Wills Way], s1968, 2/24 (264), Bryant. Wallace Rd and Newbury Ln, Blocks A, B, s1966, 1/19 (108), 1/9 (96), Kendrick. West Smethwick RDA [Malthouse, Sandfield Points, Oldbury Rd], s1967, 2/21 (252), Maxim Construction (Bison).

WEDNESBURY MBC (TO 1966; AFTERWARDS LARGELY IN WEST BROMWICH CBC)
Russell St Clearance Area RD, a1966, 1/11 (81), Gregory (Bison). Rydding Ln [Kynaston Hs], a1966, 1/11 (41), Gregory (Bison).

WEDNESFIELD UDC (TO 1966; AFTERWARDS LARGELY IN WOLVERHAMPTON CBC)
Hickman St Devt Area, Phase 1 [Graiseley Ln], s1964, 2/20 (228), Wimpey. Lakefield Rd, s1961, 3/9 (153), Wimpey.

WELLINGTON (SALOP) RDC
Hadley No. 16 Site [Haybridge Rd], a1966, 1/12 (58), McAlpine. Ivy Row RD: Cordingley Way, Donnington, a1969, 1/7 (28), McAlpine. Ketley RD, No. 5 Site [Station Rd], a1963, 1/11 (44), McAlpine.

WELLINGTON (SALOP) UDC
Dothill Est [Severn Dr], a1960, 2/9 (104), Laing.

WEST BROMWICH CBC (TO 1966)
Carisbrooke Rd, Friar Pk, a1964, 1/17 (64), Wates. Charlemont Farm, a1960 [Meadow Ave], 3/9 (108), Wates; a1962 [Windmill Cres], 2/9 (72), Wates; a1962 [Beacon View Rd], 4/9 (136), Wates; a1964 [Beacon View Rd, Wigmore Ln], 3/21 (240), 2/15 (284), Gilbert Ash (Tracoba). Cophall St [Whitehall Rd], a1958, 4/8 (128), Wates. Dunkirk Brewery Site [Dunkirk Ave], a1964, 1/17 (64), Wates. Ebenezer St/Dial Ln, a1960, 2/9 (72), Wates. Glover St, a1963, 2/9 (68), Wates; a1964, 3/17 (192), Wates; a1965, 1/17 (128), Wates. Hallam St, a1965, 2/9 (72), Wates. Hamstead, a1965 [Langdale Rd], 1/11 (82), Wates; a1965 [Langdale Rd, South View], 2/9 (68), Wates. Lyttleton St, Lyng, a1966, 2/17 (128), Wates. Moor St, a1962, 2/9 (68), Wates; a1963, 1/9 (34), Wates. Moor St, Bowater St, Lyng, a1961, 1/9 (36), Wates. Sams Ln, Lyng, a1965, 1/17 (64), Wates. Spon Ln [Boulton Hs], a1960, 1/9 (36), Wates. Summer St, a1966, 1/17 (64), Wates. Yew Tree Est, a1953 [Yew Tree Gdns], 6/6 (180), Wimpey; a1955 [Brackendale Dr], 6/8 (240), Wimpey; a1959 [Acacia Ave], 2/9 (72), Wates; a1964 [Plane Tree Rd], 1/21 (80), Gilbert-Ash (Tracoba).

WILLENHALL UDC (TO 1966; AFTERWARDS DIVIDED BETWEEN WALSALL CBC [INCLUDING PORTOBELLO EST] AND WOLVERHAMPTON CBC [OTHER MULTI-STOREY DEVTS])
Gomer St, a1964, 1/15 (87), Bryant (Bison). Lodge Farm Est, Phase II [Stroud Ave], a1965, 2/15 (170), Five Oaks. Portobello [New St], a1962, 2/11 (86), Bryant; a1963, 1/11 (43), Bryant. Rose Hill, a1962, 2/11 (86), Bryant.

WOLVERHAMPTON CBC (TO 1966)
Boscobel Est (Lower Stafford St RDA), a1962, 5/11 (210), A. F. R. Godfrey. Cobden Ln RDA [Dudley Rd, Chapel St], a1964, 2/18 (268), 4/11 (312), Wates. Dale St RDA, 1st Stage [Graiseley St], a1956, 2/8 (112), A. F. R. Godfrey; 2nd Stage [Hallet Dr], a1958, 3/11 (126), Simms Sons & Cooke/Truscon. Harrowby Rd, Moreton, a1962, 3/9 (102), Wates. Leasowes Dr, a1965, 1/17 (126), 2/16 (240), Wimpey. 'The Mayfield', Willenhall Rd, a1962, 2/9 (68), Bryant. Vauxhalls RD [Upper Vauxhall], a1959, 3/11 (126), Simms Sons & Cooke/Truscon.

WOLVERHAMPTON CBC (FROM 1966)
Heath Town RDA, Phase 1 [north of Wolverhampton Rd], a1967, 2/23 (214), 1/21 (102), 1/7 (60), 2/6 (36), Wates; Phases II, III [south of Wolverhampton Rd], a1968, 1/21 (102), 3/10 (114), 2/9 (86), 1/8 (95), 4/7 (437), 1/6 (64), Wates. Hickman St RD, Phase II, Willenhall [Graiseley Ln], a1968, 1/20 (114), Wimpey. Whitmore Reans RD, Phase I [Evans St], a1971, 2/12 (116), Maxim.

WORCESTER CBC
Tybridge St RDA, Phase I, a1967, 3/13 (147), Tarmac.

ENGLAND: YORKSHIRE AND HUMBERSIDE

BARNSLEY CBC
Sheffield Rd RDA [Union St, Duke St], Blocks A, B [Britannia, Buckley Hses], s1966, 2/7 (110), Carlton Contractors; Block C [Albion Hs], s1972, 1/7 (56), DL.

BINGLEY UDC
Crosley Wood II [Crosley Wood Rd], a1966, 3/11 (189), Concrete Northern (Bison).

BRADFORD CBC
College Rd RDA [Swarland/Elsdon Grove], s1965, 5/13 (310), Laing (Sectra). Fitzgerald St RDA [Radwell Dr], s1966, 3/15 (255), Wimpey. Holme Wood Est, Section P2 [Danecourt Rd], s1964, 2/9 (110), Laing. Jermyn St [Barkerend Rd], s1954, 2/8 (80), Wimpey. Manchester Rd [Croscombe Walk], s1960, 3/8 (123), Wimpey. Newby St RDA [Bowling Old Ln], s1967, 4/16 (359), Concrete Northern (Bison). Otley Rd, s1964, 3/8 (123), Wimpey. Thorpe Edge [Fairhaven Green, Idlethorpe Way], s1955, 4/8 (192), Laing, and 1/8 (101: now 125), Wimpey.

DONCASTER CBC
Balby Bridge RD, Phase 1 [Carr Hs Rd], s1967, 1/17 (129), Gleeson (Sheffield). Central Area No. 1 [Cleveland St], s1962, 3/14 (249), 2/9 (72), Wimpey. Intake [Lothian Rd], s1964, 1/13 (83), 2/9 (70), Wimpey.

ELLAND UDC
Southgate, Stage I [Church Hs], a1965, 1/8 (32), Marshall Builders (Elland); Stage II [Castlegate Hs], a1967, 1/8 (32), 1/6 (31), J. Miller. Westgate III [Talbot, Towngate], a1970, 2/8 (124), Finnegan.

GRIMSBY CBC
East Marsh Devt [Albion St, Albert St], s1963 [Nelson, Garibaldi, Thesiger Hses], 3/16 (279), Wimpey; s1964 [Albion, Tennyson, Bevan Hses], 3/16 (279), Wimpey.

HALIFAX CBC
Cow Green, a1969, 1/15 (90), Gleeson (Sheffield). Great Albion St, a1962, 1/15 (86), 1/12 (61), Wimpey. Jumples [Abbey Pk Rd, Mixenden], a1963, 6/16 (576), Wimpey. New Bank Devt, Phase 1 [Range Ln, Haley Hill], a1964, 3/15 (255), Gilbert Ash (Northern). RDA No. 2 (Crib Ln) [Richmond Rd], a1969, 3/19 (321), Gleeson (Sheffield). Shaw Hill, a1967, 1/17 (85), Wimpey.

HUDDERSFIELD CBC
Berry Brow, a1964, 1/6 (36), J. Miller; a1965, 1/6 (36), J. Miller; (Low Rd), a1965, 1/17 (101), Wimpey; a1969, 1/17 (101), Wimpey. Buxton Rd

[Albion St], a1965, 1/11 (57), J. Gerrard. Fernside [Grove Pl], a1967, 1/6 (36), Carlton Contractors. Halifax Old Rd, Birkby [Miln Rd], a1966, 1/6 (36), J. Miller. Lark St, Paddock, a1966, 1/6 (36), J. Miller. Northgate-Southgate RDA, a1958, 2/11 (86), J. Miller; a1962, 1/11 (43), J. Miller. Paddock [Granby Flats], a1964, 1/6 (36), J. Miller. Rashcliffe Hill RD, Scheme 2 [Victoria Rd], a1963, 2/11 (86), J. Miller. Reinwood: Willwood Ave, Chesil Bank, a1966, 4/6 (144), J. Miller. Swan Ln/Winton St, a1968, 1/6 (30), Marshall Builders. West St/Fernlea Rd, Lindley, a1966, 1/6 (36), J. Miller.

KEIGHLEY MBC
Broom St [Parkwood Rise], s1961, 2/12 (192), Wimpey. Ebenezer Sq [Hainworth Ln], s1964, 1/13 (99), Wimpey. Oakworth Rd Clearance Area, s1959, 3/10 (120), Wimpey.

KINGSTON UPON HULL CBC (TO 1974)
Bilton Grange Est [Barham Rd], a1959, 3/12 (144), Truscon. Boothferry Est, Areas G, H [Tilbury Rd], a1963, 3/12 (143), Truscon. Bransholme, Areas A1 East, D1 North [Bodmin Rd, Noddle Hill Way], a1968, 2/17 (180), L. H. Beal (later Robinson); Area A3 [Minehead Rd], a1969, 18/6 (627), Shepherd (YDG) (demol). Ings Rd Est, Areas D2, H [Bellfield Ave, Saltshouse Rd], a1967, 2/17 (180), L. H. Beal. Nornabell St RDA, Residential Area 13, Part 1, a1960, 1/12 (96), Truscon. Orchard Pk Est [entries in chron. order], Village IV [Gorthorpe, Kinthorpe], a1965, 3/10 (141), Wimpey; Villages I and III [Ashthorpe, Knightscourt], a1966, 2/20 (220), Wimpey; Villages II and IV [Dodsthorpe, Milldane], a1967, 2/22 (244), 2/19 (208), 2/17 (184), Wimpey. Porter St, a1954, 3/6 (72), J. Mather. Residential Area 17 [entries in chron. order], Part 5 [Upper Union St], a1958, 2/9 (108), Truscon; Part 6A [Brisbane St], a1958, 2/12 (98), Truscon; Part 4, Anlaby Rd [Great Thornton St], a1961, 3/15 (336), Truscon; Stage 8, Part IV [Linnaes St/Cavill Pl], a1967, 15/6 (558), Shepherd (YDG). White City Est [Lindsey Pl/Calvert Ln], a1964, 1/15 (112), Truscon.

KINGSTON UPON HULL CITY COUNCIL (FROM 1974)
Residential Area 17, Stage 9, Anlaby Rd, a1976, 2/15 (224), Wimpey.

KNOTTINGLEY UDC
Aire St RDA, Phase I, a1966, 1/9 (34), J. Finnegan.

LEEDS CBC
Anchor Street, Phases I, II [Church St, Hunslet], a1968, 19/7 (545), 14/6 (286), Shepherd (YDG) (demol). Armley Heights [Farrow Rd], a1958, 4/10 (240), Townson. Beckett Park [Queenswood Rise], a1963, 2/12 (92), Wimpey. Brackenwood [Brackenwood Dr], a1958, 2/10 (120), Townson. Camp Rd RDA, Stage 1 (Lovell Pk), a1964, 3/17 (297), Tersons. Charing Cross RDA [St Mark's Rd], a1963, 1/17 (99), Tersons. Cottingley 1A, a1970, 2/25 (294), Wimpey. Cow Cl [Whincover Dr], a1965, 1/13 (48), Wimpey. Ebor Gdns [entries in chron. order], Stage I [Rigton Dr], a1957, 3/8 (92), Reema; a1959 [Appleton Way], 4/10 (240), Wimpey; a1959 [Torre Rd], 2/10 (120), Myton; a1960 [Oxton Way], 3/10 (180), Reema; a1966 [Gargrave Pl], 3/17 (297), Wimpey. Gamble Hill [Gamble Hill Dr], a1966, 2/17 (198), Tersons. Gipton [Oak Tree Dr], a1956, 2/10 (120), Reema; a1963, 3/12 (138), Wimpey. Halton Moor [Cartmell Dr], a1956, 3/10 (180), Reema. Hugh St, Wellington Rd [Wortley Pk], a1965, 2/17 (198), Wimpey. Ireland Wood [Iveson Approach], a1958, 1/10 (60), Townson. Kirkstall Hill [Argie Ave], a1963, 2/12 (138), Wimpey. Leafield [Leafield Towers], a1956, 1/10 (60), Reema. Leek St [Church St, Hunslet], a1966, 12/6 (210), 6/7 (140), Shepherd (YDG) (demol). Lincoln Green [Lincoln Rd], a1958, 8/10 (480), Shepherd; [Lindsey Rd], a1959, 1/10 (60), Wimpey; [St Mary's St], a1959, 3/10 (180), Shepherd; (Grimston St) [Naseby View], a1965, 1/17 (99), Wimpey. Little London [Lovell Pk Rd], a1969, 3/17 (300), Shepherd. Marlborough St, a1963, 1/17 (99), Tersons. Meynell St [Holbeck Moor Rd], a1959, 3/10 (180), Myton; a1961, 2/10 (120), Myton; [St Matthew's St], a1966, 1/17 (99), Wimpey. Mistress Ln, a1961, 2/12 (92), Wimpey. Moor Crest [Moor Cres Chase], a1967, 2/17 (198), Wimpey. Moor Grange, a1958 [Fillingfir Dr], 2/10 (120), Wimpey; [Fillingfir Walk], 1/10 (60), Simms Sons & Cooke. Moortown [Scotland Wood Rd], a1956, 3/10 (180), Reema. New Carlton [Carlton Towers], a1958, 1/9 (54), 1/8 (48), Myton; [Carlton Hill], a1961, 2/12 (92), Wimpey; [Carlton Rise], a1964, 1/12 (46), Wimpey. Poplar [Poplar Croft], a1962, 4/12 (184), Wimpey. Potternewton Hs, a1965, 1/15 (87), Wimpey. Raynville Rd, a1960, 2/10 (120), Reema. Saxton Gdns [Flax Pl], a1955, 1/10 (112), 2/9 (144), 2/7 (112), G. Calverley. Seacroft Civic Centre [Bailey's Ln], a1956, 3/10 (180), Reema; [Seacroft Gate], a1958, 2/10 (120), Townson. Seacroft Cres, a1964, 1/17 (100), Tersons. Seacroft, Foundry Ln/Foundry Mill Dr, a1965, 1/17 (99), 2/15 (176), Wimpey. Shakespeare St, a1969, 3/17 (297), Wimpey. Spen Hill [Spen Approach], a1958, 1/10 (60), Townson. Swarcliffe [Eastwood Dr/Gdns], a1959, 3/10 (180), Simms Sons & Cooke. Swinnow [Rycroft Ave], a1961, 4/12 (184), Wimpey. Theaker Ln [Town St], a1961, 2/12 (92), Wimpey; a1963, 2/17 (198), Tersons. Wellington Hill [Barncroft Dr], a1961, 3/12 (132), Wimpey; [Barncroft Heights], a1963, 1/12 (44), Wimpey. Wellington Rd, Stage I, a1965, 2/17 (198), Costain. Whinmoor, Area 1 [Brayton Sq], a1963, 3/12 (207), Wimpey; Area 2 [Sherburn Rd, Brayton Pl], a1964, 5/15 (435), Wimpey. Wykebeck Valley Rd, a1963, 6/12 (276), Wimpey. Wykebridge [York Rd], a1960, 2/10 (120), Reema. Wyther, a1960, 2/10 (119), Reema.

PONTEFRACT MBC
Horsefair [Southgate], a1956, 1/8 (30), 3/6 (72), J. Miller; a1962, 1/11 (84), N. B. Bell.

ROTHERHAM CBC
Clifton Hse Site RD [Clifton Ln], a1968, 1/13 (48), J. F. Finnegan. Oakhill RDA [Doncaster Rd/Fitzwilliam Rd], a1970, 3/6 (265), Shepherd.

SCUNTHORPE MBC
Crosby Rd RDA, s1964, 3/20 (228), SLP (Bison). #[Westcliff, Bridges Rd], s1963, 1/14 (79), H. Beal.

SHEFFIELD CBC
Broomhall [Headford St], s1967, 20/7 (472), 7/6 (147), Shepherd (YDG) (demol). Claywood [Claywood Dr], s1967, 3/17 (380), Gleeson (Sheffield). Gleadless Valley: s1956 [Ironside Rd, Gaunt Rd], 28/6 (336), DL, [Raeburn Rd], 1/6 (12), H. Dernie; (Herdings) [Raeburn Rd], s1958, 3/13 (144), Tersons; (Rollestone) [Callow Rd], s1962, 1/15 (56), 5/13 (240), Gleeson (Sheffield). Greenhill-Bradway [Atlantic Rd, Gervase Ave], s1958, 3/13 (144), Tersons. Hanover [William St], s1965, 1/16 (126), Gleeson (Sheffield). Jordanthorpe [Dyche Rd], s1966, 3/15 (261), Wimpey. Kelvin [Infirmary Rd], s1967, 2/13 (948), DL. Lansdowne [Cliff St], s1963, 3/15 (180), Gleeson (Sheffield). Middlewood [Winn Gdns], s1962, 1/13 (48), DL. Netherthorpe RDA: (Martin St), s1957, 3/13 (144), Tersons; s1958, 4/13 (192), Tersons; (Brook Hill), s1960, 2/15 (112), 2/13 (96), DL. Norfolk Park [Park Grange Rd/St Aidan's Rd], s1963, 3/17 (378), Gleeson (Sheffield), and 3/17 (378), DL; s1964, 2/17 (249), DL; s1965, 2/17 (252), Gleeson (Sheffield), and 2/17 (252), DL; s1966, 3/17 (378), DL. Park Hill, Part One [Duke St, Talbot St, South St], s1957, 1/13 (313), 1/10 (361), 1/9 (140), 1/7 (181), DL. Park Hill, Part Two [Hyde Pk: Bernard St, Hyde Pk Walk, St John's Rd], s1962, 1/19 (678), 1/13 (355), 1/10 (108), 1/9 (28), DL. Stannington [Deer Pk View], a1964, 3/15 (261), Wimpey. Woodside Ln RDA [Pye Bank Rd], a1960, 2/15 (112), 2/13 (96), Wimpey.

SOWERBY BRIDGE UDC
Chapel St [Tower Hill], a1964, 2/15 (174), Wimpey.

WAKEFIELD CBC
George-a-Green Rd [Gill Syke Rd], a1965, 1/11 (87), Truscon. George St, a1959, 1/11 (66), Truscon. Horbury Rd [Park Grove Rd], a1964, 1/13 (103), Truscon. Lower Kirkgate CDA [George St, Kirkgate], a1967, 4/12 (176), Oldham Estate. Park St and William St [Monk St], a1961, 1/11 (87), Truscon. Volunteer Yard [George St], a1962, 1/11 (87), Truscon.

WORTLEY RDC
Angram Bank, High Green: Central Devt, a1967, 1/10 (34), J. F. Finnegan. Bath Hs Site, Burncross Rd, Chapeltown, a1964, 3/12 (198), Reema.

NORTHERN IRELAND

BELFAST CBC
Area A RD Scheme, West Side of Urban Motorway, Stage 5 Contract [Peter's Hill, Upper Townsend St, Denmark St], a1969, 2/7 (208), 1/6 (76), F. B McKee (demol). Artillery St RDA Area B [Artillery Hs], a1966, 1/17 (84), Laing. Clara Park Ext No. 1 [Clarawood Pk], a1965, 1/15 (57), F. B. McKee (Bison). Mt Vernon Est Ext [Mt Vernon Rd], a1963, 1/13

(72), 1/11 (60), Unit. North Queen St Devt Scheme (from 1961: Carlisle Devt Scheme), a1961, 2/13 (100), P. Carvill; a1964, 4/13 (200), Farrans.

LARNE BC
Mill St RDA [Pound St, High St, Cooper's Ln], a1966, 3/16 (270), F. B. McKee (Bison).

NORTHERN IRELAND HOUSING TRUST
Area F1 Cullingtree Rd RDA, Belfast: Phase 1A [Divis Tower], a1966, 1/20 (95), Laing; Phases IB, IB Extension [Whitehall, St Brendans, Gilford: under demol], a1967, 2/7 (93), 1/8 (123), Laing (Sectra); Phase II a1968, Phase III a1969, Phase IV a1970 (#b/u; under demol), total 3/8 (222), 5/7 (225), 1/6 (36), Laing (Sectra); (St Peter's Precinct), a1971, 4/6 (96), Unit. Belvoir Pk [Drumart Dr], a1963, 2/15 (112), Farrans. Braniel [Whincroft Way], a1963, 1/15 (56), Farrans. Cregagh, a1959 [Killagan Bend], 2/11 (88), Unit; a1966 [South Bank], 1/15 (72), Laing (Sectra). Dundonald (Ardcarn) [Ardcarn Way], a1965, 1/15 (72), Laing (Sectra). Dunmurry, Conway [Conway Hill: Ferndale Hs, Riverdale Hs, Parkdale Hs], a1963, 3/15 (168), Farrans. Dunmurry (Seymour Hill) [Rathmoyne Hs, Coolmoyne Hs], a1964, 2/15 (112), #c/u. Dunmurry-Twinbrook, Phase 1, a1970, 1/6 (22), #c/u. Finaghy [Benmore Dr], a1963, 2/15 (112), Farrans. Lisburn Old Warren IIIB [Drumbeg, Lissue Hses], a1971, 2/6 (24), #Farrans. Rossville St and Lecky Rd (Cattle Market), Londonderry, a1964, 2/10 (138), Laing (Sectra), a1966, 1/6 (40), Laing (Sectra) (demol). North St and Water St RD, Newry, a1972, 4/7 (67), F. O'Hare (Newry). Rathcoole Devt 14 [Rosslea Way], a1964, 4/15 (260), Laing (Sectra). Rushpark [Woodland Dr], a1963, 2/15 (112), F. B. McKee. Tullycarnet No. 5 [King's Rd], a1967, 1/9 (120), Laing (Sectra).

SCOTLAND

ABERDEEN BC (TO 1975)
Ashgrove VIII [Gillespie Cres], s1959, 1/10 (40), A. Hall. Balnagask South Section 14 [Balnagask Circle], s1968, 3/14 (156), A. Hall. Castlehill Section 1 [Justice St], s1966, 1/19 (108), 1/9 (48), W. J. Anderson. Chapel St and Skene St, Section 2 [Kidd St], s1961, 1/11 (75), W. J. Anderson. Cornhill-Stockethill, Section I [Cairncry Rd], s1966, 1/17 (100), 2/16 (188), Wimpey; Section IV [Castleton Dr], s1967, 4/19 (288), W. J. Anderson; Section VII [Oldcroft Terr], s1968, 1/17 (100), Wimpey. Gallowgate II, s1964, 1/19 (126), 1/9 (72), W. J. Anderson. Great Northern Rd X [Printfield Walk], s1971, 1/10 (58), A. Hall. Great Northern Rd 'A', Phase 2 [742, 768 Great Northern Rd], s1974, 2/10 (112), A. Hall. Hazlehead I [Provost Graham Ave], s1962, 4/12 (184), W. J. Anderson. Hutcheon St [Catherine St], s1973, 1/19 (144), 1/15 (140), A. Hall. Kincorth Section 49 [Tollohill Sq], s1963, 1/14 (52), A. Hall. Mastrick 1 [Mastrick Rd], s1961, 1/14 (52), A. Hall. Mastrick 57 [Kingsford Rd], s1966, 1/10 (57), P. Cameron. Middlefield: Fowler Ave, s1971, 1/10 (58), A. Hall. Rose St and Huntly St, s1973, 1/15 (126), A. Hall. Seaton 'A' [St Ninian's Pl], s1969, 4/17 (296), Bett (Bison). Seaton 'B', 'C', 'D' [School Rd], Phase 1, s1971, 3/10 (170), P. Cameron; Phase 2, s1972, 7/19 (781), P. Cameron (Bison). South Mile End [Balmoral Ct, Holburn St], s1968, 1/10 (58), P. Cameron. Tillydrone-Hayton II [Pennan Rd], s1965, 1/14 (52), A. Hall; IV [Auchinleck Cres], s1965, 5/19 (360), A. Hall; XVI (A) [Gordon's Mill Cres], s1970, 1/10 (58), A. Hall. Upper Denburn CDA I [Gilcomston Pk], s1971, 1/22 (120), A. Hall.

(CITY OF) ABERDEEN DISTRICT COUNCIL (FROM 1975)
Hardgate and Gairn Terr, s1978, 1/11 (56), A. Hall. Hilton Rd and Rosehill Dr, s1976, 2/10 (113), A. Hall. Jasmine Pl, s1983, 1/11 (58), Wimpey. Marchburn Dr, s1975, 1/10 (56), A. Hall.

AIRDRIE BC
Chapel St RD, a1970, 1/16 (94), Mitchell (Camus). Holehills, Thrashbush Rd, a1967, 3/8 (138), Mitchell (Camus).

AYR BC
John St [Riverside Pl], a1968, 3/14 (234), Concrete Scotland (Bison).

BARRHEAD BC
Blackbyres Rd [Glasgow Rd], s1968, 1/12 (47), J. Miller.

BUCKHAVEN & METHIL BC
Savoy Site [Swan Ct, Memorial Ct], s1968, 2/14 (148), Crudens.

CLYDEBANK BC
Central RDA [Kilbowie Rd], a1962, 1/12 (46), Wimpey. Dalmuir Gap Sites RD, a1963, 6/15 (528), Wimpey. East End RD [Glasgow Rd, Mill Rd], a1964, 3/16 (273), Crudens. Great Western Rd [Kirkoswald Dr], a1963, 5/13 (230), Wimpey. Littleholm [Mountblow], a1968, 3/16 (270), Tersons. Melbourne Ave, a1953, 1/9 (32), Lawrence. Perth Cres, a1962, 3/6 (78), A. A. Stuart.

COATBRIDGE BC
Blairgrove [Bank St], a1963, 2/15 (165), H. Leggat. Hutchison St, Phase II [Henderson St], a1968, 1/8 (44), Crudens. Jackson St RD, Phases I, II [Coats St], a1967, 2/18 (384), 1/17 (186), Crudens (Skarne). Ronald St, a1967, 2/15 (170), Wimpey. Whifflet [Calder St], a1963, 2/15 (165), H. Leggat. Wilton St, a1969, 1/15 (85), Wimpey. Woodside [Woodside St], a1965, 2/15 (170), Wimpey.

CUMBERNAULD NTDC
Carbrain 9 [Millcroft Rd], s1963, 5/6 (286), HHC. Kildrum 19, Phase 1 [Kenmore, Lammerton Rds], s1965, 2/7 (146), Concrete Scotland (Bison). Kildrum 21 [Campsie View], s1967, 1/7 (66), Concrete Scotland (Bison). Kildrum 22 [Burns Rd], s1967, 1/20 (73), 2/12 (89), Concrete Scotland (Bison). Muirhead 6 [Hume Rd], s1965, 3/12 (135), Laidlaw (Bison). Ravenswood 1 [Berryhill Rd], s1964, 3/12 (135), Laidlaw (Bison). Seafar 3 [Allanfauld Rd], s1964, 3/12 (135), Laidlaw (Bison). Town Centre, Phase 1, s1963, 1/6 (35), Duncan Logan [penthouses in shopping centre: now converted to offices].

DUMBARTON BC
Central Area [Risk St], a1966, 2/6 (47), Atholl Homes (later Laidlaw). Howatshaws Rd, a1970, 4/16 (248), Crudens (Skarne). West Bridgend, a1969, 3/16 (186), Crudens (Skarne).

DUNDEE BC
Ardler, Phase I [Birkdale Pl], a1964, 6/17 (1788), Crudens. Dallfield CDA, 1st Devt [Hilltown], a1964, 4/15 (336), Scotcon. Derby St CDA, a1967, 2/23 (374), Mitchell (Camus). Foggyley, 1st Devt, a1958, 4/10 (120), SSHA DL; 2nd Devt, a1962, 2/15 (168), Crudens. Kirk St CDA, a1967, 4/16 (480), Scotcon. Lansdowne, Phase 2 [Coupar Angus Rd], a1962, 2/15 (168), Crudens. Maxwelltown CDA [Alexander St], a1965, 4/23 (440), C. Gray. Menzieshill, 9th Devt, a1963, 5/15 (420), Crudens. St Mary's Pl CDA, Block 4 [Lochee Rd], a1962, 1/15 (92), J. Miller. Trottick, a1966, 3/15 (171), Bett (Bison). Whitfield, Central Precinct [Lothian Cres], a1967, 2/16 (360), Crudens; Industrialised Phase I [Berwick Dr], a1968, 16/6 (288), Crudens (Skarne). Whorterbank CDA, 1st Devt, a1960, 2/15 (170), Crudens.

DUNFERMLINE BC
Broomhead Pk [Pilmuir St], a1960, 3/12 (213), Wimpey.

EAST KILBRIDE NTDC
Calderwood 15, 16 [Bosworth Rd], a1966, 6/15 (522), Wimpey. The Murray 8(5), 9(2) [Dunlop, Lister Towers], a1965, 2/15 (145), Wimpey. St Leonards XI [Strathaven Rd], a1969, 1/20 (114), 1/19 (109), 1/16 (91), Reema Scotland. Westwood 2(14) [Fraser River Tower], a1965, 1/15 (87), Wimpey.

EDINBURGH BC
Citadel & Central Leith RDA: Cables Wynd, Phase I, a1963, 1/10 (212), Smart; Couper St, a1961, 2/20 (153), Miller; Kirkgate, a1964, 1/18 (64), Token; Tolbooth Wynd, Phase II, a1964, 1/11 (98), Smart. Coillesdene House [Seaview Cres], a1966, 1/11 (41), Wimpey. Comiston [Oxgangs Cres], a1960, 3/15 (240), Laing. Craigmillar THA [Craigmillar Castle Gdns], a1966, 2/15 (114), Concrete Scotland (Bison). Dumbiedykes [Holyrood Rd], a1958, 2/11 (182), Miller. Gracemount [Gracemount Dr], a1960, 3/14 (246), Crudens. Greendykes 3 THA [Greendykes Rd], a1964, 2/15 (172), Crudens. Leith Fort [Lindsay St], Stage I, a1960, 2/21 (152), Miller; Stage II, a1961, 1/7 (157), Smart. Lochend [Lochend Ave], a1968, 2/15 (170), Smart. Moat Dr, a1957, 2/10 (120), Miller. Moredun, Phase 3 [Moredunvale View], a1966, 2/16 (182), Wimpey. Moredun THA, Phase 2 Stage 1 [Craigour Dr], a1965, 4/16 (364), Wimpey. Muirhouse: Phase II [Muirhouse Parkway], a1960, 2/15 (112), 2/9 (96), Wimpey, 2/11 (151), Scotcon; a1962, 1/23 (88), W. Arnott McLeod; THA II [Muirhouse Cres], a1963, 1/9 (49), 3/6 (75), Wimpey; THA III [West Pilton Bank], a1965, 1/16 (61), Wimpey. Niddrie Marischal [Niddrie Hs Dr], a1968, 2/15

(114), Hart Bros. (Bison). Portobello High St, a1966, 1/8 (60), J. Best. Queensferry Rd [Maidencraig Cres], a1953, 1/8 (42), Hepburn Bros. Restalrig Hs [Restalrig Dr], a1964, 2/13 (152), Miller. St Leonards CDA (Arthur St), a1970, 5/7 (125), 10/6 (256), Wimpey. Sighthill Neighb. Centre [Sighthill Bank], a1965, 3/17 (285), 1/11 (80), Crudens. Sighthill THA III [Calder Gdns], a1966, 3/13 (408), Crudens (Skarne). Spey St, a1955, 1/11 (60), Scotcon. Wester Hailes: Contract 4 [Hailesland Pk], a1969, 6/10 (519), Hart Bros (Bison); Contract 5 [Westburn Gdns], a1969, 7/9 (442), Crudens; Contract 7 [Wester Hailes Pk], a1970, 7/9 (516), Crudens. Westfield Flats, Gorgie [Westfield Rd], a1949, 1/8 (88), Hepburn Bros. West Pilton Grove, a1956, 2/10 (120), Wimpey.

FALKIRK BC

Callendar Est [Callendar Rd], Phase 1, a1965, 5/15 (420), Crudens; Phase 2, a1966, 2/15 (168), Crudens; Section 4 [Corentin Ct, Breton Ct], a1967, 2/15 (170), Concrete Scotland (Bison); Site 2 [High Station Rd], a1965, 2/15 (170), Wimpey. Glenfuir Est [Windsor Rd], a1969, 2/15 (170), Wimpey.

FIFE COUNTY COUNCIL

Kincardine 14th Devt, Phase A [Ramsay, Sandeman, Kincardine Cts, Kincardine-on-Forth], s1969, 3/16 (181), Bett (Bison).

GLASGOW BC (APPROVAL DATES REFER TO DEAN OF GUILD COURT)

Acre Rd, a1969, 3/8 (96), 1/6 (24), Lawrence. Anderston Commercial Centre [Cadogan St], a1967, 3/16 (336), Myton. Anderston Cross CDA, Phase III [St Vincent Terr], a1968, 4/9 (124), 3/11 (115), 1/13 (48), SSHA DL (Bison). Anniesland Cross, a1966, 1/23 (126), DL. Archerhill Rd North [Archerhill Ave], a1966, 5/8 (150), DL. Ardencraig Rd, a1963, 5/20 (570), Wimpey. Barfillan Dr, a1968, 2/8 (56), DL. Battlefield [Cathkinview Rd], a1965, 2/20 (228), Wimpey. Blairdardie South [Keal Dr], a1960, 1/15 (84), 1/14 (78), 2/13 (144), Lawrence. Blawarthill [Plean St], a1964, 2/20 (228), Wimpey. Bogany Terr, a1966, 1/20 (114), Wimpey. Bridgeton-Dalmarnock CDA (Ruby St), a1967, 3/15 (252), Wimpey. Broadholm St, a1969, 1/8 (30), DL. Broomloan Rd (Albion Site), a1963, 3/21 (285), Reema Scotland. Cleeves Rd [Nitshill Rd], a1969, 1/13 (49), F. G. Minter. Coll St, a1967, 3/18 (306), Reema Scotland. Cowcaddens CDA [Stewart St], Phase I [2, 6 Dundas Vale Ct], a1968, 2/24 (274), Laing; Phase II, a1973, 1/24 (137), Laing. Cranhill Ext [Bellrock St], a1963, 3/18 (306), Crudens (Truscon). Crathie Dr, a1949, 1/8 (89), DL. Darnley [Glen Moriston Rd], Phase 2 Section 1, a1972, 1/8 (60), 3/7 (162), 6/ 6 (168), DL/Lawrence/Smart; Phase 2 Section 2, a1973, 3/6 (82), DL/Fairclough; Phase 2 Commercial Area, a1973, 1/8 (42), HHC. Dougrie Place, Castlemilk, a1960, 3/20 (233), Leggat. Dumbreck Ave, a1968, 2/22 (198), DL. Gallowgate CDA Area 'A' (Bluevale St), a1963, 2/31 (348), Thaw & Campbell. Garscadden Policies [Linkwood Dr], a1965, 1/23 (132), 1/22 (114), 1/18 (102), DL/Truscon/Scotcon. Govan CDA 'A' [Kintra St], a1967, 3/20 (342), Crudens. Hillpark I [Hillpark Dr], a1966, 5/8 (140), 3/6 (240), DL. Hutchesontown/Part Gorbals CDA: Area 'B' [Ballater St], a1958, 4/18 (308), DL/A. A. Stuart; Area 'C' [Old Rutherglen Rd], a1960, 2/20 (400), HHC; Area 'E' [Crown St], a1968, 2/24 (384), 12/7 (759), Gilbert-Ash Scotland (Tracoba) (7-storey blocks demol). Ibroxholm [Ibrox Terr], a1962, 3/22 (297), DL. Kelso St [Halley Sq], a1965, 3/8 (90), DL. Kennishead [Kennishead Ave], a1965, 5/23 (660), Laidlaw (Prometo). Kirkton Ave, a1965, 5/24 (690), Wimpey. Kirriemuir Ave, a1966, 3/8 (88), DL. Laurieston-Gorbals CDA [Gorbals St], Phase 1A, a1970, 2/24 (552), Crudens; Phase 2B, a1973, 2/24 (552), Crudens. Lillyburn Pl, a1965, 1/8 (30), DL. Lincoln Ave, a1962, 6/20 (684), Wimpey. Maryhill CDA Area 'B' [Rothes Dr, Duncruin St], Phase I, a1966, 3/21 (360), Reema Scotland; Phases II, III, a1967, 15/8 (451), DL. Milton North [Castlebay St, Scaraway St], a1966, 6/17 (576), Tersons. Moss Heights [Berryknowes Ave], a1950, 3/10 (219), HHC. Mosspark Dr North [Tarfside Oval], a1962, 4/22 (396), DL. Northinch St, a1971, 1/21 (120), Wimpey. Northland Dr, a1966, 2/8 (60), DL. Paisley Rd West (Halfway), a1974, 1/18 (134), Taylor Woodrow. Parkhead CDA Area 'A', Phase 1 [Helenvale St], a1967, 3/15 (252), Wimpey. Pollokshaws CDA Unit 1 [Birness Dr], a1966, 2/22 (244), 1/20 (110), 1/18 (100), DL (Bison). Pollokshaws CDA Unit 2 [Shawbridge St], Phase 1, a1961, 3/16 (227), 1/20 (89), Laidlaw (Bison); Phase 2, a1962, 1/16 (75), Laidlaw (Bison); Phase 3, a1964, 3/23 (315), Laidlaw (Bison); Phase 4, a1968, 1/23 (105), Laidlaw (Bison); Blocks 28–30, a1971, 1/17 (134), Laidlaw (Bison). Prospecthill Rd [Myrtle Hill View], a1967, 3/8 (144), Lawrence. Queensland Dr, a1965, 2/20 (228), Wimpey. Red Rd, a1962, 6/31 (720), 2/27 (606), DL (MSC). Redpath Dr, a1968, 5/8 (154), DL. Royston RDA, Area 'A' [Garnock St], a1959, 3/20 (351), Wimpey; 'B' [Rosemount St], a1966, 2/25 (288), Reema Scotland; Area 'B', Phase 2 (Millburn St I), a1969, 1/25 (144), Reema Scotland; (Millburn St II), a1970, 1/12 (140), Reema Scotland; Area 'C' [Charles St], a1969, 2/20 (228), Wimpey. St Andrew's Drive, a1966, 7/8 (210), 9/6 (320), DL. Sandwood Rd Area 'B' [Birkhall Ave], a1967, 8/8 (240), DL. Sandyhills Hs [Strowan St], a1964, 4/23 (528), DL. Scotstoun Hs [Kingsway], a1962, 6/20 (684), Wimpey. Sighthill [Fountainwell Rd, Pinkston Dr], Phase 1A, a1963, 4/20 (912), Crudens (Truscon); Phase 1B, a1964, 1/20 (228), Crudens (Truscon); Phase 2, a1964, 3/20 (684), Crudens (Truscon); Phases 2B, 3, a1967, 2/20 (456), Crudens (Truscon). Smeaton St, a1965, 1/8 (30), DL. Springburn CDA, Area 'A' [Wellfield St], a1966, 2/26 (200), Reema Scotland; Area 'B' [Balgrayhill Rd], Phase 1, a1964, 2/26 (200), Reema Scotland, 7/6 (483), DL; Phase 2, a1966, 2/25 (192), Reema Scotland; Area 'C' (Elmvale St), a1971, 4/6 (117), Mitchell (Camus). Summerfield [Summerfield St], Phase 1, a1962, 3/23 (396), Laidlaw (Prometo); Phase 1 Ext, a1965, 1/23 (132), Laidlaw (Prometo). Toryglen North [Prospecthill Circus], a1963, 2/23 (267), 1/21 (202), 2/6 (82), Laing. Townhead CDA Area 'A' (Ladywell Devt), Phase 1, a1961, 1/16 (90), 1/15 (84), 1/13 (72), DL; Area 'B' [St Mungo Dr], a1967, 4/25 (768), Wimpey. Woodside CDA [St George's Rd], Area 'A', Phase 1, a1964, 3/23 (315), DL (Bison); Area 'B', Phase 3, a1970, 2/8 (203), Leggat.

GLENROTHES NTDC

South Parks, 8th Devt [Raeburn Heights], s1967, 1/16 (61), Wimpey.

GOUROCK BC

Eastern School [Chapel St], s1968, 1/15 (87), Wimpey.

GREENOCK BC (TO 1975; FROM 1975, SEE INVERCLYDE DC)

Carwood St and Sinclair St, a1965, 1/13 (49), H. Leggat. CDA 2 (Drumfrochar Rd and Ann St), a1968, 2/16 (182), Wimpey, a1969, 1/16 (89), Wimpey. CDA 4, Phase IIB [Belville St], a1967, 1/8 (30), 1/7 (33), 1/6 (36), C. Gray. CDA 4, Phase III [Belville St], a1965, 6/16 (492), 1/15 (76), J. Laidlaw (Bison). Duncan St, a1965, 1/15 (88), Wimpey. Grieve Rd, a1962, 3/16 (270), Crudens. Lady Octavia, Phase I [John Wilson St], a1969, 1/18 (103), Crudens. Lynedoch St and Regent St, a1970, 2/18 (208), H. Leggat [Wates]. Neil St, a1965, 1/15 (57), Concrete Scotland (Bison). Old Inverkip Rd, a1965, 1/15 (57), Concrete Scotland (Bison). Ravenscraig Neighb. Centre [Cumberland Rd], a1969, 1/12 (44), J. Harrison. Regent St/Trafalgar St, a1970, 1/18 (71), Mitchell (Camus). Upper Bow Farm [Tay St], 1st Devt, a1964, 3/10 (165), Crudens; 2nd Devt, a1966, 2/10 (110), Crudens.

HAMILTON BC

Almada St RD, a1967, 1/14 (78), Lawrence. Duke St, Phase 2 [Wyler Ct], a1968, 1/12 (70), Crudens.

INVERCLYDE DC

Kilblain St, a1975, 1/16 (61), Wimpey.

IRVINE BC

Fullarton St RD, a1966, 5/14 (275), Wimpey.

JOHNSTONE BC

High St/Dimity St, Phase I [Provost Hs], a1972, 1/14 (72), Lawrence.

KIRKCALDY BC

Esplanade [Forth View], s1956, 3/8 (141), Wimpey. Pathhead [Mid St], Phase I, s1964, 2/15 (172), Wimpey; Phase II, s1968, 1/15 (86), Wimpey. Valley Gdns, s1954, 1/8 (48), Wimpey.

LANARK COUNTY COUNCIL

Cambuslang CDA No. 2, Central Area [Allison Dr]: a1963, 1/14 (96), 1/6 (22), Laing; a1967, 3/13 (216), Reema Scotland. Lightburn [Hamilton Rd, Cambuslang], a1967, 1/13 (72), Reema Scotland. Springhall [Cruachan Rd, Cambuslang], a1967, 1/13 (72), Reema Scotland. Whitlawburn, Cambuslang [Western Rd], a1968, 6/13 (432), Reema Scotland.

MOTHERWELL & WISHAW BC

Brandon St and Merry St Area: Railway Site, a1967, 1/20 (106), Loudon (Bison). Central Motherwell CDA: Phase 1 [Anderson St], a1967, 2/17 (134), Loudon (Bison); Phase II (Thistle St), a1970, 3/17 (201), Loudon (Bison). Clyde Valley St and Leven St, a1961, 3/12 (140), Wimpey.

Flemington Area: Burnside St, Phase I, a1966, 5/18 (520), Wimpey; Phase III [Doonside Tower], a1968, 1/20 (116), Wimpey. Main St, Wishaw (Burgh Chambers Site), a1964, 1/6 (25), Scott (Builders). Merry St (Dalziel St to Wilson St), a1967, 3/20 (351), Crudens. Muirhouse Area: Phase III [Shields Dr], a1964, 7/18 (735), Wimpey. Netherton Area: Main Site (Gowkthrapple) [Castlehill Rd], a1968, 3/12 (210), Mitchell (Camus). Parkhead St and Macdonald St, a1963, 1/17 (161), Crudens (MSC). Watson St Area: Phase III [Elvan Tower], a1964, 1/12 (46), Wimpey.

PAISLEY BC
Blackhall [Cartha Cres], a1958, 2/15 (112), Blackburn. Foxbar, 1st Stage [Montrose Rd], a1958, 3/15 (168), Blackburn. Gallowhill [Montgomery Rd], a1968, 3/15 (270), Wimpey. George St and Canal St, a1958, 1/15 (56), Blackburn. George St Stage 2 Phase II [Maxwellton St], a1965, 1/18 (102), Lawrence (MSC). Great Hamilton St, Phase I, a1963, 3/16 (270), Wimpey; Phase II, a1965, 2/16 (180), Wimpey. High Calside, a1967, 2/16 (180), Wimpey. Lacy St RDA, a1967, 1/15 (88), J. Miller. Millarston East [Millarston Dr], a1967, 3/15 (270), Wimpey. Nethercraigs and Gleniffer Rd, a1965, 2/15 (114), Concrete Scotland (Bison).

PERTH BC
Market St & Caledonian Rd, a1973, 3/9 (104), Bett (Bison). Pomarium St, a1958, 1/11 (44), 1/8 (45), Wimpey. Potterhill [Gowrie St], a1961, 1/8 (48), Wimpey. Strathtay Rd, a1966, 9/6 (99), C. Gray.

PORT GLASGOW BC
Bay Area RD [John Wood St], s1968, 3/15 (170), Concrete Scotland (Bison).

RUTHERGLEN BC
Regent St [Greenhill Ct], a1973, 3/9 (135), Crudens (Skarne).

SALTCOATS BC
Glebelands, 2nd Devt [The Glebe], a1966, 2/12 (94), J. Miller (Bison).

SCOTTISH SPECIAL HOUSING ASSOCIATION (GROUPED BY LOCAL AUTHORITY AREA)

CLYDEBANK
Central RDA, Radnor Park, a1960, 7/15 (392), DL.

DUNDEE
Lansdowne, Phase I [Dryburgh], a1958, 4/10 (120), DL.

GLASGOW
Anderston Cross CDA, Phase II [St Vincent Terr], a1967, 1/18 (128), DL (Bison). Carron St, 1st Devt [Carbisdale St], a1961, 4/15 (224), Wight; 3rd Devt [Carron Pl], a1964, 3/8 (93), Concrete Scotland (Bison). Fortrose St, a1961, 1/9 (53), DL. Gorget Av, a1965, 3/8 (93), Gilbert Ash Scotland (Tracoba). Hutchesontown and Part Gorbals CDA Area 'D' [Caledonia Rd], a1963, 4/24 (552), 3/8 (96), Gilbert-Ash Scotland (Tracoba); 5th Devt, a1968, 3/8 (96), Gilbert-Ash Scotland (Tracoba). Langlands Rd, a1960, 2/15 (112), DL. Maryhill CDA Area 'A' [Collina St], a1968, 1/19 (113), Gilbert-Ash Scotland (Tracoba). North Kelvin CDA Area 'A' [Wester Common Rd], a1967, 4/19 (452), Gilbert-Ash Scotland (Tracoba). Toryglen [Prospecthill Cres], 6th Devt, a1955, 2/10 (60), DL; 10th Devt, a1957, 2/10 (60), DL. Whiteinch-Broomhill [Broomhill Dr], a1963, 5/17 (510), Miller; 2nd Devt area 'D', a1965, 3/8 (93), Gilbert-Ash Scotland (Tracoba). Wyndford [Wyndford Rd, Glenfinnan Rd], 1st Devt, a1961, 5/15 (280), DL; 3rd Devt, a1963, 7/8 (217), DL (Bison); 4th Devt, a1964, 4/26 (600), Laing; 5th Devt, a1965, 1/9 (53), DL.

PAISLEY
Foxbar, 2nd Stage [Heriot Av], a1958, 2/15 (112), DL. Renfrewshire, Linwood: [Belmar, Asbury Cts], a1970, 2/16 (174), Crudens.

STEVENSTON BC
Central RD, Phase 1, Part A [The Riggs], s1964, 2/6 (20), J. Moulds.

WALES

ABERDARE UDC
Manchester Pl [Hirwaun], s1963, 2/12 (192), Christiani Shand.

CARDIFF CBC
Butetown RD, Loudoun Sq, a1962, 2/16 (195), Wimpey. Channel View Rd, Grangetown, a1964, 1/14 (78), Truscon. Gabalfa, Lydstep Cres, a1957, 3/11 (126), Wimpey. Llanedeyrn Central Area [Maelfa], a1970, 1/11 (45), H. Fairweather.

CARDIFF RDC
Coryton, Whitchurch [Beech Hs, Hollybush Est], a1957, 1/10 (99), L. J. Hope. Hollybush Est [Sycamore Hs], a1963, 1/10 (95), E. A. Bond.

CWMBRAN NTDC
Town Centre: Tower Block [Redbrook Way, Southville], a1965, 1/23 (81), Truscon.

FLINT MBC
Central Area RD, First Stage [Richard, Bolingbroke Heights, Feather St], s1966, 1/18 (102), 1/15 (84), Concrete (Bison); Second Stage [Castle Heights], a1970, 1/15 (84), Thyssen (Bison).

HOLYHEAD UDC
Queen's Park Ct, a1963, 1/6 (22), Pochin.

LLANGEFNI UDC
Bro Tudur [Plas Tudur], a1962, 1/7 (26), H. Jones. Glancefni [Glandwr Terr], a1962, 1/6 (28), Seddon.

MENAI BRIDGE UDC
Maes-y-coed [Dale St], a1968, 1/6 (24), H. Jones.

MERTHYR TYDFIL CBC
Caedraw RD [St Tydfil's Ct], a1962, 1/12 (66), Wimpey.

NEWPORT CBC
Gaer [Gaer Rd], a1971, 1/11 (83), H. Fairweather. Ringland Shopping Centre, a1964, 1/11 (83), GWS. St Julians [Beaufort Rd], a1971, 1/11 (83), H. Fairweather.

PONTYPOOL UDC
George St, Pontnewynydd [Fairview Ct], a1965, 1/12 (70), Wimpey.

SWANSEA CBC
Brynmelin, s1961, 2/11 (154), Wimpey. Dyfatty, s1961, 2/14 (104), 2/11 (120), Laing. Llangorse Rd, Penlan, s1961, 1/10 (50), Stone. Rheidol Av, Clase, s1961, 1/8 (40), Stone. Sketty Pk, s1961, 3/11 (198), Wimpey; 2/11 (120), Reema.

CHANNEL ISLANDS

BAILIWICK OF GUERNSEY

STATES OF GUERNSEY
St Peter Port: Cour du Parc [Charroterie], s1962, 1/10 (40), R. G. Falla.

BAILIWICK OF JERSEY

STATES OF JERSEY [ENTRIES GROUPED BY PARISH]
St Helier: Ann St RD Phase 1 [1–32 De Quetteville Ct], a1967, 1/9 (32), Le Val Construction. The Cedars/Gothic Hs Site [The Cedars, Green St], a1972, 1/16 (74), Charles Le Quesne. Convent FCJ Site, Val Plaisant [1–73 Convent Ct, David Pl], a1973, 1/13 (73), Regal Construction. Dumaresq St RD Scheme [5–49, 58–102 Hue Ct], a1974, 2/10 (90), Charles Le Quesne. Green St [64–119 La Collette], a1962, 1/15 (56), Charles Le Quesne. Windsor Rd RD Scheme, Phase 1 [Caesarea Ct, Val Plaisant], a1967, 1/9 (52), CW Construction (Jersey). St Clement: Le Squez [Maison d'Azette], a1967, 1/6 (18), Jersey Contractors Ltd. Samarès Marsh [Le Marais, Rue de Maupertuis], a1971, 4/15 (224), Sir Lindsay Parkinson.

GAZETTEER II

A Selection of References to Public Housing in the UK from 'National' Periodicals, Chiefly Architectural, *c.*1945–1970

Abbreviations: see General List.

Order of entries: by country/region (see table at beginning of Gazetteer I), authority, and development.

The names in brackets are those of the architect/s; in case of 'in-house' designs by building firms usually only the name of the firm is given. LA = Local Authority architect (or engineer, surveyor, director of housing); in the case of the LCC and GLC the name of the project, job architect, or 'group leader' is given, where known.

Not included here is information contained in lists of awards, such as the Saltire Society Award, the MHLG Housing Award or the exhibitions of drawings at the Royal Academy, London, which were regularly published and illustrated in *B*, *AJ*, *ABN*; nor have we listed accounts of New Towns in the town planning journals.

ENGLAND: EAST ANGLIA

CAMBRIDGE MBC (I. M. Purdy LA): Newtown I Coronation St *Building Design* 21-11-1975 16–17. Cherry Hinton Church End Stage 2 *AJ* 24-1-1973 207–9. Roseford Rd *AJ* 10-4-1968 753–66.

CHESTERTON RDC: Fulbourne (Cambs.) Grindwich Cl *S* 14-5-1966 27 (Wale-Sindall Devs. Ltd, Sawston).

GREAT YARMOUTH CBC: *OAP* 2-1955 72–6; 12-1957 609–10. Friars Ln *AJ* 23-4-1953 517 (C. J. Oliver LA). Shrublands Est *S* 12-9-1947 482 (H. F. Dyson LA with Arcon).

HAVERHILL see LCC.

LOTHINGLAND RDC: *AJ* 6-2-1947 151–2 (Tayler & Green).

MELFORD RDC: *ABN* 11-2-1949 115–19.

NORWICH CBC: (D. Percival LA); M. Horsey & S. Muthesius, *Provincial Mixed Development: Norwich Council Housing, 1955–1973*, Norwich 1986; *OAP* 5-1954 216–19; 4-1962 182–3; *B* 25-5-1956 588–9; *BHPR* 5/6-1960 8–11; *HR* 7/8-1960 112–14; *S* 26-9-1964 39–40. Alderson Pl *HR* 11/12-1961 175–6; *B* 11-8-1961 244–6; *Daily Telegraph* 5-12-1960. Philadelphia Ln *IBSC* 3-1967 83 (Medway).

SOUTH NORFOLK RDC: Ditchingham, Gillingham, Loddon et al.: *B* 22-4-1949 485–8; *AR* 10-1948 181–2; 10-1958 226–36; *ABN* 16-12-1949 627–34; Cleeve Barr 260; *AB* 1-1960 7–9; *JRIBA* 10-1947 607–9; 1-1959 98–9 (H. Tayler & D. Green).

THETFORD SEE LCC.

ENGLAND: EAST MIDLAND

CORBY NTDC: *TPLR* 7-1951 123–31; *AJ* 16-1-1958 92; 6-11-1968 1069–84; 13-4-1968 1133–46; *MJ* 8-5-1959 1291–5; *IBSC* 1-1967 15–19.

DERBY CBC: *BHPR* 5/6-1954 14–18. Castle Hs *MJ* 18-1-1957 127–8 (T. W. East LA).

LEICESTER CBC: *MJ* 28-9-1956 2249–72; *Municipal Review* 2-1960 100–2. Aikman Ave Flats *MJ* 27-8-1954 2006 (Adv) (J. H. Lloyd Owen LA). Aikman Ave Shops and Flats *JRIBA* 3-1959 177 (Symington, Prince & Pike). Beaumont Leys New Town *S* 25-3-1967 31–2. Highfields *B* 24-4-1964 859; *MJ* 24-9-1964 1319; *OAP* 4-1964 417; *AJ* 19-2-1964 407–8; 7-5-1969 1253–64 (S. George, K. Smigielski LA). Rowlatts Hill *HR* 7/8-1963 118–19; *ABN* 20-3-1963 418; *AD* 5-1963 205; *JTPLI* 5-1963 134–7 (K. Smigielski LA). St Matthews *OAP* 12-1963 1225; *AJ* 19-2-1964 407–8; 7-5-1969 1253–64; *IB* 12-1966 28–9; *S* 2-11-1963 1367; *HR* 1/2-1964 17–18 (S. George, K. Smigielski LA). St Peter's RDA Goscote Hs *AD* 8-1966 398–9; MHLG, *Housing for Single People* (Design Bulletin 29 1974) (P. Randall LA).

LINCOLN CBC: Hartsholme Est *AJ* 1-3-1951 276–9 (P. F. Burridge LA).

MELTON MOWBRAY UDC: *ABN* 27-5-1949 468–70.

NORTHAMPTON CBC: *S* 30-7-1956 476; *BHPR* 9/10-1956 11–15; *OAP* 3-1958 112–15; *Building* 7-1950 268–72. Central Area RD St Catherine's Ct *S* 26-8-1961 1053 (B. Bunch). Delapre Rd ('The Builder Low Cost Housing Competition': *B* 23-2-1951 267–85) *B* 23-2-1951 273-5; 9-11-1951 615–20; *S* 17-11-1951 733–4. Eastfield *TPLR* 10-1954 182–94; *AJ* 3-1-1962 13, 24–5; *AR* 7-1954 42; Cleeve Barr 264. King's Heath *AJ* 25-2-1954 251–6 (all J. L. Womersley LA).

NOTTINGHAM CBC: Balloon Wood Phase No. 1 *AJ* 9-9-1970 571 (YDG; see Note 30, Chapter 11). Clifton Est *BHPR* 7/8 1953 15–23 (H. Lawson LA). Caunton Ave *AD* 9-1967 414 (D. Jenkin LA). Gregory St Kildare Rd *AR* 1-1966 45; *AD* 6-1966 271 (D. Jenkin LA). Helston Dr Strelley *S* 26-3-1971 28–9 (System 3 Drury Bldg Service Ltd). Highhurst Ct *Municipal Review* 5-1962 327. Old Basford *S* 22-4-1967 27 (Bison). Willoughby St *AJ* 1-10-1969 810–12 (D. Jenkin LA).

ENGLAND: GREATER LONDON: GENERAL

LCC, *London Housing*, 1937; *CLP*; *JRIBA* 1-1946 88–9; *AD* 5-1949 222–30; 11-1949 229–32; *Building* 12-1948 394–407; *AR* 5-1949 222–30; *A Survey of Post-War Housing of the LCC, 1945–1949*, 1949; *B* 4-5-1951 614–17; *ABN* 30-8-1951 236–8; *AD* 1-1952 1–3; *AR* 4-1952 257–60; 11-1956 303–23; *BHPR* 3/4-1953 8–9; *TCP* 8-1953 376–83; *AB* 5-1957 171–81; *JRIBA* 3-1965 126–31; 8-1967 325–30; *AD* 6-1961 234ff; *ABN* 17-3-1965 596–8; *AJ* 18-3-1970 656–8; LCC, *200,000 Homes*, 1962; LCC, *Housing Services Handbook*, 1962; GLC, *Housing Services Handbook*, 1966; GLC, *Housing and the GLC*, 1967; GLC, Dept. of Architecture and Civic Design, *Greater London Council Housing Estates, 1969–1972*, *c.*1972; GLC, *Homes for London: The Work of the LCC, GLC*, 1974; GLC, *Home Sweet Home: Housing designed by the LCC and GLC Architects, 1888–1975*, 1976. B. Cherry & N. Pevsner, *The Buildings of England* (new ed.), London 2: South, 1983; London 3: North-West, 1991; A. Saint, *Politics and the People of London: The LCC, 1889–1965*, 1989. A. N. Marmot, 'How High Should They Live? The Role of Archhitects and Planners in the Design of High Rise Housing in England and Wales, 1945–1980', PhD UC Berkeley, 1984; N. M. Day, 'The Role of the Architect in State Housing: A Case Study of the Housing Work of the LCC, 1939–1956', PhD Warwick Univ., 1988. See Notes, Chapter 15.

GREATER LONDON: CORPORATION OF LONDON

Avondale Sq Old Kent Rd *B* 22-4-1960 786; *IB* 11-1959 22–4 (Sir L. Keay, B. G. Duckett & Ptrs). Barbican RD *AD* 5-1956 155; *B* 3-2-1956 194; 1-6-1956 622–3; *ABN* 31-5-1956 581; 7-6-1956 620–3; *MJ* 8-6-1956 1319–23; 9-3-1962 690–3; *S* 2-6-1956 371–2; 2-10-1970 38–43; *AJ* 7-6-1956 632–6; *Decade* 236–48; *AR* 8-1973 68–91. Golden Ln *B* 29-2-1952 325–8; 7-3-1952 371–80; *ABN* 6-3-1952 274–89; 13-3-1952 316–17; 17-5-1956 526–7; 29-8-1957 271–89; 8-10-1958 (Adv); *MJ* 7-3-1952 488–91; *AJ* 6-3-1952 298–310; 20-3-1952 354, 358–62; 11-7-1957 78–9; *AD* 7-1953 190–2; 9-1956 295–9; 6-1958 234–5; *AR* 1-1954 51–3; 1-1956 34–7; *AB* 6-1956 209–17; *JRIBA* 9-1956 462; *HR* 9/10-1957 56–8; *B* 15-11-1957 850–6; *AAJNL* 4-1957 214–23; *AJ* 20-6-1957 911–15; *AD* 9-1956 294–9; *ABN* 19-8-1957 271–89, 296; *AR* 6-1957 414–26; *AB* 8-1957 301–9; 11-1957 420–5; *AJ* 11-7-1957 78–9; Cleeve Barr 153–5; *AJ* 16-1-1958 100–2; 29-12-1960 931–42; *Arup Journal* 12-1970 19–23 (Chamberlain, Powell & Bon/O. Arup Ptrs eng.). Golden Ln Ext [Goswell Rd] *AR* 12-1962 391–7 (Chamberlain, Powell & Bon). Lammas Green (Sydenham Hill) *B* 22-11-1957 906–7 (D. H. McMorran). Lancaster St Flats (in Southwark) *MJ* 13-5-1955 1297–8 (V. Wilkins).

GREATER LONDON: PRE-APPIL 1965 BOROUGHS AND DISTRICTS

ACTON MBC: Western Ave Glendun Rd *B* 1-8-1952 165–8 (C. Culpin).

BARKING MBC: *OAP* 8-1963 745–6. Linton Rd *B* 22-9-1961 537 (M. Maybury LA). Longbridge Road *OAP* 6-1952 264-7. Thamesview *S* 29-6-1957 699–700; *B* 16-8-1957 281; *OAP* 7-1957 327–30; *MJ* 9-8-1957 1685–6; *ABN* 16-10-1957 510–13; *Concrete* 10-1957 353–6 (C. C. Shaw LA).

BATTERSEA MBC (MET.): Battersea Pk Rd *Building* 24-6-1966 109–10 (Emberton, Franck & Tardrew). Henley St *S* 3-7-1965 41 (R. E. Carter). Lane Ct *AJ* 1-2-1951 150 (H. Atkinson). Rollo St *OAP* 12-1953 576–80 (Howes & Jackman). Stanmer St Balfern ST *AJ* 17-6-1954 744 (Davies & Arnold). Tyneham Rd *ABN* 30-7-1948 99. Winstanley Rd Livingstone Rd [Walk] Section *AR* 1-1964 29; *ABN* 17-3-1965 503; *IB* 3-1965 42, 9-1965 28–33; *IBSC* 4-1965 83; *AJ* 30-11-1966 1339–58; *AR* 11-1967 376; SBD 9-1967 19–22; *AJ* 6-8-1969 312–15; DoE, *The Estate Outside the Dwelling* (Design Bulletin 25 1972); *Decade* 88–99 (George, Trew & Dunn). Wilberforce Est *B* 3-6-1949 680–6 (C. H. Walker LA with J. Burnet & Tait).

BECKENHAM MBC: Chulsa Est *MJ* 8-10-1958 2413–18; Cleeve Barr 215 (J. Bywaters).

BEDDINGTON & WALLINGTON MBC: Rectory Ln *AR* 10-1953 251; *AJ* 7-5-1953 584–7 (Pite, Son & Fairweather).

BETHNAL GREEN MBC (MET.): *Concrete* 1-1963 36; *East London Papers* Vol. 4 No. 1 4-1961 3–13. Bacton St *SBD* 3-1967 78 (Yorke Rosenberg & Mardall). Claredale St: *AD* 4-1956 125–8; *S* 16-2-1957 147–8; *AD* 2-1958 62–5; *MJ* 19-8-1958 2184; Cleeve Barr 149; *CQ* No. 41 4/5-1959 7–9; *AR* 5-1960 304–12; *AD* 6-1960 244–7; *AAJNL* 2-1962 172–86 (Fry, Drew, Drake & Lasdun). Cranbrook St *Concrete* 1-1963 36; *ABN* 17-3-1965 499 (Skinner & Bailey). Hackney Rd Ravenscroft Rd *B* 3-1-1964 9–10 (Yorke, Rosenberg & Mardall). Kirkwall Pl *AR* 1-1954 57–8 (Yorke, Rosenberg & Mardall). Roman Road (No. 2) Market & Flats *B* 25-12-1959 930–3 (Yorke, Rosenberg & Mardall). Shipton St W. Fenn Hs *AB* 12-1957 485 (Skinner, Bailey & Lubetkin). Usk St *AR* 1-1954 49–50; *AD* 4-1956 125–6. Cleeve Barr 149 (Fry, Drew, Drake & Lasdun).

BRENTFORD & CHISWICK MBC: St Thomas's Est *MJ* 7-8-1953 1691–4 (R. Humphreys LA). Boston Manor Rd, rear of, Flats & Mais. *AB* 8-1959 298–301 (J. R. Harris).

BROMLEY MBC: London Rd Flats *B* 22-9-1950 327–9 (Dalgliesh & Pullen).

CAMBERWELL MBC (MET.): *AJ* 25-10-1961 743–4; *AD* 12-1963 579–88; *AR* 11-1963 317–23, 367; *ABN* 30-3-1951 361–7. Acorn Place *AJ* 25-10-1961 743–5; 26-8-1964 476–7; *AR* 11-1963 317–23; *ABN* 3-7-1963 9–15; *AD* 12-1963 579–88; *OAP* 1-1966 16–17; DoE, *Estate Outside the Dwelling* (Design Bulletin 25 1972) (F. O. Hayes LA). Bentons Ln *ABN* 9-10-1952 436–9 (Booth & Ledeboer). Bonamy St (Delaford) Devt *AD* 9-1967 421; *AJ* 26-8-1964 476–7; 3-9-1969 573–6; *AR* 1-1965 42; 11-1967 387–8; *IB* 1-1966 15–18; *ABN* 21-2-1968 284–91; *OAP* 4-1971 Sceaux Est [Gdns] *AR* 3-1960 201–3; *AJ* 7-1-1960 30; 26-8-1964 476–7; *CQ* No. 46 7/9-1960 36–7; DoE, *Estate Outside the Dwelling* (Design Bulletin 25 1972) (F. O. Hayes, H. P. Trenton LA).

CHELSEA MBC (MET.): Cheyne Walk Brunel Hs *AB* 5-1956 188–90 (E. Armstrong). Cremorne Est *AD* 5-1954 149-51; *AR* 8-1953 78–83. King's Road SW10 *AJ* 27-8-1953 256–9. New Pond Hs *ABN* 6-8-1948 11–13; *AD* 11-1948 235 (all E. Armstrong). Wandon Rd King's Rd (Fulham Rd) *AJ* 11-4-1962 781–96 (Bridgwater, Shepheard, Epstein). Wiltshire Cl *AAJNL* 4-1950 190–3; *ABN* 12-5-1950 493–8; *AJ* 11-5-1950 580–7 (E. Armstrong).

CRAYFORD (KENT) UDC: Hampton Hs *MJ* 26-8-1955 2288–9.

CROYDON CBC: Elmwood Rd *B* 19-9-1958 493 (L. C. Holbrook).

DAGENHAM MBC: Heath Pk Est *AR* 4-1952 227–30; *AJ* 29-11-1951 645–50; *ABN* 29-11-1951 623–31 (Norman & Dawbarn).

EAST HAM CBC: Priory Ct Priory Rd *MJ* 31-7-1953 1649–52; *AJ* 13-8-1953 193 (J. E. Austin, C. H. Doody LA). Out-County: Brentwood: Ingrave Est *MJ* 12-7-1953 1261 (A. W. Walls LA).

EDMONTON MBC: Angel Rd South Block A *IB* 9-1964 26–9 (H. Wilkinson LA).

FINSBURY MBC (MET.): *OAP* 11-1967 1623–7; *Building* 7-6-1968 99–100. Lubetkin's work: J. Allan, *Lubetkin*, 1992; P. Coe & M. Reading, *B. Lubetkin and Tecton*, 1981; J. Allan, *Lubetkin*, 1992; *AD* 5-1951 132–41; *AR* 10-1952 241–9; 7-1955 37–44. Busaco St Priory Green Est *Building* 5-1946 153; *AD* 6-1946 146; *AJ* 16-1-1947 72; *AD* 12-1951 354–6; *AJ* 9-10-1952 433–42; *MJ* 31-10-1952 2074–7; *AR* 10-1952 241–50; Cleeve Barr 156–7 (Tecton (Skinner, Bailey & Lubetkin)). Finsbury Est Michael Cliffe Hs P. Colman Hs C. Townsend Hs *Building* 7-6-1968 99–100 (Franck & Deeks). Galway St Brunswick Cl St John Street *JRIBA* 1-1957 108–9; *ABN* 31-12-1958 871–7; 17-8-1960 217–18; *OAP* 4-1959 163–5; 4-1961 105–8; *B* 7-4-1961 644–5; 20-3-1964 597; *AD* 5-1961 179 (Emberton, Franck & Tardrew). Holford Square *AR* 6-1952 403–6; 2-1955 89–92; *MJ* 18-2-1955 459–63 (Tecton (Skinner, Bailey & Lubetkin)). Killick St *AR* 7-1951 50; *AJ* 5-4-1951 430–2 (J. Emberton). King Sq *IB* 1-1963 26–31; 20-3-1964 597–9; *B* 20-3-1964 597–600; *OAP* 8-1965 1093–7 (Emberton, Franck & Tardrew). Old St Stafford Cripps Est *AJ* 25-2-1954 246–8; *AB* 2-1954 52–4; *MJ* 12-2-1954 315–18; *OAP* 4-1959 163–5; 3-1961 105–8 (Emberton, Franck & Tardrew). Rosebery Ave Spa Green Est *ABN* 2-8-1946 69–73; 20-5-1949 442–6; *Building* 10-1946 274–7; *B* 2-8-1946 112–15; 13-5-1949 589–93; *AD* 11-1948 237–8; *AJ* 12-9-1946 191–5; 26-4-1951 517–22; *CQ* No. 11 5/7 1951 2–5; Cement and Concrete Association, *Spa Green Estate*, 1952; *AY* Vol. 4 1952 160–3; Cleeve Barr 158; *AR* 3-1951 138–45 (Tecton (Skinner, Bailey & Lubetkin)).

FRIERN BARNET UDC: Alexandra Rd Muswell Hill *ABN* 8-7-1949 33–5. Chelwood Friern Ct *ABN* 27-8-1953 243–9; 8-8-1957 190–1 (K. R. Smith & W. W. Atkinson). George Cres *ABN* 10-4-1952 423–5 (K. R. Smith & W. W. Atkinson). The Hollies Oakleigh Pk Ave *ABN* 21-8-1952 228–34; *MJ* 12-6-1953 1260 (K. S. Smith of Smith and W. W. Atkinson).

FULHAM MBC (MET.): Lillie Rd South Area Clement Attlee Ct *B* 29-11-1957 956–9 (J. Pritchard Lovell LA). Sulivan Ct Hurlingham Rd *MJ* 30-4-1954 950–7 (J. Pritchard Lovell).

GREENWICH MBC (MET.): Beaconsfield Cl *B* 25-12-1953 999–1002 (C. H. Jennings LA). Cherry Orchard Est *B* 3-10-1947 374–7; 10-12-1948 680–2 (C. H. Jennings LA). Coldbath St *B* 18-4-1958 712 (F. H. Clinch LA). Church Ln/Charlton Rd *OAP* 3-1956 126 (T. P. Bennett & Son). Paragon Pl *OAP* 8-1956 379–82 (A. E. Richardson & E. A. S. Houfe). Vanbrugh Pk *AD* 11-1965 550–4; *AR* 11-1965 326–32 (Chamberlin, Powell & Bon). Westbrook Rd *B* 5-10-1956 576–7 (F. H. Clinch LA).

HACKNEY MBC (MET.): *S* 3-6-1949 330; *IB* 2-1959 18–25. Beecholme Est *AR* 10-1953 239–41; *ABN* 21-1-1954 67 (F. Gibberd). Cazenove Rd G. Downing Est *MJ* 10-9-1965 3059–61. Craven Cl Clapton *MJ* 14-10-1955 2775–81 (H. Moncrieff). Cricketfield Rd *B* 7-11-1958 776–7 (Burley & Moore). Ickburgh Est and Keir Hardie Est *MJ* 25-6-1954 1429–34 (J. A. Clark LA). Presbury St Nye Bevan Est *Journal Royal Society for the*

Promotion of Health 83 1963 240. Rectory Rd The Beckers *B* 14-7-1961 62–4 (F. Gibberd). Sandringham Rd *ABN* 24-9-1948 252–5; *AJ* 30-9-1948 309–15; *AD* 11-1948 234 (Norman & Dawbarn). Shacklewell Rd Somerford Grove *OAP* 7-1945 340–3, 353; *AR* 9-1949 144–52; *AD* 6-1946 149; *AR* 9-1949 144–52 (F. Gibberd). Tottenham Rd Kingsgate Est *AR* 4-1961 272–5; *B* 23-6-1961 1190–3 (F. Gibberd). Wilton Est Greenwood Rd *AD* 12-1948 259; *ABN* 6-10-1950 383–91 (Norman & Dawbarn).

HAMMERSMITH MBC (MET.): Albion Gdns *AD* 5-1956 164–5; AY Vol. 7 1956 162–5 (H. T. Cadbury Brown). Blythe Rd Springvale Est Blocks 2/3 *MJ* 18-4-1952 804 (J. E. Scrase LA). Caroline Est Ext *AR* 1-1954 50–1 (Armstrong & McManus). 91 Coningham Rd Percy Rd Shepherd's Bush *AR* 9-1954 186; *AJ* 17-6-1954 742–4 (Dugdale & Whitaker). Melrose Terr *AJ* 3-2-1955 169–72 (N. Conder).

HAMPSTEAD MBC (MET.): Abbey Est Abbey Rd Belsize Rd *AJ* 17-2-1965 374–5 (Austin-Smith, Salmon, Lord Ptrship). Finchley Rd Harben Rd *AR* 1-1954 58–9 (Norman & Dawbarn). Park Hill Rd *ABN* 18-11-1949 500–3; *B* 21-10-1949 511–14 (D. H. McMorran of Farquharson & McMorran). Shoot-Up Hill Templar Hs *MJ* 27-5-1955 1541–5 (F. Scarlett). Sidney Boyd Ct West End Ln *B* 17-7-1953 100–4; *MJ* 30-1-1953 164–8 (Riley & E. B. Glanfield). Wells Hs Well Walk *JRIBA* 11-1950 20–3 (C. H. James of James & Bywaters).

HARROW MBC: Alexandra Ave *ABN* 21-8-1952 222–7; *AR* 8-1952 82–4 (F. Gibberd).

HOLBORN MBC (MET.): Great Ormond St Area Dombey St *AD* 11-1948 231–2; *AR* 5-1949 233–5; *B* 4-3-1949 267–70; *Industrial Heating Engineer* 5-1948 84–5 (Henning & Chitty). Endsleigh Street [in St Pancras MB] *MJ* 8-4-1955 951–3 (S. A. G. Cook LA). Ormond Cl *S* 14-1-1961 37 (S. A. G. Cook LA). Red Lion Sq *B* 8-7-1955 55–6; *MJ* 7-1-1955 41–4 (S. A. G. Cook LA).

HORNCHURCH UDC: Mardyke Farm Est Rainham *AR* 1965 91 (Wates).

HORNSEY MBC: *S* 19-4-1952 249; *MJ* 23-5-1952 1026–7. Ashford Ave, Wolverton, Wellington *MJ* 8-5-1953 947–9 (B. Bancroft, G. A. Pentecost LA). Haringey Grove *IB* 4-1965 42 (F. Ley LA with Sunley Allbetong). Hillcrest North Hill *B* 8-7-1949 42–5; *AD* 12-1948 261; *OAP* 10-1947 542–9; *AJ* 28-4-1949 383–5 (T. P. Bennett & Son). Mildura Ct *B* 16-4-1948 455–7; *OAP* 2-1948 80–3 (J. H. Melville-Richards LA). Norman Ct Stapleton Hall Rd *B* 24-9-1948 360–1 (J. H. Melville-Richards LA).

ILFORD MBC: Beehive Ln *AR* 5-1953 320; *AJ* 29-1-1953 157–60 (L. E. J. Reynolds).

ISLINGTON MBC (MET.): Chestnuts Highbury Pk *B* 21-1-1948 10–14 (E. C. P. Monson). Canonbury Ct Est *B* 3-9-1948 270–1 (H. C. H. Monson). Bentham Ct Essex Rd *B* 23-9-1949 387 (E. C. P. Monson).

KENSINGTON MBC (MET.): Henry Dickens Ct: [Becher St] *AD* 6-1946 153; *ABN* 19-12-1950 696–8; *AJ* 11-1-1951 42–6 (E. Armstrong); [St Ann's Rd] *AR* 4-1951 250; 8-1953 87–9; *AJ* 27-8-1953 261–4 (E. Armstrong). Portobello Rd *AJ* 3-1-1952 18–21; 27-8-1953 262–5; *AR* 4-1952 261: 8-1953 84–6 (E. Armstrong & McManus). Kensal New Town *AJ* 26-2-1959 327–8; *B* 9-9-1960 457; *AD* 8-1959 A9; 5-1961 257; *AB* 11-1959 423; *IB* 8-1960 14–19 (W. Holford & D. Fraser).

KINGSTON UPON THAMES MBC: Cambridge Gdns *B* 16-12-1949 761–96; *ABN* 30-12-1949 677–80 (S. Clough Sons & Ptrs).

LAMBETH MBC (MET.): *MJ* 20-3-1953 571–5; *JRIBA* 7-1965 350–3. Bentons Ln *ABN* 9-10-1952 436–9 (Booth & Ledeboer). Canterbury Cres *B* 13-9-1957 453; *MJ* 20-9-1957 1999–2003 (H. Moncrieff). Elder Rd *AD* 11-1948 238–9 (Booth & Ledeboer). Denmark Rd Est *ABN* 27-5-1949 464–7; *B* 13-5-1949 594–6 (G. Grey Wornum). Fount St *B* 6-2-1948 164–9; *AD* 11-1948 261 (Howes & Jackman). Knight's Hill *AD* 12-1948 261 (Howes & Jackman). Hartington Rd Stage No. 2 *B* 14-5-1954 844–50 (A. Kenyon). Leigham Ct Rd *B* 28-1-1949 119–26; *ABN* 15-5-1952 573 (W. F. Howard). Studley Rd *MJ* 20-11-1953 2525; 10-1-1958 77–82 (Sir L. Keay & B. G. Duckett Ptrs). Wilcox Rd Wyvil Rd *AD* 12-1948 257; *ABN* 15-10-1948 309 (G. Grey Wornum). Wyvil Rd Wandsworth Rd *ABN* 15-10-1948 309–13; *AJ* 28-9-1950 286–8, 298 (G. Grey Wornum).

LEWISHAM MBC (MET.): Catford Bromley Rd 'Passfields' *ABN* 19-1-1951 62–72; *AD* 1-1951 16–17; *AJ* 8-2-1951 184–90; AY Vol. 4 1952 156–9. Catford Whitefoot Ln Foster Hs *AJ* 11-2-1954 191–5. Catford Bromley Rd Falkland Hs *AJ* 11-2-1954 196–8 (all Fry, Drew & Ptrs). Shackleton Cl Sydenham *B* 27-4-1951 586–7 (M. H. Forward LA).

LEYTON MBC: Livingstone College [Essex Rd] *S* 9-6-1962 765 (Wates). Oliver Cl *AJ* 29-9-1965 727–8 (Wates).

MITCHAM MBC: Pollards Hill *B* 23-4-1948 437–92; *ABN* 12-2-1953 199; *Concrete* 3-1953 121–3 (Collcutt & Hamp).

MITCHAM, SUTTON AND CHEAM UDC: Tadworth Hs Scheme *B* 10-8-1956 226 (C. Culpin).

PADDINGTON MBC (MET.): Bishop's Bridge Road Hallfield Est *AY* Vol. 4 1952 137–43; *ABN* 28-7-1950 99–118; 19-1-1953 135; 18-11-1954 619–26; *AAJNL* 1-1953 110–12; *AR* 11-1954 303–18; *AJ* 11-11-1948 441–4; 3-3-1955 299–307; *AD* 12-1951 354–6; 2-1958 55–69; Cleeve Barr 172 (Tecton (Drake & Lasdun); O. Arup, eng.). Church St Gilbert Sheldon Hs *ABN* 18-2-1954 196–8; *MJ* 16-4-1954 855–8 (R. A. Jensen LA). Fleming Ct St Mary's Sq *ABN* 1-10-1948 266; *B* 22-10-1949 472–75 (W. E. Roberts, R. A. Jensen LA). Fulham Pl *ABN* 7-1-1949 16–20. Leamington Hs *ABN* 9-4-1953 422–4 (R. A. Jensen LA). Peach St *ABN* 16-4-1948 346–9 (Ramsay, Murray & White). St Mary's Sq *AJ* 7-10-1948 331–4 (R. A. Jensen LA).

POPLAR MBC (MET.): *B* 16-6-1950 810–12. Abbott Rd Braithwaite Hs *S* 26-11-1948 633–4; *B* 3-12-1948 652–3 (W. J. Rankin LA). Abbott Rd East India Dock Rd Currie Hs Dunkeld Hs *ABN* 15-5-1952 573; 11-13-1953 283–6; *B* 19-1-1954 213–17; *AB* 2-1954 60–1; *MJ* 12-3-1954 557–60 (Farquharson & McMorran). Mellish St [Orlit Flats] *S* 19-3-1948 154; *B* 19-3-1948 338–9; *AD* 4-1948 79–80; *CQ* No. 4 10-1948 5 (MPBW Arch. Dept) Neigh. No. 10 Poplar East *ABN* 3-12-1948 459–61 (J. Rankin LA).

ROMFORD MBC: Waterloo Rd RDA *S* 27-5-1961 665; *OAP* 6-1961 279 (H. Hurd LA).

ST MARYLEBONE MBC (MET.): Boundary Rd *AJ* 23-9-1954 377–82 (E. Armstrong). Carlton Hill *ABN* 13-10-1955 454–7 (C. Culpin). Church St *B* 5-11-1946 511–3; *JRIBA* 4-1946 228; *AD* 6-1946 150, 165; 11-1948 236; *AJ* 6-1-1949 8; *B* 19-1-1951 100–3 (Easton & Robertson).

ST PANCRAS MBC (MET.): Agar Grove [Town] *AR* 1-1960 57; *AJ* 4-5-1967 1229–44 (J. M. Austin-Smith Ptrs). Allcroft Rd (Gospell Rd Stage 3) *AR* 1-1963 46 (Armstrong & MacManus). Brecknock Rd *AJ* 4-10-1961 517–24 (J. Austin-Smith Ptrs). Burghley Rd *AJ* 8-5-1953 681–2 (Davies & Arnold). Camden Sq *ABN* 3-6-1959 715–19 (J. M. Austin-Smith Ptrs). Cromer St *AJ* 16-1-1947 74; *AD* 11-1948 232; *ABN* 6-5-1949 397–404; *AR* 5-1949 231–2; *AJ* 19-5-1949 453–5; *AY* Vol. 4 1952 148–51 (Henning & Chitty). Hawksley Rd/Ct *B* 22-2-1946 190–1; 10-9-1948 302–6 (Howes & Jackman). Judd St Medway Ct *AD* 8-1955 239–42; *ABN* 2-2-1956 137–44 (Denis Clarke Hall). Lamble St Gospel Oak *ABN* 18-9-1952 343–5; 21-10-1954 485–90; *AJ* 21-10-1954 496–502; *AR* 10-1954 219-21; *B* 26-11-1954 858–61; *AB* 11-1954 410–13 (Powell & Moya). Oakford Rd *AJ* 29-3-1951 400–1 (H. Roberts & Davies); 28-5-1953 681–2 (Davies & Arnold). Oakley Sq *AR* 1-1965 43 (E. Lyons Ptrs). Plender St *ABN* 23-6-1955 (Adv.) (G. Morgan & Ptrs). Regent's Park Area C Osnabrugh St *AR* 6-1956 331; *AJ* 29-12-1955 875–7; 19-1-1956 103; *MJ* 3-2-1956 275–7; *AD* 10-1960 392 (Davies & Arnold). Regent's Park Areas E, F, G *AR* 1-1956 32–4; 8-1960 144–5; *AJ* 13-10-1960 527; 10-10-1962 842; *AD* 6-1961 259 (Armstrong & McManus). Regent Sq *MJ* 19-7-1957 155–8 (Davies & Arnold). St Pancras Way *AD* 6-1946 146–8; 11-1948 233; *B* 12-8-1949 197–202; *ABN* 9-9-1949 242–9; *AR* 8-1949 80–5; 4-1952 227–30; *AJ* 4-8-1949 118–25; 24-1-1952 125–8; *AY* Vol. 4 1952 152–5; Cleeve Barr 184–5 (Norman & Dawbarn). West Kentish Town *OAP* 11-1964 1358–66; 5-1966 695 (Crabtree & Jarosz). See also Holborn.

SHOREDITCH MBC (MET.): Wenlock Barn RDA *B* 23-12-1949 826–7 (J. L. Sharratt LA).

SOUTHGATE MBC: Avenue Flats *AJ* 28-8-1952 254–5 (W. W. Fisk). Bowes Rd *B* 7-7-1961 15–16. Orchard Ct *ABN* 21-8-1952 235–8 (W. W. Fisk & S. H. Fisk). Palmer's Rd Phase I ['New Southgate'] Highview Gdns *B* 10-10-1958 609; 16-9-1960 505–12; *HR* 11/12-1960 189–90; *OAP* 10-1960 449–50; *AD* 10-1960 417–18; *AJ* 23-3-1961 429–40 (D. Du R. Aberdeen).

SOUTHWARK MBC (MET.): Borough High St 1–52 Redman Hs *ABN* 6-11-1968 69–71. Kennington Theatre Site Conant Hs Kennington Pk *AJ* 24-

2-1949 175; *B* 12-5-1950 629–31 (Howes & Jackman). Portland St *IB* 9-1966 27 (F. O. Hayes LA). St Agnes Pl *B* 16-1-1948 84–5 (Howes & Jackman).

STEPNEY MBC (MET.): Bede Rd (Lewey Hs Bow Common Ln) *Architect* 10-1972 77–80.

STOKE NEWINGTON MBC (MET.): Crawshaw Hs Clissold Cres Manor Rd Portland Rise Vivian Hs Eade Rd *MJ* 10-12-1954 3113–17 (Howes & Jackman). Hawksley Ct Est Albion Rd *B* 10-9-1948 300–6; *AD* 11-1948 239–40 (Howes & Jackman).

SUTTON & CHEAM MBC: Chaucer Rd *IBSC* 6-1964 125; *S* 19-6-1965 25 (Gaz. I). Tadworth *MJ* 26-6-1953 1370–1 (C. Culpin Ptrs).

TOTTENHAM MBC: Albert Rd Richmond Rd *Municipal Review* 11-1964 687.

TWICKENHAM MBC: Butts Farm Est *S* 3-7-1954 555 (A. S. Knolles).

WALTHAMSTOW MBC: *ABN* 24-4-1952 491–7. Chingford Rd *B* 20-2-1953 308–9 (F. G. Southgate LA). Countess Rd Priory Ct *Building* 6-1948 172–5; *B* 16-4-1948 458–64; *AD* 11-1948 242; *AR* 8-1948 55–9; *ABN* 7-5-1948 418–26; *S* 30-4-1948 221; *CQ* No. 3, 7-1948 22–5; Cement and Concrete Association, *Priory Court*, 1949; Cleeve Barr 191 (F. G. Southgate LA). Lea Bridge Rd *B* 11-4-1958 668–9 (F. Greenwood). Oakhill Ct *ABN* 24-4-1952 491–3; *B* 27-2-1953 337–8 (F. G. Southgate LA).

WANDSWORTH MBC (MET.): *ABN* 26-9-1947 246-54. Albert Dr Wimbledon *AR* 11-1956 313. Brixton Hill *AJ* 16-1-1947 73; *AR* 12-1954 393–4 (C. Culpin). Clapham Common South Side *AJ* 20-4-1950 486–9 (W. H. Beesley). Clapham Pk *Concrete* 1-1954 59 (Harold, Baily & Sutcliffe Assoc). Edgcombe Hall Beaumont Rd ['West Hill'] *AR* 1-1958 73; *ABN* 30-6-1965 1219–23; *IB* 5-1960 14–15 (C. Culpin). Heslop Ct *ABN* 27-4-1951 482 (Poulton & Freeman). Notre Dame Est *AJ* 25-10-1951 510: *B* 27-6-1952 965–9 (C. H. James). Roupell Pk Est Brixton Hill *AJ* 20-4-1950 490–4; 5-8-1954 159; *MJ* 22-11-1957 2547–9 (C. Culpin). West Hill Est Putney *AR* 11-1958 331–2; *B* 22-5-1953 793; 13-3-1959 491–5; *AJ* 10-1-1957 49–50; Cleeve Barr 198 (Sir L. Keay, B. Duckett).

WEMBLEY MBC: Forty Ave Flats *B* 2-12-1949 733–6 (R. Atkinson). Sudbury Heights Ave *IBSC* 1-1965 55 (Bison).

WEST HAM CBC: *AJ* 27-9-1956 451–68; *AR* 1-1964 19. Boundary Rd *OAP* 10-1965 1417–27 (Booth, Ledeboer & Pinckhead). Claremont Est Forest Gate *AJ* 17 10-1957 595–606; 16-1-1958 103–4 (T. E. North LA). 'Family Houses I' Ravenscroft Rd *B* 14-2-1964 323–4; *Building* 12-9-1969 127–9; *AR* 1-1964 17; *IB* 2-1964 34; *OAP* 4-1964 405–81; *AJ* 28-10-1964 1001–12; *AD* 8-1966 384-7; *IBSC* 10-1969 46–9; *Family Houses at West Ham*. (Design Bulletin 15 1969); *Decade* 41; see also Notes 4, 5, Chapter 22 (MHLG: A. Cleeve Barr, later H. Whitfield Lewis, O. Cox, with T. E. North LA). Fife Rd Queen Mary Rd *OAP* 10-1965 1417–27 (Booth, Ledeboer & Pinckhead). Henniker Rd [Leyton Rd] *HfF* 115–21. Eastwood Rd Barnwood Rd North Woolwich Rd *Building* 16-6-1967 160 (Stillman & Eastwick-Field).

(CITY OF) WESTMINSTER MBC (MET.): Berwick Street Soho Kemp Hs *HR* 11/12-1959 195–6; *OAP* 4-1960 157; *AJ* 18-10-1961 676–87; *ABN* 31-1-1962 172 (Riches & Blythin). Ebury Bridge *ABN* 16-5-1956 634–9 (Riches & Blythin). Hide Pl [HideTower] *AD* 6-1958 237; *HR* 3/4-1958 40–8; *JRIBA* 3-1962 86–98; *AR* 1-1959 64–5; *AD* 12-1960 486; 6-1961 258; *AJ* 20-2-1958 282–3; 23-6-1960 973–6; 18-8-1960 244–9; 20-10-1960 585–9; 5-1-1961 20–5; 2-3-1961 327–32; 18-5-1961 735–40; 7-2-1962 311–18; *S* 20-1-1962 65–6; *HfF* 115–21 (Stillman & Eastwick-Field). Lillington St *B* 28-7-1961 151–61; *AJ* 2-8-1961 156ff; *ABN* 2-8-1961 160–70; *AR* 1-1965 39; 11-1967 380; 4-1969 281–6; 8-1970 165–8; *AJ* 1-10-1969 813–15; *OAP* 11-1969 1344–7; *Brick Bulletin* 11-1971 15–21; *AJ* 11-9-1968 554; 12-1-1972 56–8; 30-4-1975 917–25; 1-12-1976 1031–9; *Decade* 229ff; *Darbourne & Darke*, exh. cat. RIBA Heinz Gallery London 1977 (Darbourne & Darke). Pimlico, Churchill Gdns *ABN* 24-5-1946 122–7; 31-5-1946 138–9; 8-12-1950 607–18; *AJ* 30-5-1946 411–13; *AAJNL* 6/7-1946 10–11; *AY* Vol. 2 1947 140–2; *AD* 11-1948 241; *AAJNL* 4-1949-50 190–1; *AJ* 17-4-1947 317–20; 12/19-10-1950 329; 7-12-1950 473–4, 491–2; 18-1-1951 71; 13-12-1951 709–12; *Concrete* 8-1950 283–9; *HR* 11-1951 16; *AD* 1-1951 8–17; *AR* 2-1951 71; *JRIBA* 11-1951 14–17; *B* 26-9-1952 429–32; *CQ* No. 13 1/3-1952 30–6; *MJ* 4-4-1952 714–15; 3-10-1952 1844–7; 18-12-1953 2761; *AJ* 2-10-1952 406–14; *Building* 11-1952 411–19; *AD* 8-1953 209–27; *AR* 9-1953 176–84; *AJ* 12-8-1954 189–94; *AY* Vol. 4 1952 144–7; *AR* 8-1954 79–83; Cleeve Barr 206; *B* 10-3-1961 440ff; *AJ* 24-10-1962 967–9 (Powell & Moya).

WILLESDEN MBC: ABC Cinema Site [Tolgate Hs] *S* 2-11-1963 1367 (Emberton, Franck & Tardrew). Canterbury Rd W. Dunbar Hs *S* 22-9-1962 1173–4. South Kilburn Chichester Rd Blocks F, G *B* 9-6-1961 1084–7 (A. M. Foyle). Shoot-Up Hill *B* 1-12-1957 218; *ABN* 31-12-1958 878 (J. Emberton).

WOOLWICH MBC (MET.): St Mary's CDA *B* 30-6-1961 1282; *AR* 1-1959 13; *S* 20-5-1961 654–5; *Keystone* Summer 1961 8–11; *OAP* 6-1961 160–2 (Norman & Dawbarn).

GREATER LONDON: LONDON COUNTY COUNCIL (TO 1965)

(Director of Housing: Cyril H. Walker 1945–9; Principal Housing Architect: M. J. Whitfield Lewis 1949–59; Kenneth Campbell 1959–74; the LA architects mentioned below were the project architects, job architects or 'group leaders'.)

Housing according to Borough Location:

BATTERSEA MB: Aegis Grove; Tidbury St *AR* 8-1963 144; *IBSC* 10/12-1963 27–8 (Reema).

BETHNAL GREEN MB: Angrave St *Observer* 28-2-1960; *OAP* 4-1962 175–7 (K. Grieb LA). Bandon Rd *AJ* 28-2-1952 175–9 (DeMetz & Birks). Minerva Est *ABN* 14-3-1947 169–76; *B* 7-3-1947 218–20; 23-4-1948 480; *AJ* 27-3-1947 253–6; 29-4-1948 391–3; *S* 21-3-1947 159–60; *Concrete* 4-1947 16–19; *CQ* No. 1 7-1947 133–8 (C. H. Walker LA). Park View Est *AJ* 28-2-1952 275–9 (DeMetz & Birks). Wellington Est Mowlem St *AR* 11-1956 310.

BERMONDSEY MB: Abbeyfield Rd *AR* 1-1965 56 (D. F. Grove LA). Brandram's Works Site, Neptune St (Canada Est) *AR* 1-1962 44–5; *AJ* 3-2-1965 305–16; *OAP* 1-1966 75–7; *Building* 28-7-1967 81–4; *AR* 11-1967 374–5; *AJ* 6-8-1969 316–18; DoE, *Estate Outside the Dwelling* (Design Bulletin 25 1972); *Decade* 79 (C. Lucas, P. Bottomley, J. Robinson LA). Rotherhithe New Rd [Bermondsey Old Manor] Blocks A, C (described with Silwood Est) *AJ* 27-11-1958 799; 17-11-1960 715; *OAP* 12-1960 548 (E. E. Hollamby LA).

CAMBERWELL MB: Champion Hill East Dulwich Est *AB* 4 1954 134–7 (G. Morgan Ptrs). Champion Pk Est *ABN* 19-1-1956 76; *B* 3-2-1956 195–6 (H. R. E. Knight LA). Kingswood Est Dulwich *B* 6-6-1952 841–5 (C. H. Walker LA). Picton St *ABN* 10-11-1955 579–87; *B* 11-11-1955 804–6; *AJ* 10-11-1955 637–45; *JRIBA* 12-1955 56–9; *OAP* 12-1955 624–7; *MJ* 11-11-1955 3063–7; *Prefabrication* 1-1956 113–19; *AB* 2-1956 64–8; *AAJNL* 6-1956 22–4; *AR* 1-1956 36–8; *AJ* 24-1-1957 135–6; *S* 26-1-1957 73–6; *AD* 2-1957 35–7; 4-1957 113–14; 1-1959 8; *B* 25-1-1957 197–200; *AB* 5-1957 190–1; *AJ* 3-4-1958 493–8; *Prospect* Vol. 2 Autumn 1958 16–23; Cleeve Barr 150 (A. Cleeve Barr, H. G. Gillett LA). Willowbrook Rd *OAP* 1-1966 78–9 (S. J. Follett LA).

DEPTFORD MB: Czar St (Sayes Ct; partly in Greenwich) *AJ* 14-5-1959 749; *BHPR* 5/6-1959 5. Royal Victoria Yard (Pepys Est) *AR* 5-1961 178; 11-1967 377–8; *S* 22-4-1961 505; *AJ* 13-4-1961 529; *ABN* 12-4-1961 529; *OAP* 4-1961 181–2; *AJ* 28-2-1962 444, 453–60; 28-1-1970 201; 14-4-1982 51–2; GLC, *Pepys Est*, 1969 (H. R. E. Knight, P. A. Westwood, D. Gregory Jones et al. LA).

FINSBURY MB: Banner St, Bunhill Fields *OAP* 11-1958 515; *S* 26-1-1963 114; *AJ* 1-10-1969 816–18.

GREENWICH MB: Brooklands Pk *B* 10-10-1958 606–7 (J. M. Bridges LA). Creek Rd Norway St Trafalgar Rd *AR* 1-1965 47 (J. Gowan). Shooters Hill Rd *AJ* 27-8-1959 107; *OAP* 9-1959 407; 1-1966 81 (A. Boyd, C. T. Banham LA).

HACKNEY MB: Bentham Road *AR* 1-1955 30–2; *AD* 5-1954 152–5; *B* 24-9-1954 491–4; *MJ* 9-7-1954 1551–5; *Prospect* Vol 2 Autumn 1958 16–23; *IB* 2-1959 18–25; see also Loughborough Rd below (C. G. Weald; C. St J. Wilson, P. J. Carter, A. H. Colquhoun, J. F. Metcalfe, A. H. R. Wetzel, I. Young LA). Frampton Pk Ext *AR* 1-1959 69 (E. Lyons). Gascoyne RD *B* 9-4-1948 428–9 (C. H. Walker LA). Kingshold Est King Edward's Rd *B* 26-11-1948 622–4; *S* 19-11-1948 616 (C.H. Walker LA).

HAMMERSMITH MB: Queen Caroline St *Concrete* 7-1950 247–8 (C. H. Walker LA).

HAMPSTEAD MB: Ainsworth Est Boundary Rd *B* 19-3-1954 504–8 (Anderson, Foster & Wilcox). Studholme Ct *MJ* 28-10-1955 2921–4.

ISLINGTON MB: Highbury Quadrant *ABN* 14-5-1953 570–3; *OAP* 6-1953 293–4; Cleeve Barr 162 (E. Stevenson, B. Adams et al. LA). Tufnell Pk Est Ext *B* 12-12-1947 675–7 (C. H. Walker LA).

KENSINGTON MB: Tor Gdns Campden Hill *AJ* 30-9-1954 403 (R. Knight LA).

LAMBETH MB: Baylis Rd *AR* 1-1963 44; *AJ* 4-8-1965 275–86 (Stillman & Eastwick-Field). Brandon Estate, see Southwark. Cedars Rd (beg. 1961) *AR* 11-1967 382–3; *ABN* 27-3-1968 484–91; *OAP* 4-1971 282–3 (C. Lucas LA). Loughborough Rd *S* 26-7-1952 470; *MJ* 8-8-1952 1476–9; *B* 25-7-1952 122; *AD* 8-1952 237; *AJ* 7-8-1952 157–8; 21-8-1952 227; *Observer* 20-7-1952 8; *AB* 9-1955 342–6; *AR* 11-1956 314–15; 1-1959 21; *ABN* 4-6-1958 736–42; *CQ* No. 28 1/3-1956 12–15; *AY* Vol. 7 1956 155–65; Cleeve Barr 167; MHLG, *Families Living at High Densities* (Design Bulletin 21 1970) (C. G. Weald, H. J. Hall, G. M. Sarson, S. J. Howard. A. A. Baker, C. A. St J. Wilson, P. J. Carter, A. H. Colquhoun LA) Robsart St *AD* 12-1959 A7. St Matthew's Rd *OAP* 8-1958 363 (H. V. Abbott, D. T. Grove). Tanswell Est Ext Bayliss Rd *AJ* 4-8-1965 276–7 (Stillman & Eastwick-Field).

LEWISHAM MB: Dacres Rd *AJ* 15-8-1962 439–42; *OAP* 1-1965 54–60 (H. R. E. Knight LA). Derby Hill *AD* 6-1961 255. Flower [Hs] Est Catford *B* 18-3-1949 340–1; *ABN* 4-11-1949 (Adv); *Concrete* 6-1950 243–7 (C. H. Walker LA with C. H. Howard). Hillcrest Rd *IB* 5-1963 35 (W. Holford Ptrs). Silverdale *ABN* 18-2-1959 216–18; *OAP* 4-1959 169–71 (A. J. Booth, D. C. Streatfield LA).

PADDINGTON MB: LCC, *LCC Housing in Paddington*, 1964. Warwick Cres/Est *AR* 1-1959 10–11; *IB* 10-1962 34; 8-1963 28–9; *MJ* 9-11-1962 3436; *B* 4-9-1964 485; 7-12-1962 1121–2; *ABN* 12-8-1964 331; 30-3-1966 569–72; *HR* 7/8-1966 137–41; *S* 27-10-1962 1309–10; 27-7-1963 945; 30-6-1964 81; *SBD* 7-1964 32–4; *Building* 17-3-1967 94–6 (L. Hunter LA).

POPLAR MB: Stepney-Poplar Reconstruction Area, see Stepney. Devons Rd *B* 26-2-1945 134. Lansbury *AJ* 15-6-1950 737–51; 6-9-1951 294–300; *OAP* 8-1950 445–8; *ABN* 9-6-1950; *JTPLI* 11-1950 15–19; 11-1951 9–14; *AD* 5-1950 158–9; *B* 17-8-1951 218; 27-4-1951 578–85; *JRIBA* 8-1951 379–83; 5-1959 248; *AJ* 11-9-1952 308–11; *Building* 1-1952 8–14; 10-1952 369ff; *AR* 2-1953 121; 12-1951 360–7; *MJ* 16-1-1953 78–81; *TPLR* 4-1954 33–51; Cleeve Barr 175; *East London Papers* Vol. 3 No. 2 1960 67–86; J. H. Westergaard & R. Glass, 'A Profile of Lansbury', in R. Glass (ed.) *London: Aspects of Change*, 1964; *AJ* 3-7-1974 23–42; *Building* 14-10-1977 76–7; *HR* 1/2-1978 19–23; *Municipal Review* 1-1978 300–1 (S. P. Abercrombie et al., planners; Bridgwater & Sheapheard, G. A. Jellicoe et al.; C. H. Walker, S. Pinfold et al. LA). Norwood Hs Poplar High St *AR* 1-1965 48 (T. Dannatt). Tidey St *AJ* 12-4-1956 350–1; *ABN* 12-4-1956 360–2; *B* 20-4-1956 350; *OAP* 5-1956 247–9; *MJ* 20-4-1956 885–8; *B* 15-2-1957 315; *S* 16-2-1957 143–4; Cleeve Barr 187 (A. J. M. Tolhurst LA).

SHOREDITCH MB: Pownall Rd Grand Union Canal Marlborough Ave *B* 3-2-1961 393.

SOUTHWARK MB: Brandon Est [partly in Lambeth] *AJ* 5-11-1956 686; *MJ* 25-2-1955 531–5; *OAP* 3-1955 143–6; *NHTPLCY* 1955 112–13; *ABN* 3-1-1957 6–17; 16-3-1960 56 (Adv); *OAP* 1-1958 24–5; Cleeve Barr 165; *AB* 4-1960 130–6; *IB* 2-1960 17; *Concrete* 1-1960 59–64; *OAP* 1-1961 7–11; *AJ* 1-11-1961 825–42; *MJ* 24-2-1961 605–6; LCC, *Brandon Estate*, *c.*1960; *Brandon Neighbourhood*, 1965 (E. E. Hollamby LA). Dickens Sq Harper Rd Rockingham Est Ext *AD* 6-1961 251. Elephant & Castle CDA Draper St *AJ* 23-10-1958 595; *OAP* 11-1958 521; *MJ* 15-1-1965 172. Kingslake Est *B* 22-7-1949 110–12 (C. H. Walker LA). Lawson Est *B* 4-1-1952 9–12; *ABN* 14-2-1952 199–201 (Sir J. Burnet, Tait Ptrs). St George's Rd [Circus] Gaywood St *AR* 1-1963 46–7 (L. Manasseh Ptrs).

STEPNEY MB: *ABN* 15-2-1946 93–5; 22-2-1946 113; 22-12-1955 803–8; *AR* 1-1956 28–9; *AJ* 28-3-1957 457–8; *S* 23-3-1957 261–2; *B* 29-3-1957 596; *OAP* 5-1957 234–6; *JRIBA* 5-1959 246ff; *IB* 2-1961 16–35. Berner St Umberston St *ABN* 19-1-1956 76. Cleveland Est *AD* 6-1961 252. Clive St Mountmorres Rd *AJ* 28-3-1957 452, 457–8, 486; Cleeve Barr 189; *Concrete* 1-1963 37 (Clive St: A. Mackenzie, L. Hunter, G. A. Wenman, R. C. Purdew; Mountmorres Rd: A. C. H. Boyd, L. C. Challener). Crowder St Swedenborg Sq W. Cable St *IB* 8-1964 38–9 (J. E. Reid, D. N. J. Harris LA). Glamis Rd *IB* 12-1962 28–30 (Armstrong & McManus). Hanbury St Old Montague St *AJ* 27-10-1960 628; *OAP* 9-1960 419–20 (G. Jackson, G. B. Finch LA). Kilner St *AD* 9/10-1977 709 (b1959 C. Lucas, M. Richardson et al. LA). Pitsea Est *B* 25-10-1963 829–32 (A. & N. Moffett). St Anne's Neigh. Victoria Pk Brickfield Gdns *AJ* 22-12-1955 836–44; *AR* 1-1956 28–30; *B* 21-9-1956 484; *OAP* 1-1956 30–4 (E. Humphrey LA). St Peter's Hospital Site Fulbourne St Vallance Rd *MJ* 15-6-1956 1387–91; *AJ* 21-6-1956 702–3; *JRIBA* 8-1956 407–11; 5-1959 249; Cleeve Barr 186; *AD* 8-1960 323–4; *B* 6-1-1961 12–14 (Stillman & Eastwick-Field). Tidey St, see Poplar.

STOKE NEWINGTON MB: Woodberry Down *ABN* 18-2-1949 143–9; *B* 12-4-1956 356; *AD* 6-1946 151; *Concrete* 2-1951 65–9 (C. H. Walker; see Note 71, Chapter 16).

WANDSWORTH MB: Argyle Est *AJ* 16-3-1961 391–8 (G. F. Bailey LA). Cedars Rd, see Lambeth. Chartfield Ave *B* 6-6-1952 849–50 (Lanchester & Lodge). Horndean Est Roehampton *AR* 12-1956 423. Kersfield Est *ABN* 11-6-1958 775–8 (H. G. Gillett, A. P. Roach, E. Hartry, P. Butler LA). Lytton Grove Est Cleeve Barr 193. Princes Way Putney Heath Wimbledon Pk (Nos. 2 & 3 Sites: Ackroydon Est) *AJ* 2-12-1948 502; 23-11-1950; 7-12-1950 476–7; 17-5-1954; 24-6-1954 762–8; *ABN* 24-11-1950 566; 8-12-1950 618–22; *B* 24-11-1950 526–8; 8-12-1950 590–1; 16-7-1954 92–4; *MJ* 24-11-1950 2777; 6-8-1954 1805–8; *OAP* 1-1951 30–1; *AD* 1-1951 22; 1-1952 13–16; *AR* 11-1954 222–5; *S* 3-7-1954 552–4; *JRIBA* 8-1955 407–9; Cleeve Barr 209 (H. H. Gillett, C. A. Lucas, A. P. Roach). Portsmouth Rd (Alton East, Roehampton) and Roehampton Ln (Alton West, Roehampton): *AAJNL* 1-1954 250–2; 1-1957 142–8; *AB* 4-1959 129–36; 6-1959 222–7; *ABN* 29-11-1951 617–22; 6-8-1953 148–51; 11-6-1958 767–78; *AD* 9-1953 260; 2-1955 50–1; 1-1959 7–21; *AJ* 8-11-1951 548, 550; 15-11-1951 588–92; 6-8-1953 161; 10-3-1955 344; 25-9-1958 471, 473; 5-11-1959 461–78; 30-3-1977 593–603; *AR* 1-1954 52–6; 11-1956 307–9; 7-1959 21–35; *B* 9-11-1951 621–5; 31-7-1953 164–5; 23-1-1959 174–81; *Building* 12-1951 464–8; 9-1953 340–2; *CQ* No. 28 1/3-1956 8–14; No. 39 10/12-1958 2–9; *HR* 11-12-1956 196–201; *MJ* 14-8-1953 1740–1; *JRIBA* 7-1960 328–9; *OAP* 10-1958 475; *Prospect* Vol 2 Autumn 1958 16–23; *S* 19-10-1957 1093; Cleeve Barr 177; M. J. Thrift, 'Design of the Alton East Estate, Roehampton', Diss. Dept. of Arch. Newcastle Univ., 1974. (Portsmouth Rd/Alton East: R. Stjernstedt, M. C. L. Powell, A. W. Cleeve Barr, O. J. Cox, J. N. Wall, H. P. Harrison LA; Roehampton Ln/Alton West: K. J. Campbell, C. A. Lucas (in charge), J. A. Partridge, W. G. Howell, J. A. W. Killick, S. F. Amis, J. R. Galley, R. Stout LA). Trinity Rd Fitzhugh Est *MJ* 25-2-1955 550 (Adv); *AJ* 3-2-1955 173–8; 22-9-1955 378; 29-11-1956 795–806; *JRIBA* 4-1955 255; *Concrete* 6-1955 233–7; *CQ* No. 28 1/3-1956 16–17; Cleeve Barr 195 (R. Stjernstedt, O. Cox, K. Grieb LA).

WOOLWICH MB: Abbey Est *OAP* 8-1960 364; *S* 2-11-1957 1145 (H. J. W. Broadwater, B. Mendelsohn LA). Abbey Wood Est Cleeve Barr 212. Morris Walk *B* 8-2-1963 279; *IB* 10-1962 36–9; *HfF* 127–34; *S* 16-5-1964 67–8 (J. Whittle, M. Richardson LA). Walpole Est Anglesea Brookhill Rd *OAP* 9/10-1961 410 (A. Boyd LA).

LCC OUT-COUNTY: Haverhill [Suffolk]: *AR* 1-1960 55–8; *ABN* 13-4-1960 475–85; *AJ* 7-11-1962 1067–80; 27-4-1966 1073–84; *MJ* 21-6-1963 1821; *JRIBA* 9-1964 385–92 (J. Stedman, later D. N. Wisdom LA). Merstham *MJ* 9-10-1953 2200 (C. Walker LA). St Paul's Cray [Kent] L. E. White, *Neighbourhood Planning . . . St Paul's Cray Estate . . .*, London Housing Centre 1950 (C. H. Walker LA). Thetford [Norfolk] *S* 5-10-1957 550; 9-7-1966 49–50; *MJ* 11-10-1957 2181–2; *ABN* 13-4-1960 475–85; *OAP* 10-1967 1426–9 (M. H. Hurley, D. F. Row LA). Woking Sheerwater *OAP* 4-1956 172–8 (C. H. Walker LA).

GREATER LONDON: POST-APRIL 1965 LONDON BOROUGHS

BARKING & DAGENHAM LBC: Gascoigne RDA *S* 24-4-1970 29 (Bison).

BARNET LBC: Dollis Valley *S* 22-7-1967 29 (Camus).

BRENT LBC: Chalkhill Rd *SBD* 3-1969 73; *Concrete* 1-1969 24–6; 12-1970 443–7 (A. G. Beckett LA with Miall Rhys-Davies & Ptrs/Bison).

CAMDEN LBC: *TPLR* 1970 15–40; *AD* 3-1972 145–64; *AR* 1-1973 34;

JRIBA 9-1969 366; W. Barnes, *A Century of Camden Housing*, 1972. Alexandra Rd *AD* 11-1969 593–601; *AJ* 14-1-1970 62–4; *AR* 9-1970 180 (S. A. G. Cook, Neave Brown LA). Foundling Est Brunswick Centre *AJ* 28-7-1965 172; *JRIBA* 5-1967 199; *AD* 9-1965 428, 438; 10-1971 605–12; *AR* 11-1967 385; 10-1972 196–218 (P. Hodgkinson, Sir L. Martin). Burghley Rd Hs and Old People's Home *AR* 11-1967 381; 3-1972 151–4; *AJ* 11-9-1968 553; 3-9-1969 567–9; 26-1-1972 189–206; *Decade* 216 (S. A. G. Cook, J. Green, M. Hendy, Michael Smith LA). Chalcots Est *OAP* 12-1965 1727; *HR* 3/4-1966 54–5; *AR* 1-1966 40 (D. Lennon & Ptrs). Curnock St *AD* 9-1967 424–5 (Boissevain & Osmond). Fleet Rd Area 2 *AR* 1-1968 60 (S. A. G. Cook, Neave Brown LA). Highgate New Town *ABN* 17-5-1967 853–60; *AR* 9-1973 158–62; *AD* 3-1972 155–8 (S. A. G. Cook LA). Holly Lodge *AR* 1-1966 40 (S. A. G. Cook LA). Millman St RD *AD* 5-1974 289–90 (Farrell & Grimshaw). Netherwood St *AD* 9-1967 411 (S. A. G. Cook LA).

EALING LBC: Trinity Way East Acton *S* 5-8-1967 34 (T. N. I'Anson, M. Rhys-Davies/Bison).

ENFIELD LBC: (all T. A. Wilkinson LA) Edmonton Green CDA *S* 22-6-1968. Barbot St Lancelot Hs/Brettenham Rd East Phase II Walbrook Hs *S* 20-4-1968 29–31. Goodwin Rd *ABN* 18-10-1967 670. Shepcot Hs Wood Ln *S* 7-10-1967 47.

GREENWICH LBC: Bowling Green Row *AJ* 3-9-1969 580–2. Creek Rd *AD* 1-1969 43–5 (J. Gowan). Glyndon Rd *AJ* 9-7-1969 50–2 (R. L. Gee LA).

HACKNEY LBC: *TCP* 2-1971 127–8. Holly St *ABN* 20/27-12-1967 986; *S* 26-12-1969 16 (J. L. Sharratt with Camus). King Edward's Rd *Building* 6-3-1970 63–8 (Yorke, Rosenberg & Mardall). Holly St *ABN* 22/27-12-1967 986 (J. L. Sharratt LA).

HAMMERSMITH LBC: *AR* 5-1968 385–6. Bluebell Works RDA Wandsworth Bridge Rd *S* 2-7-1966 24 (E. G. Sames LA). Charecroft RD Shepherds Bush Green *MJ* 7-4-1967 933; *S* 10-10-1969 29 (Solomon, Kaye & Ptrs). Masbro Rd *AR* 1-1967 27; *AD* 11-1970 574 (Renton, Howard, Wood Assoc). Reporton Rd Moore Pk Rd *AD* 9-1967 417; *Building* 3-5-1968 93–4; *AJ* 24-7-1968 129–42; *AR* 2-1970 125–8; *Decade* 128 (Higgins, Ney & Ptrs).

HARINGEY LBC: Broadwater Farm (incl. Ziggurat) *AR* 1-1967 24; *AJ* 18-7-1973 114–17; *S* 16-9-1967 39; *Building* 10-11-1967 150 (C. E. Jacob, A. Weitzel LA). Milton Rd N15 *AD* 9-1967 413; *AJ* 11-9-1968 552; 11-6-1969 1584–6; *AR* 11-1967 383; 4-1971 208–12 (C. E. Jacob, later A. Weitzel LA). Park Ln Tottenham *S* 26-10-1968 54 (C. E. Jacob LA). Penbury Rd Tottenham *MJ* 15-10-1965 3499 (C. E. Jacob LA).

HARROW LBC: Resiform Flats, e.g., Goldsmith Cl Rayner's Ln *IBSC* 9-1968 225 (G. J. Foxley LA with Dry Halasz).

HAVERING LBC: Mardyke Farm Est *S* 6-1-1968 27 (D. Pearcy LA).

HILLINGDON LBC: Cranfield Site *AD* 11-1970 575; *HR* 3/4-1971 36–8. Field End Road *AR* 1-1967 33; *CQ* No. 84 1/3-1970 2–7; *HR* 7/8-1970 104–5. Pole Hill Uxbridge *AD* 1-1968 18 (all T. Williams LA with Austin-Smith, Lord).

HOUNSLOW LBC: Beavers Farm Est *S* 12-3-1971 40–1 (C. Culpin Ptrs). Brentford Waterworks Green Dragon Ln *AJ* 3-2-1965 282–3 (M. Lock Ptrs). Ealing Rd Brentford *S* 7-8-1970 27 (G. A. Trevett LA). Rayners Ln *S* 9-4-1971 29–30 (Resiform System).

ISLINGTON LBC: Carleton Rd *AD* 6-1972 354 (C. Cross, J. Dixon, M. Gold, E. Jones). Durham Rd Scheme *S* 30-3-1968 43 (M. Lock Ptrs with Laing). Harvist Est *S* 22-4-1967 27–8 (Bison). Hornsey Ln *AR* 1-1968 70 (A. E. Head LA). Marquess Rd *Building* 2-6-1967 101–2; *AR* 1-1968 64; 9-1974 140–52; *AD* 1-1968 19; *Darbourne & Darke*, exh. cat. RIBA Heinz Gallery London 1977 (Darbourne & Darke). Packington Est *S* 7-1-1967 19–20; *AJ* 3-9-1969 577–9; 9-9-1970 578–9 (H. Moncrieff). Palmerston Flats *Building* 17-7-1970 63–5 (P. S. Boyle). Popham St *AJ* 27-3-1974 662–75 (Andrews, Sherlock & Ptrs). Six Acres *S* 17-5-1969 25 (M. Lock Ptrs).

KENSINGTON & CHELSEA LBC: Kensal New Town Phase 3 Hazlewood Rd *S* 20-5-1967 42 (J. Keable Ptrs). King's Road Moravian Corner *AJ* 4-11-1970 1050–2; *Architect* 2-1971 66–9; *Brick Bulletin* 11-1971 3–9 (Chamberlain, Powell & Bon). Woodsford Sq *AJ* 9-9-1970 578–9 (Fry, Drew Ptrs). West Chelsea RD World's End *ABN* 23-10-1963 635; *AD* 12-1963 558; *AJ* 6-11-1963 943–4; *JRIBA* 2-1964 51–69; *AR* 1-1964 26; 11-1967 379–80, 9-1977 172–6; *S* 2-1-1970 23–4; *Landscape Design* 11-1972 21–3; *AJ* 20-4-1977 733–44; (Eric Lyons & Ptrs; later E. Lyons, Cadbury-Brown, Metcalfe & Cunningham).

LAMBETH LBC: *JRIBA* 7-1965 350–7; 3-1974 37ff; *ABN* 17-8-1966 274; *AJ* 17-11-1965 1118; 6-10-1971 746–8; 30-8-1972 470; Note 54 Chapter 27. (E. E. Hollamby LA unless otherwise stated.) Binfield Rd *AR* 1-1966 38. Clapham Rd *SBD* 9-1967 16–18 (E. E. Hollamby, G. Finch LA). Clarence Ave ('Pentagon' Bl) *AR* 1-1966 39. Central Hill *AJ* 14-12-1966 1473–4; *AD* 9-1967 407; *AR* 1-1967 22–3; 2-1976 97–106; *ABN* 30-11-1966 944–5; 13-2-1969 67–70 (E. E. Hollamby, R. Stjernstedt LA). Drewster Rd *AR* 1-1968 62. Lambeth Rd *AR* 1-1965 49; *AD* 4-1965 182. Loughborough Pk Rd *AJ* 9-5-1973 1129–30. (With Sutton and Merton LBCs) Stockwell Pk Rd *JRIBA* 8-1967 330; *Building* 27-4-1973 83–98.

LEWISHAM LBC: Catford Town Centre *S* 4-6-1971 21 (Adv) (O. Luder).

MERTON LBC: Pollards Hill Mitcham Common *AR* 4-1971 201–7, 211–12; *HR* 7/8-1971 88–92; *AD* 1-1968 12; 10-1971 613–18 (P. J. Whittle LA). NW Quadrant *AR* 10-1972 219–22 (B. V. Ward LA).

NEWHAM LBC: Dunleavy 205–54. Clever Rd Stage I (incl. Ronan Point) *ABN* 29-11-1967 869; *IBSC* 12-1967 125; *Municipal Review* 1-1968 10; 6-1968 262–3; 9-1968 367; *AJ* 22-5-1968 1125–7; 21-8-1968 311; 13-11-1968 1111; *JRIBA* 12-1968 526; *Building Design* 19-1-1973 14; *New Society* 11-7-1974 68–70 (T. A. North LA with TWA). Eldon Rd *S* 10-6-1967 59 (T. E. North LA with TWA).

REDBRIDGE LBC: Broadmead Rd *AR* 1-1968 73, *Building* 22-5-1970, 21/71–6 (E. D. Mills & Ptrs).

RICHMOND ON THAMES LBC: Hampton Hill, Teddington Flats *Building* 9-5-1969 104–5 (Manning & Clamp). Hounslow Heath *AJ* 6-8-1966 303–8 (Wimpey).

SOUTHWARK LBC: Aylesbury Devt Area *S* 2-1-1970 24; *AJ* 27-5-1970 1288–91; *Building Design* 17-5-1974 20–1; *Architect* (London) 4-1975 30–3 (F. O. Hayes, H. P. Trenton, D. Winch et al. LA). Camden RD *AJ* 9-5-1973 1130–1 (H. P. Trenton, B. Emby LA). Dawsons Hill [Heights] *AR* 1-1967 22–3; *AD* 1-1968 26–7; *ABN* 13-2-1969 67–70; *AJ* 25-4-1973 976–95 (F. O. Hayes LA, later H. P. Trenton, D. A. Wise LA). Emmanuel Church Site *AR* 1-1968 63; 11-1971 313–16 (Neylan & Ungless). Linden Grove *AR* 1-1966 42; *AD* 9-1967 409; *AJ* 3-11-1971 983–1000; *AR* 11-1971 309–16; *Decade* 192 (Neylan & Ungless). Setchell Rd *AJ* 9-5-1973 1117–18 (Neylan & Ungless). North Peckham Devt Area Hordle Promenade West/East/South Walford Way *Building* 8-7-1966 90–2; *AR* 1-1966 41; *AD* 9-1967 426; *AJ* 3-2-1971 240; *S* 1-9-1972 16–19 (F. O. Hayes, later H. P. Trenton LA).

SUTTON LBC: Carters Seeds, Benhill Ave *JRIBA* 8-1967 330. Culvers Ave *IBSC* 4-1969 48–50 (W. H. Saunders). See also under GLC: Sutton.

TOWER HAMLETS LBC: Bacton St *Building* 5-1-1968 73–6; *ABN* 17-1-1968 90–3 (Yorke, Rosenberg & Mardall). Juniper Street *HR* 7/8-1972 143–5 (ARU). Monteith Rd *S* 16-3-1968 66 (Bison).

WALTHAM FOREST LBC: *B* 17-12-1965 1345–7. Cambridge Rd *SBD* 9-1967 22, 3-1968 29; *AJ* 6-8-1969 309–11 (F. G. Southgate LA, later A. S. Brickell LA). Chingford Hill *IBSC* 5-1969 26–9 (J. Overy, C. Bromley).

WANDSWORTH LBC: Crown Ct Lacy Rd Cardinal Pl *B* 23-7-1965 189–90 (Diamond, Redfern & Ptrs). Doddington Rd *IBSC* 6-1966 32–4; *AJ* 29-4-1987 32–5 (Emberton, Tardrew Ptrs with 12M Jespersen/Laing). Garrett Ln Wimbledon Rd SW17 *Building* 30-6-1972 40 (R. Seifert & Ptrs). Hill Side Gdns Ext *ABN* 28-6-1967 1118–24 (Renton, Howard, Wood Assoc). St James's Grove Est *S* 26-7-1969 43; *Building* 1-12-1972 66–9; *International Asbestos Cement Review* 1-1974 13–15 (C. Culpin Ptrs). Surrey Ln Westbridge Rd *S* 30-7-1971 24–5; *AJ* 11-8-1971 290; *Concrete* 11-1971 351–3; (R. Seifert & Ptrs). York Rd Battersea *S* 3-5-1968 34; *IBSC* 6-1968 59 (Howes & Jackman).

(CITY OF) WESTMINSTER LBC: Clipstone St *AR* 1-1966 38; *AD* 9-1967 427; (F. McManus & Ptrs). Lisson Green (St Marylebone Goods Yard) *IB* 7-1965 41–3; *AAJNL* 7/8-1965 52–3; *S* 26-11-1971 38–40 (F. G. West LA with TWA). Mozart Est *AJ* 23-1-1974 170–3; *Building* 26-4-1974 77–8 (A. Rigsby, later F. G. West; D. J. Baker LA).

GREATER LONDON COUNCIL (FROM 1965)

(Principal Housing Architect: Kenneth Campbell (1959)—1974)

Housing according to borough location:

BARNET LB: Hendon Aerodrome Grahame Pk *JRIBA* 3-1969 106–11; *Glass Age* 11-1973 34–5; *London Architect* 10-11-1973 8–10; *AJ* 18-3-1970 656–8; 31-12-1975 1337–50 (J. Oatley LA).

GREENWICH LB: Woolwich & Erith Site/Thamesmead *S* 15-12-1962 1519–20; *AJ* 12-12-1962 1337–46; *ABN* 12-12-1962 871–2; *B* 14-12-1962 1165–6; *HR* 1/2-1964 22–5; 9/10-1969 178–9; *AY* Vol. 11 1965 198–202; Vol. 13 1971 233–56; *AD* 4-1966 162; *OAP* 4-1967 555; *AR* 1-1967 20–1; 11-1967 385–6; *IBSC* 6-1968 13–15; *S* 3-2-1968 55; 2-3-1968 30; 16-3-1968 66; *Concrete* 11-1969 436–40; *AD* 1-1967 26–7; 11-1969 602–13; *Building* 17-5-1968 128; *Journal Royal Society for the Promotion of Health* 1/2-1971 28–32; *Building Design* 21-7-1972 12–13; *AJ* 11-10-1972 817–96 (J. G. H. D. Cairns; P. A. Bottomley, N. Engleback, John Knight, R. E. Rigg, J. A. Roberts, G. A. Comrie-Smith, P. A. Westwood LA).

HACKNEY LB: PSSHAK Stamford Hill *AJ* 15-9-1971 573–6; 28-8-1974 484–9; *AD* 5-1974 293–4; Mark 2 Adelaide Rd, Camden *AJ* 21-5-1975 1070–3 (Nabs Hamdi, N. Wilkinson LA). Kingshold Est King Edward's Rd *IBSC* 11-1970 26; *Concrete* 7-1970 286–7 (Yorke, Rosenberg, Mardall). Trowbridge Rd *IB* 8-1965 40–1; *AJ* 21-12-1966 1536 (Cebus Systems/GLC).

HAMMERSMITH LB: Masbro' Rd *AD* 11-1970 574 (Renton, Howard, Wood Assoc).

HOUNSLOW LB: Beaver Est Vincent Rd *Architect* (London) 9-1972 47–50; *Building* 5-3-1983. Brentford Dock *AJ* 18-3-1970 656–8. Riverfront Project *AJ* 3-2-1965 282–3 (M. Lock Ptrs).

ISLINGTON LB: Alsen Rd *Building* 4-5-1973 93–4; GLC, *Alsen Road Housing*, *c.*1972 (I. Mazija LA). Banner St *AJ* 1-10-1969 816–18. Weston Rise *AR* 1-1965 41; 12-1969 458–62; *AJ* 1-10-1969 804–6; S. Cantacuzino, *HKPA: Architecture*, 1981 (Howell, Killick, Partridge & Amis LA). Raglan Est Kentish Town *Building* 20-5-1966 113–16 (F. Scarlett). Wynyatt St *AJ* 18-3-1970 656–8 (Renton, Howard, Wood Assoc.)

KENSINGTON & CHELSEA LB: Edenham St Blocks A & B Trellick Tower *AR* 1-1968 72; *AJ* 10-1-1973 76–77; 27-2-1985 22; J. Dunnett & G. Stamp, *E. Goldfinger*, 1983 (E. Goldfinger).

LAMBETH LB: Baylis Rd *AJ* 4-8-1965 276–86 (Stillman & Eastwick Field). Fenwick Est Willington Rd *OAP* 1-1966 79–81; 4-1971 283 (S. J. Follett et al. LA).

LEWISHAM LB: Drysdale Rd *S* 19-7-1969 49; *Building* 4-7-1969 87 (TWA).

SUTTON LB: Croydon Airport Roundshaw (with Sutton LBC) *B* 6-12-1963 1169; *ABN* 27-11-1963 812; *AJ* 18-12-1963 1294; 27-9-1967 780; *AR* 11-1967 382; *S* 26-8-1967 55; 16-9-1967 61; 20-7-1968 37–47 (C. Culpin & Ptrs).

TOWER HAMLETS LB: Ashington Hs Bethnal Green *ABN* 2-7-1970 41–2 (N. Moffett Assoc). Cayley St *IBSC* 2-1967 99 (TWA—Larsen Nielsen). Robin Hood Gdns *AD* 10-1968 452; 9-1972 557–73; *Architecture Plus* 6-1973 36–45 (A. & P. Smithson; see Lit. Chapter 18). Rowlett St Balfron Tower *AR* 1-1964 20; *S* 2-3-1968 30; *AD* 1-1963; *AJ* 22-5-1968 1133–4; J. Dunnett & G. Stamp, *E. Goldfinger*, 1983 (E. Goldfinger). Watney St Market, Stages 1 & 2 (see below: Westminster, Walterton Rd)

WANDSWORTH LB: Somerset Est *ABN* 25-10-1967 689–93.

WESTMINSTER LB: Walterton Road [Elgin Est] see Note 66, Chapter 10; Note 22, Chapter 22.

OUT-COUNTY: Andover *JTPLI* 12-1962 317–20; *OAP* 10-1967 1415–24; 3-1969 281–6; *AJ* 18-3-1970 656–8. Aveley, Chigwell, Thurrock [Essex], Estates at *IBSC* 4-1968 79 (Tooley & Foster Ptrs).

ENGLAND: NORTHERN

BILLINGHAM UDC: *S* 11-4-1964 51–3.

CARLISLE CBC: *BHPR* 7/8-1953 6–14. Harraby Neighb. *S* 3-11-1956 855–6 (L. J. A. Stow LA).

CRAMLINGTON NTDC: *MJ* 6-11-1964 3611; *TPLR* 4-1964 59–75.

FELLING UDC: Crowhall Ln RD *S* 6-1-1968 29 (J. G. L. Poulson with TWA).

GATESHEAD CBC: Beacon Lough *Architect and Surveyor* 11/12-1968 2–5 (A. L. Berry LA) Teams RDA Phase 1 (Bolam St Derwentwater Rd) *IBSC* 1-1965 18–20 (both L. Berry LA).

HARTLEPOOL MBC: *MJ* 7-10-1960 3139–41.

HEBBURN UDC: School St *AJ* 9-7-1969 47–9.

HOUGHTON-LE-SPRING UDC: Hillside *AD* 9-1967 408 (Napper, Errington, Collerton, Barnett, Allott).

LONGBENTON UDC: Killingworth Township *OAP* 4-1967 570; *Northern Architect* 11-1968 1016–36; *AR* 1-1968 69; *AJ* 19-11-1969 1295–1307 (L. G. R. Preston, Dev. Group Arch.).

MARYPORT UDC: Ellenborough *AR* 4-1971 215–16 (Napper, Errington, Collerton, Barnet).

MIDDLESBROUGH CBC: *JRIBA* 7-1945 281. Longland Rd *IB* 6-1964 24–5 (Spacemaker).

NEWCASTLE-UPON-TYNE CBC (TO 1974): *ABN* 14-5-1958 636; Esher 172 ff; *S* 15-4-1961 389. Blakelaw *AD* 9-1967 412 (G. Kenyon LA, job arch. R. H. Harper). North Kenton Est (1950s) *TPLR* 1970 80–92. North Kenton *AR* 1-1965 42 (Ryder & Yates & Ptrs). Queen's Ct *AJ* 21-3-1957 439–41 (G. Kenyon LA). Shieldfield Clearance Area *B* 21-4-1961 768.

NEWCASTLE-UPON-TYNE CITY COUNCIL (FROM 1974): Byker *HR* 11-12-1974 149–56; *AR* 12-1974 346–62; 12-1981 334–43; *New Society* 6-2-1975 330–2; *AD* 6-1975 333–8; 11/12-1977; *Brick Bulletin* 3-1976 3–11; *AJ* 18-2-1970 408; 14-4-1976 731–42; 9-5-1979 961–9; 16-5-1979 1010–21, P. Collymore, *The Architecture of R. Erskine*, 1982 (R. Erskine, V. Gracie Assoc).

NEWTON AYCLIFFE NTDC: G. Philipson, *Aycliffe and Peterlee New Towns*, Cambridge 1988; *AR* 1-1968 65; *MJ* 13-4-1956 823–7; Cleeve Barr 213. Burnhill *AD* 9-1967 410 (Ryder, Yates & Ptrs).

PETERLEE NTDC: see Aycliffe above; *ABN* 12-11-1948 410–12; *B* 16-1-1953 123–9; *AR* 2-1961 88–98; 12-1962 398–400; 4-1967 271–6; *AJ* 23-2-1961 291–302; *TPLR* 10-1960 210–18 (H. Durrell LA, A. T. W. Marshall LA; Victor Pasmore, painter); see also P. Roe & M. Reading, *Lubetkin and Tecton*, 1981, 181–7; J. Allan, *Lubetkin*, 1992.

SOUTH SHIELDS CBC: *BHPR* 10/11-1950 19–28. Woodbine St *AJ* 11-6-1969 1581–3 (A. Gourlay LA).

SUNDERLAND CBC: Central Area *IB* 1-1966 34–5; *Concrete* 4-1969 151–2 (J. E. Barlow LA). Gilley Law *IBSC* 3-1967 73; 5-1967 15–22 (TWA). Hahnemann Ct [St] *S* 6-2-1965 46; *Concrete* 4-1969 148; *AJ* 1-10-1969 801–3 (J. E. Barlow LA with Laing).
Hendon Rd RDA *IBSC* 1-1968 (Adv).

THORNABY-ON-TEES MBC: Airfield Hs Devt *AJ* 14-9-1966 691–704; *IB* 4-1964 31 (Spacemaker).

WASHINGTON NEW TOWN NTDC: *AR* 1-1968 77; G. McLelland, *Washington New Town*, Cambridge 1988. Usworth: *Brick Bulletin* 5-1973 13–16; *S* 16-3-1968 24–6. Edith Ave *AR* 1-1964 28; *AD* 9-1967 418–19; *AJ* 17-6-1963 126–8; 9-7-1969 56–8; *OAP* 10-1964 1185–6 (Napper, Errington, Collerton, Barnett, Allott).

WHICKHAM UDC: Ravensworth Rd Dunston *AR* 1-1967 30–1; *Structural Engineer* 7-1973 225–31; *Northern Perspective* 1/2-1973 4–5 (O. Luder).

ENGLAND: NORTH-WEST

AUDENSHAW UDC: Stanhope St Est *S* 2-7-1966 23–4 (Rowcon System).

BIRKENHEAD CBC: Eldon St *AJ* 16-5-1957 742; *MJ* 8-11-1957 2431–5; Concrete 1-1958 41–2 (T. A. Brittain LA). Woodchurch Est *ABN* 14-2-1947 132–3; 13-10-1950 406–9 (H. J. Rowse).

BLACKBURN CBC: Queen's Pk St Aidan's Ave *ABN* 19-8-1964 347; *CQ* No. 94 7/9-1972 10–16; *ABN* 19-3-1970 32–4 (12M Jespersen/Laing).

BLACKBURN RDC: Billington *B* 5-1-1951 10–11 (G. Baines Group).

BOOTLE CBC: Balliol Hs *Municipal Review* 3-1969 138.

HEYWOOD: see Manchester

LEIGH MBC: *MJ* 17-4-1953 768–70.

LEYLAND UDC: *MJ* 23-1-1953 124–6; 22-10-1954 2567–76.

LIVERPOOL CBC: C. G. Pooley, *Development of Corporation Housing, 1869-1945*, Univ. of Lancaster Centre for NW Regional Studies, 1984; *Housing and Planning News Bulletin* (Nat. Housing & Town Planning Council) No. 46 3/4-1947 12–15; *JRIBA* 5-1946 259–63; *ABN* 3-6-1949 489–93; *AJ* 30-8-1951 266–7; 25-12-1952 762–4; *MJ* 16-1-1953 82–5, 94; 2-10-1953 2129–43; 7-1-1955 46–7; *HR* 3/4-1954 20–4; *JTPLI* 6-1953 157–60; *AB* 6-1954 213–15; *TPLR* 10-1956 145–63; 4-1957 45–71; *ABN* 23-5-1957 663–7; *NHTPLCY* 1960 53–4; *ABN* 14-10-1964 717; *S* 9-2-1963 165; 23-11-1963 1469; *IBSC* 10/12-1964 20–4; *SBD* 6-1967 63; *JTPLI* 1-1965 20–32; *AJ* 1-9-1965 468–9; *ABN* 20-11-1969 34–9; *TPLR* 1969 319–34; Esher 217ff; see Notes 14, 26, Chapter 20; R. Bradbury LA unless otherwise stated. Anthony St RDA Everton Heights [Braddocks] *AR* 1-1956 31–2; *MJ* 4-10-1957 2119–23; 24-7-1959 2048–50; MHLG, *Families Living at High Densities* (Design Bulletin 21 1970). Belle Vale (City) *S* 7-8-1970 26 (Shankland, Cox). Croxteth *ABN* 26-5-1953 618–25. East Lancashire Rd Fazakerley Coronation Ct *MJ* 30-5-1952 1060; 4-10-1957 2116–21; *AR* 1-1955 26–7. Harding St Phase I *S* 30-12-1961 1547. Jordan Pl *S* 22-7-1967 39; *Concrete* 7-1969 234–5 (J. W. Boddy LA). Kirkby *OAP* 11-1961 458–61. Classic Rd *S* 9-2-1963 165; 23-11-1963 1469 (Camus). Sparrow Hall Est Croxteth *MJ* 19-11-1954 2887; *ABN* 26-5-1955 618–25; 23-5-1957 664–5; Cleeve Barr 257.

LANCASTER CBC: Mainway Rd *ABN* 2-8-1961 19 (Adv) (Wimpey).

MACCLESFIELD MBC: Victoria Park *S* 3-5-1968 34 (R. H. Sidwell LA).

MANCHESTER CBC: *ABN* 25-2-1944 146–8; 15-6-1960 774–5; *MJ* 30-7-1954 1755–61; *S* 7-7-1956 486–8; *Municipal Review* 4-1959 190–3; *B* 24-6-1960 1181–3; *OAP* 5-1960 215–20; 3-1967 406–13; *B* 24-6-1960 1181–3. Beswick Bradford Wellington St *AR* 11-1967 356–7 (J. Austin Bent LA). Brunswick RDA *OAP* 11-1963 1105–6 (R. Nicholas, R. C. Stones LA). Coronation St Newcastle St Hulme *MJ* 30-7-1954 1755 (A. F. Shannon LA). Hulme RDA *BHPR* 1/2-1971 11–14; *IBSC* 11-1964 66 (J. Austen Bent LA). Hulme 5 Stretford Rd *AR* 1-1968 71 (H. Wilson, L. Womersley). Longsight Gibson St *TPLR* 1967 137–254; 1970 353–6; *AR* 11-1967 355–6 (R. C. Stones LA). Simon Ct Woodhouse Pk *B* 27-10-1961 760–4. Wythenshawe *MJ* 3-11-1961 3452–3; *OAP* 8-1961 341–4; D. Deakin, *Wythenshawe*, Chichester 1989 (J. Austen Bent LA).

OUT-COUNTY: Heywood [Argyle St, Darn Hill] *B* 29-3-1963 654; 10-10-1963 721–3; *AR* 1-1965 91; *IBSC* 10/12-1963 33 (Sectra/Laing).

OLDHAM CBC: St Mary's RD *AR* 1-1965 55; 11-1967 352–3; *AD* 8-1966 393–7; *AJ* 26-7-1967 245–63; 10-1-1968 77–81; 9-7-1969 43–6; *CQ* No. 74 7/9-1967 10–13; *SBD* 11-1967 19–30; MHLG, *Living in a Slum, Moving out of a Slum, New Housing in a Clearance Area* (Design Bulletins 19, 20, 22, 1970–1) (MHLG R. & D. Group, M. Lock & Ptrs with 12M Jespersen/Laing).

POULTON-LE-FYLDE UDC: *B* 9-4-1948 425–7.

PRESTON CBC: Avenham Brunswick St (Oxford St) *AJ* 8-6-1961 845–50; *AD* 7-1961 285; 12-1961 538–45; 10-1963 451; *ABN* 14-3-1962 381–6; *HR* 5/6-1962 73–6; *AR* 11-1967 346–7; 5-1975 273–6 (Stirling & Gowan; Lit. see below Runcorn). Avenham No. 2 *IB* 4-1964 28; *S* 7-8-1965 35; *AR* 11-1967 346–7 (Building Design Partnership, Bison).

PRESTON UDC: Penwortham King's Fold *MJ* 17-4-1953 770–2 (Lancs. CC).

ROCHDALE CBC: *AJ* 18-8-1965 353. Falinge 'B' *IBSC* 6-1968 49 (D. Broadbent LA).

RUNCORN NTDC: *AR* 9-1964 203–5; *MJ* 28-1-1966 251–2; *OAP* 3-1966 403–11; *AJ* 30-4-1969 1177–90; *JRIBA* 6-1969 236–9; *AD* 6-1972 372–8; *S* 26-4-1969 6; *AY* Vol. 13 1971 28–33. The Brow, Halton Brow *AJ* 14-10-1970 889–902; *Decade* 206 (F. Lloyd Roche, later R. L. E.Harrison; P. Riley). Southgate *Oppositions*, Winter 1976 8–23: P. Arnell, T. Bickford, J. Stirling, *Buildings and Projects*, New York 1983 (J. Stirling).

SALFORD CBC: *OAP* 5-1960 221. Ellor St RDA *OAP* 8-1963 753–5; *IB* 1-1963 20–2; *S* 18-5-1963 651–2; *ABN* 5-6-1963 855; 15-9-1965 509–10; *AJ* 2-10-1963 687–8; *AR* 1-1965 57; MPBW Directorate of Research & Information, *Decisions affecting Design of Five Point Blocks* (ARU), 1968 (P. Johnson-Marshall, Sir R. Matthew).

SKELMERSDALE NTDC: *IB* 10-1964 16–18; *AD* 8-1963 352. Fir Tree Tanhouse *OAP* 3-1966 387 (W. D. C. Lyddon LA). Digmoor Area *IB* 10-1964 16–17 (L. Hugh Wilson). Manor Hs Est *MJ* 14-5-1954 1083–5 (U. Aylmer Coates).

STOCKPORT CBC: Lancashire Hill *S* 22-4-1967 27; 13-1-1968 38 (J. S. Rank LA with Laing).

WALLASEY CBC: Church St Charter Hs *S* 13-2-1960 155.

WIGAN CBC: Worsley Mesnes North Est *IBSC* 7-1964 57 (Bison).

ENGLAND: SOUTH-EAST (EXCLUDING GREATER LONDON)

ABBOTS LANGLEY: see Watford.

ANDOVER: see GLC Out-County.

ASHFORD UDC: Osborne Rd *JRIBA* 4-1947 320–5 (W. Kenyon).

BASILDON NTDC: *AJ* 3-1-1957 12–14; 11-8-1960 217–30; *ABN* 11-11-1959 425–38; *JTPLI* 7/8-1967 297–301; *AD* 4-1957 125–6; 8-1966 424; *Building* 12-8-1966 52. Barnstaple Neighb. Timberhill Ln *AJ* 8-11-1956 674–5 (N. Tweddell LA). Barnstaple 6 *AR* 9-1960 198 (N. Tweddell, later A. B. Davies LA). Basildon Town Centre Brooke Hs *AR* 11-1962 332–40; *S* 16-7-1960 825; *AJ* 19-12-1962 1382–3 (A. B. Davies LA with Sir B. Spence). Fryerns: Ghyllgrove (The Gore) *AR* 10-1957 226, 274–5 (L. Brett, K. Boyd). Fryerns: Ghyllgrove 1 *AR* 1-1959 69–70 (N. Tweddell, later A. B. Davies LA). Fryerns 7C, Fryerns 8 *AR* 9-1960 197–9 (N. Tweddell, later A. B. Davies LA). Laindon 1, 2, 3 Laindon High Rd Leinster Rd *AR* 1-1963 40–1; *OAP* 2-1964 159–61; *IB* 4-1964 15; 12-1965 12–13; *AJ* 27-9-1967 799–814; 11-6-1969 1575–7; *Decade* 114; *ABN* 20/27-12-1967 993–1002 (A. B. Davies LA, later A. B. Davies Assoc). Laindon 5 Mellow Purges Somercotes *AR* 1-1966 49; *AJ* 9-12-1970 1360–1; 16-2-1972 355–72 (D. Galloway LA). Langdon Hills 1 *AJ* 9-3-1973 1133 (D. Galloway LA). Vange 1 *AR* 1-1965 44 (A. B. Davies (Collister & Davies)).

BANSTEAD UDC: *B* 23-12-1955 1090–1.

BEDFORD MBC: *HR* 7/8-1964 160–70. Ashburnham Ct *AJ* 7-7-1955 15–19; Cleeve Barr 217 (M. Lock & Ptrs). Central RDA Roise St *S* 4-10-1958 964. Goldington Cleeve Barr 219 (M. Lock & Ptrs).

BLETCHLEY UDC: Abbeys Est II [Mellish Ct] *IBSC* 11-1966 108 (Sunley Allbetong).

BRACKNELL NTDC: *MJ* 7-3-1958 2505–7; Cleeve Barr 225; *AJ* 9-2-1972 284.

BRIGHTON CBC: *AJ* 12-7-1967 103ff. Albion Hill Devt *ABN* 30-5-1962 (Adv 47) (D. J. Howe LA). High St-Cavendish St Area Stage I *IB* 12-1964 30–1; *S* 6-8-1956 35; *ABN* 9-12-1964 1115 (K. W. Bland of Wates with D. J. Howe LA).

CANTERBURY CBC: *Building* 6-1953 216; *MJ* 5-6-1953 1197–1201; *ABN* 20-9-1961 439; *B* 15-11-1963 997–8; 6-11-1964 971. London Rd York Rd *Prefabrication* 12-1954 82–3 (J. L. Berbiers LA with Building Research Station). Military Rd Thanington Rd King's Allotment *AJ* 27-3-1958 465–72; 3-4-1958 500; *OAP* 5-1958 229–31; *MJ* 18-10-1963 3137–43. Tenterden Area *MJ* 8-8-1958 2003–4 (both J. L. Berbiers LA).

CHATHAM UDC: Wayfield *B* 18-1-1952 118–19.

CHESHUNT UDC: High St RD *Municipal Review* 3-1968 89 (C. Culpin & Ptrs).

CRAWLEY NTDC: F. Gray, *Crawley, Old Town, New Town* (Univ. of Sussex, Centre for Contin. Education Occas. Paper 18) 1983; *OAP* 2-1950 87–92; *ABN* 20-12-1951 705–9; 6-11-1952 542–52; *AJ* 25-6-1952 796–801; *Building* 7-1952 257–61; *B* 3-4-1953 516; *MJ* 29-7-1955 2047–52; Cleeve Barr 233–5; *AR* 4-1971 219–20; *AD* 12-1973 800.

DOVER MBC: The Gateway Marine Parade *B* 2-10-1953 493–7; 9-10-1953 537–8; *AJ* 15-10-1953 472–82; 4-2-1954 145, 147; *ABN* 8-10-1953 414–24; *AR* 4-1954 273–4 (K. Dalgliesh & R. K. Pullen).

EASTBOURNE CBC: Langney Village Section 20 *B* 24-4-1964 887 (Bison).

ESHER UDC: Weston Green *AJ* 25-11-1948 490–2 (E. Lyons & G. P. Townsend).

ELSTREE UDC: *MJ* 18-4-1952 806. Bockam Wood Maisonettes *B* 31-10-1952 618–21; *MJ* 7-1-1955 45–6 (Laing/Easiform).

GOSPORT MBC: South St *MJ* 31-3-1961 1022–3 (W. H. Saunders).

HARLOW NTDC: F. Gibberd, *The Design of Harlow* (Harlow Corp.), 1980; F. Gibberd, B. H. Harvey, L. White, *Harlow*, Cambridge 1980; *JRIBA* 11-

1948 4–10; *MJ* 25-4-1952 850–1; *AJ* 5-2-1948 127–31; 16-11-1950 391; 14-6-1951 764–7; 14-4-1952 449; 14-8-1952 196–202; *AR* 5-1955 311–30; *ABN* 19-12-1947 245–58; 3-7-1952; *OAP* 1-1951 24–9; Cleeve Barr 246–9; F. Gibberd, *Town Design*, 1967. Architect and Planner to NTDC: F. Gibberd, V. Hammett executive architect LA. Harlow Housing Competition *ABN* 24-1-1962 117; *AJ* 25-5-1961 765–76; Ideal Home RIBA Housing Competition *AJ* 24-1-1962 193–204; *B* 26-1-1962 189–97. Bishopsfield *AR* 1-1964 8, 11; *ABN* 17-5-1961 639–44 (M. Neylan). Chippingfield Hs *ABN* 26-1-1951 110–13 (Design Unit in Architects' Plann. Dept). Clarkhill *OAP* 3-1967 345–59 (Bickerdike, Allen & Ptrs). Cook's Spinney Mark Hall South *ABN* 17-1-1957 71–5; *AJ* 12-3-1953 340–1 (H. T. Cadbury-Brown). Gt Parndon *AR* 7-1966 36–50. Hugh's Tower Market Sq *AD* 9-1957 302–4; *AB* 3-1960 90–3 (F. Gibberd). Ladyshot *ABN* 22-4-1954 454–61; *AJ* 20-1-1955 95; *ABN* 22-4-1954 454–61 (Yorke, Rosenberg & Mardall). Mark Hall The Lawn *B* 10-2-1950 188; *AD* 3-1950 79; *ABN* 14-2-1950 181; 5-7-1951 7–11; *AR* 9-1951 155–62; *AJ* 19-3-1953 377–8; 23-8-1956 267 (Adv); 22-8-1957 270; *MJ* 3-9-1954 2047–51 (F. Gibberd). The Maples *S* 27-5-1967 21–2 (Central Mortgage & Housing Corp. (Canada)). Mark Hall North Area 3 *AJ* 25-9-1952 375–9 (F. Gibberd & Fry, Drew & Ptrs). Mark Hall South *AR* 1-1954 59–60 (Norman & Dawbarn). Netteswell Hs Area 23 *AD* 10-1952 284 (H. T. Cadbury-Brown). Netteswell Tower *Housing and Town Planning Review* 2-1987 10–11 (F. Gibberd). Orchard Croft (Mark Hall South) *MJ* 3-9-1954 2047–51 (F. Gibberd). Pennymeades Tower *AB* 3-1960 90–3 (Norman & Dawbarn). Potter St Neighb. *OAP* 5-1955 261–2 (Henning & Chitty). Rivermill, Hornbeams *AR* 9-1960 200–2 (F. Gibberd). St Edmund's Tower *BHPR* 1/2-1960 18–19; *AB* 3-1960 90–3 (V. Hammett LA). Tye Green *AR* 1-1955 29–30 (Architects' Co-Partnership).

HATFIELD NTDC: *Prefabrication* 6-1955 349–52. Roe Green *AR* 5-1953 318–19; *AJ* 11-12-1952 703–19; *ABN* 1-5-1952 507; *MJ* 12-6-1953 1261 (L. Brett, K. Boyd). French Horn Ln *Building* 2-5-1969 71–4; *ABN* 4-12-1968 69–73 (Woodroffe, Buchanan & Coulter).

HEMEL HEMPSTEAD NTDC: *AJ* 26-6-1952 790–5; *ABN* 14-4-1950 376–83. Apsley-Bennetts End Neighb. *JRIBA* 12-1953 48–52; *MJ* 15-1-1954 103–14 (J. Ledeboer, arch. to HHNTC). Barnes Ln King's Langley *AD* 12-1948 262–3 (Yorke, Rosenberg & Mardall).

HORNCHURCH RDC: *ABN* 20-5-1949 446–50.

KINGSCLERE UDC: Banghurst Highworth *AJ* 17-12-1963 757–60 (E. Chick, consult. Powell & Moya).

LUTON CBC: *S* 31-12-1966 10; *B* 14-4-1950 487–9. Marsh Farm Est *S* 12-4-1969 23–4 (M. H. G. Blackman LA).

MAIDSTONE MBC: *ABN* 26-8-1959 22–3 (Adv); *MJ* 25-9-1959 2653–5. Ringlestone Est Stanhope Cl *AR* 1-1966 39 (J. Voelcker).

MILTON KEYNES NTDC: D. Walker, *Milton Keynes*, 1981.

NEW WINDSOR MBC: Northern Area Ward Royal Est *AR* 1-1967 25; *AJ* 22-7-1970 181–96; *Decade* 158 (Mathews, Ryan & Simpson).

OXFORD CBC: *ABN* 15-6-1960 751. St Ebbe's *ABN* 15-6-1960 751; *AJ* 1-5-1963 949–58 (D. Murray LA). Jordan Hill *B* 5-9-1958 385–8 (Booth, Ledeboer & Pinckheard). Starwort Path *S* 22-7-1967 39 (Easiform/Laing). Summertown North Oxford *B* 12-7-1957 62–3.

PORTSMOUTH CBC: *Building* 3-1953 91ff; *B* 8-10-1965 763–7; *ABN* 12-12-1947 226–7. Church St *IBSC* 8-1965 10–11 (F. Mellor with Reema). Elizabeth Hs Wymering Ln *MJ* 1-7-1955 1752, 1979 (F. Mellor LA). Paulsgrove *AJ* 30-10-1952 518–19 (F. Mellor LA). Somers Rd Flats *SBD* 12-1967 13–22 (H. Wilson, L. Womersley). Portsdown Hill *AJ* 6-10-1965 766, 772–5; Arena (*AAJNL*) Vol. 81 3-1966 235–81; *Brick Bulletin* Suppl. 5-1969; *Journal of the Society of Architectural and Associated Technicians* 12-1969 1–12 (E. Theakston & J. Duell).

READING CBC: Coley Pk *AJ* 11-5-1961 700 (Adv) (C. H. A. Willett LA). Woodley *B* 12-3-1948 305–9 (Arcon).

SALISBURY MBC: Bemerton Est *CQ* 7/9-1952 3–5 (Reema).

SOUTHAMPTON CBC: *AJ* 16-4-1953 489. Central Station RDA *AR* 1-1965 56; *AD* 4-1966 179–80. Hoglands RDA, Vyse Ln RDA *AD* 1-1959 31. Kingsland Hs *ABN* 11-11-1949 471–5 (Johnson & Crabtree). Lansdowne Hill *AR* 1-1960 59–60. Lord's Hill *S* 20-7-1963 905; *AJ* 18-9-1963 579 (all Lyons, Israel, Ellis & Ptrs). Pleasant View *AR* 11-1967 384; *AJ* 11-6-1969 1578–80 (H. Wilson & L. Womersley).

SOUTHEND CBC: Earl Hall RD *AJ* 4-5-1966 1137–42 (P. F. Burridge LA). Prittlewell St RD *S* 13-5-1967 37 (P. F. Burridge). Temple Court Pantile Ave *S* 27-10-1962 1311–12; *BHPR* 11/12-1962 5–7; *OAP* 3-1963 205–7 (P. F. Burridge LA).

STEVENAGE NTDC: *AJ* 14-8-1952 190–5; *MJ* 18-7-1952 1345–5; H. Orlans, *Stevenage: A Sociological Study of a New Town*, 1952 (1971); *MJ* 28-10-1960 3368–72; P. Wilmott, 'Housing Density & Town Design . . .' *TPLR* 7-1962 115–27; J. Balchin, *First New Town . . . Stevenage, 1946-1980*, Stevenage 1980. Chells Pestcotts Elm Green *AJ* 25-3-1964 691–5; *OAP* 3-1966 386 (L. G. Vincent, LA). Old People's Flatlets Ross Cts Chells Way *AJ* 18-7-1962 147–58; MHLG *Old People's Flatlets at Stevenage* (Design Bulletin 11 1966) (L. E. Vincent LA with MHLG). Popple Way Stony Hall *AJ* 31-12-1953 808–9 (C. Holliday). Stony Hall Sish Ln *AD* 3-1951 71–6; *AR* 12-1952 357–66; *AJ* 4-5-1950 544; 18-12-1952 734–6; Cleeve Barr 270 (Yorke, Rosenberg & Mardall). Town Centre Hostel *AR* 1-1959 70 (L. G. Vincent LA).

SUNBURY-ON-THAMES UDC: Laleham Rd Shepperton *ABN* 22-4-1949 351–4; 11-11-1949 479–81; *AJ* 3-11-1949 486; 8-12-1949 654–7; 1-1-1953 18–20; *B* 21-10-1949 515–18; *AD* 1-1950 19; *AR* 7-1953 45 (B. Spence Ptrs).

THURROCK UDC: Chadwell St Mary's Devt *S* 31-7-1970 22–6 (H. K. Brown, D. C. W. Vane). See also GLC Out-County.

WATFORD MBC: Meriden Est *MJ* 3-12-1965 4149–61.

WELWYN NTDC: M. DeSoissons, *Welwyn Garden City*, Cambridge 1988, R. Filler, *Welwyn Garden City*, Chichester 1986. Homestead Ct Scheme *AJ* 11-12-1952 698–90 (L. de Soissons).

WINDSOR: see New Windsor.

WITHAM UDC: 'Experimental Housing' Maldon Rd *MJ* 21-8-1963 1797 (Stanley Bragg).

WATFORD RDC: Abbots Langley Maisonettes *AR* 1-1960 59; 5-1961 344–6 (E. Goldfinger).

WOLVERTON UDC: East Woverton [The Gables] *S* 7-5-1966 27 (C. V. Rees LA).

WYCOMBE RDC: Wooburn Glory Hill *IBSC* 2-1966 101; *S* 14-5-1966 29; 30-10-1970 38; *B* 16-10-1970 42/95–6; *Journal of the Society of Architectural and Associated Technicians* 6-1970 11–13 (TRADA, Timber Research & Development Assoc, Tylers Green, Bucks).

SOUTH-WEST

BATH CBC: Moorlands Est *ABN* 12-11-1948 406–9 (J. Owens LA). Phoenix Hs *ABN* 27-8-1953 239–42 (H. D. Roberts). Snow Hill *AR* 1-1955 28; *B* 4-10-1957 572–3; *JRIBA* 11-1957 22–3; *ABN* 19-11-1958 673–4 (Snailum Huggins & Le Fevre).

BRIDGWATER UDC: *B* 4-12-1953 878–9.

BRISTOL CBC: *HR* 1/2-1958 23–6; *AJ* 1-6-1950 683ff; *OAP* 7-1950 386–90; *JRIBA* 5-1950 257–62; *MJ* 5-3-1954 487–9; 5-12-1958 3527–9; *Municipal Review* 4-1960 258–9; *NHTPLCY* 1960 41–2; *CQ* No. 45 4/6-1960 35–43; *AD* 10-1966 482; Dunleavy 303–32.
Ashton Gate, Duckmoor Rd Winterstoke Hs *S* 10-11-1962 1962 (A. H. Clarke with Laing). Barton Hill RDA *MJ* 18-6-1958 1821–2; *OAP* 12-1958 559–61 (J. Nelson Meredith LA). Hotwells *AJ* 3-3-1960 348; *ABN* 2-3-1960 279–80; 14-9-1960 334–6 (R.W.A. School of Architecture Projects). High Kingsdown *AR* 1-1968 75 (Whichelow, Macfarlane & Towning Hill). Lawrence Weston Kingsweston Ln *B* 7-4-1961 647–50 (A. H. Clarke LA). Penelope Point [The Ridge] Shirehampton *OAP* 10-1963 978–82 (A. H. Clarke, S. J. Tucker LA). Redcliffe RDA *Municipal Review* 3-1955 61; Cleeve Barr 228–9; *B* 29-7-1960 183–5; *ABN* 14-6-1961 46–7 (Adv) (J. Nelson Meredith, later A. H. Clarke LA). St Jude's RDA *MJ* 8-3-1957 519–24 (J. Nelson Meredith LA). Summerhill Rd St George *OAP* 11-1963 1100–1 (A. H. Clarke LA with Wimpey).

EXETER CBC: *MJ* 28-8-1953 1849–61. Countess Wear Est *AJ* 21-8-1952 228–31 (H. B. Rowe LA).

FROME UDC: Trinity St *S* 17-2-1962 185 (R. Vallis).

GLOUCESTER CBC: (J. V. Wall LA). Fountain Ct *MJ* 11-6-1958 1742–3; *AJ* 12-11-1959 507–14. Kingsholm CDA *AJ* 16-9-1964 643–58. Westgate Devt *OAP* 9-1962 515–16.

PLYMOUTH CBC: *Building* 5-1950 168–72; *B* 19-5-1965 652; *MJ* 4-9-1953 1915–19; *Municipal Review* 6-1959 318–19; *OAP* 8-1954 360–2; *AJ* 12-6-1952 732; 27-5-1954 648. Ernesettle Est *AJ* 12-6-1952 733–4 (E. G. Catchpole, then H. J. W. Stirling LA). Ker St RD Devonport *OAP* 6-1962 297–301; *S* 26-5-1962 697 (J. Ackroyd & H. J. W. Stirling LA). Union St *B* 23-9-1949 384–6 (L. de Soissons & Ptrs).

TAUNTON MBC: Scapes Farm Est *MJ* 18-10-1960 3154–61.

ENGLAND: WEST MIDLAND

BIRMINGHAM CBC: *AJ* 19-10-1944 291–4; *MJ* 4-12-1952 2647; 1-5-1953 889–92; 14-6-1957 1286; *AB* 8-1954 303–5; *OAP* 3-1955 128–32; *TPLR* 4-1955 24–47; *AJ* 9-5-1957 692–3; *ABN* 15-4-1959 471–91; 14-12-1960 767–8; 19-4-1961 511–16; 18-10-1961 583–6; 8-4-1964 620; 9-12-1964 1121–4; *NHTPLCY* 1960 37–8; *S* 2-7-1966 21; 9-7-1966 48; *HR* 9/10-1966 151–8; *AR* 8-1970 178–9; *TPLR* 1974 189–205; Dunleavy 255–302. A. G. Sheppard Fidler LA unless otherwise stated.
Aston Reservoir Holte Est *MJ* 1-2-1957 239–45; Cleeve Barr 223 (H. Weedon). Bangham Pit Est Long Nuke Rd *B* 13-5-1960 926–7; *ABN* 27-1-1965 160; *AJ* 24-3-1960 478. Bath Row RD *MJ* 11-3-1955 667. Birchfield Rd Perry Barr *S* 5-3-1960 228; 29-7-1961 937 (A. G. Sheppard Fidler/Bison). Chamberlain Gdns *MJ* 28-12-1962 3928–33; *B* 3-11-1961 811–13; *ABN* 9-12-1964 1121–4 (A. G. Sheppard Fidler, later J. R. Sheridan-Shedden LA). Civic Centre Site Brindley Dr Canalside *AR* 1-1969 20–1 (J. A. Maudsley LA). Duddeston Nechells RDA *ABN* 15-8-1947 122, 126–7; *B* 12-3-1954 458–9; *Municipal Review* 4-1954 106; *OAP* 4-1954 118–20; *MJ* 22-11-1950 2280ff; 2-4-1954 735–41; *AJ* 25-2-1954 249; *AR* 5-1954 342; E. Simon, *Rebuilding Britain*, 1945, 190–3; F. W. Bradnock (ed.), *City of Birmingham Official Handbook*, 1947, 84–6 (S. N. Cooke & Ptrs) Later: see Nechells Green. Firs/Rubery Est *MJ* 13-2-1953 329–33 (A. G. Sheppard Fidler, J. H. Manzoni LA). Hawkesley Farm Moat Site Northfield *AJ* 4-12-1958 835; *OAP* 1-1959 32. Kingstanding *AR* 1-1969 20–3 (J. A. Maudsley LA). Kitwell Farm Est *AJ* 3-1-1957 27; *OAP* 1-1957 43. Ladywood RDA Units 201–3 *B* 7-3-1961 440–3; 3-11-1961 811–13; *Building* 21-11-1969 129–30; *S* 28-11-1969 38–9 (J. A. Maudsley LA with Fram Group). Lee Bank Cregoe St *ABN* 20-3-1963 418; *AR* 11-1967 344–5; *IB* 4-1963 23; *S* 23-2-1963 223; *Building* 8-12-1972 56–8 (Sheppard Fidler, J. R. Sheridan Shedden, J. A. Maudsley LA). Lyndhurst Sutton Rd Erdington *AR* 1-1958 76. Metchley Grange *B* 24-7-1964 173–4; *ABN* 28-9-1966 553–8 (J. R. Sheridan-Shedden; later J. A. Maudsley LA). Millpool Hill Est *ABN* 17-5-1956 539–41; *AJ* 16-2-1956 205–7; 17-4-1958 583–9; 24-4-1958 603–4; Cleeve Barr 224; *OAP* 6-1958 283; *Prefabrication* 11-1956 9–13. Nechells Green RDA Unit 11 *B* 19-9-1958 476–7. Unit 31 Heneage St *S* 16-6-1962 778; *ABN* 1-5-1963 655–8. Pool Farm Walker's Heath Rd *ABN* 31-1-1962 163. Primrose Hill Hawksley Hs Scheme Kings Norton *AR* 1-1963 40–1; *OAP* 3-1963 216; S 29-12-1962 1570; *Building* 24-2-1967 85–6. Staple Hall Farm Est Northfield *MJ* 12-8-1955 2171–3. Tile Cross (Marston Green) *AJ* 30-4-1953 547; *B* 1-5-1953 680–4; *MJ* 1-5-1953 889–92; *OAP* 5-1953 245–7; (H. J. Manzoni, A. G. Sheppard Fidler LA). Tyburn Rd *ABN* 8-4-1964 620; *IBSC* 6-1964 121 (Bison). Ward End Hall Est Cleeve Barr 221. Wychall Farm Chaddesley Rd *B* 25-10-1957 712–14; *ABN* 9-10-1957 466.

COVENTRY CBC: *ABN* 31-1-1947 92–3; *AJ* 2-12-1948 507–13; 1-11-1951 533–6; 11-7-1962; *B* 8-4-1949 424–7; 22-6-1951 892; *MJ* 22-6-1951 892; *Concrete* 4-1952 123–4; *MJ* 22-5-1953 1077–87; 16-10-1953 2236–8; *Building* 4-1953 139ff; *AJ* 8-10-1953 428ff, 443; *S* 23-10-1954 910–12; *HR* 3/4-1957 48–54; *JRIBA* 5-1959 249–51; *NHTPLCY* 1960 47–8; *AR* 1-1959 62–3; *ABN* 11-7-1962 41–56; *BHPR* 3/4-1962 13–20; *OAP* 12-1967 1746–65; G. Lewison & R. Billingham, *Coventry New Architecture*, Warwick 1969; L. Carter & J. C. Holliday, 'Postwar Council Housing in Coventry with special reference to Woodend, Willenhall, Stoke Aldermoor', Dipl. Town Planning, Coventry Polytechnic, 1970.
Barras Heath *ABN* 7-2-1962 208; 21-8-1963 281; *B* 2-2-1962 250–1; 20-9-1963 557–8; *AJ* 24-3-1960 473–8; 18-12-1963 1297; *OAP* 4-1962 198; *IB* 10-1962 35; *S* 17-8-1963 1022; *International Asbestos Cement Review* No. 38 4-1965 33–41 (Jackblock). Belgrave Est *AD* 10-1963 451 (A. Ling LA). Henley Rd *AR* 1-1969 24 (T. Gregory LA). Hillfields *AR* 1-1959 62–3; *AJ* 9-3-1961 351; *B* 10-3-1961 439; *JRIBA* 1-1963 12–13; *S* 11-3-1961 255 (A. Ling LA). (Mercia Hs) Lower Precinct Block N *ABN* 23-10-1968 28–31 (J. M. McLellan). Houghton Est Brydon Rd, see Chapter 14. Tile Hill Ln *AJ* 2-6-1965 1303–8 (Calder). Tile Hill Neighb. North *B* 11-9-1953 396; *MJ* 25-9-1953 2088–9; *AJ* 10-9-1953 313; 8-7-1954 34; 21-2-1957 296–8; *AR* 7-1956 25–32; *MJ* 10-2-1956 325–9; *CQ* No. 30 7/9-1956 20–1; Cleeve Barr 230 (D. Gibson LA). Wellington St [King Hs] *AR* 1-1963 46–7; *S* 12-11-1966 110; *IBSC* 5-1966 199 (A. Ling LA with BLS Liftslab). Willenhall Wood *AR* 9-1960 203–5; *B* 24-2-1961 350–3; *AJ* 16-2-1961 149–50; *OAP* 3-1966 381–4 (A. Ling LA). Woodway Ln *B* 28-8-1964 431–2; *AR* 1-1965 44; *AJ* 29-9-1965 725; 11-9-1968 551; 11-6-1969 1572–4; *S* 15-8-1964 32; *H* 2-12-1967 33 (MHC).

DARLASTON UDC: Bentley Est *S* 2-11-1963 1368; *ABN* 2-9-1964 435 (Mason & Richards Ptrs).

DROITWICH MBC: Chawson Est *MJ* 11-6-1965 2035–6 (Jackson & Edmonds).

DUDLEY CBC: *S* 18-6-1966 41–2.

HALESOWEN MBC: Highfields Hales Rd *ABN* 18-5-1960 637–45; *AJ* 19-5-1960 767–76; *B* 20-5-1960 948–51; *MJ* 7-2-1964 407; *AJ* 23-12-1964 1499–515; *AD* 1-1965 54 (R. & M. Granelli with M. Rhys Davies).

KIDDERMINSTER MBC: Hurcott Rd *AR* 8-1963 144; *ABN* 13-11-1963 759; *B* 15-11-1963 1000 (Bryant/Bison).

LICHFIELD MBC: Stowe St *AR* 1-1969 24–5 (G. Wintringham of S. T. Walker & Ptrs).

NUNEATON UDC: Dempster Ct Church St *ABN* 28-8-1952 251–7; *AR* 8-1952 85–6 (F. Gibberd).

REDDITCH UDC: G. Anstis, *The History of Redditch New Town, 1964-1985*, Cambridge 1985; *AJ* 9-2-1972 284–7; *S* 26-6-1970 32–3; 11-2-1972 28–9; *OAP* 3-1972 182–3.

SMETHWICK CBC: *S* 8-10-1960 1137. Eastbrock Angle Houses *S* 5-11-1960 1243. RD Site No. 4 (Cheshire Brewery) *S* 13-10-1962 1249 (Bison/Bryant).

STAFFORD MBC: *S* 24-1-1953 56.

STOKE ON TRENT CBC: Blurton Est *B* 20-4-1956 343-4; *MJ* 6-1-1956 41–3; Cleeve Barr 274 (J. R. Piggott LA). Blurton Ripon Rd *S* 17-12-1955 1225–6; *BHPR* 5/6-1959 15–18. Bucknall New Rd Stages 1 and 2 *Building* 29-8-1969 51–4 (J. W. Plant LA). Ripon Rd *Brick Bulletin* 5-1977 9–11 (N. Hambleton LA).

STOURBRIDGE MBC: Lye Devt *S* 3-12-1966 42 (H. Jackson with H. W. Morris LA).

STOURPORT-ON-SEVERN UDC: Walshes Farm Est Cleeve Barr 275.

TELFORD NTDC: *TPLR* 1972 343–60. Woodside-Dawley *AR* 1-1969 24–5 (C. Griffiths LA).

TIPTON MBC: Ocker Hill Rd *IBSC* 10-1965 93 (Wates).

WALSALL CBC: *BHPR* 7/8-1954 18–32. Blakenhall Heath *OAP* 1-1959 21; 12-1961 487–9; *S* 10-9-1960 1020 (A. T. Parrott LA). Lower Farm Est Bloxwich Bamford Hs *AJ* 16-9-1964 (Adv) (A. T. Parrott LA). Mary St Green Ln *MJ* 9-2-1951 304–5 (M. E. Habershon LA). Orlando St *OAP* 12-1961 487–9; *IB* 11-1961 35; *Municipal Review* 2-1962 79 (M. E. Habershon LA). Sandbank RD Wolverhampton Rd *TCP* 12-1967 559–60; *MJ* 21-5-1965 1776; *AJ* 3-9-1969 570–2 (A. T. Parrott LA).

WARLEY CBC: West Smethwick Oldbury Rd Maxim Hs *IB* 6-1967 45–6; *CQ* Nos. 89/90 4/9-1971 30–2; *S* 22-4-1967 26; 26-7-1969 43 (K. R. Emmett LA, NBA, R. C. Purdew with M. Rhys-Davies/Bison). Uplands Est ('Metric Housing') *AJ* 8-9-1971 518–30; *S* 12-6-1970 82; *Building* 23-7-1971 30/84–5 (NBA; K. R. Emmett LA with R. C. Purdew).

WEST BROMWICH CBC: *B* 16-8-1963 335; *IBSC* 5-1965 131. Central Area RD *AJ* 31-3-1965 755; *ABN* 18-12-1963 990; 10-2-1965 259 (J. H. D. Madin Ptrs). Charlemont Farm *SBD* 9-1967 38 (Tracoba). Yew Tree Est *MJ* 31-5-1953 1657 (K. W. Bland with Wates).

WOLVERHAMPTON CBC: Dale St (Central Area RD I) *MJ* 28-11-1958 3187–9; *B* 7-11-1958 774–5 (H. Schofield LA). Heath Town RD *AR* 1-

1969 22–3; *MJ* 9-6-1967 1547; *Municipal Review* 9-1967 481; *S* 12-4-1969 32 (A. Chapman LA with Wates).

YORKSHIRE AND HUMBERSIDE

BRADFORD CBC: *B* 5-3-1948 1277–81; *Municipal Review* 9-1957 462–3. Newby St *S* 31-12-1966 22 (Bison).

BRIDLINGTON MDC: Westhill Est *ABN* 16-10-1952 456–65 (C. Culpin).

ELLAND UDC: Westgate *OAP* 11-1966 1681-90; 12-1966 1826–31 (D. Harper, B. H. Gilbert).

HALIFAX CBC: *S* 16-1-1970 34–5.

KINGSTON UPON HULL CBC: *MJ* 3-12-1954 3015–27; *BHPR* 1/2-1957 18–25; *AJ* 12-6-1963 1222–3. Southcoates Ln *AJ* 12-4-1951 449 (A. Rankine LA). Ings Rd Est *ABN* 3-4-1963 505–8; *AJ* 27-10-1965 953–70; *S* 30-3-1963 369 (D. C. H. Jenkin LA with Capon Hs). Residential Area 17 Linnaeus St *AJ* 9-9-1970 570 (YDG; see Note 30, Chapter 11).

LEEDS CBC: *JRIBA* 10-1946 531–41; 7-1948 393–9; *Municipal Review* 12-1959 702–3; *B* 27-1-1961 176–7; *MJ* 22-1-1960 257–64; 26-5-1961 1721–2; 26-2-1965 735–7. R. A. H. Livett LA unless otherwise stated. Burley Lodge Rd Area *AR* 11-1967 358 (E. W. Stanley LA). Camp Rd *S* 24-9-1960 1083. Ebor Gdns *ABN* 7-2-1957 197; *OAP* 2-1957 73; *MJ* 18-2-1957 131ff; *Families Living at High Densities* . . . (Design Bulletin 21 1970) (R. A. H. Livett LA with Reema). Leek St *AR* 1-1967 28; 11-1967 354–5; *S* 13-4-68 16–17, 44; *AJ* 6-8-1969 306–8; 9-9-1970 567–8 (YDG; see Note 30, Chapter 11). Lincoln Green Est *B* 1-2-1957 227; *HR* 1/2-1958 6–7. Moorfield Est *MJ* 8-7-1955 1837–7; *OAP* 6-1955 301–3. Myton Holbeck Towers *S* 28-5-1960 628. New Carlton Towers *OAP* 11-1959 507. Quarry Hill A. Ravetz, *Model Estate: Planned Housing in Quarry Hill, Leeds* 1974. Saxton Gdns, York Rd *MJ* 17-6-1955 1617–20; *B* 17-6-1955 990; *HR* 1/2-1958 6–7; *OAP* 12-1959 600–1. Seacroft *B* 5-2-1960 258–9. Wellington Hill *MJ* 14-12-1962 3843; *B* 27-1-1961 176 (Sheridan Shedden LA).

PONTEFRACT MBC: Horsefair *S* 8-2-1958 133.

ROTHERHAM CBC: St Ann's *S* 12-2-1966 30–1; *OAP* 2-1966 239–40; *IB* 2-1966 239–40; *ABN* 26-1-1966 158–60; 25-10-1967 694–6; *Building* 21-2-1969 95–8; *AJ* 9-7-1969 53–5; 21-4-1971 883–94 (Gillinson Barnett & Ptrs with Bison). Oakhill RDA *S* 4-8-1972 30. The Lanes *AJ* 21-4-1971 883–94; *Decade* 182 (all Gillinson Barnett & Ptrs).

SCUNTHORPE MBC: *BHPR* 6/7-1961 15–20.

SHEFFIELD CBC: see Notes 28, 29, Chapter 18; Housing Development Committee of the Corp. of Sheffield, *Ten Years of Housing in Sheffield*, Sheffield April 1962; *MJ* 1-4-1960 1077–81; 1-6-1962 1643; *ABN* 25-7-1962 115–26; *AJ* 21-4-1960 617-25; 10-7-1963; *ABN* 1-7-1963 88–104; *B* 18-10-1963 787; *IB* 6-1963 32–3; *HR* 1/2-1974 15–17; *AY* Vol. 11 1965 53–97; Esher 194; *Economist* 8-9-1962 937–8. J. L. Womersley LA unless stated otherwise. Broomhall *AJ* 9-9-1970 569 (YDG; see Note 30, Chapter 11). Burngrave Dist. *B* 12-7-1963 73–4 (J. Mansell, Jenkinson & Son). Gleadless Valley *Municipal Review* 5-1960 324–5; *B* 27-4-1962 856–71; 12-7-1963 65–8; MHLG, *The Family at Home: A Study of Households in Sheffield* (Design Bulletin 17 1969); DoE, *The Estate Outside the Dwelling* (Design Bulletin 25 1972). Gloucester St and Woodhouse, Badger Rd *AJ* 12-5-1965 1135–46; *IBSC* 1/3-1964 7–10; *Designing a Low-Rise Housing System: 5M System* . . . *in Sheffield* (Design Bulletin 18 1970): *Decade* 57, 68 (5M; MHLG Res. & Dev. Group with J. L. Womersley LA). Greenhill Bradway *MJ* 29-3-1957 695–7; *TPLR* 10-1954 182–94; Cleeve Barr 267. Kelvin *AR* 1-1965 40; *OAP* 2-1966 232–3 (J. L. Womersley, later W. L. Clunie LA). Norfolk Pk *S* 29-12-1962 1565–6; *B* 4-1-1963 9–11. Park Hill *AJ* 31-3-1955 438–9; *B* 23-4-1955 666–9; *NHTPLCY* 1955 106–9; *MJ* 15-4-1955 1007–12; 4-11-1955 2985–9; *AD* 6-1955 192; *S* 5-7-1959 689–90; *IB* 4-1960 23; *HR* 9/10-1958 156–8; 7/8-1961 133–9; *AD* 9-1961 393–404; *AR* 12-1961 402–10 (R. Banham); *ABN* 16-1-1963 77; 17-7-1963 90ff; *JRIBA* 12-1962 447–69; 7-1963 281–6; 6-1967 271–80; *AJ* 23-8-1961 271–81; 15-1-1964 147–9; 21-7-1965 157–70; 15-5-1974 1067; *OAP* 2-1966 225–38. *New Society* Vol. 26 No. 576 18-10-1973 154–6; DoE, *Estate Outside the Dwelling* (Design Bulletin 25 1972); *Built Environment* 12-1972 557–61; *Architecture Plus* 5/6-1974 108–15; C. Bacon, *Park Hill in its social context*, 1985 (J. L. Womersley, J. Lynn, Ivor Smith, F. Nicklin LA). Park Hill Pt II (Hyde Pk): *AR* 1-1959 14; 11-1967 350–1; *TPLR* 1974 207–14 (J. L. Womersley, W. L. Clunie, A. V. Smith LA). Woodhouse, see Gloucester St Woodside *S* 2-4-1960 327–8 (J. L. Womersley with Wimpey).

STOKESLEY RDC: West End Devt *Building* 9-7-1971 28/66–8 (Manning & Clamp).

YORK CBC: Festival Flats Fishergate *ABN* 18-12-1952 719–24; *AJ* 2-2-1950 183–4; *B* 3-2-1950 166–70; *JRIBA* 8-1954 417 (G. Toplis & R. Meadows).

NORTHERN IRELAND

BELFAST CBC: Annadale Embankment *MJ* 16-10-1953 2241–3 (L. W. Adamson LA). Highfield *ABN* 6-1-1950 17–19. Mt Vernon Est Ext *S* 26-2-1966 51 (Unit Constr.)

CLOUGHER VALLEY RDC: *MJ* 11-2-1955 397–9.

CRAIGAVON DC: *AR* 1–1968 68–9.

KILLYLEAGH: *B* 1-1-1960 12–13.

NORTHERN IRELAND HOUSING TRUST:

GENERAL: *ABN* 15-6-1951 710; *B* 29-12-1950 686-9; 16-4-1954 697; 11-6-1954 1015–24; *JRIBA* 11-1949 9–16; 5-1954 269–75.

SPECIFIC LOCATIONS:

Belfast: Cullingtree Rd (Divis Flats) *S* 27-2-1970 41 (J. Cairncross NIHT with Laing).

Londonderry: Rossville St Lecky Rd *S* 7-5-1966 35 (Sectra/Laing).

SCOTLAND

ABERDEEN BC: *TCP* 6-1967 284–5; *S* 5-10-1973 49–50. Ashgrove *MJ* 9-1-1953 37–41 (A. B. Gardner LA). Kincorth *IB* 4-1964 26–8 (Harley, Haddow & Ptrs). Rosemount Sq *ABN* 18-2-1949 138–9; *AJ* 17-2-1949 155 (A. B. Gardner LA).

AIRDRIE BC: *ABN* 24-8-1966 320–1.

CLYDEBANK BC: *OAP* 2-1944 72–3; *B* 18-1-1952 120; *MJ* 15-2-1952 333–41. Littleholm *AR* 1-1967 30–1 (J. Vaughan LA). Melbourne Ave Mountblow Hs *S* 21-8-1954 713–14; *AJ* 26-8-1954 250; *MJ* 15-10-1954 1493–5 (S. Bunton Assoc).

CUMBERNAULD NTDC: *S* 7-6-1958 577–8; 3-9-1960 999–1001; 3-7-1965 33–6; *TCP* 9-1961 355–6; *ABN* 29-3-1961 407–26; 5-12-1962 824; *JTPLI* 5-1964 195–200; *AR* 2-1964 93–9; 1-1964 14–15; *AD* 9-1960 352; 1-1962 20; *HR* 7/8-1963 120–3; *MJ* 5-4-1963 982–4; *AJ* 5-12-1962 1248, 1279–88; 8-1-1964 65–6; 31-1-1968 293–310; *JRIBA* 5-1964 191–206; *IB* 7-1965 32–5; *AY* Vol. 10 1962 99–103; Vol. 11 1965 231–64; M. Keating, *The Designation of Cumbernauld New Town*, 1986. Abronhill South *AR* 1-1966 48 (D. R. Leaker LA). Abronhill T 49 Hs *AJ* 6-7-1966 16 (Rothwell Perrin Ltd, Portland, Ontario). Carbrain 1, 2 *AR* 1-1961 30 (L. Hugh Wilson LA). Carbrain 13, 14 *AR* 1-1967 29 (D. R. Leaker LA). Muirhead 3 *AR* 2-1964 95–9 (L. Hugh Wilson, D. R.Leaker LA). Park 3 West *AR* 1-1964 15; *IB* 5-1966 33–4 (ARU). Park 4 *AR* 1-1965 54 (D. R. Leaker LA). Ravenswood 5 *AR* 1-1965 54 (D. R. Leaker LA). Seafar 2 *AR* 1-1961 31; 2-1964 95–9 (L. Hugh Wilson, D. R. Leaker LA).

DUMBARTON BC: Central Area RD *B* 8-7-1960 48–52 (J. Rae, D. Preston, S. Garner, W. Strebel). Cardross Rd *B* 6-3-1953 380 (A. D. Holmes).

DUNBAR BC: Fishermen's Cottages *ABN* 15-4-1949 334–7; *B* 2-11-1951 581–5; *MJ* 5-9-1952 1642–5; *AJ* 18-9-1952 339–41 (B. Spence & Ptrs).

DUNDEE BC: *TPLR* 7-1972 275–85. Ardler Courtyard Housing *AJ* 4-3-1964 537–46; 14-1-1970 89–100; *Decade* 21 (Baxter, Clark & Paul).

EAST KILBRIDE NTDC: *B* 7-11-1952 657ff; *S* 11-8-1956 583–4; *TPLR* 1-1964 306–16. Bronster Pl Quebec Dr *MJ* 18-1-1957 129–30 (F. C. Scott LA).

EAST LOTHIAN CC: Prestonpans Inchview Devt *AD* 9-1960 351; *AR* 1-1961 28–9; *AJ* 24-5-1967 1217–27 (ARU, R. H. Matthew).

EDINBURGH BC: *B* 15-11-1946 508–10; 20-6-1952 913–30; *ABN* 26-6-

1952 732ff. Couper St Leith Phase I *AJ* 28-12-1966 1607–18 (Alison & Hutchison & Ptrs). The Inch Nether Liberton *B* 15-11-1946 508–10; 20-6-1952 913–19; *MJ* 24-9-1954 2276–8 (A. G. Forgie LA with D. Stratton Davis). Leith Fort *B* 31-1-1958 214–23; 7-2-1958 261; *AJ* 6-2-1958 205–16; 7-4-1965 837–48; *AR* 1-1961 32–4; 3-1965 218–23; P. Whiting, *New Single-Storey Houses*, 1966, 166–9 (S. Stewart, Baikie & Perry). Muirhouse Demonstration Maisonettes and Houses *AJ* 7-3-1957 356–7; *MJ* 22-3-1957 645–50; *OAP* 12-1957 175–9; *AD* 4-1957 145 (T. A. Jeffryes of DHS). Muirhouse 2 Martello Ct *ABN* 22-9-1965 535 (R. Anderson, Kininmonth & Paul). Newhaven Annfield *B* 12-5-1961 886–7 (Sir B. Spence Ptrs). Queensferry Rd *MJ* 16-3-1951 607; *B* 20-6-1952 932; *Concrete* 1-1954 58–9 (A. G. Forgie LA). Sighthill 3-storey flats *B* 30-7-1954 169–71; *MJ* 18-6-1957 60; *S* 8-5-1954 377–8; 10-8-1957 833–5 (Arch. Sect. DHS and Min. of Works). Westfield Ct *B* 20-6-1952 930–1 (Williamson & Hubbard).

GALASHIELS MBC: Church St *ABN* 22-6-1966 1125–8 (P. Womersley).

GLASGOW BC: M. Horsey, 'Crathie Court and Moss Heights', *Scottish Georgian Society Bulletin* 1982; idem, 'The Story of Red Road Flats', *TCP* 7/8-1982 177–9; idem, 'Multi-Storey Council Housing in Britain, *Planning Perspectives* 5-1988 167–96; idem, *Tenements and Towers*, 1990; *Building Industries and Scottish Architect* 11-1945 22–3; *Building* 2-1946 54–5; *AJ* 15-9-1949 283–94; *BHPR* 2/3-1951 60–1; *S* 21-8-1954 713–14; *ABN* 18-3-1954 326–8; *B* 9-4-1954 627–8; *AJ* 4-2-1960 196–205; *IB* 9-1960 32–7; *OAP* 2-1961 65–72; Concrete 11-1963 449–56; *B* 8-5-1964 953–8; *JTPLI* 1-1965 3–8; *S* 1-7-1967 29–33; 23-4-1971 30–2; *TPLR* 1969 319–34; *OAP* 1-1972 33–7. Calfhill Ct *B* 18-9-1953 427–9; *MJ* 9-10-1953 2187–90 (A. G. Jury LA).
Cranhill Ext *OAP* 2-1963 116–17 (A. G. Jury with G. Bowie/Crudens). Hillpark *OAP* 10-1962 619, 631; *IB* 9-1962 35; *S* 8-9-1962 1111–12 (A. G. Jury LA). Fyvie Ave *B* 7-11-1952 672 (A. G. Jury LA).
Hutchesontown/Part Gorbals CDA *MJ* 23-4-1954 899–902; 15-3-1957 588–9; *OAP* 5-1954 225–7; 6-1956 277–80; *AJ* 18-4-1957 570–3; 4-9-1958 326; *OAP* 10-1958 469–72; *S* 2-3-1957 197–8; 6-9-1958 890; 26-3-1960 301; *B* 5-9-1958 282–3; *HR* 11/12-1958 184–5; *ABN* 10-9-1958 350–1; 27-5-1959 678–9; 15-1-1970 26–9; *AR* 1-1959 9–11; *B* 7-7-1961 32; *S* 13-5-1961 615–16; *Building Industries and Scottish Architect* 11-1962 40–6; *AJ* 15-4-1964 857–72; *AR* 11-1967 348–9 (Area B: R. Matthew & Johnson Marshall; Area C: Sir B. Spence Ptrs). Hillpark *B* 19-10-1962 769–70 (T. S. Cordiner). Liddesdale Rd Milton *MJ* 29-4-1955 1151–3 (A. G. Jury LA). Moss Heights *MJ* 22-9-1950 2281; *B* 12-6-1953 910–11; *AR* 5-1954 342; *CQ* No. 19 7/9-1953 16–19; *AJ* 25-2-1954 250 (A. G. Jury LA). Pollokshaws CDA Unit 2 *IB* 11-1961 36–9; *OAP* 3-1958 126–9 (Boswell, Mitchell & Johnston). Red Rd *B* 19-10-1962 769–70; *B* 15-3-1963 568; *JRIBA* 2-1967 46; *AR* 11-1967 343; *SBD* 5-1967 50–3; *International Asbestos Cement Review* No. 44 10-1966 21–5 (S. Bunton Assoc). Royston RDA *S* 10-91-1960 1019–20; *All Electric Flats, Royston, Glasgow*, 1961 (A. G. Jury LA). Sannox Gdns Flats for Single Women *BHPR* 8/9-1951 152 (R. Bradbury LA). Sighthill *IB* 4-1963 11; *S* 23-3-1963 337–8 (Crudens). Summerfield [Dalmarnock] *IBSC* 4-1967 9–11 (Parry & Hughes). Springburn CDA *OAP* 8-1963 867–9 (A. G. Jury LA). Toryglen North *IB* 9-1963 24 (Laing). Townhead CDA *IB* 9-1962 35; *OAP* 9-1962 535–7; *S* 6-1-1962 11 (A. G. Jury). Woodside CDA *IBSC* 10-1964 71 (Boswell, Mitchell & Johnson/Bison). See also SSHA below.

GLENROTHES NTDC: *MJ* 20-3-1959 804–6. Auchmuty, Woodside *MJ* 18-1-1957; Cleeve Barr 243 (P. Tinto LA). Caskieberran Tanshall *IB* 1-1966 32 (Laing 12M Jespersen).

KIRKCALDY BC: Valley Gdns (Templehall Est) *ABN* 21-7-1955 97; *B* 9-9-1955 432–5; *CQ* No. 38 7/9-1958 23–4; Cleeve Barr 255 (M. R. Meldrum LA). Dysart *AJ* 14-2-1962 338; *HR* 7/8-1967 107–10; *AR* 4-1967 277–9 (A. Wheeler of Wheeler & Sproson).

LESLIE BC: Bowery Devt *MJ* 20-12-1953 2759 (H. Anthony Wheeler).

LIVINGSTON NTDC: Craigshill 1 *AR* 1-1965 45; *B* 15-5-1964 1035–6; *IB* 5-1964 20–1; *AJ* 10-1-1968 83–100 (MHLG P. Daniel, later W. Newman Brown LA with Laing 12M Jespersen). Craigshill 2 *Concrete* 4-1967 132 (Messrs J. Parr Ptrs with Siporex/Costain).

PAISLEY BC: *MJ* 9-1-1953 42–3; *S* 10-10-1959 823–4; 5-6-1965 33; *B* 14-10-1960 698; *OAP* 11-1959 512. George St Phase II *S* 5-8-1967 39 (Lawrence (MSC)).

PRESTONPANS: see East Lothian CC.

SELKIRK BC: *ABN* 26-3-1948 290–3.

STIRLING BC: Baker St *OAP* 4-1954 160–2 (Sir F. Mears & Ptrs).

SCOTTISH SPECIAL HOUSING ASSOCIATION

GENERAL: *ABN* 20/27-12-1967 1003–6; *OAP* 8-1968 1030–4; *S* 3-4-1970 38–41; *JRIBA* 9-1951 415–22; 2-1971 68–72.

SPECIFIC LOCATIONS: Erskine New Town: *S* 14-11-1969 63; 7-5-1971 19. Glasgow: Anderston Cross CDA *OAP* 8-1968 1034 (SDD/SSHA Joint Devt Unit). Whiteinch-Broomhill *AJ* 7-12-1966 1405; *ABN* 20/27-12-1967 1003 (H. Buteux SSHA). Fortrose St *IB* 5-1964 18–19 (SSHA/SDD Joint Devt Unit). Toryglen *Prefabrication* 1-1954 22–4; *B* 25-1-1957 185–6; *MJ* 8-2-1957 299–300; *CQ* No. 36 1/3-1958 38–9; Cleeve Barr 241 (J. Austen Bent SSHA). Wyndford *B* 22-1-1965 220 (H. E. Buteux).
West Calder: Parkhead Est *S* 21-5-1971 26–9.

WALES

BEAUMARIS MBC: *ABN* 4-11-1949 445–7.

CARDIFF CBC: Butetown RDA *HR* 9/10-1957 154–5; *MJ* 8-2-1957 297; *HR* 9/10-1958 159–60 (E. C. Roberts LA). Gabalfa *AJ* 11-6-1959 856; *ABN* 10-6-1959 752; 6-1-1960 13 (Adv) (J. Dryburgh LA).

CARDIFF RDC: Coryton Whitchurch Beech Hs *OAP* 9-1959 409; *NHTPLCY* 1960 45–6 (S. P. Youldon LA).

CWMBRAN NTDC: P. Riden, *Rebuilding a Valley . . . Cwm Bran . . .*, Cambridge 1988; Cleeve Barr 236; *MJ* 16-10-1959 2806–76. Fairhill Rd *AJ* 23-2-1966 535–6 (G. Redfern LA). Greenmeadow 1A Site *SBD* 10-1967 13–22 (G. Redfern LA). Town Centre North *AJ* 11-6-1959 887 (J. C. P. West, Miall Rhys Davies LA). Town [Civic] Centre Tower Bl *AJ* 13-2-1963 328; *ABN* 20-10-1965 721 (G. Redfern LA).

LLANGEFNI UDC: Plâs Tudur *S* 6-2-1976 37–8 (A. Gordon Ptrs).

LLANRWST UDC: *ABN* 21-7-1950 78–9.

MENAI BRIDGE UDC: Maes-y-coed Est *Construction* (London) 4-1975 4 (A. P. Thomas, Jones & Evans).

MONMOUTH MBC: Wyesham *AJ* 11-6-1959 886 (John H. Evans).

NEWPORT CBC: Duffryn *Building* 20-9-1974 111–18; *Architect* (London) 2/3-1975 31–3; *AJ* 6-5-1981 847–59 (L. G. Monckel & Ptrs et al.). Gaer Stelvio Neighb. *B* 29-6-1951 916ff (J. Blackett LA).

PORT TALBOT MBC: *S* 30-10-1965 33–4.

RHONDDA MBC: Penrhys *S* 30-1-1970 40–1.

SWANSEA CBC: *MJ* 4-6-1954 1273-9; *NHTPLY* 1960 63–4.

VAYNOR PENDERYN RDC (FROM 1974 MERTHYR TYDFIL BC): Cefn Coed y Cynner Pont y Capel Rd *AJ* 25-3-1970 737–52; *Decade* 170 (J. H. Gammon, H. O. Williams & Assoc).

WREXHAM MBC: Queen's Pk *JRIBA* 7-1952 332; *MJ* 18-9-1953 2025–8; Cleeve Barr 278; *TPLR* 1-1954 271–95 (J. M. Davies LA with G. Stephenson). Plas Medoc Cefn Mawr *MJ* 12-7-1968 2025–8; *S* 29-3-1969 29 (J. B. Moreton of Merwyn Edwards Moreton Ptrs).

Notes

INTRODUCTION

1 P. Calvocoressi, *The British Experience, 1945–1975*, 1978, p. 140; int. Rogan, 1992; J. Steel Maitland, *JRIBA* 7-1952, p. 320.
2 Int. Smyth.
3 E.g., Dunleavy, p. 31. Wales: K. O. Morgan, *Rebirth of a Nation*, 1981, pp. 18, 19.
4 D. Miller, *Material Culture and Mass Consumption*, 1987.
5 See A. Ravetz in Chapter 33; S. Macdonald & S. Potter, *Putting on the Style*, 1990.
6 See *Art History* 6-1986, pp. 262–3.

CHAPTER 1

1 Cleeve Barr, p. 56.
2 G. & E. G. McAllister, *Homes, Towns and Countryside*, 1945, p. 132.
3 Marianne Walter, 'Flats, their Number, Types and Distribution', *AJ* 6-2-1947, p. 147.
4 Cleeve Barr, p. 83; *AJ* 2-6-1960, pp. 841–8.
5 T. Van Doesburg, *Tot een Beeldende Architectuur*, 1924, quoted in R. Banham, *Theory and Design in the First Machine Age*, 1960, p. 197; K. Frampton, *Modern Architecture: A Critical History*, 1980; C. Jencks, *Modern Movements in Architecture*, 1985; G. Kähler, *Architektur als Symbolverfall*, Braunschweig, 1981; K. Herdeg, *The Decorated Diagram: Harvard Architecture and the Failure of the Bauhaus Legacy*, 1983; see also Notes 43ff, Chapter 15.
6 M. Tafuri, *Architecture and Utopia: Design and Capitalist Development*, 1979; Joan Ockman (ed.), *Architecture, Criticism, Ideology*, Princeton, 1985; R. Scruton, *The Aesthetics of Architecture*, 1979; D. Watkin, *Morality and Architecture*, 1977.
7 See N. Bullock, 'First the Kitchen—Then the Façade', *Journal of Design History*, 1988, pp. 177–92; see *AJ* 17-5-1934, pp. 710–11; *BHPR* 7/8-1957, pp. 36–7.
8 A. Whittick, *Civic Design and the Home* (Rebuilding Britain Series, No. 10), 1943, p. 9.
9 L. E. M. Campbell, 'Architecture and Client: Modern Architecture in its Context, England, 1919–1939', PhD London University, 1983; idem, 'The Mars Group, 1933–1939', *RIBA Transactions* 4, No. 8, Twentieth Century Studies, No. 2 1986.
10 M. Pleydell-Bouverie, *Daily Mail Book of Post-War Homes*, 1944, p. 33.
11 ABT, *Homes for the People*, 1946, p. 13.
12 A. Saint, *Towards a Social Architecture: The Role of School Building in Post-War England*, 1987, pp. 7–14; see *BHPR* 4/5-1951, pp. 94ff; *MJ* 7-5-1954, p. 1013; N. M. Day, 'The Role of the Architect in State Housing', PhD (Warwick), 1988; A. De Reuck et al., *Decision Making in National Science Policy*, 1968.
13 *JTPLI* 5-1953, p. 132.
14 See Dudley, p. 53; *JRIBA* 8-1946, p. 443; Saint, *Social Architecture*, p. 28.
15 First called Association of Architects, Surveyors and Technical Assistants (AASTA); from 1942, Association of Building Technicians (ABT); cf. also the Architects' and Technicians' Organisation (ATO). See Saint, *Social Architecture*, p. 12.
16 White, p. 37.
17 White; Prefabrication; Saint, *Social Architecture*.
18 'LCC Technical Development and Research', *JRIBA* 10-1955, pp. 471–9; see also Note 11, Chapter 15.
19 *OAP* 3-1963, pp. 237–8; N. Lichfield, 'Research for Planning', *JTPLI* 4-1966, pp. 115–61; *AD* 8-1966, pp. 378–402; *AJ* 15-11-1967.
20 *JRIBA* 4-1963, p. 159.

CHAPTER 2

1 H. Kamenka, *Flats*, 1947, p. 99.
2 Dudley, pp. 21, 39; ABT, *Homes for the People*, 1946, pp. 18, 30, 39, 45; *AD* 9-1948, p. 230; Segal, pp. 127–45; *ABN* 11-2-1949, p. 123; *AJ* 13-12-1951, pp. 699–700; *AR* 5-1951, p. 300; *MJ* 4-11-1955, pp. 2985–9; *TPLR* 1954, p. 48; Cleeve Barr, p. 55.
3 *AJ* 8/15-3-1956, p. 261; see also London: *B* 30-11-1945, pp. 430–5; *AJ* 27-12-1945, pp. 465–72; Cleeve Barr, p. 54; *JRIBA* 4-1962, p. 148; Dudley; MH, *Housing Manual*, 1944; MH, *Housing Manual*, 1949; MHLG, *Houses 1952*; *Flats and Houses 1958*; HLG 101–816 29-10-1956 Min. of 11-10-1956 meeting; SHAC, *Planning our New Homes*, 1944; DHS, *Scottish Housing Handbook*, Part 3, 1950; DHS, *House Design*, 1956. Northern Ireland: *JRIBA* 5-1954, p. 269; *HR* 7/8-1960, p. 154; DoE NI 487/1957; DoE NI 487/1957 table of 11-2-1963.
4 *LCC Housing Type Plans: prepared in the Housing Division of the Architect's Dept . . .*, 1956; new ed. 1960; *IB* 12-1959, pp. 24–5.
5 See Note 7, Chapter 1; *JRIBA* 10-1942, p. 209.
6 Yorke & Gibberd, p. 34; *JRIBA* 7-1946, p. 387; *ABN* 20-9-1951, p. 309; *AJ* 20-12-1951, pp. 734–8; *TPLR* 1-1954, p. 278; Cleeve Barr, p. 59.
7 *MJ* 27-2-1953, pp. 437–43; *JRIBA* 12-1954, pp. 66–74; *AJ* 13-12-1961, p. 1159; *JRIBA* 4-1962, p. 147; NBA, *Generic Plans: Two and Three Storey Houses*, 1965.
8 Cleeve Barr, p. 62; *AJ* 7-12-1950, p. 494.
9 A. Bertram, *Design*, 1938, pp. 71ff.
10 *JRIBA* 3-1947, p. 250.
11 Cleeve Barr, p. 55; DoE, (Design Bulletin 8), 1963.
12 H. Robertson, *Reconstruction and the Home*, 1947, p. 22.
13 *Listener*, 28-12-1961, p. 1109; see *AJ* 12-11-1980, pp. 957–8.
14 Parker Morris, pp. 2, 35.
15 See also *AJ* 13-12-1961, p. 1157.
16 Parker Morris, pp. 4, 8.
17 See above, Note 3.
18 O. W. Roskill, *Housing in Britain* (TCPA), 1964, p. 40.
19 *AJ* 17-3-1934, p. 713; Yorke & Gibberd; ABT, *Homes*, p. 23; *AD* 1948, p. 231; *AR* 12-1951, p. 355; *HR* 1/2-1954, pp. 13–15; *AJ* 7-3-1957, pp. 372–6; *OAP*, 3-1957, pp. 140–1; Cleeve Barr, pp. 65, 184; *AD* 2-1958, p. 64; *ABN* 27-5-1959, p. 695; *AJ* 15-1-1959, pp. 105–11; Parker Morris, pp. 27ff; see also Chapter 19.
20 *JRIBA* 10-1942, p. 209; 3-1947, pp. 250, 254; LCC, *Housing: A Survey of the Post War Housing Work of the LCC, 1945–1949*, 1949, p. 69; see A. Ravetz, 'From Working Class Tenement to Modern Flat: Local Authorities and Multistorey Housing between the Wars', in A. Sutcliffe (ed.), *Multistorey Living: The British Working Class Experience*, 1974,

pp. 141–3; *JRIBA* 3-1955, p. 211; White, pp. 140–7; *Building* 12-1948, pp. 394–407; BRS, *A Study in Space and Water Heating in Local Authority Flats* (National Building Studies, Research Paper 34), 1961; LCC, *Housing Services Handbook*, 1962; *MJ* 20-10-1961, pp. 3382-9; V. Hole & J. J. Attenburrow (BRS), *Houses and People* . . . 1966, p. 1; R. Banham, *The Architecture of the Well-Tempered Environment*, 1969; idem, *Mechanical Services* (Open University, A305, 'History of Architecture and Design, 1890–1939' Course, Unit 21), Milton Keynes, 1975.

21 M. Pleydell-Bouverie, *Daily Mail Book of Post War Homes*, 1944, pp. 97–8.
22 Cleeve Barr, pp. 56–9; *ABN* 11-2-1949, p. 123.
23 Political and Economic Planning (PEP), *Report on the Market for Household Appliances*, London, 1945, pp. 159–61; *AJ* 2-3-1950, pp. 287–91; 16-12-1964, p. 1437; see Ravetz, 'Working Class Tenement'; Hole & Attenburrow, *Houses and People*.
24 Cleeve Barr, pp. 72–3.
25 PEP, *Report*, p. 19; *AJ* 28-6-1956, p. 732.
26 PEP, *Report*, p. 2.
27 *AJ* 28-6-1956, p. 752; 8-6-1961, p. 857.
28 *JRIBA* 7-1949, p. 400.
29 'High Flats Symposium', *JRIBA* 3-1955, p. 210; *AAJNL* 1-1957, p. 145.
30 Parker Morris, p. 16.
31 Cleeve Barr, pp. 71–3.
32 *JRIBA* 11-1948, pp. 13–26; 1-1949, pp. 115–19; 8-1949, p. 451; 9-1952, pp. 402–9; *AJ* 28-6-1956, p. 734.
33 *AJ* 28-6-1956, pp. 732–64; 5-7-1956, pp. 13–20.
34 *JRIBA* 8-1949, pp. 456–7; 3-1951, p. 180; *AJ* 8-6-1961, p. 857.
35 H. Kamenka, *Flats*, 1947, p. 99.
36 *JRIBA* 5-1941, p. 285.
37 *AJ* 7-12-1950, pp. 487–92 (Pimlico); *AR* 11-1954, p. 308; *JRIBA* 3-1955, p. 197; *AJ* 5-7-1956, p. 17; *AAJNL* 1-1957, p. 145; *AR* 6-1957, p. 416; Cleeve Barr, p. 156; *JRIBA* 12-1962, pp. 468ff (Sheffield).
38 *AJ* 5-7-1956, p. 19.
39 LCC, *Housing Services Handbook*, 1962.
40 See Egerton Report, Ministry of Works Postwar Building Studies No. 19. Heating and Ventilation of Dwellings 1945, p. 10; ABT, *Homes*, pp. 100–6; MH, *Housing Manual*, 1949, p. 97; *MJ* 27-1-1956, pp. 25–9; *AAJNL* 1-1957, p. 146; *AJ* 28-6-1956, p. 734.
41 *B* 9-9-1955, pp. 432–5; *S* 9-5-1959, pp. 511–12; Cleeve Barr, pp. 76–80; *AJ* 8-6-1961, p. 858; 16-12-1964, pp. 1438ff.
42 Cleeve Barr, pp. 71, 75.
43 *AJ* 28-6-1956, p. 748; 5-7-1956, p. 20; 15-1-1959, p. 110; *BHPR* 1-1960, pp. 18–19.
44 *AJ* 16-12-1964, p. 1434; *MJ* 19-6-1959, pp. 1695–1713.
45 Egerton Report (Text above), pp. 13, 18, 19.
46 *AJ* 16-12-1964, pp. 1439ff.
47 *JRIBA* 11-1948, p. 12; *AJ* 28-6-1956, p. 734.
48 Parker Morris, p. 65.
49 *AJ* 28-6-1956, p. 738.
50 Labour Party, *Housing and Planning after the War*, [1943], p. 5.
51 *AJ* 1-6-1961, pp. 808ff; 25-11-1964, pp. 1249ff; *SBD* 10-1967, pp. 31–53.
52 Parker Morris, p. 15; see *AJ* 7-12-1950, pp. 493–7.
53 *JRIBA* 9-1967, pp. 383–6.

CHAPTER 3

1 *Living in Flats*, p. 1.
2 P. Abercrombie, Foreword in A. Block, *Estimating Housing Needs*, 1946.
3 *Eastern Daily Press* 17-3-1948; N. Bullock, 'Plans for Post-War Housing in the UK: The Case for Mixed Development and the Flat', *Planning Perspectives* 2, 1987, pp. 71–98 ; Dudley, p. 12.
4 Block, *Estimating*, pp. 12, 13, 92.
5 *JRIBA* 10-1942, pp. 207–13; S. P. Brown & R. Glass, 'Household Structure and Population Needs', *Population Studies* IV, 1950–1, pp. 395–420; Mary P. Newton, 'Some Aspects of Household Structure in Relation to Planning', *BHPJ* 5-6-1950, pp. 137–45; J. M. Mackintosh, *Housing and Family Life*, 1952; J. MacColl, *Policy for Housing* (Fabian Research Series, No. 164), 1954.
6 *AR* 3-1945, p. 67; Bullock, 'Post-War Housing', pp. 78–80.
7 Sharp, p. 61.
8 *AJ* 6-2-1947, p. 146.
9 *JRIBA* 6-1950, p. 324.
10 *JRIBA* 3-1947, p. 247; see *ABN* 18-2-1949, p. 144.
11 Block, *Estimating*, pp. v, 46.
12 *Ibid.*, p. 54; *British Journal of Sociology* XI, 1958, p. 351.
13 *JRIBA* 7-1948, p. 381.
14 *AJ* 5-11-1953, p. 566.
15 *AJ* 13-12-1951, p. 566; 4-9-1952, pp. 293–4.
16 Dudley, p. 25; P. Abercrombie, *Greater London Plan*, 1944, p. 174; *JRIBA* 4-1947, p. 298; MHLG, *Housing for Special Purposes* (Supplement to *Housing Manual*, 1949), 1951, pp. 13–15; DoE, *Housing Single People*, 1 (Design Bulletin 23), 1971 Coventry CBC's Manor Guildhouse, Bell Green, of 1956, see G. Lewison & R. Billingham, *Coventry New Architecture*, Warwick, 1969, pp. 131–2. L. F. Pearson, *The Architectural and Social History of Cooperative Living*, 1988; G. Uhlig, *Kollektivmodell Einküchenhaus* (Werkbund Archiv 6), Giessen, 1981; *IBSC* 10-1968, pp. 37–51.
17 Cleeve Barr, p. 66; MHLG, *Flatlets for Old People*, 1958, p. 4.
18 *BHPJ* 7-1950, pp. 137–45.
19 *JRIBA* 5-1951, pp. 279–80.
20 MHLG, *More Flatlets for Old People*, 1960; MHLG, *Grouped Flatlets for Old People* (Design Bulletin 2), 1962; MHLG, *Old People's Flatlets at Stevenage* (Design Bulletin 11), 1966; DoE, *Housing for the Elderly* (Design Bulletin 31), 1975.
21 Cleeve Barr, p. 66.
22 J. B. Cullingworth, *Housing Needs and Planning Policy*, 1960.

CHAPTER 4

1 Yorke Gibberd, p. 8.
2 Flats in general: M. Horsey, *Tenements and Towers: Glasgow Working Class Housing, 1890–1990*, Edinburgh, 1990; F. Worsdall, *The Tenement*, 1979; S. Perks, *Residential Flats for all Classes*, 1905, 1930s: Council for Research on Housing Construction, *Slum Clearance and Rehousing, 1st Report*, London, 1934; H. Ingham Ashworth, *Flats: Design and Equipment*, 1936; Yorke & Gibberd; S. Bayley, *The Modern Flat* (Open University, A305, 'History of Architecture and Design, 1890–1939' Course, Unit 22), Milton Keynes, 1975; D. Calabi, *Architettura domestica in Gran Bretagna, 1890-1939*, Milan, 1982; S. Pepper, 'Ossulton Street: Early LCC Experiments in High-Rise Housing, 1925–1929', *London Journal* 7, No. 1, 1981, pp. 46–64; A. Sutcliffe (ed.), *Multi-Storey Living*, 1974; Dudley, pp. 19–22; M. Walter, 'Flats, their Numbers, Types and Distribution', *AJ* 6-2-1946, pp. 145–9; E. Armstrong, 'Housing: Planning for Amenity', *JRIBA* 3-1947, pp. 247–55; H. Kamenka, *Flats*, 1947; see also Note 16 below.
3 *TCP* 7/9-1936, p. 97.
4 Denby, pp. 260–3.
5 J. Madge, *The Rehousing of Britain*, 1945, p. 22.
6 Labour Party, *Housing and Planning after the War*, [1943], pp. 9–10.
7 ABT, *Homes for the People*, 1946, p. 46.
8 Council for Research, *Slum Clearance*, p. 136.
9 Mass Observation for Advertising Service Guild, *Enquiry into People's Homes*, 1943, p. 4.
10 Yorke & Gibberd, p. 8.
11 For Lubetkin, see Gazetteer II: London, Finsbury.
12 ABT, *Homes*, p. 46.
13 Ravetz, in A. Sutcliffe, *Multi-Storey Living*, p. 141.
14 *JTPLI* 1953, pp. 54–8; *NHTPLCY* 1956, p. 91; *JRIBA* 3-1947, p. 255.
15 Yorke & Gibberd, p. 13; ABT, *Homes*, p. 46.
16 A. Whittick, *Civic Design and the Home*, 1943, pp. 9–13; Ascot Gas Water Heater Services, *Flats: Municipal and Private Enterprise*, London, 1938; B. S. Townroe, *Britain Rebuilding: The Slum and Overcrowding Campaigns*, 1936, p. 121; Segal, p. 148.
17 W. Gropius, *The New Architecture and the Bauhaus*, 1934, pp. 99ff; Dudley, pp. 19–22; ABT, *Homes*, pp. 20–5; Sharp, p. 60.
18 *JRIBA* 2-1946, p. 126.
19 Dudley, p. 19; Whittick, *Civic Design*,

pp. 10–11; *Listener* 14-6-1951, pp. 951–2; *AAJNL* 5-1953, p. 187.
20 *JRIBA* 7-1948, p. 391; *AR* 3-1945, p. 70.
21 Dudley; A. Ravetz, *Model Estate: Planned Housing in Quarry Hill*, Leeds, 1974.
22 *AJ* 6-2-1947, p. 145.
23 N. Bullock, 'Plans for Post-War Housing in the UK: The Case for Mixed Development and the Flat', *Planning Perspectives* 2, 1987, pp. 75–80.
24 LCC, *Housing Services Handbook*, 1962, pp. 21–2.
25 *AJ* 3-3-1955, p. 307; see Cement and Concrete Association, *Spa Green Estate*, London, 1952, p. 6; *AY* 4, 1954, p. 133; *ABN* 20-9-1951, pp. 309–15.
26 *Dens. of Res. Areas*, p. 53.
27 *AJ* 13-12-1951, p. 699.
28 Sharp, p. 90.
29 Mass Observation, *People's Homes*, pp. 223ff.
30 *CLP*, pp. 170–6.
31 Dudley, p. 12.
32 *AJ* 6-2-1947, p. 147.
33 *Living in Flats*, p. 3.
34 *MJ* 14-11-1952, p. 2230.
35 *JTPLI* 5-1958, p. 131; Cleeve Barr, p. 64.
36 P. Kuenstler (ed.), *Community Organisation in Great Britain*, 1960, p. 48.
37 *AJ* 9-5-1957, p. 692–3.
38 See *JRIBA* 10-1942, p. 212; 8-1948, p. 434; *AB* 9-1951, p. 315; *AJ* 23-10-1952, p. 491; *TPLR* 10-1956, pp. 158–60; *ABN* 6-8-1958, p. 189; *AJ* 15-1-1959, p. 107.
39 Dudley, pp. 19, 70; *AJ* 20-11-1947, pp. 454–6; 17-12-1953, pp. 757–60; MH, *Housing Manual*, 1949; *AR* 7-1951, pp. 17–26; LCC, *Housing Services Handbook*, 1962, pp. 48–9. For Northern Ireland, see *JRIBA* 5-1954, p. 269.
40 See Gazetteer II.
41 See A. T. Edwards, 'An Alternative to Tenements', *MJ* 7-2-1958, pp. 285–7.
42 See Note 1; LCC, *A Survey of Postwar Housing of the LCC, 1945–1949*, pp. 44–5.
43 *JRIBA* 10-1942, p. 212.
44 ABT, *Homes*, 1946, p. 48.
45 See E. D. Mills's Kenmure Road, Hackney, Brett Manor Flats—Maisonettes (for the Manor Charitable Trust), Hackney: *AD* 11-1951, pp. 324–33; see *ABN* 14-11-1947, pp. 132–7.
46 *AJ* 13-12-1951, p. 699; Cleeve Barr, p. 69.
47 Segal, p. 128.
48 Cleeve Barr, p. 65.
49 *JRIBA* 4-1955, p. 260.
50 LCC HC PP (Greater London Record Office), Report to HC 25-6-1952.
51 *Living in Flats*, pp. 5–6.
52 Information C. St John Wilson.
53 *AD* 9-1953, pp. 258–9; *NHTPLCY* 1953, pp. 87–91; *JRIBA* 3-1955, p. 198; *AAJNL* 1-1957, pp. 142–8.
54 *AJ* 15-1-1959, p. 107; *Flats and Houses 1958*; *B* 30-6-1961, pp. 1240–1; *JRIBA* 4-1962, p. 147; see *AJ* 22-11-1967, pp. 1311–12.; *HJF*, p. 2.
55 Cleeve Barr, pp. 63–6.

CHAPTER 5

1 *AR* 9-1949, pp. 144–51.
2 G. R. Owens, 'Mixed Development in Local Authority Housing in England and Wales 1945–1970', PhD London University, 1987; N. Bullock, 'Plans for Post-War Housing in the UK: The Case for Mixed Development and the Flat', *Planning Perspectives* 2, 1987, pp. 71–98; N. M. Day, 'The Role of the Architect in State Housing', PhD (Warwick), 1988.
3 *AR* 7-1953, p. 32.
4 R. Durrant, *Watling*, pp. 2–4; M. Horsey, *Tenements and Towers: Glasgow Working Class Housing, 1890–1990*, 1990.
5 H. Ingham Ashworth, *Flats: Design and Equipment*, 1936.
6 Sharp, p. 65.
7 Denby, p. 232.
8 *CLP*, pp. 83, 174.
9 *AR*, 9-1949, pp. 144–51; Hackney MBC HC [HTPC] Min. 16-11-1945.
10 *AJ* 15-6-1950, pp. 737–74.
11 *AR* 12-1952, pp. 357–66.
12 *AAJNL* 1-1957, pp. 142–3.
13 Greater London Record Office, LCC HC Min. 25-10-1950.
14 Cleeve Barr, p. 66; LCC, *Housing Services Handbook*, 1962.
15 Owens, 'Mixed Development'.
16 Cleeve Barr, p. 134.
17 *Arena (AAJNL)* 81, 3-1966, pp. 231–5; *AD* 9-1967, p. 430.
18 *OAP* 1965, p. 635.
19 *JTPLI* 4-1962, pp. 151–7.
20 *AD* 9-1967, p. 430.
21 Int. Neylan & Ungless.
22 *AJ* 11-9-1968, p. 51.

CHAPTER 6

1 See note 9.
2 M. Fry: *AJ* 17-5-1934, p. 713; A. Whittick, *Civic Design and the Home*, 1943, p. 28.
3 Lighting Committee, Building Research Board, Dept of Scientific and Industrial Research, *The Lighting of Buildings* (Postwar Building Studies, No. 12), 1944.
4 Whittick, *Civic Design*, p. 28; ABT, *Homes for the People*, 1946, pp. 39, 119; MHLG & MT, *Planning for Daylight and Sunlight* (Planning Bulletin 5), 1964.
5 E.g., *B* 15-10-1954, p. 627.
6 Yorke & Gibberd, pp. 19–20.
7 G. R. Owens, 'Mixed Development in Local Authority Housing in England and Wales, 1945–1970', PhD London University 1987, pp. 337ff, 355; see also *JRIBA* 5-1946, pp. 290ff.
8 MHLG & MT, *Daylight and Sunlight*; see *AJ* 14-8-1947, p. 153; *JTPLI* 5/6-1947, pp. 93–100; *Flats and Houses 1958*, pp. 123–36; M. Rodenstein, *"Mehr Licht, Mehr Luft", Gesundheits-Konzepte im Städtebau seit 1750*, Frankfurt 1988.
9 Sharp, p. 64.
10 *JRIBA* 3-1947, pp. 247ff.
11 Dudley, p. 63; see *AJ* 17-5-1934, p. 713.
12 *AJ* 11-9-1968, p. 520.
13 See H. E. Beckett, 'Population Densities and the Height of Buildings', *Transactions of the Illuminating Engineering Society*, 7-1942, pp. 75–80.
14 *AJ* 11-9-1968, pp. 509, 520; T. Crosby, *How to Play the Environment Game*, 1973, pp. 211–17; E. S. Brierley, *Exploratory Studies of the Sunlight, Daylight... Factors*, 1970 (copy in RIBA Library).
15 *JRIBA* 12-1-1924, pp. 125–49; F. Jackson, *Sir Raymond Unwin, Architect, Planner, Visionary*, 1985.
16 S. Gale, *Modern Housing Estates*, 1949, pp. 13–17, 27, 73, 153.
17 ABT, *Homes*, p. 145; *Dens. of Res. Areas*, pp. 2–5, 70; *Flats and Houses 1958*, pp. 8ff.
18 Dudley, p. 52.
19 Denby, pp. 260–2.
20 D. Calabi (ed.), *Architettura Domestica in Gran Bretagna, 1890–1939*, Milan, 1982, pp. 115ff; N. Bullock, 'Plans for Post-War Housing in the UK: The Case for Mixed Development and the Flat', *Planning Perspectives* 2, 1987, pp. 81–6; *JRIBA* 6-1949, pp. 347–52; *ABN* 30-8-1951, p. 236; *AJ* 16-10-1952, p. 455; *JTPLI* 1-1953, pp. 34–8; *JRIBA* 3-1955, p. 205; *JTPLI* 3-1958, p. 78; MHLG & MT, *Residential Areas, Higher Densities* (Planning Bulletin 2), 1962.
21 Yorke & Gibberd, p. 10.
22 Sharp, p. 64.
23 *AR* 5-1951, p. 294.
24 *AR* 7-1953, p. 32.
25 N. Huse, *'Neues Bauen', 1918 bis 1933*, Munich, 1975, p. 92.
26 *JRIBA* 2-1943, pp. 85–7; Dudley, p. 67; Lighting Committee, Building Research Board, *Lighting of Buildings* (Postwar Building Studies No. 12) 1944.
27 L. Hilberseimer, *Entfaltung einer Planungsidee*, 1963; *AR* 7-1959, p. 22; *Arena (AAJNL)* 81, 3-1966, pp. 231–5.
28 Whittick, *Civic Design*, p. 21.
29 W. Gropius, *The New Architecture and the Bauhaus*, 1934, pp. 100–5; see Council for Research on Housing Construction, *Slum Clearance and Rehousing, 1st Report*, London, 1934, pp. 37, 122; Sharp, pp. 63–5; Dudley, pp. 64, 67; *JRIBA* 2-1943, pp. 85–7.
30 Council for Research, *Slum Clearance*.
31 *AJ* 21-3-1935, pp. 437–51.
32 See Yorke & Gibberd.
33 *JRIBA* 3-1955, p. 209.
34 *ABN* 7-2-1952, p. 157.
35 'Recreation': *AJ* 8/16-3-1956, p. 262; *CLP*, p. 77.
36 *S* 6-3-1954, p. 184.
37 Gropius, *New Architecture*, pp. 101–2.
38 Yorke & Gibberd, pp. 13, 40.
39 Whittick, *Civic Design*, p. 22.

CHAPTER 7

1 See note 13.
2 *JTPLI*, 5/6-1947, pp. 93–100; *Transactions*

of the Illuminating Engineering Society 7-1942, pp. 75–80.
3 Denby, p. 275.
4 Segal, p. 146.
5 Holborn MBC, Great Ormond St Area (1946).
6 *ABN* 27-5-1959, p. 694.
7 *JRIBA* 3-1955, p. 203; 'Symposium on High Flats I', *JRIBA* 3-1955, pp. 195–213; 4-1955, pp. 251–61; *OAP* 3-1955, pp. 141–2; 2-1955, p. 125; 4-1955, p. 198; *MJ* 4-1-1955, pp. 316–17; 12-11-1954, pp. 2811–12; 19-8-1955, pp. 2225–9; 4-11-1955, pp. 2985–9; *BHPR* 7/8-1955, pp. 10–19; 7/8-1957, pp. 18–27.
8 *JRIBA* 8-1948, p. 434.
9 *AJ* 2-6-1949, p. 497.
10 *JRIBA* 3-1955, p. 195.
11 *JRIBA* 7-1958, p. 305.
12 Sharp, p. 91. 'Beauty': E. Sharp, *JRIBA* 3-1955, p. 195.
13 *JRIBA* 3-1955, p. 208.
14 Esher, p. 114.
15 *JRIBA* 6-1958, p. 277.
16 *TPLR* 4-1955, p. 45.
17 *AJ* 28-2-1952, p. 264.
18 G. E. Kidder-Smith, *Sweden Builds*, 1950; B. Hulten, *Building Modern Sweden*, Penguin, [*c.*1950]; F. R. Yerbury, *Modern Swedish Architecture* (Swedish Institute for Cultural Relations and National Assoc. of Swedish Architects), 1952; *AR* 7-1959, p. 22; P.A. Scoffham, *The Shape of British Housing*, 1984, pp. 51, 76; (Ed.) Svenska Arkitektens Riksförbund, *Fyrtiotalets Svenska Bostad*, Stockholm, 1950; C. Engfors, *Folkhemmets Bostäder, 1940-1960*, Arkitektur Museet, Stockholm, 1987; *AR* 9-1943; 6-1947, pp. 199–204; 1-1948, 9-22; *JRIBA* 1-1943, pp. 58–61; *B* 25-10-1936, pp. 420–5; 8-11-1946, pp. 475–82; 22-11-1946, pp. 532–7; *Building* 12-1945, pp. 324–7; 8-1946, pp. 240–4; 2-1951, pp. 53–6; *AD* 7-1946, pp. 180–90; 4-1950, pp. 89–90; *AJ* 4-7-1946, pp. 7–11; 15-8-1946, pp. 121–3; 28-2-1952, p. 264; 20-1-1955, pp. 101–10; *ABN* 2-1956, pp. 58ff; *S* 11-6-1971, pp. 30–2; N. M. Day, 'The Role of the Architect in State Housing', PhD (Warwick), 1988.
19 *AR* 7-1959, pp. 21–35; N. Pevsner, *The Englishness of English Art*, 1956, pp. 172, 176.
20 HLG 91-417 notes 13-150, 1-2-1950; notes 16-651, 8-7-1953; *JRIBA* 3-1955, pp. 195, 20.
21 Ints. Ling, Whitfield Lewis.
22 SRO Files DD6/268, DD6/1515 passim; *B* 18-1-1952, pp. 120–3; *S* 21-8-1954, pp. 713–14.
23 *AJ* 26-1-1953, p. 278.
24 *HR* 3/4-1957, p. 54.
25 *B* 1-6-1956, pp. 621–2.
26 *MJ* 4-11-1955, pp. 2985–9.
27 *JRIBA* 3-1955, p. 201.
28 *HR* 1/2-1954, pp. 13–15; *JRIBA* 3-1955, pp. 203–4; *AJ* 7-3-1957, pp. 372–6; 13-6-1957, pp. 897; 10-7-1957, pp. 64–76; 5-6-1963, pp. 1181ff.
29 *AJ* 15-1-1959, p. 109.
30 Int. Whitfield Lewis.
31 *JTPLI* 1-1961, p. 9.
32 *JTPLI* 3-1953, p. 137; '"Point" houses', *AD* 4-1950, p. 89; GLRO, LCC HC Min. 21-11-1950, p. 672 ('"Point blocks"').
33 *JRIBA* 2-1946, p. 113; 8-1948, p. 438; *Living in Flats*, pp. 1–5.
34 *AR* 11-1949, p. 316.
35 P. Peters, *Wohnhochhäuser*, Munich, [*c.*1958] (review: *AD* 12-1958, p. 506).
36 Dudley, p. 34.
37 See *B* 15-10-1954, p. 627. Jensen's project 'Perkins Heights,' Paddington: *B* 13-8-1954, p. 261; *ABN* 18-2-1954, pp. 193–5; 29-11-1956, pp. 712–14; *MJ* 29-1-1954, pp. 201–4, 220.
38 *AJ* 19-7-1951, p. 83; 13-12-1951, p. 699; *JRIBA* 3-1955, p. 200; F. Gibberd, *Town Design*, 1955, pp. 255–6.
39 Denby, pp. 236–40; Sharp, p. 30; Yorke & Gibberd, pp. 175–9.
40 See Note 17; *AR* 9-1951, pp. 175–8; *AJ* 15-8-1946, pp. 121–3.
41 *JRIBA* 10-1956, pp. 487, 489.
42 Lighting Committee, Building Research Board, Department of Scientific and Industrial Research, *The Lighting of Buildings* (Postwar Building Studies, No. 12), 1944, pp. 30, 75.
43 *AJ* 6-2-1947, pp. 147–8; Dudley, p. 63.
44 *JRIBA* 3-1955, p. 205.
45 See LCC, *Housing Services Handbook*, 1962, pp. 23, 47.
46 *AR* 5-1951, pp. 293–300; see *ABN* 9-9-1949, pp 250–1; *AD* 1-1951, pp. 3–4; *JRIBA* 4-1953, p. 218; 10-1965, pp. 497–500, *AY* 4, 1952, pp. 131–6; A. Forty, 'Le Corbusier's British Reputation', in Arts Council of GB, *Le Corbusier*, (exh. cat.), Hayward Gallery London, 1987, pp. 35–41; D. Jenkins, *Unité d'Habitation, Marseille . . .*, 1992.
47 Int. Partridge.
48 *AAJNL* 1-1957, pp. 142ff.
49 *Observer* 20-7-1952, p. 8 (C. St J. Wilson).

CHAPTER 8

1 See note 13.
2 *JTPLI* 1-1953, pp. 34–8;.
3 Jensen, pp. 29, 36.
4 See Notes 25–30, Chapter 17.
5 *JRIBA* 4-1959, p. 194; *JTPLI* 3-1959, pp. 76–8; *AB* 3-1960.
6 See *The Times* 3-7-1961, suppl.
7 *ABN* 12-12-1962, p. 871.
8 A. N. F. Marmot, 'How High Should They Live? The Role of Architects and Planners in the Design of High Rise Housing in England and Wales', PhD (Calif., Berkeley), 1984, p. 230; *OAP* 7-1967, pp. 393–8.
9 *MJ* 29-1-1954, pp. 201–4.
10 *JRIBA* 4-1962, p. 153.
11 *AD* 10-1956, p. 327; *AB* 9-1958; 2-1959.
12 *JRIBA* 3-1959, p. 170.
13 *AD* 9-1967, p. 397.
14 *AD* 7-1961, p. 289; see *JRIBA* 6-1956, pp. 350ff; *AB* 3-1960.
15 G. R. Owens, 'Mixed Development in Local Authority Housing in England and Wales 1945–1970', PhD London University 1987; *JRIBA* 3-1955, pp. 209–10; *AAJNL* 1-1957, p. 148; *JRIBA* 4-1956, pp. 240–9; Cleeve Barr, pp. 143–7; *Flats and Houses 1958*, pp. 137–9; *OAP* 7-1959, pp. 304–12.
16 Cleeve Barr, p. 114.
17 *JRIBA* 4-1955, pp. 252–3.
18 See *IB* 10-1969, pp. 46–9.
19 *JRIBA* 9-1956, pp. 447–59; 10-1956, pp. 487–95; *AJ* 5-1-1959, pp. 109–11; 13-12-1961, p. 1158; *JRIBA* 4-1962, p. 147; *Journal of the Royal Society for the Promotion of Health* 1959, pp. 183–92; *HR* 5/6-1966, pp. 87–91; *TCP* 9-1970, pp. 387–91.

CHAPTER 9

1 ABT, *Homes for the People*, 1946, pp. 93–4.
2 D. Calabi, *Architettura domestica in Gran Bretagna, 1890–1939*, Milan, 1982, pp. 124, 130. Pimlico: *AJ* 7-12-1950, p. 487; *Report of the City of Sheffield Housing Deputation, Multi-Storey Housing in some European Countries*, 1955, p. 17; *JRIBA* 4-1955, p. 260. J. B. Dick & G. D. Nash, 'Internal Bathrooms and Water Closets . . .', *JRIBA* 4-1955, pp. 239–46; Cleeve Barr, p. 59. Sheffield Park Hill: *JRIBA* 7-1963, p. 281; Jensen, p. 43. Building regulations: *B* 7-9-1962, p. 497; DoE, *Mechanical Ventilation of Inner Rooms* (Design Bulletin 3, Pt 3) 1963. See R. Banham, *AR* 2-1960, p. 99.
3 See M. McDonald, 'The Wash House', MA Birmingham Univ., 1988; 'Great advances': F. W. Black, 'Clothes Washing and Drying in Flats', *HR* 1/2-1963, pp. 14–17. Cleeve Barr, pp. 92–3, 124; Dudley, p. 22; *JRIBA* 3-1947, p. 251; J. C. Wilson (MHLG, Dept of Scientific Research), *Inquiry into Laundry Facilities* (National Building Studies Special Report No. 9), 1949; LCC, *A Survey of Post-War Housing*, 1945–9, pp. 48, 63; *Living in Flats*, pp. 12, 20–4; *OAP* 1-1959, pp. 36ff; LCC, *Housing Services Handbook*, 1962, pp. 23, 29; *AJ* 25-9-1968, p. 642; Parker Morris, p. 28.
4 *B* 5-4-1935, p. 628; Dudley, p. 45.
5 LCC, *Post-War Housing*, p. 63.
6 *ABN* 6-8-1958, p. 190.
7 *JRIBA* 3-1955, p. 212; Parker Morris, p. 29; *B* 7-9-1962, p. 498.
8 LCC, *Handbook*, p. 22; Gleeve Barr, pp. 83–9.
9 *Flats and Houses 1958*, pp. 58, 76, 89–91.
10 *JTPLI* 3-1959, p. 80; Cleeve Barr, pp. 86–9.
11 ABT, *Homes*, p. 97; *JRIBA* 3-1947, p. 252; *AD* 11-1948, p. 230; *Living in Flats*, p. 26; LCC, *Post-War Housing*, p. 67; Institute of Housing, *Refuse Disposal in Flats*, London, March 1954; *JRIBA* 7-1955, p. 476; BRS, *Refuse Disposal in Blocks of Flats* (Digest 40), 1963.

12 Quarry Hill: A. Ravetz, *Model Estate: Planned Housing in Quarry Hill*, Leeds, 1974; *AR* 5-1951, p. 300; *JRIBA* 5-1955, p. 212; *HR* 3/4-1960, pp. 36–43; Parker Morris, pp. 31–3; *JRIBA* 7-1963, p. 285; 2-1965, p. 68.
13 S. Muthesius, *The English Terraced House*, 1982; F. Worsdall, *The Tenement: Housing in Glasgow*, 1979.
14 E.g., Glasgow, Darnley, Phase 2 Devt, 1973.
15 *B* 5-4-1935, p. 628.
16 A. Whittick, *European Architecture in the Twentieth Century*, Vol. II, 1953, pp. 119–20; *AJ* 6-2-1947, p. 148; 2-6-1949, p. 497; *AR* 11-1954, p. 308; *JRIBA* 4-1956, pp. 241–2; *Flats and Houses 1958*, p. 61; *AJ* 11-9-1968, p. 516; 25-9-1968, p. 642. Netherlands: *Bouw* 1955, p. 768.
17 LCC, *Working-Class Housing on the Continent*, 1936; *ABN* 30-8-1951, p. 238.
18 *ABN* 20-9-1951, pp. 309–15.
19 *AY* 4, 1952, p. 31; see Chapter 16.
20 *AJ* 24-11-1949, p. 577; MH, *Housing Manual*, 1949; *JRIBA* 3-1955, p. 198; *ABN* 27-5-1959, p. 696; *Living in Flats*, pp. 14–20.
21 Yorke & Gibberd, pp. 23–8; Whittick, *European Architecture*; *AJ* 29-11-1951, pp. 660ff.
22 *JRIBA* 4-1962, pp. 147–54; see Chapter 19.
23 *AJ* 17-5-1934, p. 715; *JRIBA* 3-1947, p. 24; *AD* 10-1956, p. 313.
24 *HR* 1/2-1954, pp. 13–15; *JRIBA* 3-1956, p. 487; *AJ* 5-1-1959, p. 110; *OAP* 12-1961, p. 518; R. Owens, 'Mixed Development in Local Authority Housing in England and Wales, 1945–1070', PhD London University 1987, pp. 247–8.
25 *ABN* 7-2-1952, pp. 157–8; Mass Observation for Advertising Service Guild, *Enquiry into People's Homes*, 1943, pp. 160–215; *AAJNL* 5-1953, p. 185.
26 Dudley, p. 16; ABT, *Homes*, pp. 42–3; *ABN* 18-2-1949, p. 144; *Living in Flats*, pp. 24–5; *Flats and Houses 1958*; Parker Morris, pp. 23ff.
27 *Journal of the Royal Society for the Promotion of Health*, 2-1959, pp. 183–92; W. Burns, *New Towns for Old*, 1963, p. 131; *AJ* 11-9-1968, pp. 521, 525.
28 H. Ashworth, *Housing: Housing Standards*, 1947, p. 34.
29 *FLHDH* p. 19; *AD* 5-1956, p. 152; E. Beazley, *Design and Detail of the Space between Buildings*, 1960.
30 Parker Morris, p. iv.
31 *Living in Flats*, pp. 10–13; *HR* 1/2-1954, pp. 14–15; *JRIBA* 3-1955, p. 204; *FLHDH* pp. 6, 7, 17, 32ff; Cleeve Barr, pp. 46–50; *Journal of the Royal Society for the Promotion of Health* 2-1959, pp. 1833–92; Parker Morris, pp. 39–43, 77ff; *AJ* 13-12-1961, p. 1157; LCC, *Housing Services Handbook*, 1962, p. 27; Burns, *New Towns*, pp. 129–30; *JRIBA* 2-1964, p. 68; R. Wilson, *Difficult Housing Estates* (Tavistock Institute), 1963, pp. 34–5; *Arena* (*AAJNL*) 81, 3-1966, pp. 242–4; *AJ* 11-9-1968, p. 547; DoE, *Children at Play* (Design Bulletin 27), 1973; Dunleavy, p. 149.
32 Percentages: *AD* 10-1956, p. 322; Cleeve Barr, pp. 40–1; Parker Morris, pp. 1, 43, 54; *JRIBA* 4-1962, p. 154; *Arena (AAJNL)* 81, 3-1966, pp. 235–41. Need to build 'tall blocks': E. Lyons, *AJ* 13-2-1961, p. 1158; *ABN* 27-5-1959, pp. 696ff; *JRIBA* 7-1963, pp. 283–4; MHLG, *Cars in Housing*, Nos. 1, 2 (Design Bulletins 10, 12), 1966, 1967; *AJ* 11-9-1968, pp. 530–6; 1-8-1973, p. 271. Owens, 'Mixed Development', pp. 356–8.

CHAPTER 10

1 ABT, *Homes for the People*, 1946, p. 56.
2 *HfF*, p. 4; see G. Scott, *Building Disasters and Failures: A Practical Report*, 1976.
3 *JRIBA* 6-1954, p. 319.
4 White, p. 137.
5 Dept of Scientific and Industrial Research, BRS, *Principles of Modern Building*, Vol. I, 3rd ed., 1959; cf. R. Fitzmaurice (Dept. of Scient. and Ind. Res., BRS), *Principles of Modern Building*, Vol. 1, 1939. See *AD* 11-1957, pp. 397–426; A. Saint, *Towards a Social Architecture: The Role of School-Building in Post-War England*, 1987; F. M. Lea, *Science and Building*, 1971; Barry Russell, *Building Systems, Industrialisation and Architecture*, 1981.
6 *JRIBA* 12-1949, p. 54; *AJ* 4-9-1952, p. 293.
7 *JRIBA* 3-1962, p. 96; *AJ* 23-2-1966, pp. 531–3.
8 See notes 4, 5 above.
9 ABT, *Homes*, p. 56.
10 White, pp. 295, 457.
11 Finnimore, pp. 32ff; White; *AJ* 7-5-1953, p. 592.
12 Corp. of Glasgow, *Review of Operations, 1919–47*, 1947, pp. 34–40, 56; SRA File D-TC 8/20 H1.
13 Saint, *Social Architecture*, p. 141.
14 *JRIBA* 5-1946, p. 260; Cleeve Barr, p. 118; *CQ*, No. 51, 10/12-1961, p. 1; Russell, *Building Systems*, pp. 223, 238, 243; Finnimore, p. 261.
15 *JRIBA* 7-1952, p. 330; Cleeve Barr, pp. 118–19; Russell, *Building Systems*, pp. 201–10; White, pp. 174, 197–200; Finnimore, pp. 30–2, 48.
16 See *AR* 6-1952, p. 372; Cleeve Barr, pp. 119–20.
17 MH, Comm. on the Cost of Housebuilding, Report (Girdwood Report, 1948); *JRIBA* 12-1949, p. 57; 1-1952, pp. 97–102; 7-1955, pp. 358–9; *AJ* 5-6-1952, pp. 703–9; 8-12-1955, p. 764; 25-1-1957, p. 197; Cleeve Barr, p. 134.
18 *JRIBA* 4-1955, pp. 254ff; 12-1949, p. 52; *AD* 11-1948, pp. 244–5; *AJ* 5-6-1952, p. 707; 11-9-1952, pp. 324–5; 7-5-1953, p. 592, 3-2-1955, pp. 173–8; 5-8-1955, p. 155; *HfF*, p. 81; Finnimore, pp. 194–6.
19 *AJ* 28-1-1954, p. 141.
20 E.g., *AJ* 4-8-1965, pp. 279, 283 (Baylis Rd, Lambeth).
21 *AR* 12-1951, pp. 361–7.
22 *JRIBA* 4-1955, p. 254.
23 1930s: see Yorke & Gibberd; *ABN* 30-8-1951, pp. 236ff; *JRIBA* 4-1955, p. 251; Cleeve Barr, p. 114; *B* 16-12-1960, p. 1122; Jensen, pp. 48–9; White, pp. 97–102; Russell, *Building Systems*, p. 212.
24 *ABN* 29-10-1953, pp. 517–18.
25 M. Bowley, *Housing and the State*, 1945; *AR* 5-1950, pp. 331–42; *JRIBA* 1-1953, p. 91; Cleeve Barr, p. 104; R. Banham, *The New Brutalism*, 1966, p. 89.
26 *AJ* 5-6-1952, pp. 754–6.
27 *AR* 5-1950, pp. 331–4.
28 *JRIBA* 12-1949, p. 74; 1-1953, pp. 91–7.
29 *JRIBA* 4-1956, p. 244; K. W. Schmidt, *Multi-Storey Housing*, 1964.
30 See P. Coe & M. Reading, *Lubetkin and Tecton*, 1981; *JRIBA* 4-1956, p. 244; Jensen, pp. 179–214; J. Allan, *Lubetkin*, 1992.
31 *AJ* 7-7-1955, pp. 18–19; *ABN* 17-8-1960, pp. 217–19.
32 'Jackblock' (Costain): Barras Heath, Coventry. British Lift Slab: Birmingham CBC Long Nuke Rd Devt; see *AR* 5-1950, pp. 331–4.
33 *AJ* 7-12-1950, p. 485; 5-6-1952, p. 706; 17-3-1955, pp. 357–74 (P. Donison & A. W. Cleeve Barr, 'Cross Walls'); *JRIBA* 10-1955, p. 471; Cleeve Barr, pp. 96ff; Russell, *Building Systems*, pp. 294, 364ff; *MJ* 20-2-1953, pp. 388–91.
34 E.g., S. Bunton's designs for Drumchapel, Unit 2, 1954 (SRA, Dean of Guild plans).
35 See Lubetkin, note 30 above.
36 *AR* 3-1951, p. 140.
37 Ellington Ct, Southgate, by F. Gibberd: S. Bayley, *The Modern Flat* (Open University, A305, 'History of Architecture and Design, 1890–1939' Course, Unit 22), 1975, p. 71; Evelyn Ct, Hackney, private low rental housing by Burnet, Tait & Lorne, D. Bethune-Williams and F. S. Snow, engin., 1935: A. Jackson, *The Politics of Architecture: A History of Modern Architecture in Britain*, 1970, p. 169; see *AJ* 5-12-1946, p. 418; *B* 7-1954, p. 126.
38 'Building': *AD* 11-1949, p. 318; 11-1951, pp. 324–33.
39 *AJ* 17-3-1955, pp. 632–3; *AD* 11-1951, pp. 324–3.
40 See F. R. S. Yorke, *The Modern House in England*, 2nd ed., 1944; *ABN* 5-4-1956, pp. 344–9; Cleeve Barr, p. 113.
41 Cleeve Barr, p. 121; *JRIBA* 7-1954, pp. 372–6.
42 *AJ* 25-2-1960, pp. 337–44; 1-3-1960; 28-4-1960; 12-5-1960.
43 Cleeve Barr, pp. 96, 126.
44 *AJ* 1-11-1961, p. 827.
45 *AJ* 5-6-1952, p. 709.
46 *AJ* 17-3-1955, p. 372.
47 ABT, *Houses*, p. 60.
48 *AJ* 28-4-1960, p. 653.
49 *AJ* 3-3-1960, p. 366; 28-4-1960, pp. 653–60.
50 Cleeve Barr, p. 110.
51 Russell, *Building Systems*, p. 212; *JRIBA*

6-1954, pp. 306, 314; 4-1955, p. 252; *AAJNL* 82, 11-1966, pp. 121–2.
52 *AJ* 17-3-1955, p. 358.
53 *AJ* 3-2-1955, pp. 173–8.
54 *AJ* 20-10-1960, pp. 585–9; see *OAP* 12-1967, pp. 1766–72.
55 Finnimore; White, pp. 191, 208–9; MPBW, *Postwar Building Studies No. 1 Housing Construction*, pp. 200ff; *AJ* 26-2-1953, pp. 278–9; Cleeve Barr, pp. 106, 113.
56 DD6-1515; *AJ* 6-3-1952, p. 313. Glasgow: HC Min. 17-10-1952. Early English large-panel construction: *B* 7-1-1966, p. 16.
57 Reema: *HfF*, pp. 53, 79–86; *Prefabrication* 3-1956, pp. 208–10. General: R. M. E. Diamant, *Industralised Building: 50 International Methods*, 1964, pp. 13–14; White, pp. 186–92. See A. F. L. Deeson (ed.), *The Comprehensive Industrialised Building Systems Annual*, 1965; *S* 20-6-1964. See, on France, Scandinavia, etc.: *AJ* 9-6-1960, pp. 877–81; *AR* 9-1963, pp. 180–2; *HfF*, pp. 25–40; T. Schmid & C. Testa, *Systems Building: An International Survey of Methods*, 1969; *IB* 1-1959; 10-1962; *IBSC* 10/11/12-1963, pp. 8–9; *OAP* 1964; 12-1967, pp. 1767–74; *MJ* 25-1-1963, pp. 224–9; 24-5-1968, pp. 1267–1301; *Concrete* 3-1971, pp. 85–7; *SBD* 9-1967, pp. 15–70. List of films: *MJ* 18-2-1966, p. 544.
58 Diamant, *Industrialised Building*, pp. 49–51.
59 *HfF*, pp. 123–8; Diamant, *Industrialised Building*; Russell, *Building Systems*, pp. 454ff; Finnimore; see Gazetteer II, Clever Road CDA (Ronan Point), Newham, London.
60 Concrete Ltd/Bison, *High-Wall-Frame* [*c.*1963]; Concrete Ltd/Bison, *Information Book*, 1961; Diamant, *Industrialised Building*, p. 19; *HfF*, pp. 53, 55, 87–94; *ABN* 17-4-1963, pp. 585–6; *AJ* 1-8-1962, pp. 262–4; Finnimore, pp. 169–9. Many advertisments: *MJ* 1965–7.
61 Int. Mitchell, then Sales Director Concrete (Scotland) Ltd.
62 *OAP* 5-1963, p. 446; 10-1965, pp. 1452–7.
63 *AJ* 16-9-1964, p. 627; Finnimore, pp. 222–6. Thamesmead: *AJ* 18-10-1972; Russell, *Building Systems*, 1981, pp. 438ff.
64 *OAP* 12-1965, pp. 1787–9.
65 See note 32 above and Gazetteer.
66 Two blocks at Watney St Market, Tower Hamlets, and two at Walterton Rd, Westminster. Builder: F. G. Minter/Indulex; Russell, *Building Systems*, pp. 475ff; *AJ* 24-11-1965, pp. 1201–5; *OAP* 1-1966, p. 121; *AD* 3-1967, pp. 138–40; *SBD* 6-1967, p. 44; *IBSC* 1/3-1964, p. 45; 3-1968, pp. 30–3; *S* 21-11-1969, p. 40 (LCC Design team: C. R. Brooks et al.).
67 Geo. Wimpey & Co. Ltd, *A Problem Shared* [*c.*1961]; idem, *Rationalized Planning in No-Fines Construction, Series 1001, M.S. Flats* [*c.*1963]; Finnimore.
68 Deeson, *System Annual*, p. 49; see also NBA, *Industrialised Two-Storey Housing*, August 1970; *S* 9-5-1964, pp. 21–2; *IBSC* 4-1966; 7-1967, pp. 67–98; 4-1968, pp. 61–95ff.
69 *AD* 2-1957, pp. 35–7; *HfF*, pp. 60–1, 89; Diamant, *Industrialised Building*, p. 63; *B* 29-3-1963, p. 631; *OAP* 5-1963, p. 440; 12-1965, p. 1452; *ABN* 1-12-1965, p. 1020.
70 *HfF*, pp. 87–90; cf. pp. 46, 47; Diamant, *Industrialised Building*, p. 177.
71 *OAP* 5-1963, p. 440; *HfF*, pp. 18, 57, 59, 90, 106, 125, 149; Diamant, *Industrialised Building*, pp. 20, 77; Schmid & Testa, *Systems Building*, pp. 70, 100; *JRIBA* 2-1967, p. 68; 6-1969, p. 250; Russell, *Building Systems*, pp. 443, 473–5.
72 Cleeve Barr, pp. 111, 114.

CHAPTER 11

1 Banham, *The New Brutalism, Ethic or Aesthetic?*, 1966.
2 *The Times* 3-7-1961, suppl. p. xv.
3 *AD* 11-1961, pp. 507–9; 7-1961, pp. 288–9.
4 *AR* 6-1952, p. 371.
5 *AR*, 7-1959, p. 35.
6 R. Banham, *The New Brutalism*, 1966, p. 135.
7 *AR* 6-1952, p. 372.
8 *JRIBA* 1-1952, pp. 79–87; *AJ* 24-2-1952, pp. 118–24.
9 R. Banham, *Theory and Design of the First Machine Age*, 1960; Banham, *New Brutalism*; see also N. Whiteley, 'Banham and Otherness', *Architectural History* 33, 1990, pp. 188–221.
10 *AJ* 17-3-1955, p. 357.
11 *AR* 5-1951, p. 300.
12 R. Banham, 'Revenge of the Picturesque: English Architectural Polemics, 1945-1965', in J. Summerson (ed.), *Concerning Architecture: Essays . . . presented to Nikolaus Pevsner*, 1968, p. 272.
13 *AR* 11-1954, p. 306; *AD* 9-1955, p. 286; *AB* 5-1959, p. 167; Banham, *New Brutalism*, p. 71.
14 R. Banham, *Megastructure: Urban Futures of the Recent Past*, 1976, p. 9.
15 *JRIBA* 11-1956, pp. 26–9; 7-1962, pp. 246ff; *AJ* 1-8-1962, pp. 279–90.
16 *HfF*, p. 140.
17 *AAJNL* 1-1957, p. 148.
18 *AD* 10-1956, p. 321.
19 See, e.g., *B* 29-3-1963, pp. 651–7; see also Note 21 below.
20 *HfF*, p. 140.
21 *AJ* 16-1-1959, pp. 111–12.
22 *AR* 6-1959, pp. 389–97.
23 *AR* 6-1959, p. 387; see also 5-1950, p. 331; *JRIBA* 11-1951, pp. 8–11; *HfF*, p. 73; M. Bowley, *Innovations in Building Materials*, 1960, pp. 255–6, 259.
24 *HfF*, p. 89.
25 *HfF*, p. 5.
26 G. Oddie, *AR* 9-1963, pp. 180-2.
27 See *AR* 2-1960, pp. 93ff; *JRIBA* 5-1961, pp. 252–69; *AD* 11-1961; pp. 507–9; *AJ* 29-6-1961, pp. 937, 941.
28 *B* 29-3-1963, p. 651.
29 *AD* 2-1957, pp. 35–7; 4-1957, pp. 113–14.
30 YDG, *Annual Report of the City Architects to the Board*, July 1965; *IB* 12-1964, pp. 35–7; *AR* 1-1967, p. 28; 11-1967, pp. 334–5; 8-1970, pp. 161–5; *AJ* 16-12-1964, pp. 1425–8; 6-8-1969, pp. 306–8; 9-9-1970, pp. 566–71; *OAP* 6-1965, pp. 784–9; 11-1970; *Arena (AAJNL)* 81, 3-1966, pp. 221, 227; *Yorkshire Architect* 11-1970, pp. 341–4; *AD* 9/10-1977, pp. 707–22; int. Richardson.
31 Int. Darbourne.
32 *AB* 7-1956, p. 252; *AD* 12-1956, p. 321; *AB* 5-1959, p. 167; *AD* 7-1959, p. 279; *AJ* 8-6-1961, p. 845; *JRIBA* 7-1967, pp. 279ff.
33 *AR* 9-1955, p. 148; *B* 29-3-1963, pp. 651–7; *AJ* 19-7-1967, p. 158; *JRIBA* 2-1967, pp. 66–72.

CHAPTER 12

1 *AD* 6-1955, p. 192; E. J. Carter & E. Goldfinger, *The County of London Plan*, 1945, p. 29; L. H. Keay, 'The Working Class Home', in P. Abercrombie (ed.), *The Book of the Modern House*, 1939, p. 155; int. Bon.
2 P. Hall, *The Containment of Urban England*, 1973, pp. 67–8.
3 *JRIBA* 8-1949, p. 259.
4 J. Habermas, 'Die Krise des Wohlfahrtsstaates und die Erschöpfung utopischer Energieen', in *Die neue Unübersichtlichkeit*, Frankfurt, 1985, p. 161.
5 *TCP* 11, 1943-4, pp. 6–7; R. N. Morris & J. Mogey, *The Sociology of Housing*, 1965, p. 171.
6 Privacy: see, e.g., *TCP* XI, Spring 1943, pp. 6–8; see also Note 16, Chapter 3.
7 *AB* 11 1954, p. 444.
8 C. D. Mitchell, T. Lupton, M. W. Hodges, & C. S. Smith, *Neighbourhood and Community*, Liverpool, 1954, pp. 147–8; see N. M. Day, 'The Role of the Architect in State Housing', PhD (Warwick), 1988, pp. 67, 72ff, 169, 193.
9 *TPLR* 7-1958, J. Allan, *Lubetkin*, 1992, p. 92.
10 *JRIBA* 7-1948, pp. 381–3.
11 *JRIBA* 8-1948, p. 443.
12 *AR* 3-1951, p. 129.
13 Int. Lubetkin, 1990.
14 D. Miller & C. Tilley (eds.), *Ideology, Power and Prehistory*, Cambridge, 1984, Chapter 'Modernism and suburbia as material ideology', pp. 37ff; see W. Sarkissian, 'The Idea of Social Mix in Town Planning: A Historical Review', *Urban Studies* 1976, pp. 231–46.
15 'The Housing Act removed from the LAs the obligation to provide houses for the "working classes" only': M. E. H. Smith, *Guide to Housing*, 1971, p. 51.
16 Paramount Hawkins Newsreel 3-12-1946 (information kindly supplied by Pam

Turner, Visnews, London). West India House, Stepney, opened early December 1946: *S* 6-12-1946, p. 943.
17 H. Kamenka, *Flats*, 1947, p. 134.
18 L. E. White, *Tenement Town*, 1946.
19 Int. Muriel Smith.
20 Council for Research on Housing Construction, *Slum Clearance and Rehousing, 1st Report*, London, 1934, pp. 62–3; R. Durant, *Watling*, 1939; *JRIBA* 3-1947, p. 253; *S* 13-8-1948, p. 415; *AR* 5-1949, p. 228; *JRIBA* 6-1948, pp. 338–45; A. Ravetz, *Model Estate: Planned Housing in Quarry Hill*, Leeds, 1974, pp. 122ff; LCC, *Housing Services Handbook*, 1962, pp. 27–8; G. R. Owens, 'Mixed Development in Local Authority Housing in England and Wales, 1945-1970', PhD London University 1987, p. 426; National Council for Social Services, *The Size and Social Structure of a Town* . . . (publ. for Sir Halley Stewart Trust), 1943; idem, *Our Neighbourhood: A Handbook* . . . , 1950.
21 See Note 3, Chapter 9.
22 R. Fishman, *Urban Utopias in the 20th Century*, New York, 1977; see below, Note 35, Chapter 13; see also S. O. Khan-Magomedov, *Pioneers of Soviet Architecture*, 1987. 'Community design' in Germany in the 1940s: W. Durth & N. Gutschow, *Träume in Trümmern, Planungen zum Wiederaufbau* . . . , Braunschweig, 1988.
23 G. Kähler, *Architektur als Symbolverfall*, Braunschweig, 1981.

CHAPTER 13

1 See note 6.
2 *AJ* 28-1-1954, pp. 127–8.
3 Sharp, p. 118; G. E. Cherry, *The Evolution of British Town Planning*, 1974, p. 130; K. Standfield, 'T. Sharp', in G. E. Cherry (ed.), *Pioneers of British Planning*, 1981, pp. 150–76; see also W. Ashworth, *The Genesis of Modern British Town Planning*, 1954; P. Ambrose, *Whatever Happened to Planning?* 1986.
4 M. P. Fogarty, *The Machinery of Town and Country Planning*, Oxford, 1944, pp. 10, 13.
5 T. Sharp, *English Panorama*, 1950, p. 106.
6 *JRIBA* 2-1946, p. 109.
7 *JRIBA* 3-1952, p. 158.
8 P. Abercrombie, *Greater London Plan*, 1944, p. 109.
9 *JRIBA* 10-1942, pp. 207–13. CIAM: see Note 5 Chapter 1.
10 *TPLR* 1-1954, p. 263; L. Mumford, *The Urban Prospect*, 1968, pp. 56–78; see also G. E. Cherry, *Town Planning in its Social Context*, 1970.
11 *TPLR* 1-1954, p. 259.
12 Sharp, pp. 93, 95.
13 M. Fry, *Fine Building*, 1944.
14 *CLP*, pp. 76, 101.
15 *CLP*, p. 101; int. Ling; see also MH, *Housing Manual*, 1944.
16 *AB* 4-1960, pp. 137–9; P. Self, in H. Evans (ed.), *New Towns: The British Experience*, 1972; A. J. Veal, *New Communities in the UK: Classified Bibliography* (Centre for Urban and Regional Studies, Univ. of Birmingham), 1973; A. Saint, 'The New Towns', in *The Cambridge Guide to the Arts in Britain* (ed. B. Ford), Vol. IX, 1988; (ed.) P. Merlin & M. Sudarskis, *New Tocons in Perspective*, (Internat. New Tocons Association) The Hague 1992; see also Notes 3, 4, Chapter 20.
17 *JRIBA* 10-1952, pp. 453–5; *JRIBA* 12-1949, pp. 43–7; see Chapter 17 below; see also Cherry, *Evolution*, pp. 139, 152ff.
18 *AD* 5-1956, p. 154; *JRIBA* 6-1958, p. 271; *AJ* 5-2-1969, p. 222.
19 *Listener* 14-6-1951, pp. 951–2.
20 *CLP*, p. 36.
21 *AJ* 8/15-3-1956, p. 262.
22 *JRIBA* 10-1942, p. 208.
23 *CLP*.
24 *CLP*, p. 101; Dudley, p. 59.
25 *JRIBA* 8-1948, pp. 343–4.
26 In H. Evans (ed.), *New Towns: The British Experience*, 1972, p. 96.
27 *AR* 11-1948, pp. 235–40; *AJ* 16-4-1953, p. 477; *JRIBA* 3-1959, pp. 163–70; see also *AJ* 8/15-3-1956, pp. 261–74.
28 E. Simon, *Rebuilding Britain: A Twenty Year Plan*, 1945, p. 190.
29 *JRIBA* 8-1948, p. 441.
30 Int. Muriel Smith.
31 L. Wolfe, *The Reilly Plan: A New Way of Life*, 1945, pp. 23, 32, 45ff; *TPLR* 7-1950, p. 136.
32 *TPLR* 7-1950, p. 129.
33 Int. Bon.
34 S. Gale, *Modern Housing Estates*, 1949, pp. 23–6.
35 MHLG, *Houses* (3rd Supplement to *Housing Manual*, 1949), 1953, pp. 28–33; *AJ* 5-11-1953, pp. 566–7; 20-8-1959, p. 43; 10-11-1960, pp. 680–4; 17-11-1960, pp. 719–23; 24-11-1960, pp. 765–79; 25-11-1968, p. 642; *JRIBA* 4-1946, p. 110; 4-1962, p. 152; F. Gibberd, *Town Design*, 1967, pp. 289ff; *TCP* 12-1967, pp. 557–8; *TPLR* 1-1954, pp. 272–95; 10-1954, pp. 182–94; *OAP* 3-1966, pp. 370–8; *JTPLI* 1-1969, p. 10; P. A. Scoffham, *The Shape of British Housing*, 1984; A. Edwards, *The Design of Suburbia*, 1981, pp. 166ff.
36 R. Unwin, *Cottage Plans and Common Sense*, Buxton, 1902, p. 3; see W. Creese, *The Search for Environment: The Garden City, Before and After*, 1966.
37 H. Kamenka, *Flats*, 1947, pp. 134–5.
38 *AAJNL* 5-1953, p. 191.
39 City of Sheffield Housing, *Multi-Storey Housing in Some European Countries*, Sheffield, 1955, p. 7.

CHAPTER 14

1 *JRIBA* 2-1946, p. 126.
2 R. Glass (ed.), *The Social Background of a Plan: A Study of Middlesbrough*, 1948.
3 *TPLR* 1-1954, p. 259; F. Tönnies, *Fundamental Concepts of Science: Gemeinschaft und Gesellschaft*, New York, 1940; London, 1955. See generally: W. Burns, *New Towns for Old*, 1963, pp. 98–103; P. H. Mann, *An Approach to Urban Sociology*, 1965; A. Buttimer, 'Sociology and Planning', *TPLR* 1971, pp. 145–80.
4 N. Dennis, 'Community and Sociology', in P. Kuenstler (ed.), *Community Organisation in Great Britain*, 1960, pp. 119–36.
5 R. N. Morris & J. Mogey, *The Sociology of Housing: Studies at Berinsfield*, 1965.
6 *AR* 3-1945, p. 67; R. Glass, 'Urban Sociology in Britain: A Trend Report', *Current Sociology* 4, No. 4, 1955, pp. 5ff, 64; *TPLR* 4-1954, p. 33; R. Glass, 'Social Survey', in *Chambers Encyclopedia*, Vol. XII, 1966.
7 L. Kuper (ed.), *Living in Towns* (Univ. of Birmingham Faculty of Commerce and Social Science), 1953, pp. vii, viii, 42, 183.
8 *Planning (PEP—Political and Economic Planning)* 15, No. 296, 28-3-1949, pp. 259ff, 265.
9 *AAJNL* 2-1962, p. 183.
10 Morris & Mogey, *Sociology of Housing*.
11 Kuper, *Living in Towns*, p. 159.
12 Dudley, p. 59.
13 *TPLR* 7-1950, pp. 131–43, Kuper, *Living in Towns*, p. 170; *TPLR* 7-1954, pp. 129–43, Glass, 'Urban Sociology,' p. 75; Kuenstler, *Community Organisation*; Morris & Mogey, *Sociology of Housing*, pp. 86–7, 91, 98–9, 103, 135, 143.
14 See above, Note 27, Chapter 7; *AAJNL* 1-1957, pp. 203–4.
15 Glass, *Middlesbrough*, pp. 43–4.
16 R. Durrant, *Watling: A Survey of Social Life on a New Housing Estate*, 1939, p. 50.
17 *JRIBA* 2-1946, p. 127; 7-1948, p. 392; *AY* 4, 1952, p. 32; *TPLR* 7-1954, pp. 50–1.
18 Kuper, *Living in Towns*, pp. 155ff.
19 *JRIBA* 2-1946, p. 113.
20 B. S. Townroe, *Britain Rebuilding*, 1936, p. 119.
21 *JRIBA* 6-1948, p. 338.
22 C. Bauer, *Social Questions in Housing and Town Planning*, 1952, p. 5; cf. E. Denby, *JRIBA* 7-1955, p. 380.
23 Kuper, *op. cit.*, p. 186.
24 *AY* Vol. 4, 1952, p. 31.
25 W. Ashworth, *The Genesis of Modern British Town Planning*, 1954, p. 206.
26 *JRIBA* 6-1946, pp. 444ff; *TPLR* Vol. 29, 7-1958, p. 91.
27 *Public Administration*, Vol. 32, 1954, pp. 463–9; Kuenstler, *op. cit.*, p. 144.
28 Kuenstler, *op. cit.*, p. 51.
29 R. Durrant, *Watling*, 1939, p. 119; Glass in *Current Sociology*, *op. cit.*, p. 59; *Planning (PEP)* 1949, *op. cit.*, p. 259.
30 *TPLR* Vol. 29, 7-1958, p. 93.
31 *Sociological Review*, 12-1958, pp. 191–206.
32 *FLHDH*, pp. 3, 13; *AAJNL* 2-1962, pp. 173–86; Burns, *New Towns*.
33 *International Social Science Journal* 1959, pp. 393–409.
34 Kuper, *Living in Towns*, p. 179; see *Journal of the American Institute of Planners*

29, 1963, pp. 124ff.
35 See Gazetteer II.
36 Kuper, *Living in Towns*, p. 179; *AY* 4, 1952, pp. 30–1.
37 Kuper, *Living in Towns*, pp. 170–1.
38 *TPLR* 7-1950, pp. 131–43.
39 *JRIBA* 1946, p. 393.
40 *AJ* 12-6-1958, pp. 894–5.
41 Kuper, *Living in Towns*, pp. 27, 176ff.
42 *AAJNL* 2-1962, pp. 172–86.
43 P. Willmott, *The Evolution of a Community: A Study of Dagenham after Forty Years*, 1963, p. 83.

CHAPTER 15

1 Int. Percival 1983. Architectural professions: Esher, pp. 19, 26, 65ff.
2 LCC Min. Report of Civic Defence & General Purposes Comm., 19-11-1945, pp. 1178–81; *JRIBA* 1-1946, pp. 88–9; 2-1946, p. 111.
3 Holborn MBC HC Min., 16-2-1946. Powell & Moya's earliest project, flats for Bethnal Green: *AJ*, 9-8-1945, p. 105; M. Taylor, H. Moya & P. Powell, 'Bethnal Green Flats', Diss. Architectural Association, *c.*1943 (P & M office).
4 *AJ* 10-3-1949, pp. 251–4; 17-3-1949, p. 254; 26-5-1949, p. 474; 2-6-1949, p. 498; 9-6-1949, p. 517.
5 *AR* 12-1951, pp. 361–7.
6 *ABN* 11-2-1949, pp. 122–4; 18-2-1949, pp. 143–6; *B* 11-2-1949, pp. 178–80; *AJ* 9-6-1949, pp. 527–8; *OAP* 3-1949, pp. 136–8; 4-1949, pp. 191–4.
7 Min. of Proceedings of General Purposes Comm., 5-12-1949, pp. 779–80; *B* 23-12-1949, p. 819; N. M. Day, 'The Role of the Architect in State Housing', PhD (Warwick), 1988, pp. 6, 107ff, 252.
8 Int. Denington.
9 See Note 19, Chapter 1.
10 H. Bruckmann & D. L. Lewis, *New Housing in Great Britain*, 1960, p. 23.
11 *AR* 11-1956, pp. 303–23; *AB* 5-1957, pp. 170–80.
12 Int. Richardson 1989.
13 S. Cantacuzino, *Howell, Killick, Partridge & Amis: Architecture*, 1981.
14 J. L. Womersley, 'The Architect's Contribution to Housing in 1952', *JRIBA* 7-1952, pp. 226–37.
15 Int. I. Smith.
16 J. Summerson, Intro. to Arts Council of GB, *Ten Years of British Architecture, 1945–1955* (exh. cat.), 1955, p. 7.
17 R. Banham, *The New Brutalism*, 1966, p. 10.
18 *AR* 3-1950, p. 165
19 Esher, p. 59.
20 *AAJNL* 4-1954, pp. 216–27; *JRIBA* 7-1954, pp. 330–6.
21 *AR* 7-1955, pp. 37–8.
22 *AR* 1-1947, p. 22.
23 *AR* 7-1959, pp. 21–2.
24 R. Banham, 'Revenge of the Picturesque: English Architectural Polemics, 1945–1965', in J. Summerson (ed.), *Concerning Architecture: Essays . . . presented to Nikolaus Pevsner*, 1968, p. 266.
25 *AR* 5-1951, p. 293; Esher, p. 39.
26 *AJ* 18-1-1951, p. 73.
27 *JRIBA* 1-1952, p. 79.
28 *AR* 12-1953, p. 360.
29 *AJ* 11-12-1952, p. 702.
30 Competitors: *AJ* 19-5-1960, p. 777.
31 W. Burns, *New Towns for Old*, 1963, p. 60.
32 *AR* 1-1948, p. 9.
33 *HR* 9/10-1954, p. 23.
34 *B* 20-3-1953, p. 446.
35 Burns, *New Towns*, pp. 181, 187–8.
36 *AR* 1-1951, p. 36; 3-1951, pp. 135–7.
37 *AAJNL* 4-1954, pp. 216–27.
38 Esher, p. 39.
39 Esher, p. 123.
40 *ABN* 11-2-1949, p. 124; see H. Ashworth, *Housing: Housing Standards*, 1947, p. 46; see also Note 1, Chapter 4.
41 P. Abercrombie, *Greater London Plan*, 1944, p. 177.
42 E.g., O. Lancaster, *Here of All Places*, 1959.
43 J. M. Richards, *An Introduction to Modern Architecture*, 1940, p. 15; *AJ* 24-1-1952, pp. 118–24.
44 MARS, *New Architecture: New Burlington Galleries*, 1938.
45 Richards, *Modern Architecture*, p. 15.
46 Ashworth, *Housing*, p. 46.
47 R. Banham, *Theory amd Design in the First Machine Age*, 1960; V. M. Lampugnani, *The Thames and Hudson Encyclopedia of 20th-Century Architecture*, 1986; see L. L. Ligo, 'The Concept of Function in 20th Century Architectural Criticism', PhD (Univ. of North Carolina), 1973; Day, 'Role of the Architect', pp. 22ff, 229; T. Benton, 'The Myth of Function', in P. Greenhalgh (ed.), *Modernism in Design*, 1990, pp. 41–52.
48 (Under pseud. Ivor de Wolfe), *AR* 10-1949, pp. 355–62; see also *JRIBA* 2-1971, pp. 58–9.
49 *AR* 3-1950, pp. 165–81.
50 *AR* 7-1955, p. 42.
51 P. Coe & M. Reading, *Lubetkin and Tecton*, 1981, p. 28; *AJ* 2-6-1949, p. 495.
52 *ABN* 29-1-1953, p. 135; *AR* 11-1954, pp. 303–7.
53 Banham, 'Revenge'.
54 *AR* 5-1951, p. 300.
55 *JRIBA* 1-1957, p. 108.
56 *AB* 7-1956, p. 248.
57 Sweden: see Note 17, Chapter 7.
58 *AR* 1/2-1948, p. 9; 6-1947, p. 199; E. De Maré, 'New Empiricism', *AR* 1-1948, p. 10.
59 *AR* 10-1949, pp. 352–62.
60 N. Pevsner, *The Englishness of English Art*, 1956, pp. 172ff.
61 *AJ* 2-6-1949, p. 495.
62 Banham, 'Revenge', p. 269.
63 *JRIBA* 2-1946, p. 79.
64 Banham, *New Brutalism*.
65 *Ibid.*, pp. 11ff; see *AR* 5-1951, pp. 293–300.
66 Banham, *New Brutalism*, M. J. Thrift, 'Design of the Alton Estate, Roehampton', Diss. Architecture Dept. Newcastle Univ., 1974. Communist cell in Architect's Department: A. Saint, lecture at Twentieth Century Society Conference, London, September 1992.
67 Cleeve Barr, p. 46.
68 *JRIBA* 8-1948, p. 444.
69 *ABN* 2-1-1953, p. 135.
70 *JTPLI* 5-1949, p. 137.
71 *AR* 5-1951, p. 293.
72 *AR* 7-1959, p. 21.
73 *AR* 9-1963, pp. 180–2.
74 Summerson, Intro., *Ten Years*, p. 13.
75 *JRIBA* 5-1961, p. 256.
76 *AJ* 2-6-1949, p. 498; *AR* 7-1953, p. [3].
77 J. Summerson, 'The Case for a Theory of Modern Architecture', *JRIBA* 6-1957, pp. 307–13; also idem, *The Unromantic Castle and Other Essays*, 1990.
78 Summerson, Intro., *Ten Years*, p. 10.

CHAPTER 16

1 *AB* 11-1954, p. 444; see *AJ* 5-2-1958, pp. 132–3 (J. M. Richards).
2 *JRIBA* 5-1948, p. 295.
3 *AR* 3-1955, p. 166.
4 *AY* 4, 1952, pp. 65ff.
5 Cleeve Barr, pp. 41–2, 83.
6 Kenilworth Group: '*c.*1950–70': int. Cox; *The Times* 3-7-1961, suppl.
7 *JRIBA* 2-1946, p. 126.
8 F. Gibberd, *Town Design*, 1955, p. 269.
9 Roads: *ibid.*, p. 207. Holford: *JRIBA* 7-1958, p. 304.
10 *JRIBA* 7-1948, pp. 381, 383.
11 *AR* 4-1949, p. 179.
12 *JRIBA* 4-1953, pp. 215–18.
13 *AY* 4, 1952, p. 28.
14 Sharp, p. 91.
15 *AR* 3-1950, pp. 170–1.
16 *The Times* 3-7-1961, suppl.
17 *AR* 7-1952, p. 34.
18 Cleeve Barr, pp. 32, 51.
19 *AR* 3-1950, p. 166.
20 Int. Lubetkin.
21 'Three-dimensional': *JRIBA* 8-1948, p. 433. 'Community': *ABN* 7-2-1952, p. 15.
22 Report of CHAC Sub-Committee on the Means of Improving the Appearance of Housing Estates: *The Appearance of Housing Estates* (Farringdon Report) June 1948, quoted in S. Gale, *Modern Housing Estates*, 1949, p. 271.
23 *JRIBA* 3-1952, p. 158.
24 *AD* 10-1956, p. 321.
25 Quoted in *AB* 9-1958, p. 361.
26 *TPLR* 1-1954, p. 261.
27 *AR* 4-1949, p. 180.
28 Dudley, pp. 59, 62.
29 Sharp, pp. 27, 41–2.
30 *JRIBA* 7-1946, p. 393.
31 *JRIBA* 7-1948, p. 384.
32 *JRIBA* 8-1958, p. 444.
33 *JTPLI* 5-1959, p. 347.
34 L. Kuper (ed.), *Living in Towns*, 1953, pp. 168ff.
35 Dudley, pp. 69–70; P. Abercrombie, *Greater London Plan*, 1944, p. 178.
36 *JRIBA* 7-1948, p. 386.
37 *JRIBA* 8-1948, p. 432.

38 *AJ* 5-2-1948, pp. 132–3.
39 *AJ* 18-12-1952, p. 228.
40 *JRIBA* 8-1948, pp. 433–42; see L. Brett, 'Post-War Housing Estates', *AR* 7-1951, pp. 17–26.
41 *JRIBA* 12-1946, p. 109; 7-1946, pp. 392–3; H. Ashworth, *Housing: Housing Standards*, 1947, p. 46.
42 Dudley, p. 70; Denby, pp. 260ff.
43 *JTPLI* 1-1953, pp. 34–8.
44 *TPLR* 7-1950, p. 132.
45 *MJ* 16-10-1953, p. 2236.
46 *AJ* 8-9-1960, p. 355.
47 Fulham Study: *JRIBA*, 2-1964, pp. 60ff.
48 *AJ* 9-12-1970, p. 1361.
49 *AR* 12-1953, pp. 358–60.
50 *AB* 9-1958; 2-1959, p. 46.
51 G. R. Owens, 'Mixed Development in Local Authority Housing in England and Wales', PhD (London), 1987.
52 *JRIBA* 7-1949, p. 400.
53 Owens, 'Mixed Development', p. 13.
54 L. E. White, *Tenement Town*, 1946.
55 *AD* 6-1946, p. 149.
56 See Note 50.
57 *Dens. of Res. Areas*, p. 53.
58 *JRIBA* 7-1946, pp. 395–400.
59 *JRIBA* 7-1949, p. 393.
60 *Ibid.*, p. 398.
61 Gibberd, *Town Design*, p. 271.
62 *JRIBA* 8-1948, p. 439.
63 White, *Tenement Town*.
64 *JRIBA* 3-1947, p. 253.
65 J. M. Richards, *An Introduction to Modern Architecture*, 1940, pp. 111-12.
66 Ascot Gas Water Heater Services, *Flats: Municipal and Private Enterprise*, London, 1938, p. 62.
67 Sharp, pp. 60-1, 76.
68 H. Kamenka, *Flats*, 1947, p. 135.
69 *AR* 12-1953, p. 360.
70 *JRIBA* 4-1947, pp. 297–8.
71 N. M. Day, 'The Role of the Architect in State Housing', PhD (Warwick), 1988, pp. 182, 200ff.
72 Cement and Concrete Association, *Spa Green Estate*, 1952, p. 4.
73 Dudley, p. 21; *Living in Flats*, p. 14; *HR* 1/2-1954, p. 15; *ABN* 27-5-1959, p. 695; see A. Ravetz, *Model Estate: Planned Housing in Quarry Hill*, Leeds, 1974, p. 176; A. Jackson, *The Politics of Architecture: A History of Modern Architecture in Britain*, 1970, p. 189. Netherlands: J. Barends & F. de Pree, 'Galerijbouw', *Bouw* 1955, p. 768.
74 *AY* 4, 1952, p. 31.
75 R. Banham, 'La maison des hommes et la misère des villes: Le Corbusier and Mass Housing', in H. A. Brooks (ed.), *Le Corbusier*, Princeton, 1987, pp. 107–16; A. Wogenscky, 'The Unité d'Habitation', in *ibid.*, pp. 117–26.
76 *Living in Flats*, pp. 3–5.

CHAPTER 17

1 *AB* 7-1956, p. 247.
2 S. Muthesius, 'Przestrzeń architektoniczna około 1900', *Kwartalnik Architektury i Urbanistyki*, 1991, 1, pp. 21–44; C. Van de Ven, *Space in Architecture*, Assen, 1980.
3 *JRIBA* 8-1948, p. 433.
4 *JRIBA* 3-1955, p. 209.
5 *AB* 7-1956, p. 247; *S* 6-3-1954, p. 184.
6 Smithson, p. 13.
7 Sharp, p. 77.
8 *JTPLI* 5-1953, p. 136.
9 *HR* 7/8-1954, p. 28.
10 *NHTPLCY* 1955, p. 106.
11 *Listener* 14-6-1951, pp. 951–2; for Denby, see previous chapter.
12 T. Sharp, *English Panorama*, 1950, p. 105.
13 See *AR* 9-1941, pp. 82–8.
14 *AR* 7-1953, p. 32.
15 *JRIBA* 2-1946, p. 110.
16 *AR* 7-1952, p. 34.
17 'Misogynous': *AR*, 12-1953, p. 361. 'Flats': *AR* 7-1953, p. 32.
18 *AR* 7-1953, p. 3; J. M. Richards, 'Failure of the New Towns', *AR* 7-1953, pp. 29–32; G. Cullen, 'Prairie Planning in the New Towns', *AR* 7-1953, pp. 33–6; Sharp, *English Panorama*, p. 107; see A. M. Edwards, *The Design of Suburbia*, 1981, pp. 223–6; J. M. Richards, *Memoirs of an Unjust Fella*, 1980, p. 193; *BHPR* 5/6-1961, pp. 9–11.
19 *AR* 12-1953, pp. 355–61.
20 *TCP* 9-1961, pp. 355–6.
21 *JRIBA* 5-1964, p. 191.
22 *JRIBA* 2-1962, pp. 45–77.
23 I. de Wolfe, 'Townscape', *AR* 12-1949, pp. 355–62.
24 *AB* 9-1957, p. 353.
25 See G. Cullen, Townscape, 1961.
26 See P. Johnson-Marshall, *Rebuilding Cities*, Edinburgh, 1966. SPUR (Society for the Promotion of Urban Renewal): *AR* 5-1959, pp. 303–5.
27 Bunton—e.g., Central Area, Clydebank: SRO DD6/269 1-12-1949, Bunton letter to Mitchell and draft paper, 'Brief Memo on Multi-Storey Flat Redevelopment'.
28 S. Kadleigh, *High Paddington: A Town for 8000 People* (publ. by *ABN*), 1952; *ABN* 23-10-1952, pp. 381–3; 6-11-1952, pp. 536–7; *B* 23-3-1953, pp. 440-1; *MJ* 14-11-1952, pp. 2227–30; 28-11-1952, pp. 2333, 2343; 21-11-1952, pp. 2282–5.
29 *AB* 11-1954, pp. 441–6; *AJ* 14-10-1954, pp. 464ff.
30 'Glass Age Development Committee' (E. D. Mills & G. A. Jellicoe; sponsor: Pilkington's Glass Manuf.): *ABN* 28-10-1954, pp. 14–17; 6-1-1955, pp. 16–17.
31 Barbican: see Gazetteer II. Boston Manor: *AB* 9-1958.
32 *AB* 12-1958, pp. 444–61.
33 *AAJNL* 2-1957, pp. 190-303; *University Left Review*, Spring 1957, pp. 37–42.
34 *AB* 3-1960, p. 88.

CHAPTER 18

1 *AR* 5-1960, p. 304.
2 A. & P. Smithson, *The Shift* (Academy Editions, Architectural Monographs 7), 1982; Most writings and illustrations are collected in: A. & P. Smithson, *Uppercase* (ed. T. Crosby), 1960; A. & P. Smithson *Urban Structuring*, 1967; *Smithson*; A. & P. Smithson *Without Rhetoric: An Architectural Aesthetic*, 1973; See J. Baker, 'A Smithson File', *Arena (AAJNL)*, 81, 2-1966, pp. 177–218. Here quotes are from the original articles where possible. Duplicated lists: Bibliography Essays and Books, March 1952 to May 1988, and Bibliography Built Work Including Projects and Diagrams, August 1948 to May 1988, were kindly provided by the Smithsons.
3 ICA, *The Independent Group: Postwar Britain and the Aesthetics of Plenty* (exh. cat.), London, 1990; cat.: *Moderns Dreams: The Rise and Fall and Rise of Pop* (L. Alloway et al.) ICA New York, Cambridge, Mass., 1988; A. Massey, 'The Independent Group: Towards a Redefinition', *Burlington Magazine*, April 1987, pp. 232–241.
4 The Smithsons' work has attracted violently contrasting reactions and evaluations. For instance: 'Lubetkin talks across time to the great masters; the Smithsons talk only to each other' (R. Furneaux Jordan, *AR*, 7-1955, p. 42); 'the influence of the Smithsons: nil' (int. Cox); 'I hate Brutalist raw concrete' (int. Denington); 'extraordinary that I should talk in the RIBA' (P. Smithson, *JRIBA* 1-1957, p. 137); 'I admired the Smithsons' (int. Neylan); see also *JRIBA* 9-1962, pp. 447–8 (J. Lynn); *AJ*, 25-9-1968, p. 636; Esher, pp. 37, 60–1; R. Banham, *The New Brutalism*, 1966; *AR* 12-1955, pp. 355–6; *AD* 1-1967, pp. 7–8.
5 On Richards, etc.: R. Landau, *New Directions in British Architecture*, 1968, p. 22; *AJ* 28-12-1966, pp. 1500–1.
6 *AD*, 9-55, p. 268; see T. Crosby, *AD* 6-1955, p. 192.
7 'Arbitrary': *AD* 6-1957, pp. 185–6. 'Banality': *AR*, 11-1957, p. 334. 'Academicism': *AR* 8-1954, pp. 273–4. 'Van Eesteren': *AD* 8-1954, pp. 225–7. 'Mechanical': Smithson, p. 106.
8 'Rightness': *AD* 7-1957, p. 229. 'Market towns': *AD* 7-1955, p. 188. 'Unadulterated': *AD* 1-1967, p. 8. Photos of children: Smithson, *Uppercase*. 'Spontaneity': *Smithson*, pp. 31, 48.
9 'Man or child': *AD* 6-1955, p. 187. 'Community': A. Smithson (compiler), *The Emergence of Team 10 out of C.I.A.M. Documents, AAGS Theory and History Papers*, 1. 82, Architectural Association, London, 1982. 'Survey assessed': *AD* 6-1955, pp. 185–8. 'Sociology and architecture': *AD* 6-1957, p. 188. 'Sociology invented': *AJ* 28-12-1966, pp. 1500–1. 'Natural groupings': *AD* 7-1956, pp. 230–1. 'Mechanical': *AA Papers*, Emergence of Team Ten, p. 62. 'Generalized': *AD* 6-1957, p. 186.
10 'Association': *Urban Structuring*, p. 7. 'Shelter': Smithson, p. 125. 'Identity': *Zodiac* 4, Autumn 1959, p. 75. 'Community': (A. Smithson), *Team X*

Primer, Cambridge, Mass., 1968, p. 75; 'anthropology': p. 75; see *AY* 4, 1952, pp. 42ff. 'Ameliorative': Smithson, p. 127; *AD* 7-1956, p. 231. 'Form': *AD* 6-1955, p. 186. 'Decisions': *AD* 6-1956, p. 230.
11 Golden Lane project, first published: *AJ* 20-3-1952, pp. 358–9; *AY* 5, 1953, p. 48–54.
12 *AJ* 28-12-1966, pp. 1500–1.
13 *AR* 11-1957, pp. 33–6; see A. & P. Smithson, 'Criteria for Mass Housing', *AD* 9-1967, pp. 393–4.
14 'Scatter': Smithson, p. 160. 'Nodes': *AD* 5-1963, p. 209.
15 'Aesthetic': *AD* 10-1958, p. 385. 'Anti-Cartesian': Smithson, pp. 84, 87; *AD* 6-1957, p. 186. 'Reidentify': Smithson, p. 18. 'Places': *AD* 6-1955, p. 186; see M. Tapié, *Un art autre*, Paris, 1952.
16 Cleeve Barr, pp. 65–6, see above, Chapters 9, 16.
17 See also the 1919 Rotterdam Spangen Estate: *Forum* 1960-1, pp. 159ff.
18 *Arena (AAJNL)* 81, 6-1965, p. 19.
19 *AD* 9-1955, pp. 286–9; Banham, *New Brutalism*, p. 78.
20 *AR* 7-1956, p. 52; *AY* 7, 1956, pp. 36–7.
21 *AR* 1-1954, pp. 49–50.
22 K. Lynch, 'The Form of Cities', *Scientific American* 190, No. 4, April 1954, pp. 55ff, also in idem, *City Sense and City Design*, 1990.
23 *AR* 5-1960, p. 304.
24 *AR* 12-1961, p. 410.
25 *JRIBA* 7-1963, p. 201.
26 *AJ* 25-2-1954, p. 251.
27 *B* 22-4-1955, p. 698.
28 *NHTPLCY* 1955, pp. 106–9.
29 *JRIBA* 7-1963, p. 291; City of Sheffield Housing, *Multi-Storey Housing in some European Countries*, Sheffield, 1955, p. 36; C. W. Bacon, 'Streets in the Sky: The Rise and Fall of Modern Architectural Utopia', PhD (Sheffield), 1982, pp. 268ff; C. Bacon, *Park Hill in its Social Context*, Sheffield, 1985; see also Gazetteer II.
30 *JRIBA* 12-1962, p. 448.
31 *JRIBA* 7-1963, p. 282.
32 *JRIBA* 12-1962, p. 461.
33 *NHTPLCY* 1955, pp. 106–9.
34 *AJ* 21-7-1965, p. 160.
35 Housing Development Committee of the Corporation of Sheffield, *10 Years of Housing in Sheffield*, April 1962.
36 *AD* 10-1956, pp. 320–6.
37 *ABN* 20-10-1957, pp. 436–7; *AB* 2-1958, pp. 61–3.
38 Great Westminster Castle Project, AA Students 1959; R. Banham, *Megastructure: Urban Futures of the Recent Past*, 1976, p. 145; Thesis, Residential Devt, Isle of Dogs Project (Regent Street Polytechnic Students): *AB* 2-1958, pp. 64–5.

CHAPTER 19

1 'Courtyard Planning', *AB* 4-1960, p. 129.
2 *JRIBA* 4-1962, p. 158.
3 M. Horsey & S. Muthesius, *Provincial Mixed Development: Norwich Council Housing, 1955–1973*, Norwich, 1986.
4 *AJ* 25-9-1968, p. 637.
5 'Freedom': *B* 8-1-1960, p. 63.
6 *AR* 1-1964, p. 10; 5-1960, p. 304; *JTPLI* 3-1958, pp. 84–5; *JRIBA* 7-1968, pp. 300–7.
7 R. Banham, *Megastructure: Urban Futures of the Recent Past*, 1976, p. 33.
8 *AJ* 24-1-1962, pp. 193ff; *AD* 9-1960, pp. 355ff.
9 *OAP* 6-1965, p. 788.
10 *AAJNL* 1-1957, p. 148.
11 *AR* 1-1964, p. 10.
12 *AD* 9-1967, p. 430.
13 *AR* 7-1959, pp. 21ff.
14 *AB* 7-1956, p. 252.
15 *AD* 9-1960, p. 344.
16 *JRIBA* 7-1967, p. 274.
17 A. Jackson, *The Politics of Architecture: A History of Modern Architecture in Britain*, 1970, pp. 103–4.
18 *JRIBA* 10-1967, p. 431.
19 Esher, p. 262.
20 Segal, pp. 150–3.
21 *JRIBA* 5-1961, p. 260; 10-1967, p. 431; *TPLR* 4-1961, pp. 66–82; *JTPLI* 3-1967, pp. 95–8; see *AY* 4, 1952, p. 137.
22 *AJ* 8-6-1961, p. 845.
23 *AJ* 1-11-1961, p. 828.
24 Int. Gilmour; for B. Spence in Glasgow, see Chapter 20.
25 *JRIBA* 7-1963, p. 282.
26 ARU, *Low Rise High Density Housing Study*, Edinburgh, 1970, p. 63.
27 *AD* 7-1967, pp. 418–19; *AJ* 25-4-1973, p. 982.
28 *AJ* 11-9-1968, p. 507.
29 Bonamy-Delaford: *ABN* 21-2-1968, pp. 284–91; see ARU, *Low Rise*, p. 65.
30 *AR* 1-1964, p. 10.
31 P. Johnson-Marshall, *Rebuilding Cities*, Edinburgh, 1965, p. 352; *AR* 10-1957, p. 276.
32 *TPLR* 1967, p. 241; *Arena (AAJNL)* 81, 3-1966, pp. 221, 227.
33 *AR* 1-1964, p. 9; *AJ* 9-12-1970, p. 1361. 'Italian Hill Town': *AR* 5-1962, pp. 381ff.
34 *AB* 11-1958, p. 420.
35 *AD* 2-1966, p. 83.
36 *Arena (AAJNL)* 81, 3-1966, p. 234.
37 *AJ* 11-9-1968, p. 500.
38 W. Burns, *New Towns for Old*, 1963, p. 85; cave dwellers: *OAP* 1-1959, pp. 35–8.
39 *JRIBA* 4-1959, p. 193; *AB* 7-1956, p. 249; *AR* 5-1961, p. 321.
40 P. Johnson-Marshall, *JRIBA* 4-1959, p. 193.
41 A. & W. Tatton Brown, 'Three-Dimensional Town Planning,' Tatton Brown, *AR* 9-1941, pp. 82–8; A. Tetlow & A. Goss, *Homes Towns and Traffic*, 1965. Saint Dié: *AR* 5-1951, p. 299.
42 *AJ* 22-11-1956, p. 725.
43 *AR* 5-1961, pp. 321–3.
44 *AD* 10-1958, p. 386; Smithson, pp. 66–7; *Zodiac*, 4, Autumn 1959.
45 *AR* 5-1961, pp. 321–2.
46 *JRIBA* 2-1964, pp. 60–9; T. Crosby, *City Sense*, 1965.
47 *ABN* 12-12-1962, p. 871.
48 *B* 28-7-1961, p. 161.
49 *AJ* 13-4-1961; p. 529; *AJ* 14-4-1982, pp. 51–4.
50 *AR* 4-1969, p. 180.
51 *JRIBA* 7-1967, p. 274.
52 Separation: *AJ* 8-9-1960, p. 363. Cumbernauld, disperse: *JRIBA* 10-1967, pp. 433–6. 'Pilotis': *AJ* 11-9-1968, pp. 494ff; see Esher, pp. 79, 83, 263.
53 See Note 18, Chapter 2; see Segal; H. Kamenka, *Flats*, 1947.
54 *AJ* 8-9-1960, p. 354.
55 *NHTPLCY* 1955, p. 100; *FLHDH*, pp. 19, 57.
56 Garden City: *JTPLI* 5-1958, p. 131; L. Kuper (ed.), *Living in Towns*, 1953, pp. 166–8; R. Glass, *AR* 12-1953, p. 360; Smithson, p. 34.
57 *AAJNL* 1-1957, p. 144. 'Fences': *FLHDH* p. 30. Back garden: *AB* 9-1958, p. 340; *JTPLI* 12-1959, pp. 19–21; *AJ* 29-5-1963, pp. 1137–41; 5-6-1963, pp. 1183–7; ARU, *Privacy and Courtyard Housing in Dundee*, Edinburgh, 1968.
58 *AB* 4-1960, p. 122; *AJ* 8-9-1960, p. 356.
59 *TPLR* 7-1962, p. 121.
60 *AJ* 25-9-1968, p. 642.
61 *AR* 7-1963, p. 9.
62 *JTPLI* 3-1962, p. 68.
63 *AR* 9-1960, p. 195.
64 See *AD* 2-1966, p. 81.
65 Plans: *JRIBA* 10-1965, p. 499. Park Hill: *AD* 6-1955, p. 192.
66 Hill housing: *AD* 2-1966, p. 82.
67 Banham, *Megastructure*, pp. 133, 185–8.
68 *B* 28-7-1961, p. 151.
69 *AJ* 29-11-1951, p. 660.
70 Sheppard Fidler: *JRIBA* 3-1955, p. 208.
71 *JRIBA* 4-1962, pp. 156–7; *AJ* 28-2-1962, pp. 453–9; *S* 19-6-1965, pp. 25–6.
72 E.g., Netherwood St, NW6 (Camden BC; M. Wilson, S. C. Brooks): *AD* 9-1967, p. 411.
73 Wind problems: *JRIBA* 2-1964, p. 68. Service core: *Arena (AAJNL)* 81, 3-1966, p. 234. T. Crosby: *JRIBA* 2-1964, p. 60. Unité: *AJ* 21-7-1965, p. 158. Point blocks: *Decade*, p. 83; see *HR* 5/6-1966, p. 91; 9/10-1971, pp. 129–33; 11/12-1974, pp. 157–9.
74 *OAP* 4-1964, pp. 173–9; *AD* 9-1967, p. 392; *ABN* 1/15-1-1969, pp. 30–3.
75 L. Hilberseimer, *Entfaltung einer Planungsidee*, Berlin, etc., 1963.
76 *AD* 10-1956, p. 327.
77 Greece: *AD* 9-1960, p. 355. Iran: *AD* 3-1957, pp. 81–3. Kasbah: *AB* 9-1958, p. 342; see ARU, *Courtyard Houses . . . Prestonpans*, Edinburgh, [*c.*1966].
78 St Pancras Housing Devt Proj.: *AD* 7-1959, pp. 279–82. Yale: *AD* 12-1960, pp. 497–503. Halen: *AD* 2-1963, p. 63.
79 *Arena (AAJLN)* 81, 3-1966, pp. 135–41; *AD* 9-1967, pp. 432–3; *AJ* 1-8-1973, pp. 265–80.
80 Services, 'pilotis', footpaths, overlooking: *AJ* 11-9-1968, pp. 510–11, 520. Squalor: *AD* 9-1967, pp. 428–9. Ground level: *OAP* 10-1964, p. 1185.
81 Companionship, sprawl: *AJ* 25-9-1968,

pp. 636–9. Ribbon development: *AD*, 9-1967, p. 435.

SECTION II, PART A (INTRODUCTION)

1 'If we': H. Macmillan, House of Commons, 13-11-1951. 'To someone': int. Cramond. 'In those days': int. King.
2 N. Morgan, in R. Rodger (ed.), *Scottish Housing*, 1989, pp. 128–35.
3 Preference for cottages: *Planning Our New Homes*, 1944, Appendix 3, pp. xix–xx; DHS, *Glasgow and North Lanarkshire . . . Survey*, 1948, tab. 40–2.
4 Walker: LCC HC PP 29-10-1945 (Special Sub.); LCC CL 23-11-1949, 9-5-1950. *BHPR* 10/12-1951, pp. 31–5. Woodberry Down instigated by Forshaw, the LCC Architect: N. M. Day, 'The Role of the Architect in State Housing', PhD (Warwick), 1988.
5 Camberwell HC 18-7-1946, 25-2-1952; Shoreditch HC 30-2-1948; Poplar HC 14-11-1945; Southwark HTPC 21-11-1945, 17-4-1946; Wandsworth CL 17-10-1944; HC 11-4-1945; TPC 29-11-1949; HC 7-12-1950.
6 LCC help to MBs (e.g., CPOs): Battersea HC 8-3-1946; Camberwell HC 21-6-1948. Wandsworth building drive: HC 29-8-1945, 20-11-1951, 20-10-1952, 12-3-1953.
7 Dunleavy, pp. 184, 188; *HR* 7/8-1978, pp. 86–7.
8 'Endless': int. Samuel. 'I used': int. Sneddon.

CHAPTER 20

1 'Planners': F. J. Osborn, *TCP* 1949, p. 90.
2 Green Belts: Minister's statement 26-4-1955; Circular 42/55, 50/57. 'Do battle': HLG 71-1656 Sec.-Sharp 8-2-1952, Sharp–Minister 1-12-1951.
3 F. Jackson, *Sir Raymond Unwin*, 1985; M. Miller, Raymond Unwin: *Garden Cities and Town Planning*, Leicester 1992; M. Swenarton, *Artisans and Architects*, 1989, pp. 126–66.
4 'Chestertonian': letter Osborn–Mumford 23-7-1957, in *The Letters of Lewis Mumford and Frederic J. Osborn*, 1971, p. 276. M. Hebbert, in G. Cherry (ed.), *Pioneers in British Planning*, 1981, pp. 179–83. Official two-part history of TCPA: D. Hardy, *From Garden Cities to New Towns*, 1991; idem, *From New Towns to Green Politics*, 1991.
5 'Monomaniacs': int. Reiach. 'Impression': int. Beddoe.
6 'No Government': int. Johnson-Marshall.
7 Housing politics: S. Damer, *Glasgow—Going for a Song*, 1990, pp. 116–25. DD6/269 Bradbury memo 12-5-1948 ('Housing . . . in Glasgow').
8 R. Smith, in A. Sutcliffe (ed.) *Multi-storey Living*, 1974, pp. 232–3; R. Smith, *East Kilbride*, 1979, pp. 21, 25. M. Keating, *The City that Refused to Die*, 1988. 'The practical': RTPI Scotland, *A Celebration of Planning in Scotland*, 1989, p. 16. 'How I adored': int. Grieve.
9 DHS dissuaded from New Town: ints. Mabon, Fraser; DD12-2245 meeting 9-10-1956; HLG 90-321 Stuart–Butler 30/3/55, 6/4/55; C. Carter & M. Keating, *The Designation of Cumbernauld New Town*, 1986.
10 Sharp on Osborn: int. Milefanti.
11 SSHA: *H* 3-1957, pp. 115–18; *ABN* 20-12-1967, pp. 1003–6. T. Begg, *Fifty Special Years*, 1987. SSHA rents and overspill, SSHA as economic regulator: DD6-1557 meeting 12-2-1958.
12 Overspill proportions: HLG 101-748 notes 14-9-1956.
13 Parochial: int. Wollkind; *HR* 9/10-1959, p. 153. Warwick Crescent: int. Wegg-Prosser; G. G. Don, *MJ* 11-1-1957; J. & E. Braddock, *The Braddocks*, 1963, p. 119. Clifton: Lowe and Hughes, p. 41.
14 Shennan: *Evening Express* 14-1-1952; F. T. Chow, 'High-Rise Housing in Liverpool', B Arch (Liverpool), 1983, pp. 44, 119.
15 'Insult': int. Mabon. 'Denigrated': int. Fleming.
16 LCC: HC 28-7-1953. Braddock: Chow 'High-Rise', p. 44; Braddock, *Braddocks*, p. 119.
17 'Football', land supply: Newcastle CL 9-1-1952, 4-3-1953, 1-4-1953.
18 West Midlands parochialism: ints. Sheppard Fidler, Winn, Wood. 'Profound': HC 5-1-1965. 'Smallish': int. Beddoe. Ashford: T. Brown, M. Vile & M. Whitmore, *British Journal of Political Science* 1972. Haddington: int. Tindall.
19 Sharp, New Towns: *JRIBA* 5-1964, p. 205. Subordinates: int. Beddoe. Ministry aware, Sandys claim that most slum dwellers 'want to move, but nearby': CHAC 5-10-1956. Recent parallel (multi-storey tenants' dismay at idea of move to New Town cottages with gardens): *AJ* 1-4-92, p. 16.
20 'Irrational'—e.g., Bristol in mid-1950s: Dunleavy, p. 308.
21 'Diminishing returns': F. J. Osborn, *TCP* 1949, p. 91; P. A. Stone, *Journal of the Royal Statistical Society*, Series A, Part IV, 1959, pp. 417–83.
22 MHLG on 100 p.p.a. at 4 storeys: HLG 101-816 27-6-1958 Phillips–Minister.
23 'Was madness': int. Cox.
24 MHLG support for LCC mixed development: HLG 71-1656 6-12-1951 Sharp–Manchester; *Flats and Houses 1958*, pp. 5–6. 'Provincial': Southgate TPHC 1-1-1958; Leyton HC 4-1-1962; DD6-1321 7-1956 DHS visit; Aberdeen CL 2-3-1959, 1-2-1960. Halesowen and Paragon Rd: *HR* 1960, p. 155. Copying of LCC plan-types: *B* 9-7-1965, p. 93 (Sutton).
25 'First come': R. D. Cramond, *Allocation of Council Houses*, 1964.
26 T. Lane, *Liverpool*, 1987, p. 138; G. Turner, *The North Country*, 1967, p. 142; S. Muthesius, *The English Terraced House*, 1982, p. 109.
27 Ints. Bor, Amos, Heffer; *Liverpool Echo* 13-11-1963, p. 12.
28 'Iron grip', 'ruthless': P. Taaffe & T. Mulhearn, *Liverpool*, 1988, p. 36 'Distrust' of high flats: Braddock, *Braddocks*, pp. 119–23.
29 Quarry Hill 'popularity': A. Ravetz, *Model Estate*, 1974, p. 90; Cohen: int. Gabb; HC 16-2-1956, 20-12-1956; *B* 1-2-1957. Higher rates to finance drive: DoE NI 487/1957, statement for J. A. Oliver 3-12-1958.
30 LCC 'horrified': int. Denington.
31 Int. ex-LCC and Leeds architect.
32 Portsmouth: CL 5-3-1957; *Evening News* 10-6-1958, p. 3; 7-8-1958, p. 2; 19-9-1959, p. 8; 18-2-1960, p. 12; 9-3-1960, p. 5; 17-10-1962, p. 4.
33 'Birmingham were': int. Sheppard Fidler.
34 'Lumpiest things', 'When I went': int. Sheppard Fidler.
35 Contractual policy: A. G. Sheppard Fidler, *JRIBA* 7-1955, p. 64. 'Impossibility': *JTPI* 4-1955. 'Overrepetition': *NHTPLCY* 1953. 'I'll design it', engagement of Mary Mitchell: int. Sheppard Fidler.
36 Green Belt releases: DD6-269 9-12-1951. 'It always': int. Jury.
37 'Sharp perception': int. Rendle.
38 Hutchesontown debates: A. G. Jury, *S* 6-3-1954, p. 571; Glasgow Corporation, *Report of Visit . . . to . . . the Marseilles Block*, 1954; Joint Sub. Housing Needs 14-1-1955, 27-5-1955; *Report on . . . Birmingham, Coventry, London*, 1955. Spence and HC: int. ex-Corporation architect. Horne, Matthew: Joint Working Party on Multi-Storey Flats 15-11-1956; int. Paterson. Internal bathrooms: DD6-2152 Jury/Fleming letters 3-1958.
39 Letter 2-12-1957 Jury–Town Clerk; *First Quinquennial Review*, 1960, pp. 124, 132 (only mention of non-CDA housing).
40 'Uneasiness': DD12-1157 14-1-1960. 'Juggernaut': DD12-2175 20-6-1960 memo. 'Do it all': int. Grieve. Tacitly supported: Lord Strathclyde at Joint Sub. Housing Needs 8-1-1954, 20-9-1954; DD12-1156 Nixon Browne, 7/9-9-1955; Joint Sub. 8-2-1957.
41 Bunton (Clydebank, etc.): *B* 25-4-1941, 14-1-1944; White, pp. 221–2; DD6-269 Bunton–Mitchell 1-12-1949 and meeting 14-12-1950. Planning debates: DD12-1735 2-12-1958. 'Curious idealism': int. ex-DHS Assistant Secretary and senior planner. 'Housing today': *Scotsman* 29-11-1965, p. 4. Bunton was much bound up with the Glasgow Protestant establishment, especially the Rangers F.C. board. On Glasgow Protestantism, and its links in some cases with Freemasonry, see G. Walker & T. Gallagher (eds.), *Sermons and Battle Hymns*, 1990, pp. 160–92.
42 'Endless complications': DD12-1156 Fleming–Rendle 2-12-1958.
43 'To puncture': DD12-1156 22-6-1958, and letters 1956–1959; DD12-1735 17/18-11-1958; ints. L. Bunton, Grieve.
44 Proportion of flats: A. E. Holmans,

Housing Policy in Britain, 1987, p. 114; Dunleavy, pp. 41–2.

45 Undermining: T. Collins, Newcastle CL 2-11-1966, p. 549; Rochester HTPC 7-10-1963. Stoke: J. Plant, *HR* 10-1958, p. 162.

46 *HR* 9/10-1958 (Percival); M. Horsey & S. Muthesius, *Provincial Mixed Development*, 1986, pp. 11–35.

47 E. D. Simon & J. Inman, *The Rebuilding of Manchester*, 1935, pp. 58, 89, 106; Manchester CL 1944–5, vol. I, p. 304; vol. II, pp. 374–80; HC, *A Short History of Manchester Housing*, 1947, p. 90. 'Cinderella': int. Stones. Lymm: *ABN* 6-8-1958, p. 188. 'Backward': int. Sheppard Fidler. MHLG on Manchester: HLG 118-154 briefing 17-5-1961.

48 Austen Bent: int. Stones.

49 Osborn on 'class matter': letters Osborn–Mumford 15-2-1963, 23-7-1957, in *Letters*. Claims that high flats, 'systems' or 'mixed development' were Establishment tools used to oppress (or appease) the working classes: Dunleavy, pp. 178, 348; Finnimore, p. 245; G. R. Owens, 'Mixed Development in Local Authority Housing in England and Wales', PhD (London), 1987, pp. 419–25; A. N. F. Marmot, 'How High Should They Live?', PhD (Calif., Berkeley), 1984; S. Merrett, *State Housing in Britain*, 1978; C. W. Bacon, *Park Hill in its Social Context*, 1985; N. M. Day, 'The Role of the Architect in State Housing', PhD (Warwick), 1988; R. McCutcheon, in M. Edwards (ed.), *Political Economy and the Housing Question*, 1975, pp. 93–6; Prince Charles, *A Vision of Britain*, 1989, pp. 9, 21, 36–42. Account stressing municipal autonomy: E. W. Cooney, in A. Sutcliffe (ed.), *Multi-storey Living*, 1974, pp. 151–80.

50 Echoed: *Living in Flats*, p. 30 (hostile). Inconclusive: M. Willis, *JRIBA* 4-1954, pp. 242–3; *Byggmästaren* 1958 A2, pp. 26–30. Macey criticisms: *JTPI* 1-1961, p. 8 (high flats 'not liked by at least 80%' of tenants); *OAP* 1-1959, p. 35 (over 130 p.p.a. makes children 'cave dwellers'). More favourable view: Davey, *BHPR* 7/8-1957, p. 25.

51 West Ham: int. Edwards. Labour anti-flats: Albert Salter's 1920s plan to rebuild Bermondsey in cottages, with no flats (which he branded 'soul destroying barracks'): F. Brockway, *Bermondsey Story*, 1949, pp. 92–3.

52 'Practical qualms': West Bromwich GPC 2-4-58 (Yew Tree), Wolverhampton Joint TPC 14-2-1956; Newcastle CL 1-4-1953 (Longbenton refusal).

53 DD6-321 meeting 13-10-1954.

CHAPTER 21

1 Int. Rendle.

2 D. Sandys (Minister of Housing), 1955, quoted *JRIBA* 3-1955 (cover).

3 'Straight continuation': int. Beddoe. Bevan, Liverpool: F. T. Chow, 'High Rise', B Arch (Liverpool), 1983.

4 'There had been': int. Beddoe.

5 MHLG resistance: HLG 101-748. Cut in PWLB lending in 1955; Merrett, pp. 156–7. S. Brittan, *The Treasury under the Tories, 1951–1964*, 1964.

6 HLG 101-748.

7 Bedford MBC 19-3-1958.

8 Conservative authorities' policy change: Brighton HC 21-12-1954 and Residential . . . Committee 17-1-1955, pp. 33–4; Gosport HC 13-2-1958; Cardiff RDC Min., Report 15-7-1957 on high flats; Cheltenham HC 12-1-1960 (memo 14-12-1959). Labour authorities: (Salford) R. Chandler, *H* 1-1966; (Manchester) HC 8-4-1957, 8-6-1958; (Oldham) HLG 118-185 paper 28-2-1962; (Norwich) Percival, *HR* 7/8-1960, p. 112.

9 LCC HC PP 22-9-1954 (Macmillan–Fiske 10-10); 'One day': int. Denington.

10 MBSJC: LCC HC PP, Architect's report 26-5-1961 on Circular 37/60; LCC HC 15-6-60, papers on 14-2-1960 letter from MBSJC.

11 Marshall: O. Marriott, *The Property Boom*, 1967, pp. 185–6; P. Saunders, *Urban Politics*, 1979. 'Let's get ahead!': int. Freeson.

12 Fulham HC 7-10-1964; Deptford HC 5-3-1962. Economise: St Marylebone HC 30-11-1955. 'Trifling': DD6-1621 15-7-1960 note. Percentages: DoE NI 3556/59 J. A. Oliver note of Beddoe phone call 16-12-1958.

13 Displacements: Reading HC 16-2-1959; Bermondsey HTPC 27-4-1960; Deptford HC 3-10-1960; Lewisham HBC 9-1-1961; Mitcham MBC Phipps Bridge Comm. 13-6-1961; HC 3-5-1962.

14 Housing gain, Walsall: int. Wood. Bethnal Green: LCC HC PP 21-3-1956; Southwark HTPC 7-11-1956. Start of tenement RD: Southwark HTPC 1-4-1953 (Mardyke); CHAC 3-7-1959; LCC HC PP 25-1-1961, 10-10-1962.

15 'Firstly, you had': int. Symthe.

16 'Awkward': HLG 101-750 SWCP–Secretary 13-7-1956; DoE NI 487/52. 'Hopelessly': C. Carter & M. Keating, *The Designation of Cumbernauld New Town*, 1986, p. 50. 'Grim': DD6-1565 note 22-1-1957.

17 'Wet blanket': int. Rendle. Rent control strengthened throughout UK in 1939: P. Malpass & A. Murie, *Housing Policy and Practice* (3rd ed.), 1990, p. 43. Town Clerk Depute: W. Gordon, *Proceedings of the Scottish National Housing and Town Planning Conference*, 1951, p. 4; DoE NI 487/1957 R. D. Cramond note 7-2-1963.

18 Rent levels: DoE NI 2271/60 10-6-1960, 3356/1959 table 14-8-1958.

19 Glasgow, Birmingham rents: *Glasgow Herald* 14-9-1963, p. 7. Share of rates: DoE NI 4150/59 'City of Belfast Housing' memo 1-1960, para. 3.

20 United Nations, *The Housing Situation . . . in European Countries*, 1968. Modest reforms: Circular 33/1960. Push up council rents: DHS, *Report by Mr G. C. Elmslie on . . . Dunbarton*, 1961. Discouragement of economic-rent flats: DD6-1321 notes 1/2-1957. 'Warring barons': int. ex-DHS architect. 'Glasgow Corporation': int. Nicoll.

21 Treasury contempt: memo 13-4-1955 (in Carter & Keating, *Cumbernauld New Town*, p. 53).

22 'The one thing': int. Mabon.

23 'Irrationality': Dunleavy, pp. 73–6. 'Fantastic': J. Forshaw, *JRIBA* 4-1955.

24 Newcastle: CL 4-3-1953. HBC alarmed: Min. of conference 27-7-1953. Subsidy probably justified by para 4(1) and 1st Schedule (b) (2) of 1946 Act, allowing inclusion of any items in calculating site cost (including blocks built on site?) 'They said', 'Mud pies': int. Sheppard Fidler.

25 Coventry HC 10-2-1955; West Bromwich HC 7-1955. LCC: int. Cox.

26 Difficulties of flats and expensive sites subsidies: HLG 49-1499 30-1-1948 Ministry of Health–LCC; HLG 118-76 21-6-1951 Shoreditch meeting. MS subsidy rationale: (balance out basic subsidy change in 1956 Act) HLG 101-748 7-9-1956 Beddoe–Phillips (equalise cost of high flats and cottages) 25-8-1959 note. Recalculated: HLG 101-478 21-9-1956, 26-9-1956 Phillips–Minister.

27 Suppression of 3-storey flats: Camberwell MBC BDC 2-7-1955; Stoke Newington HC 5-12-1955; LCC HC 23-11-1955; Comptroller report 18-11-1955; St Marylebone CL 10-10-62. Encouragement of high flats?: Chelmsford HC 9-7-1959 (Melbourne). Administrators knew LAs wanted more high flats: HLG 101-748; R. Purdew, *AJ* 15-1-1959; DD6-2133 8-10-1959 note.

28 Scots tenements cheaper than cottages: *JRIBA* 4-1955, p. 261.

29 'There was': int. Fraser. Treasury: 28-4-1955 report (in Carter & Keating, *Cumbernauld New Town*, p. 63). Glasgow pressure for 75%: DD6-1620 note 30-3-1957. DD6-1326 notes 19-3-1956, 29-3-1956, 14-6-1956, 1-11-1956 (DHS–Jury disputes on high-flat vetting, working party; Bunton–Blairdardie row; Docherty: Jury 'overworked' and allegedly 'resentful' of criticism).

30 Brooke 'identify himself': HLG 102-366 Sharp–Phillips 17-12-1958. 'She always': int. Milefanti; 'She just': int. T. Dan Smith. Sharp, New Town high blocks, personal attention; *JRIBA* 3-1955, Bracknell NTDC 12-3-1959, 9-4-1959; E. A. Sharp, *JTPI* 6-1964, p. 226. Less interest in 'old towns': HLG 91-706 Sharp notes 15-4-1959, 30-4-1959.

31 'If in doubt', 'fiction': int. Beddoe. Arbitrary mid-year reallocations: Gosport HC 28-8-1958, Maidstone HC 12-9-1960. Informal veto: DD6-1321 meetings 4-3-1957, 16-12-1957. Hackney CL 30-5-60 (MHLG letter on Kyverdale Rd and 28-2-1961 special report). 1956 subsidies encouraged higher capital

spending: HLG 101-816, Bellamy notes on 18-1-1960 meeting. 'Go native': int. Beddoe. Joyce: int. Smythe.

32 'Synopsis': HLG 101-816, Sharp–Forshaw 21-8-1957.

33 Trivial alterations: DD6-1321 report 4-3-1957; Tipton HC 13-4-1959 (Churchyard Rd). Could secure alterations: Chatham HC 5-6-1961 (Ordnance St), HC 3-9-1962 (lend LCC 'scissors' plans), HC 2-9-1963 (Melville).

34 Planners turning down schemes: Whitstable UDC Public Health and Housing Committee 27-11-1964, 11-6-1965. Behind-scenes influence: HLG 131-19 (Ellor St, Salford), *Evening News* 5-10-1963, p. 1 (Portsdown Hill, Portsmouth).

35 Int. Nicoll.

36 DD6-2145 Departmental meeting 10-2-1958.

37 Vociferously opposed: DD6-272 meeting 8-2-1946. Some DHS architects in favour: int. Fraser; DD6/1320 report 5-6-1952. 'Our relations': DD6-1326 note 31-1-1958. Failure to establish cost guidelines: DD6-2155 meeting 28-11-1958; note 5-12-1958; DD6/2153 meeting 15-11-1960. Joint Development Unit: DD12-1735 notes 5-2-1959, 13-2-1959, 12-3-59; DD6-2458 meeting 18-10-1960.

38 Bellahøj: int. Cramond.

39 Introduction of subsidy: DD6-929, 930, 931. Encouragement of high building: ints. Fleming, Fraser; DD6-2169 14-1-1959 meeting; DD6-1565 note 13-2-1957; DD6-2331 note 26-11-1957; DD6-2133 note 18-8-1959, comparison tables 25-8-1959, 8-5-1967. DHS curb on Hazlehead high flats: Aberdeen Planning Department files, letter from DHS 13-4-1960. Dumbiedykes economies, Edinburgh: *Evening News* (Edin.) 2-1-1992, p. 10.

CHAPTER 22

1 Cleeve Barr, *B* 25-1-1957.

2 Optimism: E. A. Sharp, *JTPI* 6-1964, p. 224. Squeeze: HLG 118–134 meeting 12-7-1962. Back of slum problem 'broken': H. Brooke, remarks at CHAC 3-7-1959, 8-1-1960; K. Joseph, *HR* 7/8-1964, p. 131.

3 Inhibited: CHAC 8-1-1960. Exacerbated: ints. Cramond, Mabon. Lengthening waiting lists: Merthyr Tydfil HC 23-10-1963, pp. 476–7. 400,000 speech: *The Times* 10-10-1963, p. 18. Homelessness: HLG 118-171 notes 25-10-1961, 1-11-61, 6-11-1961, 27-7-1962; *CQ* 10/12-1961, p. 1. Land costs: LCC CL 24-3-1964. Mass evictions: Islington HC 1-11-1962 (Packington); Hampstead HC 18-8-1964 (Chalcots). Rachmanism: int. Joseph. Labour 'comprehensive': S. Pepper, *Housing Improvement*, 1971, p. 96.

4 *Flats and Houses 1958*: HLG 101-816 passim, especially 22-4-1958 Bellamy–Elliot; 11-6-1958 Sheppard Fidler–Bellamy; 27-6-1958 Phillips–Brooke, 11-12-1958 Bellamy–Trystan Edwards, 18-1-1960 Bellamy notes on LCC meeting. US influence on Bellamy: *HR* 1/2-1958, p. 18. Cheap 'traditional' house: Cleeve Barr, p. 125.

5 Density ceiling, yardsticks: HLG 118-23 12-1960, 101-816 22-2-1960 Bellamy–Cleeve Barr; Cleeve Barr, *JRIBA* 4-1962, p. 154; int. Cleeve Barr. Cleeve Barr praising cottages: *B* 30-6-1961, p. 1237. Barr fostering Design: HLG 118-93 note 10-11-1960 Barr-Fox, HLG 49-1508 (vetting Percival plans). Development Group: HLG 118–121 meeting 3-2-1960, HLG 118-136; *AD* 8-1966.

6 'Fifth-column': int. Milefanti. Praise of R & D: *MJ* 2-6-1961, p. 1824.

7 Lower proportion of high blocks: HLG 118-203 7-7-1961 (Coventry); Crayford HC 15-1-1963 (Lincoln Rd). Cut 'uneconomic' types: Hackney CL 5-12-1955 (Paragon Rd); Lincoln HC 5-6-1962, 17-10-1962. Spread lift cost: D. Donnison & V. Chapman, *Social Policy and Administration*, 1963, p. 131 (Galway). Cost planning: HLG 101-816 panel 11-10-1956 (Blackshaw). Chelmsford: HC 9-7-1959. MHLG, *Housing Cost Yardstick*, 1963, p. 4; its effect, Wortley RDC EC 16-7-63 (Bath House). MHLG architects' advocacy of 100–140 p.p.a. redevelopment ceiling: *JRIBA* 4-1962, p. 154.

8 Southall HC 9-4-1962, 4-10-1962, 10-1-1963.

9 Parker Morris, pp. 28-30; praised by Brooke: CHAC 7-7-1961; by Denington: *HR* 7/8-1960, p. 147; by Cleeve Barr: *Listener* 28-12-1961, pp. 1109-11. 'Apprehension': int. M. Smith.

10 SPUR: *HR* 9/10-1958, p. 132; *AJ* 5-1-1961 p. 9. W. Bor, *JTPLI* 1-1961, p. 4; *OAP* 4-1962, p. 713; attacked; TCP 11-12-1959, p. 350. Ling: *ABN* 3-6-1959; *JRIBA* 8-1960, pp. 89–97. Sharp criticises Coventry: HLG 118-203 12-5-1961. Expensive site subsidy and CDAs: HLG 118-203 Coventry meeting 8-4-1963. Ministerial unease on overspill: K. Joseph, *HR* 9/10-1960, pp. 135–6; H. Brooke, remarks at CHAC 6-1-1961. MHLG planning initiatives: HLG 71-1656 note 22-11-50, HLG 131-126/7, 131–137 (14-12-1961 onwards); *B* 16-8-1963, p. 323 (UPG, Planning Bulletin 2). Joseph vs cramming, status building: int. Joseph; Tottenham HC 20-11-62; *HR* 9/10-1963, p. 142; letter Osborn–Mumford 20-10-1962, in *The Letters of Lewis Mumford and Frederic J. Osborn*, 1971. Crossman endorsed Stone: *JRIBA* 1-1966, p. 11.

11 'New Towns': int. Joseph. His advocacy of renewal: (visit) Hackney CL 15-10-1962; *JRIBA* 8-1960, pp. 394–7 ('life-enhancing' slum community).

12 'Sleazy areas': Joseph, remarks at CHAC 5-7-1963; HLG 131-137. 'I dreamt': int. Joseph. LCC hostility to Fulham Study: HC PP 27-5-1964.

13 Parker Morris resented: ints. Winn, Wood. Might exacerbate, 'principalities', 'I'd roll': int. Joseph; Tottenham HC 20-11-1962.

14 By improvement: HLG 131-137, 1963 meetings. Simply as a cloak: Newcastle CBC 28-7-1965, p. 299 (Cuthbertson/Harding on Walker).

15 Potential excuse: DD6-2153 notes 28-11-1961, 29-1-1962. Irrelevant: ints. Rogan, Sneddon. Impossible to stimulate: DD6-1552 4-1964, 11-8-1964.

16 'Social-reforming artist-scientists': int. Percival. Schools: A. Saint, *Towards a Social Architecture*, 1987, p. 228.

17 Cleeve Barr, *B* 29-3-1963, p. 651; *B* 25-1-1957.

18 LCC, Wates: *JRIBA* 3-1955, pp. 254-6, *AJ* 29-11-1956, p. 795; *B* 4-9-1964, p. 485; LCC HC PP 12-12-66. 'We'd put': int. Barr. Reema: LCC CL PP 22-1-1957, 18-9-1957.

19 Conservative: HC 22-3-1961 PP. 'Normally': HC PP 16-1-1963 'Housing Output'; *B* 29-3-1963, p. 655. Bison: CL 16-3-1965; HC PP 16-6-1966.

20 Mobile homes: HC PP 22-11-1961, 27-6-1962, TWA: LCC HC PP 14-3-1962, 26-9-1962; *HfF*, pp. 123–8.

21 Morris Walk: LCC HC 24-2-1965; *AJ* 27-5-1964; int. Richardson.

22 'Madmen': int. Campbell. SF1 blocks: LCC HC PP 24-4-1962 Report 'Plastics'; CL 16-3-1965, HC report, p. 1264; GLC HC PP 9-10-1970.

23 'Sacrificed': DD6-2201 27-7-1961 pressure from Camus; int. Cox. Sociological emphasis: CHAC 5-1-1962 R & D paper. Denounced: Campbell, *OAP* 5-1963, p. 439; *B* 29-3-1963, pp. 654–5. CLASP for housing: HLG 118-121 3-2-1960 and later 1960 papers. CHAC 6-10-1961: remarks by Pattinson and Barr.

24 Expedient: *HfF*, p. 6. Campbell grandly asserted: *HfF*, p. 138. Joseph on 'flats from the factory': *HfF*, vs Neil Wates: CHAC 4-10-1963.

25 Laing, 1932 competition: M. Horsey, *London Journal*, volume 11(2), 1985, p. 157. Laing, LCC: HC 2-7-1952. Picton St: *B* 11-11-1955; *AD* 2-1957, p. 35. Laing, Family Houses I: HLG 118-136 Phillips–Laing 29-5-1962. Laing 'ethos': R. Coad, *Laing*, 1979; G. Harrison, *Life and Belief*, 1954. Eventually MHLG found: HLG 118-185 notes 10-3-1961 O. J. Cox–Nunn, 30-10-1962, 9-5-1963, 14-5-1963, 12-6-1963. Finnimore, p. 154. SSHA, JDU: ints. Buteux, Black.

26 Salford: HLG 131-19 Fox–Wickenden 6-12-1960, Barr–Clayton 8-12-1960.

27 MPBW, *Decisions Affecting Design of Five Point Blocks*, 1968, p. 45; *ABN* 5-6-1963, p. 85; *AJ* 2-10-1963, p. 687. 'We would': ints. Raitt, Prof. C. Robertson.

28 CLASP-like: O. J. Cox, *S* 7-4-1962, p. 394. 'Packages': Joseph, quoted in *HR* 7-1964, p. 131. Consortia (general): *OAP*

special issue 11-1970.
29 YDG origins: Hull Housing Sub. 25-9-1961; ints. Gabb, Lambert. YDG Mk I: int. Richardson; *AJ* 18-12-1964, pp. 1426–7; *H* 5-1965, p. 10; Mk I contract: Hull Housing Sub. 26-3-1965, 14-2-1966. SLASH: DD6-2362 notes 1-11-1962, 22-5-1963; *HR* 7/8-1964, p. 158. MHC 'thought up one day by Ling while shaving': int. George; *AJ* 16-9-1964, p. 627; 21-10-1964, p. 903, 29-9-1965, p. 725, 11-6-1969, p. 1572. *OAP* 11-1970, pp. 977–8.
30 Contrived to avoid: Whitstable UDC PHHC 8-8-1966 (Clerk on IB).
31 Finnimore, p. 371.
32 For contrary 'conspiracy' view: Finnimore, pp. 79, 98.
33 MPBW role: CHAC 4-10-1963. Sharp 'scotched' MPBW plan: int. Barr; *B* 27-5-1966, p. 119 (Wilson). NBA (general): *ABN* 27-1-1965, pp. 152–4; also MPBW, *A National Building Agency*, 1963; *B* 28-4-1967, pp. 65, 102. 'Meaningless': CHAC 28-5-1965. Scepticism concerning wide definition: CHAC 13-6-1966, p. 5 (Pattinson). NBA prevented: int. Barr.
34 Tower Hamlets HBDC 22-11-1967.
35 Joseph sympathy/antipathy: int. Joseph. Quotas in 'National Housing Plan': MHLG circulars 21/65, 76/65. Use of 'system' quota to justify high-flat contracts: Portsmouth CL 12-4-1966 (Aldwell St); Walsall Special HC 16-6-1965 on MS flats (Circ. 21–65 used to justify more Wates blocks, battery-cast so they could be termed 'system built'). Refuse to comply: Stretford HC 8-2-1966; Barnsley HC 29-9-1965 (Sheffield Rd); Bristol: Dunleavy, pp. 322–6; Edinburgh: int. Rogan. NBA in Scotland: DD6-2362 2-12-1964, meeting 4-12-1964; *OAP* 11-1968, pp. 1458–62.
36 Builder, *Consortia*, 1964; Finnimore, pp. 162–4; Dunleavy, pp. 64–5.
37 Bryant Low Rise: Finnimore, p. 182. Unprofitable, Sweden, Skarne: *AF* 8-1958, pp. 120–2; Remarks by Stones/Barr, *HR* 9/10-1963, p. 158; Camden PC 26-9-1966 (Abbey III). Glenrothes: *Team Spirit* 10-1966. Camus profits: int. Mabon.
38 YDG 2 storey: CHAC 5-6-1964, 13-6-1966. Unwillingness to consider IB for low blocks: Dundee Town Clerk's files, Bett–Town Clerk 16-9-1963; HC 18-10-1965 (Bett now offering Bison high flats); Sale HC 14-2-1964 (Firs Rd); Whitstable UDC PHC 8-8-1966; Fife CC HC 22-3-1966, p. N275.
39 Proportion: Dunleavy, p. 64. Modest: Pattinson, Cohen, CHAC 5-6-1964.
40 'We resented': int. Bercott. Architects' failure: Saint, *Social Architecture*, pp. 228–31.
41 'Very high quality': HLG 118-136 18-10-1960 Adams, meeting 17-3-61. Development Group: *AD* 8-1966; praised: *MJ* 2-6-1961, pp. 1824–7. 'Right!': int. Milefanti. Post-mortem on '5M': *B* 25-10-1968, p. 117. Bunton: ints. Bercott, ex-DHS planners; DD12-1735.
42 'The one thing': int. Campbell. 'Previously': int. Buteux.
43 'The councillors': int. ex-LCC/Lambeth architect.
44 Saint, *Social Architecture*, p. 228.

CHAPTER 23

1 Int. Rogan.
2 Various devices: DD6-1557 meetings 2/3-1958, Secretary of State–Chancellor 1-8-1958 on control of tender approvals, SSHA cuts. Treasury and restraints: DD6/1558 8-1-1959 Secretary of State–Chancellor. 33/1960: DD6-1559 note 11-1-1960; DD6-1620 note 1-2-1960. Drop in urban output: Stoke Newington HC Review 1959–60. 1961–2 return to general needs: Finchley HC 5-6-1962 (East Finchley Phase 4).
3 'Sweeteners': DD6-1621 note 26-8-60; DD6-2362 note 21-10-64. 'Puny': DD6-1621 note 15-7-1960. Green puzzled: DoE NI 3556/59 26-4-1961 Green–Holden. 'After all': DD6-1621 note 29-7-1960.
4 Leyton HC, *Housing in Leyton*, 1965. Some high-flat schemes encouraged by lower-rate basic subsidy in small towns: Ramsgate HTPC 30-10-1961.
5 Forward programmes: Finnimore, p. 84. Stretford: HC 7-12-1965. London Boroughs: ints. Wollkind, King. Portsmouth (further population loss would cut off Rate Deficiency Grant): CL 12-4-1966; rate subsidy CL 10-10-1961 (committee on future housing policy); highest rents of any CB, *Evening News* 22-6-1966 p. 20. Flat-rate subsidy excuse to remove restraints: SRO DD6-2155, memo 12-12-1960, DD6-2153 memo 5-7-1961, DD6-2155 meeting 5-6-1962; Parker Morris: DD6-2153 notes 28-11-1961, 29-1-1962.
6 'They were': int. Cramond. 'Hopeless': int. Milefanti; HLG 49-1444 (1959) on general weakness, and Dorchester RDC having stopped building.
7 'Random': int. Joseph. Weakness, no charisma: int. ex-Administrator.
8 Scottish Office Regional Development Division: J. S. Gibson, *The Thistle and the Crown*, 1985, pp. 141–5.
9 'Modernisation of Britain': Finnimore, p. 81.
10 Maverick: ints. Beddoe, Milefanti. 'At Winchester': G. Wheatcroft, *Independent Magazine* 8-6-1991 p. 14.
11 'Activate': int. Mellish. Approval immediate: Waltham Forest's Cambridge Rd scheme, HC Min 14-9-1965. 'Live wire': int. Mabon.
12 Hammersmith row: int. former senior Administrator. 'Medium weight': ints. Beddoe, Milefanti. 'Wet flannel': int. Vinson.
13 'Upping': R. Crossman, *The Diaries of a Cabinet Minister*, Vol. I, 1975, pp. 108, 154. Allocations, priority: CHAC 11-10-1965, 12-6-1967; Gosport MBC HC 28-4-1966 (MHLG allocations). London: int. Milefanti. One point block took up entire allocation: e.g., Northfleet HC 24-2-1966.
14 'Heartache': int. Mellish. Cost inflation: Leeds City Architect's Department report 29-7-1964, critical analysis. Interest rates: A. E. Holmans, *Housing Policy in Britain*, 1987, p. 467. CB pressure: *HR* 9/10-1963, p. 158 (Shaw); Wates CHAC 28-5-1965. Glasgow pressure over interest rates: D. Gibson, *Glasgow Herald* 1-9-1962, p. 3; DD6-2333 meeting 18-10-1963; DD6-2362 visit to Lord Provost 10-1964 notes; notes for Minister's visit to Glasgow, 12-1964; DD6-2362 notes for PM's visit 19-4-1968. Insufficient: DD6-2133 note 11-1-1963.
15 1965 Bill: Mellish CHAC 14-2-1966. Backdating: Barking HC 25-1-1967.
16 Crossman, Mellish on variable subsidy: int. Mellish; Crossman, *Diaries*, p. 144. Treasury cross-checked with NI: see DD6-2133 note 28-11-1961. Possible influence of school percentage-grant system: int. Milefanti. Scots 1967 Act: *B* 3-3-1967, p. 103.
17 'Nightmare': int. Beddoe. Initially welcomed: LCC HC PP 3-2-1966.
18 Yardstick vs high flats: Dunleavy, p. 174; int. Beddoe. 'Fifth column': int. Milefanti. Aberdeen Planning Dept Seaton file, 28-4-1969 and 13-5-1970 CA reports to HC. 'Beating the yardstick': int. Milefanti.
19 Comparative cost of new housing: DoE NI 2271/60. In 1967–8, breakdown of finance sources between rents, rates and Exchequer was: Scottish council housing, 40%/36%/24%; English/Welsh council housing, 76%/6%/18%; Northern Irish council housing, 59%/11%/30%; SSHA, 41%/0%/59%; NIHT, 54%/0%/46%.
20 P. Hennessy, *Whitehall*, 1989, pp. 468–9.
21 Walsall slum-clearance gave major housing gain: HC 15-11-1961 (bring in fit dwellings); HC 14-10-1964 (increase site yield by doubling block height); int. Wood. Castle Bromwich: Dunleavy, p. 278.
22 Newcastle CL 5-1-1966, p. 785. 'You'd go along': int. Bowie.

CHAPTER 24

1 Int. Mitchell.
2 Dunleavy, p. 16.
3 Dunleavy claim that builders pressured authorities: p. 133.
4 Hong Kong Housing Authority, *Annual Reports*.
5 Building boom: 1961 activity 10% above 1960; CHAC 8-4-1960 (Brooke, Womersley); CHAC 6-1-1961 (Crocker, Minister); LCC HC PP 11-10-1961.
6 J. Parry Lewis, *Building Cycles and Britain's Growth*, 1965. Lengthening: CHAC 6-10-1961 (Brooke). Wates at CHAC

28-5-1965 (staged payments slow LA contracts anyway); 28-5-1965 (Brown Ban's delayed effect).

7 'Hospital work': int. Hartley. Oldham: HLG 118-185, Cleeve Barr 8-9-1961.

8 Attraction of negotiation: int. Lord. Leeds negotiated high flats as cheap as if they had been competitive tenders: City Architect 29-7-1964. Birmingham HBC 18-3-1961, 26-4-1961 (Watton: Langley, Stubbings put in cover price for Bryant at Gibbins Rd). Delayed certificates, Banwell: D. Morrell, *Indictment*, 1987, pp. 33, 37–42. Cash flow: int. Harvey.

9 Negotiated high blocks: Dunleavy, p. 261 (Birmingham from 1949); Shoreditch HC 28-1-54 (W. Lawrence); *B* 28-2-1958, p. 398 (Sheffield, Tersons); DD6-1326 meeting 10-5-57 (on DLO at Hutchesontown B).

10 DHS tried to veto negotiation where architect involved: DD6-2154 3-1959 (Royston); DD6-2153 meeting 11-4-1961. Ad-hoc allowances (towns, 10% at first; firms, negotiated after 3 competitive tenders): int. Cleeve Barr, Stoneham. Avenham No. 1: Preston BC architects file, letters Blackshaw–Stazicker 16-5-1962, HC 27-8-1962, 24-9-1962.

11 Professional staff shortages: Lanark CC Executive Sub. 8-9-1961 (engineering staff). Percentages: Dunleavy, p. 24.

12 'Neither now': DD6-2154 notes by R. Woodcock 3-7-1958. Edinburgh row: DD6-1321 meetings 13-11-1957, 28-1-1958; HC Constr. Sub. 26-3-1957, 11-6-1957, pp. 46–7. P. Trench, *JRIBA* 8-1960, p. 368. Administrators' pragmatism on negotiation: DD6-1321 P. C. Rendle–R. P. Fraser 20-6-1958.

13 Laing: Oxford HC 28-6-1960.

14 Gracemount DD6-2154 Rendle–Fraser 20-6-1958. Wimpey 'twin tower': see Bellamy design, *Flats and Houses 1958*, pp. 72–3. 'Along came people': int. Bowie.

15 'There never was': int. Bowie.

16 'Designing high': int. Bowie. Trussed Concrete Steel Co. Ltd, *Truscon: The First Fifty Years*, 1957. 'Social-reforming': int. Percival.

17 Often very profitable: int. Lord.

18 'Why': *HfF*, p. 138 (Campbell). Airy pretexts (e.g., cost): W. Reiners & D. Bishop, *B* 27-4-1962; but see A. W. Cleeve Barr, *HR* 9-10-1963, p. 158.

19 No-fines in 1950s: DD6-1422, 3-3-1953 meeting, 27-5-1955 memo; DD6-1321 3-2-1958 memo. Dr Ludwig Kresse (Stuttgart), consultant engineer to SSHA (Glasgow and Dundee) and Wimpey (Kirkcaldy). Bunton (Clydebank, etc.): DD6-1515; DD6-1320, 1322, 1323, 1422, 1515; *B* 22-1-1943, 14-1-1944, 31-3-1944; *AJ* 14-10-1948, 18-1-1952; White, pp. 221–2. Low wages costs in England and Wales: Finnimore, pp. 196–7.

20 DHS on contractors now more interested in 'non-traditional' high flats: DD6-1320 9-3-1954. Government encouragement later in 1950s: DD6-320 9-2-1954 memo; HLG 101-633 (1958 material concerning Reema); DD6-1321 18-11-1957. Concrete: *ABN* 16-10-1957, pp. 509–13; Barking HC 6-7-1959 (Linton Rd).

21 Concrete Ltd and Denmark: int. Mitchell; *HfF*, p. 89 (K. Wood).

22 DHS, Camus, SSHA: DD6-2201 letters of 24-9-1959, 15-1-1960, 22-4-1960, 4-7-1961, 27-7-1961. Camus's UK consultants (engineering, and marketing) were W. V. Zinn. Rejection of Camus: Dunleavy, pp. 72–3; Salford refusal: int. Prof. C. Robertson (Camus demanded too big an order).

23 Perverse statistics-based claim of 'contractual pressure' argument, equating smallest and largest authorities: Dunleavy pp. 129–33.

24 Bulk order: *OAP* 5-1963, p. 439. Abortive negotiations: Manchester HC 9-7-1962, 13-8-1962; int. Stones.

25 Leeds: HC 21-6-62, 19-7-1962, 17-10-1962, 21-2-1963; new block types by Gillinson & Barnett: HC 16-6-1960, 16-3-1961, 18-5-1961; *B* 27-1-1961, pp. 176–7. 'Couldn't throw': int. Lambert.

26 Bristol: Dunleavy, pp. 316, 326. Coventry: overlapping continuation contracts with Wimpey, British Lift Slab and Truscon: HC 15-1-1959, 13-12-1962, 21-1-1965. Portsmouth: Wimpey, Concrete, Reema: CL 9-4-1963.

27 'Like the local builder': int. Mabon.

28 'Almost virginal': ints. T. Dan Smith, Cramond, Kernohan. Outright refusal: DD6-2716 20-10-1970 memo.

29 Informally agreed: ints. T. Dan Smith, Winn. Two-tier: Morrell, *Indictment*, p. 42.

30 Compare the merits: int. Winn. Eastbourne won 10-year guarantee for Langney point block: HC 10-7-1963, pp. 254–5, 14-8-1963, p. 328.

31 Sales campaigns: Dunleavy, pp. 129–33. 'You'd get', 'In the': int. Bowie.

32 'I always': int. Bowie. Fearsome: Morrell, *Indictment*, pp. 21–3, int. Ross.

33 Camus, Hackney: Shoreditch had used Zinn for MS blocks (Hackney CL 21-12-1966). Burghs: Lanark CC HC 9-11-1965. Reema factory was 'act of faith': DD6-2362 4-12-1964; Lanark CL 13-2-66; Sunderland CL 12-2-1964.

34 Dunleavy, p. 220; *AJ* 15-12-65, p. 1414; letter J. Eastwick Field.

35 'That was why': int. Lund.

36 'We had': ints. Lund, Edwards. Claim that West Ham high flats built because of 'contractual pressure': Dunleavy, pp. 205–54.

37 'Convinced themselves': int. Lord. 'To start off with': int. Bowie.

38 Most profitable and extensive use: Dunleavy, p. 68.

39 Southend: *Team Spirit* 5-1967 (Easiform); HC 12-6-1964 (5M), 9-4-1965, 11-6-1965, 16-9-1965 (Laing), 12-7-1968 (Wates). Thurrock EC 8-7-1966; Blackburn bulk order EC 17-6-1963 (3 blocks per annum for five years).

40 12M, Oldham: HLG 118-185 19-7-1963 OJC note. 'Non-proprietary': Oldham HC 10-10-1963. West Pennine: Oldham HC 4-3-64; Macclesfield HC 16-9-1963, 12-4-1965 (pushing of Laing), 13-9-1965, 19-10-1966; Stockport HC 14-6-1965; *Team Spirit* 1-1966 (Crossman). Livingston problems: *Team Spirit* 10-1966 (compare optimism: *AJ* 6-5-1964, p. 1005).

41 Croydon, 3 bulk orders: HC 6-2-1964. Int. Lord. Some non-IB schemes (e.g., Brentford Waterworks) were profitable; in Lambeth, Hollamby was an 'awkward b . . . . . , those were very very complex designs, they should never have been built in system!' (Lord) Site factories: *OAP* 10-1965, pp. 1452–7.

42 West Bromwich: use local labour: HC 9-1961, p. 373, 1-1962; Tracoba HC 2-1964, p. 501. Walsall Tibbits 'test market': 16-6-1965 HC Report; int. Winn. Heath Town: Wolverhampton HC 6-4-1965, 4-1-1966, 5-7-1966.

43 'Rolls-Royce': int. Corner. 'Local' sales-pitch: int. Mitchell. 'Unusual relationships' of Bison consultant architects: *B* 21-2-1969, p. 148. The smaller the contract: int. Mitchell; *HfF*, p. 89.

44 'Any small builder': int. Smyth. Four firms: Eastbourne HC 12-12-1962, p. 685.

45 The first Bryant Bison blocks (Hurcott Rd) built 4/11-1963, won a big Birmingham order, obliging Bryant to refuse Kidderminster invitation for repeats (Kidderminster HC 11-10-1962, 29-8-1963, 6-12-1963), yet a small local firm (Deacon) three days earlier could accept Lichfield contract for one Bison block (Lichfield HC 3-12-63). Bryant later more flexible, Concrete Northern's production gap allowed price cut: Rugby HC 5-7-66 (Clifton Rd).

46 Seaton B/C/D, Concrete gave identical structural quotes to Cameron, Bett, Loudon; Cameron won on siteworks/finishing trades. 'Structurally superior': int. Mitchell. Against itself: Port Glasgow HC 14-10-1968.

47 Hull: Housing Sub. 28-2-1964; *AJ* 27-10-65.

48 'There were many rings': int. Lubetkin. Freemasonry and Protestant establishment in Glasgow: G. Walker & T. Gallagher (eds.), *Sermons and Battle Hymns*, 1990, pp. 160–92.

49 Aberdeen 'hard nut to crack' for outside firms: int. Tysler; prototype block HC 18-6-1951; Housing Sub. 11-2-1959, p. 996-7; 13-1-1960 p. 1000 (letter from local builder Hall on possible MS drive). Stoke: HC 29-10-1964; *Brick Bulletin* 5-1977, pp. 9–11; *International Journal of*

Masonry Construction 1, 1980, pp. 2–10. Crosby: HC 10-2-1960, 18-7-1962, 31-10-1963, 15-4-1964, 14-4-1965, 16-11-1966, 19-4-1967. Regional offices: int. Lord; Clydebank Building Surveyor file on Littleholm (meeting 8-1-1969).

50 Newcastle: Leslie (CL 16-9-1961 Westgate Rd, CL 19-12-1962). Brims blocks costlier: CL 12-10-1963. Brighton 12M: HC 25-8-1964, 22-9-1964.

51 Thurrock local firms vs Selleck Nicholls Williams: TDC 3-12-1962, 17-6-1965, 21-10-1965, 2-12-1965. Oldham: HC 4-7-1962, 27-1-1964, 21-3-1967, 16-4-1968. Norwich: *Eastern Daily Press* 5-4-1967; int. Stevenson.

52 Martello Ct: Edinburgh HC Sub. 17-5-1960; HC 12-6-62; int. Rogan.

53 'I've seen Conveners': int. Theurer.

54 'Glug glug glug': int. architect. Labour LAs: G. Turner, *The North Country*, 1967, pp. 313ff.

55 Craft unions: Finnimore, p. 121. Contrast J. Bonshek, *Construction History* IV, 1988, p. 53 ('deskilling'), with K. Sabbagh, *Skyscraper*, 1989, pp. 112–16, 173-7 (skyscraper ironworkers' highly skilled elite).

56 Appease: Finnimore, pp. 117–18. M. Swenarton, *Artisans and Architects*, 1989, p. 183. Restrictive conditions: Merthyr CL 3-7-1963, p. 128; 4-9-63, pp. 264–5; 4-12-1963, p. 580 (Wimpey complied, local firm Modern Building Ltd had difficulty). Sunderland: CL 2-2-1964 (TWA, local labour). Liverpool corruption: int. former Wimpey architects.

57 W. S. Hilton, *Building by Direct Labour*, 1954, canvassed 661 DLOs (5/6 of UK total). Glasgow and LCC had 11,867 out of 50,208-worker UK total; only 10 forces had more than 500 each. DL share of building output grew from 1.75 to 6.25% from 1907 to 1946. County councils' strong DLOs: e.g., Fife CL 26-7-1956 on visit to see Ayrshire DLO.

58 Brooke: Camberwell PC 15-6-1960. Would not bother: int. Lord. Favouritism: Hammersmith HTPC 9-1-1963 (Mardale St, DLO put in lower bid after tenders opened), Battersea Works Comm. 26-11-1962 (accept DLO tender, although not the lowest, to avoid redundancies).

59 West Ham DLO opposed to Taylor Woodrow-Anglian deal: int. Lund. Bermondsey, virtually all housing was DLO-built under Standing Order 82d: G. W. Jones, *Borough Politics*, 1969, pp. 313–14. Proposed DLO debate: Edinburgh HC 11-12-1959, 19-1-1960.

60 Scottish county: Fife HC 24-6-1968 (60% to DLO). SSHA: *H* 3-1957, pp. 115–18; *B* 17-4-1959, p. 744; *ABN* 20-12-1967. 'Cemetery': int. Rogan.

61 EDLO: int. Smythe; Edmonton HBC 10-11-1959 (resist Brooke curbs); 11-6-1963 (Angel Rd); 14-4-1964 (expand production); Enfield HC 14-7-1965 (42% of 1966-7 programme to be DLO-built); HC 22-3-1968 ('profit' of 4.24%); 1-1971 and 5-3-1971 Building Manager's Reports on EDLO; *Municipal Engineering* 8-10-1971, pp. 1880–1; Edmonton Labour Party, *Building our Own Future*, 1971. 'Predator': int. Smythe.

CHAPTER 25

1 'I can remember': int. Samuel.

2 Statistics: E. Farmer & R. Smith, *Urban Studies* 12, 1975, p. 163.

3 'The fight back': N. Taylor, *ABN* 6-5-1964, p. 788.

4 Gibson, Chairman's address, 1962 Annual Housing Inspection.

5 Personal details: Mrs Gibson papers. ILP: S. Damer, *Glasgow—Going for a Song*, 1990, pp. 116–25.

6 'Puncture': DD12-1156, 17-11-1958. 'Unpardonable': 1962 Inspection.

7 Against overspill: int. Mrs Gibson; *Scottish Daily Express* 28-3-1964, p. 9. 'Enough land': *Glasgow Herald* 1-9-1962, p. 3. Overspill largely catered for higher-income groups: R. Smith & U. Wannop (eds.), *Strategic Planning in Action*, 1985, pp. 63–4.

8 Gibson 'rebel', ILP vs Labour: *Glasgow Herald* 23-1-1948. Council leadership: DD12-1157 memo 29-3-1960; *AJ* 6-5-1964, p. 1000 (Taylor as 'lay planner'). 'Big pond': int. Sneddon. 'I remember': int. Cramond. ILP history: I. Donnachie, C. Harvie & I. Wood, *Forward!*, 1989; C. Levy (ed.), *Socialism and the Intelligentsia*, 1987, pp. 135–210.

9 'Gibson was the man': int. Grieve.

10 'We won't get': 30-12-1957 Joint Sub. on Housing Need; HC 4-2-1958. Anderston Cross row: Jury–Town Clerk 29-8-1962. Hutchesontown: DD6-1326 10-5-1957 meeting. Planners' scope extended from 1960 by 'outline' CDAs.

11 Cartograms: DD12-1735, 4-4-1963 note on draft para. 5 (ii). HC's proposed two-stage decanting: DD6-2362 6-6-1961, 13-4-1962 meetings.

12 Industrial reclamation sites: DD6-2362 1-11-1962. 1958 discussion of suburban MS flats: DD6-1321 15-5-1958 note; DD6-1326 10-9-1958 note.

13 'If the Housing Committee': int. ex-Corporation planner. Push for numbers behind Jury on 'visual variety': int. Jury. Jury–Gibson 7-9-1959, 5-10-1959 (Gibson papers); Gibson, Sites Sub. 23-10-59. A. Jury, *S* 6-3-1954. Planning-housing clashes in Corporation: DD6-2155 note 24-11-1960. *Daily Record* 18-3-1961, p. 8 (piece headed 'Golfers . . .'). Green Belt inviolate: Smith & Wannop, *Strategic Planning*, p. 60. Pollok Pk 'admirable' site for housing: *Glasgow Herald* 31-1-1964, p. 1 (Gibson). Mobile homes: *Evening Citizen* 3-5-1963. Densify older schemes: *Herald* 28-11-1963, p. 1. Buy Queen Mary as hostel?: *Herald* 3-12-1962, p. 12 (Gibson). 'In those days': *Red Road Inquiry*, 1969.

14 'DHS were': int. Smyth. DHS abortive attempts to curb Glasgow high flats, isolate HC within Corporation: DD12-1156 20-1-1959, DD12-1157 21-3-60 meeting; Joint Working Party 3-4-1959; notes of 13-4-1959, 24-4-1959; output level, prices DD6-2362 4-7-1962, 13-7-1962, 13-8-62. Alliance with Gibson: int. Cramond. Rezoning: DD6-2362 13-4-1962, meeting 1-11-1962. SSHA: HC 24-8-1960, p. 860; DD6-1559 2-6-1960.

15 'He was': int. ex-Corporation planner. 'Lewis': int. Smyth.

16 Jokes: Cross–Gibson 30-1-1962 on Drumchapel shops (Gibson papers).

17 Cross background: int. Smyth; *Housing News*, 8-1950. DHS social objections to MS flats countered by Gibson: DD6-2362 meeting 6-6-1961.

18 His response, 'density', Cross negotiating technique: int. Smyth; DD6-2362 24-12-1964 meeting, notes for 13-1-1965 visit; SRA D-TC Cross–Town Clerk 7-1-1964 on Sandwood Rd.

19 Planners vs 'light angles': MHLG, Planning Bulletin 5, 1964, p. 3.

20 'Spoke the same': int. Smyth. 'Small section': int. Gunn. 'Didn't want any': int. Smyth. A. A. Wood: int. ex-Corporation planner. Wood on 'curate's egg' Department: *B* 8-5-1964, p. 954. Gap-site procedure: DD6-2155 24-11-1960 note; int. Nicoll. 'He would hardly': int. ex-Wimpey architect. 'He had no': int. ex-senior planner.

21 Cross vs private architects ('They give me claims!'), int. Smyth. 'Much of delay' to drive in 1960–2 due to private architects: DD6-2362 1-11-1962 meeting. 'We were': int. Bercott. Matthew row: int. Samuel.

22 'Lewis was': int. Cramond. 'Languid': int. Smyth.

23 Fleming, 'will not': DD6/1326, 10-9-1958 note to Rendle. Broached at gap-site meetings: int. ex-DHS Administrator.

24 Origins of gap-site procedure: DD6-1326 19-3-1956, DD6-2155 25-4-1956, DD6-1321 15-5-1958, DD6-1326 10-9-1958, DD6-2155 letter 24-11-1960. Racing ahead: DD6-2362 13-4-1962 meeting; 12-12-1961 Depute Town Clerk pressure for faster rezoning to avert DLO layoffs. Pressure by Administrators: DD6-2360 15-10-1964 (Toryglen North).

25 Planners' assumed HC would only build in CDAs?: DD12-1156 20-1-1959 meeting, letter 18-12-1959. Strains between Administrators and architects: DD6-1326 30-1-1958, 31-1-1958. JD Unit against piecemeal RD: DD6-2459, letter 6-10-1959, reports 12-10-1959, 29-10-1959.

26 Red Road, 'hysterical' Gourlay reaction: ints. ex-DHS architect, Smyth. Gourlay–Cross row over Lincoln Ave, Scotstoun: DD6-2357, 6-1961.

27 'Apoplexy': int. planner. Kelly: DD6-2362, memo for 6-6-1961 meeting.
28 Reliable contractors: DD6-2362 6-6-1961. 'Lewis took': int. Smyth.
29 Royston 'A': int. Smyth; Sites Sub. 12-8-1960 Wimpey letter; DD6-2362 6-6-1961 meeting (Gibson on Royston 'A' as the 'only fully satisfactory' MS project); Cross–Town Clerk 21-7-1961; DD6-2357 notes 9-6-1961.
30 Pollokshaws: DD6-2201 10-7-1961, 20-7-1961, 21-7-1961; Sites Sub. 18-8-1961. Overheating: DD6-2362 10-8-1962; Cross–Town Clerk 29-8-1962.
31 'We have': SRA DTC-8/20, Cross–Town Clerk 21-7-1961; int. Smyth.
32 'I had': int. Kernohan. 'What Glasgow': int. Smyth. Relative merits of firms: ints. Kernohan, Cramond. Wimpey efficiency: City Chamberlain's Department, MS costs report 18-1-1966; DD6-2362 4-12-1964 meeting. Came and went: SRA Town Clerk files: AGJ–Town Clerk 28-8-1963 (on Douglas).
33 'We never', 'He'd give', 'He would': int. Smyth.
34 'My Managing Director': int. Bowie.
35 Gibson love–hate with DLO, DLO vs high flats: int. Mrs Gibson. Red Rd: DD6-2362 report 12-1969; 'literally fantastic' SRA Red Rd files, Campbell report to Sites Sub. 16-9-1960; DHS acquiescence DD6-2362 6-6-1961 (Gibson meeting), 13-4-1962, 5-10-1962 (DHS quantity surveyors' opposition to Red Road), 9-10-1962.
36 Steel-framing pressure, Motherwell HC 21-2-1963, *Interbuild* 1963, p. 27. 41 storeys: S. Checkland, *The Upas Tree*, 1975, p. 74. 'Public building': *Scotsman* 29-11-1965, p. 4. Gibson protection of scheme: SRA Red Road files, note 6-12-1963 (Hood rebuked for allowing Red Rd on to Sites agenda). Dose of salts: int. ex-planner. 'The millions': int. S. Bunton, Jnr; *Red Road Inquiry*, passim. Bunton 45-storey proposal: *B* 15-3-1963, p. 568.
37 'Blazing rows': int. Smyth.
38 'Gibson would discuss': int. ex-Corporation planner.
39 'Demolish prefabs': Gibson papers, letter 1-1962 from Mrs Hamill, 10 Smith Street, Whiteinch (enclosing cutting from *Daily Record* 28-11-1961, p. 5, 'No Room—So Mother Killed Babies'). 'I don't want': D. Gibson, *Evening Citizen* 26-12-1960, p. 1.
40 'He cut': int. Nicoll. 'Smoker': int. Mrs Gibson. Obituary: *Glasgow Herald* 28-3-1964, p. 6. 'One of your': int. Sneddon. 'Glasgow is facing', 'My idea': *Glasgow Herald* 1-9-1962, p. 3; Corporation Min. 2-4-1964, p. 2476.
41 Toryglen North: DD6/2362 13-4-62 meeting.
42 SDD aware: DD6-2362 note 10-8-1862, meeting 1-11-1962. Debates, loss of leadership: *Glasgow Herald* 3-12-1962, p. 12. 'Lay planner': int. W. Taylor. Anderston: *Scottish Daily Express* 11-9-1963, p. 9. Five-year programme: *Glasgow Herald* 26-4-1963, p. 7.
43 'We could', 'Unless': Chairman's Address, Scottish National Housing and Town Planning Conference 1964: notes, Mrs Gibson papers. Gibson at previous Peebles conferences: *Glasgow Herald* 8-3-1963, p. 1. SDD, *Central Scotland: A Programme for Development and Growth*, 1963.
44 Motherwell: int. Sneddon; J. Dickson, *High Living*, 1970, p. 39.
45 'All these': int. Sneddon. Leaders: int. Cramond. Paisley redevelopment drive: John McGregor, *RIAS Journal*, Autumn 1957, *S* 10-10-1959, p. 823. Gibson hopes for SLASH: *Scottish Daily Express* 18-10-1963.
46 'I thought': int. Rogan. Rise in waiting list: P. Rogan, *OAP* 1965, p. 1078. Demolitions secured by Rogan: *Municipal Yearbook* 1961, pp. 295–6; HC 24-11-1959, 15-12-1959, 29-3-1960. 'Wonderful': int. Corner. *Evening News* 10-2-1992, suppl., p. 31. Leith Fort: HC 28-1-1958, p. 315.
47 'The Tories': int. Mabon.
48 'To someone', 'In the Department': int. Cramond.
49 'The burghs': int. Brannan.
50 Village RD: Fife Housing Sub. 23-1-1956. 'I was': int. Brannan; Lanarks HC 9-11-1965 (Mabon pressure to join consortium with burghs).
51 'We'd completely': int. Brannan. Cambuslang Central Area: Lanark HC 1-10-1962, p. 2138; 9-4-1963, pp. 1046–7. Reema: HC 13-12-1966, 30-12-1966, 11-7-1967, 16-1-1968. 5-year programme: CL 3-3-1965; 6-year; 27-11-1967.
52 'Sea-green': F. Magee, *Evening Express* 13-2-1978. Roehampton, other visits: Aberdeen CL 2-3-1959. 'Here's a bit': int. Watson.
53 'Chicago': *Courier* 14-3-1980. 'You always': int. ex-senior SDD Administrator. Municipal corruption in Dundee back to *c.*1800: D. M. Walker, *Architects and Architecture in Dundee*, 1955. Trial: *Courier* 7-2-1980, 14-3-1980, 20-6-1980 (Stewart sentenced to five years on grounds that his electrical firm Abertay Ltd corruptly accepted subcontracts from Crudens; Moore and a local businessman acquitted on appeal).
54 R. Lyle & G. Payne, *The Tay Valley Plan*, 1950, p. 312. W. Dobson Chapman, *The City . . . of Dundee, Survey and Plan*, Pt 2, 1952, pp. 12–14.
55 'Turbulent', balance of power: *Courier* 14-3-1980; int. Dron.
56 First suggestion of MS building: Dobson Chapman, *Dundee*, pp. 12–14, 61–91. Stewart: *Courier* 14-3-1980, p. 24 (nicknamed himself 'Pierrepoint').
57 Moore negotiated Skarne deal: *Courier* 9-2-1980, p. 140. 'Approximately 750': HC 26-4-1966, 5-1966.
58 Hillpark: *Evening Citizen* 12-2-1964, p. 1; 'They will': H. Crone, *Evening Times* 30-4-1963, p. 2; *Planning our New Homes*, p. 95 (Mann). High flats in middle-class area, see also Newcastle CL 4-5-1970, p. 1170.
59 Gibson defence: City of Glasgow Development Plan Quinquennial Review 1960 Modifications, Housing at Hillpark, precognition of D. W. Gibson.
60 'I felt': int. Grieve. 'Too high density': *JRIBA* 5-1964, p. 206. Nicoll on 'upward sprawl': *AJ* 20-9-1965, p. 724. 'The problem': SRA Physical Planning of Glasgow Housing file, SDD paper 17-3-1965; *TCP* 7/8-1965, p. 285. 'Competitive' and behind-scenes collaboration SDD–Corporation planners: Min. of Mabon meetings 19-3-1965, 22-4-1965 (SRA file).
61 'He was': int. Sneddon. 2,181 high flats approved in Glasgow 1964, (4,645 in 1963): total public housing approvals 3,736 (6,309).
62 'Great little guy!': int. Theurer. Mabon believed: int. Mabon.
63 'Absolutely': int. Mabon. Limited impact of 'IB': Fife CL 22-3-1966 meeting (joint IB contracts with burghs of little use as most county houses built by DLO on gap-sites). Lanark CC refusal to join consortium: HC 9-11-1965. Lanark CC 'suspicious' of 'systems': int. Brannan.
64 Mabon, competition, Saltcoats pressure for a 'wee multi-storey' (The Glebe). Kincardine MS blocks for power-station/mine: Fife HC 5-11-1968. Kilmarnock Town Council, *Commemorative Ceremony on Completion of 10,000th House*, 1970; HC 21-4-1966.
65 'King Charles's head': int. Mabon.
66 'Forest', 'Unbelievable': int. Mabon. 'Belled the cat': int. Grieve. Mabon handling of planners vs Glasgow: DD6-2362 meeting 4-12-1964, 19-3-1965 (HC Convener: 'planning for the planners'); SRA Physical Planning of Glasgow Housing, meetings 22-4-1965, 21-5-1965, 18-2-1966 (Mabon's middle course between planners' calls for population cut below 750,000). Mabon encouragement of Glasgow output: DD6-2360 Toryglen North, 23-11-1966, 9-1-1967; DD6-2362 19-3-1965 meeting on finance. Mabon and Edinburgh sites (Alnwickhill controversial, Mabon allowed Rogan Wester Hailes instead): ints. Mabon, Rogan, Theurer. 'I didn't mind': int. Mabon.
67 Cross filled vacuum, Clark inaction: ints. Mabon, ex-SDD planner. Cross and Kelly on Kirkton Ave: int. ex-Wimpey architect. Delayed schemes: D66-2362 note 8-12-1964 on 4-12 visit: pressure DD6-2362 memo 24-12-1964; Glasgow–SDD 7-1-1965; note for Minister's visit 13-1-1965.
68 On time or early: Architecture and Planning Department, *Housing Progress Reports*. 'Hideous', 'At the meeting': int. Kernohan.

CHAPTER 26

1 Quoted in P. Dunleavy, 'The Politics of High Rise Housing', PhD (Oxford), 1978, p. 356.
2 'Pre-structured': e.g., Dunleavy, p. 178. Actors: Dunleavy, p. 351.
3 'Little Caesar': int. Reed.
4 TCPA against Wythall, Watton manifesto: A. Sutcliffe and R. Smith, *Birmingham*, 1974, p. 144; Watton interest in output, HBC 16-1-1958. Bradbeer: K. Newton, *Second City Politics*, 1976, p. 202.
5 'The PWC': int. Sheppard Fidler. Castle Bromwich row: HBC 3-5-1962, 21-3-1963.
6 Sutcliffe & Smith, *Birmingham*, pp. 105 (Watton), 441 ('A growing'). 'The most': int. Reed; Newton, p. 202. 'Looking for', 'I honestly': int. Sheppard Fidler.
7 'Couldn't cope': int. Sheppard Fidler. Low tenders: e.g., HBC 19-11-64 Area B only other tender was 16% higher. Huts: int. Harvey. Shepherd: int. Lambert.
8 Bryant competence, etc.: ints. Sheppard Fidler, Reed, Harvey. Camus HBC 13-12-1962; Dunleavy, pp. 271–7; visit 29-8-1962; prototype HBC 6-6-1963, *ABN* 8-4-1964, p. 670; HBC 7-11-1963; Chairman's Action HBC 4-6-64.
9 'Chris Bryant': int. Sheppard Fidler. 'As we were leaving': P. Dunleavy, 'The Politics of High Rise Housing', PhD (Oxford), 1978, p. 356. 'After leaving Kidderminster': letter Sheppard Fidler to M. Glendinning 1988; also HBC 7-11-1963, p. 84.
10 Dunleavy, pp. 73–7, 88–9, 337, 350.
11 Int. Harvey. Saving: Finance Dept Schedule of Contracts 7-1974; *Evening Mail* 7-4-1978, p. 5. Watton probably not corrupt: int. Amos.
12 *AJ* 26-2-1964, p. 450; 11-3-1964, p. 566; Sutcliffe & Smith, *Birmingham*, pp. 440–1. 'Starting', 'I've had enough': int. Sheppard Fidler.
13 'That was': int. former Leeds architect. Sheridan Shedden directly responsible to House Building Committee: *B* 17-4-1964, p. 797.
14 Reorganisation—Housing, Education and General branches merged into two equal branches, Housing and Education/General: NBA, *Housing Productivity in Birmingham*, 1969, p. 11; Dunleavy, pp. 286–7. Contractual policy after 1964: NBA, *Housing Productivity*, p. 17. 'Unpopular' 3 and 4-storey blocks cut: HBC 20-1-1966. Chelmsley Wood released: R. Crossman, *The Diaries of a Cabinet Minister*, Vol. I, 1975, pp. 87, 91; *B* 1-1-1965, p. 1.
15 'Goer': int. George. HBC 16-8-1965, 17-3-1966; Dunleavy, p. 286.
16 First Castle Bromwich contract: HBC 19-11-1964. 1965 Bryant extension contracts 'to get the site moving', int. Harvey. Landscaping, 'Get the team': NBA, *Housing Productivity*, pp. 33, 59. Exclude CE: *Evening Mail* 12-4-1978, p. 5.
17 Improvement: int. Reed. Cost reduction of cottages: NBA, *Housing Productivity*, p. 25.
18 'The first': NBA, *Housing Productivity*, p. 62. 'Self-cleansing': int. Harvey.
19 'Uncanny', '*He'd* tell', 'Prices were': int. Harvey.
20 'The size', 'Exciting': int. Reed. Corruption: *Evening Mail* 7-4-1978, p. 5; 8-4-1978; 11-4-1978, p. 5; Dunleavy, pp. 292–302. Birmingham production record: *B* 17-5-1968, p. 103.
21 Pre-1966 parochialism, Smethwick housing racism, Wolverhampton 'socialist decrepitude': Crossman, *Diaries*, pp. 46, 286–7. Go-ahead multi-storey Darlaston pre-1966: *Wednesbury and Darlaston Times* 29-8-1964 (Bentley).
22 Int. Bor; *Liverpool Echo* 8-11-1963, p. 14. 'They wanted': int. Nixon.
23 'Bloody silly': int. Lambert. Unit: HC 26-7-1962; tender HC 24-1-1963. Classic Rd: int. Nixon. No sites: HC 17-10-1963, p. 536; int. Bor; F. T. Chow, 'High Rise', B Arch (Liverpool), 1983, pp. 71–5. Bradbury, 'IB': *Municipal Review* 9–1963, p. 570.
24 Bor, Braddock: ints. Bor, Amos; *Liverpool Echo* 4-11-1963, 13-11-1963.
25 'Housing to Housing': int. Sefton; *Echo* 14-11-1963, p. 11. G. Turner, *The North Country* 1967, p. 155. *Observer Magazine* 19-11-1972, p. 35. Bor vs point blocks: *Interim Report of CPO for a High Buildings Policy*, 19-7-1963 (opposed by Bradbury HC 19-9-1963); HC 29-11-1963, Bor report on density.
26 Relocated blocks and gerrymandering (Logan Towers): int. Sefton.
27 Planners' advance: int. Amos; *Municipal Engineering* 15-10-1971, p. 1927; Esher, pp. 217–45. Boddy: *Echo* 15-11-1963, p. 17; int. Amos.
28 HLG 118-154 paper 17-5-61 for 30-5-61 Minister's visit.
29 Hollyhedge contractual change: Manchester HC 9-1-1961.
30 Construction lagging, Camus: HC 9-7-1962. Abandon Camus, accept Laing Sectra at Heywood: HC 13-8-1962; *Team Spirit* 8-1963; int. Stones. City wedded to traditional construction: HLG 118-154 15-7-1963 meeting. In-situ Laing point blocks, 2267 dwellings built: *Team Spirit* 9-1965.
31 Punctuated: CL 4-11-1964; HC 10-1-1966, pp. 842–3. 'Gap-site': int. Stones. HC against raising 90 h.r.p.a. ceiling: HC 11-2-1963. Joseph: HLG 118-154 11-7-1963 briefing. Suspend waiting list, rescind MS ban on children: HC 14-11-1963. 'I said': int. Mellish.
32 'Nine-storey slab': int. Stones. Hulme: *AJ* 5-10-1966, p. 834; City Planning Department, *A New Community*, [*c.*1966]; Turner, *North Country*, pp. 69–70. Build point blocks initially at Hulme to get housing gain: *Team Spirit* 6-1965. New CDAs to be higher density: HC 1-4-1968 (as built, Gibson St 148 p.p.a., Turkey Ln 195 b.s.p.a., Wellington St 170 b.s.p.a.).
33 Most slum-ridden: HLG 118-185; int. Armitage. Sholver: Oldham HC 7-10-1959, 12-1-1966. 'They have': int. Raitt. MHLG saw: HLG 118-154 11-7-1963 brief. Salford: *ABN* 5-6-1963, p. 509; *AJ* 2-10-1963, p. 687; *H* 1-1966, pp. 225–9; *Salford City Reporter* 18-9-1970, 4-2-1977 (no more MS).
34 Manchester view of Clay: int. ex-Manchester housing architect.
35 'To keep': int. Homer. 'Imposing': note for Cllr Homer when opening block 10-4-1968; int. Homer. 'We were': int. ex-Manchester housing architect. Stretford programme only slum-clearance: HC 7-12-1965. London visit, refusal to adopt 'IB': HC 8-2-1966; Cornbrook 11-10-1966. Clay and Burnley: HC 6-6-1966. Go-ahead smaller boroughs building high flats: Eccles HC 5-5-1959, 5-9-1962, 5-2-1963; Hyde GPC 21-9-1967, 16-10-1967; Chadderton (UDC) HC 17-10-1966, 12-6-1967, 22-1-1968, 2-4-1968.
36 Sunderland, Newcastle: *Team Spirit* 7-1964; Newcastle CL 9-1-1952.
37 'Ladder': *Observer Magazine* 21-2-1965, p. 14; Esher, pp. 172–93. Smith's city-centre redevelopment plans: Newcastle CL 16-3-1960, p. 1006.
38 'Perfect target': *JTPI* 7/8-1960, p. 7. Cruddas Park: T. Dan Smith, *Dan Smith: An Autobiography*, 1970, p. 62. *Observer Magazine*, 21-2-1965, p. 14 (Smith: 'I did first rough sketches'). Standard point block: *ABN* 14-5-1958, p. 637; int. T. Dan Smith. Land problem: CL 2-9-1959 (Smith). Multi-storey: CL 4-3-1959 (Smith).
39 'Operation Revitalise': *JTPI* 7/8-1960, p. 7; S. Pepper, *Housing Improvement*, 1971, p. 91. Controversies: CL 6-9-1961 (Westgate Rd; Collins on 'chaotic' building industry). 'Crudens Affair' (Morpeth St, etc.): HC passim mid-1962 to 10-1963; CL 19-12-1962 (Wright on 'different kind' of block intended). Abrahams: CL 2-11-1966, p. 549. Oversubscribed high flats: CL 4-1-1967, p. 732 (Lewcock). Walker exhibition, house tenants preferred high flats: HC 21-3-1962 (Smith); CL 4-1-1967 (Peddie).
40 Whickham HTPC 8-4-1965; *AR* 1-1967, p. 30. Killingworth: *AJ* 19-11-1969, pp. 1295–1305; Longbenton UDC H(K)C 11-9-1967, 20-12-1967; CL 27-10-1965, 19-9-1967; R. Chapman (ed.), *Policy Studies*, 1985, p. 88 ('castle town').
41 Beevers: *Rotherham Star* 27-5-1965.
42 'Two-storey', 'Like Rome': int. Lambert; *HR* 1960, pp. 153–4. Esher, pp. 194–216. C. Bacon, *Park Hill in its Social Context*, 1985.
43 'At night': int. Lambert.
44 Swansea: HC 24-9-1958, 25-2-1959, 23-3-1960, 29-6-1960. H. T. Wykes, *NHTPLCY* 1960. Vandalism, letting problems: HC 16-9-1963, 28-10-1964. Bristol: Dunleavy, pp. 314–26. Brighton:

HC 26-11-1958, 21-6-1961, 29-3-1961; Special CL 15-3-1962; 6-1962 WP Report; HC 22-9-1964 (IB MS).

45 Southend: see HC 21-1-1959 (51 being built, mostly cottages), 16-1-1963 (374, 97% flats), 21-1-1959 (30% of waiting list old people), 17-1-1962 (50%), 21-9-1960 (first MS), 25-10-1961, 6-11-1964 (raise income limit). Thurrock DC (MS) 18-6-1963, 14-4-1966, 27-10-1966 (Grays South, 146 p.p.a., Gibberd consultant architect), 25-1-1968 (completions soaring), HC 30-1-1969 (3-year programme). County planners obstructing municipal schemes: Poole EC 7-7-1960 (Lagland St high flats).

46 New Towns: Sharp, *JRIBA* 5-1964, p. 205. Stevenage NTDC 21-3-1961, 17-10-1961, 26-10-1965 (output as well as visual role of central MS).

47 *HR* 1957 6 (2), p. 50; *NHTPLCY* 1960, pp. 47–8 (no 'slum' problem).

48 Int. Ling; *ABN* 3-6-1959; *AJ* 9-3-1961, p. 351 (Hillfields housing gain); HLG 118–203 (Sharp: Ling should get on with building), 30-storey blocks vetoed by MHLG. *ABN* 23-10-1968, p. 29 (central high-rent MS block).

49 *HR* 9/10-1958 (Percival, conference); D. Percival, *HR* 7/8-1960; int. Percival, Hartley, Newton. Cf. Swindon MBC, high blocks to 'break down the flatness': HC 12-4-1960, 31-5-1960, *HR* 7/8-1964 (Ald. Camden).

50 Gosport's 1965–9 programme only envisaged 1,256 dwellings, though land was available for 1,678 HC 17-6-1965. Nobes regime, 'really lively slum-clearance authority': HLG 117-45 Ward 2-2-1965. Nobes and Town Clerk pushed through Gosport drive: int. Milefanti. Lavish high-rent blocks: HC 10-9-1959, 29-12-1960, 25-1-1961, 30-11-1961. Bedford late-1950s 'little Barbican': M. Lock, *HR* 7/8-1964, p. 161; CL 15-2-1961 (build for rent and sale); (brief 1960s drive) CL 12-4-1967, 3-4-1968. Conway St Hove, 1966, inspired by private blocks at The Drive: int. Dixon Ward. Cardiff RDC prestige high flats 1957: S. P. Youldon, *NHTPLCY* 1960. Proposed high block at Marlow: *B* 31-3-1967, p. 48.

51 'No slums' (Crossman remark, visiting Leicester): int. George. 'I said': int. Smigielski. Smigielski's previous work: K. Smigielski, *London, an Adventure . . .*, 1951.

52 TPC call for higher output: TPC report 26-11-1963. 'Any idea': int. Smigielski. *ABN* 20-3-1963, p. 418. K. Smigielski, *Leicester Today and Tomorrow*, 1968; H. Martin, *Leicester Topic* 2-1973, pp. 7–10.

53 'Troglodyte': int. Smigielski. Minor changes by George: e.g., two taller blocks substituted for Smigielski's four at Rowlatts Hill.

54 'New horizon': int. George. Cost rents: CL 26-3-1968, p. 437. Cut: HC to CL 26-9-1967. Highfields North: CL 3-1-1967; 25-3-1969; 29-4-1969, pp. 441–2; 22-9-1969, pp. 93–8; St Peter's Area Committee report to CL 25-11-1969, pp. 248–52; 24-3-1970; 27-5-1970. G. R. Owens, 'Mixed Development in Local Authority Housing in England and Wales', PhD (London University), 1987, pp. 205–31.

CHAPTER 27

1 'The whole . . .': int. Richardson 1989. Housing problems: *Report of the Committee on Housing in Greater London* (Milner Holland), 1965. CHAC 11-1-1963 (Joseph): land the basic issue. Islington HC 30-11-1961 on Rent Act, encroachment of industry and population.

2 'Difficult': Holland, at 7-9-1964 committee session. 'Colin Lucas': A. Saint, lecture at Twentieth Century Society Conference, London September 1992.

3 A. Saint, *Politics and . . . London*, 1990; W. Jackson, *Achievement*, 1965.

4 'Nothing': int. Campbell. No cost consciousness: DD6-1326 5-3-1957 meeting. Example: int. Denington. Patronage: LCC HC 8-5-1957, 11-12-1957 (Hollaway, Mitchell design consultants). 'I could': int. Richardson.

5 HLG 101-816: Bellamy's claims that LCC architects had misinterpreted *Flats and Houses 1958* (as MS to get 'maximum number of cottages'). LCC cooperation with Osborn: HC PP 23-7-1949, 18-3-1952, 18-12-1958. But int. Whitfield Lewis: 'All HC members would be in favour of houses rather than flats, but not everyone wanted to live in Haverhill!' 'She started': int. Gilmour.

6 Royal Victoria Yard: ints. Hollamby, Gilmour. Brandon: Architect report 28-1-1955 to HC and TPC; *AJ* 1-11-1961. Warwick Cres.: ints. Whitfield Lewis, Cox. 'We'd advise': int. Cox; H. J. Whitfield Lewis, *HR* 11/12-1956, p. 196. FC pressure, Denington vs high density: HC PP 25-11-1964; 1-11-1964 Blackhurst–Prichard (Howard Rd); HC PP 14-10-1964 (Downs Rd). HC pressure on TPC: TPC PP 21-5-1962 (Banner St); HC 22-3-1961 (land acquisition), CL 8-10-63 (Coopers Gdns density increase); Joint Devt Sub. PP 7-6-1961 (higher density Marine St scheme justified as part of 'Bermondsey CDA').

7 Sites under 2 acres: CL 24-4-1951 (from 1951, LCC accept all overspill from sites under 10 houses, 50% of larger sites). 25% allocation: CL 16-6-1948, 30-6-1953 (site shortage). Backlog: Hackney CL 31-1-1955. Abolition: LCC CL 20-12-1955. Derequisition: Lewisham HBC 3-11-1958.

8 Irrespective: int. Campbell. 'Rippling out' controversial: GLC HC 6-5-1965. LCC/borough division of spheres of influence: LCC HC 25-9-1946 (Islington). Railway surplus land: discussed Lambeth HTPC 20-11-1957; incorporated in section 87 of 1962 Transport Act.

9 Stepney-Poplar (Stepney HC battle for sites): Stepney HC 6-10-1963. Pro-LCC account: R. Furneaux Jordan, *AR* 11-1956, p. 318.

10 'We'll do': int. Mellish; Southwark HTPC 1-4-1953, Mardyke St delegation referred to LCC. Bethnal Green PHHC 21-4-1954 (press LCC to devolve more slum-clearance), 5-10-1955 (LCC–BGMBC joint RD drive), HC 21-11-62. Battersea HLG 118-67 24-6-1954. Latimer Rd, 'In his early': *Opening of Poynter Hs* (brochure), 3-1968; Hammersmith HTPC 17-9-1951, 28-11-56, 28-9-1960 (26-storey); 3-5-1961 (very low output); *WLO* 22-12-1966, p. 1. Friction with Tory boroughs, Walker refused Hampstead bid for land: LCC HC PP 6-1-1953.

11 Shoreditch: HC 30-2-1948 (ask LCC to release sites); HC 30-6-1955 (11-storey block); LCC praise of Shoreditch 'remarkable achievement': LCC HC PP 10-7-1963; Shoreditch CL 22-3-1965. LCC on 'excessive' proportion of MS: A. N. F. Marmot, 'How High Should They Live? The Role of Architects and Planners in the Design of High Rise Housing in England and Wales', PhD (UC, Berkeley), 1984, p. 125. Other vigorous drives: Lambeth HC 22-9-1954, Mayor's Address 24-5-1955 (allocation), 22-5-1957 (6,000 programme). Camberwell: BDC 22-3-1954 (initial 3-storey infills). Sceaux development as 'springboard' for programme: ints. Solman, Dixon Ward.

12 Int. Powell. Avondale Square: Court of Common Council 26-7-1956.

13 'It's the thin end': int. Denington.

14 TPC density-based refusals of borough schemes: St Pancras TPHDC 8-7-1951, 19-12-1951, LCC curb of densification of Regent's Park RD.

15 Bishop's Bridge school dispute: Paddington HTPC 3-11-1949, 7-2-1952. Perkins Heights LCC TPC PP 22-2-1954, HC PP 1-12-1954 (LCC planners' attack on High Paddington density as 'not what people want'). Refusal: Paddington HTPC 30-6-1955. Perkins Heights inquiry: *B* 15-10-1954, p. 627. Jensen views: *AJ* 8-6-1950, 5-1-1961; *JRIBA* 3-1955, p. 205. Further refusals: HTPC 4-7-1957 (J. Aird), 1-6-1961 (Adpar St). Mileage Yard: LCC TPC PP 23-11-1964, Paddington HTPC 9-7-1964, TPC 7-1-1965.

16 MBSJC: Kensington HTPC 21-4-1960, 20-10-1960 (CDAs), 19-1-1961. *MJ* 3-7-1959, pp. 1828-9. LCC vs 37–60: Architect, HC PP 26-5-1961, 2-5-1963: application of CLP density would cause building standstill in two years?

17 Retrospective: Westminster HC 7-5-1963, 7-4-1964 Abbots Manor; but Deptford HC 13-8-1962. Disputes between LCC HC and TPC over

occupancy rate reduction (1.1 to 0.9): HC PP 14-4-1964; TPC PP 12-10-1964.

18 No hope: Chelsea HC 2-2-1956. Gentlefolk: Milner H. meeting 7-9-1964 (Stockwell evidence). West Chelsea: Gullick papers, Rugg–Brooks 1-2-1962, Piper–Stamp 13-2-1962, Brooks–Rugg 23-7-1962; LCC TPC PP 26-2-1962; *B* 7-7-1967, p. 75.

19 Gullick papers: MHLG-Royal Borough of Kensington and Chelsea, 3-8-1965; Nonhebel 7-5-1964 report, 6-10-1964 Goldring–Nonhebel. Lyons negotiating skill: deflecting LCC red herring of further extended area, 20-2-1964 Chelsea–LCC meeting.

20 Backward: Wandsworth HC 6-12-1960 (refuse Hazelhurst Road).

21 Finsbury: int. Lubetkin; M. Davies, diploma thesis (Cambridge), 1989, pp. 126-8. J. Allan, *Lubetkin*, 1992. Riley: Finsbury Law Committee 14-6-1944; *Evening Standard* 23-6-1945. D. Donnison & V. Chapman, *Social Policy and Administration*, 1963, p. 129. *OAP* 11-1967, p. 1623.

22 'Grown': int. Lubetkin. Detailed tinkering: St Marylebone HC 9-10-1957 (straight or curved plan for Church St?). 'Softer': int. Sir P. Powell. But Westminster HC 27-11-1961 (LCC imposed Dufours alterations).

23 Eugenia Rd: LCC HC PP 8-5-1957, Town Clerk letter 18-4-1957; rebuffed, HC PP 10-7-1957. Other peremptory behaviour: LCC HC PP 19-11-1952 (Finchley Rd), 13-3-1957 (Locton St).

24 19, 21 storey (Galway St): Donnison & Chapman, *Social Policy*, p. 133. Sceaux refusal, through agency of MHLG: Camberwell BDC 14-1-1957; int. Dixon Ward. Poplar vs LCC high flats: LCC HC PP 21-3-1956 ('friendly warning'). Tidey St objection ignored by MHLG: LCC CL 5-3-1957; *B* 15-2-1957, p. 315; Locton St: LCC HC 13-3-1957.

25 Wandsworth CL 17-3-1959, p. 99. Stepney FPC 11-5-1964, 18-8-1964. Ivy Bridge Farm: Hounslow, Report of Solicitor to CL 20-9-1965; int. King. Other prestige 'epitaph' schemes rushed through just before March 1965 reorganisation: Little Ilford, East Ham; Chingford Hall, Chingford; Lincoln Rd, Crayford (Wimpey tender accepted by Crayford although insufficient land for access, so Bexley LBC had to compulsorily purchase and demolish an existing house: Bexley Housing Schemes Sub. 3-6-1965).

26 West Ham recollections (Masons, etc.): int. Edwards.

27 Pressure to transfer Becontree to boroughs: Dagenham HC 4-9-1964; Barking HC 10-7-1964, 25-1-1967. LA nominations to LCC out-county estates: LCC HC PP 18-3-1964, 28-4-1964. Croydon: Sutton HC 4-3-1963 (boroughs', 'extreme dissatisfaction'). 'Many': *H* 12-1963, p. 104 (Curtis).

28 Middlesex density increases: Wood Green PDC 28-11-1960, 2-10-1961 (on Commerce Rd); Tottenham HHC 21-3-1961, LPC 22-3-1961; Twickenham HC 10-6-1964 (Teddington RDA). Outside RDAs—Hounslow Heath row: Twickenham HC 10-2-1965. Middlesex housing powers?: Tottenham HC 2-7-1946, 1954.

29 Most complex: HLG 118-171 Niven 24-11-1962. Vigorous: Edmonton HBC 7-9-1962. 8-year plan: int. Smythe. Acton HC 2-2-1954, 2-12-1964 (South Acton), 25-9-1964, 2-12-1964 (Yeading Green). Tory boroughs: Harrow HC 18-3-1954, 31-3-1960 (sales), 6-6-1963 (5-year drive, no high flats).

30 Alpha Pl., overspill, cartograms 'not hard and fast': *Willesden Civic Review* 10-1957; TPC 15-6-1950; Sub. on Alpha Pl. 20-6-1950. Additional storeys: HC 5-6-1956. Suburban gap-sites role: HC 3-7-1956.

31 'Wettish': int. Freeson; *Willesden Civic Review* 4-1964; Willesden Lands Committee 10-12-1964; Brent HC 7-7-1965. Middlesex Education Officer: information from Dermot Hynes.

32 'By and large': int. Denington.

33 K. Young & J. Kramer, *Strategy and Conflict in Metropolitan Housing*, 1978 (pro-LCC/GLC, anti-borough account). 'Quasi': HLG 101/704 Niven 1-6-1962. Clause 21(4)(a) of 1963 Act let MHLG veto borough opposition to GLC schemes; HLG 118-195 12-10-1961 (fear boroughs would try to lock up land), 23-10-61 Niven (GLC to keep LCC estates), 26-2-1962 (LBs to lose out-county estates), 6-4-1962 (fear of output fall, yet GLC to get reserve not concurrent powers). LCC HC 30-1-1963 devolution of housing would cut output. LCC pressure group at Westminster: int. King; R. Crossman, *The Diaries of a Cabinet Minister*, Vol. I, 1975, p. 74. Incomprehensible: int. Beddoe.

34 Delay or turn down: GLC HC PP 16-6-1966 (Downs Rd), 6-7-1967 (on seven delayed schemes). 'I said': int. Fagan.

35 Pro-GLC interpretations: Young & Kramer, *Strategy and Conflict*, p. 44; K. Young & P. L. Garside, *Metropolitan London*, 1982, p. 321.

36 'We were': int. Denington. Milner Holland supported 'strategic': para. 228. Windfall: GLC HC PP report 28-1-1965, HC CL 14-12-1965, p. 851. 'Token': Kingston HC 27-4-1966 (Denington). 'Partnership proposals' (Tower Hamlets): GLC HC PP 28-4-1966; Islington HC 12-7-1965 (joint tenement demolition plan; GLC to give Islington bungalows at Bognor).

37 Kidbrooke: ints. Denington, Mellish, Milefanti; GLC CL HC report 31-1-1967. Lisson Green: Westminster CL 1-1965, p. 20; HC 16-11-1964, 13-12-1965, 28-2-1966; GLC HC PP 28-10-1965; PC 11-10-1965. Campden Hill Rd row: Kensington LBC HC 14-12-1964. Collaborative: Cheshunt UDC HC 7-3-1967 (GLC to build Holdbrook East as agents for UDC).

38 By and large: int. Denington. Allocation bargaining: Sutton CL 24-2-1966. Denington tact: Redbridge HC 2-3-1966, 4-4-1966. Poor quality relets: Kensington HC 29-9-1966; Lambeth Mayor's Report 10-5-1967, p. 44. Inter-borough allocation: Harrow HC 8-2-1966 (allocation to Kensington and Chelsea). Hounslow: int. King.

39 Denington against high densities: GLC HC PP 13-1-1966. Loss of esprit de corps, 'Diaspora': ints. Richardson, Denington. 'Waxing': int. Solman. Use of private architects: HC 14-12-1965, pp. 848–9.

40 Cutler confrontations: ints. Cutler, Milefanti; Young & Kramer, *Strategy and Conflict*.

41 'I thought': int. Hollamby.

42 GLC evaluations: int. Milefanti. Laggards: int. Mellish. Mellish querying 65% below target: Redbridge LBC CL Min. of meeting 17-10-1966. 'Rotten borough': ints. Freeson, Mellish, Denington.

43 'League table': int. Mellish. Targets: Barking HC 27-4-1966, 29-6-1966, 7-12-1966 (doubling 1966 target).

44 'Underperforming': int. Milefanti. 'Economist': int. Mellish. Sutton volunteered programme cut: CL 7-5-1968.

45 Cathall Rd cut by 14%, Waltham Forest HC 6-9-1966, 4-10-1966, 6-12-1966. Objections to 'interim policy': Lewisham TPC 1-11-1966. Objections to Greater London Development Plan initial proposals: Hackney CL 25-10-1967; GLC HC PP 8-6-1967. GLC planners' routine comments on high blocks confined to skyline, location matters: GLC CL 14-2-1967.

46 'Was trying': int. ex-chairman (1964–8).

47 Enfield: int. Smythe. Sporle: Wandsworth CL 31-5-1966; *B* 10-7-1970 (corruption); *Guardian* 13-12-1971, p. 5; Wandsworth CL 14-3-1966.

48 Pegasus: int. Edwards. Croydon HC 8-9-1966 (leave LHC?). 'If it': int. Edwards.

49 Hounslow: int. King. Acton/Ealing land bank: int. Vinson. Hillingdon drive, Bison sub-group: HC 23-9-1965, 11-11-1965, 3-3-1966, 21-4-1966. Enfield: int. Smythe (Enfield also highest 1969).

50 Harrow HC 15-12-1966 (no MS), 11-7-1968 ('IB' low flats). Redbridge TPC–HC row over Broadmead Rd density: HC 20-10-1965.

51 Lewisham: int. N. Taylor. Greenwich HC 12-7-1966, 11-11-1966 (increase yield of first RD phase by point blocks); HC 5-11-70 (glut of high flats to let). Carroll: int. Milefanti. Haringey LBC TPDC 1-3-1966, 16-6-1967 (no more very high MS).

52 Officers knew each other: int. Wollkind. Westminster programme division: CL

27-7-1967 (dwellings in south hard to let), HC 18-11-68.

53 'What we wanted': int. Fagan. Camden: St Pancras Annual Review 1964, 2,000 programme authorised; PDC 6-3-1967 for raised target. 'Landmark': int. N. Taylor.

54 Lambeth MBC Building Committee 12-1963 (step up target); ints. Fagan, Hollamby; *JRIBA* 7-1965, pp. 350–7; *AJ* 19-7-1967, p. 155. Lambeth Towers, 'We'd been': int. Hollamby: *AR* 1965, p. 49. Esher, pp. 156–62; Marmot, 'How High', pp. 217–233.

55 Wates: Lambeth Building Committee (MBC) 11-1963, (LBC) 20-4-1966 ('fast track'); *ABN* 8-11-1967. Pentagon: *AR* 1-1966, p. 39. Central Hill, 'The LCC': int. Fagan. Lambeth and GLC: GLC HC 3-2-1966 (Ethelred), 3-1965 (Hollamby); GLC HC PP 16-12-1968 (Meadow Mews).

56 Doddington Rd: Wandsworth HC 17-12-1965, 12-7-1966 (further clearances); *B* 24-6-1966, p. 109. Public support for Sporle: *Evening Standard* 11-10-1971.

57 'Outstanding'; 'the quality': int. Mellish. Chaos: int. Milefanti. Orwell, 'we saw': int. Wollkind. HBDC 22-11-1967 (NBA report), 6-2-1969. Cutler recalled: int. Cutler.

58 Hammersmith: HC 18-1-1966 (Charecroft), 27-9-1966 (Moore Pk Rd); CL 24-4-1968 (Reporton Rd, Chapman on low output). Kensington: int. Gullick.

59 'Gigantomania': ints. Hollamby, Fagan. Southwark (general): S. Goss, *Local Labour and Local Government*, 1988.

60 'Grandiloquent': int. Milefanti. Hayes: *South London Observer* 26-2-1959, p. 4. Bonamy: *ABN* 21-2-1968, pp. 284–8. 'Mastermind': int. Solman.

61 'Germanic', Aylesbury: ints. Solman, Dixon Ward; Esher, p. 159.

62 Mellish and CPOs: int. Dixon Ward. North Peckham, Aylesbury: *Team Spirit* 7-1967; *AR* 1-1966, p. 41. Southwark HC 12-7-1966 (Mellish meeting), CL 15-2-1967 (10% increase 1965–7), 12-5-67.

63 Dawsons Hill, Central Hill: *AR* 1-1967, pp. 22–3. Dulwich waiting list: int. Sawyer. Beat the yardstick: int. Neylan & Ungless.

64 'We were': int. Solman. Southwark 'outstanding': int. Mellish. Aylesbury: *Team Spirit* 2-/5-1970; attacked: *AJ* 27-5-1970, pp. 1288–91.

CHAPTER 28

1 'The historical . . .': DoE NI 3556/1959 (see note 31).

2 Interwar: DoE NI 2271-60 10-1961 paper; C. Brett, *Housing in a Divided Community*, 1986, pp. 18–20. 'Simple': int. ex-NI civil servant. Post–Home Rule political background: N. Mansergh, *The Unresolved Question*, 1991.

3 Rent control: DoE NI 3556/1959 memo to J. A. Oliver 31-10-1958.

4 Parity: R. Lawrence, *The Government of Northern Ireland*, 1965, pp. 77, 90. 'Pervaded society': int. ex-NI civil servant.

5 O'Neill on Grant: 'a typical Belfast Protestant working man, strongly anti-Catholic, but decent': T. O'Neill, *Autobiography*, 1972, p. 32.

6 Private enterprise: DoE NI H15385 statistics 13-8-1969; 3556/1959 1-1960 ('semi-detached boxes'); DoE NI 3856/1950 H2470.

7 Mid-1950s public housing only 19% of all NI dwellings: DoE NI 14882.

8 Belfast lowest: DoE NI 4150/1959 notes 12-12-1961; J. A. Oliver, *Working at Stormont*, 1978, p. 80. 'We only dated': int. ex-NI civil servant.

9 Boundary: NIHT *Report* 1959, p. 12. Alleged discrimination vs large families: *Belfast . . . Housing Allocations Inquiry, Report*, 1954; H. Diamond, Stormont Deb. 20-3-1962 col. 220. 'Stiff': int. ex-NI civil servant.

10 'Personal idea': int. ex-NI civil servant. Founding of Trust, intentions: E. L. Bird, *JRIBA* 11-1949, pp. 9–16.

11 'Slotted': int. ex-NI civil servant. 'Bryson was': int. ex-senior NIHT administrator. 'The style': Brett, *Divided Community*, p. 28; Oliver, *Working at Stormont*, p. 72. NIHT juggling of standards and rents in 1940s and 1950s: *JRIBA* 11-1949, pp. 9–16.

12 'Little ways': DoE NI 2347-56 memo to JAO 14-4-1959. 'Courage to build': O'Neill, *Autobiography*, p. 31. '[The Trust]': DoE NI 2347/1956 2-6-1961 meeting.

13 Rural values: Morgan (Minister) on 'nice garden villages', Stormont Deb. 20-3-1962 col. 249. Cregagh terraces: *JRIBA* 5-1954, p. 269.

14 Prototype MS: DoE NI 2347/56 notes 9-1956, 2-1958, 2-1959.

15 Slum-clearance motive was parity: DoE NI 2497/1956. Introduced by Part I of Housing . . . and Rent Restriction Law (Amendment) Act (NI) 1956.

16 'A shock': int. ex-NI civil servant.

17 Nationalists delayed scheme in 1910–17: Brett, *Divided Community*, p. 21.

18 'Ghetto': H. Diamond, Stormont Deb. 20-3-1962 cols. 217–23; 3-11-1966 col. 2141. Prevaricating (Town Clerk 'at his worst'): DoE NI 2497-1956 18-1-1957 JAO note; Circular 2/57. Slow RD: DoE NI H6978 19-4-1962.

19 Only receiving authority: DoE NI 3556/1959 memo Green–Minister 20-6-1960; DoE NI 2679/64. Belvoir Park: DoE NI 4150/1959, meeting Belfast–NIHT 1-7-1960; Alderman Oliver and J. A. Oliver not related.

20 'People': int. Dixon. 'I can': int. ex-NIHT administrator.

21 'As soon': int. ex-NI civil servant. 'We are': DoE NI 3556/1959 9-2-1960. 'Uncompromising': DoE NI 4150/1959 meeting 12-12-1961.

22 HC visits: Min, report 2-8-1955; Victoria Barracks HC 6-5-1959; DoE NI 2347/1956 27-5-1959 PAS–Reid, 1961 'High Flats' paper (ULS MS to cut overspill); HC 31-1-1961. 'Can be': Morgan, Stormont Deb. 19-12-1961 cols. 376–7. Mixed development: DoE NI 2347/1956 1961 'High Flats' paper.

23 'As one': DoE NI 2347-1956 1961 'High Flats' paper. Anti-flat: Stormont Deb. 20-3-1962 col. 245 (Hinds), 7-11-1962 col. 1021. DoE NI 3556/1959 Green–Holden (rents), 261/1958 6-6-1957 (Fitzsimmons), 11-1957 (Windsor).

24 'For various reasons': DoE NI 2347/1956 Sythes–Reid 4-10-1960.

25 'Regional . . .': Lawrence, *Government of Northern Ireland*, pp. 88–90.

26 'If we went': int. ex-NI civil servant.

27 'Socialism': O'Neill, *Autobiography*, p. 31. 'The Trust': DoE NI 3556/1959 Green–Holden 9-2-1960. 'Bribing' vs 'Continuity': 3556/1959 22-1-1959, etc.

28 'You've got': int. ex-NI civil servant.

29 'Poor and weak': int. ex-NI civil servant.

30 'You could': int. ex-NI civil servant. Parker: Oliver, *Working at Stormont*, p. 79. 'Semi-social': DoE NI 3276/1953 18-3-1965. 'Was able': Oliver, *Working at Stormont*, p. 191.

31 'First-rate fellow': int. ex-NI civil servant.

32 Green summarised: DoE NI 3556/1959 Green–Holden 26-11-1958.

33 Fluctuation, no fat to trim: DoE NI 487/1957, 3556/1959, 2271/1960.

34 Subsidies, etc.: DoE NI 487/1952. 'Wringing': int. ex-NIHT official.

35 'Leeway': Stormont Deb. 42 col. 898. Ad hoc: DoE NI 3556/1959 notes of 12-1958/1961; Stormont Deb. 28-5-1958 col. 1042. 'Jiggered': int. ex-NI civil servant. Two tiers dismissed: DoE NI 3556/1959 Holden–Green 30-1-1961. Scotland 60% more: DoE NI 2271/60 note 10-6-1960. 4,000 target: DoE NI 3556/1959 Green–Holden 26-11-1958.

36 Cregagh ad-hoc: DoE NI 2271/60 25-1-1961 Sythes–Cramond; DD6/2133 note 28-11-1961. Discussion on subsidies, rents, MS: DoE NI 2347/56 1961 'High Flats' paper. Green explained: DoE NI 3556/1959 27-6-1961 note.

37 'We received': Stormont Deb. 20-3-1962 col. 227 (Alderman Oliver), 19-21-1961 cols. 376–7; Belfast HC 28-12-1961; S.R.&O. 1962/205 21-8-1962. Deputation: DoE NI 4150/59 notes for meeting 12-12-1961.

CHAPTER 29

1 W. J. Morgan, Stormont Deb. 20-11-1962 col. 1419.

2 'Anything': int. ex-civil servant. O'Neill: Stormont Deb. 55 col. 28.

3 'Ronald pushed': int. ex-civil servant. 'Askance': DoE NI 3556/1959. JAO memo 13-1-1959; 26-11-1958 (Green–Holden 'stability' needed for 4,000 programme). 'Free from': DoE NI

3556/1959 Andrews–Prime Minister 2-12-1960.
4 New subsidy system: Stormont Deb. 20-11-1962 col. 1419; 21-6-1962 cols. 763-71; DoE NI 3556/1959 notes for meeting 25-7-1962.
5 'Ahead': DoE NI 443-63 Calvert–Kidd 14-12-1965. After computing: DoE NI 2271/1960 11-1969 Sacharin table, 1967/8 breakdown of public housing finance sources (rent/rates/Exchequer): NI 57%/6%/37%, Scotland 40%/33%/27%, England/Wales 76%/6%/18%.
6 High flats excluded: DoE NI 443-63 notes 6-8-1963; DoE NI 3790/64 notes 30-5-68 ('core'), 30-10-1969 (exceed basic subsidy).
7 'If they'd had': int. ex-NI civil servant.
8 'Building outside': J. A. Oliver, *Working at Stormont*, 1978, p. 81.
9 Row over extension refusal: Stormont Deb. 18-11-1959 cols. 847-910 (Oliver, Boyd); Stormont Deb. 26-5-1965 col. 75 (Fitt), 3-11-1959 cols. 479-82. 'A few': DoE NI 4150/1959 Minister–Cabinet 22-1-1960.
10 McKee suggestion: DoE NI 4150/1959 29-2-1960. Overspill: DoE NI 4150/1959 memo 5-10-1960. 'Presumably ': DoE NI 4150/1959 Hoey–Sythes 20-9-1960.
11 *Belfast Regional Survey and Plan, Interim Report*, 1961; Belfast HC 19-4-61; publ. version 1964. 'Early mistakes': *Belfast Regional Survey*, p. 11. Ruled out: DoE NI 1327/1950 notes 1965–6. 'Cutting off': J. C. Beckett & R. E. Glasscock, *Belfast*, 1967, p. 176. Higher land prices: DoE NI 3254/1964 vol. 1, Tughan–Oliver 29-6-1967. 1961 Belfast output: DoE NI 4150/1959 notes for meeting 12-12-1961. New targets: Belfast HC 2-5-62. Visits to Glasgow, etc.: Belfast HC 12-12-1964. 'Much higher density': NIHT Report 1962-3, p. 8. Belfast predicted MS offset overspill: HC report 2-5-1962.
12 'De-magnetize': *Belfast Regional Survey*, p. 18. 'The fire': Oliver, *Working at Stormont*, p. 84.
13 Regional planning: *Belfast Regional Survey*, p. 41; O'Neill, Stormont Deb. 4-11-1964 col. 351. Establishment of Ministry of Development: P. Arthur, *Government and Politics in Northern Ireland*, 1980, p. 79.
14 'All-consuming': int. ex-NI civil servant. 'Without any': DoE NI 261/1958 Robson–Mayman 20-5-1963. Antrim density row 1965: DoE NI 261/1958 notes of 10-11-1965, 26-11-1965, 7-6-1966.
15 Committee on Housing Research DoE NI H2127 21-10-1965 Potter paper, meetings 24-9-1968, 20-2-1969, 27-3-1969. Parker Morris: DoE NI 443/1963, H2436 1966 (on Craigavon housing standards); Morgan, Stormont Deb. 31-10-1962 col. 766.
16 Ardcarn: *Team Spirit* 1-1967.
17 Labour shortage: *JRIBA* 11-1949; Stormont Deb. 26-5-1965 col. 55.
18 Laing, Wimpey: NIHT Report, 1965-6, p. 10. T. O'Neill, *Autobiography*, 1972, p. 31; C. Brett, *Housing in a Divided Community*, 1986, p. 29. Bungalows: DoE NI 1683. Wilson blocks: DoE NI 2347-56 J. A. Oliver 13-9-1956.
19 Trust defended: NIHT Report 1962-3, p. 8; 1963-4, pp. 7-8 (cost vs speed). High cost a motive? Scott, Stormont Deb. 26-5-1965 col. 54.
20 Too small to: Belfast HC 20-3-1963, Green letter. Approval of systems: DoE NI 1500/1964 (2-9-1968). DoE NI H4991 NBA letter 23-11-1967.
21 Dispute between Committee on Housing Research and NBA: DoE NI H2127, 6-4-1968 NBA–Calvert, 4-7-1968 Laughlin–NBA; DoE NI 2497/1956 memo 15-3-1957 (on slum clearance).
22 Accelerating demolition: DoE NI H6978. Overspill of 2.4%: DoE NI H6978, 31-3-1970 chart. 'They were': int. ex-NI civil servant.
23 In 1961: HC 8-5-1961, 21-8-1963. Turf Lodge row: HC 15-1-1965; DoE NI 3304/1963 3-1965. 'The highly': DoE NI 3304/1967 24-6-1968.
24 'Monstrosity': Fitt, Stormont Deb. 21-6-1962 col. 142 (also Hanna); 20-3-1962 col. 216 (Hanna on Carlisle vandalism); 1-12-1964 cols. 1030-5; Stormont Deb. 20-11-1962 col. 1424 (Connor). Carlisle naming row: Belfast HC 17-10-1962; Stormont Deb. 2-3-1966 col. 1553.
25 Cullingtree Rd (Belfast CBC approval of NIHT plans): HC 9-6-1965.
26 Trust 'to preserve': NIHT Report for 1965-6, p. 14. Diamond, Stormont Deb. 3-11-1966 col. 2118. Offered a way through: int. ex-NI civil servant. 'Captured': *Team Spirit* 2-1970.
27 'Canon Murphy': int. ex-NIHT official. Corporation role: *Belfast Telegraph* 24-5-1968. Pejorative account: *The Divis Report*, 1986, p. 6.
28 Derry background: Arthur, *Government and Politics*, p. 101. Creggan: DoE NI H14129 14-10-1969.
29 Trust built low flats first: NIHT Report, 1960-1, p. 13.
30 DoE NI H818 17-9-1965 ('The mischief'), 29-6-1967 (deflect), 23-3-1966 Ministry–Trust (go-between). Overspill rose to 604: London derry RD Sub. 9-3-1966. Less stringent: DoE NI 2347/1956 meeting 2-6-1961.
31 'We were': int. ex-NIHT official; NIHT Report, 1965-6, p. 16. NIHT in 1967: *B* 26-5-1967, p. 85.
32 DoE NI H818 11-1-1967 Trust–Ministry meeting ('While'), 16-1-1967 L. Calvert to Green and Minister ('supporters', 'I suggest'). US high flats, segregation: D. Bowly, *The Poorhouse*, 1978, pp. 77–84, 112, 225.

SECTION III (INTRODUCTION)

1 'By the late': int. Beddoe. 'We always': N. Taylor, *AR* 11-1967, pp. 341–359. 'We have seen': C. Booker, *Spectator* 2-4-1977.

CHAPTER 30

1 'Just before': int. Richardson 1989. B. Russell, *Building Systems*, 1981, p. 712.
2 Yorke & Gibberd, p. 8.
3 Finnimore, pp. 44–7.
4 Int. Whitfield Lewis.
5 *ABN* 21-2-1968, p. 289. Cf. private flats: *ABN* 19-4-1961, pp. 511–16 (Hagley Rd, Birmingham), *B* 19-8-1960, pp. 314–16 (Dulwich College Estate).
6 Egerton Report, Chapter 2, pp. 2, 13.
7 *AD* 5-1957, pp. 147–8.
8 *AD* 2-1966, p. 83.
9 MHLG (Design Bulletin 1), 1962, p. 1.
10 R. N. Morris & J. Mogey, *The Sociology of Housing*, 1965, p. 165.
11 *AR* 9-1963, p. 181; F. M. Lea, *Science and Building*, 1971, p. 116.
12 *AR* 3-1945, p. 70.
13 *JRIBA* 4-1961, p. 217.
14 C. Jameson, *AJ* 27-10-1971, pp. 917–57; 6-3-1963, pp. 531–46.
15 P. A. Scoffham, *The Shape of British Housing*, 1984, p. 153; see *AJ* 25-9-1968, p. 646.
16 G. Broadbent, *Design in Architecture*, 1973.
17 See, e.g., *Arena* (*AAJNL*) 81, 1-1966, pp. 149–55.
18 *JRIBA* 5-1961, p. 260.
19 *AJ* 11-10-1972, p. 827.
20 C. Jameson, *AJ*, 27-10-1971, pp. 917–57; M. Burbridge, *High Density Housing: A Social Perspective* (MHLG, Research and Development Group), December 1969; *TPLR*, 1970, pp. 80–92; *British Journal of Sociology*, 1969, pp. 134–47.
21 MHLG, *Report of the Committee on Public Participation in Planning* (Skeffington Report), 1969; see N. Dennis, *Public Participation*, 1972.
22 See Note 42, Chapter 14; D. Turin, *AJ* 23-9-1964, pp. 668–75.
23 See N. Wates & C. Knevitt, *Community Architecture*, 1987, pp. 24–5.
24 *AR* 11-1967, pp. 341ff; see *AAJNL* 2-1962, pp. 172–86; *AJ* 23-9-1964, pp. 668–75; V. Hole & J. J. Attenburrow (BRS), *Houses and People . . .*, 1966; *AR* 9-1970 ('Manplan').
25 A. Whittick, *Civic Design and the Home*, 1948, pp. 38–9; *AR* 3-1950, p. 168; see Scoffham, *Shape of British Housing*, pp. 145, 153, 168, 177.
26 *AR* 5-1960, p. 304.
27 *AR* 11-1967, p. 359; see R. S. Haynes, 'Design and Image in English Urban Housing, 1945–1957', M Phil (London), 1976.

CHAPTER 31

1 Esher, p. 75.
2 Leeds area improvement: S. Pepper, *Housing Improvement*, 1971 pp. 67–75; int. Gabb. TPC: City Engineer report 7-1-1960 on housing policy; 5-1961 report on clearance. Dispute: Sub. TP Development Plan Committee 7-12-1965, 21-12-1965.

3 Incessant Government stress on improvement, LA indifference: CHAC passim; H. Brooke, *HR* 9/10-1958, pp. 122–6; *HR* 7/8-1964, pp. 133–5. Ministers' early unease redevt 'destroying . . . communities'?: *HR* 12-1962, pp. 71–2 (Corfield). 'If you're': int. Cramond. Gibson improvement drive blocked by decanting problems: DD6-2362 6-6-1961 meeting, DD6-2362 2-12-64 paper. Newcastle: Pepper, *Housing Improvement*, pp. 75–97; CL 7-12-1960, pp. 615ff; 6-12-1967, pp. 1008–20; 5-6-1968, pp. 23–4; 31-7-1968, pp. 319–25; 4-9-1968, pp. 401–2; 2-10-1968, pp. 409–15, 417–18; 8-1-1969, pp. 749–54; 7-5-1969, pp. 1241–3.

4 Anti-flat feelings revived: Hammersmith CL 21-8-1968, 24-2-1971 (Putnam vs Labour 'skyscrapers'). Controversy over high flats: Portsmouth *Evening News* 5-5-1971, p. 7. Teesside HC 5-11-1973, p. 1289. Owner-occupied: Brent HC 30-3-1968 vs Carlton Vale extension. LA moves to improvement: Wandsworth CL 24-4-1968 Sporle–Symons, HC 22-7-1968 (1968 White Paper); Hammersmith BDGC 20-6-1968; CL 10-7-1968, 21-8-1968 (revoke CPOs).

5 MHLG on improvement cheaper: ints. Kennet, Beddoe; CHAC 10-6-1968, 9-2-1970; 1963 debates HLG 131-137 passim. Curb on small-town MS: Weston-super-Mare HC 27-11-1967, p. 213; MHLG density curb, Ramsgate HC 26-11-1968 (140 p.p.a. too high). Regional offices found loophole—redefine site to raise yardstick density: int. Beddoe. Loopholes found by Savage in Birmingham ('100% support' by Savage for city: int. Reed), and Clay in Manchester: int. Stones; Dunleavy, p. 295. Luton CBC ignored MHLG pressure vs high blocks: HC 8-4-1969; also Halifax HC 18-5-1967 (late drive). Maudsley on yardstick pressure vs MS: NBA, *Housing Productivity in Birmingham*, 1969, p. 64. Tanhouse Lane, Halesowen—MHLG suggested the addition of a 11-storey block now, as it would probably not pass yardstick later: HC 19-9-1966. St Julian's, Newport—overall scheme failed yardstick, so build only the high block: HC 10-3-1970. Post-devaluation cuts: CHAC 12-2-1868.

6 MHLG using yardstick to cut costs: *JRIBA* 9-1969, p. 367 (Morton); CHAC 13-10-1969. Yardstick further cut profitability of IB contracts: int. Lord. By 1975: Kensington HC 27-11-1975; but see *AJ* 20-9-1972, p. 631.

7 Original London yardstick supplements were 10 to 12.5%, later raised (e.g., by Circular 31–69), but trailed behind inflation: GLC HC PP 8-7-1971. Barking late MS drive exploited subsidy: HC 9-9-1970. Last-minute Labour contract-fixing before 1968 elections: int. Fagan (Vinson: South Acton Stage 15, three 13-storey blocks, was 'signed the Tuesday before I lost my seat—I spent all day up there making sure it was all right!'). Lambeth Tories maintained output after 1968: int. Hollamby. Post-May 1968 Tory reductions, MHLG protests: Ealing HC 4-7-1968, 5-6-1969, 1-1-1970, Chairman's Panel 18-5-1970. Output was further: Islington TPC 25-11-1971; HC 22-11-1973; Houslow HC 13-9-1971. Channon: int. Milefanti.

8 Yardstick and GLC: HC PP 8-6-1967, loan sanction agreed with Mellish 21-12-1966. HC 20-2-1969 PP: first GLC scheme subject to yardstick, Elsdale Rd (Hackney), only reached tender stage 1969. Yardstick negotiations increased GLC precontract work by 50%: HC PP 8-7-1971, on Circular 18–71. 'Dispiriting': int. Campbell. Grahame Pk chaos, Wates withdrawal: GLC HDC report 1-3-1974; int. Lord (GLC 'stopped supplying' drawings).

9 'Campbell': int. Cutler. Land drying up: GLC CL 9-5-1972. 'Strategic Housing Plan': Kensington LBC Health Committee 27-2-1975.

10 Comparative NI–GB output figures: DoE NI 16748, H14882.

11 Allocation complaints: Stormont Deb. 20-3-1962 col. 257, 26-11-1963 cols. 1147–9, 17-2-1966 cols. 1144–75; building policies Stormont Deb. 20-11-1962 col. 1406, 3-11-1966 col. 2131. NIHT letting row: 20-3-1962 col. 198, 26-5-1965 cols. 70–2, 19-5-1966 col. 1410, 14-12-1966 col. 126, 31-1-1967 col. 677. Points system: NIHT Report 1967–8, p. 58.

12 'Slums of tomorrow': Stormont Deb. 26-5-1965 cols. 100, 225–6; J. Beckett & R. Glass, *Belfast*, 1967, p. 180. Against RD: R. Wiener, *The Rape and Plunder of the Shankill*, 1978, pp. 159–65. Black Mountain: HC 19-5-1966, p. L183; 26-4-1967; Stormont Deb. 19-5-1966 cols. 1337–9, 1354.

13 Scottish allocations reforms: R. D. Cramond, *Allocation of Council Houses*, 1964; SHAC, *Allocating Council Houses*, 1967.

14 NI Community Relations Commission, *Intimidation in Housing*, 1974.

15 Optimistic: C. E. B. Brett, *Housing a Divided Community*, 1986, p. 48. Disrupted: DoE NI 3790–64 18-4-1974, Cullingtree Road 4th phase subsidy determination delayed by four years.

16 'People': int. Sneddon. Improvement plan blocked: DD6-2363, meetings 6-6-1961, 13-4-1962, 2-12-1964 paper.

17 P. Jephcott: Glasgow University 9-1965 paper; *Homes in High Flats*, 1971. Hostile SDD reseach: DD12-1735 23-5-1966, DD12-2694 22-4-1966.

18 McWilliam: *Scotsman* 29-11-1965, p. 5. N. Taylor: *AR* 11-1967, pp. 341–359. Early 'tenement revival': M. Laird, *AJ* 12-6-1958, p. 7; (Hutchesontown A) int. Nicoll. In late 1970s, last spasm of English anti-tenement 'league table' reformist argumentation (the claim by Bill Worden, newly appointed Glasgow City Architect, that 'higher standards existed south of the border', and that the city should build only the more 'pleasant', 'logical' English terraces of semis, rather than 'strange', 'bleak', 'depressing', 'unbalanced', 'almost mediaeval' flats): *B* 15-6-79, p. 59. Later 'tenement revival': NBA, *Residential Renewal in Scottish Cities*, 1981.

19 Vitiate: *Team Spirit* 3-1966, p. 12 (Craigshill), 5-1967 (H. K. Cowan, Mill Hill). IB costlier (e.g., by 5% at Kidbrooke): GLC CL HC 31-1-1967.

20 'I said': int. Bowie. Whitfield: Dundee HC 21-1-1969, 17-4-1969. Crudens given Baluniefield contract to compensate for Whitfield cut: *Courier* 12-2-1980. Crosby cancellation: HC 19-4-1967; St Albans HC 31-5-1967 (firm linked with M. & M.), 20-11-1968 ('gang from the north'). Decline of YDG: *B* 26-7-1968, p. 96.

21 UCATT: Finnimore, p. 116.

22 Exempted: Finnimore, p. 87. Communist agitators: D. Morrell, *Indictment*, 1987, p. 22; ('leftist power'); *AJ* 18-3-1992, p. 14 (Marsham St); info. from Alan Collison, LB Hackney (Alsen Rd disrupted by rival groups from both CP and International Socialist Party). Ivybridge (Turriff withdrew; replaced three years later by Mowlem): Hounslow BA reports to DC 27-11-1967, 7-2-1968; HC 31-3-1969 (Mowlem), 11-1-1971; *B* 12-1-1968, 9-2-1968. Turriff, Myton and Cameron Report: *B* 7-4-1967, p. 109; 15-9-1967, pp. 145, 149.

23 Circular 50/65: *B* 26-11-1965, p. 1198. 'Mr Rapier's': Southwark Disciplinary Appeals Comm. 13-3-1968, p. 14. Concern: CL 29-11-1967 (Comm. on Building Dept). Kango: Report of District Auditor 31-3-1968, p. 5. CL 29-11-1967; *B* 1-9-1967, p. 93; 17-11-1967, p. 171; and 8-11-1968, p. 127. Abolition of main DLO: FC 10-10-1968. 'Horrendously', 'piggy in the middle': int. Southwark LBC architect; *S* 26-7-1974, p. 33. Salford DLO scandal: *B* 11-11-1966, p. 185.

24 'On a visit': int. S. Bunton Jnr.

25 Lillington delays: Westminster CL 16-6-1966; Guestlings HC 1969 PP, p. 690; int. Darbourne. Higher brick productivity: *JRIBA* 2-1967, p. 69.

26 'Difficulty' (also yardstick delays): Kensington HC 24-5-1973; Hounslow HC 16-4-1973, 4-6-1973 (Twickenham Rd). Grahame Pk chaos: GLC HDC 1-3-1974. Shortages: *International Journal of Masonry Construction* I, No. 1, pp. 2–10 (Stoke brick MS blocks, problems Burslem Pk/Spark Lane).

CHAPTER 32

1 'I remember': int. Mellish. 'What they': int. Rogan.

2 Coleman: *Sunday Telegraph* 28-4-1985, p. 3. A. Coleman, *Utopia on Trial*, 1985, p. 12.

3 Early concepts of slum pathology: S. M. Gaskell (ed.), *Slums*, 1990. Continuing stigmatisation of 'residuum' in C20: S. Damer, *From Moorepark to 'Wine Alley'*, 1989; North Tyneside Community Development Project, *North Shields: Organising for Change in a Working-Class Area*, 1978 (Meadowwell); M. Horsey (Glendinning), *Tenements and Towers*, 1990, pp. 13–20, 35–6. Vandalism of Kirkby while still under construction: int. Stones. Shoreditch MBC Reconstruction Committee 15-5-1947 (Stonebridge 'malicious damage'). Design Council, *Designing against Vandalism*, 1979.
4 Joseph and interwar 'slums': *HR* 7/8-1964, p. 135.
5 Springburn B: int. Gunn. Waiting list applicants more choosy around 1970: Norwich HC Report to CL 3-9-1974. Proposed cut in height of future high blocks at 'unpopular' Tanhouse Lane scheme: Halesowen CL 2-10-1968.
6 Poverty/council housing link?: P. Wilmott & A. Murie, *Polarisation in Social Housing*, 1968, pp. 29–30. 'Now, we'd broken': int. Lambert. Vandalism at Hyde Park, Sheffield: *B* 11-8-1967, p. 58.
7 D. Wilson, *I know it was the place's fault*, 1970, p. 105; *HR* 3/4-1967, pp. 35–6.
8 Birkenhead Eldon St/Oak St: HC 1-6-1960, 22-9-1960, 5-4-1961, 30-12-1961, 17-1-1962, 14-2-1962; (later) J. Hillman, *Guardian* 22-3-1976. 'Reverence' of occupants of early high-rent MS flats in 1950s, lack of management problems (e.g., LCC Portsmouth Rd): S. MacDonald & J. Foster, *Putting on the Style*, 1990; Bethnal Green vandalism to high blocks built by borough for slum decanting, especially Claredale St: HC 28-9-1961, p. 126. Camden LBC Chalcots Estate, blocks originally designed for high-rent private occupancy, bought by Council, let to slum-cleared tenants, vandalised so much that extensive strengthening necessary: Hampstead HC 17-11-1964, pp. 178–9; Camden HC 28-10-1969, p. 576. Reverse process (vandalised and 'unlettable' family flats in slum-clearance high blocks, at Wandsworth LBC's Livingstone Rd Stage IV devt, very saleable when privatised): *Guardian* 19-6-1987, p. 11; *Sunday Times* 22-6-1986, p. 23; *Independent* 21-7-1990, p. 39.
9 Cautioned Gibson: DD6-2362 13-4-1962 meeting.
10 'Pulled': SRA D/TC 8–20. T. 7, H. Torran to Town Clerk 30-9-1970. Martello Ct: Edinburgh City Archives, Muirhouse letter file, 13-7-1965 letter S. Brown–Town Clerk; Housing Sub. 6-4-1965, p. 254; int. Rogan. Later 'rescue': *Evening News* 20-11-1980, p. 9; *Sunday Post* 23-10-1983, p. 9. 'Design disadvantagement'-inspired changes to Darnley: int. Gunn.
11 Condensation controversies: see, e.g., R. Bryant, *The Dampness Monster: A Report of the Gorbals Anti-Dampness Campaign*, 1989.
12 'Firstly': int. Sneddon. 'Popularity' of Motherwell high blocks, survey by Burgh Housing Manager: J. Dickson, *High Living*, 1970, p. 39.
13 Rochester: M. Bulos & S. Walker, *The Legacy and Opportunity for High Rise Housing*, 1987. pp. 15–16. Aberdeen housing management, letting: int. Cllr. C. Robertson. 'Five-star': *Evening Express* 10-3-1983, p. 8. 'National' swing back to high flats in housing-management and social research: N. Boléat, 'High Flats and the Elderly', M Sc (Aston University), 1978; J. Ash, *The Rise and Fall of High Rise Housing*, 1980. R. Anderson, M. Bulos & S. Walker, *The Future of High Rise Housing* (Polytechnic of the South Bank), 1983 (also *Tower Blocks*, 1985). Bulos & Walker, *Legacy and Opportunity*. National Housing and Town Planning Council, *High Rise Housing*, 1987/90; *Independent* 27-9-1990, p. 8; 10-10-1990, p. 25 ('popular' high blocks). Society for Action for Children in Tower Blocks (SoACT: founded 1985): *BD* 7-9-1984, pp. 18–19 (multi-storey life 'brilliant'); *News on Sunday* 17-5-1985, p. 27; *Guardian* 20-11-1985 ('Home, sweet tower block home'); *AJ* 29-7-1987, p. 35. 'Much maligned', 'user studies': Housing Centre Trust Conference, *Tower Blocks—A Resource for the Future*, London, 1-7-1992 (esp. lecture by B. Derbyshire).
14 Int. Balderstone.

CHAPTER 33

1 R. Scruton, *The Aesthetics of Architecture*, 1979, p. 250; R. Gradidge, BBC Radio 4, 9-12-1991.
2 Comparative study of post-1918 emergence of European and US social/municipal housing: E. Lebas et al., *Planning Perspectives* 6, 1991, pp. 249–67. Recent sociological/psychological investigation of 'need' (including housing): L. Doyal & I. Gough, *A Theory of Human Need*, 1991.
3 A. Coleman, *Utopia on Trial*, pp. 103, 158, 161, 171; Ravetz, *Remaking Cities*, 1980, p. 181. C. Booker, *Spectator* 2-4-1977, 17-2-1979; BBC2, 'City of Towers', 2-1979.
4 'Someone should': int. former YDG architect.
5 Change in architectural opinion: e.g., *Daily Telegraph* 5-2-1991, p. 33 (Helsel) *Independent* 6-2-1991, p. 12; 9-3-1991, p. 37 (J. Glancey praise of Barbican as 'village'). Women's debate on whether Modern architecture/high flats are in themselves gender-discriminatory: see, e.g., Matrix, *Making Space*, 1984 (anti-Modern pages: pp. 5–6, 14–15, 76).
6 P. Dunleavy, 'The Politics of High Rise Housing', PhD (Oxford), 1978, p. 2.

APPENDIX

1 Ballymun, Dublin: *B* 22-9-1967, p. 99.
2 Background to States housing in Jersey: *Jersey Evening Post* 15-1-1963, p. 6 (Housing Report for 1963); 5-10-1974 (delays to programme); 17-12-1990 (continuing programme); R. G. Le Hérissier, *The Development of the Government of Jersey*, 1972 (Housing Law, Housing Committee); G. C. Powell, *Economic Survey of Jersey*, 1971, pp. 284–9; M. Boléat, *The Housing Situation and Housing Policy in Jersey*, 1990, Multi-storey flats in Jersey: *Jersey Evening Post* 19-11-1964, pp. 1, 8 (La Collette, Green Street); 10-3-1969; 24-3-1969; 1-4-1969 (Ann St, Val Plaisant, Le Squez); 24-5-1971 (Samarès Marsh); 4-1-1972 (The Cedars); 2-11-1976 (no more high flats).

Abbreviations

a	date of committee approval or Dean of Guild Court approval
AAJNL	*Architectural Association Journal*
AB	*Architecture and Building*
ABN	*Architect and Building News*
ABT	Association of Building Technicians
AD	*Architectural Design*
AF	*Architectural Forum*
AJ	*The Architects' Journal*
AR	*The Architectural Review*
ARU	Architecture Research Unit (University of Edinburgh)
AY	*The Architects' Yearbook*
B	*The Builder*
BC	Burgh Council
BHPR	*British Housing and Planning Review*
BLS	British Lift Slab
BRS	Building Research Station
b.s.p.a.	bedspaces per acre
b/u	breakdown by blocks/heights not possible (incomplete information)
CBC	County Borough Council
CC	County Council
CDA	Comprehensive Development Area
CHAC	Central Housing Advisory Committee
CHR	Committee on Housing Research (Northern Ireland)
CL	Council (minutes)
CLASP	Consortium of Local Authorities Special Programme
Cleeve Barr	A. W. Cleeve Barr, *Public Authority Housing*, 1958
CLP	J. H. Forshaw, P. Abercrombie, *County of London Plan*, 1943
Concrete	*Concrete and Constructional Engineering*
CPO	compulsory purchase order/City Planning Officer
CQ	*Concrete Quarterly*
c/u	contractor's name untraceable
DD	Scottish Record Office, DHS/SDD file number
Decade	D. Crawford (ed.), *A Decade of British Housing, 1963–1973*, 1975
Denby	E. Denby, *Europe Rehoused*, 1938
Dens of Res Areas	MHLG, *Density of Residential Areas*, 1952
DHS	Department of Health for Scotland
DL/DLO	direct [municipal] labour/Direct Labour Organisation
DoE	Department of the Environment
DoE NI	Department of the Environment for Northern Ireland (file).
d/u	date of development untraceable
Dudley	Report by the Dwellings Sub-Committee of CHAC, 1944
Dunleavy	P. Dunleavy, *The Politics of Mass Housing in Britain*, 1981
EC	Estates Committee
EDLO	Enfield/Edmonton DLO
Esher	L. Esher (formerly Brett), *A Broken Wave The Rebuilding of England 1940–1980*, 1981
Finnimore	*Houses from the Factory*, 1989
Flats and Houses 1958	MHLG, *Flats and Houses 1958, Design and Economy*, 1958
FLHDH	RIBA, *Family Life in High Density Housing, Report of a symposium held on 24 May 1957*
GLC	Greater London Council
GLP	Greater London Plan
GLRO	Greater London Record Office
GWS	Gee Walker and Slater
H	*Housing*
HBC	House Building Committee
HC	Housing Committee
HfF	Cement and Concrete Association, *Housing from the Factory*, 1962
HHC	Holland Hannen and Cubitt
HLG	Public Record Office MHLG files
HR	*Housing Review*
HRA	Housing Revenue Account
h.r.p.a.	habitable rooms per acre
HTPC	Housing and Town Planning Committee
IB	industrialised building
IB	*Interbuild*
IBSC	*Industrialised Building Systems and Components*
int.	interview
Jensen	R. Jensen, *High Density Living*, 1966
JRIBA	*Journal of the Royal Institute of British Architects*

JTPLI	*Journal of the (Royal) Town Planning Institute*
LA	local authority
LCC	London County Council
Living in Flats	MHLG, Report of the Flats Sub-Committee of the CHAC, 1952
MB	Metropolitan Borough
MBC	Metropolitan (London pre-1965) or Municipal Borough Council
MBSJC	Metropolitan Boroughs' Standing Joint Committee
MH	Ministry of Health
MHC	Midlands Housing Consortium
MHLG	Ministry of Housing and Local Government
Min.	Minutes
MJ	*Municipal Journal*
MoE	Ministry of Education
MoH	Ministry of Health
MPBW	Ministry of Public Building and Works
MS	multi-storey
MT	Ministry of Transport
NBA	National Building Agency
NHTPLCY	*Yearbook of the National Housing and Town Planning Council*
NI	Northern Ireland
NIHT	NI Housing Trust
NTDC	New Town Development Corporation
OAP	*Official Architecture and Planning*
PAC	Precast Associated Construction
Parker Morris	CHAC, *Homes for Today and Tomorrow*, 1961
PC	Planning Committee
Planning Bulletin	Published by MHLG from 1962
Planning our New Homes	SHAC, *Planning our New Homes*, 1944
PP	presented papers
p.p.a.	persons per acre
PRO	Public Record Office
PWLB	Public Works Loan Board
R & D	research and development
RD	redevelopment
RDA	redevelopment area
RDC	Rural District Council
RIAS	Royal Incorporation of Architects in Scotland
RIBA	Royal Institute of British Architects
RMJM	Robert Matthew, Johnson-Marshall
s	date of start of construction
S	*Surveyor*
SBD	*Systems Building and Design*
SDD	Scottish Development Department
Segal	W. Segal, *Home and the Environment*, 1948
SHAC	Scottish Housing Advisory Committee
Sharp	T. Sharp, *Town Planning*, 1942 ed.
SLASH	Scottish Local Authorities Special Housing Group
SLP	Sir Lindsay Parkinson
Smithson	A. & P. Smithson, *Ordinariness and Light*, 1970
SRA	Strathclyde Regional Archive
SRO	Scottish Record Office
SSHA	Scottish Special Housing Association
Stormont Deb.	Northern Ireland House of Commons Debate
Sub.	Sub-committee
TCP	*Town and Country Planning*
TCPA	Town and Country Planning Association
TMI	Thomas McInerney
TPC	Town Planning Committee
TPLR	*Town Planning Review*
TWA	Taylor Woodrow-Anglian
u	Unit (of RDA in Birmingham)
UDC	Urban District Council
White	R. B. White, *Prefabrication: A History of its Development in Great Britain*, 1965
YDG	Yorkshire Development Group
Yorke & Gibberd	F. R. S. Yorke & F. Gibberd, *The Modern Flat*, 1937
#, *	information incomplete/supplied directly by housing authority

Bibliography

HOUSING BIBLIOGRAPHIES

Housing Centre Bookshop, London, *Catalogue of British Housing Books in Print*, 1978

MJ 18-8-1967 pp. 2151–85

MPBW, R & D Bulletin, *Directory of Construction Statistics*, 1968

MPBW, R & D Bulletin, *Survey of R & D for the Construction Industry*, 1968

Newson T. (ed.), *A Housing Bibliography*, Birmingham University Centre for Urban and Regional Studies, 4th ed. 1982

RIBA, *Library Bulletin/Annual Review of Periodical Articles* (to 1973)

RIBA, *Architectural Periodicals Index* (quarterly, from 2-1974)

Scott-Brown, D. 'Little Magazines in Architecture and Urbanism', *Journal of the American Institute of Planners*, July 1968

Stewart J. M. (University of Lancaster Department of Social Administration), *Housing Bibliography: Subject Classification*, 1976

Town Planning Institute, *Planning Research*, various editions/dates

See also Note 16, Chapter 13

MODERN HOUSING ARCHITECTURE

AR special issues, November 1967 and September 1970

CHAC Design of Dwellings Subcommittee and Ministry of Town and Country Planning Study Group, *Report* (Dudley Report), 1944

Cleeve Barr, A. W. *Public Authority Housing*, 1958

Coleman, A. *Utopia on Trial*, 1985

DHS/SDD, *Scottish Housing Handbook* (various parts)

DoE, Design Bulletins, Nos. 1-, 1962-; before 1962, see MHLG

Edwards, A. M. *The Design of Suburbia: A Critical Study in Environmental History*, 1981.

Marmot, A. N. F. 'How High Should They Live? The Role of Architects and Planners in the Design of High Rise Housing in England and Wales', PhD Univ. of Calif., Berkeley, 1984

McCutcheon, R. *High Flats in Britain, 1945–1971*, 1971 (M Sc Sussex University)

MoH, *Housing Manual*, 1944

MoH, *Housing Manual*, 1949

MHLG, Design Bulletins, Nos. 1-, 1962-

MHLG, *Flats and Houses 1958, Design and Economy*, 1958

MHLG, *Good Design in Housing Awards*, various years

MHLG, *Homes for Today and Tomorrow* (report by CHAC: 'Parker Morris Report'), 1961

MHLG, *Houses 1952*, 1952

MHLG, *Living in Flats* (report by Flats Sub-Committee of CHAC), 1952

Nuttgens, P. *The Home Front*, 1989

Owens, G. R. 'Mixed Development in Local Authority Housing in England and Wales 1945–1970', PhD (London), 1987

Ravetz, A. *Model Estate*, 1974

RIBA, *Symposium on High Flats*, 1955 (also see *JRIBA* March/April 1955)

Rybczynski, W. *Home: A Short History of an Idea*, 1988

Scoffham, P. A. *The Shape of British Housing*, 1984

SHAC, *Council House Communities*, 1970

SHAC, *Planning our New Homes*, 1944

University of Manchester School of Architecture, *Access in Dwellings*, 1974

Many other noteworthy architectural BA and MA theses have been produced by the departments of Cambridge University, Newcastle-upon-Tyne University, and London University Bartlett School

Flats (Gen.): see also Notes 2, 16 in Chapter 4; 7 in 7; 10 in 15; 29 in 18

MODERN ARCHITECTURE AND DESIGN: GENERAL

Allan, J. *Berthold Lubetkin*, 1992

Ford B. (ed.), *The Cambridge Guide to the Arts in Britain since the War*, vol. 9, Cambridge, 1988

Harris, J. & S. Hyde, G. Smith, *1966 and All That: Design and the Consumer in Britain, 1960–1969* (catalogue to 1986 exhibition, Manchester Whitworth Art Gallery, published London 1986)

Jackson, A. *The Politics of Architecture: A History of Modern Architecture in Britain*, 1970

Lyall, S. *The State of British Architecture*, 1980

RIBA, *Directory of Practices* (various years)

Saint, A. *The Image of the Architect*, 1983

Saint, A. *Towards a Social Architecture: The Role of School Building in Post-War England*, 1987

Strike, J. *Construction into Design: The Influence of New Methods of Construction on Architectural Design, 1690–1990*, 1991

'30 Years on: A Chronological Guide to Key Events', *AJ* 6-10-1976

Modern Architecture (General): see also Notes 5, 6, 67 in Chapter 1; 14, 22 in 12; 43, 47, 78 in 15; 67 in 19

Modern Architecture in Britain: see also Notes 9, 12 in Chapter 1; 2 in 4; 40 in 10; 9, 12 in 11; 44 in 15; 40 in 16; 2, 3, 4, 9 in 18

HOUSING AND TOWN PLANNING

Burns, W. *New Towns for Old*, 1963

Esher, L. *A Broken Wave*, 1981

Gibberd, F. *Town Design*, 1953

Heap, D. *Encyclopedia of Planning Law and Practice*, 1959 (Sweet and Maxwell Local Government Library)

Johnson-Marshall, P. *Rebuilding Cities*, 1966

Martin, Sir L. *Between Two Ideals: The Garden City and the New Architecture*, Martin Centre for Architectural and Urban Studies, Cambridge, 1976, pp. 197–201

MHLG, *Density of Residential Areas*, 1952

MHLG, *Design in Town and Village*, Parts 1–3, 1953

MHLG & MT, Planning Bulletins, Nos. 1-, 1962-

Ravetz, A. *Remaking Cities*, 1980

Stone, P. A. *Urban Development in Britain*, vol. 1, 1970

HOUSING CONSTRUCTION/BUILDING ORGANISATION

Cement and Concrete Association, *Housing from the Factory*, 1962

Deeson A. F. L. (ed.), *The Comprehensive Industrialised Building Systems Manual*, 1965

Diamant, R. M. E. *Industrialised Building* (vols. 1, 2), 1964, 1965

Finnimore, B. *Houses from the Factory*, 1989

Hilton, W. S. *Building by Direct Labour*, 1954

Ministry of Works, *Postwar Building Studies*, No. 1 1944 etc.

Powell, C. G. *An Economic History of the British Building Industry*, 1980

Russell, B. *Building Systems, Industrialization and Architecture*, 1981

HOUSING POLICY/STATISTICS

Balchin, P. N. *Housing Policy: An Introduction*, 1985

Begg, T. *50 Special Years*, 1987

Bowley, M. *Housing and the State*, 1945

Brett, C. E. B. *Housing a Divided Community*, 1986

Burnett, J. *A Social History of Housing, 1815–1970*, 1986 (2nd ed.)

DHS/SDD, *Housing Return for Scotland*, various dates

Donnison, D. V. *The Government of Housing*, 1967

Dunleavy, P. *The Politics of Mass Housing in Britain, 1945–1975*, 1981 (and PhD, Oxford University, 1981)

Fuerst, J. S. *Public Housing in Europe and America*, 1974

GLC, *Greater London Research* (Quarterly), 1967

Guerrand, R.-H. *Une Europe en construction*, Paris 1992

Lamb P. (ed.), *Encyclopedia of Housing Law and Practice*, 1958 (Sweet and Maxwell Local Government Library)

Lowe, S. & D. Hughes, *A New Century of Social Housing*, 1991

Malpass, P. & A. Murie, *Housing Policy and Practice*, 1990 (3rd ed.)

Merrett, S. *State Housing in Britain*, 1979

Ministry of Health and Local Government/Ministry of Development, *Housing Return for Northern Ireland*, various dates

MHLG, *Housing Return for England and Wales* (to 1966), *Housing Statistics* (from 1967)

MHLG, *New Houses for Old*, 1954

MHLG, *Old Houses into New Homes*, 1968

NIHT and SSHA, *Annual Reports* (various dates)

SDD, *The Older Houses in Scotland*, 1968

SHAC, *Modernising our Homes*, 1947

Smith, Mary E. H. *A Guide to Housing*, 1971

Stafford, D. C. *The Economics of Housing Policy*, 1978

Wynn M. (ed.), *Housing in Europe*, 1984

Young, K. & P. L. Garside, *Metropolitan London*, 1982

Young, K. & J. Kramer, *Strategy and Conflict in London Housing*, 1978

GOVERNMENT: CENTRAL AND LOCAL

Brittan, S. *The Treasury under the Tories, 1951–1964*, 1964

Chester, D. N. *Central and Local Government*, 1951

Cockburn, C. *The Local State*, 1977

Management and Personnel Office, *Civil Service Yearbook* (previously *Imperial Calendar*) (various dates)

Municipal Yearbook (various dates)

Pottinger, G. *The Secretaries of State for Scotland*, 1979

Scottish Government Yearbook (various dates)

Scottish Municipal Annual (various dates)

Warren, J. H. *The English Local Government System*, 1946

Warren, J. H. *The Local Government Service*, 1952

Name Index

Note: References to individual housing schemes/locations in the text and illustrations are grouped by local-authority area; however, individual development entries in the Gazetteers (other than NIHT schemes) are not indexed.

Aalto, Alvar 11
Abbots Langley BRS Experimental Houses 19–20
Abbots Langley BRS Experimental Maisonettes 78
Abercrombie, Sir Patrick 53, 97, 104, 106, 111, 158–9, 172, 220, 240, 296
Aberdare 369
Aberdeen 239–40, 322, 326, 367, 380, 396, 405
  Ashgrove VIII 240
  Chapel St/Skene St 240
  Cornhill/Stockethill 240
  Hazlehead 240
  Hutcheon St 240
  Jasmine Pl 322
  Mastrick 240
  Seaton 198, 213, 240, 396, *213*
  Tillydrone-Hayton 240
Aberdeen County Council 315
Abrahams, Cllr Mrs. 260
'Addison Acts' 198
Airdrie 179, 367, 380
Air Raid Precaution Committees 95
Aitken, J. M. 292, 295
Alexander, Christopher 13, 144
Allen, W. 280
Allen, W. A. 73
Amis, S. F.: see HKPA
Amos, F. J. C. 255, 329
Andover 376–7
Andrews, J. 295–6
Apps, E. 253
Archigram 93, 132
Architect and Building News 61
Architects' Co-Partnership *142*
Architects' Journal 3, 13, 104–5
Architectural Association (London) 127, 131, *131*
Architectural Design 9, 105, 125
Architectural Review 3, 13, 105, 107–8, 117, 119, 121, 134, 144, 307, 310, *118*
Architectural Science Board (RIBA) 13
Aristotle 127
Armitage, J. 329
Armour, J. 240
Armstrong, Edward 71, 105, 113
Arup, Ove Sir, and Partners 73, 78, 204, *78*, *119*
Ashford 161, 360, 377, 392
Ashton-under-Lyne 358
Association for Planning and Regional Reconstruction 13
Association of Building Technicians (ABT) 13, 24–5, 104, *35*
Attlee, Clement 95
Audenshaw 376
Averty, Senator J. 328
Ayr 239, 367
Baird, C. 320
Balchin, J. *274*
Balderstone, A. 322–3, 329
Balency 83
Ballantyne Report 177
Banham, Reyner 90, 91, 93, 105, 107–8, 127, 132, 309
Bannerman, D. G. 239
Banstead 377
Banwell Committee 201
Barlow Report 158–9
Barnsley 365
Barr, A. W. Cleeve 2, 9, 13, 19, 28–9, 32, 61–2, 67–8, 72, 75, 78, 80, 93, 108, 110–2, 183–5, 187–9, 201, 248, 256, 258, 298, 329, 394, *30*, *60*, *79*, *90*, *147*, *185*
Barrhead 367
Basildon 252, 360, 377
  Laindon 4 and 5, Mellow Purges *148*
  Ghyllgrove *31*, *118*
Basingstoke 360
Bath 362, 378
Bauer-Wurster, Catharine 102
Beaumaris 381
Beddoe, J. E. 307, 329
Bedford 263, 360, 377, 400, *COLOUR XIII*
  Ashburnham Rd 77
Beevers, W. 260
Belfast/Belfast Urban Area 173, 285–7, 289–90, 292–3, 295–300, 303, 366, 380, 402–3
  Andersonstown 289
  Annadale Embankment 298
  Ardcarn 298, 367
  Artillery St 289–90, 298
  Belvoir Pk 289, 367
  Black Mountain 314
  Braniel 288, 298, 367
  Carrickfergus *288*
  Clara Park 298
  Cregagh 288–9, 291, 293, 298, 367
  Cullingtree Rd 295, 299–301, 314, 367, 380, *301*
  Dunmurry 367
  Falls Rd 289
  Finaghy 367
  Lisburn, Old Warren 367
  Lower Donegall Rd 300
  Lower Shankill 289, 314
  Mount Vernon *297*
  Newtownabbey *299*
  Rathcoole 288, 298, 314, 367, *297*, *COLOUR XVI*
  Rushpark 367, *297*
  Sandy Row 300
  Seymour Hill 298
  Suffolk 314
  Tullycarnet 298, 300, 367
  Turf Lodge 289, 299
  Upper Library St 289, 293, 299, *290*, *314*
  Victoria Barracks (Carlisle Devt) 291–3, 298–9
Belgium 171, 179
Bellahøj 182
Bellamy, A. A. 29, 68, 184–5, 198, 270, 394, 396, 400
Bent, J. Austen 172, 205, 255
Bercott, Baron 226, 329
Bergman, D. 253
Bertram, Anthony 14
Bevan, Aneurin 95, 110, 175
Billingham 357, 376
Bilston 363
Bingley 365
Birkenhead 204, 322, 358, 376
  Eldon St/Oak St 405, *321*
Birmingham 2, 32, 62, 87, 132, 160–1, 166–8, 172, 178–9, 186, 189, 191, 194, 201, 203–5, 212, 218, 224, 228, 240, 243–4, 247–8, 251, 255, 258, 264–5, 307, 313, 363–4, 379, 392, 396, 399, 404, *180*, *247*
  Bell's Lane *192*, *250*
  Castle Bromwich Airfield 198, 248, 251–2, *249*
  Chelmsley Wood 251–2, 254, *253*
  Civic Centre Site *252*
  Cranes Pk 179, *180*
  Duddeston-Nechells Redevt 55, 75, 167, *25*, *167*
  Lee Bank RDA *168*
  Long Nuke Rd 386
  Small Heath 248
  Ward End Hall 179
  Woodgate Valley 252
  Wythall 248
Bishop, H. 259
Bison: see Concrete Ltd
Blackburn 358, 377, *88*
Blackpool 358
Blackshaw, M. B. 201
Blanchland, Northumberland *118*
Bletchley 360, 377
Boddy, J. W. 255
Bolton 358
Bon, Christoph 94
Booker, C. 307, 309
Bootle 160, 358, 377
Bor, W. 255, 329
Borg, N. 248
Bosch, Hieronymus 168
Bovis Ltd 83, 318
Bowder, K. 263–4
Bowen, W. 248, 251
Bowie, G. 199, 201, 203, 209, 230, 329, *230*
Boyce, S. 271
Boyd, Kenneth *31*, *118*
Bracknell 360, 377
Bradbeer, H. 167
Bradbury, Ronald 97, 163–4, 255–6

Braddock, John 161, 163–4, 254–5, *164, 254*
Bradford 365, 380
Braem, R. 171
Brain, R. 276
Brannan, H. 239–40, 329
Brentwood 360
Brett, Lionel (Lord Esher) 11, 56, 105, 312, 377, *31, 118*
Bridgwater 362, 378
Bridgwater & Shepheard *31*
Bridlington 380
Brierley Hill 364
Brighton 173, 176, 215, 263, 360, 377
Bristol 62, 160, 205–9, 213, 263, 362, 378, 396
  Redcliffe Devt *70*
British Lift Slab 83
Brooke, Henry 177, 181, 184, 194, 216, 248, 266, 318, *160, 184*
Brown, George 195, 200
Brown, Neave 142
Brown, S. P. 22
Brown, Tatton 134
Browne, J. Nixon 170, 177
Bruce, R. 158
Bryant, C. & Son Ltd 191, 205, 209, 243, 248, 251, 254, 398, *192, 249–50, 253*
Bryson, H. 287, 289
Buckhaven and Methil 207, 367
The Builder 55, 106, 191
Building Design Partnership 299
Building Research Station/Establishment 13, 19, 73, 78, 83, 203, 217, 386
Bullock, Nicholas 382, 384
Bunton, Sam 5, 77, 82, 119, 154, 170–2, 203, 221–2, 225, 228, 232, 234–5, 298, 392, 396, *55, 154, 171, 172, 233*
Bunton, Sam Jnr. 318, 329
Burnley 358
Burns, Wilfred 102, 105
Burrell, R. J. 269
Burt Committee 13, 73
Buteux, H. 189, 193, 239, *225*

Cairncross, J. 288
Cairns, J. G. H. D. *139*
Calders (Northern) Ltd 187
Callaghan, James 315
Callan Wilson, J. 224
Calvert, J. G. 287, 293
Calvocoressi, Peter 1
Cambridge 345, 370
Cambuslang 239
Cameron, P. 213
Campbell, George 232, 234, *233*
Campbell, Kenneth 91, 188, 193, 203, 314, 329
Campbell, Louise 382
Camus Ltd 82, 83, 93, 189, 191, 203–4, 208, 215, 239, 248, 254, 255, 256, 280, 396, *83, 84*
Cantacuzino, Sherban 108, 133, 116
Canterbury 377
Cardiff 176, 198, 369, 381, 400
Carlisle 376
Carlton Ltd 212
Carr, E. 278, *279*
Carroll, J. 277
Carter, E. J. 94, *40*
Carter, P. J. *52, 125*
Carver, G. 263
Carvill Ltd 298
Caspon 189
Casson, Sir Hugh 32, 54, 109, *54*
Cement and Concrete Association 188
Cement Marketing Company 39
Cementone *COLOUR V*
Central Housing Advisory Committee (England) 185
Central Scottish Programme 236
Chadderton 358
Chamberlin, Powell & Bon 61, 120, 144, 146, 269, 329–30, *32, 63, 120*
Chamelion System 87
Channon, P. 313
Chapman, W. Dobson 240
Chatham 360, 377
Chelmsford 185, 360
Cheltenham 362
Chertsey 360
Cheshunt 360, 377
Chester 358
Chesterton 370
Chichester-Clark, J. *294*
CIAM 97, 121, 131, 171, 225, 235
Citizen Party 263
Clark, Edward 246
CLASP 188, 190, 264, 394
Clay, J. 258–9
Cleveland, Ohio 87
Clougher, Valley 380
'Cluster' 121–2, 125, 127, 134, 147, *128*
Clydebank 170–1, 203, 215, 290, 367, 369, 380
  Central RDA 55
  Melbourne Ave 82
Clyde Valley Regional Plan 158, 195, 224, 259, *COLOUR VIII*
Coatbridge 179, 367
Cohen, Karl 165, 189, 206, 260, 262, 312, 315, *165*
Coignet 189
Coleman, A. 319, 325–7
Colquhoun, A. H. *52*
Combs, H. 256
Committee for the Industrial and Scientific Provision of Housing 13
Committee on Housing Research 296, 298
Comprehensive Development Areas (CDAs) 169–70, 220, 222, 225–7, 243, 246, 256, 269–70
Concrete Ltd 83, 87, 93, 189, 203–5, 209, 212–3, 228, 230, 239, 248, 276–7, 298, 325, 396, *86–7, 212, 250, 257, COLOUR XIV*
Connell Ward and Lucas 104–5, 107
Conservative Party 110, 159–60, 162, 164, 183–4, 186, 194, 209, 215, 217, 254–5, 258, 263–4, 277, 280, 313, 393; see also Moderate/Progressive/Unionist (Scotland) Parties
Cooper, P. *306*
Copcutt, G. 239
Corby 370
Corfield, F. 195
Corner, Harry 237, 329
Costain Ltd 84, 164
Cotton, A. 278
Council for the Preservation of Rural England 157
Council for Research on Housing Construction 39
'Counterattack' 119
County of London Plan 26, 31, 38–9, 99, 116, 155, *40–1, COLOUR III, VI*
Coventry 55, 87, 99, 105, 132, 166, 172, 186, 190, 193, 205, 239, 263, 364, 396
  Barras Heath 386
  Braydon Rd (Houghton Estate) 101–2
  Hillfields 263
  Manor Guildhouse (Bell Green) 383
  Spon End 263
  Tile Hill 82, 179, *76*
Cowie, Evelyn E. *8*
Cox, Oliver 13, 104, 108, 162, 184, 187–8, 266, 329, *57, 60, 147*
Craig, W. 292, 296, *294*
Craigavon 296, 314, 380
Cramlington 376
Cramond, R. D. 153, 178, 239, 245, 329
Crawley 166–7, 360, 377
Crewe 358
Crosby (MB) 215, 358, *214*
Crosby, Theo 94, 105, 125, 135, 186, 215, 358
Cross, Lewis 3, 156, 207, 224–8, 230, 232, 234–5, 237, 244–6, 252–3, 258, 269, 397–8
Crossman, Richard 196–7, 245, 251, 294, *247, 279*
Crudens Ltd 83, 199, 201–2, 215, 230, 241, 243, 276, 316, *230–1, 242, 261*
Cullen, Gordon 16, 106, 117, *17, 118*
Culpin, Clifford 116
Culross 195
Cumbernauld 117, 133–4, 142, 154, 239, 367, 380, *98, COLOUR XII*
Cutler, H. 275, 280, 313–4, 320, 329
Cwmbran 369, 381
  Chestnut Green *88*

Daily Mail Postwar Book of Homes 15
Dalton, H. 175
Darbourne & Darke 93, 133, 135, 145, 318, 329, *141*
Darlaston 364, 379
Davidson, J. 188
Day, Nigel M. 387
Demers, Joan 127
Denby, Elizabeth 2, 24, 38, 44, 53, 112–3, 116–7
Denington, Evelyn (Lady) 3, 104, 155, 166, 176, 188, 265, 269, 273–5, 329, 401, *274*
Denmark 90, 179, 182, 318: see also overseas influence
Dennis, Norman 102
Densities in Residential Areas 112
Department of Economic Affairs 195
Department of the Environment (England) 313
Department of Health for Scotland 158–9, 168, 170–1, 175, 177–82, 186–7, 189, 192, 194–5, 201, 203–4, 220–2, 224, 226–8, 291, 293, 393–4, 396–7
Derby 345, 370
Derry 285–7, 289, 291, 298–300, 303, 314, 403
  Bogside 300
  Creggan 300
  Rossville St 291, 300, 303, 367, 380, *302*
  Shantallow 302–3
Descartes, René 105
Design Bulletins (MHLG/DoE) 13, 184
Diamond, H. 300
Dickson, H. 241
Dimson, G. 314
Dixon-Ward, F. 282, 329
Dollan, P. 158, 221, 235
Doncaster 365
Donnison, D. 195
Dorking 360
Dover 360, 377
Downpatrick 287
Drancy, La Muette 56
Droitwich 379
Dron, R. 241, 329
Dublin, Ballymun 405
Dubuffet, Jean 122
Dudley (CB) 364, 379

Dudley Report 26, 31, 36, 56, 67, 102, 111–2, *16–17*
Dumbarton 367, 380
Dumfries 179
Dunbar 381
Duncan, J. 222
Dundee 63, 156, 199, 201, 207–8, 215, 239, 243, 252, 318, 367, 369, 381, 398, *240*
Ardler 203, 241, 262, *241*
Derby St 241
Hilltown 241
Maxwelltown 241
Menzieshill *67*
Whitfield 207, 243, *242*
'Dundee Dossier' 240
Dunfermline 207, 367
Dunican, Peter 62, 75, 78, 80, 97
Dunleavy, Patrick 4, 156, 327
Durrant, Ruth: see Glass, Ruth

Earle, J. H. 189
'Easiform' 80
Eastbourne 360, 377
Eastern Europe 83
East Kilbride 99, 158, 239, 367, 381
East Lothian 161, 381
Eccles 358
Edinburgh 65, 154, 179, 201, 213, 215, 237, 239, 245, 315, 367, 381, 398
Carnegie St 237
Couper St 322–3
Gracemount *202*
Holyrood 237, 245
Jamaica St *238*
Leith Fort *238*, *COLOUR XI*
Muirhouse II (incl. Martello Ct) 215, 321, 326, 397, 405, *43*, *216*, *238*
Niddrie Marischal 325
Wester Hailes 315, *316*
Edinburgh University Architectural Research Unit 13, 189–90
EDLO 196, 217, 264, 276–7, 396, *217*, *278*
Edwards, A. 271, 329
Edwards, A. Trystan 27
Egerton Report 19, 20, 80, 108
Elland 365, 380
Ellesmere Port 358
Elstree 357, 360, 377
Emberton, Joseph 70, *48*
Emberton, Franck & Tardrew 270, *68*
Emberton, Tardrew Ptrs *136*
Entwistle, Cllr 254–5
Erskine 381
Erskine, Ralph 142, 376, *143*
Esher, Lord: see Brett, L.
Eton 353
Exeter 362, 379

Fagan, S. (Fred) 274, 278, 280, 329, *279*
Falkirk 203, 207, 368
Family and Kinship in East London 103
Family Houses 1: see London (Greater), West Ham
Farrans Ltd 298
Farrow Ltd 212, *273*
Faulkner, B. *294*
Felling 260, 357, 376
Festival of Britain (London 1951) 75, 91
Fflint 369
Fife 191, 212, 368
Finch, G. 209
Finnimore, Brian 4, 156, 190
Fitt, Gerry 299–300
Fitzsimmons, W. *294*
5M 93, 188–9, 192, 205, 209
Flats and Houses 1958 29, 184–5, 394, *33*, *51*
Flat Slab Method 77
Fleming, J. 227, 329
Foote, R. *277*
Forshaw, J. H. 94, 97, 112–4, 142, *44*
Fram 189–90
Frampton, Kenneth 9
France 68, 83, 203–4; see also overseas influence
Frankfurt am Main, Römerstadt 111
Fraser, Ronald 182, 227, 329
Freeson, R. 176, 271–2, 280, 329
Frome 379
Fry, E. Maxwell 35, 78, 97, 99, 113, *10*, *44*, *98*
Fulham Study: see London
Fuller, Richard Buckminster 13, 93
Furneaux-Jordan, Robert 104, 108

Gabb, D. 329
Galashiels 381
Galbraith, Commander 170
Galloway, D. *148*
Garchey System 68, *69*
Garden Cities and Town Planning Association: see Town and Country Planning Association
Garden City 24, 29, 37, 42, 97, 102, 104, 116–7, 144, 157–8
Garven, Police Judge Maisie C. 245
Gas, Light & Coke Company 13
Gateshead 260, 357, 376
Chandless Area Redevt *261*
Gaudin, Senator J. E. 328
Gazzard, R. 260
Geddes, Sir Patrick 101
General Improvement Areas 313
George, S. 264, 329
Georgian Architecture 106, 144
Gibberd, Sir Frederick 29, 31, 53–5, 76, 91, 99, 104–5, 110–2, 116, 125, 132, 146, 181–2, 264, 288, *31*, *54*, *92*, *98*, *107*; see also Yorke & Gibberd
Gibraltar Housing Scheme 112
Gibson, C. W. 104
Gibson, David 3, 156, 189, 220–2, 224–5, 228, 230, 232, 234–7, 239, 243, 245–6, 248, 252, 256, 259, 269, 276, 315, 397–8, *221*, *230*
Gibson, Donald 105, 172, 190, 263
Gibson, Sadie 235, 329, *221*
Gilbert, S. W. 184
Gilbert-Ash Ltd 84, 189, 209, 277
Gillett, J. 275
Gilmour, Andrew 134, 329
Glasgow 3, 4, 26–7, 29, 32, 62, 65, 74, 77, 80, 82, 87, 153, 158, 160–2, 168, 171–2, 177–9, 183, 189, 191, 193, 201, 203–4, 212–3, 215–6, 220, 224–5, 228, 232, 235, 239–40, 243–5, 248, 251, 259, 263, 271, 275, 290, 315, 319, 368–9, 381, 392, 397–8, *178*
Anderston Cross 222, 235
Blairdardie South 228
Blawarthill *223*
Bridgeton 235
Broomloan Rd 208
5 Cardowan Rd *230*
Castlemilk 158
City Chambers 235
Coll St *234*
Cranhill Ext *230*
Darnley 322
Drumchapel 386, *154*
Easterhouse 183, 219
Gallowgate 'A' (Bluevale St) 227
Glasgow Green Project *55*
Hillpark 243–6, *243–4*
Hutchesontown/Part Gorbals CDA 168–170, 222, 224, 226, 228, 239, 310, 322, 367, 392, *169–70*
Kirkton Ave 246, *223*
Knightswood 222, 235, 246, *223*
Lincoln Ave 227–8, *223*
Pollokshaws 228
Red Rd 31, 65, 75, 82, 232, 234, 237, 239, 262, 318, 321, 398, 405, *232–4*, *COLOUR X*
Royston 'A' 19, 224, 228, 232, *229*
Royston 'B' 226
Sandyhills House 226
Scotstoun House 227–8, *223*
Sighthill 227, 230, 232, 262, *230–1*
Springburn 'A' (Wellfield St) 226–7
Springburn 'B' 226
Springfield Rd Post Office 235
Summerfield 235
Toryglen North 235, *236*
Townhead 'B' 82, 246
Whiteinch 235
Glasgow Corporation 155–6, 158–60, 168, 170–2, 175, 178–9, 182, 189, 194–5, 198, 201, 203, 205, 207, 217, 219–20, 222, 225–8, 233, 236, 244, 287, 320, 322, 368, 397–8, *178*
Glass, Ruth 22, 101–2, 113, 116, 144
Gleeson Ltd 205
Glenrothes 191, 239, 368, 381
Gloucester 362, 379
Glover, Norah 106
Goldfinger, Ernö 94, *40*, *136*
Goldring, E. 269
Gorbals: see Glasgow, Hutchesontown/Part Gorbals CDA
Gosforth 357
Gosport 176, 263, 360, 377, 400
South St 263
Gourlay, S. 227–8
Gourock 368
Government of Ireland Act 1920 290
Gradidge, R. 324
Grant, W. 286, 293, 402
Gravesend 361
Great Yarmouth 370
Greater London Council 187–8, 191, 265, 273–5, 278, 280, 303, 313–4, 318, 356–7, 401, 404
Greater London Development Plan 276
Greater London Plan 157
Green, Mr and Mrs H. 195
Green, Ronald 194, 287–9, 291–5, 298–9, 303, 314, 402, *286*
Greenock 368
Greenwood, A. *197*
Greig, J. 240
Grieb, K. *60*
Grieve, R. 159, 170–1, 177, 187, 195, 227, 244–6, 315, 329
Grimsby 365
Gropius, Walter 9, 11, 39, 42, 53, 58, 106, 111, 162, *10*, *40*
Group House Competition 132
Guernsey (Bailiwick/States of) 328, 369
Guildford 361
Gullick, E.: see Stockwell

Haddington 161
Haddow, Sir D. 187, 195
Haddow, T. H. 171
Halen, Siedlung 146

Halesowen 162, 364, 379, 404–5
Halford, C. *284*
Halifax 365, 380
'Hallamshire' 189, 205
Hambleton, N. 213, 379
Hamburg, Grindelberg 75
Hamilton (Burgh) 368
Hamilton, I. D. 226–7
'Hard' Group 91, 108, 121
Häring, Hugo 11
Harlow 99, 252, 263, 361, 377, *98*
  Bishopsfield 146, 310, *146*
  Gt Parndon *149*
  Mark Hall 31, 54, 76, 113, *54*
Harris, T. S. 263
Harrison, Max 25
Hartlepool 376
Hartley, F. 263, 329
Harvey, K. 195, 253
Hastings (CB) 357, 361
Hastings, H. de Cronin 107–8
Hatfield 361, 377
  Roe Green 105
Havant 361
Haverhill 370
Hayes, F. O. 280, 282, 318, *138*, *140–1*, *COLOUR I*, *VII*
Hayward, Sir I. 265
Hebburn 357, 376
Hemel Hempstead 361, 377
  Adeyfield *118*
Henderson, Judith 121
Henning & Chitty *75*
Herne Bay 357, 361
Hertfordshire Schools 12–13, 74, 91, 106
Heywood 256, 377, *205*
Highton Report 154
Hilberseimer, Ludwig 39, 146
Hill, Octavia 95, 287
HKPA (Howell, Killick, Partridge & Amis) 105, 125, 330, *59*, *126*, *COLOUR IV*
HLM societies 178
Hoddesdon 361
Hodgkinson, Patrick 146, *140*
Hoey, C. D. 296
Holford, W. G. (Lord) 99, 110, 120
Hollamby, E. E. 61, 108, 120, 198, 209, 275, 278, 280, 282, 329, *62*, *279*
Holland, Sir Milner 265
Holland, Hannen & Cubitt Ltd 83
Holyhead 369
The Home and its Setting 134
Homer, D. W. 259
Hong Kong Housing Authority 200
Hood, Jim 222, *224*
Hook New Town Project 117, 142
Horne, Dr 170
Houghton-le-Spring 376
Housing Act (N.I.) 1945 286
Housing and Town Development (Scotland) Act 159–60, 175, 180, 198
Housing Centre 13
Housing from the Factory 188
Housing Manuals (MHLG) 22, 97, 110
Housing Revenue Accounts 194, 198
Housing Review 105
Housing Treatment Areas 315
Houston 159
Hove 263, 361, 400
Howard, Sir Ebenezer 97, 102, 116, 158
Howell, W. G.: see HKPA
Huddersfield 365
Hughes, P. L. 209, 257–8
Hull: see Kingston-upon-Hull
Huntingdon 357
Hyde 358

ICA 121
Independent Group 121
Independent Labour Party 220–2, 225, 232, 235–6, 244, 259, 397
ILP Guild of Youth 221
Initial Development Plan (Greater London) 276
Inverclyde 368
Ipswich 195, 345
Irvine 245, 368
Isle of Man 328
Italian Hill Towns 131, 134

Jackblock 83
Jacobs, Jane 13, 103, 134, 142, 309
Jacobsen, A. 187
Jarrow 215, 357, 397
Jellicoe, Geoffrey 106, *119*
Jenkinson, Rev C. 165
Jensen, Major Rolf 38, 61, 112, 269, *56*
Jephcott, P. 315
Jersey (Bailiwick/States of) 328, 369, 405
Jespersen 189, 191, 209, 215, 276, 396, *211*; see also 12M
Joint Development Unit (DHS-SSHA) 182, 189, 192, 227
Johnson-Marshall, Percy 31, 99, 104, 108, 119, 158, 176, 189, 257, 267, 329, *136*, *266*
Johnston, T. 158, 171
Johnstone 368
Jones, C. 184
Jones, E. 302–3
Jones, J. M. 212
Joseph, Sir K. 61, 183–4, 186, 189, 191, 195, 256, 258, 273, 319–20, 329, 394–5, *184*, *186*
Journal of the Royal Institute of British Architects 13
Joyce, T. 181–2, 217
Jury, A. 168, 171, 180, 182, 222, 226, 228, 329, 393

Kadleigh, Sergei 38, 61, 76, 145, 269, 390, *119*
Kamenka, H. 14, 19, 113
Kaufmann, Gerd *136*
Keay, Sir Lancelot H. 67, 69, 94, 163, 168
Keighley 366
Keith, G. McI. 240
Kelly, H. F. G. 226–7, 246
Kenilworth Group 110
Kennedy, T. 257
Kennet, Lord 313, 329
Kenyon, A. W. 106
Kernohan, J. 230, 246, 329
Kidderminster 364
  Hurcott Rd 248, 251, 379, 396
Killick, J.: see HKPA
Killingworth 260, 316, *261*
Killyleagh 380
Kilmarnock 245
  New Farm Loch 245
Kincardine-on-Forth 212, 398
King, Alf 218, 329, *277*
Kingsclere 378
Kingston-upon-Hull 189, 213, 266, 380
  Linnaeus St *85*
  Orchard Pk 213
Kingswood 362
Kirkbright, A. *259*
Kirkby 163, 207, 254, 319, 358, 405
Kirkcaldy 87, 228, 368, 381
  Pathhead *214*
  Valley Gdns 19, *15*

Klemming, H. *54*
Knight, H. R. E. *143*
Knottingley 366
Kresse, L. 396
Kunstler, P. 102
Kuper, Leo 60, 101, 103, 111

Labour Party 24, 159–60, 162, 164, 166–7, 170–1, 174, 178, 181–3, 186, 191, 195–7, 205, 215–6, 220–2, 232, 235, 240–1, 245, 247–8, 255, 258, 263–4, 275, 277–8, 280, 313–4, 318; see also Independent Labour Party
Laidlaw Ltd 213
Laing Ltd 75, 80, 83, 187, 189, 191–2, 201–2, 205, 208–9, 230, 239, 255–6, 276, 281–2, 298–300, 394, *88*, *136*, *211*, *236*, *283–4*, *288*
Laird, Michael 103
Lambert, Harold 105, 131, 205, 254, 260, 262, 320, 329
Lanark County Council 191, 208, 239, 240, 271, 315, 368
Lancaster (MB) 358, 377
Lancaster, Osbert 106
Lang, S. 108
Larne 298, 367
Larsen-Nielsen 82, 84, 187–8, 203–4, 208, 212, *188*, *208*
Lasdun, Denys (Sir) 108–9, 121, 125, 310, 329, *47*, *77*, *128*
Laughlin, R. W. 298
Lawrence, D. H. 120
Lawrence, J., Ltd 207, 298
Le Corbusier 11, 27, 35, 58, 92–3, 100, 106–110, 112–3, 116, 122, 134, 144, 146, 385, 390
Ledeboer, Judith 95, 11
Leeds 160, 163, 165–6, 189, 194, 204–5, 213, 216, 224, 240, 244, 247, 251, 260, 262, 312, 326, 366, 380, 396, *165*
  Leek St 308, *85*
  Quarry Hill 26, 35, 67, 69, 71, 75, 80, 82, 104, 165
  Saxton Gdns 165
  Wellington Hill *206*
  Whinmoor 312
Lee Valley 275
Leicester 239, 263, 345, 370
  Highfields North 264
  Rowlatts Hill 264, *COLOUR XIV*
Leigh 377
Leith 153, 237, 239
Lennox, R. 240, 329
Leslie 381
Lewis, J. Whitfield 3, 104, 108, 330, *ii*, *147*
Leyland 377
Lichfield 364, 379, 396
Lighting of Buildings Report 36, 38, 56
Lincoln 345, 370
Ling, Arthur 55, 99, 116, 186, 190, 263, 269, 329, *COLOUR VI*
Lipton, M. *279*
Liverpool 32, 65, 83, 99, 160, 163–4, 166, 168, 171–2, 175–6, 178, 191, 193, 203–4, 215, 240, 247–8, 254, 259, 260, 322, 326, 358–9, 377, 399, *164*
  Beechwood Rd 164
  Boundary St (Logan Towers) *83*
  Cantril Farm 255
  Classic Rd 255
  East Lancashire Rd (Coronation Ct) *164*
  Everton 164, 255
  Garibaldi St 165

Harding St 165
Netherley 255
Quarry Green 255
Sefton Pk 164
Sheil Rd 255
Speke 168
Livett, R. A. H. 104, 165, 205
Livingston 209, 239, 315, 387
Craigshill *211*
Llangefni 369, 381
Llanrwst 381
Llewellyn Ltd 212
Llewellyn-Davies, Richard (Lord) 91
London/Greater London (within area defined by 'GLC boundary') 155, 160, 162, 176–7, 186, 194, 197–8, 209, 212–3, 215, 217, 224, 247, 251, 265, 273, 276, 313, 317, 335–6, 345–357, 370, 400–2
Specific locations, public housing (arranged by local-authority areas; pre- and post-1965 combined):
Action MB 274, 277, 346, 371
Barking LB 313, 353, 356, 375, 404
Barking MB 204, 271, 346, 371
Barnet LB 353, 356–7, 375–6
Grahame Pk 275, 313, *274*
Battersea MB 267, 346, 351, 371, 373, 397
Beckenham MB 371
Beddington MB 371
Bermondsey MB 154–5, 177, 184, 216–7, 280–2, 346, 351, 373, 393
Brandram's Works 188
Eugenia Rd 270
Bexley LB 353, 401
Bethnal Green MB 103, 177, 267, 280, 346, 351, 373, 405
Usk St/Claredale St 125–7, *128*
Brent LB 271, 274, 277, 353, 375
Chalkhill *273*
Brentford MB 277, 346, 371
Bromley LB 353
Bromley MB 371
Camberwell MB 270, 280, 318, 346, 351, 371, 373
Acorn Pl 135, 280, *141*
Avondale Sq 267
Bonamy/Delaford 134–5, 280, *140*; *COLOUR I*
Picton St 74–5, 78, 80, 187, 201, 208, *60, 79*
Secaux Estate 280
Camden LB 278, 313, 353, 356–7, 375, 405
Alexandra Rd 142, 144
Foundling Estate 135, 144, *140*
Mill Lane *137*
Chelsea MB 180, 269–70, 346, 371, 401
Cremorne Estate 269
West Chelsea Extended Area (World's End) 269–70, 317, *138*
Chislehurst UD 353
City of London 180, 267, 278, 345, 371
Barbican 61, 119, 120, 269, 317, *120*, *COLOUR XV*
Golden Lane 39, 62, 76, 105, 116, 121–2, 144, *63, 123*
Crayford UD 346, 371, 401
Croydon CB 176, 209, 271, 346, 371
Croydon LB 276, 353
Dagenham MB 103, 271, 346, 371
Deptford MB 176, 277, 347, 351, 373
Royal Victoria Yard 142, 266, *143*
Ealing LB 197, 277, 353, 356, 375, 404
Ealing MB 347
East Ham CB 271, 347, 371, 401
Edmonton MB 181, 217, 264, 270, 347, 371
Fore St 182
Enfield LB 217, 276–7, 353, 375, *197*
Angel Rd South 196, 217
Barbot St 217, *278*
Edmonton Green *217*
Enfield MB 347
Erith MB 347
Feltham MB 347
Finchley MB 347
Finsbury MB 39, 62, 65, 77–8, 91, 108, 213, 270, 280, 347, 351, 371, 373
Brunswick Close 70, *47*
Busaco St 270, *45, 66*
Clarke's Close 270
Galway St 270
Holford Sq *77, 115*
King Sq *68*
Rosebery Ave 70, *45, 69, 78, 107, 114*
Friern Barnet UD 371
Fulham MB 176, 347, 351, 376
Greenwich LB 270, 277, 353, 356, 375–6
Kidbrooke 209, 274–5
Woolwich-Erith (Thamesmead) 61, 135, 142, 209, 275, 317, *139*
Greenwich MB 347, 351, 371, 373
Hackney LB 208, 280, 353, 356, 375, 376
Downs Rd 274
Hackney MB 155, 162, 347, 351, 372–3
Bentham Rd *81*
Evelyn Ct 386
Paragon Rd 162
Shacklewell Rd/Somerford Grove 31, 112, *31, 107*
Hammersmith LB 267, 280, 353, 356, 375, 376
Charecroft Redevt 120
Latimer Rd South 280, *267–8*
White City 196–7, *30*
Hammersmith MB 347, 351, 372, 374, 397
Hampstead MB 347, 351, 372, 374
Abbey Estate *135*
Haringey LB 278, 353, 375
Broadwater Farm *279*
Harrow LB 277, 375
Harrow MB 372
Havering LB 353, 375
Hayes UD 347
Hendon MB 101–2, 347
Heston & Isleworth MB 347
Hillingdon LB 353, 375
Holborn MB 104, 180, 348, 351, 372
Great Ormond St Area *75*
Hornchurch UD 348, 372
Hornsey MB 348, 372
Hounslow LB 218, 275, 277, 353, 356, 375–6
Brentford Dock 275
Brentford Waterworks *277*
Heston Farm 275
Ivy Bridge Farm 271, 317–8, *317*
Ilford MB 348, 372
Islington LB 274–5, 280, 313, 353, 356, 375–6
Alsen Rd 318
City Rd *281*
Islington MB 348, 372, 374
Hilldrop Estate *34*
Kensington & Chelsea LB 280, 355–6, 375–6
Edenham St *136*
Kensington MB 348, 357, 372, 374
Kingston LB 275, 355
Kingston MB 348, 372
Lambeth LB 193, 198, 209, 274–5, 278–9, 313, 355–6, 375–6, 401
Brixton Project 61
Central Hill 280, 282
Clarence Ave *279*
Ethelred St *142*
Hurley Rd *211*
Lambeth Rd 278
Leigham Ct Rd 274
Lambeth MB 348, 352, 372, 374
Cedars Estate 134
Loughborough Rd 19, *58*
Lewisham LB 277, 317, 355–6, 375–6
Evelyn Estate 276
Grove Pk Rd 266
Milton Ct Rd Stage III 276
Lewisham MB 348, 352, 372, 374
Whitefoot Lane 78
Leyton MB 194, 209, 271, 348, 372
Oliver Close *195*
Merton LB 277, 355, 375
Merton UD 348
Mitcham MB 348, 372
Newham LB 208, 276, 313, 355, 375
Clever Rd/Mortlake Rd (including Ronan Point) 264, 313, 315–6, 325, *208*
Queen's Rd Market *277*
Paddington MB 61, 266, 269, 271, 348, 352, 372–4, 400
Bishop's Bridge Rd (Hallfield Est) 19, 23, 26, 108–9, 127, 269, *47, 77*
Church St 76
Mileage Yard 269
Perkins Heights Project 269, 385, *56*
Walterton Rd 188, *89*
Warwick Crescent 62, 160, 194, 209, 266, 275
Penge UD 348
Poplar MB 267, 280, 348, 352, 372, 374
Abbott Rd 155
Blair St *107*
Lansbury 104, 105, 267, *31*
Mellish St 83
Stepney/Poplar Reconstruction Area 31, 58, 119, 176, 266
Tidey St 62, 270, 401, *64*
Redbridge LB 275, 355–6, 375
Richmond LB 355, 375
Richmond MB 348
Romford MB 348, 372
Ruislip-Northwood UD 271
St Marylebone 180, 275, 349, 352, 372
St Pancras MB 62, 270, 280, 349, 352, 372
Regent's Park Area 76
St Pancras Way 75, *42*
Shoreditch MB 155, 207, 265, 267, 270, 280, 349, 352, 372, 374, 396, 400, 405
Kingsland and St Mary's Estate *268*
Southall MB 185, 274, 349
Southgate MB 349, 372
Ellington Ct 386
Southwark LB 132, 275, 278, 280, 313, 318, 326, 355–6, 375, 401
Aylesbury Devt Area 280, 282, 326, *283–4*
Camden Redevt Area *138*, *COLOUR VII*
Dawson's Hill 93, 282, *284*
Heygate Devt Area 70, 282, 319
N Peckham Devt Area 282, 318, 326
Southwark MB 267, 280, 349, 352, 373–4

Brandon Estate 20, 62, 80, 120, 266, 312, *20*, *62*
Stepney MB 160, 267, 270, 274, 280, 349, 352, 373–4
Bede Rd 271, *272*
Clive St *51*, *64*, *267*
Pelling St 265
St Anne's 267
Smithy St *267*
Stepney-Poplar Reconstruction Area 31, 58, 119, 176, 266
Stoke Newington MB 349, 351, 373–4
Woodberry Down Estate 113, *44*
Sutton LB 277, 355, 357, 375–6
Sutton MB 350, 373
Croydon Airport 271
Tottenham MB 291, 350, 373
Tower Hamlets LB 191, 274, 280, 355, 357, 375–6
Alpha Grove *COLOUR II*
Lefevre Rd 300
Mansford Buildings Area Stage I *87*
Monteith Rd *212*
Robin Hood Lane *124*
Rowlett St *136*
Watney St Market 188, 387, *89*, *266*
Twickenham MB 350, 373
Waltham Forest LB 277, 355, 375
Cambridge Rd *278*
Cathall Rd 276
Walthamstow MB 350, 373
Countess Rd 76, *47*, *50*
Wandsworth LB 278, 356–7, 375–6
Doddington Rd 276, *136*
Wandsworth Stadium 280
Wandsworth MB 155, 267, 270, 350, 353, 373–4
Notre Dame 155
Roehampton:
(General) 19, 54, 66, 106, 108, 125, 134, *57*
Portsmouth Rd (Alton East) 31–2, 55, 56, 58, 70–1, 76, 80, 109, 114, 179, 182, 203, 209, 240, 265, 280, *51*, *57*
Princes Way (Ackroydon) 31–2, *ii*
Roehampton Lane (Alton West) 58, 70, 76, 78, 80, 91, 105, 113, *51*, *59*, *COLOUR IV*
Ryde Vale Rd 87
Trinity Rd 80, 280, *60*
Wanstead MB 103, 350
Wembley MB 271, 274, 277, 350, 373
Chalkhill RDA 271
West Ham CB 173, 208, 216, 248, 271, 350, 373
Eastwood/Barnwood Rds 208
Fife/Totnes Exeter Rd Devt *147*
'Family Houses I', Ravenscroft Rd 146, 184, 189, 192, *147*
Westminster LB 278, 356–7, 375–6
Lisson Green 275
Westminster MB 62, 180, 350, 373
Hide Pl 80, *82*
Lillington St 93, 133, 135, 144, 318, *141*
Pimlico (Churchill Gdns) 19, 27, 39, 66, 76–77, 104, 270, *46*, *51*
Willesden MB 176, 271, 274, 277, 280, 350, 373
Lower Pl 271
South Kilburn RDA 176, 271
Stonebridge RDA 271
Wood Green MB 271, 350
Woolwich MB 155, 270, 277, 350, 352, 373–4
Morris Walk Areas 187–8, 208, *188*
Specific locations, non-public housing:
Boston Manor 112, 117, 120
Brett Manor, Hackney 78, 384
Dolphin Sq 19, 38
Dorset House *49*
Fulham Study 135, 186
Ham Common 133
High Paddington 61, 76, 106, 119, 145, 390, *119*
High Point I and II, Highgate 25, 39, 77, 108, *77*
Islington AA Project 131
Kensal House 71, 113, *44*
Lawn Rd 25
'Low Kensington' 125, 131, 144, *126*
Paddington Housing Project (AA) *131*
Pullman Ct 39
St Pancras Housing Project 146
St Paul's Precinct 120
Soho 'Glass Age' Project 61, 119–20, *119*
London County Council (gen.) 153–6, 160–2, 166, 168, 171–2, 174–7, 179, 184, 186–9, 191, 193–4, 201, 203, 205, 208, 216, 225–6, 251, 260, 263–7, 269, 271, 274, 278, 280, 313, 351–3, 373–4, 392, 400–1, *51–2*, *64*, *89*, *145*, *188*
LCC Architect's Dept 3–4, 13–4, 22, 26–9, 31–2, 38, 53, 55–6, 58, 62, 69–70, 72, 77–8, 82–3, 101–2, 104ff., 108, 121, 132, 134, 145, 187–8, 221, 226, 235, 265, 312, 394, 400–1, *52*
Londonderry: see Derry
London Government Act 1963 265, 271, 275, 280
London Housing Consortium 190, 217
Longbenton 259–60, 357, 376
Killingworth 260, 316, *261*
Lothingland 370
Lowe, R. 277
Lowestoft 345
Lubetkin, Berthold 25, 39, 73, 77–8, 91, 95, 104–5, 108–9, 111, 113, 121, 213, 270, 329, *45*, *66*, *69*, *77–8*, *107*, *114–5*
Lucas, Colin 104, 188, 265, *57*, *59*, *COLOUR IV*
Lund, K. 208, 329
Lurgan 296
Luton 361, 378, 404
Lutyens, Sir E. 106
Lymm 172
Lynch, Kevin 127
Lynn, Jack 105, 127, *129–31*
Lyons, Eric 77, 269, *138*

Mabon, Dr. J. Dickson 179, 191, 245–6, 252, 315, 329, 398, *245*
McAllister, G & E.G. 9
McAteer, E. 302–3
Macclesfield 209, 359, 377
McClure, James *224*
McColl, S. 239
McConnell, B. *294*
McGuinness, James 159, 171, 177, 195
McGuinness, Joe 226
McInerney Ltd 318
McKee, Sir C. 296
McKee F. B. Ltd 298
Maclay, J. S. 224
MacLeod, W. Arnott 215, *216*, *238*
Macmillan, Harold 153, 156, 175, 181, 186
Macmillan, T. 271
Macpherson-Rait, A. 171, 228
Macrae, E. 154
McWilliam, C. 315
McWilliam, G. Alexander 189, 257, *136*
Madge, Charles 102
Magee, Frank 240
Maidenhead 361
Maidstone 361, 378
Malmstrøm, P. E. 204
Manchester 160–1, 172, 176, 178, 189, 194–5, 204, 209, 215–6, 220, 240, 247, 254–6, 258, 260, 263, 298, 313, 359, 377, 393, 399, *205*
Beswick-Bradford 313
Gibson St (Longsight) 134, 144, *256–7*
Harpurhey 313
Hollyhedge Roundabout 255
Hulme 256, 258
Victoria Ave East 257
Wythenshawe 256
Manchester Housing Development Group 256–7
Mann, J. 158, 235, 243
Mansley, R. 246
Manzoni, H. 166–7, 179, 248, 267, *25*
Mardle, Jonathan 22
Margate 361
MARS Group 73, 97, 106, *98*
Marseilles, Unité d'Habitation 27, 58, 75, 91, 100, 108, 109, 113, 116, 119, 122, 144, 146
Marshall, Ald. Sir James 176
Martin, Leslie (Sir) 28, 146, *10*, *140*
Martin & March 309
Maryport 376
Mass Observation 25, 26, 308
Matthew, Robert (Sir) 104, 110, 140, 159, 168, 189, 226–8, 235, 295–6, *137*
Matthews & Mumby 215, 316, *214*, *259*
Maudsley, J. A. 243, 252–4, 258, 264–5, *251–2*
Medway Ltd 215
Meldrum, P. 170–1, 221
Melford 370
Mellish, R. (Lord) 196, 218, 245, 256, 267, 274–6, 278, 280, 282, 313, 319, 329, 395, 401, *196*
Mellor, F. 166
Melton Mowbray 370
Menai Bridge 369, 381
Mendelsohn, Erich 106
Meredith, J. Nelson 70
Merstham 374
Merthyr Tydfil 369
Metropolitan Boroughs Standing Joint Committee 176–7, 269
Middlesborough 102, 376
Middlesex County Council 162, 185, 271, 273
Midlands Housing Consortium 189–90, 209, 263–4, 395
Midlands New Towns Society 248
Mies van der Rohe, Ludwig 11, 121
Milefanti, D. 276, 329
Miles, Frank 166
Millar, J. S. 256
Millard, D. 257
Miller, S., Ltd 261
Mills, E. D. 73, 78, 384, *119*
Milton Keynes 133, 144, 378
Ministry of Commerce (N.I.) 289
Ministry of Development (N.I.) 292, 296, 298, 302
Ministry of Education (England/Wales) 182, 184–5, 188
Ministry of Finance (N.I.) 288–9, 291–5
Ministry of Health (England/Wales) 97
Ministry of Health and Local Government (N.I.) 194, 286–7, 291–6, 299
Ministry of Housing and Local Government

(England/Wales) 13, 31–2, 62, 112, 145–6, 157, 159, 162–3, 172, 175–7, 179–82, 184–91, 194–8, 204, 209, 216, 248, 254, 257–8, 264–6, 269, 271, 275–6, 294, 296, 313–4, 317, 392–3, 395, 404, *37*
Ministry of Public Building and Works (England/Wales) 190, 395
Ministry of Town and Country Planning (England/Wales) 54, 159
Mitchell, A. 200, 329
Mitchell, Craig 171
Mitchell, G. D. 102
Mitchell, M. 167
Model Clauses (1938) 37
Moderate Party 240
Modern Homes Exhibition (Glasgow) 169
Moira 296
Money Bill 275
Monmouth 381
Montréal, Habitat 132
Moore, T. 241
Mopin construction 80
Morgan, T. 329
Morgan, W. 293, 295, *294*
Morris, Beeban 184
Morris, William 108
Morris, R. N. & Mogey, J. 101, 102
Morris, Sir Parker 104; see also Parker Morris Report
Morrison, H. 154, 265
Morriss & Jacombs Ltd 248, 253
Motherwell 156, 179, 218, 236–7, 244, 322, 368
Flemington *237*
Muirhouse 218, 236, *237*
Parkhead St 75
Mowlem Ltd 13
Mumford, Lewis 97, 102, 110, 111
Murphy, Canon 300
Mussolini, B. 171

National Building Agency (NBA) 13, 190–1, 280, 298
National Council for Social Service 13
National Housing and Town Planning Council 13
National Housing Plan' 195–7
National Playing Fields Association 71
Netherlands 69, 113; see also overseas influences
Newcastle under Lyme 319
Newcastle-upon-Tyne 65, 160, 162, 179, 215, 180–1, 199, 259, 264, 313, 326, 357, 376, 396, 399, *181*
Adelaide Terrace 260
Byker Devt 142, *143*
Cruddas Park (Scotswood Rd) 181, 199, 313, *259–60*
Heaton Park Rd 259
Shieldfield 259
Newman, Oscar 310, 319, 325
Newmarket 345
Newport 369, 381, 404
Newry 287, 367
Newton, Len 263, 329
Newton Aycliffe 376
New Towns Act 1946 158
New Windsor 316, 378
New York City 39, 56, 171, 232; see also overseas influence
Neylan & Ungless 146, 282, 329, *146*
Nickson, D. 164
Nicoll, R. E. 168, 171, 219, 225–7, 244–5, 329
Nobbes, A. R. 213
Nonhebel, G. 270
Norman & Dawbarn 104, *42*
North, T. E. 208, 248
Northampton 105, 132, 345, 370
King's Heath 127
Northern Ireland Housing Executive 315
Northern Ireland Housing Trust 2, 4, 29, 132, 209, 286–9, 291–3, 296–300, 302–3, 314–5, 367, 380, 402–4, *297, 299, COLOUR XVI*
Northfleet 198, 361
North Shields, Meadowwell Estate 325
Northumberland 260
Norwich 22, 132, 172, 176, 193, 226, 263, 306, 345, 371, 391
Globe Place/Vauxhall St *67*
Philadelphia Lane 215
Nottingham 160, 213, 264, 316, 345, 370
Balloon Wood *85*
Nottinghamshire 190
Nuneaton 379

Oadby 345
O'Brien, J. 282
O'Brien, L. 287, 291
Oddie, Guy 93
O'Grady, J. 282
Oldbury 364
Oldham 176, 201, 215, 359
St Mary's 102, 189, 208–9, 215, 257, 377, *88*
Sholver 257
Old Houses into New Homes 313
Oliver, J. A. 286, 288, 292, 295, 329
Oliver, W. 289, 299
O'Neill, T. 296, 314, *294*
'Operation Revitalize' 260, 313
Orlit 298
Orwell, J. 280
Osborn, Sir Frederick 24, 26, 38, 42, 117, 132, 157–60, 162, 173, 244, 248, 259, 392–3, *157*
'Outrage' 119
Owens, Ruth 56, 112, 156
Oxford 361, 378
Blackbird Leys 201

Paisley 369, 381, 398
George St 75
Paris 254
World's Fair (1937) *25*
Parker, Dame Dehra 287, 292–3
Parker Morris Report (CHAC) 14, 16, 21, 65, 71, 72, 132, 174, 183, 185–6, 191, 194, 275, 296, 315, 394, *17*
Parker & Unwin 97
Park Hill: see Sheffield, Park Hill
Parkinson, Sir Lindsay Ltd *284*
Partington, T. 215
Partridge, J. A.: see HKPA
Paterson, J. L. 169, 330
Pearman, Wolf 257
Peebles Hydro 215, 236
Pepper, R. 277
Percival, David 104, 172, 263, 330, *67*
Perry, A. H. 258
Perry, Clarence 97
Perth 182, 369
Peterborough 345
Peterlee 376
Pevsner, Nikolaus (Sir) 54, 91, 105, 108–9, *10*
Philbin, Most Rev Dr W. J. *300*
Pilkington Bros. Ltd.: 61, *119*
Plato 96
Plymouth 362, 379
Pollock, Jackson 122
Pontefract 366, 380
Pontypool 369
Poole 362
Portadown 296
Port Glasgow 369, 396
Portsmouth 166, 173, 194, 205, 263, 361, 378, 396
Leigh Pk 166
Nelson St 166
Postwar Building Studies 13
Poulton-le-Fylde 377
Powell, M. C. L. *57*
Powell & Moya 27, 39, 104, 108–9, 270, 330, 389, *46*
'Prairie Towns' 106, 117, 121
Prentice, Brigadier 207, 228
Preston 359, 377, *43*
Avenham Devt 133–4, 201, 310, 396, *133*
Prestonpans, Inchview 146
Price, Sir Uvedale 108
Prince Charles 178, 326
Principles of Modern Building 73
Progressive Party 168, 170, 237–8, 245
Prudential Assurance 186
Public Works Loan Board 161
Pugin, A. W. 326
Purley *52*

Queens University, Belfast 296

Rachmanism 183, 265, 394
Radburn layout 69, 97, 100, 111, 134, 248, *98*
Ramsgate 213, 361
Rangers F. C. 235, 392
Rankin, W. *107*
Rapier, W. 318
Ravetz, Alison 25, 326
Read, Sir Herbert 12
Reading 361, 378
Redditch 379
Reed, Bill 252, 330, *252*
Reema Ltd 82, 165, 187, 204–5, 208, 213, 226, 228, 239, 270, *234*
Regional Development Division 195
Reiach, A. 159, 330
Reigate 361
Reilly Green 99–100, *98, 100*
Reilly, Sir Charles Herbert 99, 108
Rendle, P. C. 174, 330
Rennie, A. 315
Rent Act 1957 179, 183, 263
Research Council for the Environment 13
Rhondda 381
Rhys Davies, Miall 212
Rice Ltd 215
Richards, J. M. 75, 104–6, 110–1, 117, 121, 189, 226, 310, *10, 107*
Richardson, Martin 93, 134, 144, 187–9, 265, 308, 330, *85*
Riley, H. 270
Rippon, G. 190
RMJM: see Matthew, R.
Robert Matthew, Johnson-Marshall & Partners: see Matthew, R.
Robertson, C. 168, 330
Robertson, Mr and Mrs E. 197
Robertson, G. 172
Robertson, R. 322, 330
Rockdale 359, 377
Rochester 322, 405
Roehampton: see London, Wandsworth MB
Rogan, Pat 1, 194, 217, 237, 239, 245, 322, 330, *238*
Roman Catholic Church 221, 289–90, 330

Ronan Point: see London, Newham, Clever Rd
Roq et Rob project 132
Roskill Report 191
Ross, W. 245, *233*
Rosta, Örebro 56
Rotherham 260, 366, 380
Rotterdam, Bergpolder Flats 39, *43*
Rowe, Colin 108
Rowley Regis 3
Royal Burghs 179
Royal Commission on Housing, Scotland (1917): see Ballantyne Report
Royal Institute of British Architects (RIBA) 13, 95, 97, 101–2, 110, *10, 34, 47*
RIBA High Flats Symposium (1955) 53, 55, 383
Royal Leamington Spa 364
Royal Town Planning Institute 13
Rugby 364, 396
Runcorn 147, 359, 377
Ruskin, J. 157
Russell, B. 308
Russell, Charles 104
Rutherglen 369
Rye-Arc Ltd 271, *272*

Sacharin, W. 292
Sadia Ltd *18*
Safdie, Moshe 132
Saint, A. 12, 191, 193
St Albans 361
St Austell 362
St Clement Parish (Jersey) 369
Saint Dié 134
St Helier 328, 369, 405
Green St 369
St Peter Port 369
Sale 359
Salford 3, 160, 163, 176, 189–90, 194, 204, 216, 240, 255, 257–8, 275, 396
Ellor St 189, 257, 360, 377, *136, 163, 190, 258*
Salford City Shopping Centre 120, *258*
Salisbury 362, 378
Saltcoats 245, 369
Salter, A. 393
Samarès Marsh (Jersey) 328
Samuel, I. M. T. 220, 330, 328, 369, 405
Samuels, J. 267
Samuely, F. J. 73, 77–8, 82, *81*
Sanders, L. H. 255
Sandford, J. 320
Sandys, D. 157, 159, 175, 245, 293, 392
Sant'Elia, A. 134
Sawyer, C. 282, 330, *284*
Scales, E. W. 286
Scoffham, E. R. 147
Scotcon Ltd 201
Scottish Development Department 187, 189, 191, 195, 198, 222, 226–7, 235–7, 239–40, 244–6, 294, 296, 315, 321
Scottish National Housing and Town Planning Conference 215, 236, 398
Scottish Special Housing Association 2, 74, 80, 87, 159–60, 169, 174, 178–9, 189, 192–4, 201, 203, 207, 217, 224–5, 239, 246, 287, 293–4, 369, 381, 392
Scruton, R. 9, 324
Scunthorpe 366, 380
Sectra 83, 209, 256, 298, 300, *205, 297, 299, 301–2, COLOUR XVI*
Sefton, W. (Lord) 255, 330
Segal, Walter 27, 53, 56, 106, 133, 146
Seisdon 161
Selective Employment Tax 317
Selkirk 381
Senior, D. 172
SF1 83, 188, *89*
Shankland & Cox 113
Shankland, Graeme 120, 225
Sharp, Dame Evelyn A. 159, 161, 181–2, 184, 191, 263, 393, *159, 181*
Sharp, Thomas 26, 35–6, 38, 53, 55, 97, 109, 111, 113, 116–7, *42*
Sharratt, J. 267, 280
Shaw-Stewart, Baikie & Perry 330, *238*
Sheffield 160, 166, 189, 204–5, 217, 224, 240, 244, 247, 254, 260, 316, 366, 380, 396
Hyde Pk (Pk Hill Part 2) 131, 277–320, *262*
Netherthorpe 262, *COLOUR X*
Norfolk Pk 262
Park Hill 19, 55, 66, 69, 76, 84, 91, 94, 105, 127–33, 135, 144, 262, 391, *129–31*
University Project 122
Woodside 262
SHELTER 320–1
Shennan, Cllr 160
Shepheard, F. & Son 83
Shepherd Ltd 205, 316
Sheppard Fidler, A. G. 39, 53, 116, 134, 145, 166–8, 172, 179–80, 184, 209, 247–8, 251, 256, 330, *166*
Sheridan Shedden, J. R. 205, 251
Siberry, J. W. 198
Simon, E. D. (Sir) 99, 172, 255–6
Sitte, Camillo 116
Skarne 207, 243, 316, *242*
Skelmersdale 134, 377
SLASH 189, 237, 245
Slough 160, 353, 361
Smethwick 65, 364, 379, 399
Smigielski, W. Konrad 263, 264, 330, 400, *264*
Smith, Albert 105, 260
Smith, Ivor 105, 127, 330, *129–31*
Smith, T. Dan 181, 187, 215, 264, 313, 330, *181, 259*
Smithson, Alison & Peter 106, 116, 121–32, 135, 144, 146–7, 190, 225, 310, 330, *123–4*
Smyth, Tom 224, 228, 230, 330
Smyth, W. 255
Smythe, E. J. C. 217, 330, *196, 197*
Sneddon, Hutchison 156, 218, 236, 244, 322, 330
'Soft' Group 108
Society for Action for Children in Tower Blocks 322
Solman, Bill 330
Southampton 62, 65, 361, 378
Southend-on-Sea 209, 263, 362, *210*
Southgate, F. G. *47, 50*
South Norfolk, council housing 27
South Shields 376
Southwick 362
Sowerby Bridge 366
Spacemaker 83
'SPAN' 77, 269
Spence, Basil (Sir) 168, 170, 224, 228
Sporle, S. 276, 280, 401
Springside 221
SPUR 19, 186, 394
Stafford 364, 379
Staffordshire 161
Stalybridge 360
Stamp, Reginald 104, *ii*
Stazicker, E. H. 201
Steel Maitland, J. 1
Stein, Clarence 97, 99
Stephenson, Gordon *98*
Stevenage 99, 263, 361, 378, *118, 159*
Sish Lane 31
Stevenson, Len 215, 330
Stevenston 369
Stewart, James L. 241, 398
Stillman and Eastwick-Field 92, 208, 329, *82*
Stirling (Burgh) 381
Stirling, James (Stirling & Gowan) 108, 125, 133, 146, *133*
Stjernstedt, Rosemary 80, 108, 280, 282, 330, *57, 60*
Stockholm, Kärrtorp *54*
Reimersholme, Danviksklippan 56
Stockport 209, 360, 377
Stockwell, E. 269, 329
Stoke-on-Trent 172, 213, 364, 379
Stokesley 380
Stones, Robert 134, 144, 256, 330, *257*
Stourbridge 364, 379
Stourport 379
Stretford 194, 258, 360, 399
Chapel Lane 258, *259*
Clifford Ward Redevelopment 258
Stuart, A. A. 207
Stuart, J. 159, 179
Stubbings Ltd 248, 253
Subtopia 116, *34*
Summerson, John 105, 109
Sunbury 362, 378
Sunderland 172, 179, 208, 259, 267, 358, 376
Gilley Law 259
Hahnemann St 300, *88*
Sunley Ltd 280
Sutton Coldfield 364
Swansea 263, 369, 381
Sweden 54, 56, 71, 84, 108, 168, 318, 386; see also overseas influences
Swindon 362

Tafuri, Manfredo 9
Tamworth 364
Taunton 379
Tayler & Green 27
Taylor, Nicholas 17, 220, 307, 310, 315, 321, 330
Taylor, Rattray 102, 110
Taylor, William 235, 330
Taylor Woodrow/Taylor Woodrow-Anglian Ltd 82–3, 186–7, 189, 203, 208, 276, 278, *279*
Tay Valley Plan 240
Team X 121, 134, 146, *123–5*
Technical Advisory Panel (MHLG-local authority) 184
Tecton, see Lubetkin
Teesside (CB) 358
Teignbridge 362
Teignmouth 362
Telford 379
Tersons Ltd 205, 215, 230, 262, 272
Thanet 362
'The Next Step' (J. M. Richards) 106–8, *107*
Theobald, S. W. 263
Thetford 370
The Times 110
Theurer, G. A. 239, 245, 330
Thomas, M. Hartland *36*
Thornaby 358, 376
Thurrock 209, 263, 362, 378
Tibbits, Sir C. 209
Tindale, Pat 188
Tindall, F. 161, 330
Tipton 364, 379
Tolhurst, A. J. *64*
Tönnies, Ferdinand 101
Toothill Report 187
Tory: see Conservative/Moderate/Progressive/

(Scottish) Unionist
Town and Country Planning Association 13, 24, 157–9, 168, 244, 392, *157*
Town Development Act 1952 159
Townscape 16, 108, 112, 114, 134–5, 144, 146, 262
Townsend & Collins Ltd 276
Townson Ltd 165
Tracoba 83, 209
Trenton, Felix 280–1, *284*
Truscon Ltd 189, 203, 209, *136*
Tudor Walters Report 157
Turner, J. 201
Turriff Ltd *317*, *COLOUR XV*
12M Jespersen 83, *136*

Union of Construction and Allied Trades Technicians 317
Unionist Party (N.I.) 286, 291, 294, 296, 299–300, 302, 314, *294*
Unionist Party (Scotland) 182, 159, 195, 239
USSR 179, 203
Unit Ltd 204, 255, 298, 299, 300, *83*
USA 171, 179; see also overseas influences
Unwin, Sir Raymond 14, 37, 96–7, 99–100, 116, 157–8, 162, 173
Uthwatt Report 97

Vällingby 120
Van Eesteren 121
Vaynor Penderyn 381
Vicenza, Villa Rotonda 127
Vickers, F. *259*
Vienna 178
Vinson, A. C.
Vitruvius 10–11, 106–7, 110
Voelcker, John 122
Voluntary Association for Women 13

Waddell, J. H. 197
Wakefield 366
Wales, cultural identity of 3
Walker, Cyril 26, 69, 104, 106, 112–3, 154–5, 161, 176, 265–6, 269, *ii*, *34*
Wallasey 360, 377
Wallsend 358
Walsall 161, 209, 254, 365, 379
Walsh, J. 194, 330
Walter, Marianne 9, 22, 26, 29, 56
Walton & Weybridge 362
Warley 365, 379
Warrington 360
Washington New Town 376
Edith Ave 134
Wates Ltd 80, 83, 167, 187, 189, 194, 201, 209, 274, 276, 280, *211–2*
Wates, M. *277*
Watford 368, 378
Watkin, David 9
Watson, T. 246, 330
Watton, H. 168, 247–8, 251–2, 399, *247*
Weald, C. G. *58*, *81*
Wednesbury 365
Wednesfield 161, 365
Weemys, Frank *206*, *223*
Wellington 365
Wells Coates 25
Welsh Office 198
Welwyn Garden City 106
West, H. *294*
West Bromwich 209, 254, 365, 380
Yew Tree Estate 179
West Calder 381
Weston-super-Mare 363
West Pennine Group 209
Whickham, Ravensworth Rd 260, 358, 376
Whitstable 191, 362
Whittick, Arnold 7, 35, 42, 310
Wilkins, E. 269
Wilkinson, J. T. 189
Williams, R. 309
Willis, Mary 56, 102
Willmott, Peter 103, 144; see also Young and Wilmott
Wilson, Colin St John 78, 125, 146, *52*, *58*, *81*, *125*
Wilson, Des 321
Wilson, J. Callan 201
Wilson, L. Hugh *98*, *274*
Wimpey 80, 87, 167, 180, 201, 203, 205–7, 209, 213–5, 224, 227–30, 232, 239, 245–6, 251, 254–5, 262–4, 280, 298, 322, 396, *15*, *89*, *214*, *229*
Winchester 362
Windsor: see New Windsor
Winkler, R. O. C. 188
Wittkower, Rudolf 108
Woking 374
Wolfe, Lawrence 99
Wollkind, J. 280, 330
Wolverhampton 161, 254, 365, 380, 399
Heath Town 209, 254
Wolverton 362, 378
Womersley, Lewis 55, 105, 127, 205, 256, 262, *129–31*
Wood, A. A. 226
Wood, Kenneth 204
Woods, E. E. *267*
Worcester 365
World War I 153, 240
World War II 94, 96–7, 161
Wornum, Grey 105
Wortley 366
Wrexham 381
Queens Pk *98*
Wright, Cllr C. 197
Wright, F. L. 107
Wright, Henry 97, 99
Wycombe 378

Yale University Housing 146
Yorke & Gibberd 24–5, 36, 38, 93, *43*
Yorkshire Development Group 83, 133–4, 144, 189, 191, 205, 213, 260, 316, 322, 326, 387, 395, *85*
YRM (Yorke, Rosenberg & Mardall) 31
Young, Ald. Ben Nicholson 251
Young, M. and Willmott, P. 103, 122, 309

Zinn, W. V. 396

Subject Index

access to flats 39, 56, 58, 69, 113, *47*, *70*; see also balcony access
A frame 144, *124*
allocation of dwellings 176, 266, 269, 271, 274–5, 278, 280, 287, 302, 314, 320, 322–3, 392, 404–5
architectural drawing 117
Art Deco 106, 171
Arts and Crafts 157, 265
attacks against tower blocks 146, 244–6, 258, 299, 307, 309–11, 314–5, 319, 321–2, 324–7, 403–5

balconies 16, 77, 127
balcony access 69, 70, 135; see also deck access
bathrooms 9, 16, 25, 56, 66, 74, 84, 153, 170, 183, 308, 319, 325, 392
Beaux Arts planning 108
béton brut 92
block dwellings: see tenements
box-frame 35, 77–9, 91, 93, 108, 132
brick 74–5, 77, 80, 91, 93, 133–4, 213–4, 318, 396, 404
Brutalism: see New Brutalism
building labour 200–1, 215–7, 221, 317–8, 396–7, 404
building regulations/standards 54, 62, 74, 180
bungalows 112
byelaws: see building regulations

calculated brickwork: see brick
'carpet development' 146
cars, car parking 65, 72, 94, 134, 146, *273*
cartograms: see density
cellars 71
'cellular' 132
children in housing/children's play-spaces 71–2, 99, 113, 122, 134, 308, 321–2, 326, 386, 392, 404–5
City Beautiful Movement 99, 116
civic pride 116, 127, 153, 155–6, 158–62, 164, 170–4, 178–9, 181–3, 194, 206–7, 217–23, 227, 235–7, 239, 245, 247–8, 254, 257–60, 262–3, 265–82, 287, 296, 313, 320–1, 325, 399–400, 405
cladding 78–80, 91
coal 21, 68
colour, external 80, 91, *COLOUR V*
communal kitchens 99
communism 109, 164, 221, 317, 404
community 22, 26, 38, 70, 94ff., 101ff., 113, 116, 121–2, 127, 133, 142, 144, 147, 150
community centres 95, 101, 127
consortia 189–91, 209, 394–5
consumers: see users
contracts (building) 3, 74, 82, 155, 162, 165, 167, 187–9, 191–3, 195, 200–9, 212–7, 227–8, 230, 232, 234–5, 239–40, 243, 246, 248, 251–7, 270–1, 276, 282, 298, 315–8, 395–6, 399, 404, *212*, *COLOUR XV*
corruption 207–8, 213, 215–6, 240, 254, 276, 287, 318, 396–8
cottages 22, 24, 26, 38–9, 53, 62, 74, 113, 154, 157–8, 165, 172–3, 184–5, 188, 235, 252, 280, 288, 291, 312, 325–6, *288*, *299*
court[yard] housing 144, 146–7
courts, private: see gardens
crane: see tower crane
'crossover' maisonettes 70
crosswalls 16, 27, 35, 58, 77, 154, 386, *90*; see also box-frame
cul de sac 99, 103, 116, *98*

daylight 11, 36ff., 56, 69, 74, 111, 112, 147, 183, 225, 230, 384, *36*, *37*
decanting: see slums
deck access 69, 122, 125, 146, 154, 226, 243, 255–7, 259–60, 315, 320, *129–31*, *242*, *261–2*, *273*, *279*, *283–4*, *301–2*, *COLOUR VII*, *XV*
density 24–5, 29, 36, 61–2, 71–2, 103, 112–3, 116–7, 127, 134, 144, 146, 162, 164–5, 168, 172, 176, 185, 222, 226–8, 243, 246, 255–6, 266, 269–71, 291, 296, 392, 394, 397, *40–1*
design, freedom of 14, 38, 54, 68, 74–5, 91, 93, 105, 110, 132, 134, 153–5, 162, 166–7, 183, 191–3, 225–8, 230, 248, 251
'diminishing returns': see density
direct labour 2, 74, 163, 189, 196, 205, 207, 216–7, 230, 232, 234, 243, 257, 264, 270, 276, 280, 318, 397–8, 404, *217*
'duplex' 27
dust chutes: see refuse disposal

empiricism 106ff., 121
'enclosure': see space
Existenzminimum, kitchen for the 11, 14, 121

family 29, 31; see also sociology
fire precautions 62, 71
flat roofs 6, 39, 80, 106–7
flats/multi-storey flats (general) 3, 5, 22, 24–6, 29, 31, 38, 53, 56, 74, 93, 96, 100, 113, 146, 154–5, 158, 163, 166, 171–3, 180–1, 184, 189, 235, 244, 252, 280, 291, 312–3, 321, 324–5, 308, 393–4, 404–5
'flats versus cottages': see flats
formalism 106
freemasonry 213, 271, 392, 396
front gardens 99, 100, 144
functionalism 9, 10, 10–2, 54, 73, 91, 93–4, 106–10, 122, 389, *107*

gap sites 38, 155, 161–2, 164–5, 170, 172–3, 176–7, 198, 222, 225–7, 230, 241, 243, 246, 248, 252, 255–6, 259, 266, 269–71, 392, 397, 400, *COLOUR IX*
garages: see car parking
gardens, private 16, 61, 71, 99, 100, 110, 142, 144
Gemeinschaft und Gesellschaft 101
general needs housing 175–7, 183, 194, 263
geometry 108
green belts 157–9, 168, 176, 222, 248, 251, 295, 392, 397, *COLOUR VIII*
greenery 36, 39, 54, 61, 71–2, 96, 100, 111–2, 114, 116–7, 144, 167–8, 228, 256, 308, 325

'habitat' 121
'hammer head' 68, 142
heating 16, 18–21, 65, 71, 74, 93, 153, 308, *15*, *21*
hostels 22
hot water 18, 66, 74, *18*
'houses' (English usage): see cottages
'H' plan 56
Hügelhäuser 144
'human', humanism 109
'image' 122, 310

improvement of housing 175, 252, 280, 312–3, 315, 320, 394, 403–4
indicative costs 175, 184, 198, 295, 312, 394, 395, 404
industrialised building: see prefabrication
'inhuman' 109
insulation 80, 87
interior planning 14ff., 382, *16*, *20*

joints in construction 80, 87
journalism, architectural 106
see also language

'kasbah' 134, *148*
kitchens 14, 16, 74, 94, 153, 183, 308, 319, *17*; see also *Existenzminimum*

landscape (architecture): see greenery
language of architectural criticism 3, 106, 117, 310, 326–7
large panel construction: see prefabrication
laundries 67–7, 71, 95, 385, *66–7*
life-span, expected (of high blocks) 73
lifts 26–7, 65, 67–8, 84, 131, 142, 321, 325
loan sanction: see subsidies
low rise high density 62, 71, 91, 125, 145–7, 193, 198, 263, 280, 282, 307, *COLOUR XII*
luxury flats 25, 56, 71, *49*

maisonettes 14, 27–9, 58, 70, 77, 84, 91, 125, 127, 145, *47*, *52*, *70*, *91*, *123*, *129–31*, *136*
management of housing 12, 32, 71, 147, 263, 319, 320–3, 326, 393, 405, *306*
'medium rise' 146
megastructures 91, 120, 127, 134, 142, 147
mixed development 26, 29–34, 33, 53, 61, 71, 112, 117, 132, 146, 155, 162, 166–8, 199, 235, 269, 275, 308, 392, 393, *30*, *32*, *33*, *57*, *COLOUR II*
mobile homes 187
mobility 122, 133, 134
Modern architecture, style, aesthetics, theory 9–12, 53–6, 58, 74, 80, 90ff., 96, 105–6, 110–1, 116, 122, 153, 171, 183, 225, 235, 244, 307, 310, 326–7, 382, 403, 405, 408
'modernistic' 106
'modular' 91
municipal committees 158, 160–1, 164–6, 171–3, 179, 206, 215, 220–3, 235, 237, 240–1, 251, 253, 255, 263–4, 266
municipal ethos/pride: see civic pride
municipal finance 156, 160, 166, 170, 174,

176–180, 182, 194–5, 198–9, 253, 257, 275, 287, 292–5, 313, 393, *98*

'negative' and 'positive' planning 36, 54, 97
negotiated contracts: see contracts
neighbourhood 97, 101, 111, 117, 122, 133, 150
neighbourhood movement (American) 101
New Brutalism 91, 93, 106, 109, 121, 133
New Empiricism 108
New Humanism 109, 121
New Towns 26, 29, 38, 54–5, 61, 99, 102, 104, 106, 109, 117, 133, 134, 158–9, 220, 239, 248, 254, 263, 315, 325, 388, 392, *98*, *118*
'no detailing' 91, 106
no-fines construction 80, 87, 203, 213, 396, *89*, *214*

old people, housing of 22, 71, 263, 322
open space: see greenery/space
orientation of blocks 39, 69
overseas, influences from 1, 5, 22–3, 71, 82–3, 90, 93, 97, 144, 146, 182, 386, 388; see also under individual countries
overspill 4, 155, 157, 159–61, 163–4, 166–8, 170–2, 175, 177, 187, 195, 220–1, 240, 244, 248, 257, 266, 269, 271, 274–5, 302, 392, 397, 400, *COLOUR VIII*

'package deals': see contracts
parity 285–6, 291, 294, 314, 402
parking: see cars
participation: see users of housing
'patio housing' 125, 144, 146
pedestrian bridges, walkways 125, 127, *135ff*
pedestrianisation 134, 142
'people's detailing' 109
'People's House' 16, 159, 175, 198
photography, architectural 106, 117, 121
picturesque, aesthetic of the 108, 111, 113, 131, 147, 171, 262, 310, 326, 387
piecemeal development: see gap sites
pilotis 39, 58, 116, 142, *31*, *42*
'platform housing' 135
plumbing 66
'podium' 135
point block 53, 56, 71, 100, 109, 113–4, 132, 146, 162, 164, 181–2, 168–70, 229, 239, 240, 252, 256, 258–9, 262–3, 267, 280, 290, *ii*, *49*, *54ff*, 62, *87ff*, *213–4*, *216*, *237–8*, *268*, *272*, *279*, *COLOUR II*, *IV*, *IX*, *X*, *XI*
post-modernism 9–10
p.p.a.: see density
pre-cast concrete blocks: see prefabrication
'precinctual planning' 135
prefabrication 73–4, 77, 80, 82, 84, 87, 92–3, 154, 165, 187–92, 195–6, 203–5, 207–9, 212–5, 237, 242–3, 248, 256, 258, 264, 270, 276, 298, 315–7, 334, 387, 394–5, 409, *211–2*
'prefabs': see prefabrication
privacy 25, 27, 39, 56, 67, 69–70, 94–5, 113, 121–2, 127, 134, 142, 147, 150
psychology of housing 102, 122, 309
'puritan' 109

rationalism 1, 106, 121
refuse disposal 68, 385
rehabilitation: see improvement
reinforced concrete 75ff., 91, 133, 135, 256
religious politics 163–4, 255, 271, 289–92, 296, 298–300, 302–3, 314–5, 392, 396, 399, 402–4
rents 174, 177–9, 183, 194–5, 239, 269, 287, 289, 292–3, 328, 393, 405
'research and development' 13, 19, 73, 104, 170–1, 187–9, 192–3, 203–4, 208, 264–5, 296, 394–5
road layout 39, 111; see also streets
romanticism 108

scaffolding 74
'scissors plan' maisonettes 70, 145
'sectional design' 144
self-containedness of dwelling 22–3, 25, 71
semi-detached houses 26–7, 38, 111, 113
'set back' 144
sheds, adjacent to blocks of flats 71, 143–4
'simplicity' 12
slab block 39, 53ff., 108–9, 113–4, 132, 164, 168–70, 230, 239–40, 267, *32*, *37*, *40–52*, *58*, *59*, *75*, *77*, *81*, *163–4*, *231*, *241*
slum-clearance: see slums
slums 27, 43, 93, 134, 144, 153, 156, 158, 160, 172, 174, 175–8, 186, 194, 220, 237, 240, 243, 266–7, 277–8, 286, 288–9, 290, 298–9, 300, 302–3, 310, 312–3, 319, 320–3, 326, 328, 388, 393–5, 400, 402, 405, *34*, *178*, *184*, *186*, *COLOUR IX*
small flats 22–3, 26, 32, 70, 77
'social' 11, 22–3, 94ff., 97, 110, 163, 170, 188, 308–10, 319, 321, 325–7, 403, *COLOUR VI*
sociology 20, 71, 77, 94–5, 101, 111, 122, 387
space 14, 36–7, 39, 71, 99, 111, 116–7, 144, 146, 390
space standards 14, 154, 186–7, 394–5
'spine' 142
'stadium section' 125
'staggered' elevation 144
stairs, external 142
standardisation 11, 74
statistics of housing 1–2, 26, 65, 178–9, 331–6, 409
steel construction 74–5, 84, 167, 232–3, 398, *75*, *232–3*, *COLOUR IX*
street 36, 42, 110, 117, 122, 127; see also road layout
'street deck' 122; see also deck access
street furniture' 117
structural engineering 73
subsidies/grants/cost controls (Government) 22, 62, 67, 72, 155, 159, 166, 173–82, 184–5, 194–8, 237, 245, 286–8, 291–5, 314, 393–6, 402–4
suburban 116, 150
sunlight: see daylight
'symbols': see image
'system building': see prefabrication

tenants: see users
tenements 2, 24, 26, 38–9, 53, 62, 67, 70–1, 106, 109, 113, 117, 153–5, 158, 161–3, 168, 172–3, 177–8, 182–3, 225, 274, 315, 321, 325, 382–3, 392, 404, *34*, *154*, *316*
terraced houses 24, 27, 38, 95, 111, 132, 146, 150; see also cottages
Terrassenhäuser 144
territoriality 144
'three dimensional design' 111
toilets 16
'top hamper' 68
tower crane 74, 80, 82, 87, 217
town and country planning 29, 94, 97, 111, 117, 155, 157–9, 162, 168, 170–1, 177, 182, 187, 195, 220–1, 226, 236, 243, 245–6, 255–6, 263–4, 266, 269–71, 274, 276, 295–6, 392, 394, 397, 401, 403, *157*, *COLOUR III*, *VIII*
town development: see overspill
trade unions: see building labour
traffic separation 141–2, 147

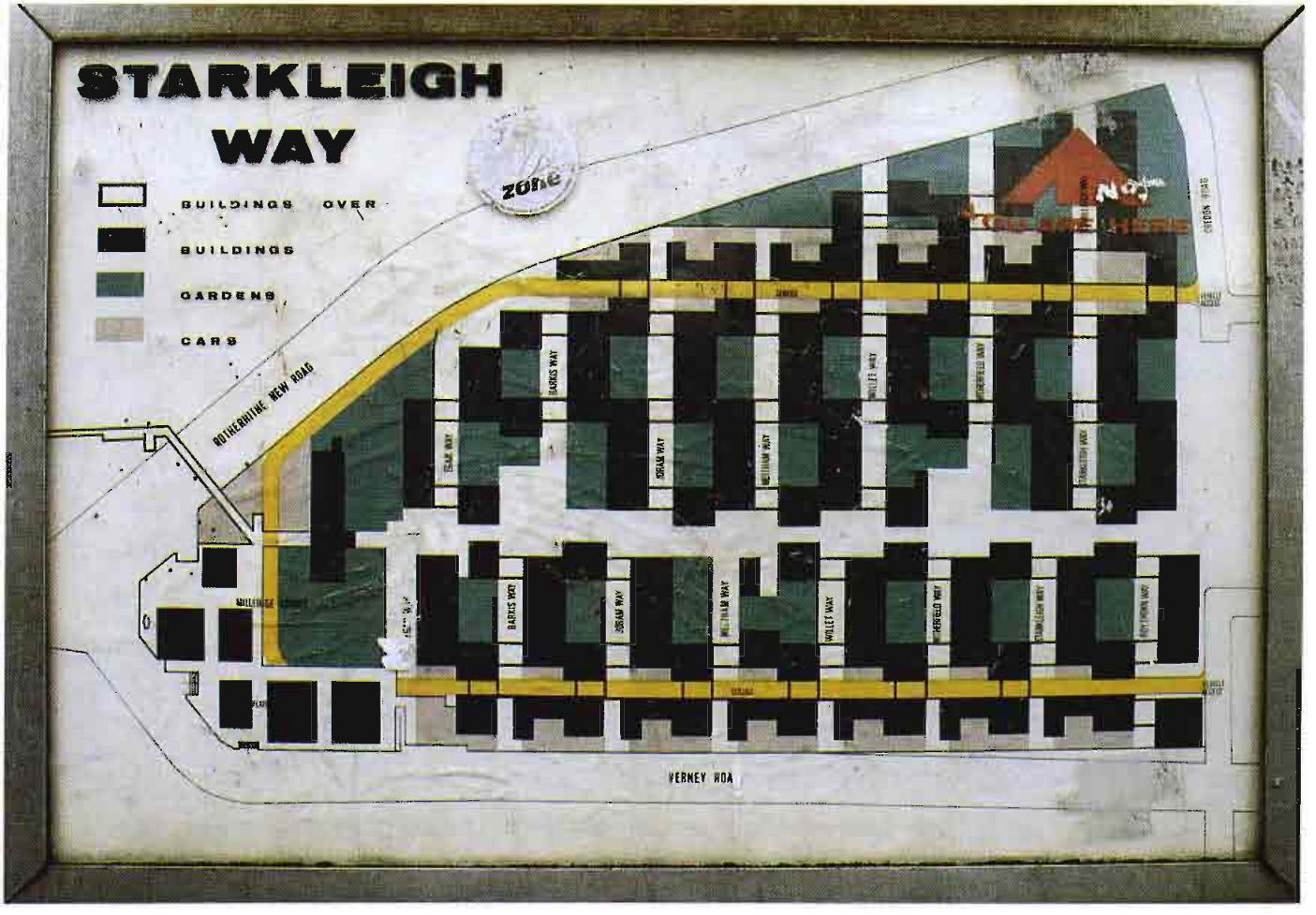
universities, new 132
'urban' 25, 61, 96, 103, 116, 119, 127, 133, 135
urban redevelopment/renewal 19, 125, 162, 168, 171, 179, 186, 236, 258, 263, 270, 282, 394, *261*, *COLOUR IX*
'urban village' 113, 116
users of housing 5–6, 66ff., 91, 95, 110, 127, 134, 142, 150, 156, 160, 163–5, 220, 235, 243, 289, 308–10, 312–3, 315, 320–6, 393, 403, 405
Utopia 9, 94, 96, 102–3, 327, 388, 405
'U Value' 80, 87

vandalism 72, 263, 310, 315, 318, 319, 322–3, 326, 399, 405, *320–1*
village 111, 116, 121, 125

waiting lists: see allocation of dwellings
Welfare State 1, 95, 110, 324
windows 35, 133, *35*, *92*
wood, use of 80
working class 96–7, 103, 107, 134, 177, 309, 320–3, 326, 393, 405

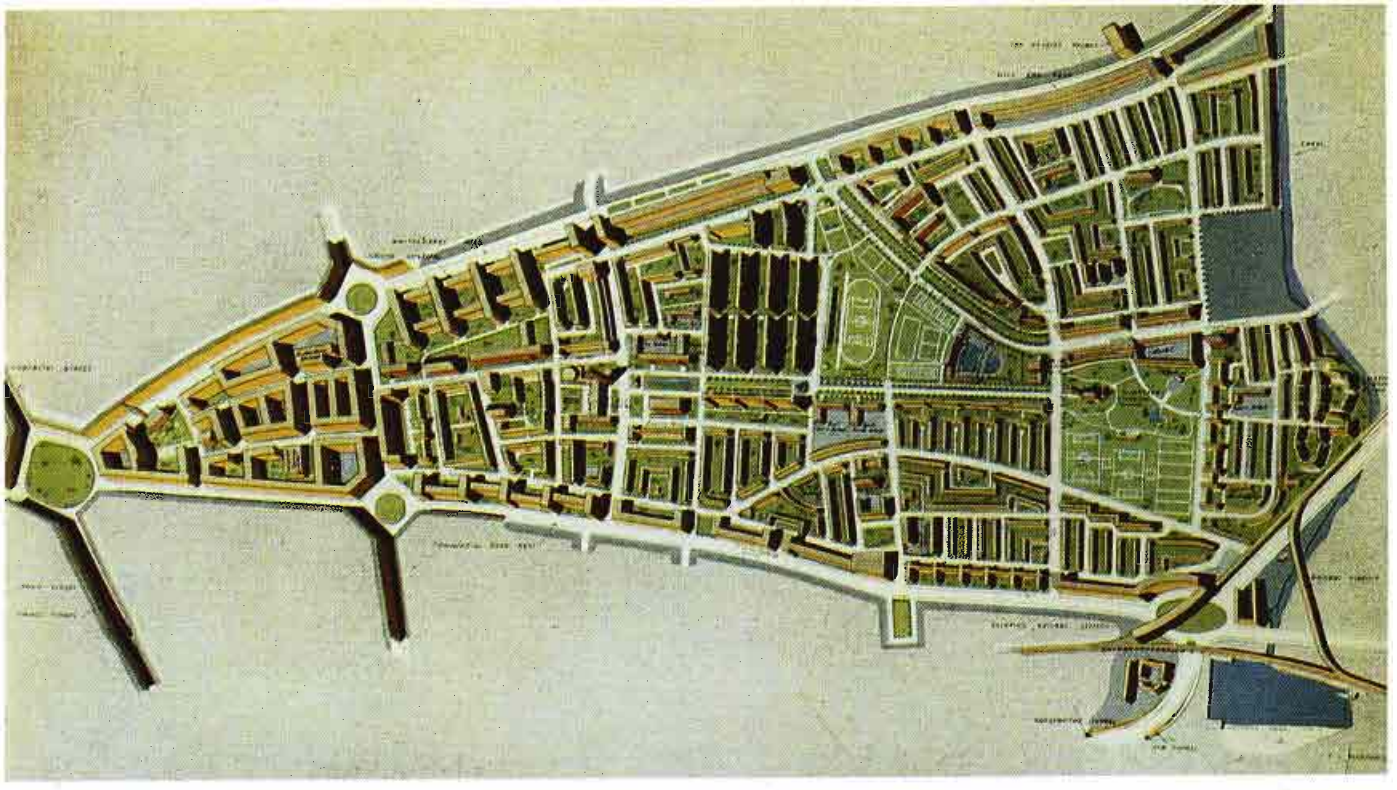
'Yardstick': see indicative costs
'Y' plan 39, 55–6

Zeilenbau 11, 39, 53, 56, 68–9, 71, 78, 100, 106, 109, 113, 121, 171, 203, 308, *40–7*, *241*
zoning: see density



I. London: Starkleigh Way forms part of the Bonamy-Delaford Development for the Metropolitan Borough of Camberwell, designed in 1964 by F. O. Hayes et al. The signboard is typical of London schemes of that period. Abstraction and intricacy were characteristics of the designers' visual language, even when it was purposely simplified (see ill. 19.12).

II. London: GLC Alpha Grove and Malabar Street Development (Barkantine Estate), Tower Hamlets, from 1965; one of the ubiquitous London examples of Mixed Development.



III. The *County of London Plan*, published in 1943 by J. H. Forshaw and P. Abercrombie, was one of a great number of planning proposals presented during and after the war which envisaged the reshaping of large parts of all towns.

IV. London: LCC Roehampton Lane (Alton West), designed 1953 under C. A. Lucas, J. A. Partridge, W. G. Howell, J. A. Killick, S. F. Amis, et al. (see ill. 7.7).

Whatever its shape or size, a building today is certain to need colour; colour outside to catch the sunshine and gladden the eye, colour inside for walls, ceilings and floors. Cementone No. 1 *Permanent* Colours for Cement are economical in use, attractive to look at: specially designed for cement rendering and concrete work, composition floors, and similar applications for buildings of every kind.

To obtain further details please write for colour shade card and full technical information.

Cementone

No. 1 PERMANENT COLOURS FOR CEMENT

JOSEPH FREEMAN SONS & CO. LTD., CEMENTONE WORKS, WANDSWORTH, LONDON, S.W.18. Telephone: VANdyke 2432 (10 lines)

10 standard shades and black, which can be intermixed to form a variety of colours in white or Portland cement.

T.A. 9295

V. Advertisement for external colouring, popular especially in the later 1950s. (*AJ* 5-7-1956)

VI. A. Ling and K. D. Johnson, 'London, Social and Functional Analysis', from the *County of London Plan* by J. H. Forshaw and P. Abercrombie, 1943; a map of '. . . Communities and Open Spaces . . . showing the existing main elements of London . . .'.

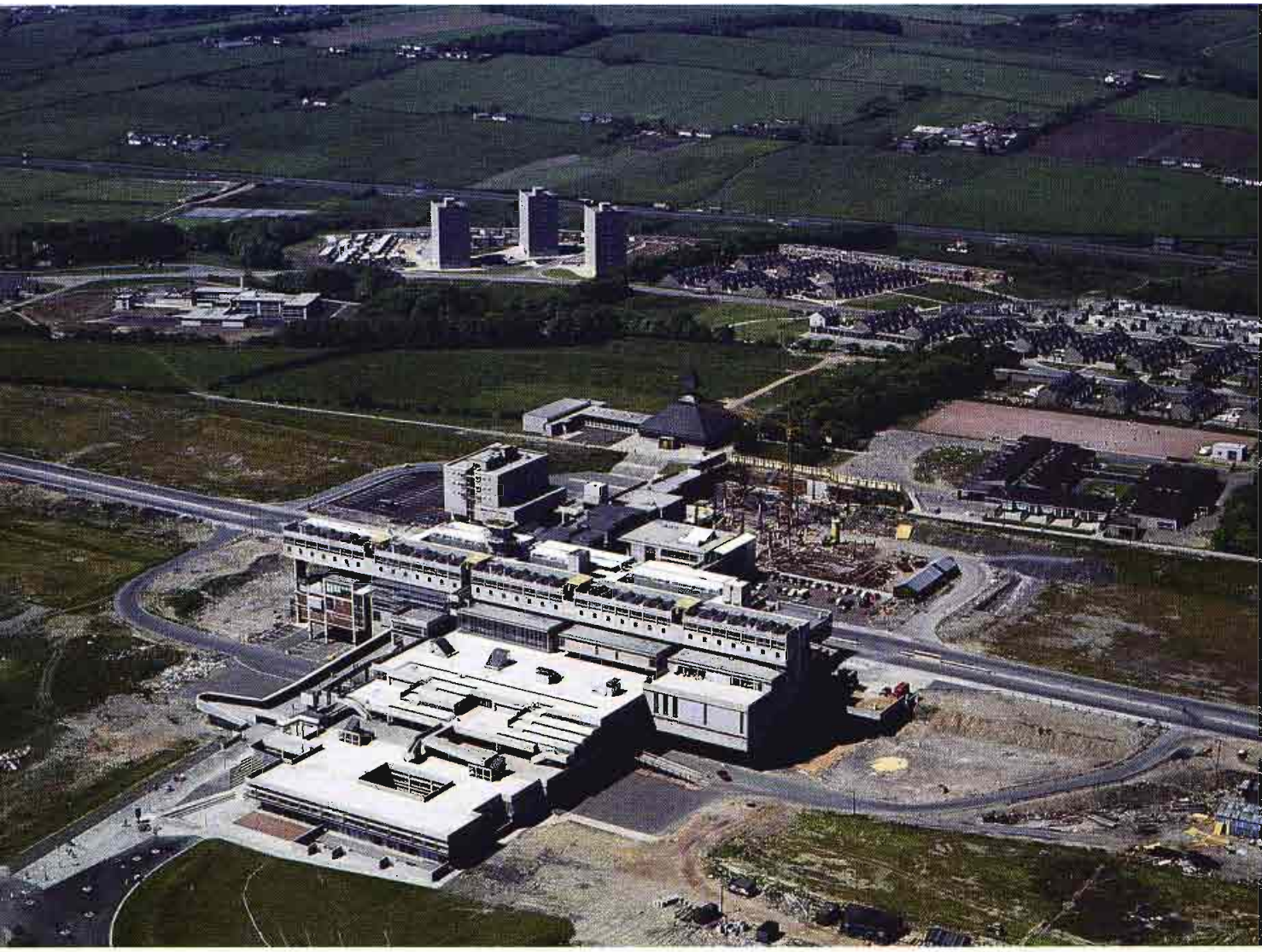
VII. London: Southwark LBC, Camden Redevelopment, 1972, designed by F. O. Hayes, et al. Late London style of design: communication and enclosure, all faced with Victorian-coloured brick.

VIII. The Land Trap: Clyde Valley Regional Plan 1946, section of Master Plan, showing Green Belt overlapping Glasgow city boundaries, and (at bottom right) the location of East Kilbride New Town. (Scottish Office Environment Department)

IX. Architect-dominated slum redevelopment: Netherthorpe Redevelopment Area, Sheffield, seen in 1959. As completed, the scheme comprised a uniform line of seven point blocks. In Oliver Cox's view, 'if it had to be developed piecemeal, you did an overall plan!' (Sheffield City Council)

X. (*Opposite*) Red Road development, Glasgow: steel framed blocks of 31 storeys (Blocks 1 and 2) under construction, 1965. Transparency taken by the job architect, Sam Bunton Junior.

XI. Leith Fort: 1990 view of the two 21-storey point blocks, showing the north-west (service) elevations.



XII. Cumbernauld New Town: view from east, 1967. At centre: Town Centre Phase I almost completed, and Phase 2 under construction. In the background: Bison point blocks and terrace housing of the Seafar and Ravenswood areas (see ill. 13.1). (Cumbernauld New Town Development Corporation)

XIII. Bedford: Central Redevelopment Area, three 12-storey blocks built in 1958–60. 1981 view of intercom call panel at entrance to one block.

XIV. Leicester: Rowlatts Hill development, 1968 view showing the two 24-storey Bison Wall-Frame point blocks, built in 1964–6 by Bryant. (British Coal)

XV. The Corporation of London's high-rental Barbican redevelopment, seen under construction in June 1968. All blocks in this view form part of the ill-fated phase II contract, awarded in 1963 to Turriff. As in the case of Hounslow's Ivy Bridge development, Turriff eventually withdrew from the project (in August 1971, nearly four years after the original scheduled completion date!) The contract was then reassigned to Laing.

XVI. The Northern Ireland Housing Trust's Rathcoole Estate, seen in 1981. On the right side is a type 'M' block of four-storey flats, built *c.*1955; at left background are the four 15-storey Sectra blocks added to the estate in 1964.