

STRUTS-IN-THE-SKY: THE RISE AND FALL
OF THE MODERN ARCHITECTURAL URBAN UTOPIA

by

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SUBMISSION FOR THE DEGREE OF DOCTOR OF PHILOSOPHY
IN THE UNIVERSITY OF SHEFFIELD
DEPARTMENT OF TOWN AND REGIONAL PLANNING

AUGUST 1982

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SUMMARY

Streets-in-the sky is a form of multi-storey working class housing which is important in today's society for two reasons.

Firstly, because street-deck housing became especially popular during the post-war rebuilding of British cities following the inter-war introduction of the idea and the successful development of the Park Hill scheme in Sheffield in the 1950's. In the 1960's, especially in the second half of the decade, the design professions, several leading local authorities, and central government undertook the development of street-deck housing throughout the United Kingdom. It proved to be especially popular, outside London, in the economically declining or static regions of England; relatively little being built in Scotland, Wales or Northern Ireland. Hence streets-in-the-sky tended to be developed in those English regions where the basic export industries of coal, iron and steel, shipbuilding and textiles were subject to the most comprehensive state-controlled restructuring. The large-scale public investment and labour resistance to change associated with industrial restructuring were therefore often partnered by a form of high density housing more acceptable to the financially overburdened local authority and the 'anti-flats' culture of the English than the economically and socially unpopular tower block.

Following the building programme there was a decline in the fortunes of modern architecture, the labour movement and the United Kingdom economy. With that decline came a pronounced reduction in the quantity and quality of this type of urban housing. In the 1970's, the poor construction, difficult access, anti-social use of the 'street' and the stigma attached to living on the estates usually led to the schemes becoming especially difficult-to-let. Thus, in a quarter of a century, this particular housing form had changed from being a central element in the modern architectural urban utopia to its opposite - a microcosm of the problems facing British cities in their decline.

Secondly street-deck housing is important because its history brings to light the contradictions between different ideas and different political and economic interests, and reveals how these contradictions can be temporarily overcome by the development of a particular form of urban housing. These patterns of conflict and consensus are not fully comprehended by existing "counter-revolutionary" and "revolutionary" theories of urban form and change. In the former case we have tried to show how the assumptions of so called "postmodernism" are incorrect. And in the latter, how a far broader interpretation of the totality (base and superstructure) is necessary as a basis to knowledge and action.

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ABBREVIATIONS

AAJ	Architectural Association Journal
AD	Architectural Design
AJ	Architects' Journal
AR	The Architectural Review
BD	building Design
BE	Built Environment
DOE	Department of the Environment
HR	Housing Review
LCC	London County Council
MILG	Ministry of Housing and Local Government
MPBW	Ministry of Public Buildings and Works
NBA	National Building Agency
NEDC	National Economic Development Council
NS	New Society
ppa/ha	people per acre/hectare
RIBA J	Royal Institute of British Architects' Journal
RTPI	Royal Town Planning Institute
TCF	Town and Country Planning

INTRODUCTION AND ACKNOWLEDGEMENTS

This is a study of a form of multi-storey housing which has been central to modern architecture and urban design and particularly important in the history of post-war British urban working-class housing renewal. The importance of so called streets-in-the-sky or deck access housing (we will usually refer to it as deck housing) lies in two factors. Firstly, unlike other forms of multi-storey local authority housing it was intended to allow for the achievement of both social and economic objectives. The upper level street-deck supplied space for community development away from ground level traffic and provided, mainly through the high ratio of dwelling units per lift shaft, the possibility of low cost, low rent, high standard accommodation for all types and sizes of household.

Secondly, it is important because, in the vast majority of cases, the recently completed deck housing schemes have proved to be extremely unpopular with tenants and local authorities. There have been four causes; firstly, the frequently poor construction leading to excessive problems of water penetration and condensation with consequent high heating costs; secondly the difficult access to ground level due to the poor provision of lifts; thirdly the anti-social use of the deck, that is, the presence of vandalism, litter and noise making it unsuitable for children's play and community development and fourthly, the inhuman appearance of many schemes with the associated stigma attached to living in such an environment. In fact in a small number of cases the new housing estates have proved so difficult-to-let and difficult-to-live-in, that, following tenant protests, they have been almost completely vacated and even demolished. The situation is fast becoming a national scandal (1).

Thus, the original ideal of creating the modern city without the depravity, inequality, inefficiency, ugliness and social alienation which characterised the urban form and culture of the nineteenth century has, in this important case, collapsed. The recent history of deck housing has meant a return to the conditions it was intended to combat; that is, those extreme social, economic and political problems and inequalities which characterise capitalist society.

At the same time, behind the rise and fall of this type of multi-storey housing lies the fact that the definitions of "success" and "failure" have tended to be influenced by the state, the media and the professions. There has been a tendency for a self-fulfilling prophecy of success when the estates were first opened - everybody said they were model housing schemes, therefore they were seen as such - to be replaced by a self-fulfilling prophecy of decline - everybody says they are problem housing schemes, therefore they are labelled in that way. In the tenants' experience, while they were probably

not their ideal homes when they moved in, they are not always today, as intolerable an environment as is suggested. Hence the small number of deck housing estates that are still surviving may cease to provide an acceptable home as the definition of problems continues to be imposed from above in the interests of government, the press and television and the design professions.

Hence, the purpose of this research into the past dream and present nightmare of the planner (if not necessarily the tenants) is to uncover not only the political and economic but also the ideological forces behind the phenomenon of deck housing. The theoretical position underlying this aim is discussed in Chapter 1. The empirical content of the study, the facts discovered in the course of the research, are then described in Parts 1 and 2, according to the hypotheses established in the first chapter.

However, this is not simply a process of fitting the facts to the theory because, in general, it has been difficult to obtain much of the information necessary to the study. Neither the architectural profession nor the government provide any official data relating specifically to deck housing. Hence, the only way to obtain details about the projects designed by the founders of the Modern Movement (for Chapter 2) was to consult as many of the relevant texts and journals as possible. Also, in the case of discovering and gathering information about the deck housing estates designed and sometimes built in the United Kingdom after the second world war (for Chapter 4), a similar procedure was used initially. This was then followed by direct contact with representatives of the central and regional offices of the Department of the Environment and over fifty local authorities. Once it had been established where the relevant examples might be located, the site was visited and basic information obtained, where possible from local authority officials; these were usually members of the Architects Department.

Representatives of the other local authority departments, the building industry, trade unions and tenant associations were not contacted in most cases because their contribution was secondary to our task of establishing the regional pattern of deck house building and the basic information about conditions on the estate. An inspection of cuttings from the local press (in the local library) usually provided valuable additional information about the background to the building project and the problems confronting the local authority and occupants of the estate. At the same time, it gave occasional insights into media coverage and distortions.

In conclusion, this study almost certainly excludes, by default, some deck housing schemes which should be included (apart from those developed in the post war period in other parts of the world which are deliberately excluded). Nevertheless we are confident that all the major projects have been catalogued. Also, it should be noted that the survey of local authority

estates was completed in 1980, eighteen months before this research terminated. However, conditions have almost certainly only deteriorated further given the unpopularity of the building form and the decline of new house building by local government, while the location and number will not, of course, have altered.

The one scheme where the information is much more up to date and comprehensive in character is the Park Hill estate in Sheffield. A case study was made of Park Hill because it was the principal model for deck housing and for high density urban development, when slum clearance and redevelopment were at their height in the period from the early 1960's to the early 1970's. Even in this example we did not attempt to interview every person remotely connected with the building project or the present day problems. Also we have not undertaken a sample survey to discover residents' opinions. Instead it was decided that a far more direct and significant insight could be gained from active involvement in the life of the estate. Nearly three years were spent living at Park Hill, from early 1978 to late 1980. During this period a personal commitment was established in challenging the character of the local press publicity of the area, in a new youth club being founded in the Park district ('Club 61') as a school governor, of the middle school, and in the controversy surrounding the keeping of pets, especially dogs. This last issue eventually led to our leaving the estate. Meanwhile, research into the history of Park Hill was taken up by detailed study of the vast amount of literature published about the estate and a comprehensive reading of the council minutes, press reports, archives and local history material in general.

The analysis and information contained in the whole study are divided into two parts following Chapter 1. Part 1, A History of the Idea of Deck Housing (Chapters 2 to 4) and Part 2, A Political Economy of Deck Housing in the United Kingdom (Chapters 5 to 7). Chapter 2 describes the architectural history of deck housing over the first half of the century. This is followed by a chapter which looks at the intellectual culture of the 1950's and the place of the Park Hill project in that period. Chapter 4 describes the history of deck housing in the 1960's and 1970's and the realisation of the idea in the 140 estates, 75,000 dwellings, scattered throughout the United Kingdom, including details of the problems now confronting local authorities and tenants. The next chapter provides an analysis of the reasons for the building and apparently successful occupation of Park Hill. Chapter 6 builds upon the findings of the previous chapter to present an explanation for the rise and fall in the popularity of deck housing. And finally Chapter 7 draws together some conclusions.

The whole research project would not have reached even this limited and interim stage of development without the generous and encouraging

assistance of Roy Darke of the Department of Town and Regional Planning and Professor Anthony Sutcliffe of the Department of Economic and Social History. As tutors for this doctoral thesis undertaken at Sheffield University from June 1978 to 1981, they were always as helpful and encouraging as a research student would wish. A number of long essays I submitted at early stages of the study were subject to the kind of detailed criticisms which are essential to progress. And in particular they provided the necessary correctives to my excesses of theory and, later, descriptive work.

The development of the study was also helped enormously by the open-handed assistance offered by two of the architects of Park Hill, Jack Lynn and J.Lewis Womersley, the resident social worker, on Park Hill from 1959-62, Mrs.J.F.Bevan (then Mrs.J.F.Demers) and the friends and neighbours on the Park Hill estate, notably the members of the Jones-Fairbrother households.

Many other people have been encouraging and supportive in a number of ways. They include Dr. Michael Cuthbert of the Department of Town and Country Planning, Heriot-Watt University, who first put forward the idea of a detailed study of the Park Hill estate, Councillors Harold Lambert, J.W.Sterland and David Skinner, M.P.'s Fred Mulley and Frank Hooley, F.G.Jones, the City Treasurer from 1952 to 1974, Henry Smith, the Manager of the Council's Public Works Department from 1946 to 1973 and Mr.H.Rowley, the Housing Manager at Park Hill.

Outside Sheffield many central and local government officials gave the generous support without which this research project would have been almost impossible. In particular I would mention Alison and John Curtis of the Department of the Environment. Also, towards the end of the study, several of the architect-planners who had played an important part in the history of deck housing consented to an interview. I would therefore like to thank (in alphabetical order) Walter Bor, Oliver Cox, Ken Campbell, Whitfield Lewis, Bertold Lubetkin and Alison Smithson for their kind assistance.

Among friends who actively sustained my efforts in one way or another there were Chris Holmes and Denise Harrison in Sheffield, Roy and Judy Dunn in Liverpool, Paul Winter in Manchester, Gordon Dabinett in Newcastle, Gez Baker in Glasgow and Peter Totterdill in Nottingham. My mother very kindly typed the thesis, an effort which deserved an honorary degree in itself, while my father supplied encouragement in various ways. Enid Kent, the dog, provided the welcome company essential to the inevitably lonely life of a research student! Finally Barbara Waugh made the whole thing possible. Without her support this investigation would never have materialised, no matter how obliging other people were during the four years study. I always knew that if I failed to complete the research she would never forgive me!

CHAPTER 1. THEORETICAL BACKGROUND

The aims, methods and problems behind the comprehension of the condition and form of a particular building change with the social circumstances of the study and with the build up of knowledge and understanding over time. When this investigation began in mid 1978 its purpose was to discover why the apparently unusual Park Hill estate, the famous "streets-in-the-sky" housing scheme, had been so successful. This was undertaken through an attempt to place the building form within the context of a history of ideas about urban renewal and architectural practice. On this basis its example could be used to inspire new confidence for the rebuilding of inner city areas recently declared to be in a state of 'crisis'. However, as the research progressed it became apparent that Park Hill had actually been the leading model for new urban working class housing in the 1960's and that a great many of the resulting building projects were proving to be very unpopular with residents; the idea of streets-in-the-sky was therefore seen as part of the problem, not part of the solution. How then can we explain the rise and fall of the idea of deck housing and link this to the contemporary 'urban crisis' whose seriousness has been growing over the period of the study?

Most existing explanations of urban form and design problems can be divided into status quo, counter-revolutionary and revolutionary theories (1) The former tend to be represented by those supportive of the idea of planning and detailed empirical study of the history and problems of urban design and planning (2). The latter two represent the right and left wing of the political spectrum; put simply, the monetarist and the marxist respectively. Counter revolutionary theories concentrate on the history of the supposedly rationalist and social/socialist and thereby utopian ideas behind the Modern Movement and its partnership with the 'state socialism' fostered by post war labour governments (3). Today this type of comprehensive and idealistic urban planning seemingly has to be minimised in favour of a free market approach providing greater freedoms for the individual, leading apparently to a more complex, open ended, dynamic and thus emotionally and economically rewarding urban environment(4) This account takes the tower block, found in striking form at the centre of Le Corbusier's Contemporary City (1922) as the archetypal example of inhuman modern housing whose influence can be traced to the unpopular character of urban renewal in the 1960's. Thus housing form born of a social conscience had decidedly anti-social results; the tower block symbolises the need for an end to the Modern Movement and the founding of a "postmodernist" architecture and urban planning practice.

This view has done two things. Firstly, it has tended to omit the history of deck housing, whether as part of, for example Le Corbusier's

designs (which proposed just such a building form surrounding the central towers of the Contemporary City, which were actually for business use only) or as part of the post war development of British architecture. Secondly, it has neglected to mention the anti-functionalism behind the Modern Movement. The idea of deck housing, whose purpose was to provide architecture which went beyond any simple technological solution to the problem of mass housing could be seen in this context. All told, from our perspective, a critique of this type seemed to misinterpret the history of the Modern Movement so as to justify a new postmodernist architecture, one which advocated the escapism of contrived picturesque housing design, and the Beaux Arts pro Edwin Lutyens Monumentalism. Hence elitist aesthetic interests combined with an anti-functional architectural practice is now gaining ground under the rhetoric of a new humanism and realism (that is facing up to what people really want - decoration of buildings). Hence the worst features of the Modern Movement, which had originally evolved in opposition to the sham and waste of nineteenth century ornamental architecture, but which nevertheless incorporated irrepressible 'bourgeois' aesthetic tastes, is in essence becoming well established while in appearance these characteristics are criticised and dismissed as mistakes of the past or the present but not of the future.

Existing neo-marxist theories of the 'urban question' offer little resistance to the new architectural ideology (by which we mean a system of illusory beliefs) and little insight into how to understand the history of streets-in-the-sky. That is, a history of architectural and urban design ideas is largely absent in spite of claims as to the 'relative autonomy' of the ideological superstructure from the economic base, and thus of the importance of a history of such ideas about the urban question. Thus, for example, Castells' study of urban sociology and "urban culture" in The Urban Question (1976) or Harvey's "Liberal Formulations" in Social Justice and the City (1973) contain few of the details about urban design to be found in Hall's 'liberal' text Urban and Regional Planning (1974). While, more recently, Dunleavy's neo-marxist study of The Politics of Mass Housing (1981) is world's apart from the history of modern architecture to be found in Booker's The City of Towers (1979) (5)

Moreover, as the research expanded to consider, on the one hand, other relevant facts and on the other hand, other relevant theoretical works (traditional British historical and empirical neo-marxist studies of society), it became apparent that other elements of the superstructure plus the economic base itself, had played a vital role in the history of deck housing. Thus, central and local government, the Labour movement, national culture and the media had all seemingly had a positive determining (and not just

"mediating" or "regulating") influence, while changes in the industrial sector were clearly linked to the quantity, quality and distribution of deck housing. And thus it was only by developing a broader understanding of the totality that a history of streets-in-the-sky could be formulated in opposition to the ideology of post modernism.

Existing neo marxist urban studies have not even located the problem. They tend to see urban planning, including post modernism, as a mechanism principally for temporarity resolving or obfuscating the housing question. Marx's original assessment of the housing problem placed the emphasis on the economic base and allowed urban planning a focus for social reform. He stated:

"The ultimate connection between the pangs of hunger suffered by the most industrious layers of the working class, and the extravagant consumption, coarse or refined, of the rich for which capitalist accumulation is the basis, is only uncovered when the economic laws are known. It is otherwise with the housing situation. Every unprejudiced observer sees that the greater the centralisation of the means of production, the greater is the corresponding concentration of workers within a given space; and therefore the more quickly capitalist accumulation takes place, the more miserable the housing situation of the working class" (6)

Urban planning evolved, in part, to overcome this contradiction between contrived capital accumulation and the housing situation. However, now that an 'urban crisis' is upon us and one supposedly due to the collapse of 'state socialism', we are presented with the most remarkable circumstance. The "miserable" housing situation, such as that apparently due to the development of the tower block, is now emphasised and indeed often defined by postmodernist culture, regardless of the circumstances, so as to justify the latest prescriptions for better architecture and planning. Thus every "unprejudiced observer" now often fails to see the economic laws of capitalism because of the establishments new definition of the modern housing situation as a socialist disaster. Marx's insight has thus been turned on its head. Far from being a threat to the system, the definition of the housing problem is a threat to socialism and a means thereby of hiding or stabilising the effects of the development of the "economic laws". Postmodernism, as a set of beliefs shared by the experts and the general public, thus acts as a determining ideological force on the evolution of capitalism. New marxist theories provide an alternative but not a critique.

How then do we propose that a history of deck housing can be undertaken and developed in opposition to the new ideology of architecture and urban planning? What is our theory of this particular 'urban question' relative to the existing one?

Streets-in-the-sky and the Urban Question

Existing neo-marxist studies of the 'urban question' tend to provide too limited and narrow a theoretical framework. There is a certain "poverty of theory" which derives from an "Althusserian-structuralist" approach to Marxism (7). This leaves critical socialist explanations deficient in an historical, superstructural and empirical understanding of the totality. And these shortcomings have, peculiarly, led both to a neglect of the economic base (industrial and finance capital) as a determinant of urban social change and a neglect of the knowledge which has been at the very centre of earlier attempts to resolve the urban problem (hence, giving rise to the 'urban question') - the urban design utopias. In sum, there has been a tendency in urban studies to negate the very *raison d'être* of Marxism: its claim to comprehend, using facts and hypothesis, the whole of society (base and superstructure) as a dialectically structured system whose inherent contradictions lead to an historical process of motion and change (8) We, therefore, share the aims and focus (upon the particular qualities of the 'urban') of contemporary theories but find the elucidation of the basic philosophy and definition of the relevant concepts less acceptable.

Hence this study agrees with Castells - the leading theoretician (9) - that the city produces particular problems and performs particular functions within society and that the aim of urban planning and design has been to act as a 'relatively autonomous' superstructural element over and above the economic processes underway in the city. Also, it shares Castells' basic purpose. As he notes:

"an elucidation of the 'urban question' is becoming urgent not only as a means of demystifying the ideology of the dominant classes, but as a tool of reflection for the political tendencies which, confronted by new social problems, oscillate between the dogmatism of general formulations and the apprehension of these questions in the (inverted) terms of the dominant ideology" (10)

From our perspective the present dominant ideology in urban design is post modernism; its influence is such that neo-marxist studies often formulate questions about urban form in these too general and/or inverted terms. A study of streets-in-the-sky can specify the history of a particular urban form and counteract any tendency to criticise this type of working class housing in the dismissive and dogmatic manner typical of post modernism.

The problem arises, in the case of Castells, from two things: firstly, the attempt to comprehend existing 'liberal' theories of urban culture from the standpoint of urban sociology; and secondly, the attempt to produce a new theory by marrying the complex Althusserian system of three levels - the economic, political and ideological - with the physical phenomenon

of the city and city-region.

In the first case Castells understanding of the overlap between social processes and spatial forms (like Hargrey's view of "Liberal formulations") is ahistorical and divorced from the attempts to change modern industrial culture by means of changes in urban form. There is no attempt to comprehend the totality or the social context of a particular city or building at a particular point in its development. Thus we find, for example, that Young and Wilmott's classic study of Family and Kinship in East London is of interest only insofar as it helps to answer the abstract theoretical question: "Is there an 'urban' behaviour pattern characterising social life in the residential units?"(11) From our point of view it is of greater relevance to ask: what part did this study play in the overall context to the building of Park Hill? (see Chapter 3) And, as a study sympathetic to the interests of working class communities, how were its ideas and proposals carried into policy? What can the labour movement learn from the success or failure of this critical investigation?

Castells limited understanding of the significance of "urban culture" is tied to the failure to comprehend the importance of the social conscience/ socialist movements attempt to change this product of capitalist society; and thus link this to the contemporary attack on such an historical legacy by the postmodernist culture. Engels original insight into the social conditions of the nineteenth century city were of a kind to inspire the reformist aims of urban planning and design. He stated:

"After roaming the streets of the capital a day or two, making headway with difficulty through the human turmoil and endless lines of vehicles, after visiting the slums of the metropolis, one realises for the first time that these Londoners have been forced to sacrifice the best qualities of their human nature, to bring to pass all the marvels of civilisation which crowd their city; that a hundred powers which slumbered within them have remained inactive, have been suppressed in order that a few might be developed more fully and multiply through union with those of others. The very turmoil of the streets has something repulsive, something against which human nature rebels. The hundreds of thousands of all classes and ranks crowding past each other, are they not all human beings with the same qualities and powers, and the same interest in being happy? And have they not, in the end, to seek happiness in the same way, by the same means? And still they crowd by one another as though they had nothing in commonAnd, however much one may be aware that this isolation of the individual, this narrow self-seeking is the fundamental principle of our society everywhere, it is nowhere so shamelessly barefaced, so self-conscious as just here in the crowding of the great city. The dissolution of mankind into nomads of which each one has a separate principle and a separate purpose, the world of atoms, is here carried out to its utmost extreme". (12)

The origins of British urban planning lie in the socialist ideas of William Morris and the municipal socialist policies of the Fabians (Wells

Carpenter and Shaw) supported by the planners such as Ebenezer Howard, Raymond Unwin and H.R. Lethaby. In addition these reformers looked to the radical American social criticisms of Henry George, Thorstein Veblen and Edward Bellamy (13). The source of the Modern Movement can be traced to the Russian and German-Weimar revolutionary cultures. Two outstanding figures from these events, Bertold Lubetkin and Arthur Korn came to Britain in the 1930's and headed the new band of reformist sometimes left-wing architect-planners. In the post war period many leading professionals were active supporters of the Labour movement up until the late 1960's. (14) One result of these historical developments was deck housing.

As we shall see in Chapter 3, the idea was born of a socialist-liberal respect for the urban working class community and carried into practice through the Labour movements desire to support the modernisation of the United Kingdom economy and encourage the regeneration of industrial capital, especially in the cities.

The problem has been that these critical and constructive social practices have been diluted, misinterpreted, their weaknesses developed, and then in this form, incorporated into the existing social relations. When this process is completed, the 'new' movement can be used as an alternative to radical socialist policies while publicly presented as a far-reaching reformist practice. Then as social conditions continue to worsen in one way or another, the original socialist aims and ideals can be referred to as the reason for the further economic or political collapse of society; it can be used to legitimate a turn away from socialist policies, and instead a further strengthening of the economic and political resources of the dominant class.

The second problem created following Castells theoretical investigations follows the added division of the economic level into three parts: production, consumption and exchange. This produces a total of five categories including the political and the ideological. It is then proposed that each one corresponds to or describes the function of factories and offices, housing and recreation, means of transportation, urban administration and the 'urban symbolic' respectively. Two further propositions are then made. Firstly, it is argued that the urban system is not merely a microcosm of the total system but that it performs a specific function in relation to that system, namely consumption or the reproduction of labour power through the provision of housing etc. Secondly, it is suggested that contradictions arise within and between each level, such that one of the three levels has to perform a dominant role, one of ensuring the unity of the "social formation" (to use Althusiers terminology). Our contemporary society or "structure in dominance" is ordered at the political level.

Thus we arrive, given these two propositions, at a definition of urban planning as:

"the intervention of the political in the specific articulation of the different instances of a social formation within a collective unit of reproduction of labour power with the aim of ensuring its extended reproduction". (15)

The outcome of these divisions and definitions of urban planning is a theoretical framework which, according to one recent study, can "simplify and 'purify' a complex reality in order to make it amenable to analysis" (16). The problem is that such a simplification seriously distorts the analysis in a way we shall describe in due course. Before that we should note that this is the case with another definition of urban planning, one supplied by Lefebvre (17) and shared by Harvey (18). The former has noted:

"urban redevelopment plays the part of a secondary process parallel to that of industrial production. It is a compensating process: when the surplus value created by industry sinks to a low level, surplus value created by construction and speculative development rises instead. Urban planning masks this relationship and in so doing prevents not only a clear understanding of urban phenomena, but also the proper use of the city itself". (19)

In the first definition, the one supplied by Castells', urban planning is unnecessarily confined to the political and consumption categories when it has important functions within the other parts of the economic level and the ideological level. And in the second definition, it is unjustifiably restricted to a secondary process, playing no part in the fortunes of industrial capital. We propose to argue, firstly, that urban planning and design have played a vital role in the national economy and, secondly, that at the crucial ideological level, it has had important political and economic functions. As with urban culture, urban design has to be seen in a far broader context, one in which the superstructure and the base have important influences within the totality. The position can be summarised in the following table.

LEVELS	ideological	political	consumption	production and exchange
Ideological	'urban symbolic' (F)	(A)	(B)	(C)
political	(A)	'urban administration'	'urban planning' (G)	(D)
consumption	(B)	'urban planning' (G)	'housing etc.' (E)	
production and exchange	(C)	(D)	(E)	'factories, offices and roads'

Here we illustrate an attempt to comprehend the totality rather than a series of divisive 'levels'. Each letter represents either an additional

area of interaction (A to E) or an expanded definition of the subject (F and G). Thus, in our view, there is in the first place no simple correspondence between the ideological level and the 'urban symbolic' the political level and 'urban administration' etc. Instead, urban form as an expression of the ideological level, will have important political (A) (reference the history of urban culture and post modernism), economic-consumption (B) and economic - production and exchange (C) functions; the political level will have important functions for production and exchange (D) and the associated building industry will not simply be important in relation to consumption but will perform a valuable function in promoting and controlling the production of commodities (E). In the second place, we also propose to argue for a greater understanding of the urban symbolic as a history of urban design (F) and for a broader interpretation of the politics of consumption by considering the role of the media, the Labour movement and local culture (G). In fact part 1 of this study is concerned with (F) and part 2 with (A) to (E) and (G). Both are assembled into detailed theoretical statements later in this chapter. For the present we will concern ourselves with the relevance of each level for part 2 only, looking first at the economic - production and exchange level, then the political and economic - consumption levels and finally the ideological level.

Thus in the example of the production and exchange of commodities (C, D and E) the present neo-marxist approach denies the role which urban design and planning, housing, the building industry and the city as a whole perform as active forces in the productive modernising or "restructuring" of the national state-controlled economy, whose changes arise from the forces of international competition. For much of this century the competition between firms operating in the market place, which typified the "liberal" phase of capitalist development, has been replaced by international competition between nation states (20) Hence when a 'crisis' has occurred, due to a failure to compete at this level, each 'relatively autonomous' government has attempted through growing corporate control of the economy (that is, centralised physical and economic planning of the public and private sectors) to resolve the contradictions and minimise the adverse costs arising from the cycle of production, consumption and (private) accumulation. Also the struggle between individual firms, fractions of capital and sections of society has been halted or resolved if possible before it disrupts the competitive ability of the whole mechanism. And competition between local authorities for scarce supply of land, labour and capital has been encouraged and

controlled as far as is feasible, so as to ensure that each unit makes the maximum possible contribution to the whole country's international fortunes.

Urban planning has therefore acted as a modernising force, aiding both industrial production and speculative development. Clearly urban redevelopment cannot be a "secondary process" because (referring to Lefebvre's definition) construction is a form of industrial production, demand for which is created by plans for renewal of the city fabric. The task of urban planning has been to 'balance' the contradictory forces in the urban system so that economic growth - and thus capital accumulation - at all spatial levels can proceed.

These factors are not considered in leading analyses of the problem of working class housing. In a well known essay by Michael Ball (21) the attempt is made to show that a relatively low rate of accumulation of surplus value, or low productivity in the building industry, lies behind the problem: that is, how to reproduce labour at the minimum cost to capital. For this purpose building is mistakenly taken out of its context in the national economy. The figures provided are not explained in terms of the rise and fall of production in building as the economy was expanded and contracted (for example, the downturn 1960-65 and 1971-73, upturn 1949-55 and 1966-71) and no comparison made with the declining sectors of manufacturing industry. As a result the reason for and the failure of the attempt to introduce industrialised building methods in the 1960's is not seriously tackled because this venture was part of the attempt to regenerate the national economy and so outside the scope of Ball's analysis.

Behind these influences at the economic- production and exchange level lies a conflict at the political level which is not open to study from the urban structuralist position. This is the struggle between industrial and finance capital for control of the state-run economy, the former supported in large measure by the Labour movement (either at the local level, for example in Sheffield - see Chapter 5 - or at the national level through corporate alliances) and the latter by the dominant class. In fact, the history of urban planning as a modernising force has been closely tied to the rise and fall of industrial capital; its rise being promoted especially by the Labour party (included under interaction (D)). The role of the Labour party here follows the evolution of attempts to 'correct' urban culture summarised earlier and pigeonholed as interaction. (A)

The modernising of the economy would not have proceeded without the influence over public opinion occasioned by the successful development of the Labour party and the media (especially the local press). That is, the local sense of tradition and pride of place symbolised by new urban form as

interpreted by these respective institutions; the politics of consumption (G) had a vital role to play in the successful production of new commodities.

Investigation of the 'urban symbolic' is a neglected subject. Castells' comment on the "unexplored theme" of the "language of forms" (22) while a recent British study noted that the political economy of design "is probably the most underdeveloped dimension in the entire analysis of the housing question" (23). A history of urban design and architecture in terms of the different images it has produced, their place in the overall social context and function within urban renewal, is completely absent from Castells' work. Thus we find that his discussion of the urban planning and design behind the New Towns plan for London contains no details about the character and inadequacies of the two plans for the capital itself (24). Part 1 of this research proposes to remedy this shortcoming amongst other things.

Just as important, there is no consideration of the relationship between the ideological and the political level (A). Thus we find that any understanding of the role of new urban form in answering the problems of urban culture is absent. For example, it was precisely the aim of British deck housing and the street-deck city to remove the social isolation and separation of the modern city so ably described by Castells. He states:

"The ideological integration of the working class into the dominant ideology goes side by side with the separation experienced between work activity, residential activity and 'leisure' activity, a separation that underlines the functional zoning of the metropolis. The high value placed on the nuclear family, the importance of the mass media, and the domination of the individualist ideology all encourage an atomisation of relations and a fragmentation of interests in accordance with particular strategies, which at the spatial level, is expressed by the dispersal of individual dwellings, whether in the isolation of the suburban house or in the solitude of a block of flats". (25)

The design of the street-deck also had an important function at the economic level. It was a means of resolving two 'urban' problems, one related to consumption (B) the other to production and exchange (C)

Firstly, due to the relative powerlessness of labour in the struggle for resources within the urban area, a contradiction appears between the desire to house low income community-centred groups and the provision of anti-social and expensive housing; in the post war period the unsuitable housing has taken the form of high rise blocks located on expensive urban land. The social and economic advantages of deck housing ensured a unique answer to this problem. It promised greater stability of the labour

force by providing for women, children and older citizens - indeed a complete community - at the same time lowering the costs to the state and industry of reproducing labour, keeping down housing costs as an element in wage costs. In addition it meant that the demand for slum clearance and improved working class housing conditions could be answered because densities comparable to those achieved with high rise developments were possible without some of the disadvantages of the tower block.

Secondly, a contradiction arises between the need to stimulate the economy using local authority housing (through subsidy levels and interest rates on loans) and the extremely limited amount of resources available to working class housing. That is, the 'crisis' leading to the state-controlled cycle of feverish production, glut in the market and contraction means a restructuring of the urban economy in which local authority housing has a crucial but relatively disadvantaged function. Engels explained the problem when he outlined the circumstances of the 'housing shortage' prior to large scale state intervention. He stated:

"The period in which an old civilised country makes such a transition from manufacture and small scale production to large scale industry.....is also predominantly the period of the 'housing shortage'. On the one hand, masses of rural workers are suddenly drawn into the big towns which develop into industrial centres; on the other hand, the building plan of these old towns does not any longer conform with the conditions of the new larger scale industry and the corresponding traffic; streets are widened and new ones cut through, and railways run through the centre of the town. At the very time when masses of workers are streaming into the town, workers dwellings are pulled down on a large scale". (26)

In the post war period in Britain a problem of land supply arose as the demand for labour and the rate of population growth increased while the needs of industry, commerce and especially vehicular traffic expanded. Deck housing could save not only the short supplies of labour and capital (as we have already noted in regard to consumption) but also land. This was achieved by lifting the pedestrian away from the congested ground level thereby providing more space for traffic, industry etc. Thus streets-in-the-sky was, in fact, housing for the multi-level city where there need be no housing shortage.

We have thus, so far, outlined several shortcomings in the neo-marxist theory of the 'urban question' put forward by Castells and others. These have led to a failure to confront the dominant ideology of urban design and planning. And it is for these reasons that we cannot look to the leading study of multi-storey local authority housing from a structuralist position, Patrick Dunleavy's The Politics of Mass Housing (1981) for an explanation of deck housing or post modernism. This is not to say that our interests

do not, on occasion, overlap. He does conclude his research with a similar theme to ours. Thus he states:

"Finally, and most significantly of all, the high-rise housing boom cast a sizeable blight on the public image of post war council housing. The policy lent itself to analysis in terms of the inherent inefficiency, bureaucratic indifference and unresponsiveness of state intervention compared with market provision. The orientation of public housing in the 1960's towards unpopular and high cost forms of accommodation seems to have slowly but quite decisively reduced the levels of public support for council housing, and to have strengthened support for private house ownership". (27)

however, the post modernist "blight on the public image of post war council housing" is not challenged by Dunleavy. Indeed he remains largely ignorant of the history of ideas which post modernism has distorted and seems to share its wholesale criticism of multi-storey local authority housing.(28)

Instead Dunleavy's principal argument regarding the high-rise boom is that it was due to the power of, and the state's support for, the demands of large building contractors. In summary he suggests a hierarchy of influences beginning with that of private capital. Thus the:

"most important influences on the development of high-rise policy were the pressures from the construction industry directed at both the MHLG and at local authorities, the influences from the planning system on MHLG policy and the influence of the MHLG on local authorities". (29)

Behind this political relationship lay private capitals investment in various high rise house building techniques, ones which had been perfected some time before the boom:

"high rise markets were dominated in general by large national contractors and displayed a markedly higher degree of industrial concentration than other public housing markets. In view of the high degree of concentration in public housing as a whole vis-a-vis other new construction...this finding suggests a quite remarkable process of concentration associated with the high rise boom. In our view it is this, rather than any major or modern technological change which constituted the fundamental industrial innovation of high rise'. (30)

And the state bowed to pressure from this section of the building industry not because it meant it could embark upon positive steps to encourage economic growth but so that:

"a direct attack could be mounted on inner city housing conditions without altering the planning system, the local government structure or the existing balance of social forces". (31)

In view of this interpretation of the history of multi-storey housing it is not surprising to find that Dunleavy denies the architectural or planning profession any significant role in promoting high-rise housing:

"Contrary to the prevailing conventional wisdom on the high-rise period, the design professions could not be seen as important national influences on the level of high flat building". (32)

nor does he attempt to link different local authority policies to the character of the local economy. The absence of the ideological and economic levels in the analysis leads to shortcomings in explaining the politics of mass housing. He notes:

"Given that local decision-makers are closer to the "grassroots" and in particular were clearly aware of tenant resistance to high rise, the uncontroversiality of the topic and the absence of any developed political activity around it poses a prima facie problem". (33)

It is a peculiar coincidence that Dunleavy's three case studies should be in three of the few urban areas of England where no deck housing was built (that is, Merthyr in London, Birmingham and Bristol) and where, in the latter two cases, economic growth was secure due to the absence of declining basic export industries. In our view deck housing was a special design whose application was determined by local and national political and economic forces.

From our perspective Dunleavy takes multi-storey housing out of the context of urban planning and design and the building industry out of the context of state economic planning. In total he does not consider the phenomenon in question in a broad social-historical context within which the ideological, government and economic forces are each determining factors. Instead the state is seen as part of the supportive superstructure, merely preserving the cohesion of the social system within which private capital is dominant - although this theoretical position is not made clear at first. Instead from a political science standpoint facts are recorded and then attempts made to fit a theory or mixture of theories to those facts, as if they had not already been selected according to specific preconceptions. And in contrast although the investigation is sub-titled "a study of corporate power and professional influence in the welfare state" there is actually no consideration of the nature and growth of corporate power in the welfare state nor a study of the full scope of professional influence. These are issues which we aim to detail in this study of deck housing.

In the remaining sections of this chapter we will argue, in direct contrast to Dunleavy that, at least in the case of deck housing, government and not private capital was behind the introduction of new types of multi-storey housing in the 1960's and that the design professions were an important influence upon the development of deck housing because of the nature of the ideas involved. In the former case the struggle between industrial and finance capital determined the nature and scope of government action; and in the latter case the struggle between different conceptions of urban planning and design. These specific theories are based upon the more general explanations of the political economy of the United Kingdom and the history of ideas and culture to be found in well established traditional British neo-marxist studies.

Political Economy of the United Kingdom

A need for the unequalled transformation of the national economy arose in the early 1960's. Its appearance was due to the historically dominant role of finance capital in the development of the United Kingdom, that is, capital itself as controlled by the banking community and the multi-nationals. The international purpose and scope of finance capital had come into direct conflict with the domestic orientation of industrial capital, capital concerned with the productivity and competitiveness of home based industry, especially after the second world war (34). The radical change in the economic situation in the 1960's was meant to overcome the decline in productivity and competitiveness of the United Kingdom relative to that of other advanced capitalist countries, consequent upon that dominance.

Finance capital became established in a preeminent position because of the lead this country gained in the process of industrialisation, using this lead to secure large areas of especially profitable overseas development to the benefit of sterling. Home production gradually suffered because of its relatively lower level of profitability. In contrast the finance and industrial capital of most of our competitors, who had to break into the world market joined forces for that purpose. They thereby moved from strength to strength relative to the British economy.

This division in British capital was, and is, of a contradictory nature. That is, insofar as the state has supported and does support the demands of the City for a strong pound through the offices of the Bank of England and the Treasury, this can eventually so undermine the viability of industrial capital that the continued existence of British finance capital itself comes into question. The nature of this contradiction which led to a political and economic crisis in the early 1960's followed by reorganisation and expansion and then further reorganisation and contraction of the economy can be summarised by reference to the relevant sequence of events.

In the immediate post war period up until the early 1960's, as the free flow of capital continued to override the free flow, especially the export, of manufactured goods, industry was starved of capital and long term security. As a result productivity decreased, goods became obsolescent and expensive to produce and industry declined. Exports then decreased, imports and the rate of inflation increased and finally the balance of payments was permanently destabilised. The decline in the growth rate of the economy, in Gross National Product and productivity per man, became so serious that it threatened to produce a permanent deficit in the balance of payments, and hence a fundamental weakening of the position of finance capital as well as the nation; And this meant a "crisis" because the very legitimacy and viability of the state and capital were threatened.

One economic historian has described the situation in the early 1960's as follows:

"The difference, the striking gap between the sluggish growth in output in Britain and the very much faster growth elsewhere, was so wide that the leading continental countries, which for centuries had had much lower incomes and productivity per capita, began to catch up with and overtake Britain in absolute levels by the early 1960's. It was at that time that the poor growth performance of the United Kingdom became one of the main pre-occupations of economists and policy makers and the main index of Britain's economic shortcomings". (35)

A dramatic change occurred in government policy. Another economic historian has noted:

"The change in the mood of Government in the early 1960's bore all the signs of one of those sudden ideological waves which periodically seem to sweep through Whitehall. The excesses of market worship in the 1950's had been of a similar type. But now the doctrine of the 'invisible hand'.....was entirely out of favour. The Tories declared themselves for "planning".....The new approach of the 1960's was based on the long view. It was a rebellion against the technique of administration by short-term expedient which had been given an extended run over the previous decade." (36)

The short-term "stop-go" monetary policies of the 1950's were designed to ensure that there was the correct balance of payments required for the favourable operations of finance capital. If a deficit appeared then to halt the withdrawal of capital from the City, especially short-term speculative "hot money", a "stop" on the national economy would be instituted through a contraction of credit. The rise in interest rates would halt the flow of capital out of the country's banks and restore confidence. This would also reduce demand at home, especially for council house building, and increase unemployment as production fell. Such a situation was, however, socially and economically unacceptable in the post war period up to the mid 1970's due to the waste of resources and the resistance of the trades unions, hence a minor "go" would be induced by a relaxation of credit restrictions. This would lead to increases in wages, imports and the rate of inflation. The cycle of control would therefore have to be repeated.

The problem was that, as we have already noted, such a policy worked to the detriment of the long term investment and increasing profit levels required by industrial capital. Furthermore increasing interest rates to institute a "stop" could only once more fuel inflation. As each succeeding "go" failed to help industry, and imports and wage demands increased so each "stop" only further increased the rate of inflation so exacerbating the problem. A halt had to be called before it was too late (37)

Hence Keynesian-like methods for boosting and controlling the economy were introduced in the 1960's to counteract the spiral of decline. A new type of market economy was developed by the state:

"In the private sector the violence of the market has been tamed. Competition, although it continues to be active in a number of areas, tends to be increasingly regulated and controlled. The effort to secure an enlarged area of predictability for business management, in a period in which technological change is very rapid and individual business investments are both larger in size and take longer to mature, has encouraged long-range collaboration between firms. Governments in their anxiety to increase the area of the predictable for purposes of economic planning have encouraged firms within an industry to evolve agreed policies on the basis of their long-range interests. The classical market of the textbooks in which firms struggle with one another and disregard any possible effect that their actions may have on the market as a whole has become more remote than ever". (38)

In economic planning this change led to the setting up of the National Economic Development Council in 1962 and the pursuit of the so-called Four Per Cent Plan, 1962-64. This was followed in 1964 by the addition of a specific government department, the Department of Economic Affairs, whose purpose was to implement at a regional level a National Plan published in 1965. In both cases representatives of government, industry and labour came together to plan centrally the whole economy, including wage levels through an acceptable incomes policy. (39)

Later plans were referred to as The Task Ahead 1968-9, the Industrial Review 1977 and the Planning Agreements and National Enterprise Board initiatives of the 1974-79 Labour government. (40) Reforms followed in physical planning principally through the 1968 Town and Country Planning Act and the 1974 Local Government Reform Act. The "systems theory" techniques which came into the substantive and procedural parts of urban planning from the mid 1960's, were an important element in the attempt to see things as a whole and be able to control incremental aspatial developments toward the desired objectives of economic growth or contraction(41)

This central and local corporate planning process had, however, have to overcome serious difficulties if it were to be successful. If the state was to aid the process of production, circulation and exchange, and attempt to ensure the optimum turnover of commodities in relation to cost and the maximum profit to capital, then there had to be a substantial increase in public expenditure. This could lead to an unacceptable increase in imports, in wage levels, in the revenue required from industry and eventually to a return to a balance of payments deficit.(42) In the United Kingdom this was especially the case because the required growth rate had to be faster than our competitors if we were to catch up and not fall behind once more. Finance capital was therefore all the more sensitive to satisfactory conditions for investment at home. Monetarist, short-term stop-go economic management

techniques were always in competition with the new ideas regarding economic and physical planning.

In the event productivity did not increase at a sufficient rate to keep pace with the growth in public expenditure and hence prove satisfactory to finance capital regarding the security and profitability of its loans. A long term 'stop' was demanded in place of the long-term 'go'. In July 1966 under pressure from the bank of England and the Treasury, the most savage set of deflationary measures since the war were announced. One critic noted at the time that amongst other things, as a result of this reversal of policy:

"Unemployment will rise; production will stagnate or fall, the amount of idle machinery will increase, and productive investment, so necessary for the future, will dwindle. While this tragic waste of resources takes place, the balance of payments will improve temporarily as imports fall away. Once again the economy is being sacrificed on the altar of the pound sterling, but this time it is a labour high priest who is performing the ceremony". (43)

Even so the confidence of the City was not restored. A year later the pound was devalued and then stringent restrictive policies were introduced in the 1968 budget with the bank rate increasing to 8 per cent, the highest since 1914. The early Feldon Phase of the new Tory Government 1970-74 was an attempt to continue this restrictive policy of the late 1960's with a return to a free market doctrine. And from the late 1970's, especially since May 1979, the return to pure monetarist policies represents a complete victory for finance capital over industrial capital. A planned contraction of the economy in the name of an anti-planning return to laissez-faire, represents a long-term attempt to make the United Kingdom as profitable for finance capital investment as any area of the world. The only alternative is to prevent British finance capital operating abroad, with complete freedom, by imposed controls. In either case it would appear that the growing corporate centralised power of the state will continue; in the former case behind an ideology of the free market, in the latter case behind an ideology of reformist socialism. The common social value is that of a nationalistic desire for cooperation and order in the drive for a new rate of economic growth based upon a sound industrial base. (44)

The aim of this study is to show that the rise and fall of deck housing in the United Kingdom, its design, location and problems, have been determined in part by the dominance of finance capital in the country's state-run economy. This is attempted in Part 2.

A History of Architectural and Urban Planning Ideas

The social context or culture surrounding a particular urban and building form and a particular type of architecture and urban planning

movement has to be understood as a whole if its products are to be explained. This means that as many features as possible in the superstructure have to be comprehended - sociology, philosophy, literature, painting as well as architecture and planning - and related to the development of the base. As Williams states, we need to recognise the "indissoluble connections between material production, political and cultural institutions and activity, and consciousness". (45)

Given this approach two patterns emerge when studying the history of ideas. Firstly the broad superficial changes in culture. Thus, for example, the expansion and then later contraction of the economy will be partnered by different ideas and interpretations of reality. Secondly, the co-existence of contradictory beliefs and theories with their temporary union achieved as a synthesis or 'balance'. These will partner, for example, the conflict between finance and industrial capital, the former usually promoting an ideology of the free market and the latter an ideology of the planned market. It is an especially noticeable feature of urban planning that its legitimacy is often seen as resting upon its ability to justify opposites. Hence, a middle path or synthesis is claimed of the dualisms, private and public interest, individualist and socialist, idealist and empiricist, anti-rationalist and rationalist, spiritual and functional and partial and comprehensive; although one of them is usually dominant.

How are we to make intelligible these changes and syntheses in ideas? Williams provides some useful pointers. (46) He proposes the division of a culture into three elements, the dominant, residual and emergent. These can be used to point to the "dynamic interrelations, at every point in the process of historically varied and variable elements". (47) Dominant refers to the determinant features of a cultural system. However:

"In authentic historical analysis it is necessary at every point to recognise the complex interrelations between movements and tendencies both within and beyond a specific and effective dominance. It is necessary to examine how these relate to the whole cultural process rather than only to the selected and abstracted dominant system". (48)

This is where the two other concepts are useful. Thus Williams states:

"The residual by definition, has been effectively formed in the past, but it is still active in the cultural process, not only and often not at all as an element of the past, but as an effective element of the present". (49)

And for the second concept he states:

"By 'emergent' I mean, first, that new meanings and values, new practices, new relationships and kinds of relationship are continually being created". (50)

These elements may be a threat or a stabilising factor within the dominant

system. Thus in regard to the latter Williams notes:

"it is exceptionally difficult to distinguish between those which are really elements of some new phase of the dominant culture.....and those which are substantially alternative or oppositional to it". (51)

The relationship between these and the dominant features of the cultural system can be highlighted by using Harvey's classification of theories, that is, status quo, counter-revolutionary and revolutionary. The main features of the three fold classification is as follows: (52)

- (1) status quo - grounded in the reality it seeks to portray, serving to perpetuate that reality.
- (2) counter-revolutionary - may or may not appear grounded in reality but obscures our ability to comprehend reality due to its logical or aesthetic appeal. Diverts attention from fundamental to superficial issues.
- (3) revolutionary - offers real choices for the future and holds out the prospect for creating truth.

From this perspective our task is "revolutionary negation" - "taking counter-revolutionary theory and exposing it for what it really is". (53)

Using the concepts of Williams and Harvey we can classify urban planning as follows:

<u>Nature of Cultural Element</u>	<u>Approach to the Twentieth Century City</u>	
	<u>Past</u>	<u>Present</u>
Emergent/Counter Revolutionary	(1) Urban Planning	(3) Anti-Urban Planning
Residual/Status Quo	(2) Anti-Urban Planning	(4) Urban Planning

Definition (3) refers to post modernism and (4) to the present advocates of planning such as Peter Hall and more recently Lord Esher's history of post war urban renewal, The Broken Wave (1981) The past anti-urban planning (2) has a tradition going back to C.F.A. Voysey, with later influential exponents including Jane Jacobs, Christopher Alexander and Charles Lindblom. (54)

Using the same concepts of Williams and Harvey we can divide (1) past urban planning into what we term the premodernist and modernist views. These gradually converge, leading to areas of overlap or agreement as the merits of the anti-urban planning approach are discovered.

The Evolution of Architectural and Urban Planning Ideas

Nature of Cultural Element	1900-1950 (1)	1950-1960 (2)	1960-1970 (3)
Emergent/ Counter Revolutionary	Modern Movement	New Brutalism	Cultural Modernism
[Anti-Urban Planning]	-----		
Residual Status		Picturesque Modernism	Picturesque Modernism
Quo	Pre- Modernism		

Indicates area of agreement

This diagram summarises two aspects of the history of urban planning ideas. Firstly, the beginning with two opposed movements (1), gradually converging as the realities of public and private interests, the market and the history of localities made their presence felt. As a result, in the periods (2) and (3) some consensus occurred in ideas and policies. Indeed as we hope to show in Chapter 3 it was only because of the shared aims and values that deck housing became the model for urban multi-storey housing. Secondly, the Modern Movement was always in the ascendant and radical position vis-a-vis pre modernism, until the arrival of post modernism after 1970

Given these changes and syntheses of opposed ideas what exactly was the nature of pre modernism and modernism? And following from this, New Brutalism, Picturesque Modernism and Cultural Modernism? We can consider the former question by referring to their contrasting views about streets-in-the-sky within the context of the dominant cultural element, Romanticism (that is the all pervading ideas of Hume, Rousseau and Hegel) (55).

Premodernism and Modernism grew from different interpretations of Romanticism, what we will term 'reflective romanticism' and 'realist romanticism' respectively. Behind these contrasting approaches to the city lay differences in culture. Pre modernism was 'Anglo-American' and in favour of the low density, decentralist (basically two-storey housing) urban form. Modernism was continental and advocated the high density, compact, centralist multi-storey city. However, the essence of the opposition between the two types of urban planning lay in their preconceptions about the aims and methods of urban planning and design.

Pre modernism looked to medieval and classical periods for a mixture of satisfying social and artistic forms, archetypes derived from a past

golden age when a communal and natural environment existed; for example, the two storey cottage house. However, it also rejected the imposition of any generalised or rigid plan on place and people. All proposals had to be based upon a detailed survey of local cultural and physical conditions to establish the sense of tradition, place and community. Only then could a 'third way' between the extremes of laissez-faire and total planning be found and a plan for a sense of order and a sense of wholeness be designed by the architect to guide future development. The aim of the planning process was "to know in order to foresee and foresee in order to provide" (56) This type of planning was above all a "positivist" movement closely tied to the collection of positive facts as a basis to constructive action.

Premodernism was, therefore, too conservative in its aims and methods to produce such a radically new conception of urban form as streets-in-the-sky; it kept to a remodelled form of the traditional street and house known as the "Radburn" design. In fact the premodernist conception of the street grew from a desire to recapture, by design, a sense of community which had been lost in the big city. The physical environment had to be rearranged to aid "gemeinschaft" or community and halt the growth of "gesellschaft" or association. (57) This led to a concentration on suburban rather than urban forms; that is, on pre-industrial examples. It was a sociological exercise tied to evolutionary biology for its scientific status, concepts and aims. In the hands of Patrick Geddes in Britain and Robert Park in the United States (58) along with the fact-finding tradition of Charles Booth, it developed the very *raison d'être* of premodernist planning, the ability to see things as a whole. On this basis it was possible to plan ahead for social and economic well being in place of the individualism of the present.

The Modern Movement was very different. It was intent upon using the opportunities presented by the new "machine age" to liberate man from laissez-faire policies and from the superficial, sham, false feelings and utopian thinking of the premodernists. Only with this approach could man be brought into a complete union with his fellow man and with nature. If architecture was to be beautiful and useful it had to come from an honest and clear understanding of the present age. It was up to the architect to use his imagination, his feeling for the times, to give a wholeness and thus a sense of meaning to the material world; that is, the otherwise unconnected and destructive products of science and technology. By making the completely new forms which expressed the spirit of the age or *zeitgeist*, perceiving them as only the exceptionally talented and well-trained observer could do, the spiritual needs of the period could be answered.

Modernism therefore sought a new kind of community, the growth of, as

Durkheim expressed it, the "organic" as opposed to "mechanical" type of solidarity (59). The latter described a relative homogeneity of the population, a uniformity of beliefs, opinions and conduct; the former was obtained when a population was mentally and morally heterogeneous, when there was a diversity of beliefs, opinions and conduct; the new machine age made this diversity possible as never before.

This type of urban planning was especially divided by anti-rationalist and rationalist methods and aims. To some, reason, theory, was sufficient in itself and to go further was to "satisfy the craving of architects for individual expression, the craving of the public for the surprising and fantastic, and for an escape out of reality into a fairy world". (60) However, to many others it was, above all, the ability of the modern architect and artist to go beyond the fundamentals established by reason and achieve a kind of complex mystic unity of the simple elements which made up the fundamental building blocks of society. This would seem to have been the main criteria of modernism because of its overall intellectual context. On the one hand painting was always the guiding light of new ideas; that is, Impressionism, Expressionism, Surrealism, Dadaism and Abstract Art. In the latter case for example, the use of plain forms and colours was inspired by their spiritual significance. For example the leaders of the De Stijl movement, Piet Mondrian, Theo. van Doesburg and J.J.P.Oud were all Theosophists who found a potential for the good of the whole of society in modern forms. Thus the first modern house designed by the De Stijl member Bernt Reitveld, the Schroeder House of 1924, was actually a monument to Theosophist beliefs. These were profoundly anti-rationalist and Romantic.(61)

Hence we find at the turn of the century, when the Modern Movement was emerging, a revolt against positivism as a purely scientific deterministic practice and a "recovery of the unconscious" (62). The belief in "intuition" as a means of moving beyond a machine-like understanding of the human world guided the leading philosophers of the period such as Bergson, Croce and Dilthey. And, in another form, led to Jung's interest in the "collective unconscious", James definition of pragmatism and later the phenomenological and existentialist philosophies of Husserl and Heidegger respectively. A connection between many of these philosophical works and modernism can be found in the work of T.E.Hulme. (63)

Streets-in-the-sky were, therefore, born of a desire for a completely new housing form for a completely new age. They were meant to satisfy the desire for rational urban development and the innermost "emotional" needs denied by the traditional city and its congested streets. Their design came from a technical knowledge gained by the architect in order to express the spiritual and material needs of the community.

These different philosophical and epistemological approaches to the city were, in fact, opposites providing a materialist and idealist understanding of social phenomenon. The positivist reflective-romanticism of premodernism was directly contrary to the anti-positivist realist-romanticism of modernism. In the first of his Theses on Feuerbach Marx notes his objections to these two theories of knowledge:

"The chief defect of all previous materialism (including Feuerbach's) is that the object, actuality, sensuousness is conceived only in the form of the object or perception, but not as sensuous human activity, practice, not subjectively. Hence in opposition to materialism the active side was developed by idealism - but only abstractly since idealism naturally does not know actual sensuous activity as such."

hence between the premodernist traditional street-form and the modernist street-in-the-sky there lay a fundamental gap. In the former the problems of the modern street were not fully grasped and in the latter, the actual object, the two-sided complex street was not comprehended. In each case, instead of trying to prove in practice the usefulness of the idea, the problem of social alienation in the city led to the "fetishisation of the commodity". The two utopias, the past golden age and the future machine age were given a life of their own. A "social relationship between things" was meant to replace a "material relation between persons".(64)

However, from the 1940's onwards this separation of the two approaches began to fade as the 'reality' of the market economy and the social history of a particular place began to appear. In accord with the unavoidable need to "prove the truth" the radical and critical stance of each approach was modified. By the early 1950's premodernism had become a movement trying to give an English picturesque treatment to the 'inhuman' modernist building forms. Meanwhile Modernism had begun to incorporate notions of tradition, place and community, to become what was called "New Brutalism". By the mid 1960's, when urban planning came into its own, the premodernist and modernist forms were sometimes indistinguishable.

Conclusions.

This study rests upon specific ideas regarding counter-revolutionary and revolutionary theory. These are:

- (1) A history of deck housing provides an opportunity to oppose the theory of post modernism. This is because, as an example of modern urban housing form, its history highlights the Romantic origins of urban design and planning (and not the purely functionalist or inhuman tendencies) while its political and economic history reveals the role of finance capital in the fortunes of urban renewal (and not the dominance of the Labour movement). Part 1 deals with the first issue, Part 2 with the second.

- (2) A neo-marxist theory of the 'urban question' has to be developed which recognises the historical, superstructural and empirical understanding required of the totality. This means that each of the five levels has to be comprehended in interaction with the other levels instead of confining the ideological to a narrow conception of the urban 'symbolic', the political level to a limited conception of urban planning and consumption, production and exchange to an inadequate recognition of the function of housing and factories and roads respectively in the urban system. Instead urban design and planning, local authority housing and the building industry, with the Labour movement often behind them, have to be understood as active modernising forces working in the 'primary circuit' of production and economic growth; the role of urban design in resolving the problems of the economic level, and the history of urban design and the politics of that tradition, have to be comprehended in full while other factors behind the politics of consumption need to be recognised as important influences.

PART 1

A HISTORY OF THE IDEA OF DECK HOUSING

CHAPTER 2. THE ORIGINS OF DECK HOUSING

In this chapter we will consider the contrasting modernist and premodernist approaches to architecture and urban planning, and thus community planning, by looking at the respective conceptions of deck housing.

Positively recognisable designs for streets-in-the-sky were forthcoming from six types of modernism, each one representing a stage in the evolution of the movement as a whole during the first half of this century. These were Futurism, Expressionism, Early Modernism, Socialist Modernism, Purist Modernism and Brutalist Modernism. The architects responsible were Italian, Dutch, Austrian, Russian and Swiss-French with an additional design produced by a Yugoslavian. Each scheme thereby related not only to its true period but the social-urban context. That is, respectively, the architecture of Milan, Amsterdam/Rotterdam, Vienna, Moscow, Paris/Marseilles and Zagreb.

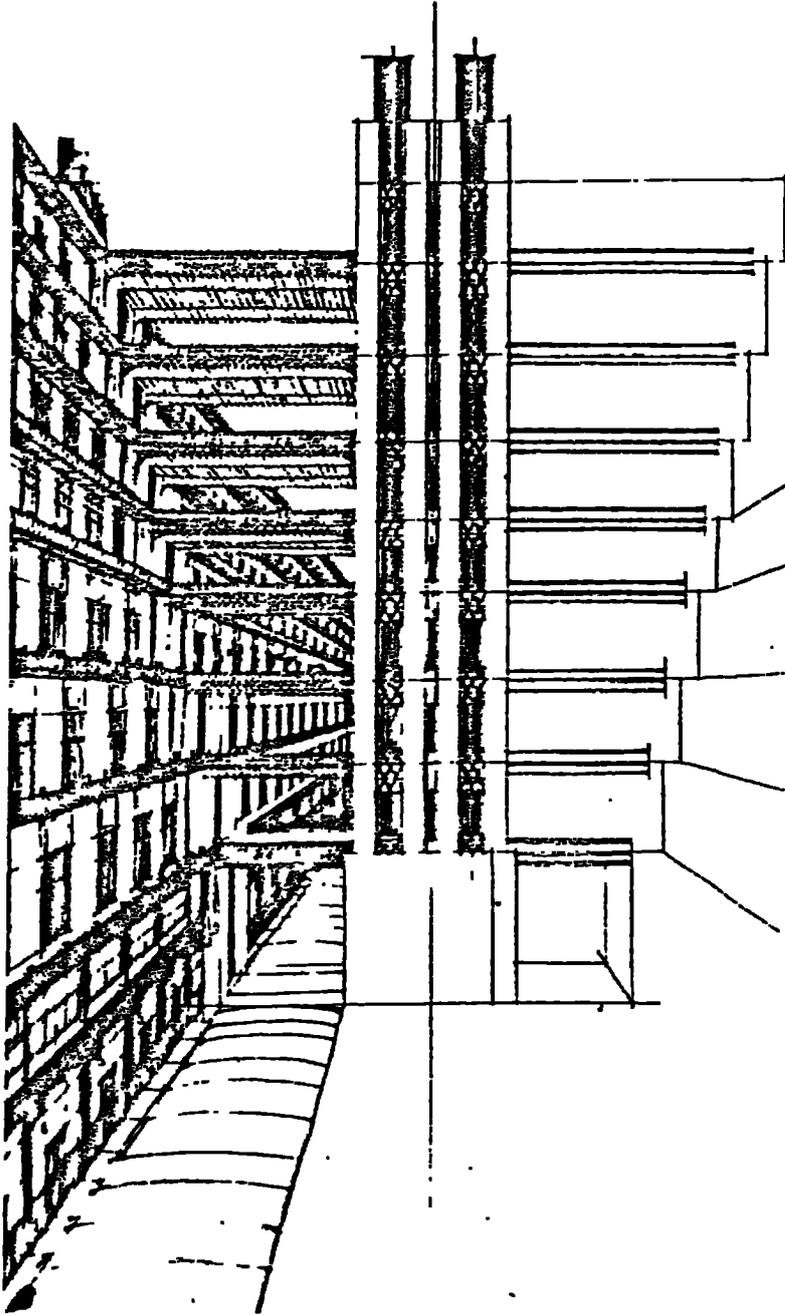
Over the same period premodernism produced two important city and regional plans. These were the Survey and Plan for New York and its Environs, 1923-32 and the two plans for London and its region, published in 1943 and 1944 (1). In the former case some modernist-like ideas were used to propose a super-decked city but without any results for new housing form. In the latter case pseudo-modernist ideas incorporated in the plans failed to produce any suggestion of multi-level or deck-access communal housing form. This type of urban planning therefore successfully resisted any incursion of pure modernist policies and designs at this stage of its development.

Futurism: The Italian Example

Between 1909 and 1914 Antonio Sant'Elia, an architect who was a member of the Futurist circle in Milan, led by F.T. Marinetti, produced designs for The New City and Milan, 2000 A.D. (2) These were the first illustrations of new urban form. As we can see from illus 1 (p. 35) they included proposals for wide upper level street-like galleries, giving access to multi-storey housing. The Manifesto of Futurist Architecture made it clear that the old architecture and with it, the typical city street, would no longer be tolerated. It stated:

"Thus this art of expression and synthesis has become in their hands a vacuous stylistic exercise, a stirring-about of half-baked formulae to camouflage modern buildings in the routine past stupidities of brick and stone. As if we, accumulators and generators of movement, with our mechanical aids and extensions, the noise and speed of our lives, could live in those same streets that were designed for their own needs by men of four, five or six centuries ago".

On the one hand this meant that the new street "will plunge storeys deep into the earth, gathering up the traffic of the metropolis" while



1. The Housing of the Futurist City, 1909-1914.
Source: Banham, R. RIBA J February 1957

on the other "we must exploit the roofs" and "raise the level of the city". The result would be an architecture:

"of calculation, of temerous boldness and simplicity; the architecture of reinforced concrete, iron, glass, cardboard, textile fibres, and all those replacements for wood, stone and brick that make for the attainment of maximum elasticity and lightness".

For all that, the new architecture will not be:

"an arid combination of practicality and utility but remains an art, that is, synthesis and expression".

Hence Futurism must be understood:

"as the power freely and boldly to harmonise environment and man, that is, to render the world of things a direct projection of the world of the spirit".

It was this new spirit that was to guide the other designs for deck housing forthcoming after the first world war.

Expressionism: The Dutch Example

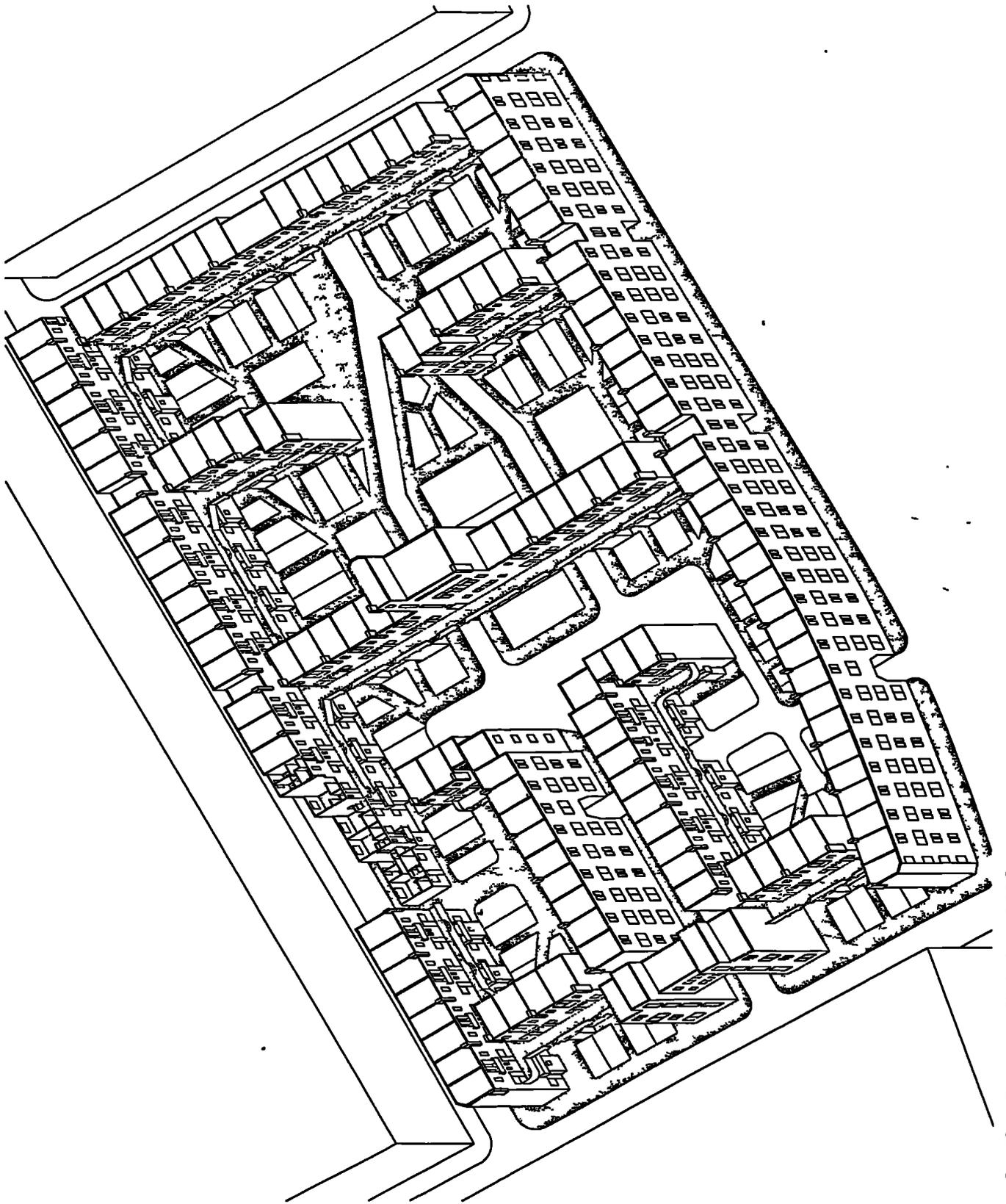
Between 1914 and 1923 an avowedly anti-rationalist tendency emerged in modernism. It was fashioned principally in Amsterdam and Berlin by Michel de Klerk (1884-1923) and Eric Mendelsohn (1887-1953) respectively (3).

The Spongen estate (Illus. 2 and 3) (p.378) designed by M.R.Brinkman (1873-1925) and built in Rotterdam in 1918, was a product of de Merk's school of thought. The absence of pure forms and modern materials and the presence of a variety of detailing and the predominant use of brick gave the building all the attributes of expressionist design.

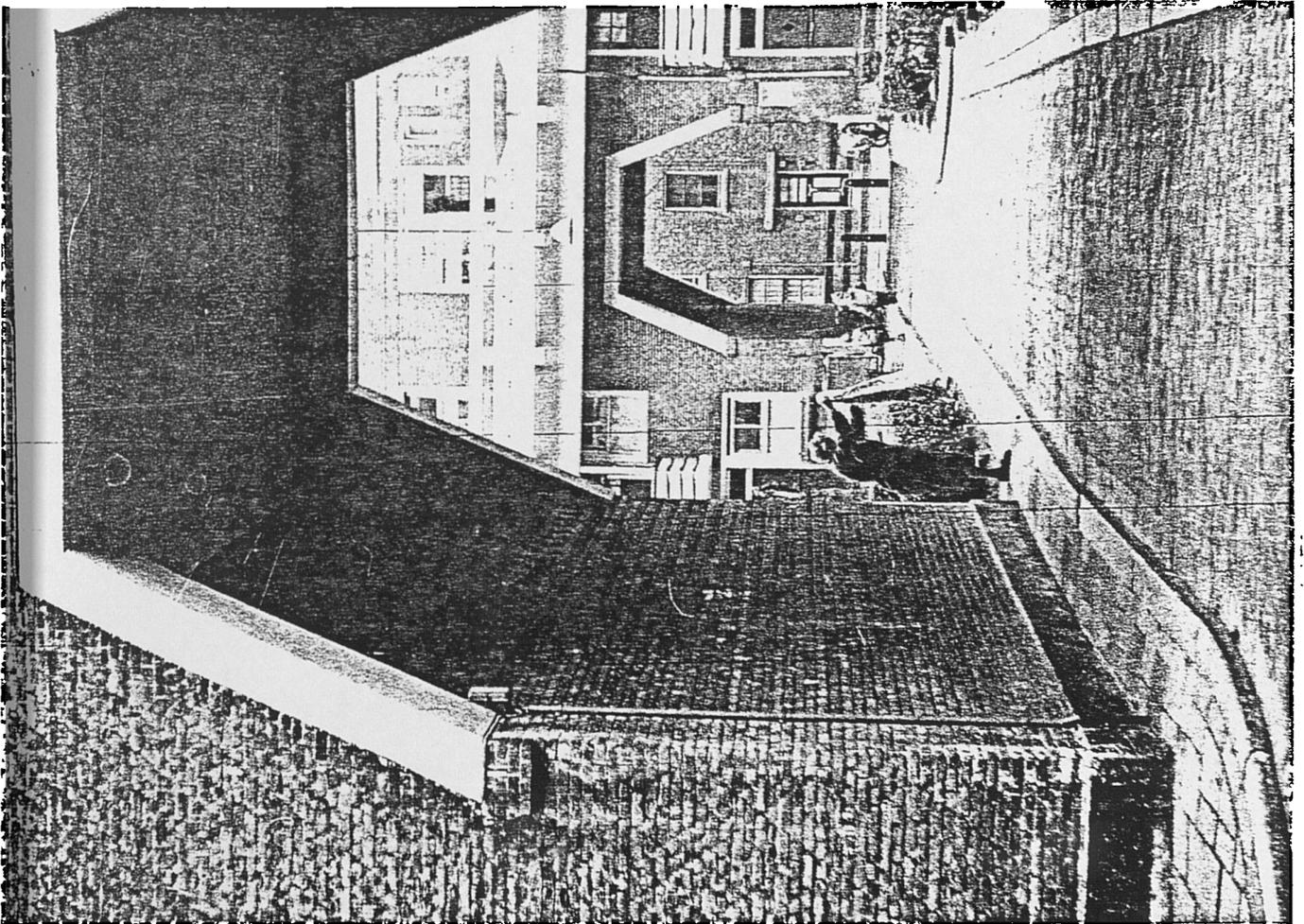
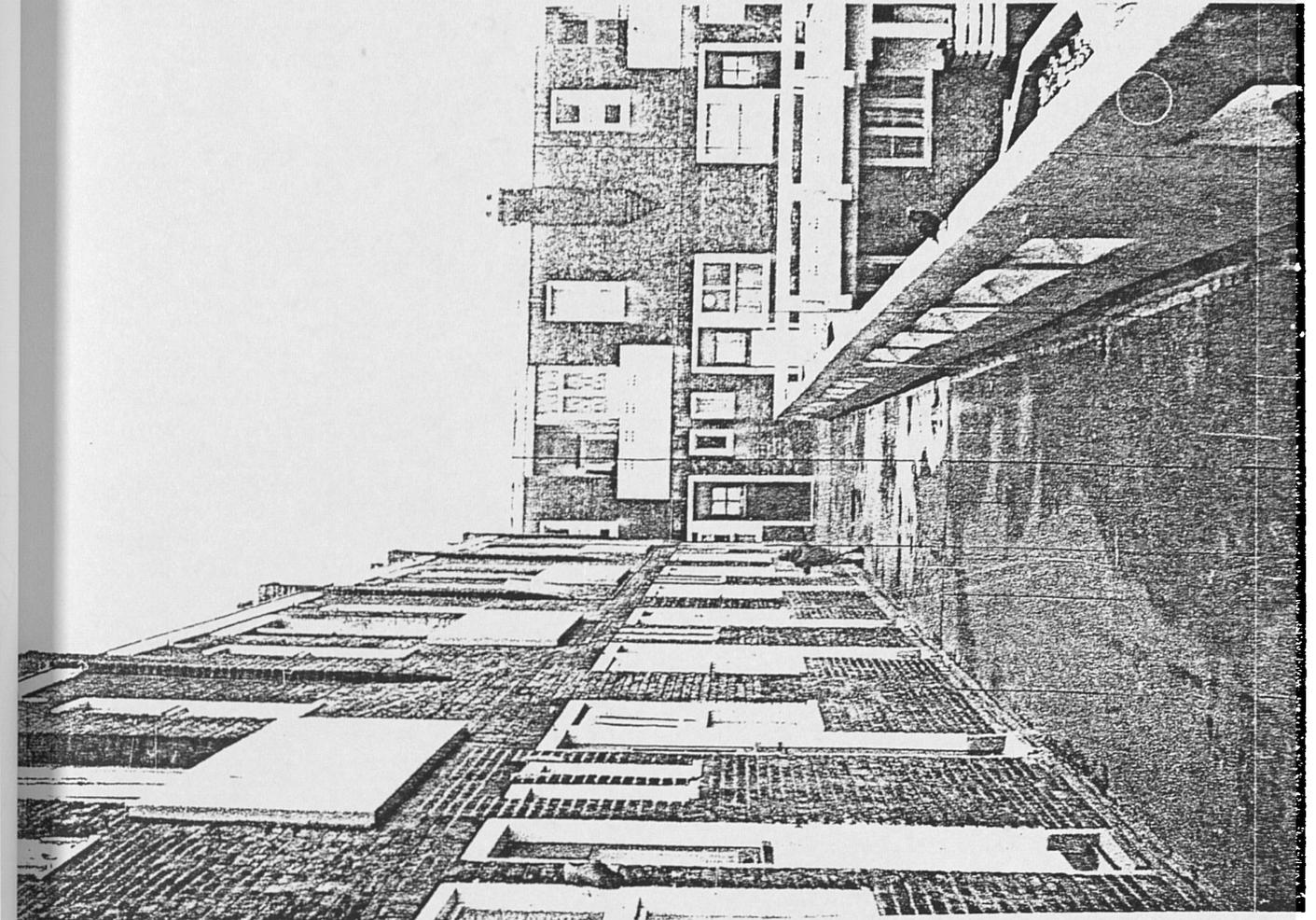
Hence one English commentator noted in 1922, with regard to the "abundant vitality and intense individualism" of de Klerk's functionless design work:

"The most striking and praiseworthy characteristics of de Klerk's buildings are their magnificent breadth of handling, and the extraordinarily fine brickwork, which is laid with perfect craftsmanship and handled with an ingenuity which, however, at times abuses the function of the material, employing it as mere surface texture and not as a unit of construction."(4)

Nevertheless, the movement which Brinkman and de Klerk represented was still able to introduce a truly remarkable innovation in what was primarily a functional, that is, socially and economically useful, type of access to four storey housing; a second floor external deck, linking the whole housing scheme together as a communal unit. The entrance to the estate, the internal aspect of the deck and the generous provision of ground level gardens for residents of ground floor flats, all gave the tenant a feeling of importance and security which the attractive detailing or ornamentation served to reinforce. Furthermore, the one road penetrating the site, which occupied two blocks of the street-grid, was designed to



2. The Spangen Estate, 1918. Source: Sherwood, R. Modern Housing Prototypes 1977



3. Pedestrian - level views of the Spangon Estate

pass underneath arches at each end and divide at the centre to pass underneath two other arches; through traffic could not, therefore, reach speeds which could threaten the safety of the pedestrian or disrupt the community.

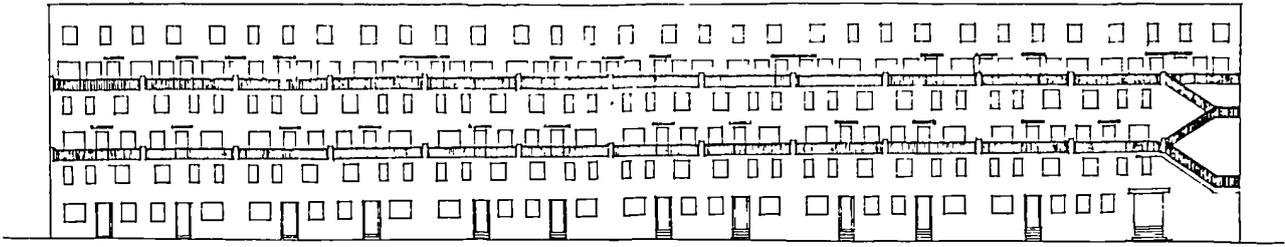
Early Modernism: The Austrian Example

In 1927 the Deutscher Werkbund, directed by Mies van der Rohe, organised the Weissenhof exhibition in the suburbs of Stuttgart. Architects from all over Europe were, for the first time, invited to design detached houses or small groups of flats, to produce a model garden suburb. The outcome revealed an underlying unity of design principles which later earned the title, the 'International style'. This was in direct contrast to the individualism of the Expressionist designs.

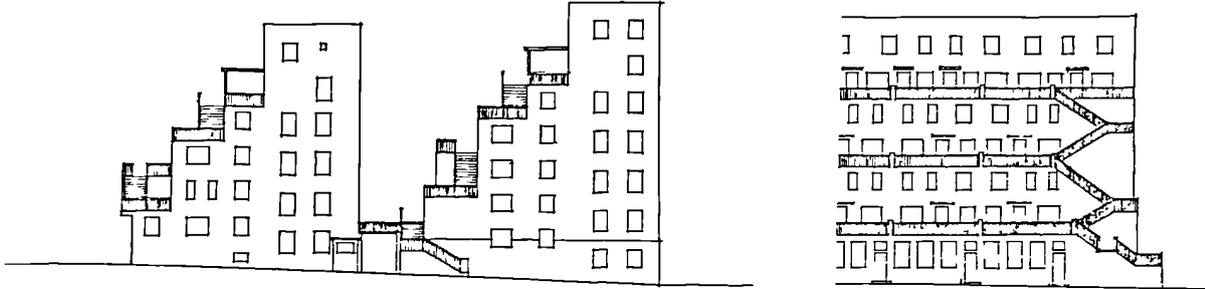
The suburban community was originally conceived as several serpentine terraces of more or less continuous buildings of similar heights, following the contours of the site; the result would, apparently have been a sequence of "pedestrian through ways opening into squares". (5) In the event, the freestanding buildings still exhibited a common desire to include pedestrian spaces by using terraces or roof gardens. The idea of the hollow perforated rectangular box, containing a series of linked but different spaces, which conspicuously drew together the various designs, consistently led to the inclusion of an exterior upper-level space for the use of the family. If the original site for the exhibition had been in the city centre where high density, low cost housing was required, these principles and features may well have led to the use of an upper level street.

This was apparent from a publication entitled City Architecture (6) produced in 1927 by one of the participants in the exhibition, Ludwig Hilberseimer. Here current ideas for new pedestrian levels devised in the United States by Hugh Ferriss and R.J. Neutra were discussed and a proposal made by the author for the redesign of Berlin following these principles. More important for our purposes, Hilberseimer discussed a number of designs for blocks of maisonettes with high level gallery access to all the two level dwellings. Details of Brinman's Spangen estate and Le Corbusier's "cellular block" were provided amongst others.

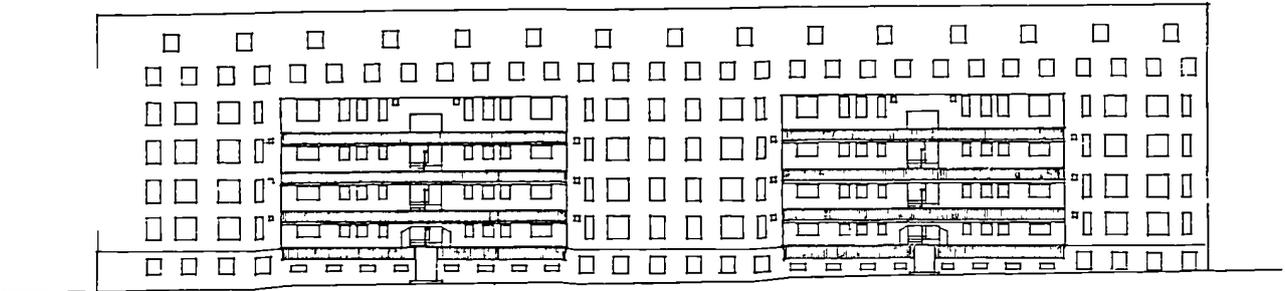
These early modernist ideas provide the context for the first concrete proposal for streets-in-the-sky using the International style. Adolf Loos, recognised as a pioneer of the Modern Movement (but one who was not invited to the exhibition), produced a suitable design for the Municipality of Vienna in 1923 (Illus.4) (p. 40)



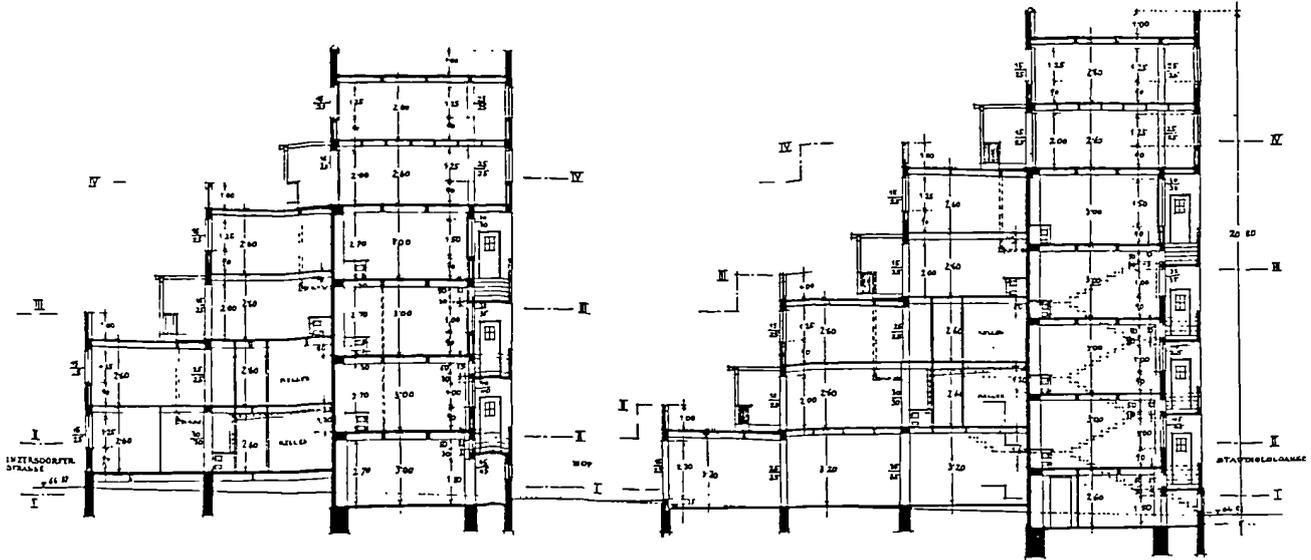
INZERSDORFERST



BÜRGER



STAUDIGL.G.



4. Loos's Viennese Estate, 1923.

Source: Munz L. Kunstler, G. Adolf Loos: Pioneer of Modern Architecture 1966

Two large blocks, reaching up to a maximum of seven storeys and linked at first floor level only, had external decks in the form of terraces on every second floor. These provided access to maisonettes. At the rear, balconies on every floor except the top two, provided access to flats. In contrast to the Spangon estate, the deck was incorporated by using the roof of the lower level maisonette. The design represented an extension of Loos's earlier middle class housing architecture where the staggered form made possible the use of the roof of the lower block as a roof garden.

The scheme was never built probably partly because of the questionable standard of the accommodation; most of the dwellings were effectively 'back to back's', with no through ventilation possible and residents of the higher maisonettes would have to climb through three or five storeys before reaching their access level, no lifts being incorporated in the design.

Loos described the terraces as "high level roads" (7). They would provide each maisonette with "it's own entrance, with its own loggia, where one may sit at night in the open overlooking the road". (8) The inspiration behind the project was sociological in nature:

"It was always a dream of mine to build a block set back on terracing for working class housing. The fate of the proletarian child, from the age of one until he goes to school, seems to me very hard. For the child kept at home by his parents, the shared terrace opens up his domestic prison cell, since it allows the neighbours to keep an eye on him". (9)

A sense of responsibility for the usefulness of the house as a shelter and a home was a prerequisite to good architecture:

"A house has to please everybody, in contrast to a work of art which need not please anybody. The work of art is the artist's private affair. The house is not. The work of art is born without any existing need. A house fulfills a need. The work of art is responsible to nobody; the house to everybody. The artist has to serve only himself, the architect the community". (10)

But how does the architect serve the community? Principally, Loos would reply, by living in the present and by trying to bring others out of the past, away from the sham and falsity of revivalist, artistically minded doctrines.

In the modern age it was felt that to use ornament was to live in the past. Only artists who pretended to be architects wasted resources on decoration when they could be used instead to provide good quality materials, solid workmanship and "high level roads". Ornament in a building was a crime to the present and a negation of the tenets of "cultural evolution".(11) Accordingly, on his gravestone Loos asked to be placed

the inscription: "Adolf Loos, who freed man from unnecessary work". (12)

This problem of waste was really part of a much more important problem: the failure of architecture to find a language which made possible a clear and concentrated process of creativity. Loos comments:

"Lack of ornament has pushed the other arts to unimagined heights. Beethoven's symphonies would never have been written by a man who was obliged to go about in silk, velvet and lace.....His (modern man's) individuality is so strong that he does not need to express it any longer by his clothing. Lack of ornament is a sign of spiritual strength. Modern man uses the ornaments of earlier and foreign cultures as he thinks fit. He concentrates his own powers of invention on other things". (13)

Many of Loos' Venetian friends also strove for a new language which ensured an absolute accuracy of expression and a show of spiritual strength. Those of greatest consequence were Schonberg in music, Kraus in journalism, Kokoschka in painting and Wittgenstein in philosophy. The latter figure, for example in his famous Tractatus Logico-Philosophicus published in 1921 was intent upon confining language to the simple logical entities instead of the convoluted terms which we mistakenly use to try to picture a complex world. The task of philosophy was to clarify thoughts, to show that "what can be said at all can be said clearly, and what we cannot talk about we must pass over in silence" (14) Wittgenstein's modern house, which he built between 1925 and 1928 was the three dimensional expression of this philosophy:

"The building is his work down to the smallest detail and is highly characteristic of its creator. It is free from all decoration and marked by a severe exactitude in measure and proportion. Its beauty is of the same simple and static kind that belongs to the sentences of the Tractatus". (15)

If we wish to go beyond the limitations of the language of, say, architecture, we must look beyond reason: "Feeling the world as a limited whole - it is this that is mystical" (16) and "There are, indeed things that cannot be put into words. They make themselves manifest. They are what is mystical" (17) The demand of Loos was, according to a close friend:

"to be silent where one cannot speak; to do no more than design a building with technical correctness, guided by the right human approach, and leave the right and truly modern form to emerge spontaneously". (18)

The modern form encountered in the deck housing design for the Municipality of Vienna emerged from this desire for "technical correctness" and the "right human approach". It was symptomatic of a determination to concentrate on the real basis of architecture - to provide a shelter and a home - and leave aside the questions of the artistic composition associated with decoration and ornament and the understanding of the complex "whole"

associated with the creation of an ideal city. In contrast to the Futurist and the Dutch Expressionist architects, who had or desired almost complete control over the replanning and rebuilding of their cities(19) this Austrian-Viennese movement aimed to confine itself to the development of a modern building form. As one fellow architect put it:

"What K&gus, Loos and Wittgenstein have in common is their endeavour to separate and divide correctly. They are creative separators. It is understandable that they should arouse fierce resistance since their endeavour was counter to the desperate (and justified) instinct of their age, which seeks to overcome division in all fields. Yet division can be overcome only through a new unity built in fresh foundations, never through ^{an} indiscriminate mixture of polluted and deformed debris, the detritus of once living cultural values".(20)

Thus Loos's streets-in-the-sky were no more purely rationalist in origin than Futurism's "world of the spirit" or expressionism's anti-rationalism. And in the work of the Russian modern architects we find a similar origin of ideas in "the supremacy of feeling in art" - as Malevitch described the all-important suprematist movement (21) - combined with a determination to build the new socialist post-revolutionary society.

Soviet Modernism and Collective Housing Schemes

Following the revolution in 1917 there was little development of new architecture until the mid 1920's. In 1925 the Organisation of Contemporary Architects (O.S.A.) was formed by Moses Ginsburg and the Vegnin brothers. This was to be the most successful and internationally well-known school of modern Russian architecture.

Five years after its formation El Lissitzky, the well-travelled leader of Soviet modern art, whom Banham later described as "one of the great ideas-men' of the Modern Movement", (22) published a work summarising the progress of the architects in the O.S.A. and other lesser known groups and individuals. It was entitled Russia: An Architecture for World Revolution Here Lissitzky emphasised that the aim of Russian revolutionary architecture was to build the new society:

"Its task is to comprehend the new conditions of life, so that by the creation of responsive building design it can actively participate in the full realisation of the new world. Thus the thrust of Soviet architecture is directed towards the goal of reconstruction." (23)

In the new social conditions the private client had been replaced by the so called "social commission". The emphasis had shifted from "the intimate and the individual to the public and the Universal" (24). The physical structure and the social relationships of the old society were to be swept away:

"In our country all existing differences in housing accommodation,

from a hole in a basement for the worker in a large city, a multi-room high rise apartment to a private villa, have been abrogated. The Soviet architect was given the task of establishing a new standard of housing by devising a new type of housing unit, not intended for single individuals in conflict with each other as in the west, but for the masses". (25)

The leading group involved in designing the new so called "social condensers" was the O.S.A. or as Lissitsky described them the "Building Committee of the Economic Council of the RSFSR". Some of their designs for autonomous housing communes, the so called Stroikom Units, published by Lissitsky are reproduced here (Illus. 5 to 7) (pp.45-7). They introduce the full-length "corridor" as the crucial structuring element, linking the dwelling block with the community centre, kitchens, dining-rooms, reading halls, recreation rooms and children's playrooms. In large measure they appear to be derived physically from Fourier's Phalanstery and its crucial architectural innovation, the street-gallery, although there the similarity ends (26) Lissitsky emphasised the importance of the communal space joining the separate facilities together.

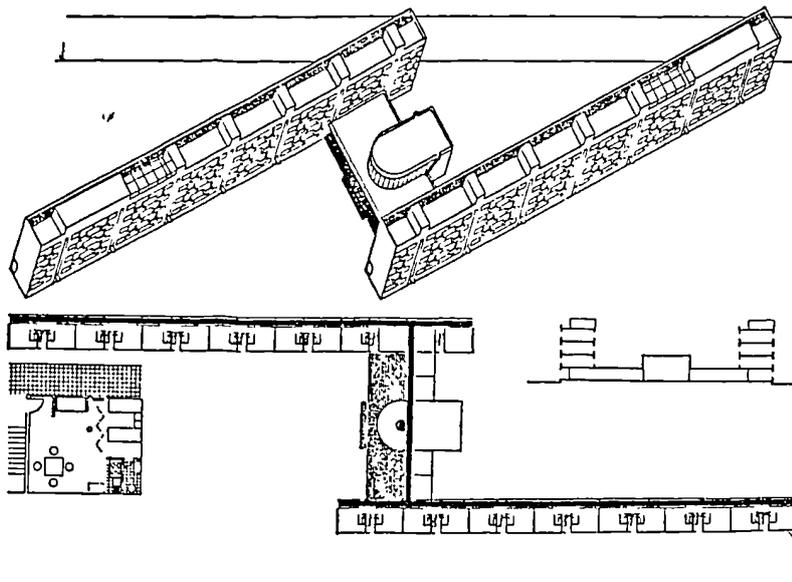
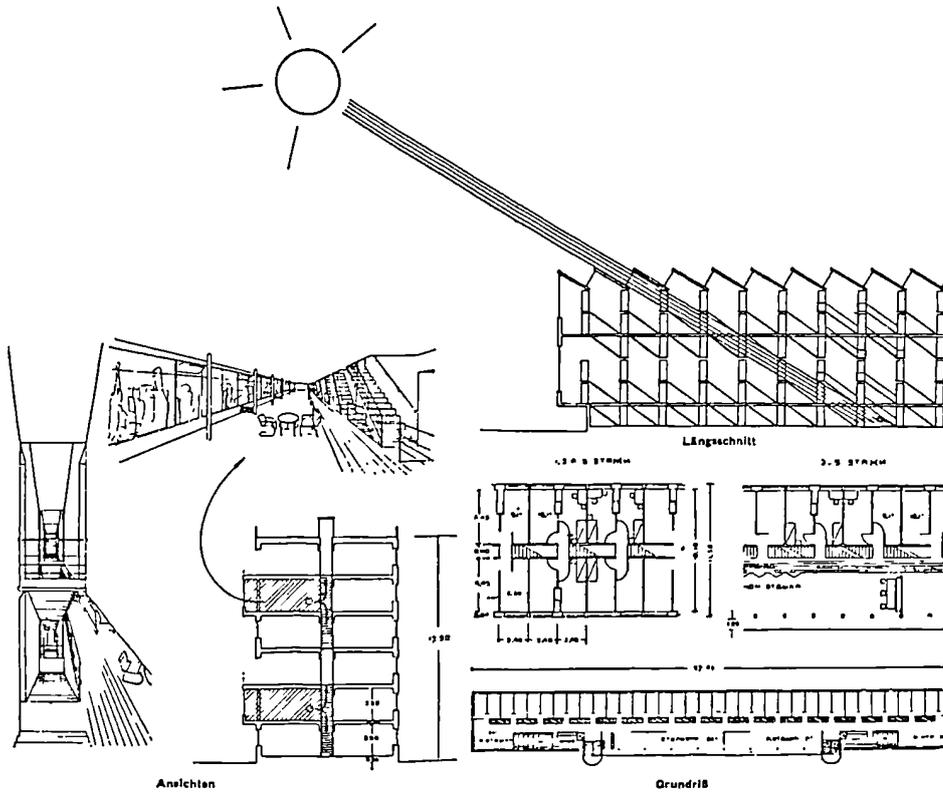
"It is not important whether the scheme favours a horizontal (corridor) or a vertical (staircase) system; the important thing is that the housing block, which up to now has merely represented the algebraic sum of self-contained private apartments, has now been transformed into a synthetic complex for total communal living".(27)

However, it was the horizontal corridor and especially the F type living unit (Illus 5) (p.45) which was dominant in the designs produced between 1927 and 1930. Ginsburg noted:

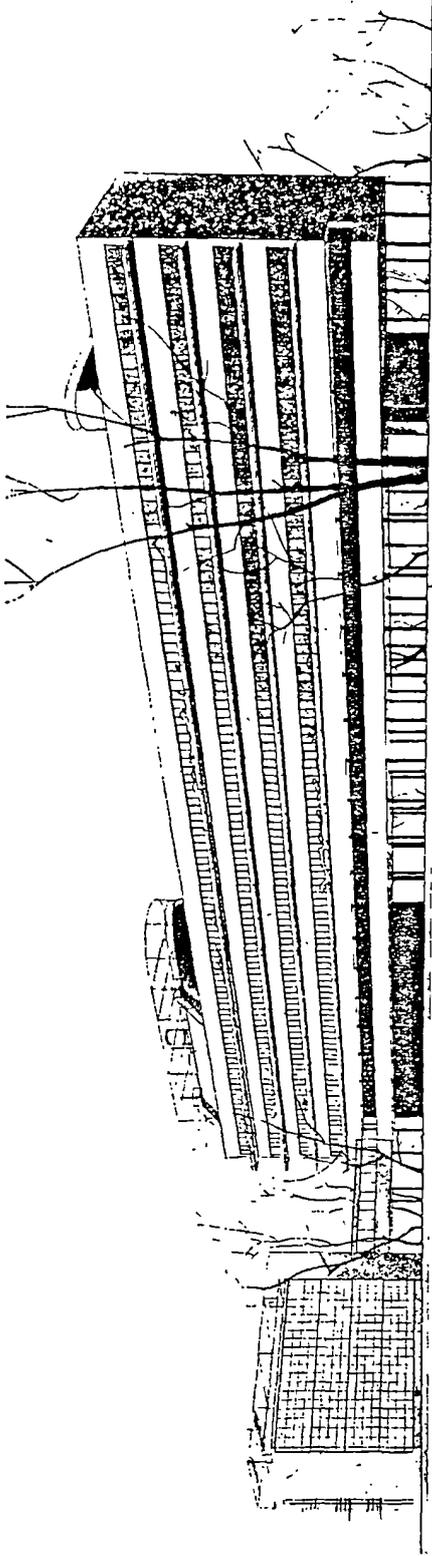
"For us a particularly important aspect of the type F unit is that such an apartment offers its occupants new possibilities of enriching social experiences. The well-lit access corridor could become a sort of forum, a setting for the development of purely collective functions and social exchanges. Essentially, a complex of one room type F apartments is a new organism that will lead us toward a socially superior mode of life - the communal house. The presence of the horizontal artery - the external corridor makes it possible to link such units organically with a communal dining room and kitchen, recreation rooms, baths and so on, indeed all the facilities that must become an inseparable part of our new housing". (28)

The only building actually completed according to these principles was the Narkomfin apartments in Moscow 1928-29, by Ginsburg and I. Milinis (Illus.7) (p.47) It consisted of a large housing block raised on stilts with type F and K interior corridors or streets plus a roof garden. Also included were a canteen, kitchen, gymnasium, library and day nursery.

Unfortunately following this breakthrough the Soviet architects became preoccupied with a debate about the 'correct' type of urbanisation that Russia should embark upon. Ginsburg favoured complete deurbanisation

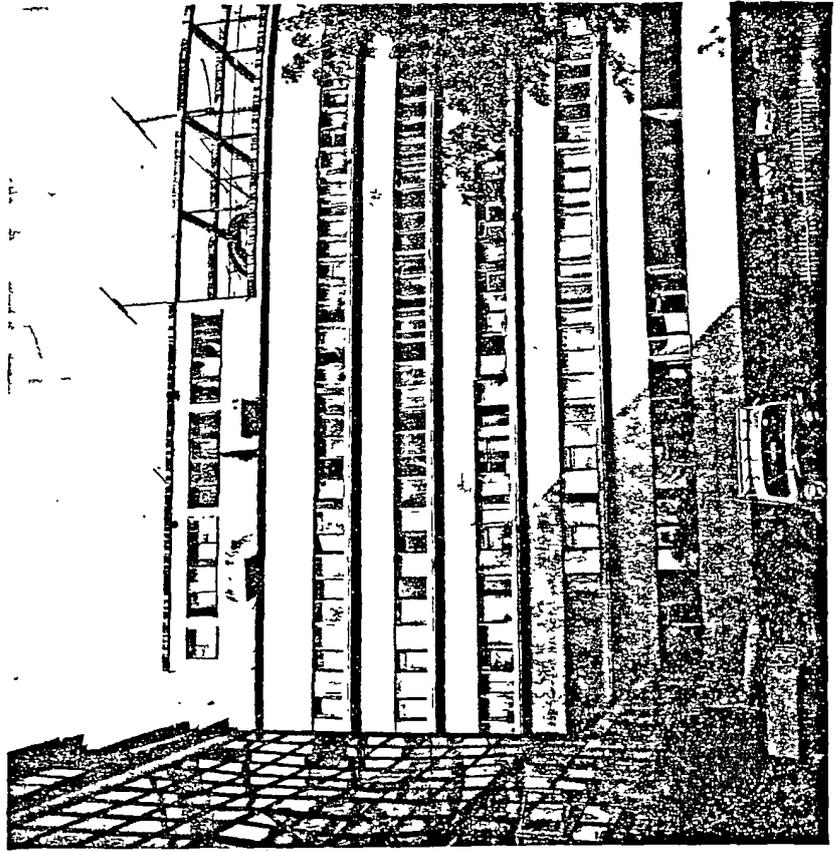
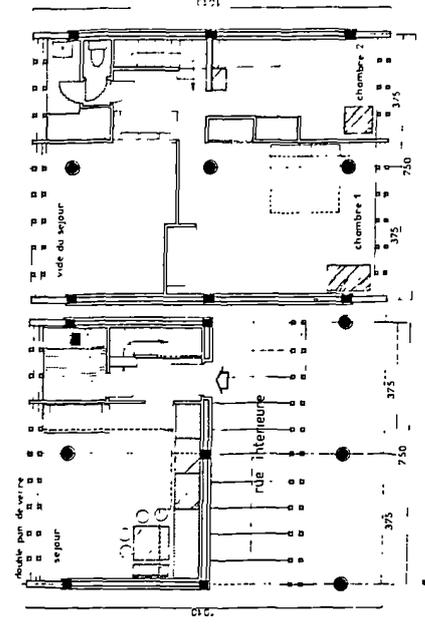
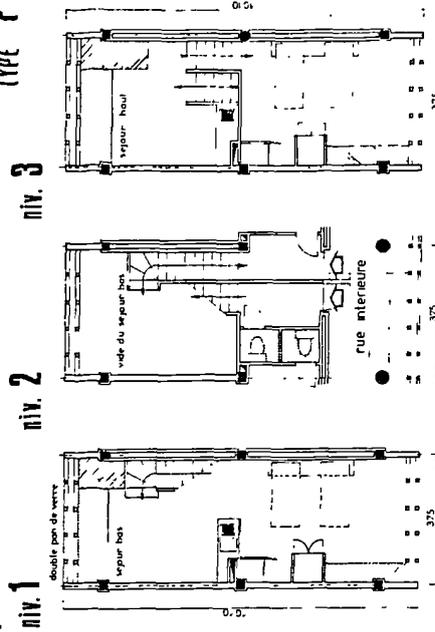


5. Russian Collectivist Housing, late 1920's
 Source: Lissitsky, E. Russia: Architecture for World Revolution 1930.



IMMEUBLE DU "NARKOMFIN" MOSCOU 1929

TYPE F



7. The Narkomfin Apartments, Mowcow, 1929
 Source: Kopp, A. Town and Revolution. 1967

TYPE K
 niv. 2
 niv. 1

while others demand the complete rebuilding of existing cities.

The leader of O.S.A. found Le Corbusier, who visited in 1928, too conservative:

"We are making a diagnosis of the modern city. We say: yes, it is sick, mortally sick. But we do not want to cure it. We prefer to destroy it and intend to begin work on a new form of human settlement that will be free of internal contradictions and might be called socialist".(29)

By 1930 the Central Committee of the Bolshevik Communist Party decided that the debate regarding urbanism had to cease. Furthermore, due to their neglect of other subjects, German, Dutch and French architects had to be called in to design the new housing and the new settlements. The outcome was a departure from the idea of the communal house and its characteristic corridor, and from 1932, an end to the use of modern architectural forms as a whole (although they did actually continue to be used in many areas of the country).

These changes were not necessarily unwelcome to architects or the public. One historian of the period has noted that the members of the O.S.A:

"were themselves to criticise the communal house for its noisy and dirty inside corridors, its institutionalised dining rooms, and the de-personalising effect of buying people in a huge anonymous mass, which made the end result seem more like a barracks or an anthill than the collective of work, culture, and community interests it had been intended to create". (30)

And in regard to the reactions of those living in the new housing, he noted:

"It is true that the abandonment during the thirties of all research and construction along the lines laid down by the Stroikom team was partially justified by the widespread unpopularity of that type of unit". (31)

However, this was not simply due to the design. The underlying idea of the housing communes had been to reduce costs, increase production and free women from domestic labour so that they could work in the factories and that included the factories producing the industrialised construction elements of the housing communes. By grouping together a large number of housing units there could be a reduction in the number of stair wells and savings in the horizontal and vertical services that formed the determining elements of the design. Thus:

"The occupants were to enjoy services that the old landlords could never provide, namely a whole series of collective facilities to make up for savings achieved at the expense of the individual dwelling units". (32)

While the Russian streets-in-the-sky were not therefore, very successful, the ideas developed by them do seem to have had considerable influence

outside the country. Le Corbusier would, more than any other architect take up the idea of the communal house and the upper level corridor or street, in his plans and designs of the 1930's. But unlike the Soviet architects he did not believe in a simple rationalism. To Lissitsky functionalism was the only basis to modern architecture:

"In these times we must be very objective, very practical, and totally unromantic, so that we can catch up with the rest of the world and overtake it". (33)

And this meant that:

"The artist, or the creative worker, invents nothing; there is no such thing as divine inspiration. Thus we understand by the term "reconstruction" the conquest of the unresolved, of the "mysterious" and the chaotic". (34)

But was Lissitsky really being consistent here? As the leader of Russian art and architecture he had been profoundly influenced by Malevitch one of the pioneers of the Modern Movement as a whole. Malevitch as we have already noted, characterised modernism by the pre-eminent role it gave to the subjective side of man; he concentrated on the "non-objective world". To Lissitsky, as with Malevitch all that was left were certain elementary forms. Banham credits the Russian with introducing the crucial idea of "elementarism" to the Continent; it was defined by one practitioner in the following sentence:

"Elementary is the art that does not philosophise, but is built out of its own proper elements alone". (35)

It was on the basis of this rejection of reason that Lissitsky invented the fundamental element, the "Proun" (which has parallels with Wittgenstein "simple logical entity".) Thus we are not surprised to find the Soviet artist also advocating a rather mystical approach to architecture:

"What we demand from the Soviet architect is that as an artist and because of his perceptive intellect, he will fully comprehend and amplify the faintest ripple of developing energies much sooner than the masses - who tend to be shortsighted as far as their own growth is concerned - and that he will transform this energy into tangible architectural form". (36)

In this situation socialism and mysticism tended to overlap. Hence the utopia could be created for the masses according to subjectively symbolic and objectively functional principles instead of proceeding by the dialectical process Lissitsky himself had insisted upon: "to arrive at the affirmative by negation (37). It was a similar blurring of the lines between socialist-like rationalism and mysticism that guided Le Corbusier.

Le Corbusier and the C.I.A.M.

Following his return from Russia Le Corbusier recorded his impressions:

"The interior street has existed in embryonic form, in two or three apartment houses built last year in Moscow. It was

considered undesirable to continue its application, because children made a deafening racket in the corridors and the neighbours could see directly into the apartments, opening on to the corridors. Certain circles in Moscow, subdued by this failure, are thinking of abandoning the principle of the interior street and coming back to that of the separate stairway for every two apartments. The time of dangerous decisions has come; let's remain calm, let's react against panic: so the interior street did not work in Moscow? I say: let's not give up the principle of the interior street but instead, let's try to create the new organ which is the interior street; a new problem for architecture has come up here. How can we organise the interior street? That is what we must work out; we must create that organ." (38)

Why was the idea of the interior street so important? Because it ensured a radical reduction in the size of the city and freed the ground level for traffic and open space. In existing urban areas housing arranged on its longitudinal axis adjacent to roads took up to three times more space than when dwellings were positioned "depth-wise" to the street. Or when they were located about a central courtyard, the same amount of unnecessary 'sprawl' occurred. With upper level 'streets' providing access to a vast number of 'depth-wise' positioned dwellings the land area taken up by housing and traditional streets was radically reduced. The density of the city was increased while its size diminished, at the same time increasing the flow of traffic, eliminating road accidents, and, because of the increased space between buildings, letting more light and air into the new 'city in the park'.(39) Thus the new technology of the machine age made possible an ideal environment for modern man.

These were the kind of ideas which brought together the protagonists of the new architecture and urban planning, in 1928, under the title *Congres International d'Architecture Moderne*. A year after the failure to organise a proper international body at the Stuttgart exhibition, a group was thereby formed which would meet five times over the next ten years, prior to the second world war. In 1928-30 they concentrated upon the problem of housing for the "lower income classes", in 1930 on how to organise whole groups of dwellings into neighbourhood units in such a way that "human needs could be satisfied" and from 1930 to 1937 they looked at the so called Functional City. This led to the issuing of the "Athens Charter" in 1933. That document summarised the basic principles of modern architecture and urban planning, including the division of the collective life of cities into four categories: dwelling, recreation, work and transportation. In each case the development of the modern machine had proceeded within the old city framework. In order to control the machine and use it for positive purposes the city had to be re-designed according to holistic principles of interdependence. Only on this

foundation could man be liberated from urban chaos and an environment produced which satisfied his emotional and material needs. (40)

Le Corbusier was the leading figure within the C.I.A.M. Shortly after the first world war he had appreciated the need for architecture to control the machine. At the beginning of his first major work published in 1923 and translated as Towards a New Architecture, the theme of his life's work was stated as follows:

"The Engineer's Aesthetic and Architecture, are two things that march together and follow one from the other: the one being now at its full height, the other in an unhappy state of retrogression.

The Engineer, inspired by the law of economy and governed by mathematical calculation puts us in concord with universal law. He achieves harmony.

The Architect, by his arrangement of forms, realises an order which is a pure creation of his spirit; by forms and shapes he affects our senses to an acute degree and provokes plastic emotions; by the relationships which he creates he wakes profound echoes in us, he gives us the measure of an order which we feel to be in accordance with that of our world, he determines the various movements of our heart and our understanding; it is then that we experience the sense of beauty".

The very *raison d'etre* of architecture was, therefore, its ability to go beyond reason - the law of economy and mathematical calculation - and strike at the very source of our sense of harmony with the universe of man and nature; when we "experience the sense of beauty" we are at one with the world around us.

To achieve this, the building must be designed without ambiguity:

"It is because we see clearly that we can read, learn and feel their harmony. I repeat: clear statement is essential in a work of art." (41)

The vertical and the horizontal, the right angle and the "regulating line", these are the "severe and pure functioning elements" (42) of the machine which the architect needs in order to move us. But they are not enough:

"Architecture is a thing of art, a phenomenon of the emotions, lying outside questions of construction and beyond them. The purpose of construction is to make things hold together; of architecture to move us". (43)

Architecture is "spiritual mechanics" (44); it is the "happy conjunction of passion and knowledge". (45)

How was this "happy conjunction" to be realised? By means of the plan, which is the "generator" of order and sensation. The most important characteristic required of the modern city plan (and even the plan of a building) was:

"Uniformity in detail and variety in the general effect (the exact opposite of what we do today: a mad variety in details, and a deadly uniformity in the setting out of our streets and towns)" (46)

In other passages the "variety" in the general effect becomes "chaos, disorder and wild variety" (47), a "sense of movement" (48) and a "magnificent "tumult" "(49). But first it was essential to realise that the "condition of the whole city lies in the condition of each of its cells" (50). Each cell or element of the city had to function efficiently and properly as part of the "machine age". Therefore the old "corridor street" had to be replaced by a machine for the rapid and safer circulation of traffic and the house, first and foremost, had to be a "machine for living in". A uniformity in these cells would facilitate their cheap and efficient mass production. Therefore a "uniformity in detail" was essential to the machine-like efficiency of the whole city and to prevent the mind from being "bewildered and worn out and indisposed for its task".(51) The "mad variety in details" caused man to live "in a perpetual state of instability, insecurity, fatigue and accumulating delusions". (52) Once the work of the engineering side of the architect had ensured that the city would "hold together", then a variety in the arrangement of forms could be devised to make the community of residents "experience the sense of beauty."

This was the context to the "machine age" development of the idea of streets-in-the sky. The idea was extended and changed from the 1920's, when these principles were established (53) through four different types of urban plan until the building of the Unité block in Marseilles in the period 1947-52 and the several other similar blocks developed later.

The different urban forms can be summarised as follows:

- 1920's : The Geometric Form; The Contemporary City 1924
and the Voison Plan for Paris 1925 (Illus 8 and 10) (P. 54 and 59)
- 1930's : The Curvilinear Form; The Plan for Algiers 1931-34 (Illus.9) (p.58)
and South American cities; The Green or Radiant City 1931-34
and the Plan for Paris (1936-37) (Illus.11-16) (p. 59-65)
The Insular Housing Block Form and the Plan for Nemours.
- 1940's : The Insular Housing Block Form and the Plans for Saint Dié
and (1946) (Illus.19) (P.70) Marseilles, Meaux and others.
- 1950's

In all these plans, the deck housing Le Corbusier designed contrasted with the work of his modernist colleagues on three counts. Firstly, it was designed on a far greater scale (the monastery and the ocean going liner were a direct source of inspiration) and was only one element of the new multi-level urban form. Secondly, it was to be mass produced using concrete, steel or iron, and glass, and was to incorporate all the modern services available such as central heating, waste disposal mechanisms, lifts, etc. Thirdly, the street-deck was never really the primary means of pedestrian movement. All deck housing was part of the "City in a Park" and in this ideal arrangement the old fashioned corridor street had been

replaced by what we might call the "street in a park" (even if that appears to be a contradiction in terms.)

The plan for a Contemporary City (Illus. 8) (p. 54) was the outcome of a "theoretical" exercise. At the middle was the Great Central Station where the two main tracks for fast motor traffic crossed. Around the station were the giant sky-scrappers for business use only. Le Corbusier noted:

"Family life, therefore, will be definitely banished from the centre of our city. It seems most probable, as things are, that the sky-scraper cannot adequately provide for family life; for its internal economy demands so elaborate a system that if one of these structures is to pay, only business can afford the cost: while the means of getting about in what is practically a series of superimposed stations, is so elaborate that it could never be appropriate to family life". (54)

Hence family life would be confined to the twelve storey corridor or deck access "set backs" (Illus. 12) (p. 60) and "cellular" blocks (Illus. 10) (p. 59)

To the east were garden cities for industry, warehouses etc. and to the north west sports facilities. The whole city is raised on stilts and is thus set within an "immense park" surrounded by a "protected zone" with a formal park laid out to the west.

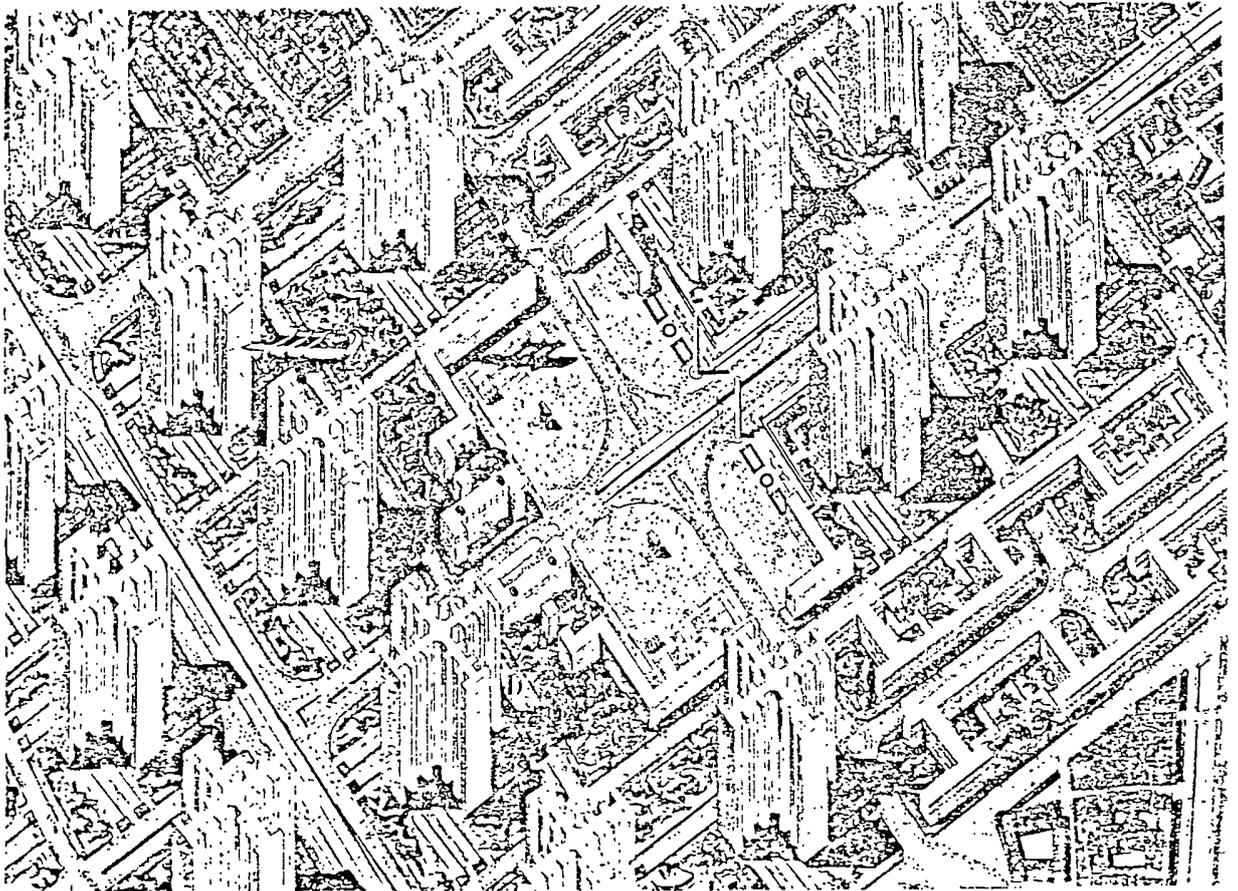
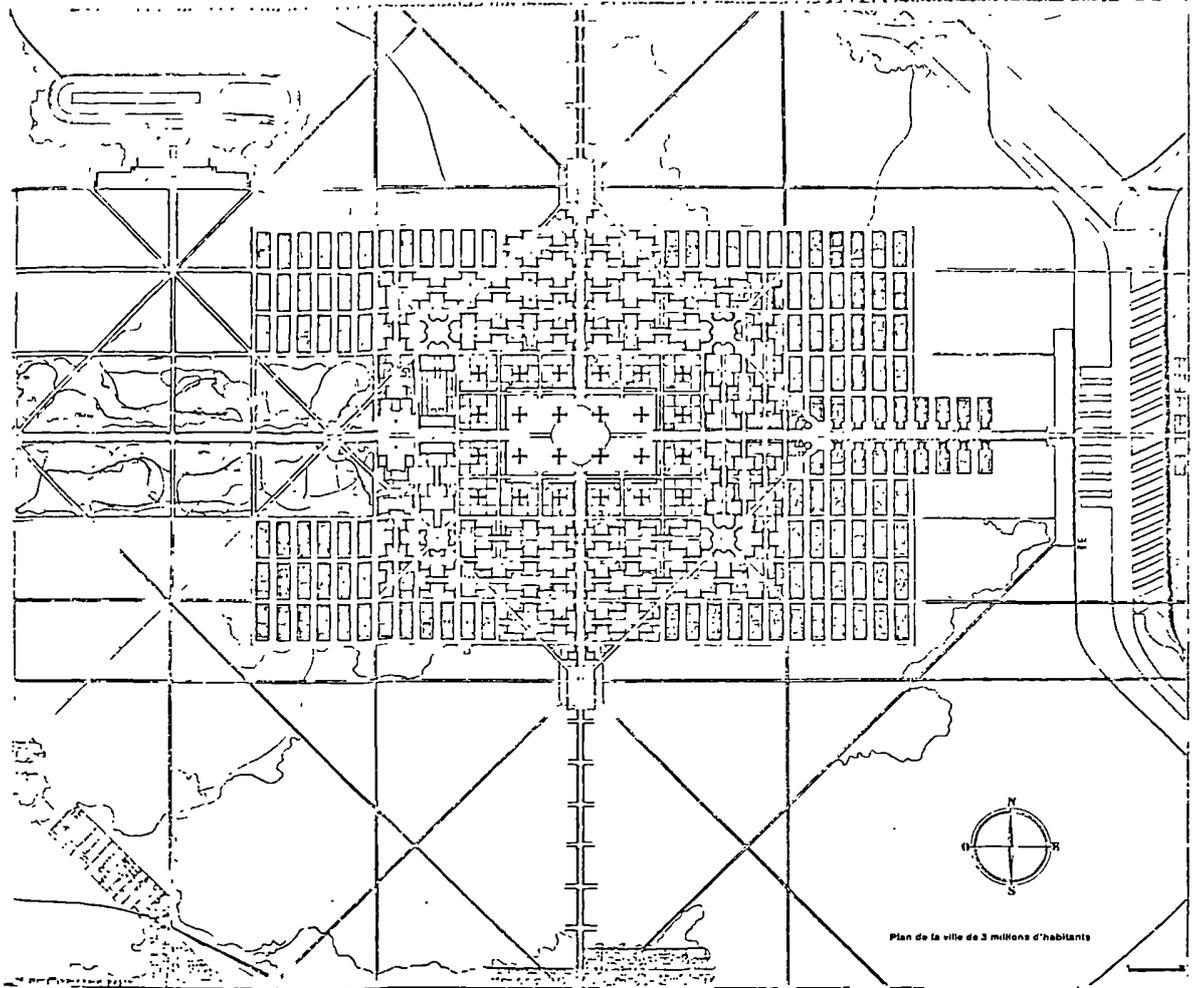
The purpose of this theoretical plan was to express the principles of urban planning to be followed in order to eliminate the chaos of the present. These were:

- (1) We must decongest the centres of our cities;
- (2) We must augment their density;
- (3) We must increase the means of getting about; and
- (4) We must increase parks and open spaces."

The proficiency with which these principles were followed would determine above all, the effectiveness of "business". The first and third would allow an increase in the volume and speed of traffic; "speed and the struggle for speed", the rhythm "which accentuates business." The second provided greater space and ensured "the close contact demanded by business". And the fourth was, the "only way to ensure the necessary degree of health and peace to enable men to meet the anxieties of work occasioned by the speed at which business is carried on". (55)

For Le Corbusier these principles would answer "the very first problem of town planning", namely that, "the centres of the great cities are like an engine which is seized". (56) The original skeleton of the city, the "Pack Donkey's Way", was "paralyzing its growth". Hence the "centres of our cities must be pulled down and rebuilt". This would overcome the second problem of town planning: "How to create a zone free for development". (57)

The Voisin Plan for the centre of Paris represented the first attempt to found an ideal Contemporary City: "A Model City for Commerce". (58) Here (Illus 8) (p. 54) the space requirements of business and traffic would have dwarfed the provision for housing. It is difficult to recognise



8. The Contemporary City, 1922. The Geometric Form (above) and the Voisin Plan for Paris, 1925 (below).
Source: The City of Tomorrow 1924

as street-life what Le Corbusier described in a famous essay published in 1929 (59)

"I should like to draw a picture of "the street" as it would appear in a truly up-to-date city. So I shall ask my readers to imagine they are walking in this new city, and have begun to acclimatize themselves to its untraditional advantages. You are under the shade of trees, vast lawns spread all round you. The air is clear and pure; there is hardly any noise. What, you cannot see where the buildings are? Look through the charmingly dispersed arabesques of branches out into the sky toward those widely-spaced crystal towers which soar higher than any pinnacle on earth. These translucent prisms that seem to float in the air without anchorage to the ground - flashing in summer sunshine, softly gleaming under grey winter skies, magically glittering at nightfall - are huge blocks of offices." (60)

And in answer to one French architect who bemoaned the "immense geometrical barracks" people would have to live in and move amongst, making them "long for 'disorder' ", Le Corbusier stated:

"These immense geometrical barracks are designed to introduce a quite new variety into the urban scene, and to replace the "corridor street" as it exists in every large town by noble perspectives, through the play and interplay of projections and recessions, "set-backs", cellular constructions and the great skyscrapers. If any one will examine carefully my plan for a Contemporary City, and imagine that he is taking a walk through the town and keeping in mind the great increase in height of the buildings, he will see that the scene changes with each step and is never repeated; that the "corridor street" is gone and is replaced by a scheme where space and an infinite architectural variety are possible." (61)

There is no mention of the streets-in-the sky in these writings of the 1920's. What was obviously of greater interest was the new ground level "street" experiences made possible by the "machine age" technology. The "crystal towers" of commerce and man-made or unspoilt "nature" could be worshipped through the medium of an architecture taken out of its "unhappy state of retrogression".

The Streets-in-the sky and the new ideal cities.

Following the criticism of these forays into utopian planning, Le Corbusier began to search for, relatively speaking, more humane and realistic types of modern architecture and city planning; and the appearance of the idea of upper level 'streets' was part of that general trend (62). From what conditions did these new plans emerge?

The geometric plan of the 1920's went beyond what any engineer would have and did, as far as we know, propose, probably because such a trained and disciplined individual would be limited not only by the "law of economy" and "mathematical calculation" but also by the untutored imagination. In contrast the "pure creation" of Le Corbusier's "spirit" produced archetypes of functionalist megalomania which went beyond engineering in so far as

they extended the principles of the machine to almost unimaginable extremes. Architecture, this "phenomenon of the emotions", did not produce the experience of a sense of beauty, but a sense of incredulity and outrage. . . . Le Corbusier not only failed to get "the measure of an order which we feel to be in accordance with that of our world", he actually awoke the opposite, the feeling of an order profoundly in discordance with that of our world.

The reason for the fantastic character of the contemporary city plan and proposals would appear to be in a fetishism of the commodity, and the simplicity and clarity attached to the product of the "machine age". This can be explained by reference to his basic building framework.

Hence the most important breakthrough in Le Corbusier's career, as an architect and urban planner, was made with his invention of the structural framework known as the Domino System. This was a reinforced concrete unit consisting of three equally spaced horizontal rectangular slabs connected together by six smooth columns, near the edges of the slabs. A staircase provided access to each level. No internal or external walls were required for any structural purpose and no foundations, as the whole unit could be raised above ground on the six columns. Therefore, in contrast to the traditional house there was a real freedom for design on four levels, including the ground and flat roof. Moreover the principle could be applied to a whole new urban design; hence all buildings, including roads, in the Contemporary City were raised on stilts to free the ground level for pedestrian movement.

And yet such an essential technique for the realisation of Le Corbusier's plans "with neither rib-beams nor column splay, would have been difficult if not impossible to construct" (63) when it was completed in 1914. This was because:

"the smooth, simple forms of the slab and column were the result of a purely formal or aesthetic decision - made, in spite of, rather than because of, structural or practical considerations". (64)

And this was, in fact, the "only truly distinctive (and unprecedented) characteristic of the Domino System" (65) Le Corbusier had made "an uncompromising formal decision to strip the structural elements down to their most generalised forms, a pure slab and a pure column" (66) before this was technically feasible.

It is not surprising, therefore, to find that many of his early buildings tended to be sham "machine age" structures. They were neither as efficient as the "machine for living in" was supposed to be (67) and nor were they constructed throughout with new techniques and new materials:

"The Le Corbusier houses of the twenties are, generally speaking, as hand-made as other buildings of the time; the walls are not

even of reinforced concrete, as the elevations might imply, for construction generally is reinforced concrete frame with block-infill, all stuccoed and painted to try to give it the precision both of machine products and cubist paintings. The machine admired in Vers Une architecture was shiny and metallic, but it was not practical to make houses like motor-cars in the twenties, so Le Corbusier's houses of the time can almost be regarded as traditional buildings designed to look machine-made. Almost. But not quite". (68)

The reaction against this obsession with machine-made architecture led, not to the alteration of building design but to the acceptance of unusual site conditions at Algiers (Illus 9) (p. 58, even though the needs of business and traffic were still paramount; the moving of housing to the centre of the Radiant City (with business to the north, industry to the south), and the acceptance of the need for greater variety in urban form overall. Hence we find the crescent shapes at Algiers, the variety of interrelationships of the "set backs" in the Radiant City and the break up of the continuous built environment altogether at Nemours, Saint Die and others.

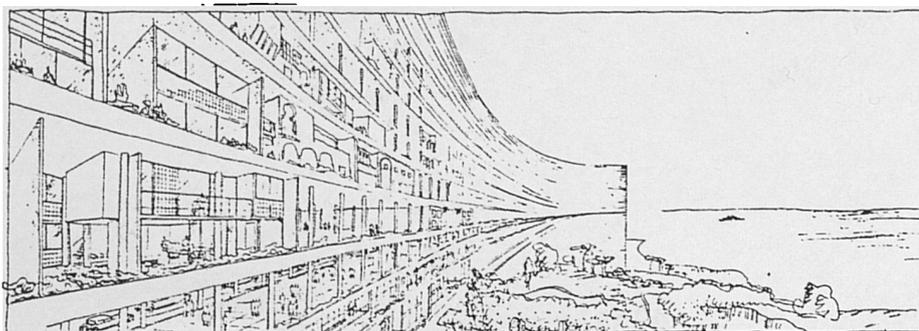
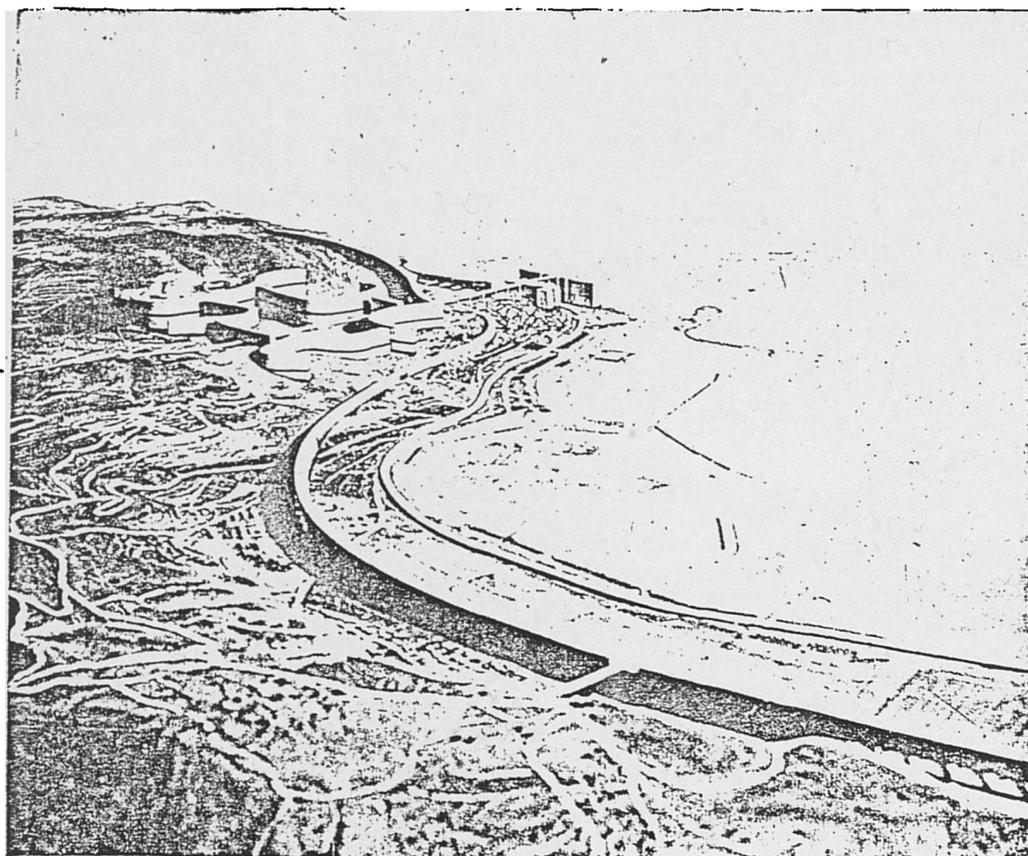
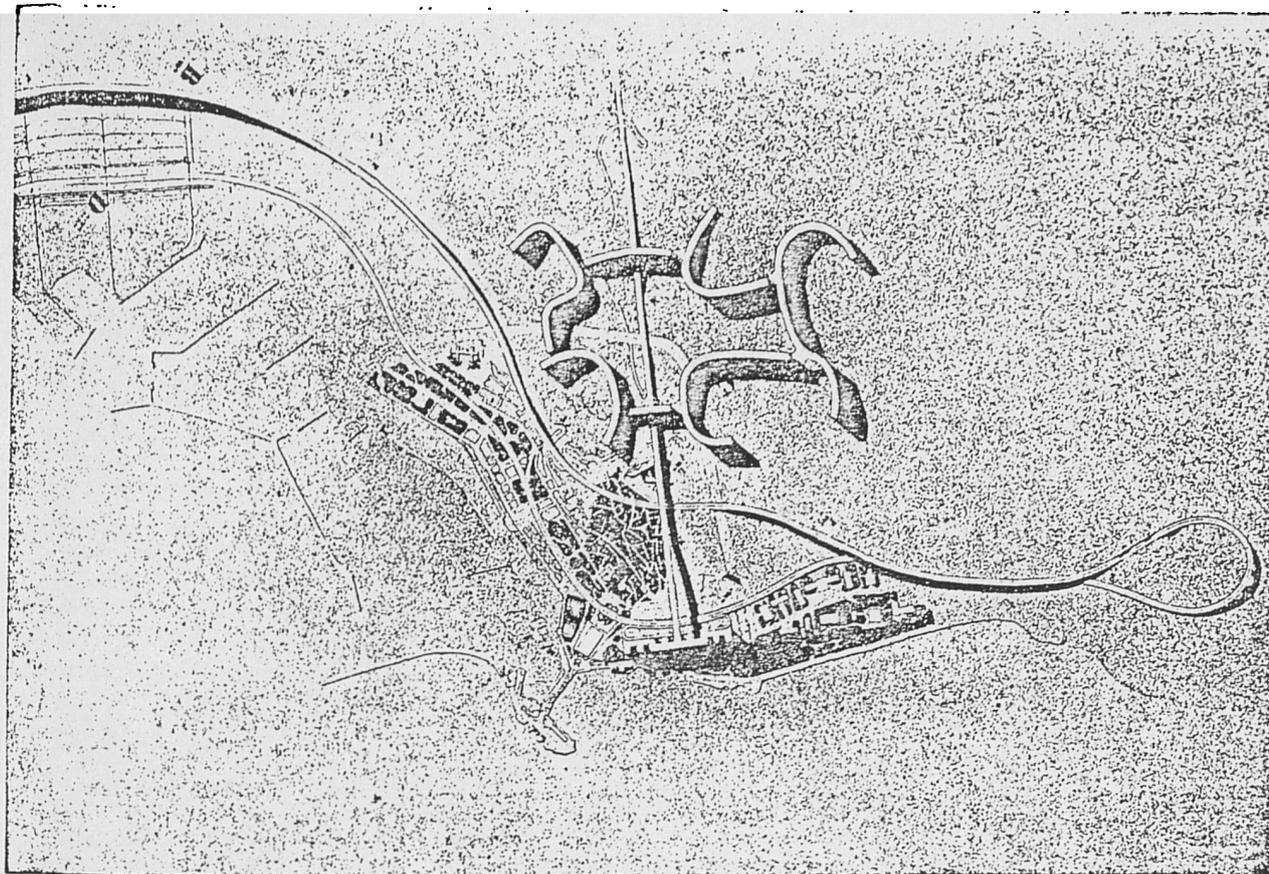
Probably most important, however, was the reconsideration of the fetishisation of nature and thus the experience found at ground level in the Contemporary City. So vast were the open spaces created by raising all buildings on pilotis that Le Corbusier feared the resident would be disorientated and unwilling to use them to their full potential.

"I was filled with great anguish lest the immense open spaces that I was creating in our imaginary city, spaces dominated by the wide sky on all sides, should be "dead" spaces; I was afraid that they would prove full only of boredom, and that the inhabitants of such a city would be seized by panic at the sight of so much emptiness.

It has taken me eight years of worrying for me to find out where I should go to look for the answer to the problem." (69)

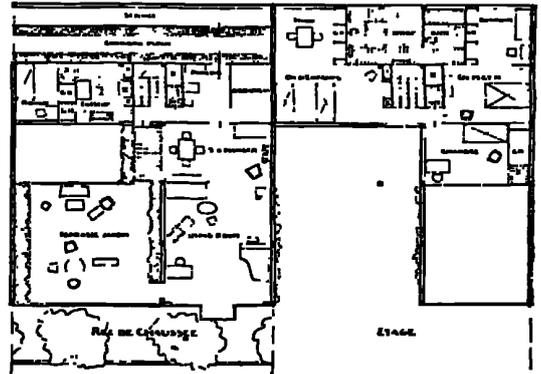
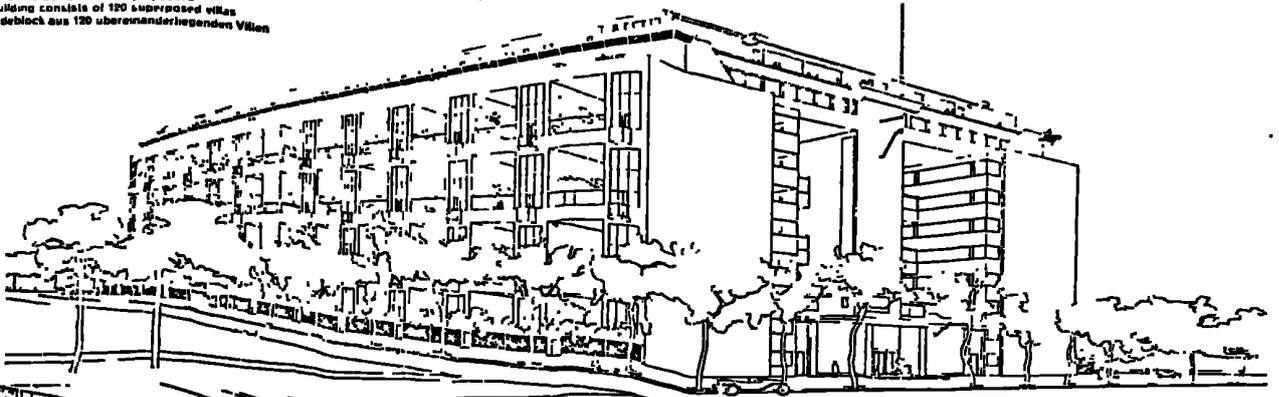
The answer was, above all, to fill the open spaces of the Contemporary City with all the sports facilities and general amenities imaginable on the premise that the individual would soon be able to "work in order to live" and not vice versa; this was the background to the development of the Radiant City (Illus.11) (p.59)

The conception of an "open air street" and an "interior street" were part of the new emphasis on the needs of the individual and the community in the Radiant City. The former would be used when the "set back" had a north-south orientation, the latter with an east-west orientation. Hence apartments would be on the south side, or facing both east and west. As the "set-back" moved through 90°, so the "street" would move from the outside to the inside of the housing block. In contrast, at Nemours, an interior street would provide access to the independent housing blocks only, with no continuous upper level system of pedestrian movement. At



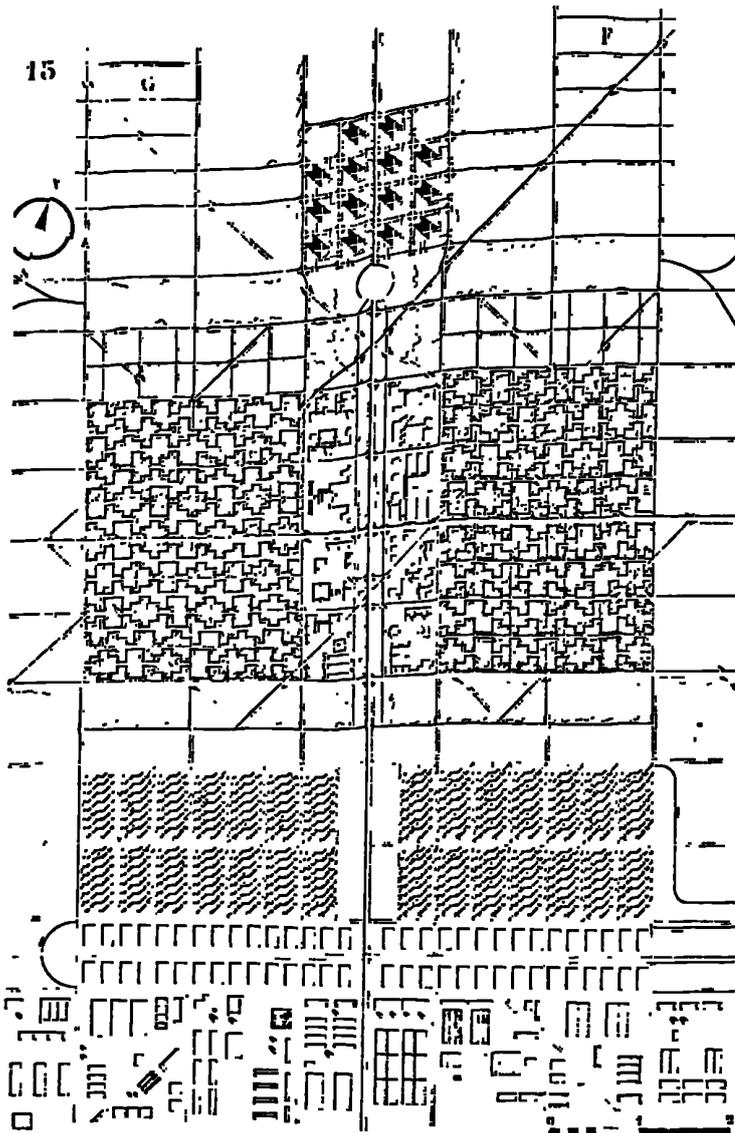
9. The Curvilinear Form: The Plan for Algiers, 1931-34.
Source: The Radiant City. 1933

Un immeuble de 120 villas superposées
The building consists of 120 superposed villas
Gebäudeblock aus 120 übereinanderliegenden Villen

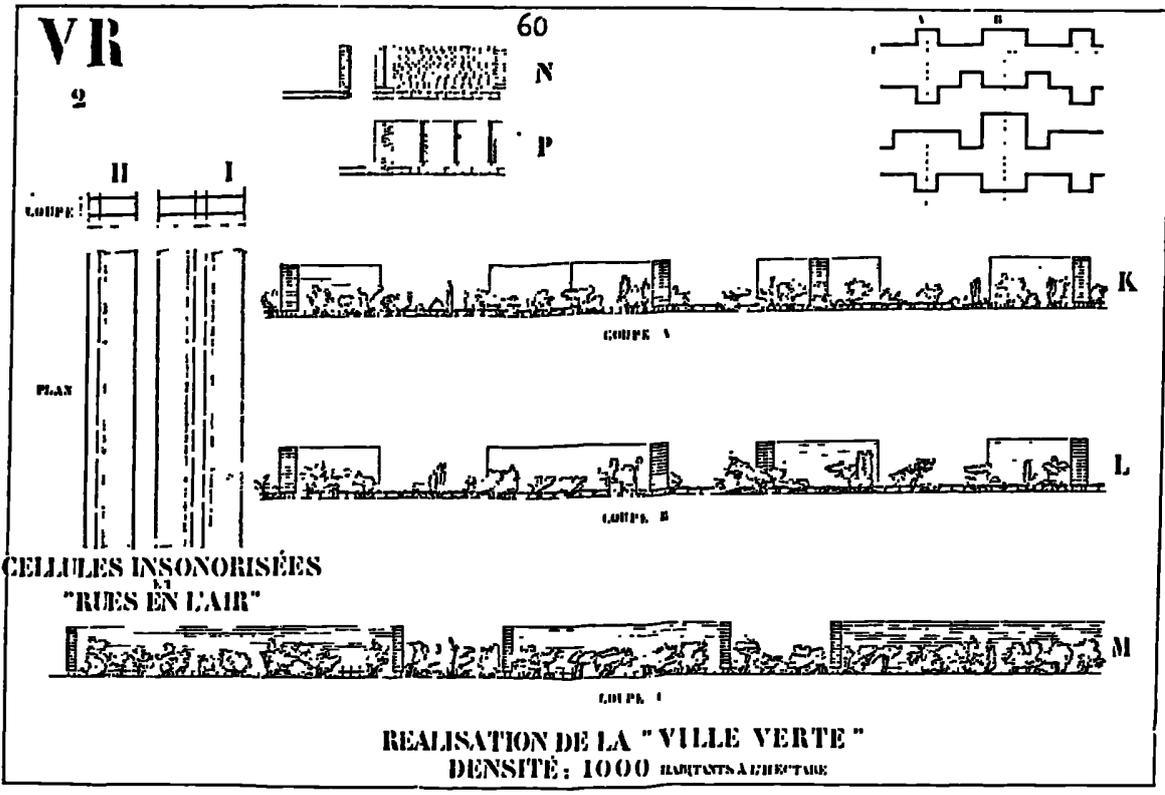


10. The Cellular Block of the Contemporar City.

Source: The City of Tomorrow
1924

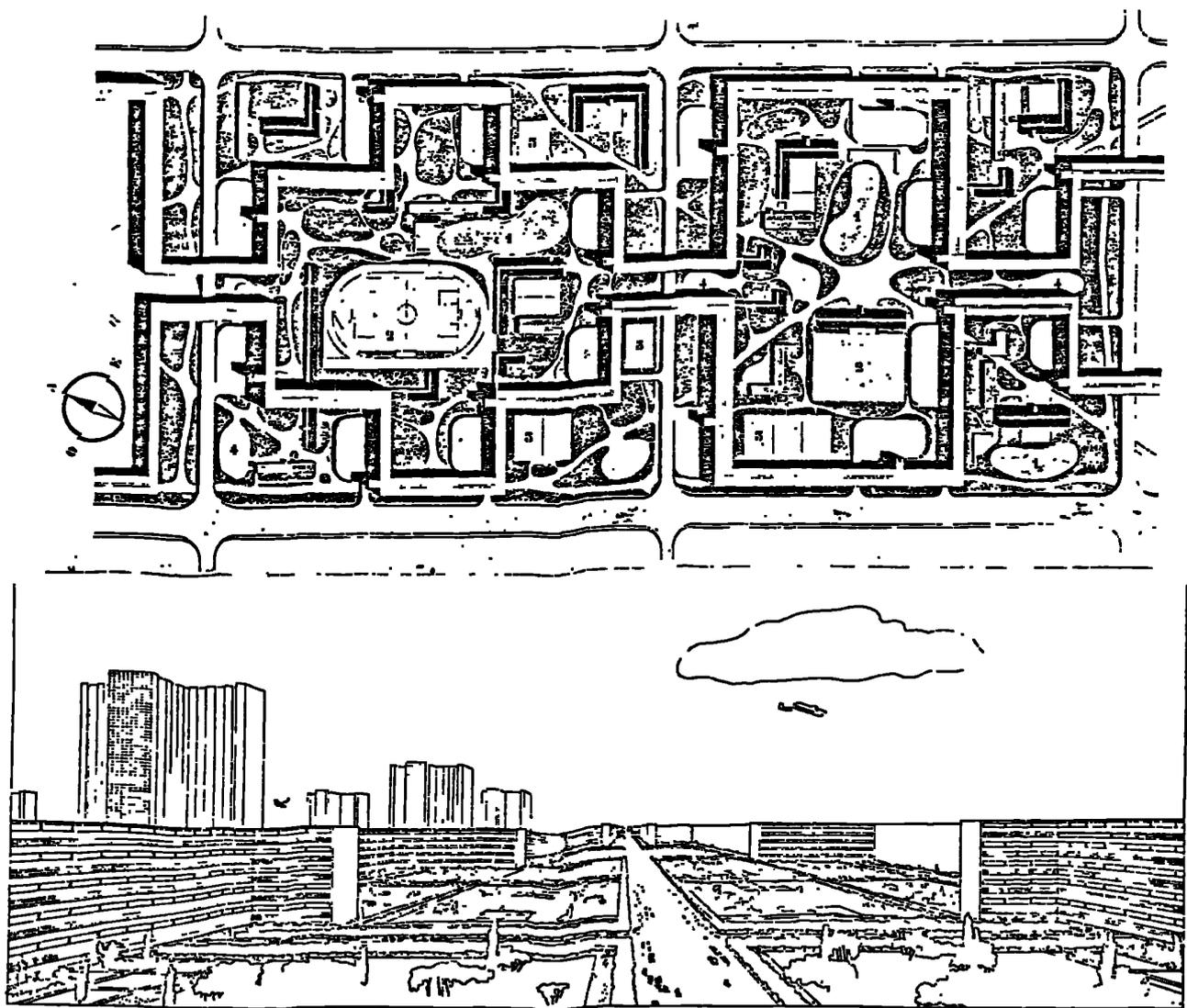


11. The Radiant City, 1931-34
Source: The Radiant City 1933



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LA "VILLE VERTE" 1000 HAB. À L'HECT.



12. The Radiant City, the 'set-backs with streets-in-the-sky', 1930's
Source: The Radiant City 1933

Algiers there was to be a proper sidewalk adjoining the new upper-level highways plus interior street access to dwellings.

The most remarkable exercise in the design of a continuous street-in-the sky was undertaken for the slum clearance housing area No. 6 in Paris in 1936. In applying the principles established for the Radiant City to a new plan for the urban area Le Corbusier was led to consider the below-standard housing to the east. He took one irregular shaped site adjacent to the super-highway leading to the new business centre and tried to show, by example, how the city could be gradually redeveloped with modern housing blocks. If the replanning and rebuilding of Paris had gone ahead on these lines, the result would have been an urban form of unusual complexity relative to the designs for the Radiant City and its application to places like Antwerp in 1933. Furthermore, Le Corbusier designed a variety of three-bay units with external and internal "streets" (Illus. 14 and 15) (p.63,64) for this project. If all of them had been used (with apartments however, facing in all directions) at least a surprising and complementary variety of upper level street architecture could have been provided at low cost.

The business-centred supra-rational Vorsin plan of 1925 had, therefore, been superseded in a little over ten years by relatively more complex, generous and realistic proposals for a community centred city; a programme far more likely to express Le Corbusier's basic aim, to "give us the measure of an order which we feel to be in accordance with that of our world." (70)

However, it remained a fact that in the late 1930's Le Corbusier had still not really departed from a worship of the machine and nature. The ideas of Descartes and Rousseau are still clearly evident in his vision of the ground level experience to be found in a Scheme such as that for housing area No. 6 in Paris (Illus.13) (p.62). However, in the next ten years, after which he would be allowed to build a small, supposedly working class, housing scheme on a vacant site in Marseilles, the second world war would fundamentally alter his aesthetic outlook.

Over the same period the Corbusian design for streets-in-the-sky was to catch fire and spread across Europe and the world and form a basic component of many visions of the Functional City. Thus, at the same time as the Fifth Congress of C.I.A.M. held under the auspices of Le Corbusier in Paris, a plan was published for the extension of Zagreb, Yugoslavia, by L.Neidhardt, an architect (Illus.17) (p.66) It proposed a number of freestanding blocks set at 90° to one another. Each slab of housing for 400 families with 6 lifts would reach up to 18 storeys, rest on pilotis and have roof garden facilities. On every third floor a wide external



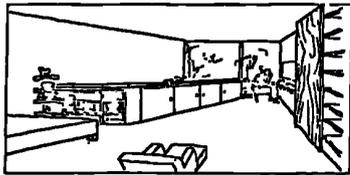
13. Plan for Housing Area No. 6, Paris, 1936
Source: Oeuvre Complète 1934-38 Zurich 1939

Les quatre pages qui suivent sont un exemple de la diversité extraordinaire des appartements à l'intérieur d'un bloc muni de « l'ans de verre ». Les coupes sont fonctionnelles de l'orientation: est, ouest ou sud.

L'innovation de l'appartement type «V-II» se trouve dans sa position en travers du bloc bâti, et non en long. Un appartement n'occupe que 3,50 m, 1,50 m ou 5,50 m de la façade. De là, la forte densité atteinte. Jamais l'appartement n'est considéré comme « minimum ». Certaines fonctions peuvent se contenter d'une surface réduite, mais le cœur de l'appartement (la salle) ne doit jamais être une cage. Au contraire: de l'espace.

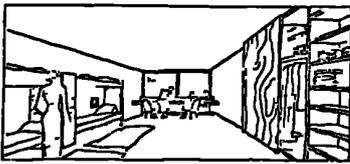
La double hauteur de 2,20 m x 2 apporte des ressources admirables: soleil, espace, verdure.

On arrive même à des types très réduits d'appartements, mais très amples, toutefoie.

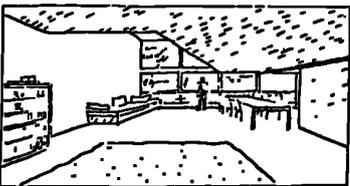


Exemples de

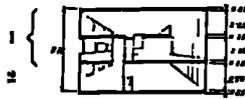
chambre des parents



chambre d'enfant (4 lits)



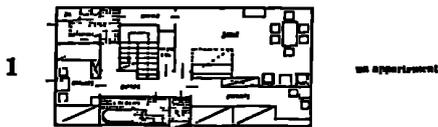
salle commune (le passage rue ouvert sur la cuisine, étant ouvert)



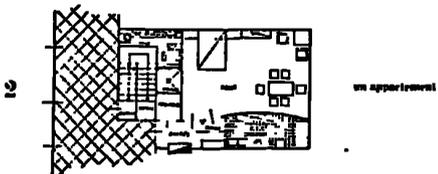
Type II

(Appartements à 6 personnes) par travées de 5,50 m:

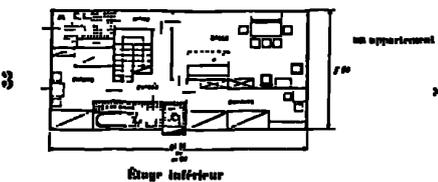
Nombre d'habitants	60
Non liv. d'appartements	10
Non liv. des cuisines	5
Hauteur totale du bâtiment, non compris pilotis et services communs	36,00 m
Calce total (sans services communs)	3510,00 m ²
Surface habitable	300,00 m ²
Calce des appartements	335,20 m ²
Surface d'un appartement	55,70 m ²



Etage supérieur



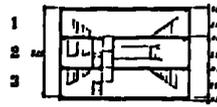
Etage médian



Etage inférieur

Appartements Nord-Sud

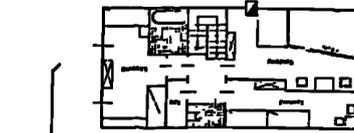
La surface nécessaire pour un habitant varie de 19,00 m² à 8,85 m².



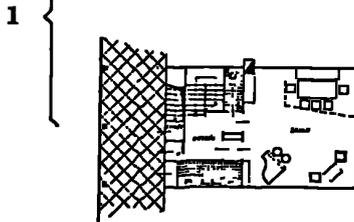
Type I

(Appartements à 6 et à 2 personnes) par travées de 5,50 m:

Nombre d'habitants	70
Non liv. d'appartements	15
Nombre des cuisines	5
Hauteur totale du bâtiment, non compris pilotis et services communs	41,25 m
Calce total (sans services communs)	3720,00 m ²
Surface habitable	352,00 m ²
Calce des appartements	245,00 m ²
Surface d'un appartement	57,50 m ²



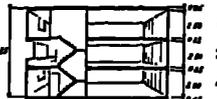
Etage supérieur



Etage médian



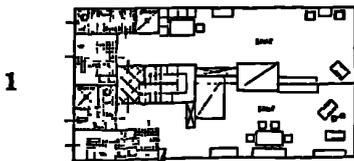
Etage inférieur



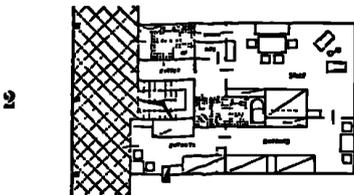
Type III

(Appartements à 6 et à 2 personnes) par travées de 7,00 m:

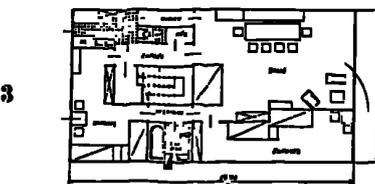
Nombre d'habitants	80
Nombre d'appartements	20
Nombre des cuisines	5
Hauteur totale du bâtiment, non compris pilotis et services communs	41,25 m
Calce total (sans services communs)	3710,00 m ²
Surface habitable	3105,00 m ²
Calce des appartements	350,00 m ²
Surface d'un appartement	58,00 m ²



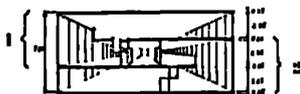
Etage supérieur



Etage médian

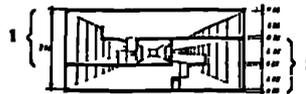


Etage inférieur



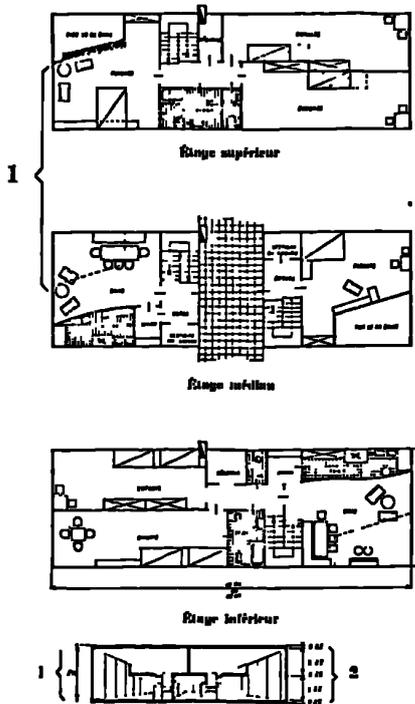
Type I
(Appartements à 6 personnes) par travées de 5,50 m:

Nombre d'habitants	60
Nombre d'appartements	10
Nombre des couchers	8
Hauteur totale du bâtiment, non compris pilotis et services communs	37,50 m
Calor total (sans services communs)	2500,00 m ²
Surface habitable	1250,00 m ²
Calor des appartements	2000,00 m ²
Surface d'un appartement	125,00 m ²

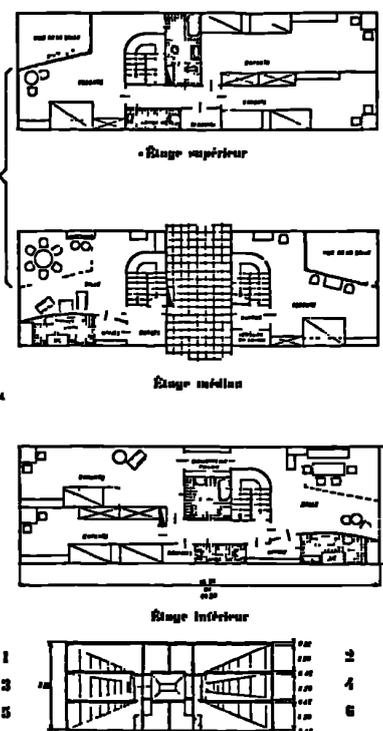


Type II
(Appartements à 6 personnes) par travées de 5,50 m:

Nombre d'habitants	60
Nombre d'appartements	10
Nombre des couchers	8
Hauteur totale du bâtiment, non compris pilotis et services communs	37,50 m
Calor total (sans services communs)	2100,00 m ²
Surface habitable	1050,00 m ²
Calor des appartements	2000,00 m ²
Surface d'un appartement	120,00 m ²



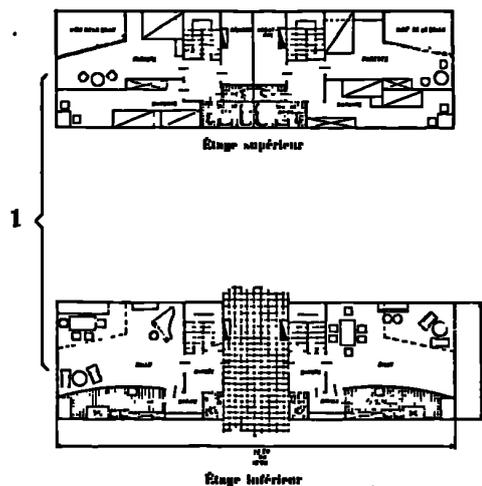
un appartement
un appartement



un appartement
un appartement

Type III
(Appartements à 4 personnes) par travées de 5,50 m:

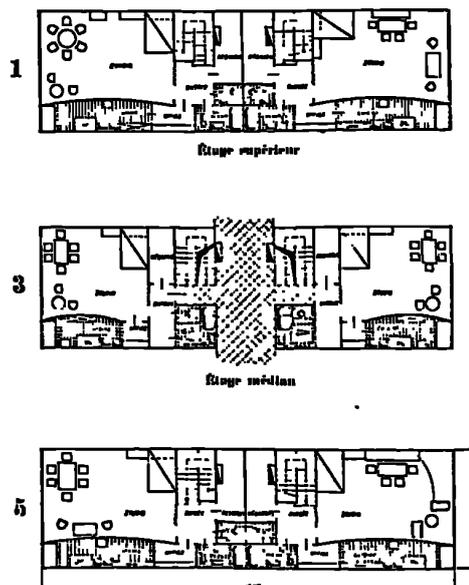
Nombre d'habitants	60
Nombre d'appartements	10
Nombre des couchers	8
Hauteur totale du bâtiment, non compris pilotis et services communs	40,00 m
Calor total (sans services communs)	4000,00 m ²
Surface habitable	1400,00 m ²
Calor des appartements	3200,00 m ²
Surface d'un appartement	320,00 m ²



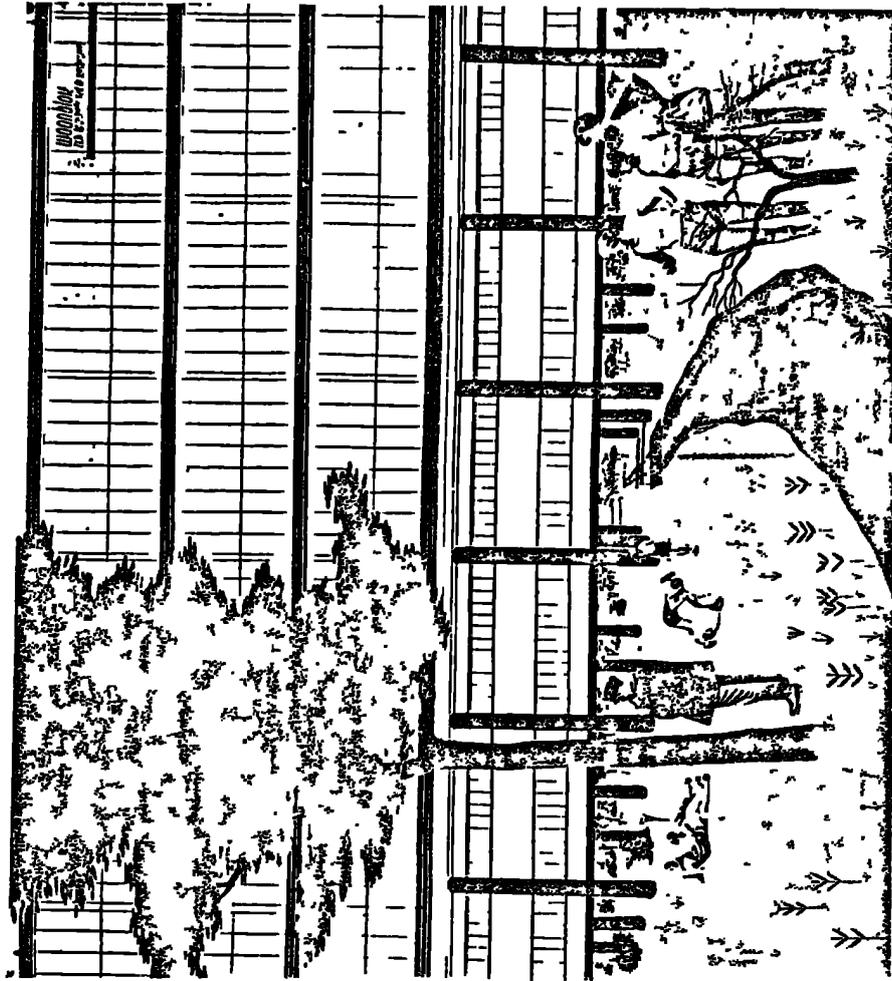
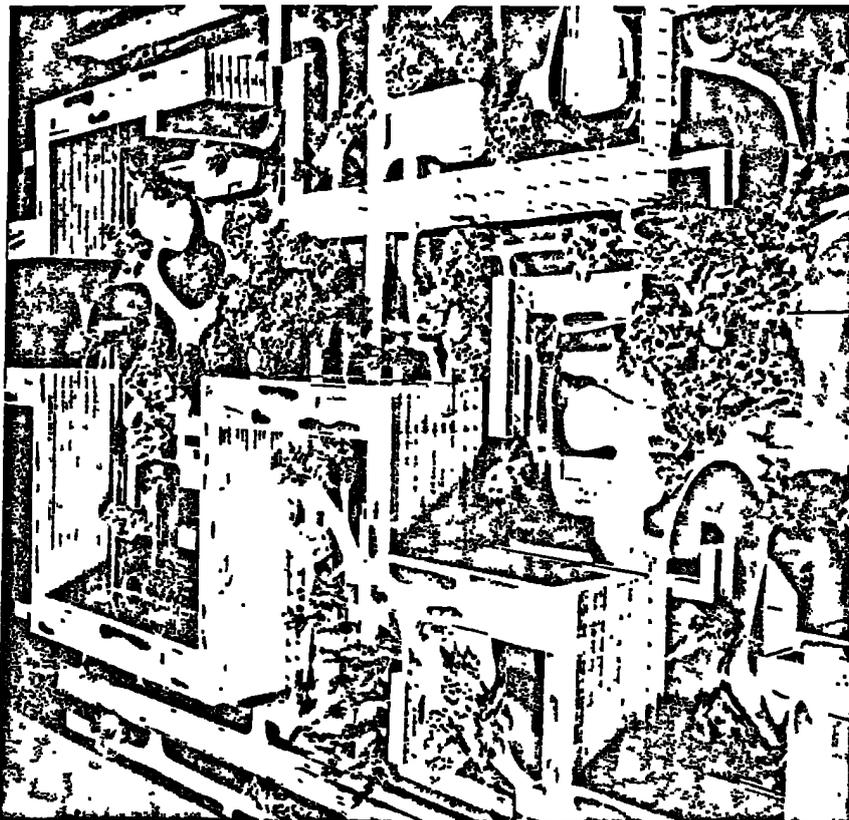
Appartements Est-Ouest

Type IV
(Appartements à 2 ou 3 personnes) par travées de 5,50 m:

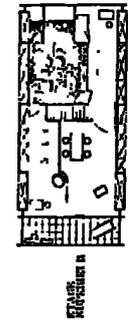
Nombre d'habitants	60
Nombre d'appartements	30
Nombre des couchers	8
Hauteur totale du bâtiment, non compris pilotis et services communs	41,25 m
Calor total (sans services communs)	4312,50 m ²
Surface habitable	1304,17 m ²
Calor des appartements	3100,00 m ²
Surface d'un appartement	103,48 m ²



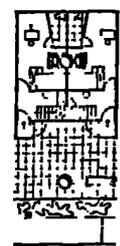
15. Sections through housing for area No. 6, Paris, 1936
Source: Oeuvre Complète 1934-38 Zurich 1939



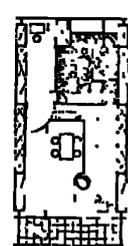
16. Views of the environment provided by the Radiant City.
Source: L'Architecture d'Amédée 'hui June 1937



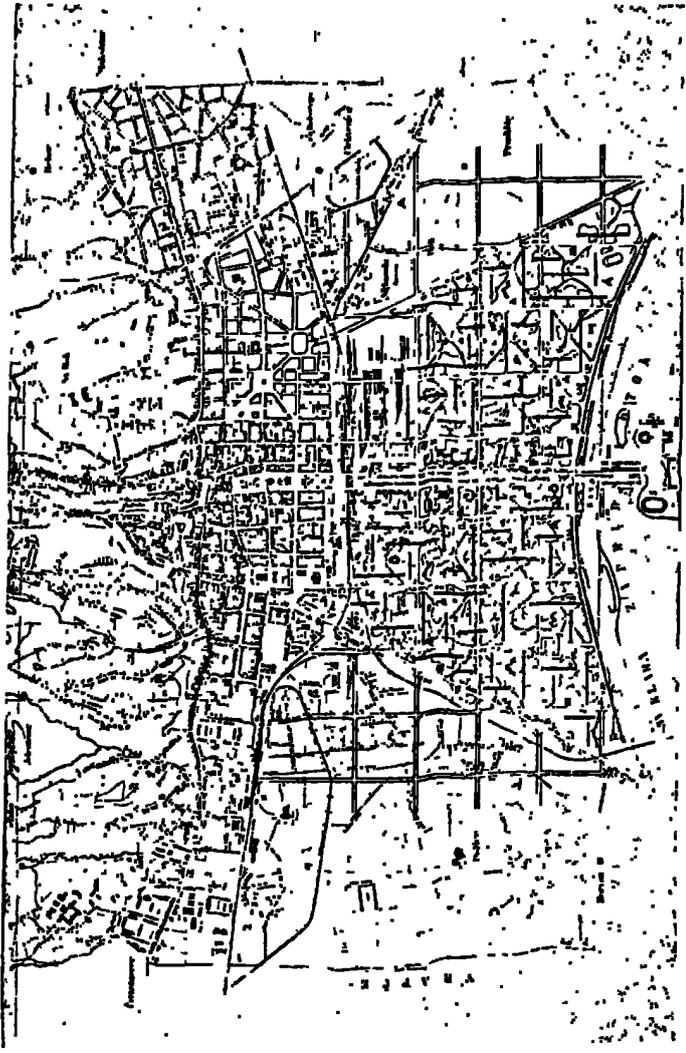
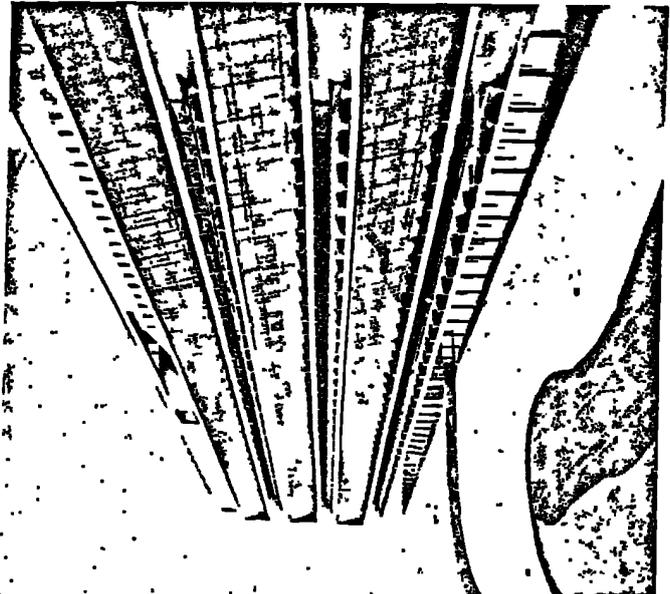
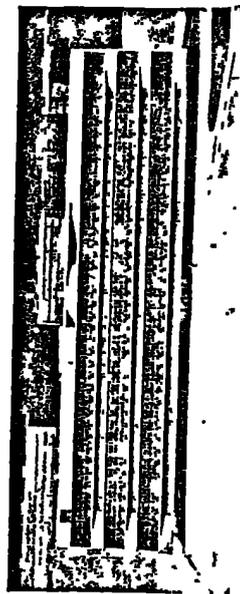
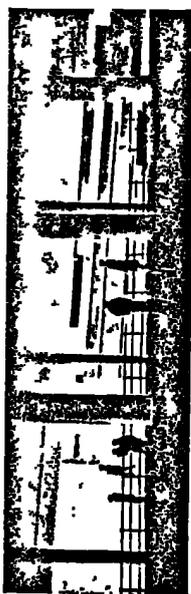
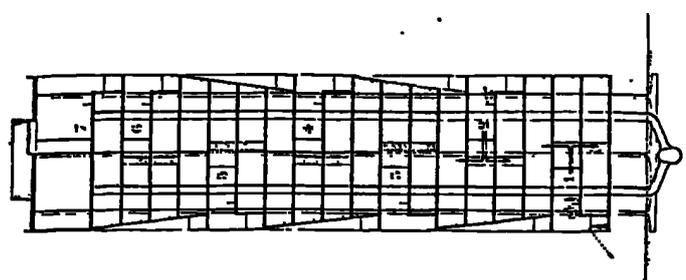
STANISLAV



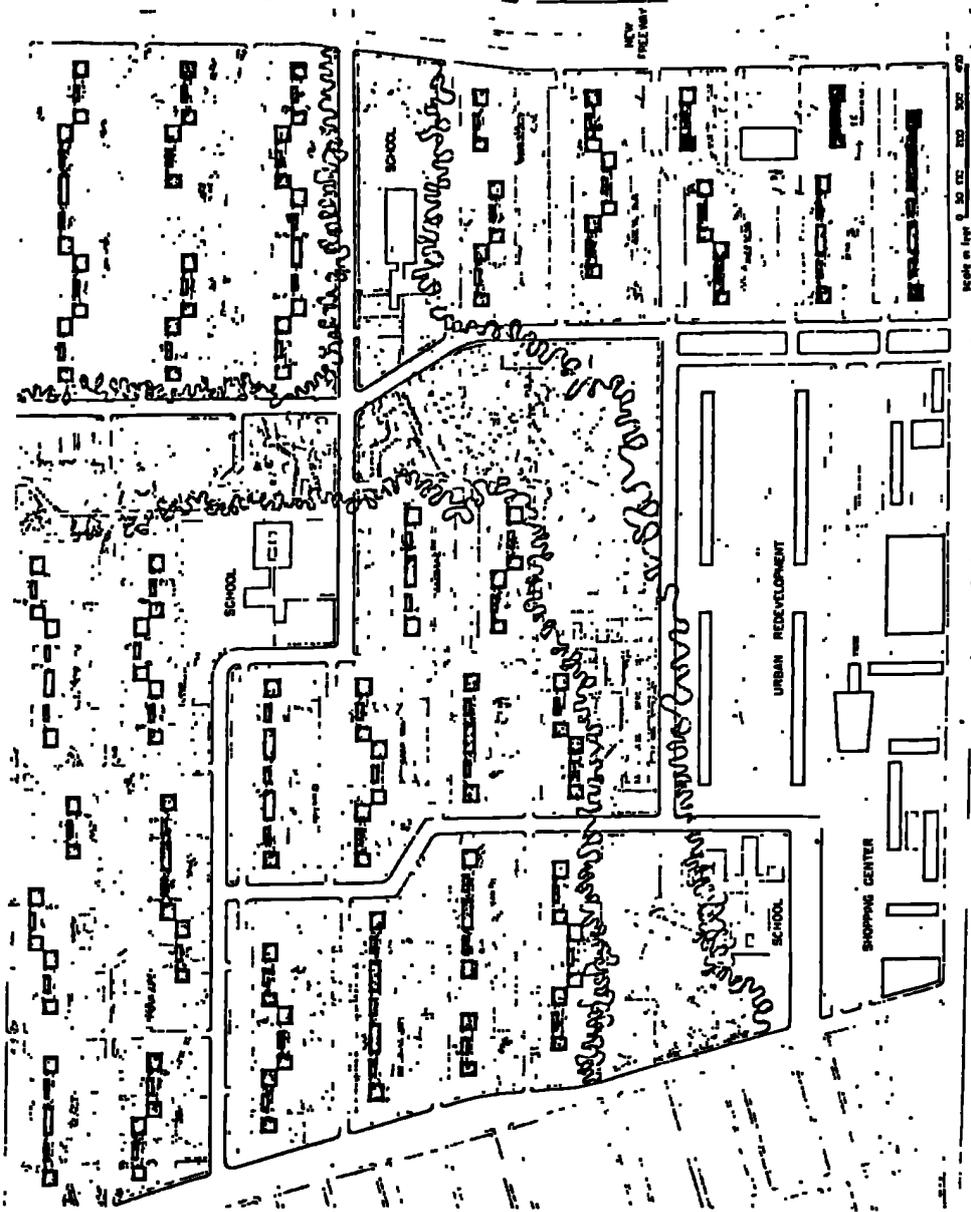
STANISLAV



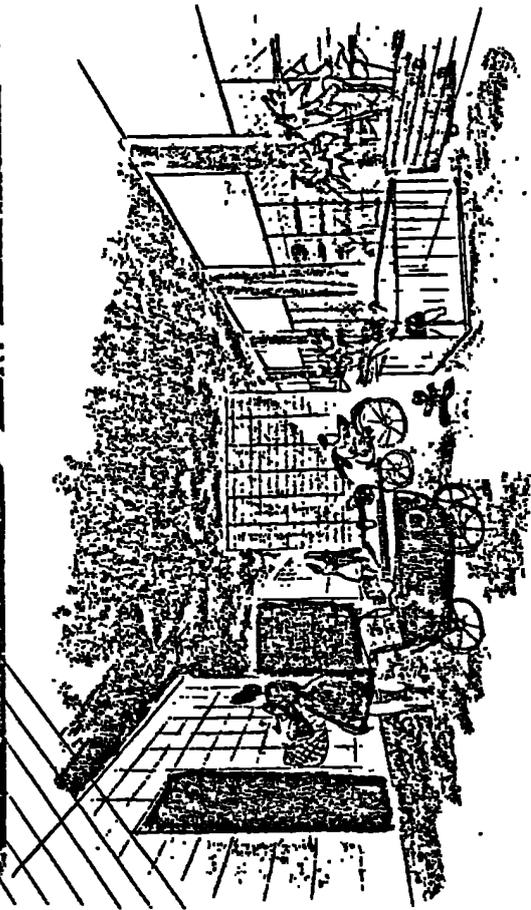
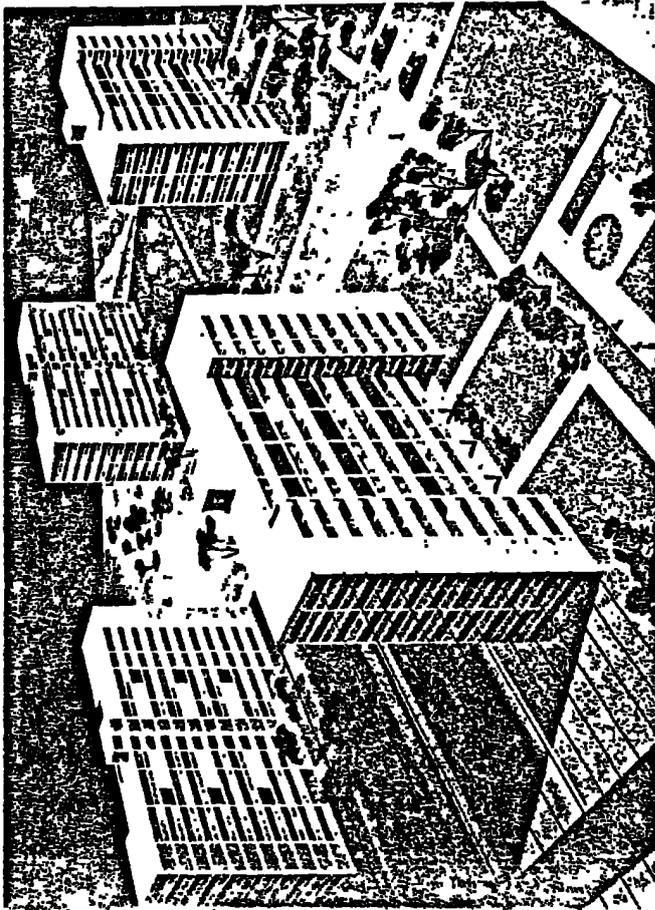
STANISLAV



17. Proposals for Zagreb, 1937.
 Source: L'Architecture d'aujourd'hui March 1937



18. Proposals for St. Louis, 1951.
 Source: Architectural Forum April 1951



"street" would provide upper level amenities for the whole community while the angled form of the external glass 'skin' would ensure that maximum sunlight could reach each deck and enable the growing of plants etc. The whole scheme would be a "city in a park" with a grid of urban freeways criss-crossing the site (71). The machine technology was being used to liberate man from the confines of the old city framework.

After the second world war the street-deck seemed to be especially popular in the vast new public housing schemes of South America and United States (72). One of the apparently most effective adaptations of existing high-rise housing was that undertaken by Hellmuth, Yamasaki and Leinveber for the Pruitt Igoe estate in St. Louis (Illus.18) (p.67) The design, completed in 1951, was understood to be a breakthrough in overcoming the interior lighting and limited social facilities of the traditional American cross-plan apartment blocks. Exterior galleries on every third floor would provide unequalled amenities for each group of twenty families, providing laundry, storage and play facilities near the home. The architects stated:

"Galleries are 11 ft. deep by 85 ft. long and will be oriented south. These areas are to be used as play and lounge areas for wheel toys, perambulators, play pens and occasionally outdoor dining. Critics of multi-storey public housing projects always object to distance of play areas for small children from mothers' supervision, also to the fact that children must use elevators. These objections are avoided here; mother can be doing the laundry within sight and hearing of the child playing in the sun. And all this is not too far away from whatever may be cooking in the apartment store." (73)

At ground level there would be roads, parking, recreation areas and a "river of open space" winding through the project. It was a typical modernist formula, adapted to building conditions in the United States.

In the same year, 1951, Le Corbusier's *Unité* block at Marseilles was nearing completion.

The Unité d' Habitation at Marseilles

There were three innovations behind this building project (Illus.20 and 21) (p.71&72) The first was the formulae introduced for the measurement and arrangement of architectural forms. As Le Corbusier noted:

"The Marseilles Block was of 'appropriate size'. That was its great quality. Every undertaking has its proper scale. It is as bad to err on one side as the other. The Marseilles Block was constructed with the help of the 'Modulor'. That is how this vast structure was kept comely, smiling, graceful and human". (74)

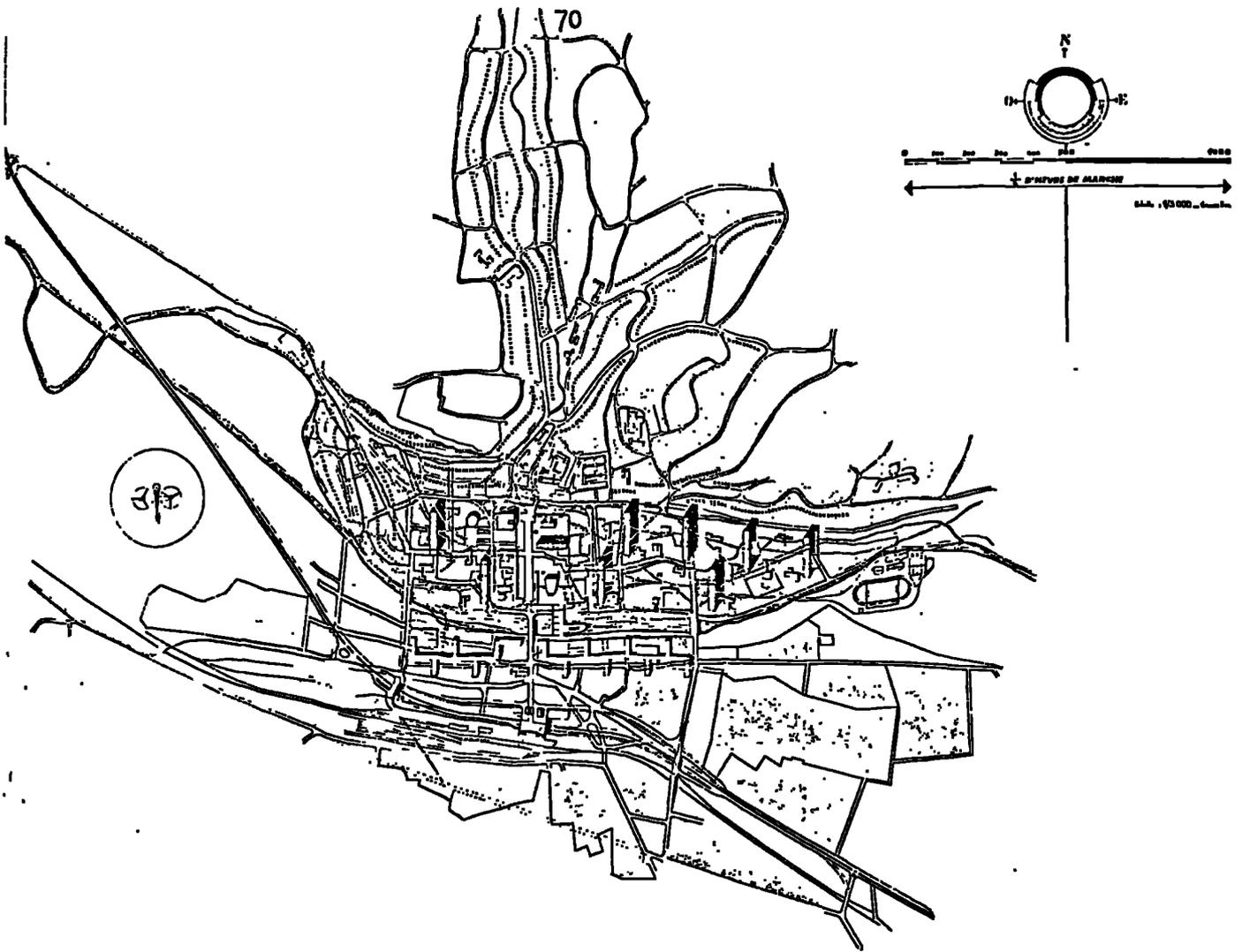
The Modulor was Le Corbusier's "proportioning grid" which he was working on throughout his life but especially after the second world war and up until the mid 1950's. It was an attempt to define a set of absolute measurements

drawn from the human figure and appropriate to the design of any "machine", a means to the creation of objects "which we feel to be in accordance with that of our world". The grid therefore combined, as never before, the uniformity necessary to efficient mass production with the variety of shapes and sizes required by the architect as a means toward the "pure creation of his spirit".

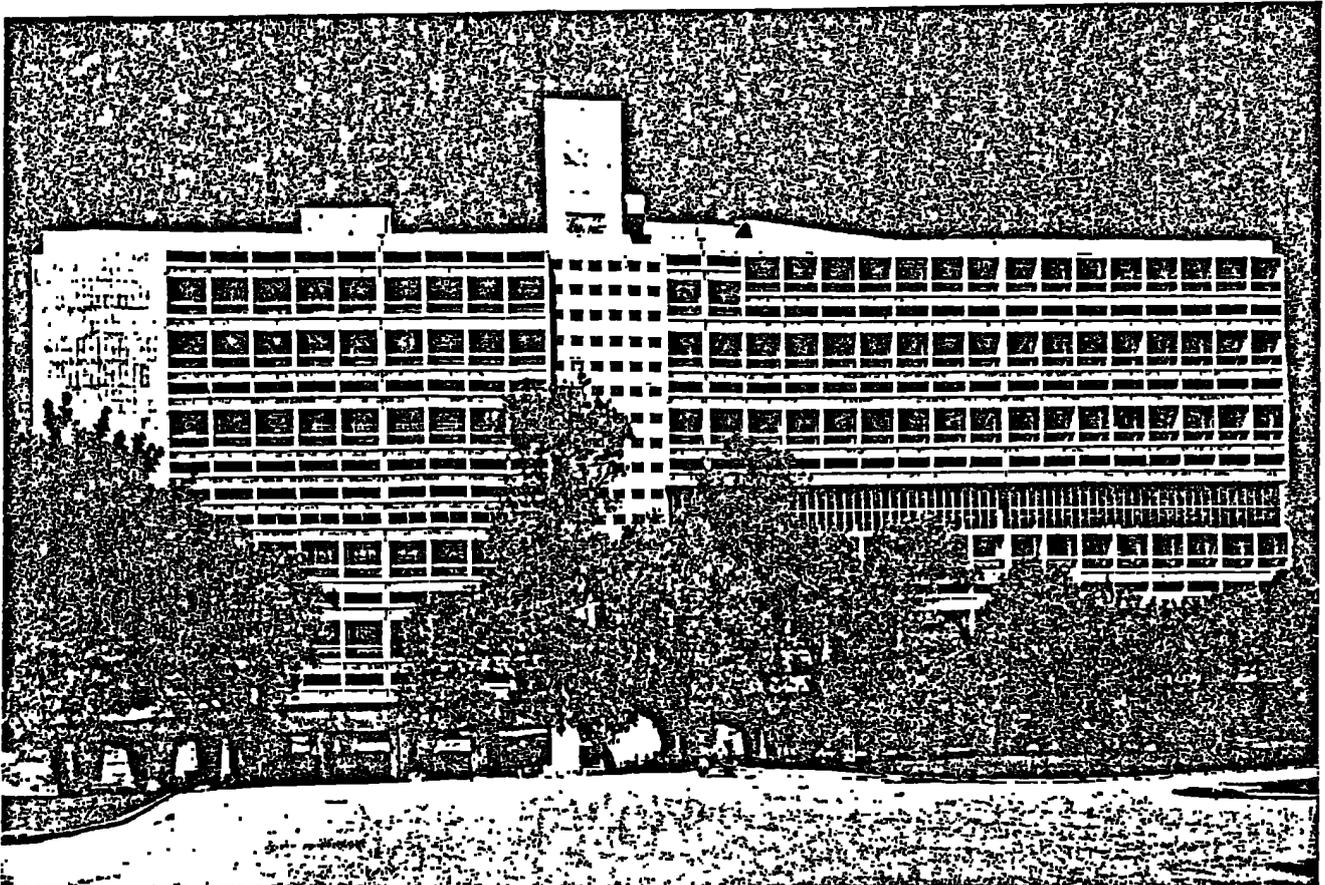
The second new departure was in the finish of the roof and ground level elements. The "cells" had precast concrete cladding but the sports equipment, amenities and services located on the roof plus the stilts or pilotis on which the giant structure rested had a surface derived directly from the wooden shuttering of the mould into which the concrete had been poured. This was "beton brut", a direct opposite to the machine smoothness of earlier buildings. Le Corbusier apparently revelled in the symbolic role of the irregularities of the concrete finish: "The defects shout at one from all parts of the structure! Faults are human; they are ourselves, our daily lives." (75) Following the enthusiasm of the "master", "It was beton brut that was photographed, written about and copied". (76) Moreover, the whole external face of the building had a sculptural and not machine-smooth quality. This allowed the building to use the site and sunlight to best advantage; Unité is orientated so that each apartment gets sunlight sometime during the day, but not an excessive amount due to the "crise-soleil" which keep the high sun out in the summer and let the low winter sun penetrate the home.

The other innovation was the attempt to cater for as many of the needs of the individual and the community as was possible in this fragment of the Insula Housing Block Plan (Illus.19) (p.70) The huge 18 storey slab block contained 23 different types of apartment with a total of 337 maisonettes for the 1,600 inhabitants. Access was via a block of lifts at one end and a series of internal streets, usually on every other floor. Aside from these basic facilities there were, in the building, "twenty-six communal services to free the housewife from domestic drudgery, enabling her to give her time and energy to bringing up her children". (77)

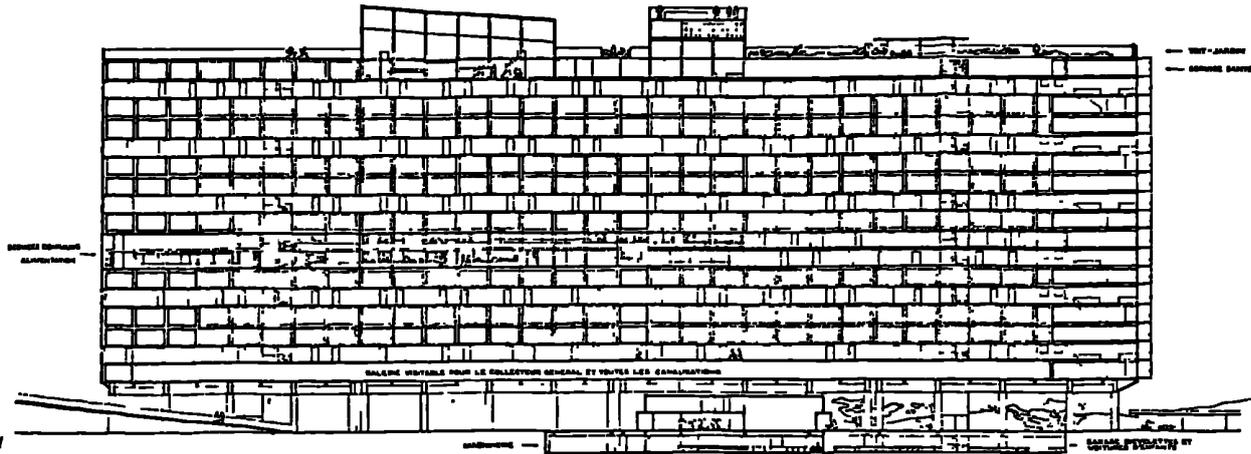
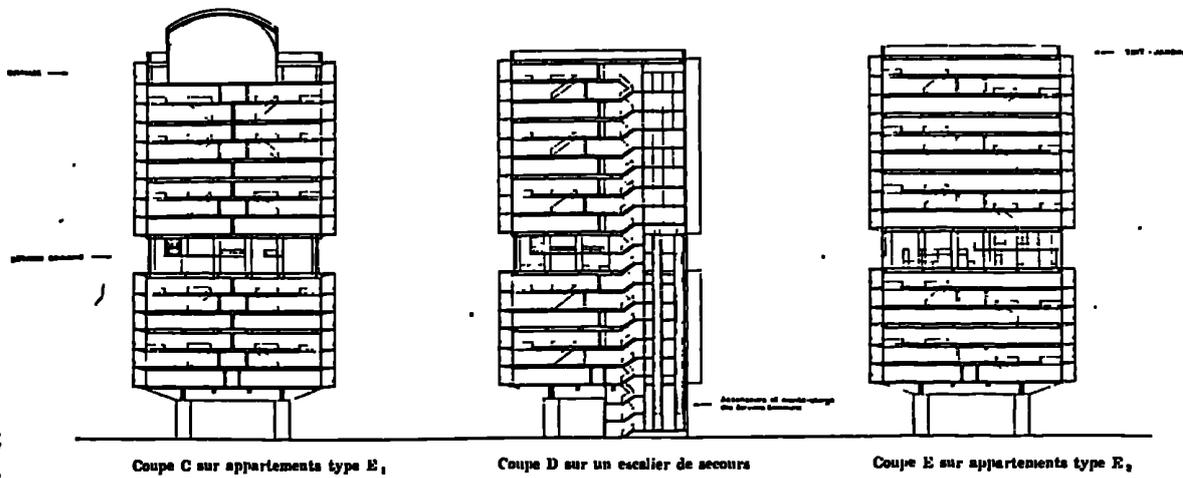
The typical maisonette, which faced east-west while the axis of the block was orientated north-south, catered for four persons. It was roughly 'L' shaped and on two floors, except where the upper floor had been discontinued to allow for a high ceiling. This provided a spacious living area, including the balcony, with full glazing to admit the maximum sunlight. The long narrow apartment (3.66 m. by 24.5m) with low ceiling (2.26m height) contained a kitchen/dining/living room or bedroom/living room, with balcony at one end and two children's bedrooms at the other end with another balcony. Bathroom and cupboards were in the centre, underneath or above the central



Plan de la reconstruction de Saint-Dié Wiederaufbauplan für Saint-Dié



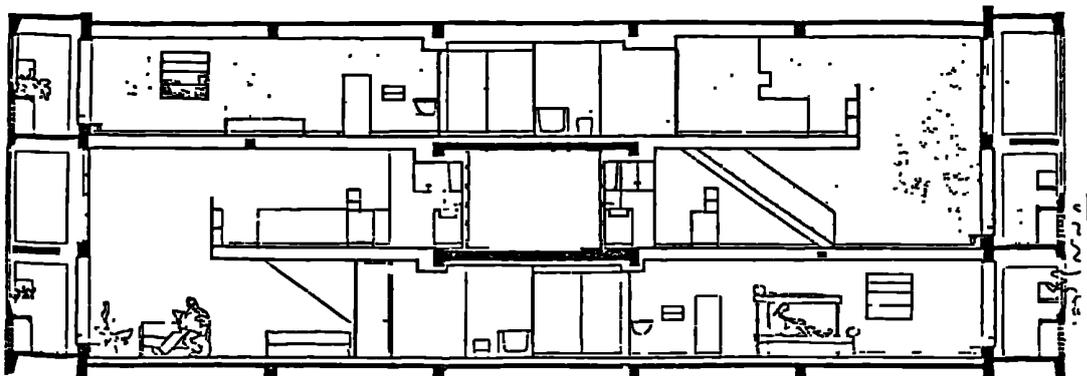
19. The Insular Housing Block Form: Saint Dié: 1946 (above)
 Source: Oeuvre Complète 1910-65
20. Unité d'Habitation, Marseilles, 1947-52 (below)
 Source: Oeuvre Complète 1910-65



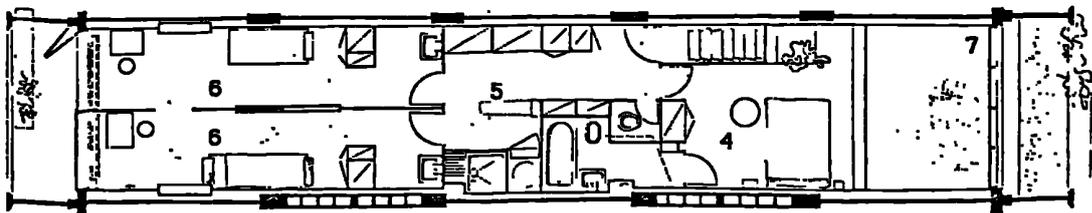
Appartement pour famille de 2 à 4 enfants (type supérieur)

Coupe longitudinale sur une «coupe de cases» Une rue intérieure dessert les appartements
 Longitudinal section through a "compartment couple". An inner street serves the apartments
 Längsschnitt durch ein «Wohnungspaar». Eine innere Straße führt zu den Wohnungen

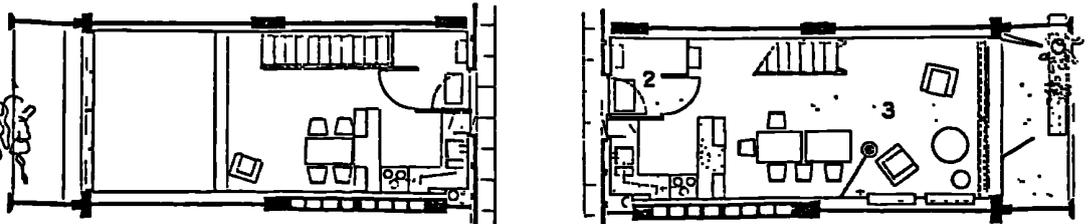
Appartement pour famille de 2 à 4 enfants (type inférieur)



Plan d'appartement type supérieur



- 1 Rue intérieure
Inner street
- 2 Entrée
- 3 Salle commune avec cuisine
Living-room with kitchen
Wohnraum mit Küche
- 4 Chambre des parents avec salle de bains
parents' room with bath
Elternzimmer mit Bad
- 5 Casiers, penderie, placards, planche à repasser, douche pour enfants
- 6 Chambres d'enfants
- 7 Vûe de la salle commune



Plan d'appartement type inférieur

21. Unité d'Habitation, Marseilles, 1947-52. Details of the Block and typical dwelling unit.
 Source: Oeuvre Complète 1910-65

"street".

This type of dwelling design entailed a serious lack of privacy in the parents' bedroom because it was next to or open to the living area. Only the narrow children's bedrooms (whose central "wall" could be removed) could provide some privacy. Furthermore, the long dark central corridor inevitably created noise and disturbance within the dwelling unit. The communal needs therefore tended to outweigh those of the individual.

The whole building did not, however, satisfactorily supply the needs of the community; it was too limited and restrictive (78) The central corridor was not a "street", the roof not a satisfactory sports and general amenity area (the space beneath the pilotis unusable) and the shopping area inadequate for the residents needs. Tenants, or owner occupiers, have tended to leave the building for most communal activities and, indeed, may also have left for the individual needs of privacy and relaxation.

In contrast to these living conditions the unmachine-like architectural effect was, by general agreement, stunningly beautiful in its overall form and its use of texture, colour, relief, light and shade. Hence, although a workable and habitable environment had been created, it was by no means the ideal synthesis of the scientific and aesthetic or the psychological and social needs of humanity. There was plenty of room for improvement by the British modernists who were seeking to continue their country's tradition of humane and popular housing.

Premodernism and the Planning of New York

The giant highways, horizontal and vertical 'streets' found in the Contemporary and Radiant cities and the work of C.I.A.M. were originally proposed mainly as an alternative to the incomparably disorganised and irrational character of urban growth in the rapidly developing areas of the United States, notably the New York region. The leading advocate of the low rise and low density premodernist city Raymond Unwin, who visited New York in 1923, was also upset by the chaos present in the city (79). There was, he proposed, a direct causal connection between increased height and increased pedestrian and vehicular traffic. Le Corbusier would have agreed with the contention that:

"increase in height of buildings necessarily involves augmented street traffic; that where the traffic has already reached the comfortable capacity of the streets, any further increase in height must cause or increase congestion, with consequent loss of time and efficiency for the users of the street. Further, that this increase cannot in practice be met by street widening, because the utmost that can be done in this direction can barely cope with the other causes which in all growing modern towns are tending to swell the volume of street traffic". (80)

But, in practice, this problem could be met by street widening according to H.W. Corbett (1873-1954) an American architect participating in the production of the Survey and Plan for New York and its Environs (81). By bringing pedestrians to an upper level, sometimes using the set-backs of the giant skyscrapers, and leaving the ground including the area underneath buildings free for the growth of vehicular traffic, an ordered and habitable environment could be created. The city could become a multi-level high density mixture of work-place and homeplace:

"You can see what a square in New York might be like. There is a constant cornice line at the first setback, and it is turned into an upper sidewalk. Below this point would be business, carried on practically in all-glass buildings. Above that point would be residents, bringing together residence and business, which are now gradually tending to drift apart, making the problem in New York that of transporting about half the population twice daily. People could move about for their shopping, small shops being on the upper section; and when a man left his office he would take the elevator and go to his residence. Movement would be free, traffic would be divided into its natural subdivision and I think it would make a very liveable and attractive city (82) (Illus 22) (p.74)

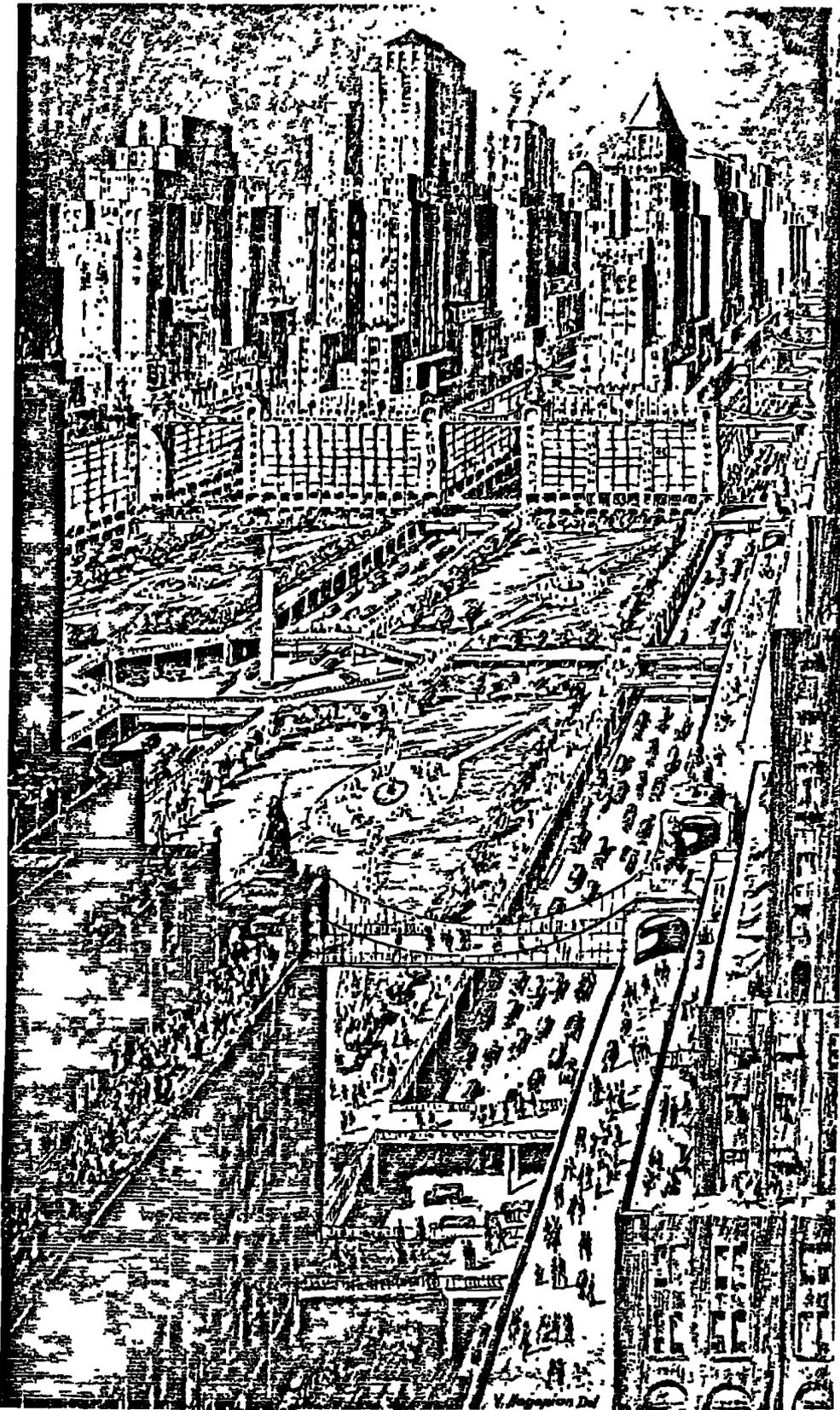
Here, almost, are residential streets-in-the-sky.

Such ideas came from Corbett's interest in the opportunities presented by new materials and structures, that is, the steel frame, and in his acceptance of the realities of the zoning laws. These required high structures to be set back at various heights to allow adequate light and air to enter the building and the city as a whole. The laws, tended, therefore, to dictate the form of the building. Moreover, the speed at which relatively new buildings were being demolished and replaced by larger ones convinced Corbett that the ideals he had formulated could be realised in the not too distant future.

Corbett's associate on the project, Hugh Ferriss (1889-1962) made futuristic sketches of the "machine age" New York where the architect had been at work in the "spirit of today", as a "sculptor of building masses". And the architect's design for the separation of pedestrians and vehicles would provide a city as satisfying as the masterpieces of the medieval period:

"The city would be a sort of modernised Venice, in which the canals, instead of being filled with water, would be filled ^{with} rapidly moving automobiles, and their tops would be seen glistening in the sun as they passed. The pedestrian would look down on the traffic. The plazas and open spaces would be lifted to the level of the side-walk, and beneath these plazas would be parking space for automobiles". (83)

This picture of the tops of motor cars "glistening in the sun" was symptomatic of Corbett and Ferriss's enthusiasm for modernist-like ideas and images; but it was a new urban form precisely the opposite to the Modern Movement city designed by Le Corbusier. In the former pedestrians



22. H.W. Corbett's proposals for New York, 1928:
Source: RIBAJ February 1928

were placed over vehicles while in the latter vehicles were placed over pedestrians who had the complete control over and freedom to use ground level. One represented an acceptance of the dominant role of the motor car and the need to adapt existing circumstances, the other demanded a revolution in urban design so that the community and "nature" were given priority over the machine. Le Corbusier considered the vision of "The pedestrian in the air, the vehicles hogging the ground" a "picture of anti-reason itself, of error, of thoughtlessness, madness" (84) Corbett and Ferriss never freed themselves from the limitations of their Beaux Arts architectural background. If they had then the possibility of different types of streets-in-the-sky may have appeared, and in a more definite and realistic form.

To Thomas Adams, General Director of the Plan for New York, the analysis and recommendations of Unwin and Corbett represented two extremes. His task was to find a middle path between them, rather than to hold to definite principles of urban planning:

"One school of thought would solve it by setting no limit to high building and instead adjusting the street system, by widening and super-decking to achieve a super-skyscraper city. Proponents of this school are just as much in the clouds and as regardless of realities as those who dream that it is possible and desirable to recreate cities so that every home may have a garden and every building may be orientated to secure the maximum of sunlight". (85)

In order to achieve an effective compromise Corbett's ideas were reduced in scale and scope; nothing approaching the form of residential streets-in-the-sky was included in the final plan. However upper level walkways were recommended for use in the busiest parts of the centre of New York.

The Survey and Plan for New York did propose a new street-form for residential areas in view of the growth of vehicular traffic. This was to take the form of a hierarchy of road widths, with a network of main traffic routes surrounding "neighbourhood units" of various densities, depending upon distance from the city centre. Each unit would contain a network of relatively narrow, winding roads providing access to the houses, community centre, shops, open space etc. These units would overcome the social and physical disorder of the present environment; a protective enclave against the destructive tendencies of the "machine age".

These ideas and principles were extended by Clarence Stein (1882 - working, independently but contemporary with the New York Plan. He grasped the principle that in local residential areas the need above all was to segregate the pedestrian routes used for local journeys, especially by housewives and children, from the routes used by car traffic. In a new town development at Radburn, New Jersey in 1933, he applied these ideas, confined to ground level, by developing a separate system of pedestrian ways, reached

from the back doors of the houses, which pass through communal open space areas between the houses, and thence cross under the vehicle streets. The vehicle streets were designed according to a hierarchical principle, with main primary routes giving access to local distributors and then in turn to local access roads designed on the cul-de-sac principle, serving small groups of houses.

Premodernism and the Planning of London

The two war-time plans for London contained no reference to, or proposals for, a multi-level city of any description (86). However, they did introduce, for the first time, proposals for the inclusion of a large amount of multi-storey working class housing in the new city. This was partly because when modern architecture entered the United Kingdom in the 1930's it was typified, above all, by new designs for high rise housing. What had previously been rejected in all but the most unusual of circumstances was now practically welcomed as a necessary and healthy departure from traditional architecture and urban planning (87).

Overall, however, the work of J.H. Orshaw and Patrick Abercrombie in London represented a continuation of premodernist ideas and their development in the United States in the 1920's. The introduction of the Modern Movement while reinforcing the need for an awareness and thorough understanding of everyday contemporary human needs, had on entering Britain soon been placed in the context of the Gothic tradition of Pugin, Sitte, the Arts and Crafts Movements, that is, the Gothic town and the picturesque landscape aesthetic. By this means the tendency for modernism to appear simply supra-rational, materialistic and international could be overcome and its forms given a regional interpretation (88). It was considered essential that the individual history and culture of place should set the framework for the use of new forms. Design should provide "a fusion of these two tendencies: an architecture that is free and natural without being unwordly, and in tune with the mechanical world, without being inhumanly exclusive". (89) The "anti-utopian" picturesque sentiment had to meet with the "exactness and order similar to that of the Renaissance". (90) It was the ^{third} way typical of premodernism; an intention to fuse the ideas of the leaders of the two movements, especially Patrick Geddes and Le Corbusier, into an empirical practical programme.

Hence the proposals for London were based upon a desire to travel the middle path between the "extreme" plans for the metropolis. These were, on the one hand, the utopian work of the Modern Architectural Research Group (M.A.R.G.) and on the other hand the continuing Beaux Arts tradition and the Town and Country Planning Association (91). In particular, the County of London Plan of 1943, formulated its proposals for various "neighbourhood units"

in opposition to the effects of the Bresse and Lutyns Highway plan for London published in 1937. It was essential to realise that there was "a living and organic structure still persisting in spite of overgrowth and decay". (92) The plan continues:

"It consists of a collection of units or communities, fused together; though their boundaries have been lost, their centres are often clearly marked, having descended from ancient villages; and in addition to the physical grouping there is found a strong local loyalty to each community whether large or small. It should be one of the first objectives of the planner to disengage these communities, to mark more clearly their identities, to preserve them from disturbing intrusions such as streams of through traffic and generally to reconstruct them where reconstruction is necessary owing to war damage or decay". (93)

The reconstruction was to proceed, principally in the East End:

"to make the industrial boroughs of London so attractive that people whose work is there will not be forced out to distant suburbs for pleasant houses, gardens, open spaces, schools with playing fields and safe shopping centres". (94)

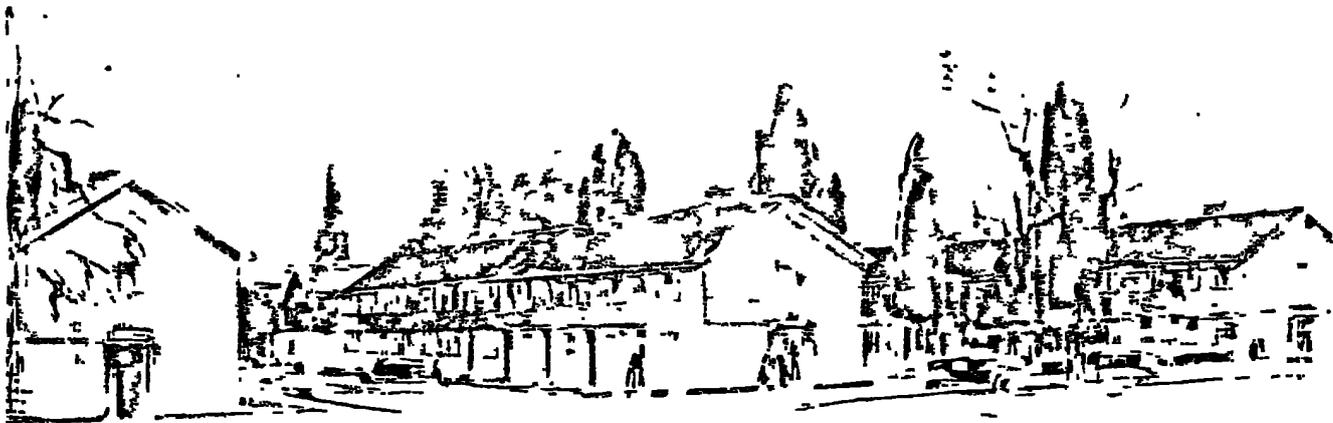
It was necessary, as in all premodernist plans, to calculate the capacity of the land and buildings in the city and region for population and economic activity, putting forward specific design and replanning proposals to ensure an efficient and satisfying environment.

The population capacity of the County of London was based upon the establishment of three concentric density zones, moving from 500 ppha (200 ppa) in the city centre, through a 340 ppha (136 ppa) zone to a suburban 250 ppha (100 ppa) zone. This ordering would replace the mixture of unhealthy high densities in the centre, e.g. 1000 ppha (400 ppa) and unpopular sprawl at low densities in the outer areas. Housing and industry would be separated along with family housing from business and cultural activities in the city centre; the 500 ppha area was to include non-family multi-storey housing only. The other zones would include a percentage of two storey houses for large and medium size families. Any population and employment which could not be found room in the new city would be moved out into expanded towns or new towns. The final pattern was to be that of a large number of improved settlements of varying size set within a mainly protected countryside, the whole system connected by a much improved transport network.

In the final analysis what all this replanning rested upon was how many families there were in the industrial boroughs and how many could be satisfactorily housed at 250 - 340 ppha. If an inexpensive type of high quality working class housing had been available, one which could provide satisfactory family accommodation at around 500 ppha, with space available for parks, roads and neighbourhood facilities, then quite possibly no decentralisation would have been necessary. Although Le Corbusier's work had produced precisely this



Multi-Storey Flats



Terrace Houses

W. Walcot

23. Forshaw and Abercrombie's proposals for London housing, 1943.
Source: The County of London Plan 1943

kind of urban form the London plans chose to ignore it; as a culmination of the premodernist suburban-based movement they had no positive conception of truly urban housing design other than an extension of balcony-access pseudo-Georgian pseudo-modernist maximum ten storey flatted housing. And even if this type of housing was being introduced on a new scale it was still considered unsuitable for families.

In the event, as we argue in detail in Appendix 1, the two plans seriously underestimated the number of families in the working class boroughs, the space required inside and outside the multi-storey housing, the loss of land space through "inefficiency" in redevelopment, the land required for neighbourhood amenities including open space and the number of areas of the capital in need of decentralisation of population. In total, the plans underestimated the demands upon the land and thus placed the required density of London on too high a level given the type of housing which could be provided. If an acceptable and smaller amount of premodernist multi-storey housing had been used and the industrial boroughs made "attractive", over 50 per cent more than the proposed quantity of "regrouped population" (1,033,000) should have been planned for dispersal (i.e. 1,615,000 people); that is 16 per cent and not 10 percent of the Greater London population. Otherwise, instead of nearly 40 per cent in multi-storey housing in London and 16 per cent in Greater London, nearly 50 per cent and 25 per cent respectively would have been inevitable, if other demands upon the land were to be satisfied.

Thus even after dispersal of population, comprehensive redevelopment in the industrial boroughs to ensure maximum population capacity, the reduction of population from between 21 per cent and 50 per cent of the pre war figure, the break up of the community and the creation of an alien one-class environment below acceptable standards (and comparable in its effect to Le Corbusier's *Voisin Plan* for Paris 1925, there was still a need for the new type of high density family housing being developed on the continent. The premodernist tradition of urban planning which had developed in Britain and especially England with the purpose of controlling the decentralisation of the urban population into garden suburbs and garden cities simply could not cope with the demands upon the land in the central area. Here, at the very heart of the problem of the modern city, British urban planning failed to achieve its objectives and facilitate the creation of a humane environment. In these circumstances the work of the modern movement was no longer incidental or misconceived; it was an essential innovation if the viability of the modern city and the authority of ^{our} modern urban planning was to be preserved.

Premodernism had seven different types of modernist deck housing to choose from if it wished to continue to combine social and economic, functional and spiritual objectives. These were the Milan, Spangon, Viennese,

Paris Housing Area No.6, Zagreb and Unité schemes. In the event it detached itself from this legacy of new housing form, concentrated upon the Unité model and chose to develop, in cooperation with the British architectural avanté garde, its own type of streets-in-the-sky. And, as we shall see, this new type of deck housing was developed, firstly, by an extension of the Romanticism in modernism and secondly, by following the British, and especially English tradition of opposition to the provision of multi-storey housing for families. The cultural traditions in the United Kingdom of liberalist anti-utopian humane urban housing form, found in premodernism was continued in post war modernism. Unlike any other country streets-in-the-sky represented a means of continuing the peculiarly accomplished tradition of British urban planning.

CHAPTER 3. THE ORIGIN OF THE HIGH RISE IN THE UNITED KINGDOM

In the post-war period up until the early 1960's the premodernist and modernist approaches to architecture and urban planning continued in the guise of a picturesque modernism and a new type of anti-functional modernism or New Brutalism, as its supporters chose to define it. Each alteration of the interior ideas brought the previously opposed doctrines closer together so that areas of common agreement arose. The design of the Park Hill estate in Sheffield in particular brought the two sides together in an apparently unique manner. The famous Roehampton mixed development estate built by the LCC in the 1950's only ensured consensus because it was divided into two: Alton East was picturesque modern (designed by Oliver Cox, Cleeve Bart and others) while Alton West was Brutalist, inspired by the unité block in Marseilles, (designed by Colin Lucas, W.G. Howell and others) (1)

The overlap of ideas was helped by other factors. Crucial sociological and literary studies of the period seemed to support many of the notions behind the concept of streets-in-the-sky. Also a new importance was attached to the market economy as a basis for a healthy development of architecture and the city. The critical work of Jane Jacobs thereby found a good deal of support from the alternative interpretations of modern architecture, partly because it grew from the same rejection of the inter-war master-planning perspective.

In this chapter we will firstly detail these intellectual and cultural developments and then look, in the second half, at the evolution of the Park Hill project. This will explain why a consensus, albeit fragile and short-lived, could have emerged and ensured the schemes model status in the 1960's.

The New Modernism

In 1951 at the 8th meeting of C.I.A.M., and then especially at the 9th meeting two years later a group of young architects voiced their dislike of the principles encaulsated in the Athens Charter. This, as we have noted, had been drawn up in 1933 as the movement's founding document. The principal causes of disquiet in the ranks of this still rather avant garde group, was the apparently simplistic and purely functional view of the subject. The division of the city into four subject areas, living, working, recreation and transportation and the use of the "rational layout" represented an over-ordering of urban phenomenon. Housing schemes were built just like "filing cabinets"; the environment produced by modern architecture may have been healthy, but it was inhuman and characterless, lacking in opportunities for "spiritual growth".

The 10th and 11th congresses of C.I.A.M. in 1956 and 1959 received

but did not bend to these criticisms, as a result it disbanded in 1959. The new group which was formed in 1950, calling itself, not surprisingly, Team 1', continued to meet until the mid 1960's (2).

The British members of the new type of modernists included Alison and Peter Smithson (3). Others, such as James Stirling and Theo Crosby and the one-time members of M.A.R.S. or associated groups, Arthur Kom, Denys Lasdun, Maxwell Fry and Jane Drew, appear to have supported many of the new principles laid down by the group. These were, in a nutshell, that in opposition to C.I.A.M.'s "generalised man" architecture had to discover real social "patterns" the "human structure in each particular place" by means of survey before plan (4). This cultural modernism also rejected the picturesque movements romanticism, the use of ideas from a past, supposedly, golden age. It was essential to look for "living patterns not architectural ones". (5) Theory and practice must be tied to local culture and local problems if a useful, meaningful and beautiful built form was to emerge. According to the Smithsons, in this realisation lay the contemporary programme for architecture:

"Each generation feels a new dissatisfaction, and conceives of a new idea of order.

This is architecture.

Young architects today feel a monumental dissatisfaction with the buildings they see going up around them.

For them, the housing estates, the social centres, and the blocks of flats are meaningless and irrelevant. They feel that the majority of architects have lost contact with reality and are building yesterday's dreams when the rest of us have woken up in today. They are dissatisfied with the ideas these buildings represent, the ideas of the Garden City Movement and the Rationalism of the thirties". (6)

Moreover, the now dated type of architecture could not comprehend a "situation of growth and change, which is the fundamental thing that happens to our communities".:

"A discipline of growth has to be evolved - do a certain thing in this place and it influences something else somewhere. It is pragmatism not cartesian; it doesn't lay out a city in advance in great parallel lines, but it grows from point to point and it follows the flow of communications. It responds to a new scale of motorways; it responds to a new sort of social set up and it doesn't place much value on classical aesthetics". (7)

This "flow of communications", this common thread or "fix" was the street-deck and the motorway. These simple forms could ensure that there was a flexible response to the demands of the site and the community: a "close knit, complicated, often moving aggregation, but an aggregation with a distinct structure"(8) The new urban area, the so called "cluster city", would not have one centre but many, not one place of work and one for home, but an overlapping of these functions, not one series of density

rings, but a variety of densities at a variety of points. The process of "extending and renewing the existing built complexes" would be an open-ended activity:

"Any new development exists in a complex of old ones. It must revalidate, by modifying them, the forms of the old communities. The architect is no longer the social reformer but a technician in the field of form, who cannot rely on community centres, communal laundries, community rooms etc. to camouflage the fact that the settlement as a whole is incommensurable. Form is generated in part by response to the existing form, and in part by response to the Zeitgeist, which cannot be preplanned. Every addition to a community, every change of circumstances, will generate a new response.....

What is being proposed here is the abolition of planning as we know it; the disappearance of the 'master plan' and all detailed town-form planning". (9)

To "revalidate" the forms of the old communities, to develop a form which was modern but generated in part by response to the existing form, it was necessary to rediscover the idea of the street. This idea meant "the creation of effective group spaces, fulfilling the vital function of identification and enclosure, making the socially vital life-of-the-streets possible" (10) The type of vertical living, commonly found in the United Kingdom, especially England, deprived the family of an essential outdoor life. Contact with other families:

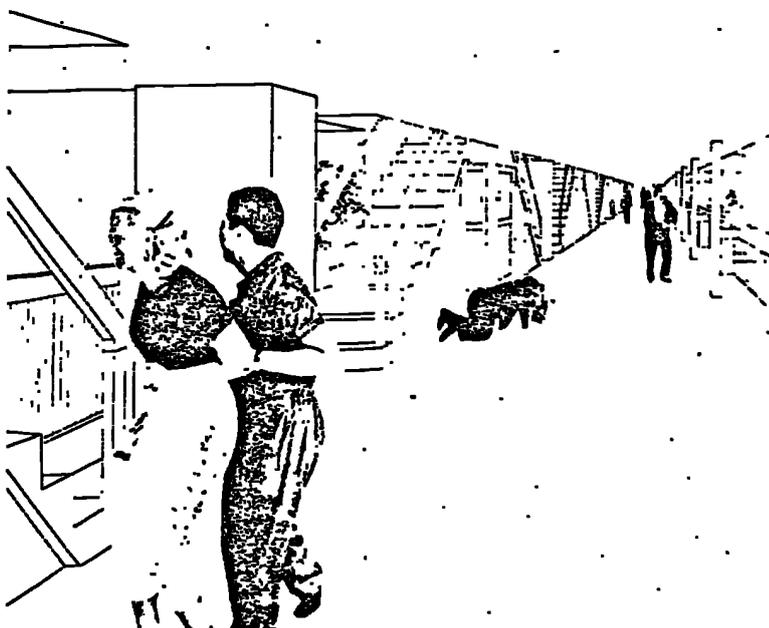
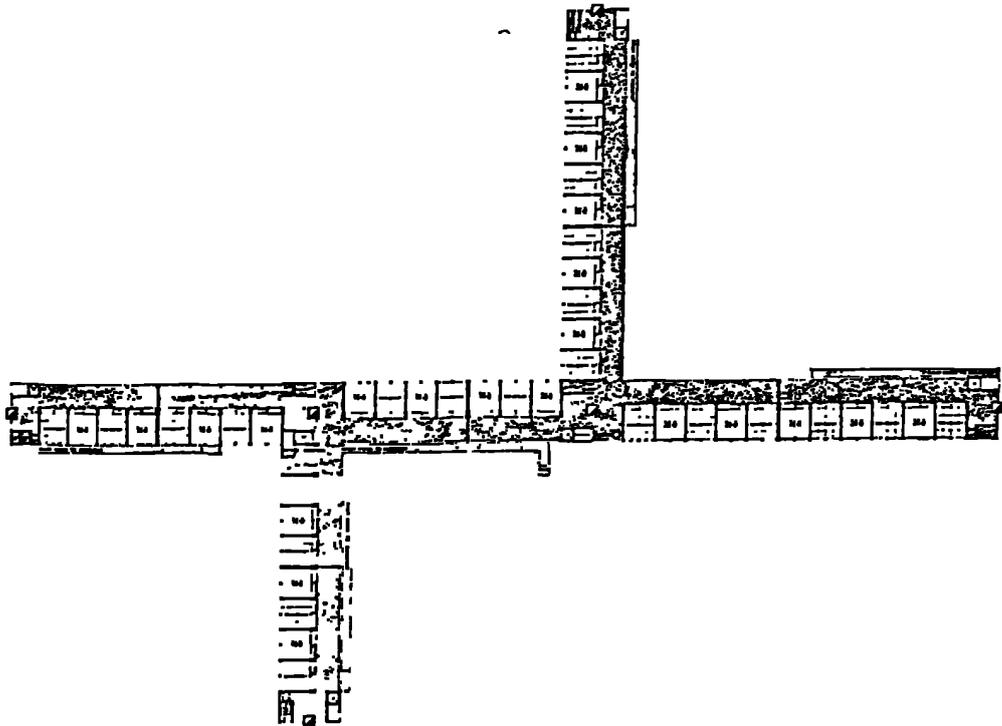
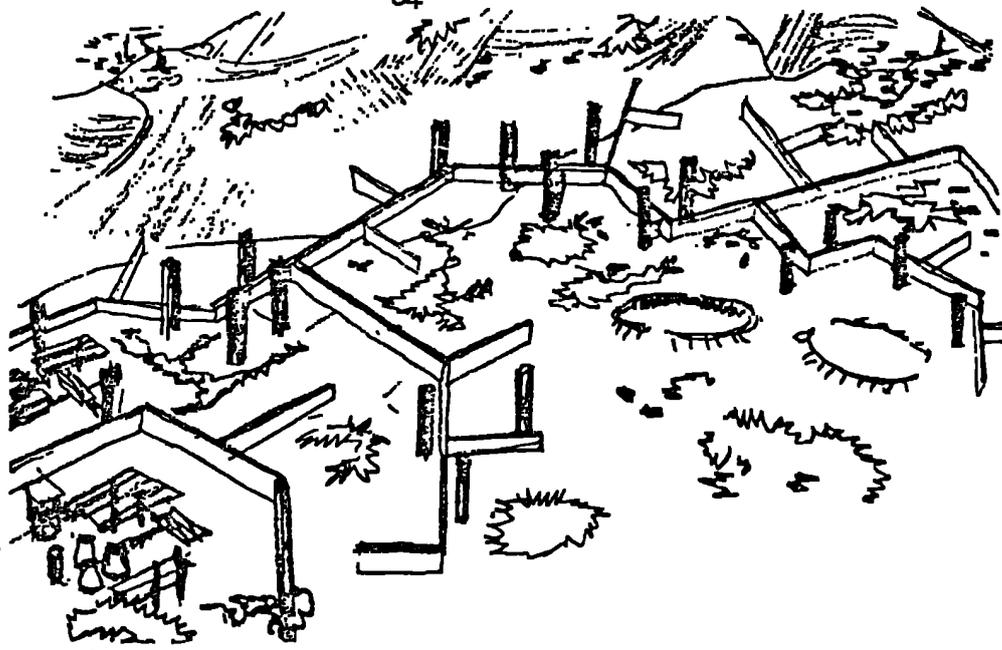
" is difficult if not impossible on the narrow balconies and landings that are the sole means of conversation and communication. Furthermore, outside one's immediate neighbours (often limited to three in point blocks) the possibilities of forming the friendships which constitute the extended family are made difficult by the complete absence of horizontal communication at the same level and the ineffectiveness of vertical communication". (11)

The streets-in-the sky represented the means of achieving the full social and political communication of an open society. They would replace the sprawling constraining and regimental city, built following the rule of the abstract ideology of architecture and the state, with a personalised, identifiable and contemporary complex urban environment. It would be contained, high density, uncongested and multi-level, combining modern amenities with a profusion of parks and open spaces. The new building form would make possible the "re-identification" of man with his environment - the houses, the street, the community, the city and the countryside. The Smithsons therefore emphasised the need for identity and individuality:

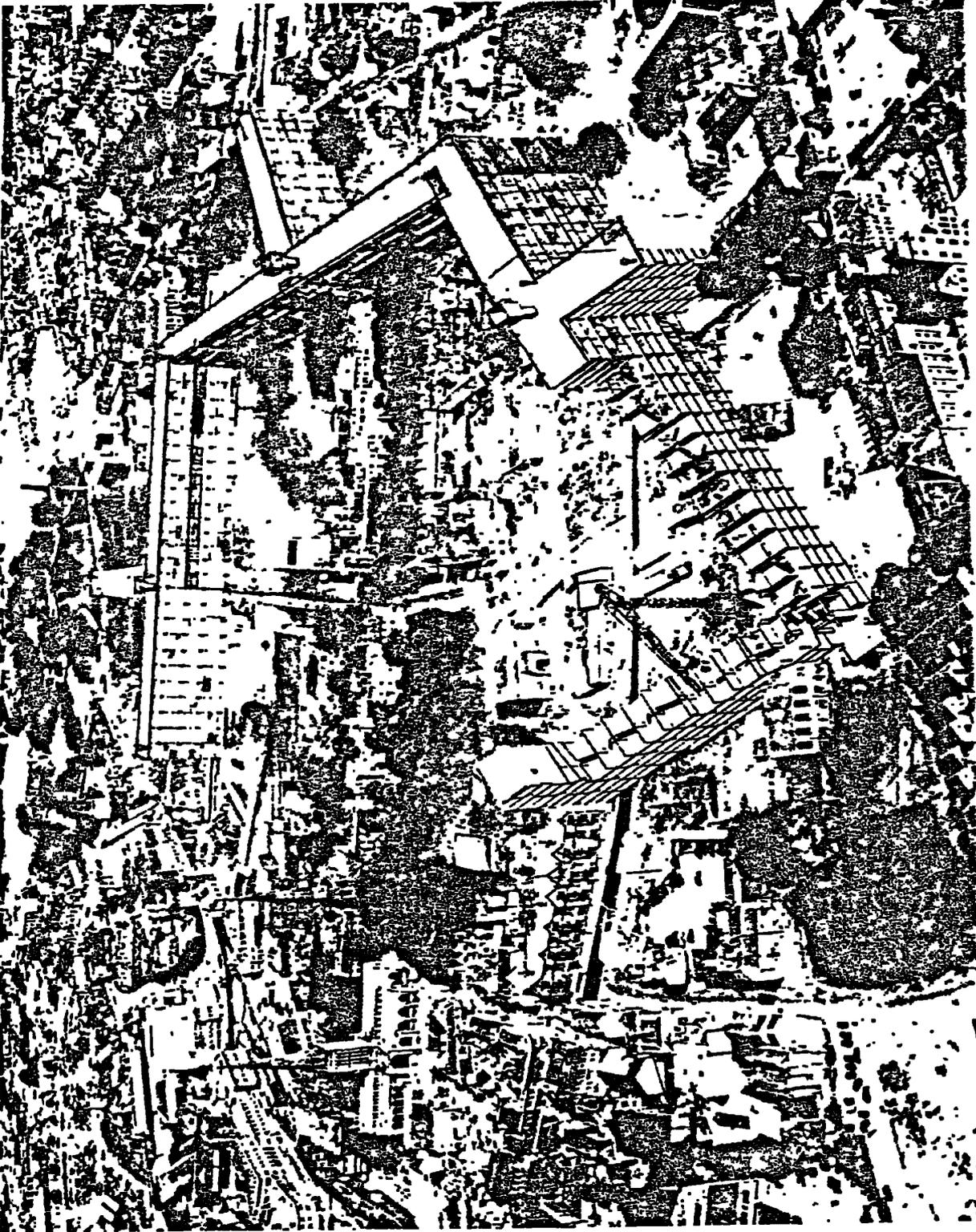
"At all densities such 'streets' are made possible by the creation of a true street-deck in the air, each deck having a large number of people dependent on it for access, and some decks being thoroughfares leading to places - so that they will each acquire special characteristics.

Be identified in fact.

Each part of each deck should have sufficient people accessed from it to become a social entity and be within reach of a much larger



24. The Smithsons' street-deck city and Golden lane project of the early 1950's
Source: Ordinariness and Light 1970



25. The Smithsons' proposals for Coventry, early 1950's
Source: Ordinariness and Light 1970

number at the same level.

Decks would be places, not corridors or balconies: thoroughfares where there are 'shops' post boxes, telephone kiosks.

Where a deck is purely residential the individual house and yard garden will provide an equivalent life pattern to a true street or square; nothing is lost and elevation is gained.

The flat block disappears and vertical living becomes a reality. The refuse chute takes the place of the village pump". (12)

In 1952 the Smithsons designed their first multi storey local authority housing scheme as one section of a future street-deck city. This was for the L.C.C's Golden Lane competition. Although the design was not accepted, the idea had at least reached the stage of the drawing board. To the members of Team 10 this was the first concrete evidence of "the measure of an order which we feel to be in accordance with that of our world". As the new modernists undertook to build, in the Corbusian tradition, for a sense of harmony with the spirit of the age, it was believed that "spiritually dead houses can be bulldozed into contour relief ready for our new homes to look out on".(13)

The work of Le Corbusier, as he moved further and further away from the geometric form of the 1920's, especially in the post war period, was the most direct influence on the young and angry modern architects. The Unité d'habitation in Marseilles was important because it was "the most significant building of our time", embodying "the whole of Le Corbusier's doctrine in its purest form" (14). Its faults were not insignificant: "man sourries along from victorian lifts down gloomy corridors to the solitary confinement of his private drawer". However it did prove:

"beyond all doubt that the vertical openly spaced green city is possible and can provide a way of life in many respects superior to that provided in the best horizontal garden city. Privacy is assured, sun penetrates, balconies make family life possible, shops are not far away, mechanical equipment is excellent, the view is superb and will remain superb, as will the acres of surrounding garden". (15,

And, what is not mentioned here, the honesty and thus brutality of the structure and materials - beton brut - were admired, above all. In the best tradition of modern architecture the Smithsons were existentialists first and foremost. It was of paramount importance to avoid sham or false feelings drawn from the past or to look to purely rational holistic scientific means of comprehending the present. Proper and rewarding architecture only came from a deep and committed feeling for the present (16). The "end of ideology" catch phrase of the 1950's and the 1960's was behind the demand for a new open city; one built around the contemporary communication structures.

To the Smithsons evidence of the present could be gleaned from the life-of-the-streets found in the East End of London, from the new images

produced by mass advertising, and above all from the work of painters such as Jackson Pollock. In 1949 "we saw the first manifestation of the new ordering, in the painting of Jackson Pollock". (17) Pollock was the leader of the American "abstract expressionists". His paintings were informal abstractions based on a technique of dripping and smearing paint on to the canvas, laid on the ground. Here the new avant-garde saw a "continuous dynamic" born of the spirit of the times. It was painting characterised by its continuation of the anti-intellectual basis of modernism. As Pollock stated:

"When I am in the painting I'm not aware of what I'm doing. It is only after a sort of 'get acquainted' period that I see what I have been about. I have no fears about making changes, destroying the image etc. because the painting has a life of its own. I try to let it come through. It is only when I lose contact with the painting that the result is a mess. Otherwise there is pure harmony, an easy give and take, and the painting comes out well". (18)

For the Smithsons the city also had a "life of its own" which should not be held back by any kind of academic preconceptions. Buildings and whole urban areas should be "primitive" in their honesty, a cross between a warehouse and luxury clinic aesthetic.

To follow up the full implications of these views the so called Independent Group was founded at the Institute of Contemporary Arts. It met for the first time in 1956, the same year that Team 10 was formed. The Group included artists, critics and architects, amongst them the Smithsons, James Stirling, Eduardo Paolozzi (who was interested in Wittgenstein's philosophy) Reynier Haubez (who was to be the principal advocate of the Park Hill scheme) and Richard Hamilton (who was arguably the founder of pop art, an extremely "realist" kind of modern art). These modernists held an exhibition in the same year entitled This is Tomorrow, whose purpose it was to bring to the attention of the public the reality of the present, the popular urban culture of the day. This was notable for its "transience, expendability, wit, sexiness, gimmickry and glamour". (19) Art, it was suggested must be "low cost, mass produced, young and Big Business". (20)

However, the continuation of the principles of the Modern Movement expressed by the New Brutalism were not carried into perpetuating the theory of urban planning established by Le Corbusier. His first problem of town planning was that "the centres of the great cities are like an engine which is seized". This was because the "Pack Donkey's Way" was paralyzing its growth. The Smithsons' solution was an upper level rather disorganised communication system equivalent to the winding Pack Donkey's way. And the second problem "how to create a zone free for development" gave way to a call for relatively gradual renewal.

Moreover the four principles laid down by the "master for decongestion of the city centre:-" suggest that the density, increasing the means of getting about and increasing of roads and open spaces were interpreted to mean improving living conditions and giving identity to the sprawl of the modern city. There is no reference in the Smithson's writings to the needs of commerce, industrial development and national economic development which can be found in Leos and Le Corbusier for example. Leos noted in regard to the need to omit ornament:

"So rated plates are very dear, while the plain white china that the modern man like is cheap, and man accumulates savings, the other debts. So it is with whole nations. How to the country that lags behind in cultural development! The English became rich and we poorer! (21)

Similarly the challenge to establish proletarian interests found in the writings of Le Corbusier is absent. The leader of the modern movement noted in the 1920's:

"Established property rests on inheritance and its highest aim is a state of inertia, of no change and of maintaining the status quo." (22)

The landlord escapes the rough warfare of competition; his property is not found on the open market.

"And so the necessary building is not done. But if existing property arrangements were changed or they are changing, it would be possible to build; there would be an enthusiasm for building, and we should avoid revolution". (23)

Le Corbusier's call in The Radiant City for the "mobilisation of the land for the common good" is another example of this, by now, radical opposition to the monopoly power of landed capital.

Three other crucial areas of modernist urban planning were missing from the work of Team 10, thereby underlining its departure from the political and economic critique behind inter-war developments. Firstly the crucial "plan as generator" idea, where a uniformity in the "part" was complementary to a variety in the "whole", had been lost. And, therefore the industrial production necessary to build the "house machine" was not possible. It was now considered advisable to have a variety in the "part" as well as in the "whole". Houses and decks would vary in type, in dimensions, so as to provide some individuality. Building a complex, ever-changing street-deck city seemed to demand an unparalleled flexibility and ability to innovate in the construction industry. And yet there was no mention of this difficult issue in the Smithson's writings.

Secondly the rejection of the modular, of the system of "regulating lines" which combined beauty with the ability to mass produce the items in question, partnered the absence of the 'plan as generator' theory. To Le Corbusier modern built form was generated by means of the modular and the

zeitgeist, to Team 10 neither formulas nor abstract feelings guiding the "pure creation of the spirit" were sufficient. It was a far more open-ended affair and therefore far less closely tied to practical consideration of industrial production.

Thirdly, the Domino structural system, which not only made the roof available for community needs - not followed up by any of the New Brutalists - but enabled the whole city to be lifted upon stilts, is regated by Team 10 theories. Instead of allowing pedestrians the complete freedom of ground level they are confined to the deck system. This was almost equivalent to the "anti-reason" Le Corbusier saw in the super-decking designs for New York in the 1920's. And just as in that earlier case it represented an alternative to the complete redesign and rebuilding demanded by Le Corbusier, so now there was, behind the new urban form, a desire to be adaptive, and not to challenge the status quo if possible. However, the new designs were no less utopian or more realistic. In the Smithsons' proposals for the centre of Berlin, submitted in 1958, there was to be a giant pedestrian 'megastructure' built over the road and parking areas. Also the London Roads study of the late 1950's involved a gradual but total rebuilding of the capital, equivalent in many ways to the functionalist MARS plan for the city produced twenty years before. As Peter Smithson noted, "In the end we would probably destroy everything stage by stage" (24)

Overall it appeared that the new modernists, especially the Smithsons had, on the one hand, become less critical and tied more closely to the status quo, while on the other hand many of the proposals were even more impractical or revolutionary than their predecessors. This led to several definite contradictions. While there was a desire to be libertarian, it was proposed to force people to accept a new motorway system and to use a building form which denied them the freedom of ground level movement. Also in spite of the belief in using only modern ideas the 'reflective romanticism' associated with the golden age of the pre-war life-of-the-streets was encouraged by the new building design. In essence the street-deck was not an innovation which grew from a democratic grass-roots movement but came primarily from architecture itself. The idea of the street deck city and the obsession with beton brut was no less an academic preconception, an ideology, than its predecessors. The building of a number of deck housing estates (Illus. 24 and 25. (p. 61/5)) would have been just as much an example of architectural megalomania and the use of dictatorial state powers as the Corbusian blocks of housing are No. 6 in Paris in 1936 (which in large part-inspired them). The difference was that any New Brutalist building project would get underway on the basis of re-establishing community life and the sense of place and history, and in the name of helping the development of the "open society". Such claims could

easily appear dishonest. However, there can be no doubt that the Smithsons were ready and willing to build their utopia. The only realised housing project at Robin Hood Gardens in the East End of London, 1963-7), provides useful evidence of the alien world that could have resulted (Illus. 44 and 45) (p.138 and 139).

Other members of Team 10, or post war C.I.A.M. were not quite so revolutionary. Denys Lasdun was mainly responsible for the design in the mid 1950's of the so-called "cluster-Block" in Bethnal Green. The 16 storey block contained 56 3-roomed maisonettes and 8 bed-sitting room flats with the result that the whole site was developed at approximately 400 ppha (163 ppa) avoiding in the process any necessary decanting of the resident population. The design of the high block was meant to represent a "cluster" of housing units. Hence the area was given a clear physical identity. Also the public balcony joining all accommodation on each floor could serve a community purpose and continue the life-of-the-streets found there before redevelopment while the apparent mass of the block was reduced, and its separate elements expressed; that is, by breaking it up into wings connected by bridges to a central service core containing stair, lifts and laundry drying area. The block was fully centrally heated and the ground floor contained boiler-room, oil storage, transformer chamber and tenants' stores. Note, in particular, the way in which the desire to be "honest" in the exposing of the separate elements of the structure was combined with a sociological purpose. Neither aims appear in a similar but traditional housing block designed by a well-known firm of what we define as Picturesque Modern architects (Illus.26) (p.91)

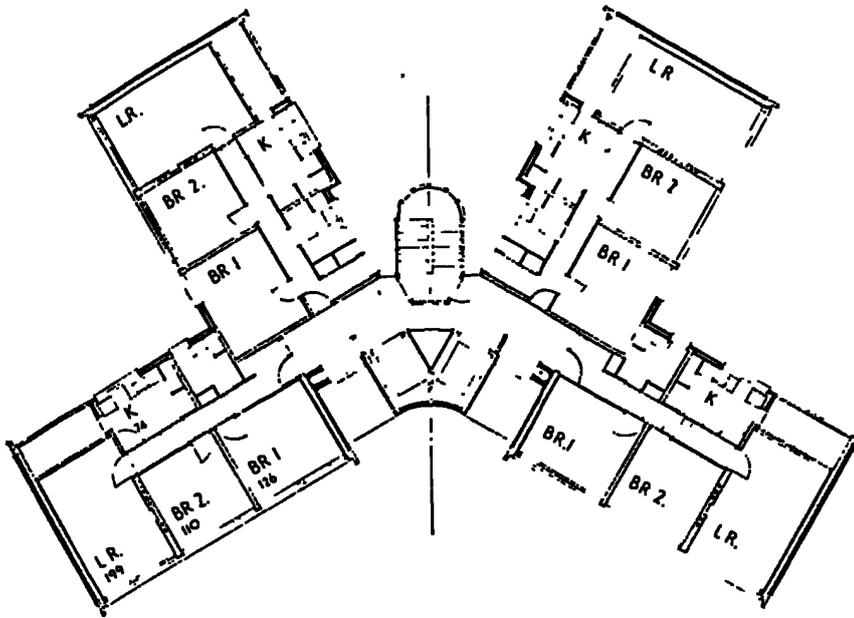
It is worth recalling here how similar Lasdun's philosophy of architecture was to the Smithsons. One critic noted in regard to the background ideas to his work:

"The most significant of these is the idea of architecture as urban landscape. The work shows an increasing desire to give architectural expression to an open and responsive attitude to nature and the city. Buildings are considered not simply as isolated objects but as an intrinsic part of their surroundings and are made to seek a vital and mutual relationship with what lies nearby". (25)

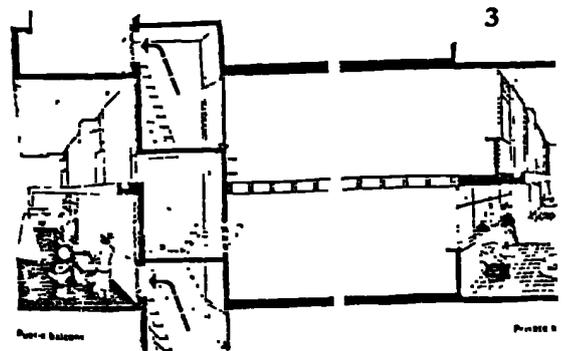
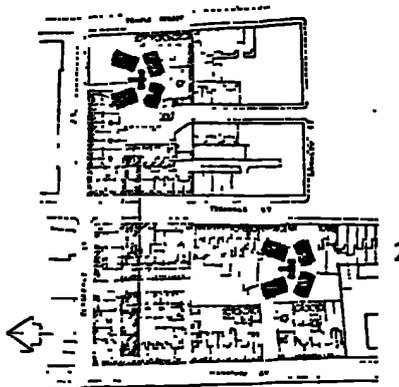
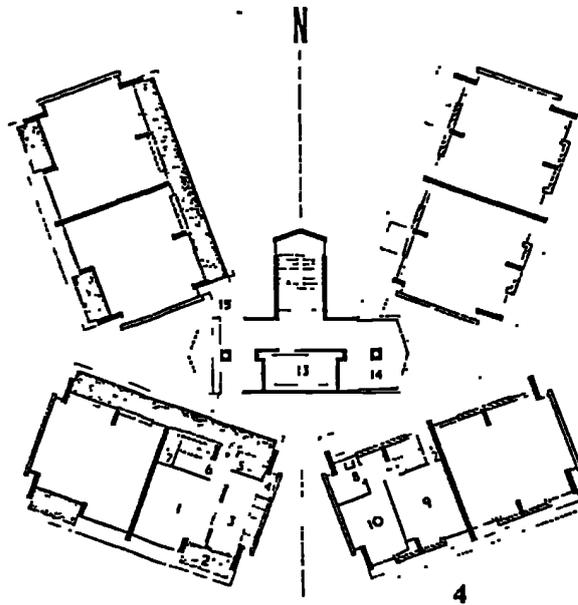
And in turning to consider the decade in question:

"The work of the 1950's onwards exhibits a gradual departure from the influence of predecessors. A quest emerges for a more complex architectural order, concerned with flux and context, which is "anti-diagrammatic" in that it recognises that architecture refers to what lies deep in our nature". (26)

James Stirling, who worked with James Gowan from 1955 to 1960, designed the "Brutalist" flats at Ham Common in 1955 and the Preston housing in 1957 (Illus. 27) (p.92) which incorporated an upper level walkway or narrow street-deck. Although it was a far less ambitious affair than the Smithson's

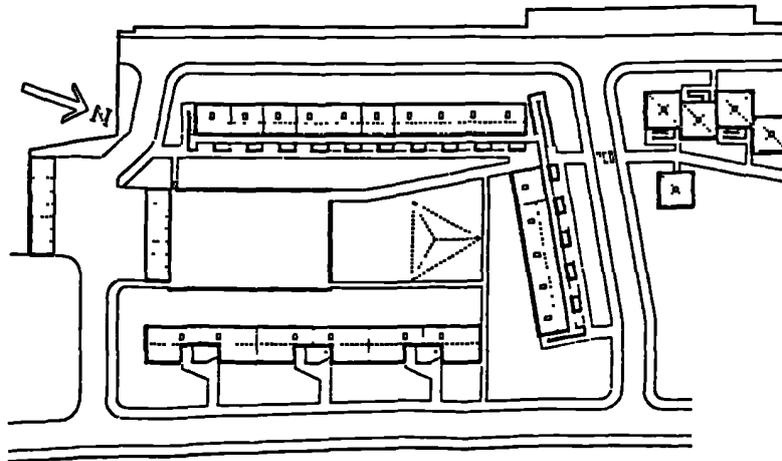
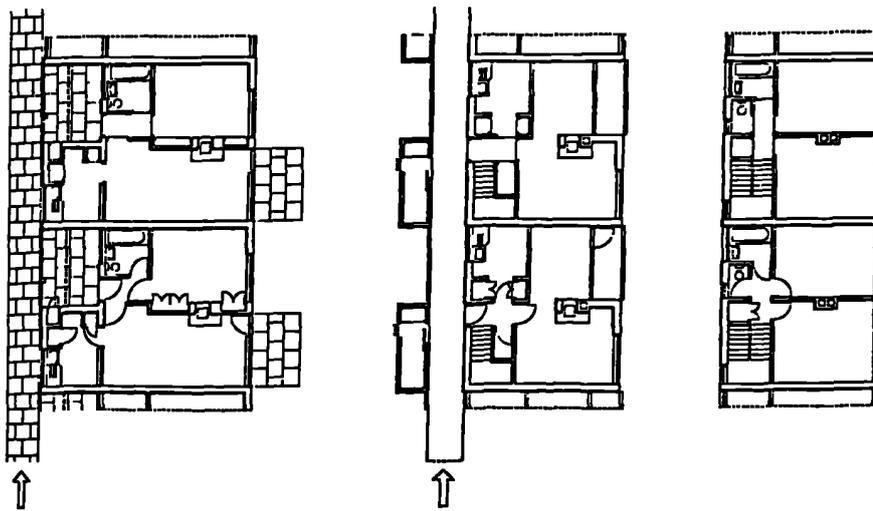
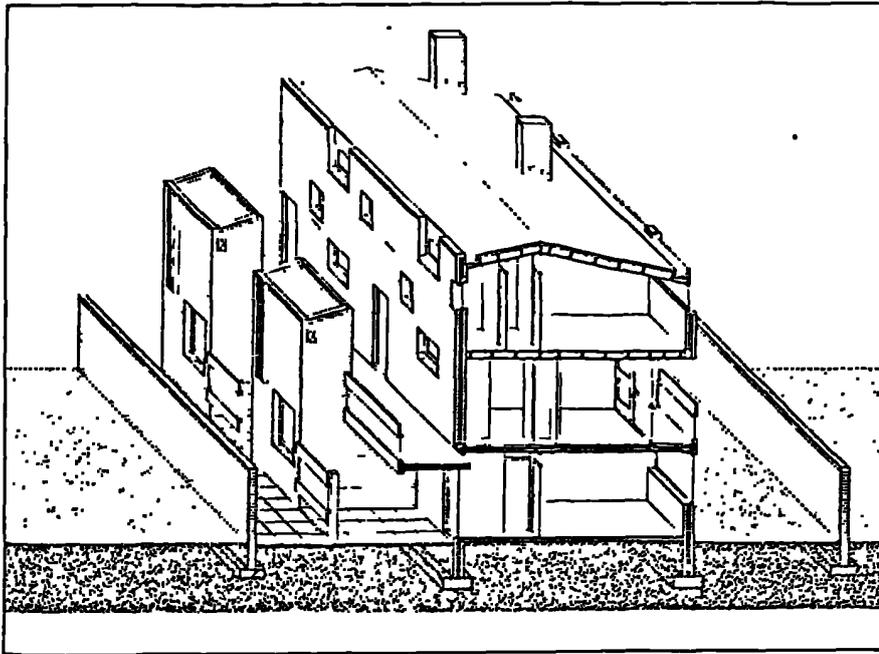


The West Hill Estate (above)



26. Cluster Block and West Hill estate. Comparison of Picturesque Modern and New Brutalist design, late 1950's.

Source: Cleeve-Barr, A.W. Public Authority Housing, 1958



27. Stirling and Gowan's Preston Housing, 1957.
 Axonometric section, ground, first and second floor plans of
 three-storey terraces and site plan.
 Source: Architects' Journal June 1961

or even Lasdun's it followed the same principles of exposed structure and relation to place and tradition. The architects stated

"In 19th century industrial 'by-law' towns you pass perhaps twenty or more front doors before coming to your own, with children playing in the roads, parents chatting on the pavement and sitting in doorways, and the old peering through windows. This horizontal approach through the neighbourhood to get to your house seems to be reason for the friendliness and sense of community which exists in these work towns and the 19th century solution seems more dynamic than later planning solutions for urban mass housing. The quality of a society is formulated to a great extent by the buildings it inhabits. In this project we tried to retain the spirit of the alley, yards and street terraces that the new development was replacing and from which its occupants were being moved. The density of the new development is twice that of the old". (27)

Arthur Korn, who taught at the prestigious Architectural Association from 1945-64, looked to the work of Stirling and Gowan as symptomatic of a forthcoming golden age of British or English architecture. In 1959 he stated:

"A new generation of architects is appearing in England, and for the first time in twenty years I find that a mutual response and understanding exists. And so, too, after this long interval, can we speak again of English architects on an international level.....It is their courage and conviction which allies them to the avant-gardists on the Continent in the 1910's. They believe that architecture is the reflection of a way of life and of a society in transition creating new activities, new social structures, that architecture sanctifies our daily lives". (28)

Besides these two developments, important new modernistic residential building projects were Theo Crosby's Fulham Study, 1963, and the Park Hill scheme by Jack Lynn and Ivor Smith. We will consider the latter example at length in the second half of this chapter.

Before leaving the subject of the new modern urban planning we can note the contribution made by N.J.Habraken, a Dutchman, who in 1961 published Supports: an alternative to mass housing.

Habraken objected to the idea of forcing people into "perfected barracks". This denied them the opportunity to use individual initiative and personal creativity. The old slum areas had permitted the possession of the home and the making of a personal sign on the dwelling, that is, "to take it in our hand, touch it, test it and put our stamp on it". (29) The modern city missed this crucial element: "It is not the result of the growing process of a living organism". (30)

To enable the natural process of adaptation and alteration to proceed, "a dwelling should be capable of being altered, remodelled, pulled down and rebuilt without affecting any other dwelling" (31) At the same time the city must be compact and allow traffic-free circulation. The answer was "support structures", a series of constructions which provided "building ground up in

the air and one permanent like streets". (32) Here, therefore, the idea of the communication network for an "open society" was taken to its logical conclusion. A series of dwelling kits would be made available for prospective tenants to choose from and then personally assemble and later reassemble, if desired, on the upper level permanent street.

This type of critique of the ideas of Team 10 was paralleled by other alternative new modernist principles developing in the United States in the 1950's, notably Robert Venturi's Complexity and Contradiction in Architecture (32) However, neither would have much impact on British thinking until the late 1960's and early 1970's.

The New Premodernism

In what way was the Picturesque modernism complementary to the New Brutalism? And to what extent did the idea of the street-deck continue the tradition of premodern urban planning?

The picturesque urban-based movement was well established in the Britain of the 1950's following the success of the South Bank Exhibition in 1951 and the authoritative position of many of its members (33) Through its house journal, the Architectural Review it called for the design of distinctive and beautiful local "townscape" (34) Inspiration for design should come from a "free grouping of parts and a free juxtaposition of materials" taking things on their own merits and not drawing upon "the grid, the axis, the module and other academic preconceptions" (35) The movement looked for an open-ended but resolute opposition to the trends toward the creation of a universal and nondescript urban sprawl now described as "prairie planning" or "subtopia" - a combination of suburbia and utopia - in place of the famous term "conurbation" coined about a half a century before by Patrick Geddes (36)

The critical position relative to the status-quo intrinsic to this approach was also evident in the concern often expressed for the lack of human scale in the large multi-storey housing developments underway at the time. The solution to this "beehive problem" could be found in picturesque design. One new local authority housing estate, which consisted of a large number of giant maisonette blocks, was admired in the following manner:

"Take the Lowell and Moya housing scheme at Fimlipo. It may truly be regarded not as a feature in the landscape but as the landscape itself, in which the figures of people moving about the balconies or climbing the glass enclosed staircases have the same relation to their background as people resting on a ledge or a mountainside or toiling up a mountain path". (37)

These balconies could not, however, really provide for social needs. A. N. Cleeve Barr, Assistant Housing Architect to the L.C.C. in the 1950's made an important point in 1958:

"In prewar and early postwar days the argument was frequently to be heard that balcony access blocks were friendliest, because they allowed tenants from the slums to get together and talk as they used to do on the doorsteps of their terrace slum or tenement block. Apart from the fact that access-galleries are not usually on the sunny side, to encourage people to linger, this argument has been invalidated by the rapid changes in social conditions and improvements in the general level of comfort. Anyone who had visited a block of flats with internal lift halls or central access corridors and discussed the matter with the tenants will appreciate that none would willingly wish to move to an external balcony access type of block". (38)

However, by the late 1950's the external deck access idea, having been developed at the Barbican scheme within the City of London (39) by the leaders of the more traditional type of architecture, emerged into a new light of day with the schemes for Cumbernauld new town by Hugh Wilson (Illus.28) (p.96) and Hook new town⁽⁴⁾ by Shankland, Cox and others (Illus.29) (p.97). Both were being prepared in 1959 and 1960 to use compact high density residential development located within walking distance of the town centre, with provision for 100 per cent car ownership. Colin Buchanan published his famous analysis of the traffic problem, Mixed Blessing in 1958 and J.K. Galbraith his equally well known study of The Affluent Society

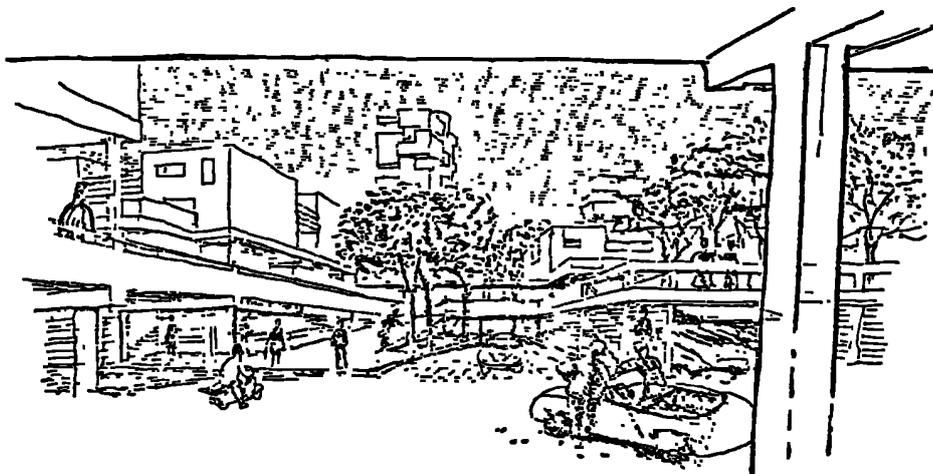
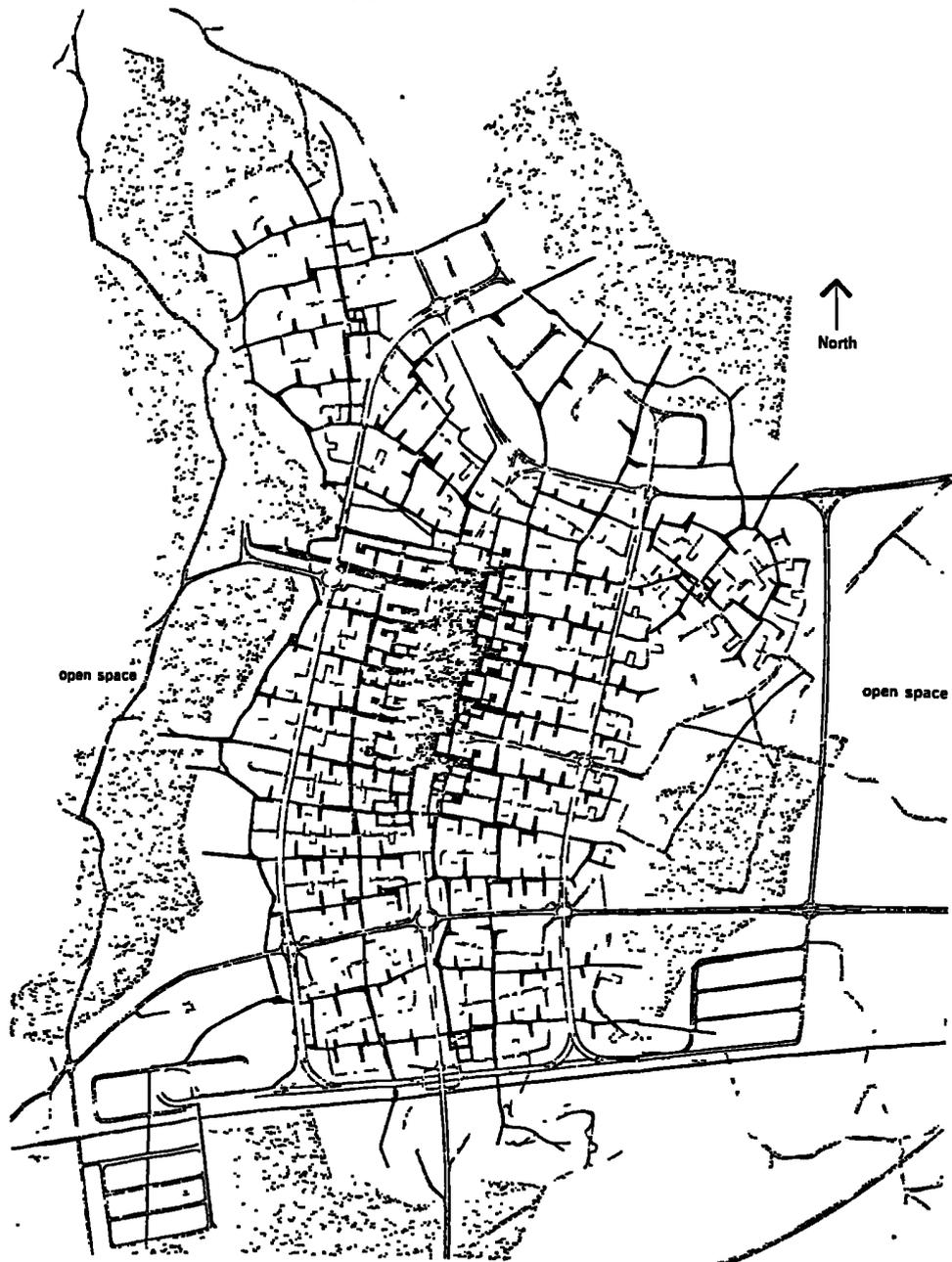
These were new towns for the modern age of growth and change; it was essential that they be capable of dealing with the new conditions.

The separation of pedestrians and vehicles at ground level on the Radburn model had been underway since the early 1950's when Gordon Stephenson completed a scheme at Queen's Park, Wrexham in 1951, J.L. Womersley designed another at Greenhill, Leffie d in 1954 and the NHC Housing manual for 1953 advocated Radburn design. By the late 1950's however, the suburban neighbourhood-unit concept behind Radburn had been replaced by a multi-level urban-based anti-neighbourhood formula. The two new towns noted above, the latter abandoned in 1960, were to be multi-level with predominantly deck access housing - although only one small pseudo-deck scheme was finally built at Cumbernauld - and so compact as to be full of the urban life - the liveliness and the realism not associated with the cosy sentimentality of the Radburn idea. The multi-purpose, multi-level town centre of Cumbernauld, built to allow for growth and change and to reflect the "realism" of the machine age structure and materials is perhaps the most obvious expression today of the ideas of the 1950's and early 1960's.

It was therefore the decade which evolved the concept of "urbanity" as a euphemism for realism and modernity. The Civic Trust (otherwise known as the Council for the Preservation of Urban England) was founded in 1957 by Duncan Sandys, the Conservative M.P. and included Anthony Crosland, the Labour M.P. and leading intellectual amongst its members; the concluding chapter of The Future of Socialism contains an apolitical call for the



28. Model for Cumberland New Town late 1950's showing proposals for deck-access housing in the middle background and elsewhere.



29. Proposals for Hook new town, late 1950's. Plan (above) and deck access housing around town centre.
Source: The Planning of a New Town LCC 1961

building of enjoyable complex cities and the preservation of the countryside. The following year SPUR, the Society for the Promotion of Urban Renewal was founded by eminent architects to oppose the unnecessary decentralisation of population from the major cities (41). There was an almost unanimous opinion that multi-level high density cities had to be built; that the remarkable architectural work undertaken at Coventry after the war was infinitely preferable to for example, the anachronistic and wasteful planning by Lutjens and Abercrombie undertaken at Hull shortly before and then after the war (42).

Many of the required attributes of urban living were to be found in the Unité d'Habitation at Marseilles. This architectural edifice was a welcome surprise to the more traditional architects because its giant scale and predominant use of concrete suggested that human qualities would be missing. However a basically conservative interpretation was forthcoming for example "it remains a triumph only to be explained by the fact that it was designed by a genius" (43) For the vast majority of experts, the Unité block was a symbol of truly modern architecture to be admired and possibly copied in some measure but never really positively investigated and improved upon. The influential L.C.C. Architects' department paid homage to the genius of Le Corbusier in one of its most prestigious early housing schemes, the Alton West estate at Roehampton (44) Here the external form of the Unité was copied and combined with other housing types in a parkland setting, to produce a sham expression of classical modernism. In the event the reduction in scale relative to the Marseilles example plus the informal layout of the whole scheme, relative to the landscape gave it a direct appeal to the Picturesque Movement (45).

Overall the architectural profession took a close interest in the social and especially aesthetic characteristics of the New Brutalism. Accordingly the Architectural Review included articles by the Smithsons, Stirling and Rayner Banham, who was on the editorial staff in the 1950's and early 1960's. The magazine also highlighted the merits of the "cluster block" in Seton Green (46) Meanwhile Theo. Crosby's editorial control of Architectural Design helped to promote the ideas of the avant-garde movement.

However, in another direction altogether, not referred to, deck housing fitted exactly into the premodernist tradition of urban planning. In order to follow the nature of the relationship we will first recall that premodern planning had its roots in a reaction against the regimented character of the late 19th century high density byelaw housing. Raymond Unwin stated:

"The haphazard growth of our towns has encouraged haphazard thinking about them. The owner of a building site is naturally obsessed by the importance of securing the most intensive utilisation of it. When he has fully occupied existing buildings

he will want to crowd it with others, and when these in turn are occupied he will seek to pile more storeys on the top. The town planner, surveying the territory as a whole may take a very different view: he sees that it is often less costly to acquire a second site than to overcrowd the first; he realises that amidst the scarcity of many things there is no want of space, and that whatever the cause of congestion it is not due to the lack of land". (47)

In the famous essay "Nothing gained by overcrowding" Luvin applied the town planner's view to a concrete situation and established that the intensive development of a plot of land with parallel blocks of houses and roads was more expensive to landlord and tenant than almost half the number of houses with far less road space. The minimising of the circulative space, i.e. roads and pavements, so reduced the overall cost of the scheme that, in spite of the greater cost of land per house, having more open space per house - the total cost was reduced and a better environment produced. (48) Lower density meant social and economic gains to all concerned and urban form that could be designed for beauty and a sense of identity, in place of the uniformity of the byelar street arrangement. This 'breakthrough' led to the development of the Radburn idea whereby the separation of pedestrians and vehicles involved the reduction of road space and the addition of parkland or green space.

A similar analysis can be applied to deck housing when a comparison is made between the building form shown in Illustration 26 and an alternative uniform development of tower blocks such as that found, for example, at the centre of the Contemporary City. In the latter case the tower blocks have a maximum amount of circulation space with high costs and low amenity value. Circulation space will include roads between each block, two lift shafts per tower stopping at every floor and corridors on each floor leading to the accommodation. In contrast medium rise deck housing at a lower density, will not require as much road space due to the services performed by the deck linking separate housing blocks together, will have a flexible relationship between lift space and accommodation (at Park Hill for example, there was one passenger lift for every 77 dwellings, although this number could have been increased or decreased) to such an extent that the number of lifts can be reduced to an acceptable minimum serving a considerably larger number of dwellings than the tower block; unless, that is, the tower block reaches beyond the economically and socially acceptable heights (49). Also with corridors or decks on every third floor only there is a saving in circulation space with fewer lift stops required leading to cheaper and faster lifts.

Hence with the street-in-the-sky there is a saving on circulation space combined with the addition of communication space, i.e. the street-deck plus more space at ground level for necessary communal amenities. Moreover, the regimented layout of tower blocks required to achieve a higher density can be

replaced by deck housing which follows the haphazard form of the sites available and uses successful urban form from the past as a working model, that is, the Georgian squares and crescents of London, Bath and Edinburgh. The Smithsons, Tirling, Crosby and many others used the medium rise building forms of the 18th century city as inspiration; this would not be possible with the tower block.

Although not strictly comparable, these kinds of social, economic and architectural benefits were behind the design of the Pruitt Igoe public housing scheme in St. Louis - now demolished (49). Here, a comparison was made between the traditional American cross-plan apartment block project and the St. Louis slab block scheme, where amenity areas, laundry, drying and storage facilities with play area attached) were, as we have noted, on every third floor. It was found that a saving of about \$1,000 per dwelling unit or 15 per cent overall was possible (partly due to the absence of a basement in the St. Louis scheme). The details were as follows:-

"The biggest economies of the slab over the standard cross are in the circulation area and elevator halls, and in elimination of the basement. The cross plan project has almost 65,000 sq. ft of service area (laundry, storage etc.) in the basement. The St. Louis plan moves the services upstairs, where they are handier, gives them 6,000 sq. ft. more space and leaves out the basement. Moreover the St. Louis type skip-stop elevator cuts so much square footage in elevator halls and circulation upstairs that the combined services and circulation area totals 99,000 sq. ft. less". (50)

The report goes on to record that the cross plan project would require 18 elevators and stop them at every floor necessitating 252 door openings, while the St. Louis type would use only 14 elevators, skip-stop (i.e. stop only every third floor) for a total of 56 door openings.

The New Urban Sociology and Literary Studies

The direct and indirect support which the idea of deck housing received from architecture and urban planning in the 1950's was paralleled by new interpretations of urban working class life coming from sociology and literary cultural studies. And in the former case most of the new urban sociology was undertaken under the guidance of architects, planners and social scientists. This was particularly the case in London, the West Midlands and in Liverpool (51) where sociology meant not only the collection of facts regarding the activities of the professions new "clients", the public, but also specific investigations to uncover to what extent patterns of "community" or *Gemeinschaft* had already been transformed into a general form of "association" or *Gesellschaft* (52) and to what extent people liked or disliked multi-storey living (53).

One study was particularly instructive. This was Michael Young and Peter Willmott's Family and Kinship in East London published in 1957. It was

the first report of research undertaken at the Institute of Community Studies located in Bethnal Green, East London. The institute was notable for its attempt to apply the insights gained from pre-war British anthropology and social survey to understanding the nature of urban working class life.

The investigation compared the extended family or "kinship" network of a "slum" redevelopment area, i.e. Bethnal Green, with the introverted nuclear family life developing in the new overspill suburban housing estate. The "mum-centred" life-of-the-streets of the older working class urban village, which was already under threat from the increasing affluence and education, the reduction in family size and the growing institutionalization of child rearing practices, was being finally disrupted by the forced movement of many of the residents out to a completely new area. The problem was that the unplanned personal communication process - mum, daughter, children, relations and friends - and its influence over landlords and shopkeepers was being broken down by the "planners". Hence the bureaucracy of the local authority denied any real choice to the community:

"The two councils already own nearly a third of the dwellings in the borough and are increasing their share every year. They select their tenants by different methods. They give preference to 'slum' dwellers and people whose need is judged greatest, not on the grounds of a person's family relationships. The whole complex, informal, intimate and chancy network of relative 'speaking for' relative spreads only to the doors of the Town hall. Inside and at County hall 'speaking for' is not time hallowed custom, it is nepotism". (54)

A divided community therefore sprang up, divided by distance, age and life-style, the 'slum' was extrovert and spiritually satisfying, the suburb anonymous and materially rewarding. The city centre site was rooted in tradition and working class consciousness, the suburb lacked any sense of continuance and solidarity and instead was typified by a continuous process of movement and change as the children on the new estate had to move to other parts of the city, wherever new housing became available for newly married couples.

In order to provide the opportunity for the retention of the balanced three-generation community, redevelopment policy had to be changed to take account of these human needs. Young and Wilmott suggested that the city population could be maintained at its present level to a far greater degree by moving industry out or into flatted factory buildings, railway goods yards could be decentralised, some open space built upon and far more existing houses retained. Also where redevelopment had to proceed people could be moved together:

"People will have to move about within their own district, if not outside it, as the slums beyond salvage are cleared and replaced. But reshuffling the residents could be

accomplished by moving as a block the social groups, above all the wider families, to which people wish to belong. Movement of street and kinship groupings as a whole, members being transferred together to a new setting, would enable the city to be rebuilt without squandering the fruits of social cohesion." (55)

At the present time the planners, especially the urban planners, were deliberately "squandering the fruits of social cohesion" by moving people to areas defined as neighbourhood units and expecting community spirit to be forthcoming. If this were possible "then there would be no harm in shifting people about the country, for what is lost could soon be regained by skilful architecture and design". (56) It had to be realised that, in contradiction of the ideology of urban planning, kinship and continuance were the basis of community life, not the physical environment. And:

"if the authorities regard that spirit as a social asset worth preserving, they will not uproot more people, but build the new houses around the social groups to which they already belong." (57)

But what form should these houses take? Young and Kilnott in a letter to The Times rejected the notion that the choice was between high flats and high density, and low density and dispersal:

"In the course of three years social research we have interviewed hundreds of local people; the overwhelming majority of them want a house rather than a flat, inside rather than outside the East End. Should the aim not be to provide as many new and reconditioned houses as possible while avoiding dispersal? If this be so then the authorities should build high only for those who cannot be accommodated on the ground. Houses come first, flats second". (58)

John Westergaard, another eminent sociologist, replied in order to claim that Young and Wilmott were "unduly pessimistic about the popular response to imaginative 'vertical' building." (59) Between these two viewpoints the new modern architects could take heart that their proposed housing form would satisfy the demands of people living in areas like Bethnal Green. The former opinion was identical to that maintained by Abercrombie and other members of the premodern movement but found to be impractical; the latter was an impression often voiced by modern architects unduly keen to build traditional types of high rise "tower block" housing. The street-decks idea could silence both parties and end the "ideological" destruction of the urban community by architects building "yesterday's dreams".

The pessimism about urban culture found in interwar architecture had been complemented by the work of members of modernist literary circles; D.H.Lawrence, F.R.Leavis and D.H.Thomson, and T.S.Eliot had written especially damning indictments of the city (60). In contrast the Angry Young Men of the 1950's produced several novels which purported to show the reality and substance of urban working class life, in its interactions

with the commercial, materialistic world at large (61)

The figures whose work had much in common with the new literary forms were the painter of industrial city life and form, L.S. Lowry (1887-1976) and the critic Richard Hoggart. The former gained a new popularity in the 1950's although most of his best work was done in the 1930's when there had been a less certain but substantial discovery of the value of 'slum' culture (62). Lowry's (illus. 30) (p. 104) work was undoubtedly critical:

"His oeuvre, when viewed as a unity, is really a parable of modern man; of man bereft of his gods, adrift, sans rudder and sans captain, under factory chimneys belching the black breath of industry. The titanic stacks are the new gods, the soulless idols of the Moghuls of commerce and industry. In their shadow man walks alone, his whole being washed in the blood of the cities of the black plains". (63)

Just as Lowry's work tried to show how industrial man was surviving but threatened by the "new gods" so Hoggart in The Uses of Literacy published in 1957, was intent upon showing how the permissive values of popular commercial literature could invalidate the standards and worthiness of urban working class culture. This was because its shallow and ephemeral values, which created a sense of purposelessness in existence, were being advertised "more insistently, effectively and in a more comprehensive and centralised form" (64) than ever before.

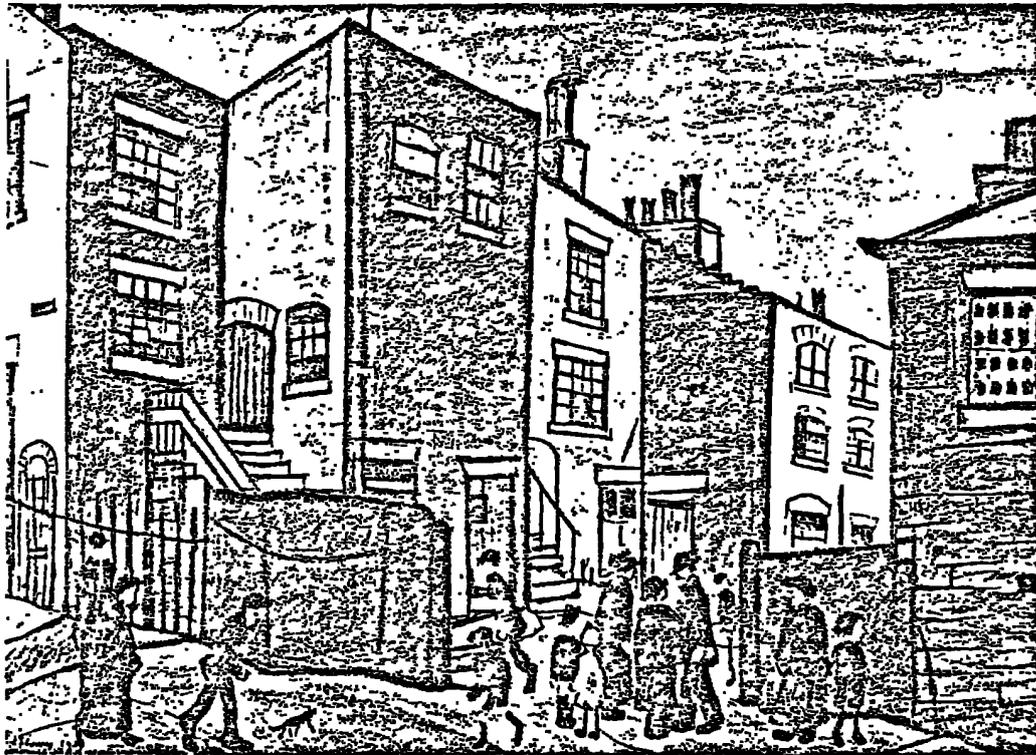
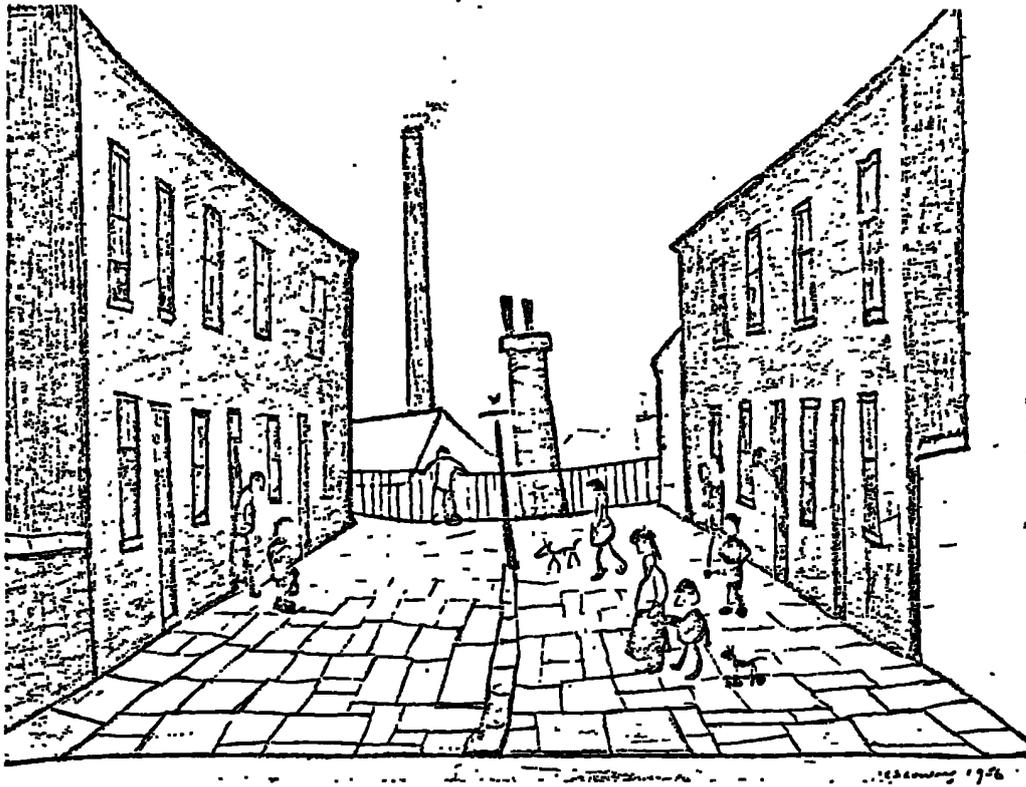
In the analysis of cheap sex and gangster fiction Hoggart related much of the permissiveness and emptiness evident in the literature to the mass society developing in the universal city.

"More importantly it seems probable that the cheap sex fiction has developed in the way illustrated partly because our great cities have become more crowded and because a sense of direction has become harder to find in them.....this is the popular literature of an empty megalopolitan world". (65)

A comparison of the new planned "megalopolitan world" and the old unplanned life-of-the-streets reveals a familiar pattern. Hoggart stated:

"It is because for all ages such a life can have a peculiarly gripping wholeness, that after twenty-five it can be difficult for a working class person to move either into another kind of area or even into another area of the same kind. We all know of working class people's difficulties in settling into the new council house estates. Most react instinctively against consciously planned group activities; they are used to a group life, but one which has started from the home and worked outwards in response to the common needs and amusements of a densely packed neighbourhood. In these brick and concrete wastes they feel too exposed and cold at first; they suffer from agoraphobia; they do not feel 'its homely' or 'neighbourly', feel too far from everything, from their relatives and friends and from their shops; they do not much take to gardening unless they have been used to running an allotment, and not always then; they long to put up hen-huts, and they acquire dogs and cats." (66)

Here was an appeal for the retention of the life-of-the-streets



30. L.S. Lowry's drawings of street life, 1939 (above and 1956 (below)
Source: Drawings of L.S. Lowry. Intro. by M. Levy. 1963

and the rejection of the modern urban culture found in the dream world of the new literature of the masses, and in the "brick and concrete 'wastes'." This and the other socially critical works of the 1950's considered so far had much in common with Jane Jacobs important work.

The New Urban Planning

In The Death and Life of Great American Cities Jacobs describes the harmful effects of urban planning, modernist and premodernist, and on the basis of her criticism prescribes a new approach to the subject based upon a method comparable to the ideal workings of the market economy.

The central target of her exposé are the large public housing projects, whose design and construction has reordered and over simplified the city and destroyed the complex community life found in the 'slums'. In place of the supposed slums large numbers of these estates have created anonymous and personally dangerous areas and encouraged the appearance of separate "turfs", each rarely visited by people living in neighbouring areas, so much so that they became mutually suspicious of one another. The end result is an environment which makes impossible the full life of the individual, the community and the city. In particular street crime becomes a major threat to the very existence of a worthwhile urban culture.

In contrast a diversity in the form, layout and age of the building stock, containing human activities of all types and at a high density of persons per hectare will mitigate against the development of the alien one-dimensional environment. Above all it is essential that the city is not changed through the injection of "cataclysmic money" but by means of "gradual money"; this will ensure "continual, gradual, complex and gentler change". (67)

The mixture of businesses and residential needs in any open-ended neighbourhood will ensure that the area is characterised by a liveliness at all hours and in all places. There will be a disordered but nevertheless structured process of social interaction between residents and between residents and strangers. The essential life-of-the-streets is retained because continuous surveillance of the public spaces is a natural and continuous activity.

Jacobs gives the example of a kind of deck housing estate to illustrate the two sides of her thesis; the community life that can arise from the correct design of public areas and the violence which inevitably appears in anonymous places. She thereby illustrates the kind of housing design the new modernists working in the United Kingdom were trying, unconsciously, to avoid. She states:

"Troubled, so far as I can determine, less by the amply proved dangers to human beings in these blind-eyed streets than by vandalism to property that occurs in them, the New York City

Housing Authority some years back experimented with corridors open to public view in a Brooklyn project which I shall call Blenheim Houses although that is not its name (I do not wish to add to its troubles by advertising it).

Because the buildings of Blenheim Houses are sixteen stories high, and because their height permits generous expanses of shunned ground area, surveillance of the open corridors from the ground or from other buildings offers little more than psychological effect, but this psychological openness to view does appear effective to some degree. More importantly and effectively, the corridors were well designed to induce surveillance from within the buildings themselves. Uses other than plain circulation were built into them. They were equipped as play space, and made sufficiently generous to act as narrow porches, as well as passageways. This all turned out to be so lively and interesting that the tenants added still another use and much the favourite: picnic grounds - this in spite of continual pleas and threats from the management which did not plan that the balcony-corridors should serve as picnic grounds. (The plan should anticipate everything and then permit no changes). The tenants are devoted to the balcony-corridors; and as a result of being intensively used the balconies are under intense surveillance. There has been no problem of crime in these particular corridors, nor of vandalism either. Not even light bulbs are stolen or broken, although in projects of similar size with blind-eyed corridors, light bulb replacements solely because of theft or vandalism customarily only run into thousands each month.

So far so good.

A striking demonstration of the direct connection between city surveillance and city safety!

Nonetheless, Blenheim houses has a fearsome problem of vandalism and scandalous behaviour. The lighted balconies which are, as the manager puts it, "the brightest and most attractive scene in sight", draw strangers, especially teenagers from all over Brooklyn. But these strangers, lured by the magnet of the publicly visible corridors, do not halt at the visible corridors. They go into other "streets" of the buildings, streets that lack surveillance. These include the elevators and, more important in this case, the fire stairs and their landings. The housing police run up and down after the malefactors who behave barbarously and viciously to the blind-eyed sixteen storey high stairways - and the malefactors elude them. It is easy to run the elevators up to a high floor, jam the doors so the elevators cannot be brought down, and then play hell with a building and anyone you can catch. So serious is the problem and apparently, so uncontrollable that the advantage of the safe corridors is all but cancelled - at least in the worried manager's eyes". (68)

These problems may have been avoided on the Smithsons' complex decks, but in the realised projects, as we shall see, Jacobs' analysis proved remarkably accurate. The gap between theory and practice was to prove of inestimable importance.

Jacobs whole study rested upon a theory of the history of scientific method, which while it had much in common with the picturesque modern and New Brutalist interpretations of the inter-war period, went somewhat beyond those existing viewpoints.

She proposed that natural and social science had progressed from an ability to deal with problems of simplicity, through an understanding of disorganised complexity, to a comprehension of the world as a phenomenon which exhibited organised complexity, She notes:

"Cities happen to be problems in organised complexity like the life sciences. They present situations in which half a dozen or even several dozen quantities are all varying simultaneously and in subtly inter-connected ways". (69)

The problem is that:

"the theorists of conventional modern city planning have consistently mistaken cities as problems of simplicity and of disorganised complexity and have tried to treat them thus". (70)

Ebeneser Howard (of the Garden City or premodernist tradition) "attacked the problem of town planning much as if he were a nineteenth century physical scientist analysing a two variable problem of simplicity". (71) Le Corbusier assumed the "statistical reordering of a system of disorganised complexity, solvable mathematically; his towers in the park were a celebration in art, of the potency of statistics and the triumph of the mathematical average ". (72). Now we need to think in terms of organised complexity, in particular in terms of processes, i.e. growth and change, and induction i.e. the "part" before the "whole".

Jacobs ideas were welcomed very enthusiastically by both types of urban planning (73). And in the 1960's her scientific pretensions were carried forward considerably, from various avenues into a comprehensive "systems theory" of organised complexity. However, urban planning never satisfactorily dealt with her criticisms because whereas it wished to build new multi-level "megastructures" expressing diversity and complexity, the theory outlined forbade any planning using "cataclysmic money". Change should only come gradually, thereby preserving a mixture of activities by size and age. The ideas of N.J.Habraken come closest to catering with the issues Jacobs outlined, but even these would require dramatic changes in order to build the upper level permanent street. The end result was therefore often a mixture or compromise between the ideal minimum planning of a market economy and the comprehensive planning of the so-called "post-industrial" society; the latter tried to produce an environment resembling the outcome of the former.

The Park Hill Project

In Sheffield we find the building project which expressed, more decisively than any other, the ideas of the New Brutalists and, at the same fulfilled many of the aims of picturesque modern architecture and planning. It was designed by two young avante garde architects, Jack Lynn and Ivor Smith, under the guidance of an older, more traditional architect, J.Lewis

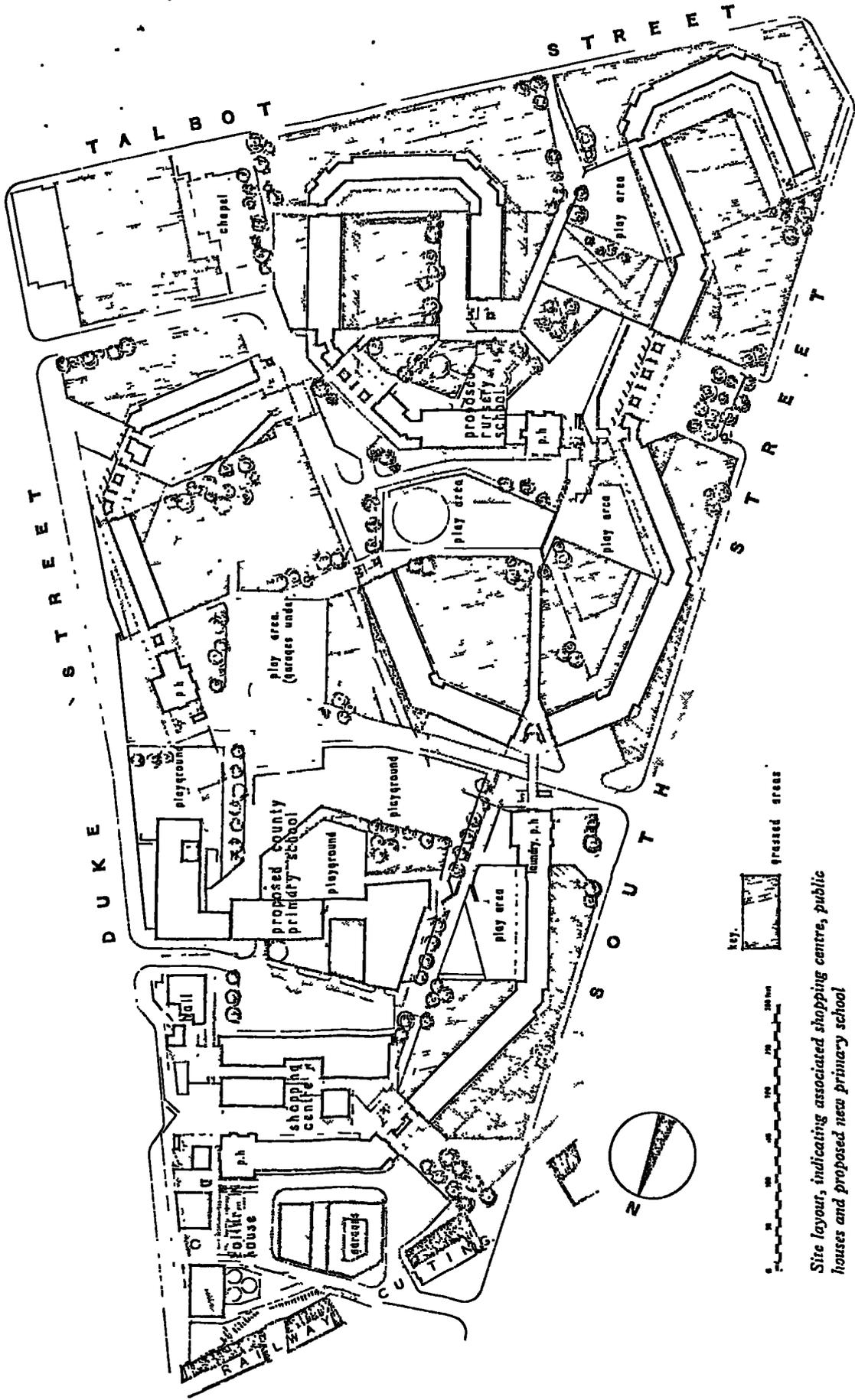
Womersley. On completion it was welcomed by both Reyner Banham, the modernist architectural critic with some reservations by the architectural establishment. The overall agreement characterising the history of the building project made Park Hill an unrivalled example for future urban housing renewal; other examples tended to be either too picturesque, such as the Alton East Roehampton scheme, or too modernist, such as the Bethnal Green "cluster-blocks", to attract support across the board.

The quantity and quality of publicity the estate received in the technical press during the first half of the 1960's was, as a consequence, completely unmatched by any other housing scheme during that period, and moreover, it remains even today unequalled in the post war period as a whole; later well known housing schemes, such as the Lillington Gardens estate in Westminster or the Byker Wall in Newcastle never generated such a continuous series of favourable reviews. Furthermore, local authority housing was a subject of only minor importance in the architectural profession up until the mid 1960's when the merits of many housing estates began to be discussed for the first time. Park Hill stood out in the journals of the early 1960's not only by virtue of its design but also in terms of representing the council housing sector as a whole.

And yet all of the publicity surrounding this first proper deck housing scheme was only really facilitated by the experts willingness to exaggerate the ingenuity and proficiency behind the design, and to ignore some facts regarding the unpopular nature of some features of the scheme. That is, in spite of the undoubted gap between theory and practice and the manifest disadvantages inherent in the design, significant criticism was absent; the "street-deck" was generally accepted as "functionally and socially" equivalent to the ground level street "without the menace of through vehicular traffic".(74)

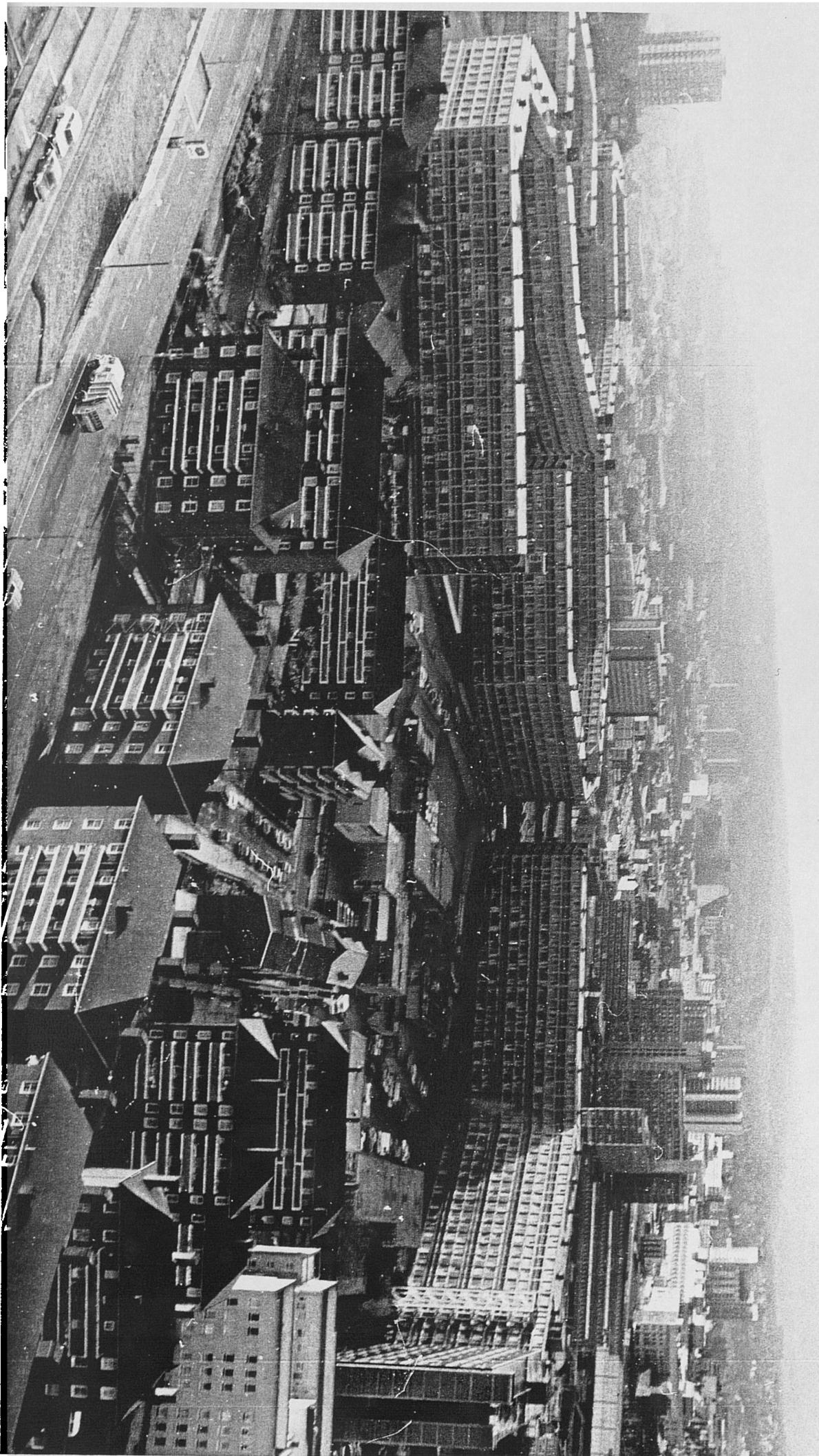
The design was actually completed in 1954 and the estate fully occupied in 1960 (Illus.31-34) (p.110/3) Four huge housing blocks, connected into one continuous building form by long pedestrian bridges, meander down a sloping site, increasing in height from four to thirteen storeys; the roof line remaining horizontal. Four 3m wide decks on every third floor connect the nine passenger lift points - thirteen passenger lifts in all - and three goods lifts which together provide for vertical and horizontal access to the 995 dwellings flats below deck, maisonettes at deck and above deck level. The decks, all but the highest of which connect with the ground level at one point, provide for milk and goods delivery, small children's play and casual social interaction. The whole estate, which incorporates a variety of amenities and services, overlooks the city centre and provides housing at a maximum net density of a little over 500 ppha (200 ppa).

This final design was the outcome of earlier investigations into the use of the deck access arrangement in multi-storey housing. While at Newcastle.

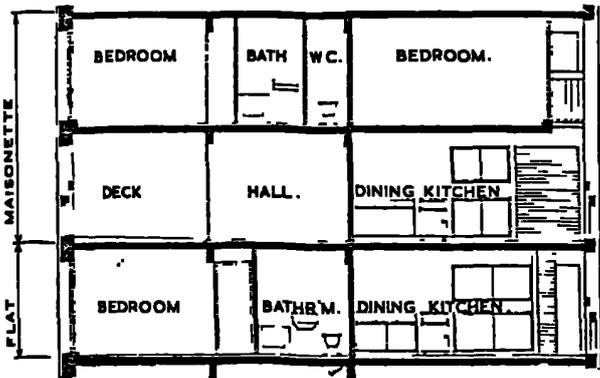
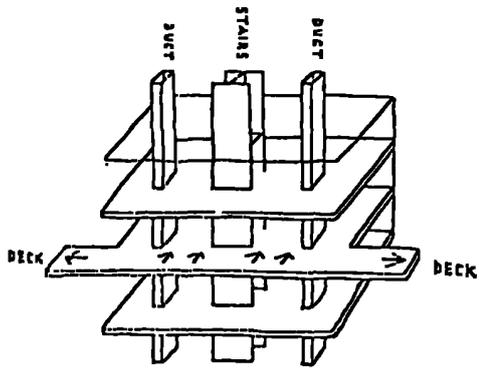


Site layout, indicating associated shopping centre, public houses and proposed new primary school

**31. Plan for Park Hill estate, 1954-61.
Source: Architects' Journal August 1961**

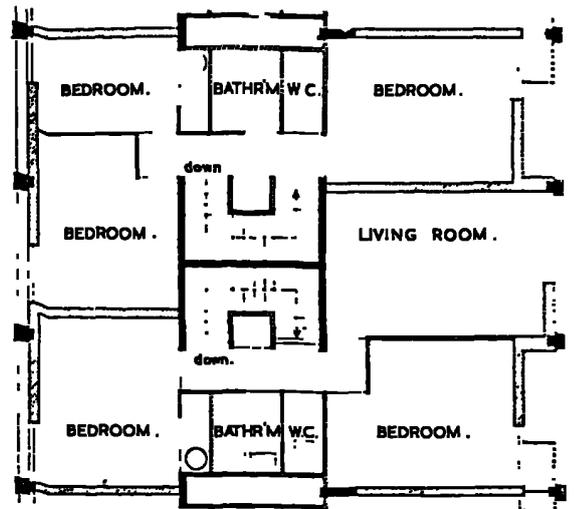


32. View of the Park Hill estate from Hyde Park

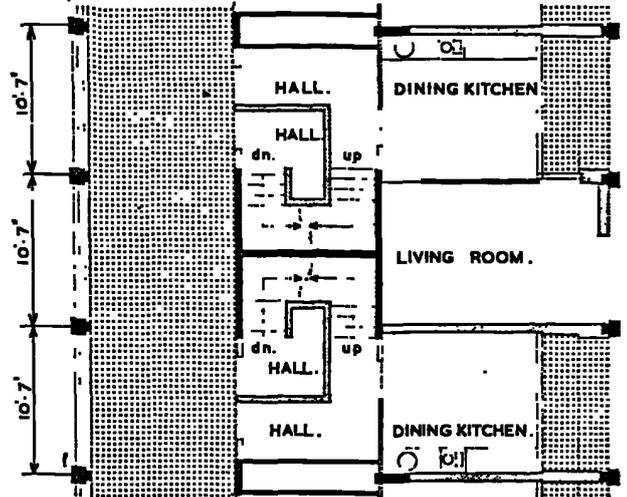


SECTION

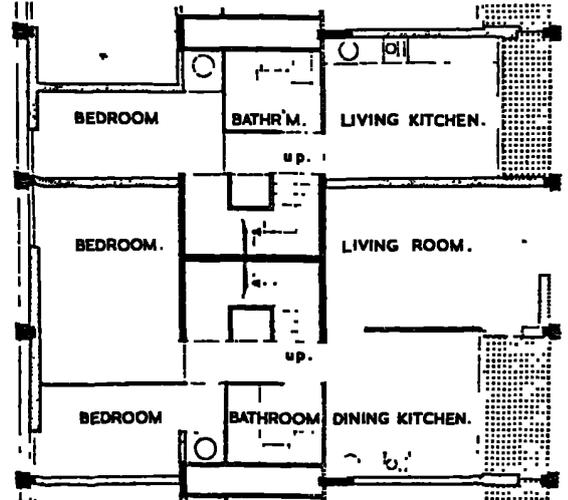
Dwellings are planned to give privacy and quiet. Access is from the deck on every third floor. A variety of dwelling types is fitted into a standard repetitive structure.



PLAN ABOVE DECK LEVEL. 40'3"



PLAN AT DECK LEVEL.



PLAN BELOW DECK LEVEL.

34. Park Hill: Section through the building 3 bay unit.

Source: Ten Years of Housing in Sheffield 1953-63 Sheffield 1962

Lynn and Smith submitted, with the help of Gordon Ryder, a street-deck housing scheme for the Golden Lane competition in 1952. Then while at the Architectural Association in London they combined their ideas and the Smithsons in a study of the Rotherhithe area of Central London. The deck was developed by introducing street-corner activities such as shops, pubs, play areas, laundries etc. and flats for larger family units were designed to bring the living rooms and so-called "yard gardens" together at street-deck level. The wider implications of the study were of great interest:

"This was a twofold study of mass production techniques and metropolitan redevelopment. It demonstrated that, if carried out on a sufficiently large scale, building economies would be bound to accrue and a dramatic reallocation of land use would become possible so that old centres at present lost in the amorphous metropolis would assert their separate identity".(75)

The origins of this discovery and the idea of the street-deck lay in the impact made on the two architects by the Unité d'Habitation at Marseilles. Typical multi-storey housing, which as Lynn noted "might be likened to tidy solutions to a sbrage problem" (76) bore no comparison to this product of Le Corbusier's theories. However the continental form of collective housing found in the Unité did have the disadvantage of producing a no-man's land between the individual's front door and the open air. It had an inhibiting effect upon the life of the individual family and the community, both of which were very important characteristics of the successful British, and especially English, habitat:

"The peculiar Englishness of English houses had never been adequately realised and explained. The Marseilles block, for instance, appeared to be rooted in the French tradition of an apartment building with one common entrance hall complete with concierge. Centuries of peace and a hundred years of housing reform in this country have given us the open street approachable from either end and off which every house was entered directly through its own front door - a simple arrangement which gave complete freedom to come and go, to meet or avoid whom we pleased". (77)

Thus when Lynn asked "Are there sociable and antisocial forms of access to housing?" (78) his answer was that the traditional open air English Street realised the former, and the French enclosed entrance hall and corridor, the latter. Hence we see in the schemes developed before coming to Sheffield the desire to combine circulation space with what we may term "communication space" and the wish to do this by responding to the particular place and its traditions.

On being appointed to the staff of the City Architect's Department at Sheffield, under J.L.Womersely, in 1953, Lynn and Smith set to work on a parkland site near the city centre. The scheme for Norfolk Park, completed

by the middle of the year, used predominantly large deck access blocks on an irregular layout at the highest part of the site, with Corbusier "set-backs" at the lower level. The whole design presented a real contrast to the form and layout that would be used by Womersely, ten years later, for the actual development of the site (Illus.35) (p.115) In both cases, however, the idea of the residential "city in a park" was apparently uppermost. When Lynn and Smith were moved in mid 1953 to consider the Park area, overlooking the city centre, they had to deal not only with the physical characteristics of the site, and the potential for a parkland architecture, but ^{with} the needs of the local community still present in the mixture of 19th century and war-time buildings.

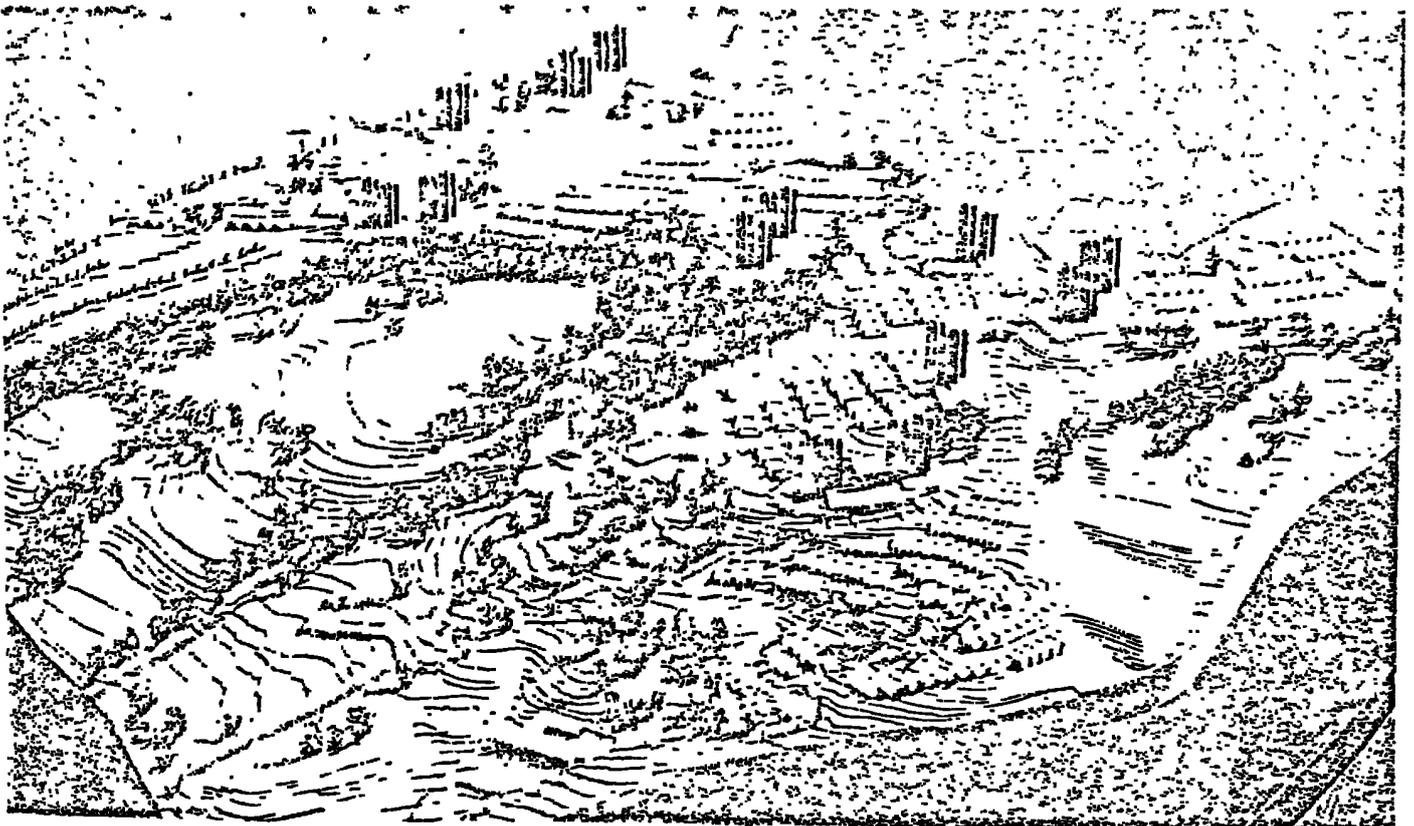
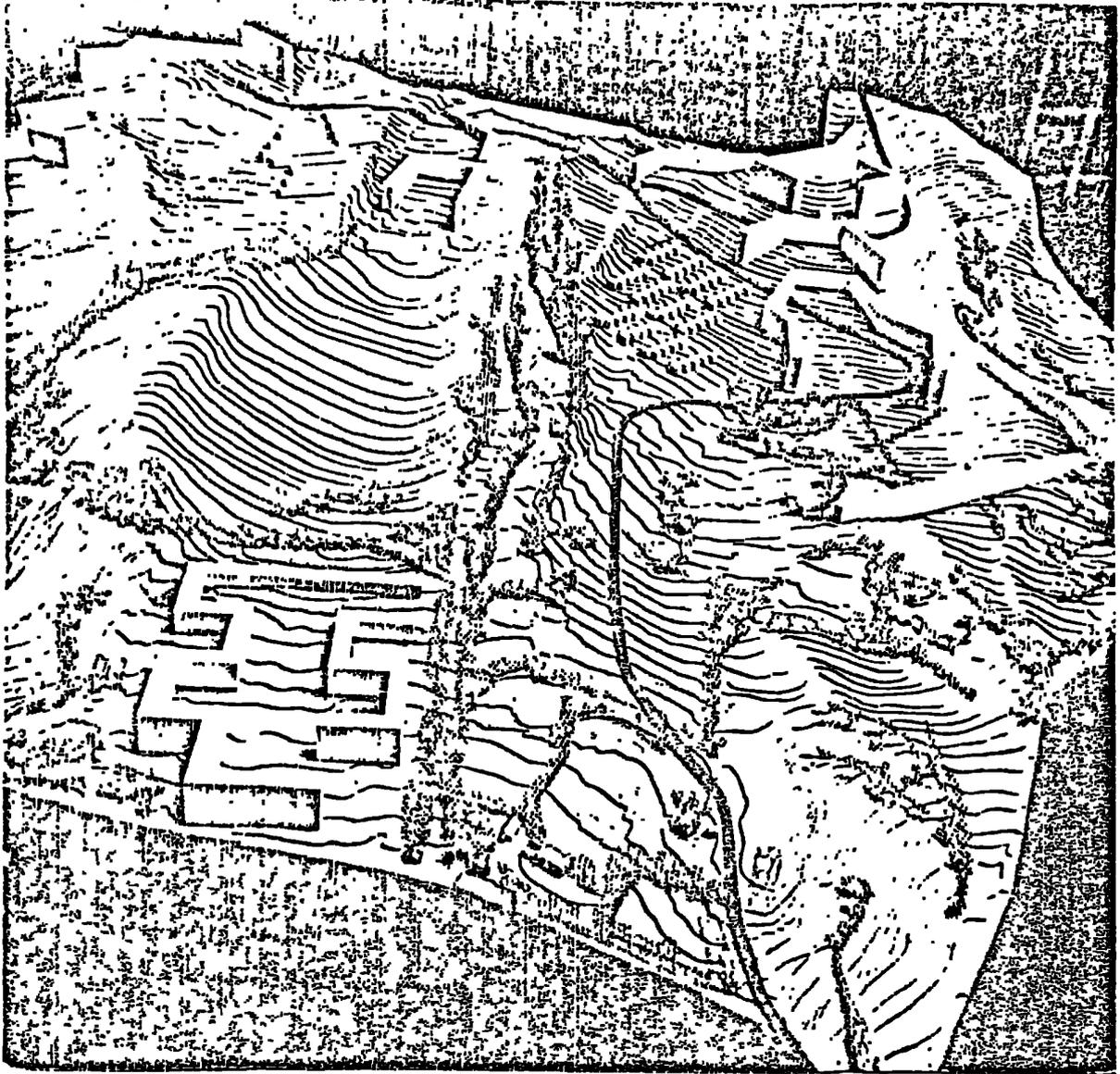
In the case of the physical constraints and opportunities it was necessary to develop a close relationship between the site boundaries, site contours, geology and climate and the standard deck access form. The crucial design problem, outside of the typical sunlight and daylight requirements, was how to produce a proper pedestrian circulation system, a proper link between building and ground level using the "principle of human movement as the generator". Smith noted:

"Footpaths then, whether on the ground or in the air, we regarded as the stems from which communities could develop. By using them, we located the 'prolongements du logis', the play spaces where the decks come to ground, the pubs at points of main vertical access, and the shops at the centre of gravity of movement". (79)

Three types of ground connection were possible: flat unit with private balcony and living room on one side and bedroom~~s~~ on the other with grass on each side for privacy and outlook; maisonette unit with deck on one side connected to play space, living room on the other with grassed area; and the whole building on stilts making an open collonade available for ancillary uses such as shops, pubs, laundry, nursery school, lavatories etc. A fourth kind of ground connection occurred at the end of the housing blocks. Here lifts and stairs were provided to ensure full continuity of access.

The architects had to work out the best relationship between the building and the site, not merely to make sure that all the amenities could be fitted into the required area but to arrange those amenities in such a manner that ~~they~~ helped individual and community life to flourish. Any number of different positions of the buildings could demand a different distribution of "hard" and "soft" surfaces; the designers had to find the most effective. Smith recalled how:

"...that was a very interesting game to play for a number of months. In fact, it had taken a long time to evaluate in a systematic way what it meant in terms of the movement of people, children playing and so on". (80)



35. Norfolk Park, Sheffield. The original scheme by Lynn Smith(top) and the later, realised, mixed development scheme by Womersley. New Brutalism and the Picturesque Modern designs on one site. 1953 and 1963 respectively.

The problem of the circulation of people also had to be considered as part of the general problem of the city centre and the location of the Park within that. Smith noted:

"We were concerned first of all with the critical relation of the site to the city centre. We were not just rehousing 2,000 families at high density, we were remodelling the most vital hillside in the city. Just below, the River Sheaf meets the Don, and that is what fixes Sheffield where it is. From this site you can, as it were, reach out and touch the city centre and the markets". (81)

The two Park housing schemes finally built formed part of a multi-level city centre whose design had been completed by the mid 1960's (82) (Illus.36) (p.117)

Apart from the physical problems and issues, the demands of the local population were important to the architects. They found that a strong sense of community life existed and was expressed in the complex built form:

"Housing grouped around courts and streets, was leavened by pubs, corner shops and small businesses scattered throughout each generating its own kind of vitality. The men and boys kept hens and pigeons and a few had pigs on top of the hill". (83)

The existence of this "vitality" was of paramount importance to Lynn and Smith. One member of the design team, John Forrester, suggested that:

"At Park Hill the important change in creative attitude that was made was that the designers felt themselves committed to the lives of particular people, in a particular place, and that to those people they were contributing not a solution to a formal problem, but something far and away beyond this". (84)

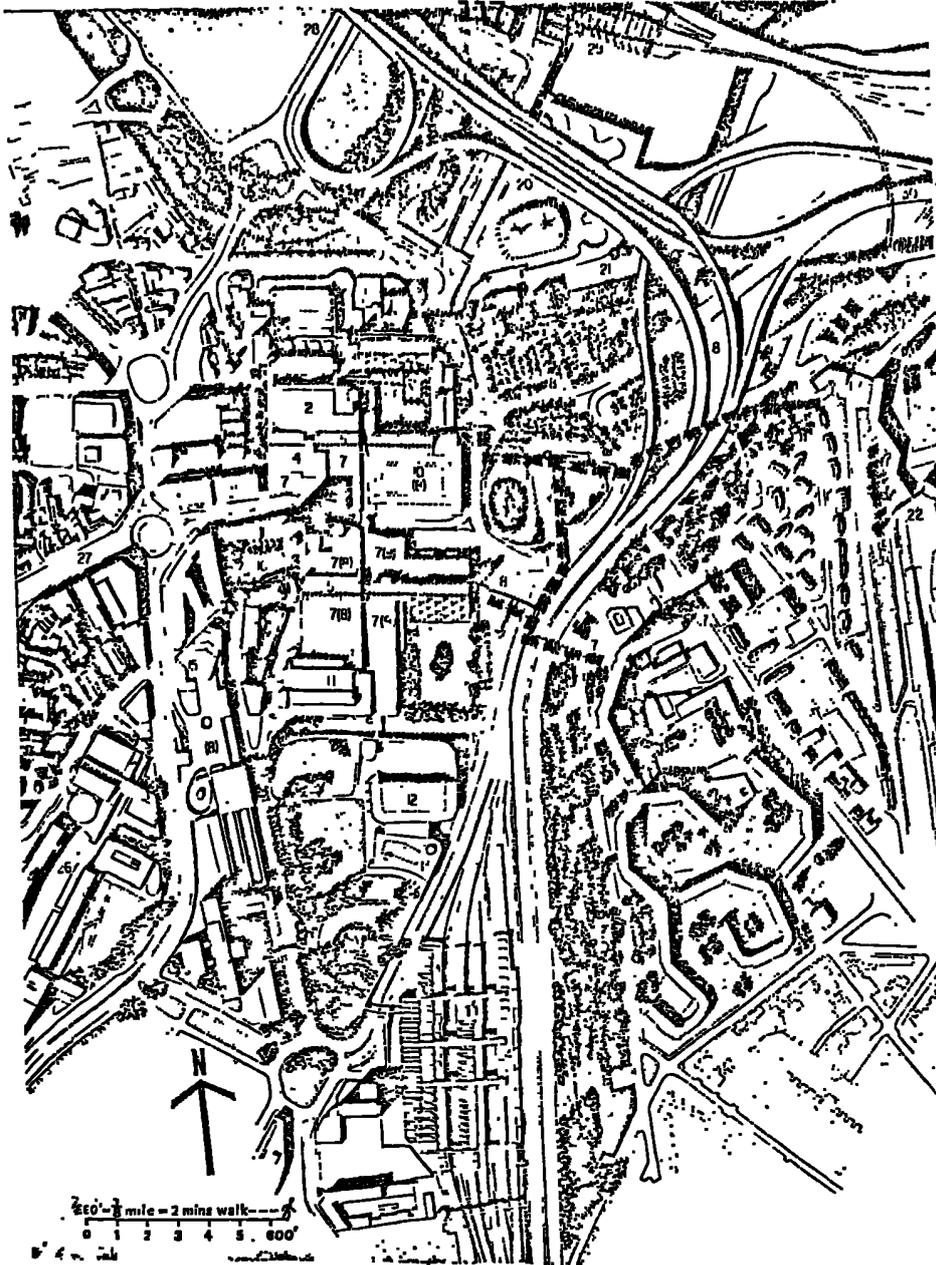
The first scheme for the whole Park area (Illus.37) (p.118) was intended to be developed so that the community and many of its existing buildings and roads could be preserved. This was the nearest the redevelopment project came to, as Young and Wilmott advocated, moving as a block the social groups, above all the wider families, to which people wish to belong". The new building was programmed so that:

"the least number of people would need to be moved out of the area to enable a start to be made and the great majority of the local residents could be rehoused without leaving the district at all". (85)

The multi-storey housing form and layout was an adaption of Corbusian ideas for internal and external deck access blocks to the existing conditions, social and physical. The 90° and 3-way angled changes of direction thereby gave the buildings a distinctive character; a particular place was to be created out of the local historical circumstances.

However, no sooner had the plan been settled than, in late 1953, it was scrapped. The idea now was to clear the whole area completely beginning with the lower site; the future Park Hill. Lynn noted:

"There were some misgivings among us that the community structure would be irrevocably upset, as indeed it was". (86)



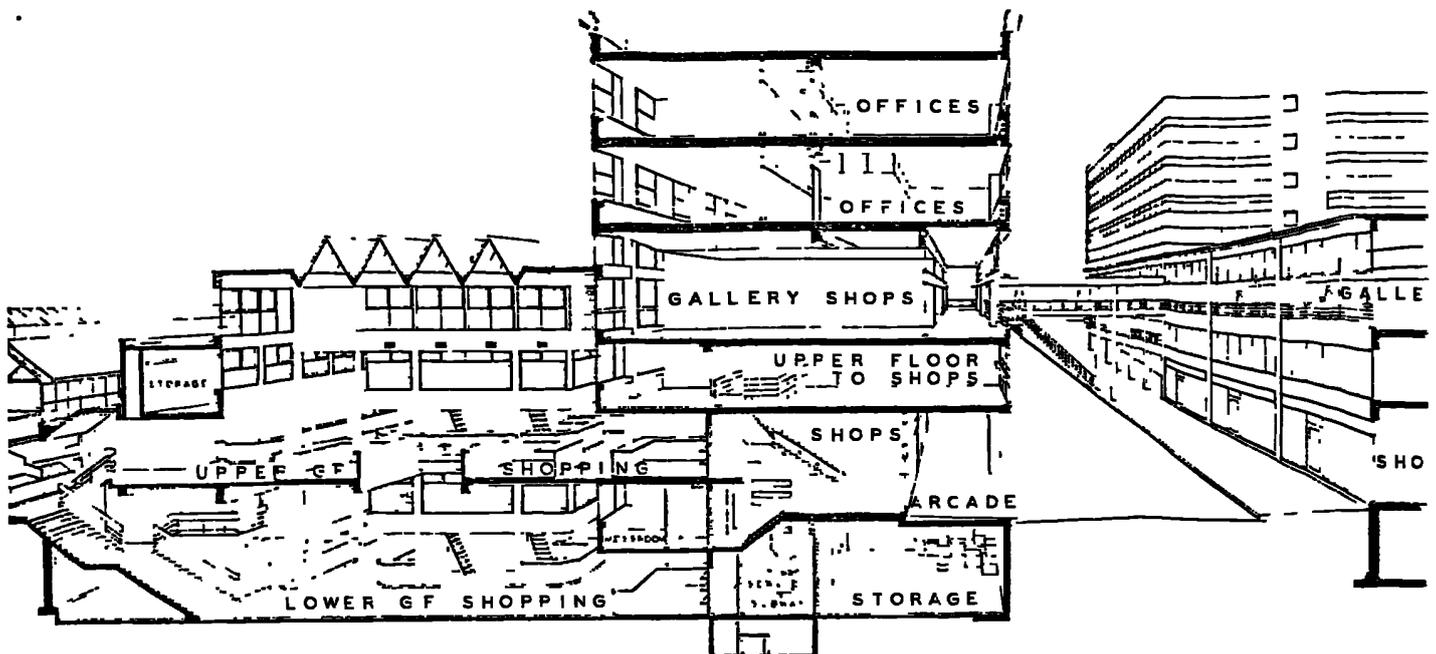
Recent plan showing total development envisaged for the centre of Sheffield with its road and rail pattern. Park Hill housing is bottom right. Eventual pedestrian routes to shopping market areas under and over the future motorway are indicated by a heavy broken line. Note pedestrian distance/time scale in left corner

- 1 Cattle Market
- 2 Woolworths
- 3 Market Square
- 4 British Home Stores
- 5 Housing
- 6 Pedestrian bridge
- 7 Shops
- 8 Car parking (under)
- 9 Bus station (under)
- 10 Ice rink
- 11 GPO sorting office
- 12 Stadium
- 13 Baths
- 14 Technical College
- 15 Cinema
- 16 Open square
- 17 Pedestrian bridge
- 18 Offices
- 19 GPO offices
- 20 Fairground
- 21 Canal dock
- 22 Hyde Park
- 23 Park Hill
- 24 Station
- 25 BTC offices
- 26 Civic centre
- 27 Civic circle
- 28 Link—M1 north
- 29 Station
- 30 Link—M1 south

AT & FISH
MARKET

CASTLE HILL RETAIL
MARKET

ASSOCIATED PRIVATE
DEVELOPMENT



36. Sheffield City Centre Proposals, late 1950's.
Source: Architects' Year Book, 1965

Moving the community by streets into the new estate was never accomplished. And all of the older parts of the environment were lost; corner shops, small businesses, the keeping of hens and pigs. Lynn and Smith would have kept them in one form or another if it had been possible. In the event corner shops were not to be included on the decks, only four pubs "returned" to the site while the pigeon lofts were moved to nearby Skye Edge(87)

The final design of Park Hill does appear to bear witness to the original attempt at gradual renewal and the creation of an environment of "organised complexity" The layout of the buildings is irregular, changing directions at 135° or $112\frac{1}{2}^{\circ}$ relative to one another, which suggests a similar piecemeal development of the urban form as originally proposed by the Smithsons for the street-deck city. Along with the changing heights which require wider spacing of housing blocks for daylight and sunlight purposes there is created a number of distinctive places within the one estate. Each court or crescent shape is different, some spaces formed by parallel blocks close together, others by buildings placed obliquely to each other, some distance apart.

These design features actually had the important function of breaking up into smaller parts the giant, potentially inhuman scale of the development. The frequent changes in direction of the building and the switching of the deck from one side to the other, nearly always facing east or north away from most of the sunlight, broke the deck up into street-like lengths, each with a different orientation. To give vertical identity to the dwellings each three storey height of the building (below deck, deck level and above) was constructed with purple, terra cotta, light red and cream bricks, within the standard concrete frame. Also each of the four decks were named after streets which used to be in the Park - Lorcwich Street, Long Henry Street, Hague Street and Gilbert Street - and the estate itself divided up into Park Hill North, Park Hill South etc. The intention was that each dwelling could immediately be visualised due to the unique combination of physical surroundings. The individual could thus establish some identity relative to the built environment in the estate which by virtue of its design had established an "old centre" previously "lost in the amorphous metropolis".

Two other factors were important in the design of Park Hill: the attempt to evolve a structure suitable for mass production and growth and change, and the brutalist - artistic inspiration behind the external appearance of the buildings.

In the first case, Lynn and Smith, with assistance from Ronald Jenkins of Ove Arup and Partners, the consultant engineers, designed a repetitive standardised 3-bay unit fixed about central 'U' shaped interlocking stair wells.

This allowed a large number of different sizes and shapes of apartment to be provided by varying the position of the non-structural party walls.

It was essential not only for housing purposes but to use every space available in a building which changed direction at such unusual angles. The development of this new type of modern housing structure represented the major "breakthrough" in the evolution of the Park Hill project. Lynn later claimed that the design enabled changes to be made according to new circumstances:

"we were at pains there to separate structure and services from dividing and enclosing walls hoping that, in the future, more civilised space standards could be accomplished by moving the latter about". (88)

In total it was a building method and form which allowed the maximum economies to be made by using a maximum number of standardised units, produced with a minimum of labour, especially skilled labour. It did not take this idea to the ultimate stage of complete factory production mainly because this would have been a very new departure in construction technology: Smith noted:

"we discussed at length the use of an industrialised system but considered that it would be unwise to try to be experimental on every front". (89)

Note should also be made that the simplification that had to be made to produce a repetitive economic unit negated many of the other experiments Lynn and Smith would have liked to pursue. This was particularly the case with regard to the street deck form and detailing. Lynn noted in 1961 that "many other house plans could be designed which would permit a degree of variety in the width of the street and in the kinds of entrance which could be provided". (90) And he concluded his description of the project:

"There are great advances to be made to the design of housing environment, in the means of access to houses, in space standards of the houses themselves, most of all, perhaps, in the provision of really private open space on a generous scale". (91)

There can be little doubt that if the means had been available the two project architects would have designed a far more complex and generous type of dwelling and street-deck.

In the second case, the aesthetics of the scheme, there is no doubt that Lynn and Smith strove for an external appearance that was not made up, it had to reflect as honestly as possible the nature of the building and the function it was performing:

"The elevations were not 'composed' in the usual sense and indeed were never drawn....The irregular window and wall disposition which resulted in the facade, particularly on the deck side, was considered to be an advantage in presenting an ever-changing rhythm running counter to the regular beat of the structural grid, the combination expressing the main social theme". (92)

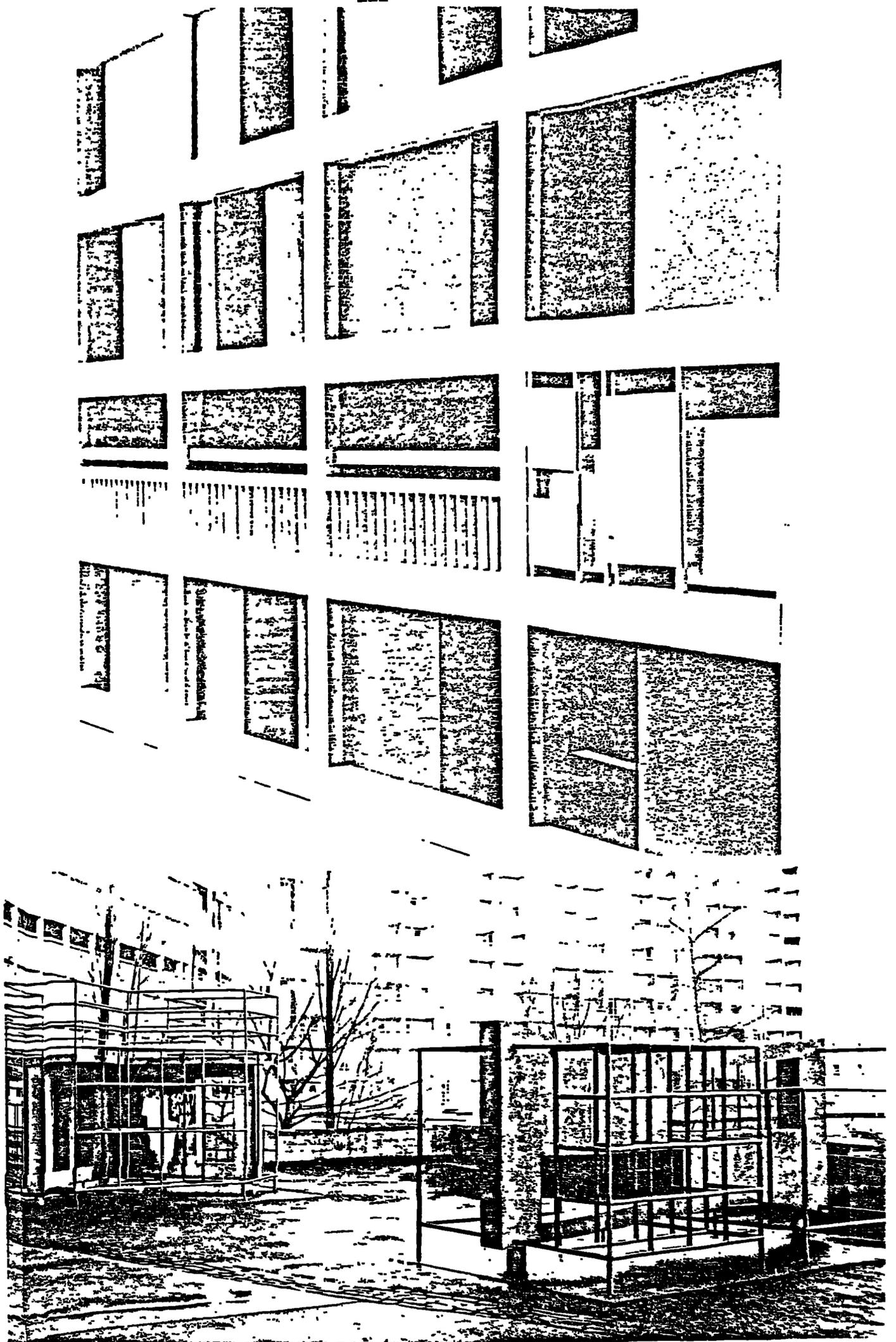
The "main social theme" was presumably the idea of a structured but unpredictable community development process evolving by means of the street-deck.

It is, however, difficult to support the claim that the elevations were not consciously designed to reflect one particular perspective on architecture, aside from the fortunate "social theme" of the facade. In the first place the beton brut finish to all concrete surfaces was requested by the architects; it had to have a "gutsy finish" if possible. This was in spite of the fact that the Unité block had a precast concrete finish on the outside of the dwellings themselves. And in the second place, an abstract artist, John Forrester was brought into the design team in 1954 - rather than, say, a sociologist - to advise and assist in the overall development of the project (Illus.38, (p.122, Lynn denied that any deliberate composition of the exterior, in order to please sentimentalist, was involved:

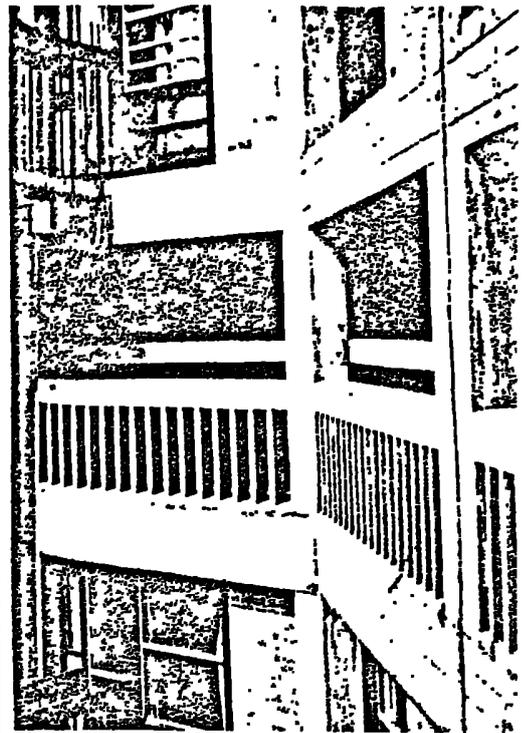
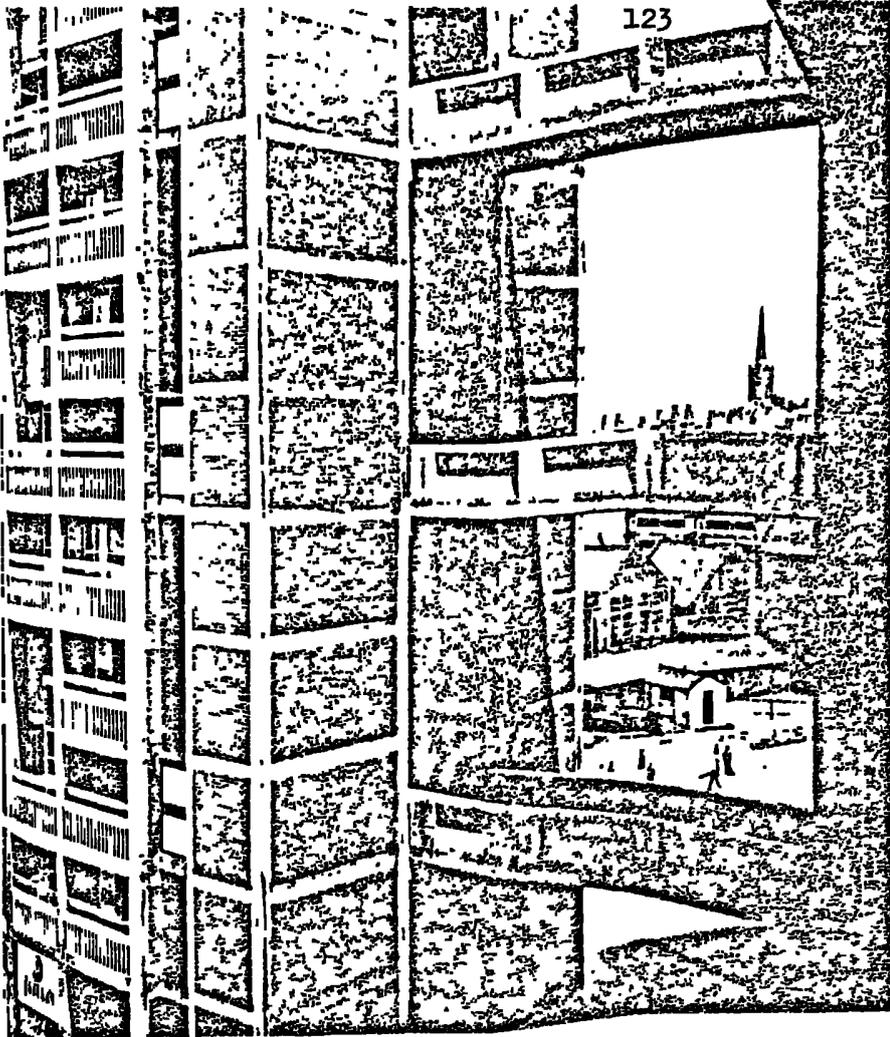
"There could be no question of his being assigned or confined to sections of the building to decorate. His contribution was to the whole concept of the environment we were making and encompassed in particular the modelling and colour of the facades, the study of the play areas and the design of the equipment for the children, the footpath system, the lighting of the site and protection against wind at exposed situations. The windscreens he designed were never built". (93)

However, the modelling and colouring of the facades plus the composition of the windscreens would seem to suggest a conscious "artistic" design of the exterior of the building along with the insistence on the beton brut finish; there was a process of "decoration" according to principles similar to those of New Brutalism. Along with the plain functionalism of the pedestrian bridges and the hammer-headed lift shafts, ensuring that the separate elements of the structure were clearly expressed, Park Hill can be seen as an example of a particular aesthetic and social philosophy (Illus 39) (p.123). And together with the second stage of the Park redevelopment, Hyde Park (designed 1960-61, completed 1965) there is presented an urban and modern townscape; the horizontal form of Park Hill is complemented by the vertical emphasis of Hyde Park to form an architectural exercise rooted as much in the desire for visual as social effectiveness (Illus.40) (p.124)

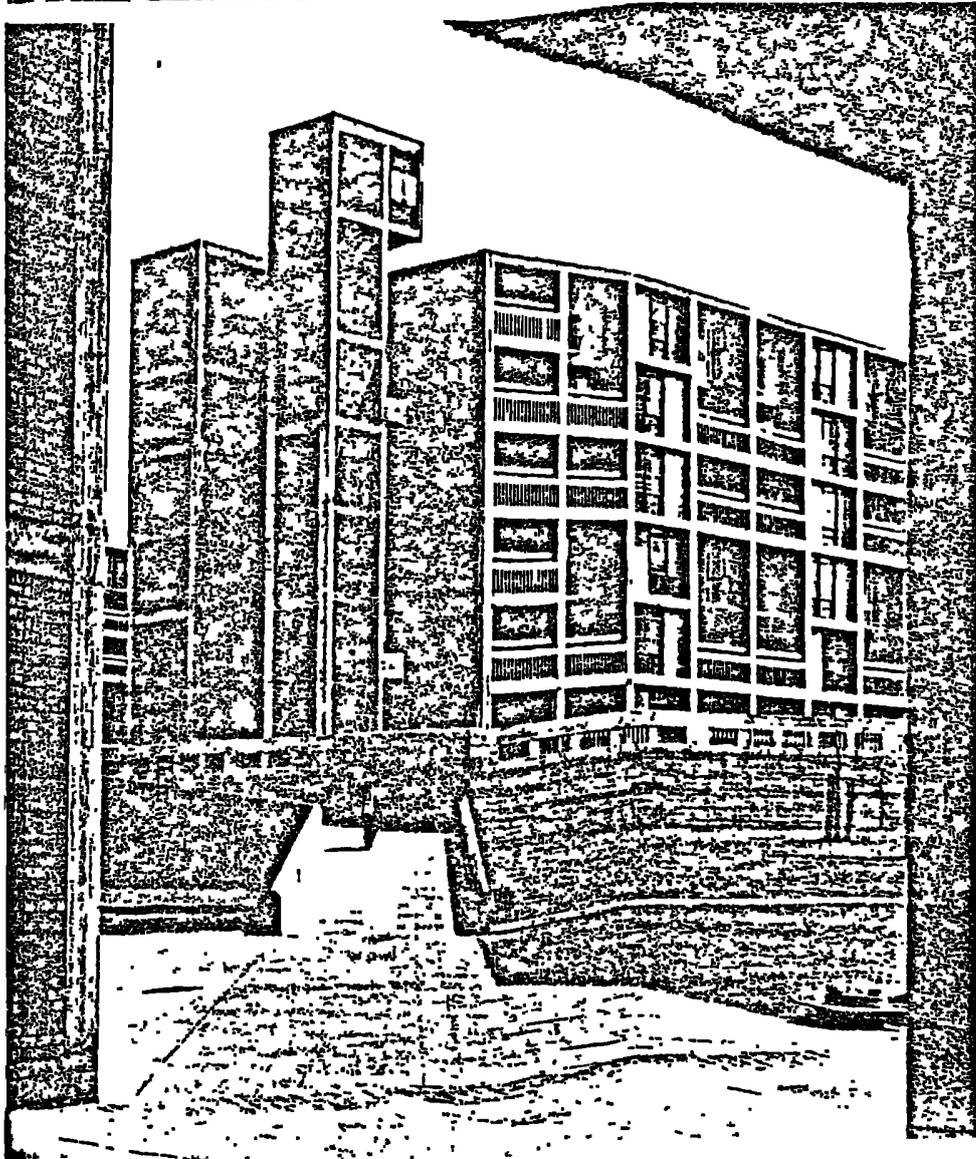
The redevelopment of the Park, and especially Park Hill, therefore provide a clear example of Team 10-type architecture and planning, even if the architects were not involved in C.I.A.M. discussions. Although Lynn and Smith do not refer to a new age or zeitgeist as the guiding hand of their design it seems clear that Park Hill was intended to be "a close-knit, complicated, often moving aggregation, but an aggregation with a distinct structure", as the Smithsons described their "cluster city". Its design was derived from a reliance upon the communication network and the local social-historical



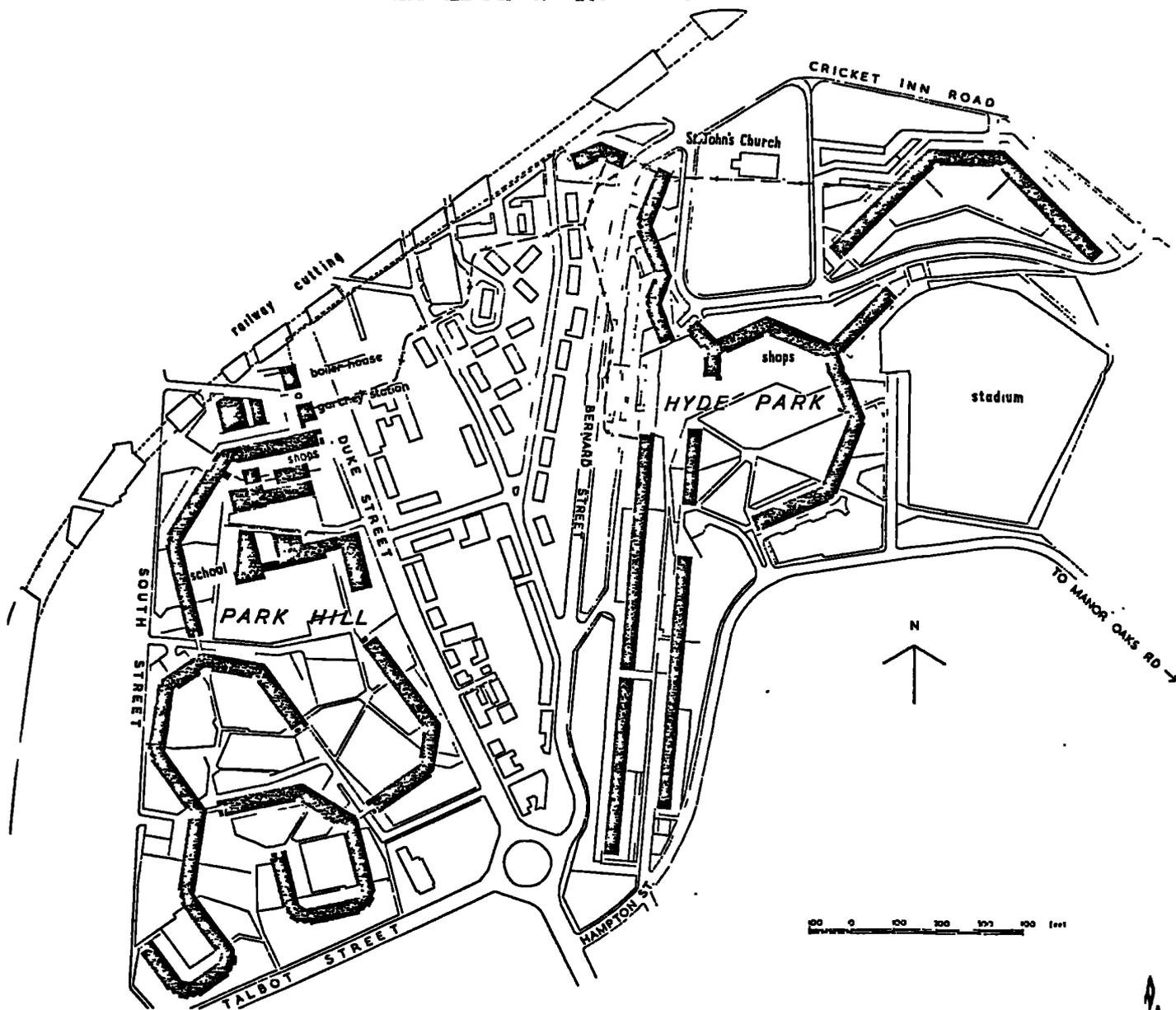
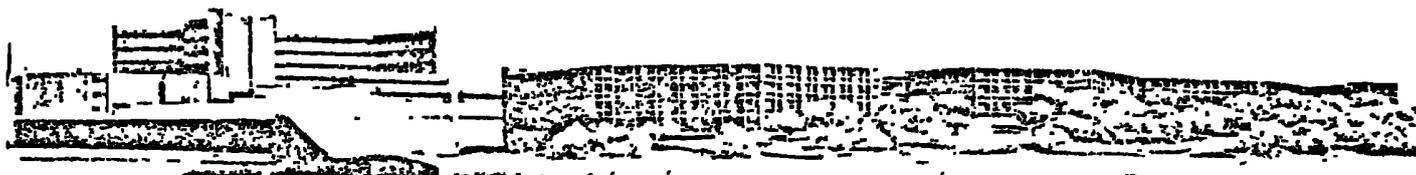
38. John Forrester: Two examples of his work



39. The New Brutalism and Park Hill. Photographs from R. Banham, Architectural Review Dec. 1961



Illustrations show the "gutsy finish" (top right), the "bare essentials of the bridges" and hammer-headed lift shaft.



40. The Plans for Park Hill and Hyde Park, early 1960's.
Source: RIBA J Dec. 1962

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conditions. The first was not fully developed, as Lynn noted:

"The lifts are the one point where the free and open nature of the circulation system is contradicted. An attempt to overcome the claustrophobic effect is being tried at Hyde Park by putting a 3ft square armoured glass window in the back of the car corresponding with a glazed slot in the well". (94)

At the same time it should be noted that even with the addition of such a glass window the circulation system lacked the activity and human scale associated with the traditional street; it resembled the blind corridor criticised by Jane Jacobs and required long distances to be traversed before reaching ground level, shops or the city centre. There were 110 dwellings per lift point, while inside the dwellings residents had to go up in the flats or usually come down in the maisonettes before reaching the front door. Peoples' willingness to walk out of the dwelling, some way along the deck, down the stairs or lift (or possibly straight out to ground level) and then to the play area or shops, was overestimated especially where at the tallest end of Park Hill movement between ground and upper levels was difficult. Overall there appeared to be too great a reliance on pedestrian movement as the "generator" of form, location and "vitality". The plan for the whole city centre underlines this point (95).

The second determining constraint, the existing community, was also negated by the building project when the decision to go ahead with complete clearance was made. By failing to move the population en bloc into the new housing Lynn and Smith appeared to be attempting precisely what Young and Wilmott had criticised, that "what is lost could soon be regained by skilful architecture and design" regardless of place. When completed, Park Hill looked like a modern structure which could have been built anywhere given the physical characteristics of the site; it did not appear to express a particular English, Sheffield or Park character.

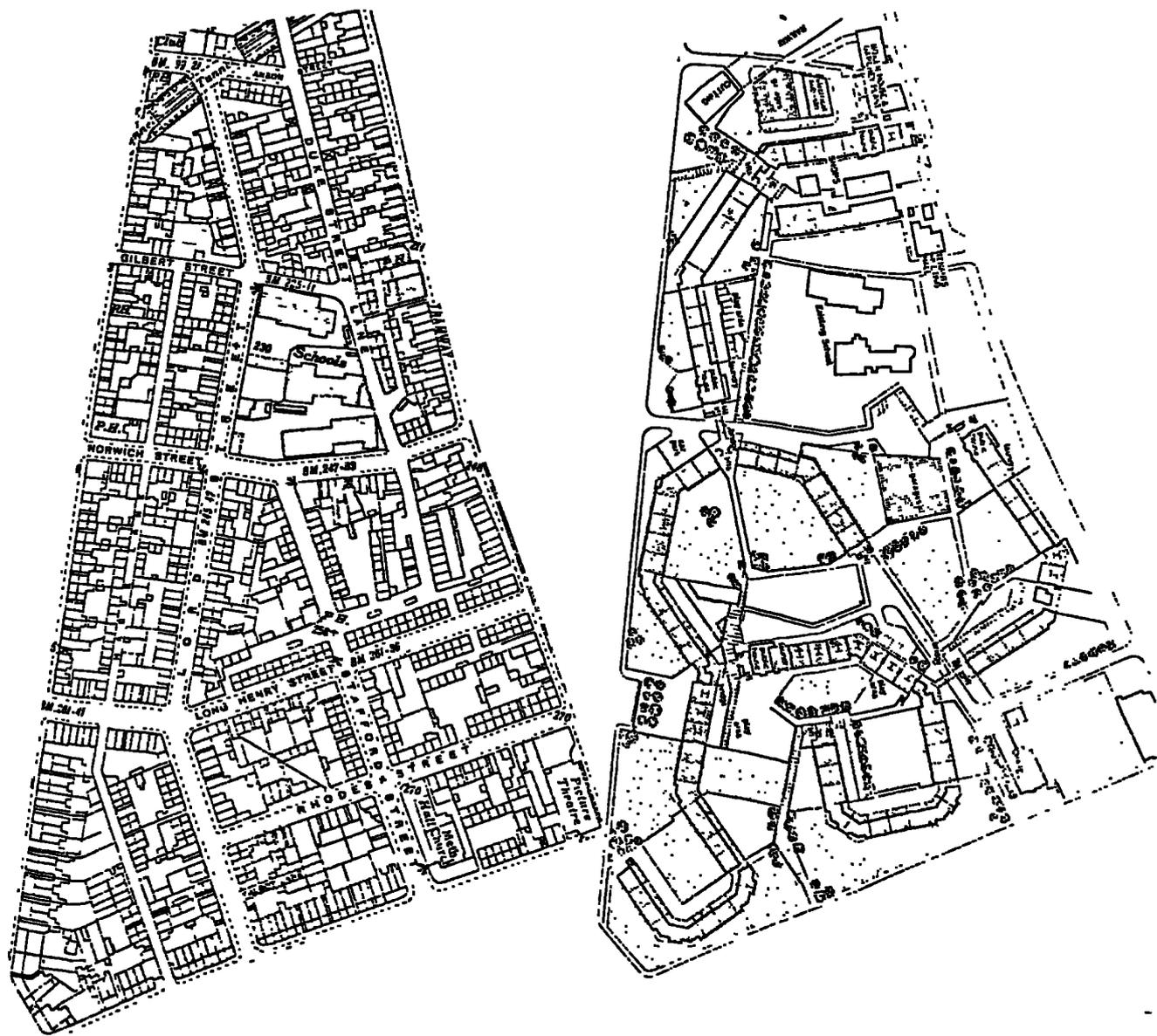
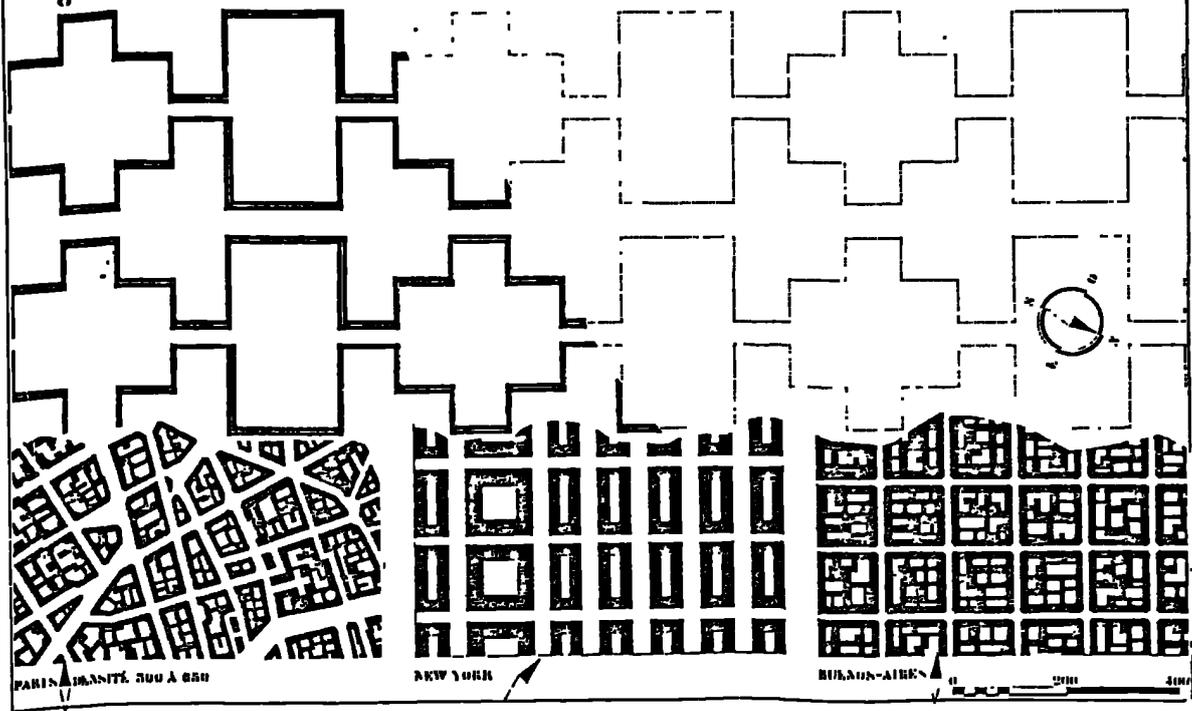
The three other features of the New Brutalism were followed with mixed success. The modulator system was not used although there was some interest in the idea of a ratio of measurements; the dimensions of Park Hill were determined by the minimum housing standards of the time and the maximum capacity of the building blocks on the site. The Domino system was not applied in full because the roof was not used, although it was used for "penthouse flats" at Hyde Park. And the "part" was supposedly given equal status with the "whole", that is the individual dwelling within the whole estate. However, because of the regimented appearance of the deck based on the use of a three-bay residential unit, the limited effectiveness of the different colour bricks and the failure to produce sufficiently separate and identifiable parts of the estate deserving of names such as "Park Hill South

the "part" tended to be lost in the "whole". Indeed the theory appeared to be much closer to the Corbusian idea of "uniformity in the part, variety in the whole" required for mass production of the "house machine" and their arrangement by the architect.

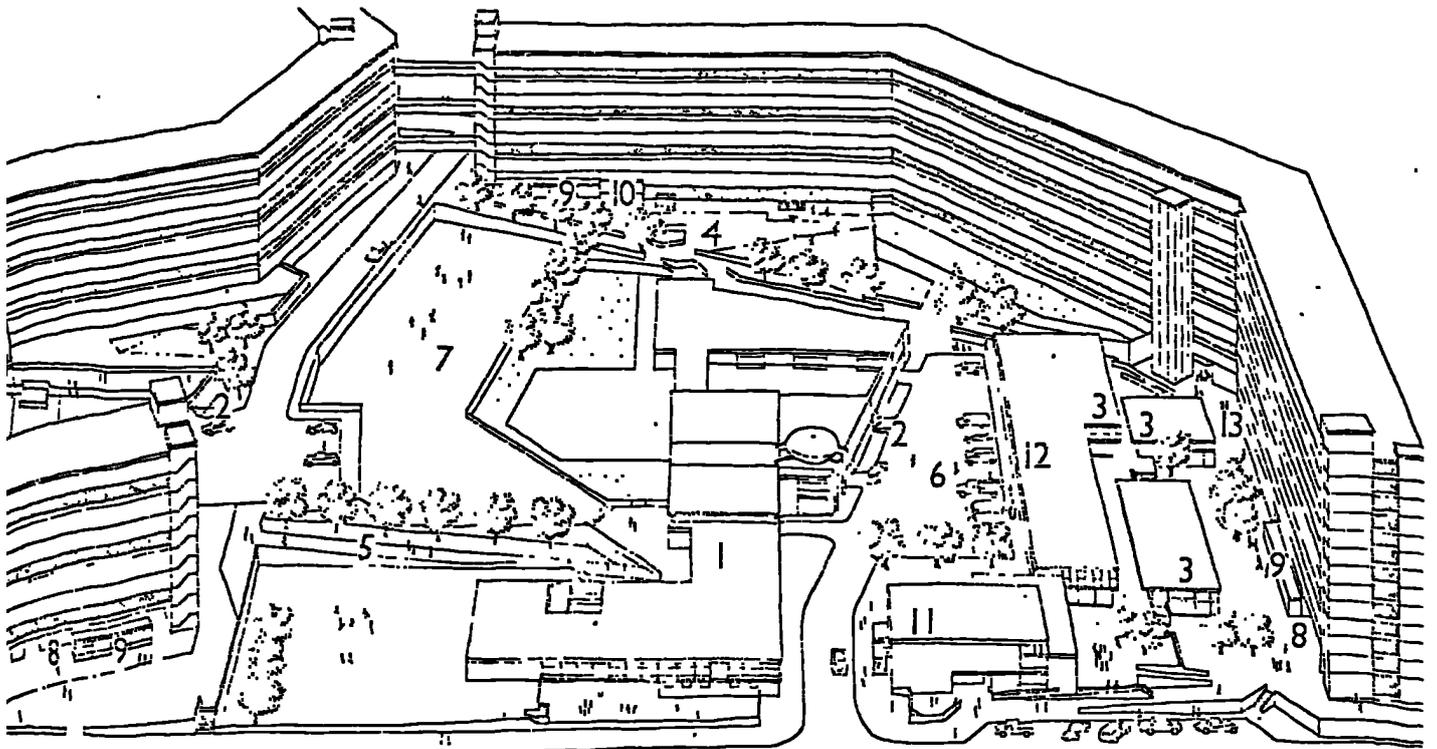
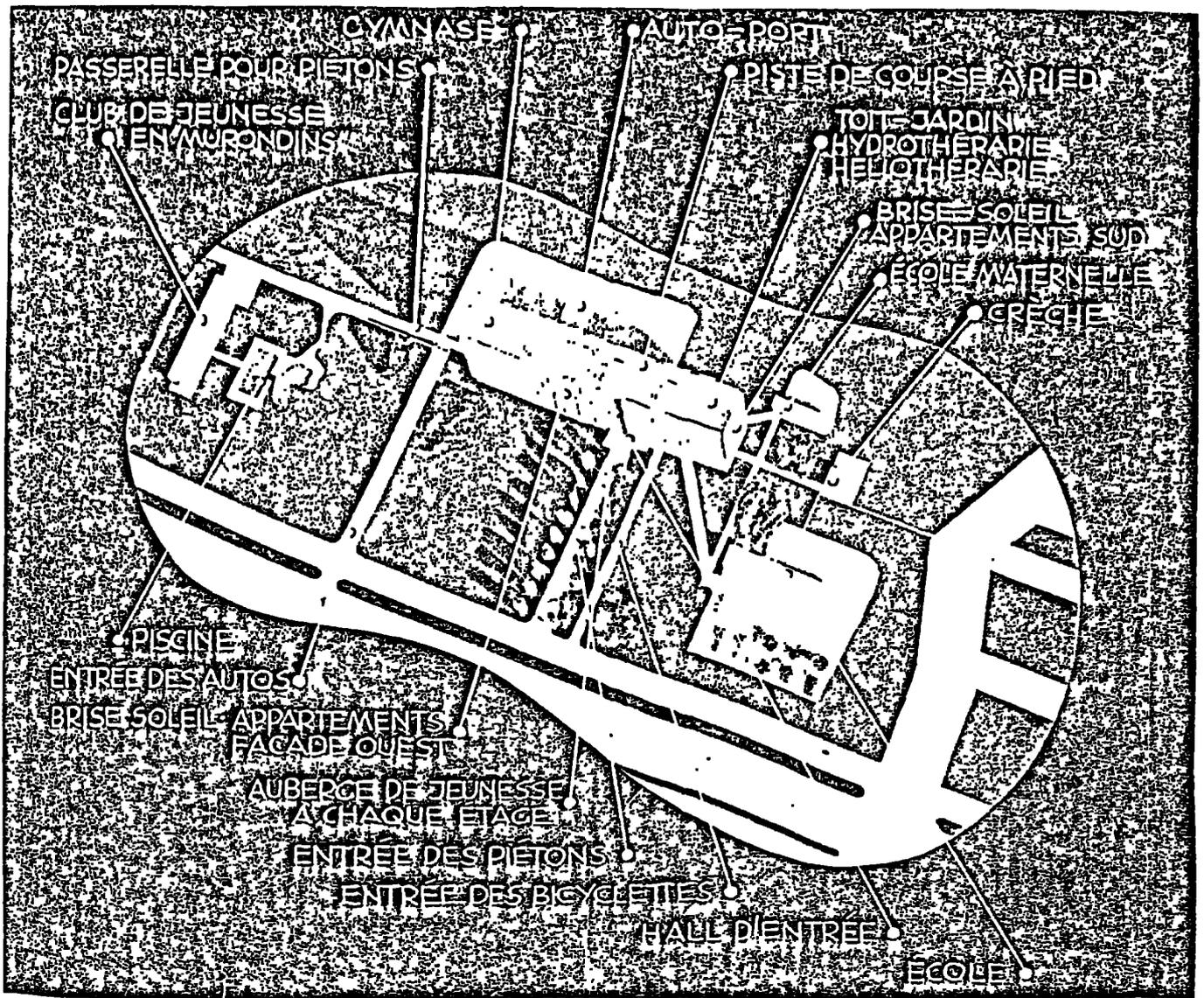
Overall, the gap between theory and practice, or the inadequacy of the theory, left Park Hill far more a continuation of inter-war Corbusian ideas than an expression of the new post war modernism. Firstly not only was the "uniformity in the part, variety in the whole" and the development of the "machine for living in" with the central services garbage waste disposal and district central heating intrinsic to the estate's development, but there was the plain and purely residential form of the street-deck (Illus.43) (p.129) This bore a far closer resemblance to Le Corbusier's designs than the architecture of the Rotherhithe or Golden Lane schemes. Secondly the concentration on provision for pedestrian movement also typified the design of the Radiant City for example. Thirdly the inclusion of a large number of neighbourhood facilities in and around the new housing bears comparison with Le Corbusier's urban plans especially the Unité block in Marseilles (Illus 42) (p. 128) Fourthly the form of Park Hill seemed to owe much to the plan followed, for example, at Algiers, even if it bore no comparison with Saint Dié; and the structure and arrangement of the mixture of housing with the building blocks appeared to be no more flexible for coping with changing needs than, say, the scheme for housing area No. 6 in Paris. Changing the position of the walls would disrupt the whole design of the separate entrances and bathroom/kitchen provision at Park Hill.

Finally, we should note that the scheme fulfilled the basic Corbusian principles of urban planning: decongesting the centre of Sheffield, augmenting the gross density from about 150 ppha (60 ppa) in 1954 to 250 ppha (100 ppa) including the clearance of buildings for the 5ha (12 acre) park between the estate and the railway station, increasing the means for getting about and increasing parks and open spaces. Hence "the first problem of town planning" had been solved, at least with Park Hill, because the centre was no longer "like an engine which is seized", and this had been accomplished by solving the second problem, "how to create a zone free for development" (Illus.41)(p.127)

As the archetypal expression of the New Brutalism the Park Hill project had therefore lost much of the libertarian and utopian position of the Movement because it had only been realised by adapting to the demands of the situation. And it was, as a consequence, a building which exhibited not so much the principles laid down by the Smithsons, as some architectural critics claimed (96) but, to a far greater extent expressed those of the "master" realist Le Corbusier, and his work of the 1950's; the absence of the modulator was the only really concrete departure from traditional modernism.



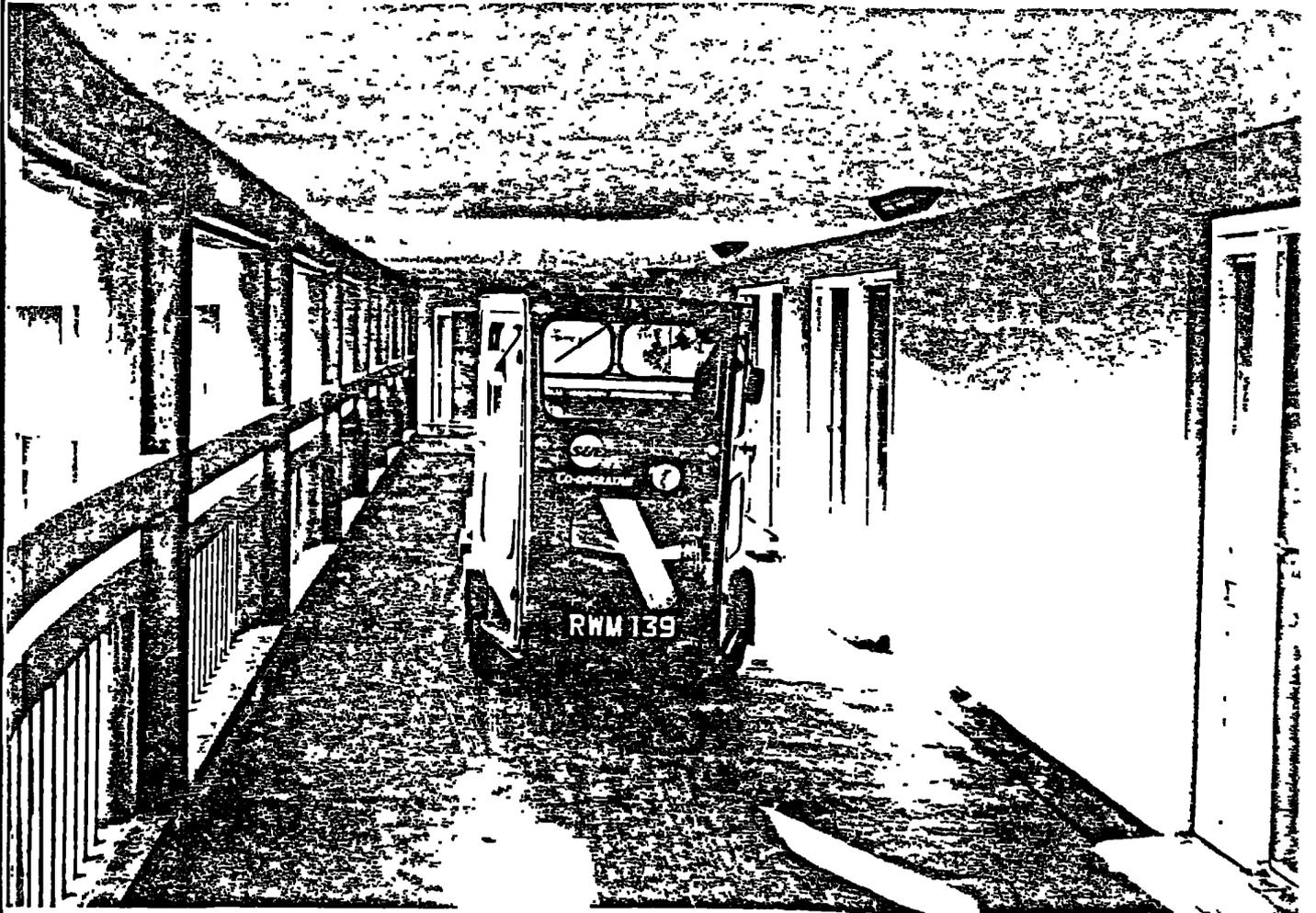
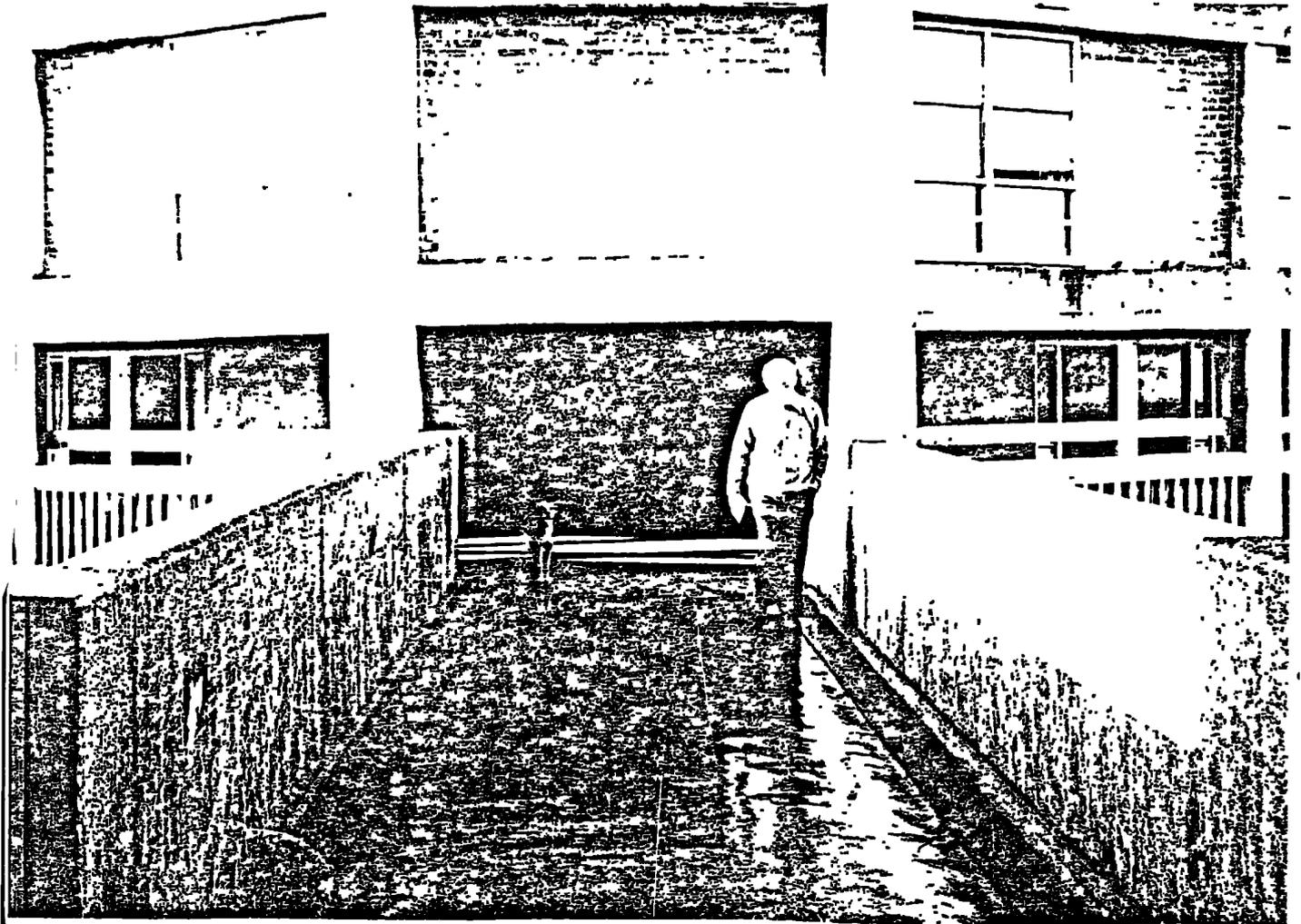
41. Reform of the built environment. Le Corbusier's Radiant City (top) and Park Hill, before and after.



View: perspective, Key: 1 primary 2 garages 3 shops 4 young children's playground 5 public footbath 6 service area 7 playground
 site features 8 public houses 9 laundry 10 tenants' common hall, clinic and shops 12 police section station 13 housing office

42. Unite and Park Hill: The neighbourhood amenities.

Source: Oeuvre Complete and Architectural Design Sept. 1961



43. The deck at Park Hill: A milk-float and a pedestrian bridge.

Another crucial difference, possibly not appreciated at the time, was that if Le Corbusier had been the architect of Park Hill it almost certainly would have been far more beautiful. In the move from Marseilles to Sheffield, the architecture had changed from that typifying a sunny mediterranean port to that typifying a "brutal" North of England heavy industrial city; and this change was not to be welcomed in the long-term.

But can the character and shortcomings of the project be laid solely at the door of Lynn and Smith? What influence did the picturesque modern architecture have on the development of Park Hill?

J. Lewis Womersley, City Architect from 1953 to 1964 was primarily concerned with counteracting the effect of the uniform sprawl of the city "subtopia" - while, at the same time avoiding placing families in high flats. This was also the aim of the previous Sheffield "planners", Patrick Abercrombie in between the wars and J.M. Collie shortly afterwards (97). Womersley set about the task in four ways. Firstly, following the example of Forshaw and Abercrombie's County of London Plan of 1943 and not that of the Smithsons "cluster city", he proposed three residential density rings, with 500 ppha (200 ppa) right in the city centre, 300 - 250 ppha (120-100 ppa) a little further out and 175 ppha (70 ppa) in the suburbs. Each new housing scheme built following slum clearance had to be designed to fit this policy and, at the same time, be closely integrated with the whole design for the city - roads, open spaces, shopping etc.; Sheffield was to be redesigned and reordered into a tight knit efficient urban unit beginning with local authority housing and its associated amenities.

Secondly, there was to be a variety of architectural forms and a variety of sites. Together they would produce a series of individual housing schemes offering character, beauty and choice to the public. Each project had to apply the principles of picturesque townscape and landscape in order to produce a distinctive and attractive landmark within the sprawling city, especially when they were built on the skyline.

Thirdly, all housing estates had to be designed for pedestrian movement and pedestrian vehicle segregation on the Radburn-self contained community model, if possible. Womersley pioneered this type of layout at Greenhill and later Gleadless, within Sheffield (98)

Fourthly the City Architects' department had to follow as closely as possible the recommendations of central government as contained in the Housing Manuals of the period and the three crucial reports, The Density of Residential Areas, published in 1952, Living in Flats, published in the same year and Moving from the Slums published in 1956. Also it was essential to use industrialised building as far as possible.

Park Hill and Hyde Park fitted neatly into this overall plan because they were the one estate to be designed for 500 rph, they had a character quite apart from the other schemes at Woodside/Burngrove, Netherthorpe and Gleadless, they presented a remarkably successful example of modern townscape and landscape when seen from the city centre, they followed the principles of pedestrian movement and pedestrian-vehicle segregation through the use of the decks and bridges and the stopping of through traffic (although there was no intrinsic reason why some vehicular movement through the site could not have been permissible, they contained all the shops and amenities necessary to a "town within a town", and, lastly, were designed and built directly in line with the recommendations contained in contemporary government reports and in particular with regard to the need for maximum industrialisation of house production.

Thus, although one other deck housing scheme was built in the city following the Park examples (namely the Kelvin estate) there was never any question of a street-deck city being created. Womersley used the ideas of Lynn and Smith to build a new city centre including high density family housing. The architectural tradition of which he was a part (he had been a member of the Garden Cities Association, later called the T.C.P.A., until 1955) had no model for inner city family housing. Indeed, as we have noted Abercrombie's central London zone was supposed to be for non-family use only. It was therefore in order to overcome the shortcomings of the picturesque modern approach that the first proper deck housing estate was built in the city, in the form we have already described.

From Womersley's point of view there was nothing really against clearing the site and creating a "zone free for development"; any loss to the community was outweighed by the gain in the practicality of the mass production of housing units. Also the corridor nature of the street-deck and the absence of the modular and domino systems in the design were, if anything to be welcomed; to have attempted anything else might well have been impractical and unnecessary. The attempt made to break the estate up into identifiable parts, avoiding the "beehive" problem and to make the accommodation efficient and adaptable was adequate. In general the layout and form of the estate was testimony to a humane approach to the problem of housing families in high flats and to a determination to avoid, in the picturesque manner "the grid, the axis, the module and other academic preconceptions". The fact that its appearance seemed to owe more to the engineers "law of economy" and "mathematical calculation" than to the architect's "sense of beauty" (to use Le Corbusier's phrases) satisfied Lynn and Smith's Brutalist approach and Womersley's insistence upon accepting the need for the minimum

costs and the general economies recommended by central government.

The Park Hill project thus grew from premodern and modern urban planning. And the end result was a housing scheme which satisfied both parties more than any other similar type of estate. But how were the non-experts the councillors and the tenants to be persuaded? And how did the architectural profession as a whole react to the new urban housing form?

The Model Estate

A principal aim for those behind the Park Hill project was to make sure that its unprecedented design was found acceptable by councillors and tenants. For this purpose two unusual measures were taken.

Firstly a tour of European multi-storey housing in 1954 for councillors and officials, took, as its central task, the evaluation of the design for Park Hill; this included requesting brief comments from leading continental City Architects. On return from the exhaustive investigation the Park Hill proposals were approved by the full Council (99).

A little over five years later the first tenant of the new estate moved in; this was the beginning of the second unusual measure. The new tenant was Mrs. J. F. Deners, the deputy housing manager and social worker for Park Hill. Her task was to help people settle in and pass critical comments back to the architects for consideration in the design of Hyde Park. In fact, Mrs. Deners seems to have effectively acted as mediator between the men in authority and the working class housewives who had to make the scheme work.

She also carried out a sample survey of residents' opinions, before leaving the estate in early 1962. The report of the survey concluded on a hopeful note, welcomed by the architects and City Council:

"There remains the undeniable fact that here, from an overcrowded slum in the heart of an industrial city, with a minimum of fuss and bother, and within an incredibly short space of time, not merely has a high quality, high density housing development taken place, but its occupants live a life equally as rich as in a long settled area, with amenities which do much to promote their feelings of being worthwhile and which also help in developing a strong community spirit". (100)

This apparent and often real sense of agreement as to the success of the scheme between architects, councillors and tenants, was important for the wider expert reception of the scheme; serious criticism could undermine the progress made by the close of the 1950's. Fortunately for both the profession and the Sheffield City Council, the design and completion of Park Hill coincided with two important events. These were the 10th congress of C.I.A.M. in 1956 by which time the first deck housing scheme had been given the go-ahead in Sheffield, and the first meeting of the International Union of Architects in the United Kingdom in 1961 when the estate was officially opened

and sympathetic evaluations began to appear. On both occasions there was agreement from the two sides of architecture that Park Hill was of really positive value.

In 1955 the first public references to the estate were to be found. Professor Sir William Holford, perhaps the leading picturesque-modern town planner, compared the design for Park Hill with the most successful housing schemes of the time; a sentiment repeated in the Manchester Guardian and The Times (101) In the modernist journal Architectural Design and Construction (later renamed Architectural Design) Theo. Crosby described the design as one of the most remarkable achievements of housing architecture outside London (102) Although he had reservations about the arrangement of the rooms in the dwellings, and the anonymous aspect of the elevation, he nevertheless found it to be "almost the only project that aims at something more than mere accommodation". Crosby concluded on a hopeful note, with typical avante garde thinking:

"But the idea of a complicated architecture, of infinite permutations, of intimate neighbourly access, of social excitement, is of value". (103)

Three years later Park Hill was mentioned approvingly in A.W.Cleeve Barr's work Public Authority Housing and reported on optimistically by Womersely and Sweet (the project's quantity surveyor) for the Housing Centre's first conference in slum clearance (104). In 1960 the Municipal Journal reported favourably on Sheffield rehousing (105). However, it was only on its official opening that people felt able to present a comprehensive analysis of the scheme. This was headed by Reyner Banham, the foremost new architectural critic of the time. His support for Park Hill, and Park Hill alone amongst all the new housing developments, was a crucial factor in the success story.

In "The Vertical Community" Banham described the "spectacular housing scheme" as "one of the most heartening architectural prospects in England." (106) The elevations, the scale and the decks were such humane and effective features of the estate that Banham was led to believe the age-old architectural claim that "community is a quality that can be designed". And in a larger and less superficial discussion of the scheme in the Architectural Review (107) Banham emphasised its singular nature - the meeting of an "aesthetic programme and functional opportunity" on an ideal site. Its unique quality was particularly evident in the nature of the decks. "Functionally and socially they are streets without the menace of through vehicular traffic" and the "act of walking along one is a serial scenic experience, punctuated by irregular spatial constructions that is continuously fascinating". The Brutalist character of the development was undeniable due to the "starkness of its expression", at the bridges it was clear that the architecture had

been "pared down to its bare essentials, to communications". Banham found little to criticise. Some features of the exterior had not been properly detailed, but this was "trifling objection because the scale of the detailing is trifling when compared with the scale of the block". He concludes and summarises his review of the essentially English building, by high-lighting the anti-rationalist nature of the design: "what Park Hill abundantly demonstrates is that there are other kinds of architectural clarity besides the classical."

Thus while there was an undoubted gap between the Brutalist theory and practice as evidenced by Park Hill, Banham was prepared to ignore this. Architectural Design joined him and made the unique precedent of providing one whole issue to review progress in one city - the city being Sheffield. Park Hill was placed at the centre of the investigations. (108)

Other evaluations were no less determined to fully publicise the benefits of the new estate. The Architects Journal considered the scheme at length in August 1961. The value and purpose of the deck system highlighted and on that basis the conclusion drawn that here was "a really major breakthrough, demanding an entirely fresh assessment of the planning of high density housing" (109) Two picturesque-modern critics supported the design with few reservations. Ian Nairn, in his important BBC TV series Britain's Changing Towns, looked at Sheffield and Park Hill in April 1961. He found the estate to be a surprising success: "the pigeonhole effect of the big block is almost taken away by the brilliant use made of the street decks". It was a "very heartening" example for the future (110). Nairn's colleague on the Architectural Review Niklaus Pevsner, later described the estate as a "visually as well as socially satisfactory conception" although it will be a slum "in a half a century or less" (111).

Others were less convinced. John Betjeman found the flats "terrifying and inhuman" though he became "acclimatized" on walking the decks (112). Lewis Mumford apparently disapproved in a similar way continuing in the process his earlier criticism of the "Marseilles Folly" (113) These doubts were referred to in a T.C.F.A. denunciation of those architectural critics, for example Reyner Banham, who equated high density with urbanity and sociability (114). Park Hill, it was inferred (in an opposite link of low density with the good life) was not conducive to a proper community life because of its inhuman scale and uniform barrack-like design. The chairman of the city's newly founded Civic Society, Rev.G.Stanley Whitby, later wrote to defend the scheme. However, a city councillor and future M.P. Frank Hooley, countered this with his view that Park Hill was a "grievous monstrosity which almost makes me ashamed to belong to the Labour Party in Sheffield" (115). His criticism was, however,

very usual for the city. Overall the Garden City advocates criticism was ineffective. In 1965 Tetlow and Goss's popular textbook Homes, Towns and Traffic while dedicated to Lewis Mumford and recommending a new town for Sheffield nevertheless admired the "vigour and boldness of the concept" of the street-deck.

In 1962 Mrs. Demers findings seemed to justify the prevailing opinion regarding the merit of the design. Along with H.J. Aldous she presented a paper on "Problems of Housing Management and Design" to the R.I.B.A.'s 1962 Housing Conference (116) Here the success of Park Hill was repeated. In 1963 the R.I.B.A. held its annual conference in the city and thereby gave further support and publicity to the scheme.

Local confidence and repeated requests for information led the City Council to publish in 1962 Ten Years of Housing in Sheffield 1953-63. This took Park Hill as its centrepiece.

Other journals began to take an interest. In September 1962 The Economist reported on the "sheffield experiments". (117) Park Hill was the "first step in a scheme of undoubted vision and scope which had a social purpose rather than a mere need to package as its impetus". They did acknowledge that the design attracted "more than one opinion" but overall they shared "the excitement of the builders and their feeling that something significant had been achieved". New Society had no qualms as to the value of the estate and especially the decks which "really do have the animation associated with city as opposed to suburban streets". (118) Moreover the decks were "complicated enough to be interesting and simple enough to be reassuring".

In 1962 and 1963 the R.I.B.A.J. published a full history of the project (119). In 1964 four leading architects, Sheppard, Wilson, Stirling and Maxwell Fry referred to Park Hill as one of the outstanding examples of modern architecture in Britain (120) And in the same year Paul Ritter's classic study Planning for Man and Motor recognised Park Hill as an "extremely important experiment" (121). He intended to make a special investigation of the whole scheme.

In 1965 the Architects Journal published another analysis of the project and the Architects Year Book contained a full length article by Jack Lynn on the design and the redevelopment of Sheffield (122). Some criticism was evident by this time. However in 1966 Reyner Banham was still as full of enthusiasm for the scheme even if his optimism regarding the "New Brutalism" had waned. In a study which was an epitaph entitled The New Brutalism he stated "regard it how you will, Park Hill comes pretty close to "another architecture"!" (123) And two other journals, Official Architecture and Planning and the Town Planning Institute Journal welcomed the estate

in 1966 and 1967 respectively (124)

However, by the late 1960's Park Hill was no longer sufficient in itself; and by the early 1970's it had to be defended against mounting criticism. For nearly ten years it survived without very serious disapproval to become the most popular model for urban housing renewal in the United Kingdom.

CHAPTER 4. THE MODEL AND THE MODEL - E.T.T.S

With the example of the Park Hill estate completed, and its importance established within professional circles, the idea of streets-in-the-sky could spread rapidly throughout the United Kingdom. However, in competition with other types of multi-storey housing design - mixed development internal corridor and balcony access - its translation into everyday practice was not uniform over time or place. That is, although the other types of high density urban housing could not attract a comparable level of agreement from the two sides of architectural ideology, they - especially mixed development - continued to be the most popular housing form up until the mid 1960's; and after that period alternatives to deck housing remained the dominant housing form in certain cities and regions. Full details of all the deck housing schemes are provided in the second half of this chapter and in Appendix 2.

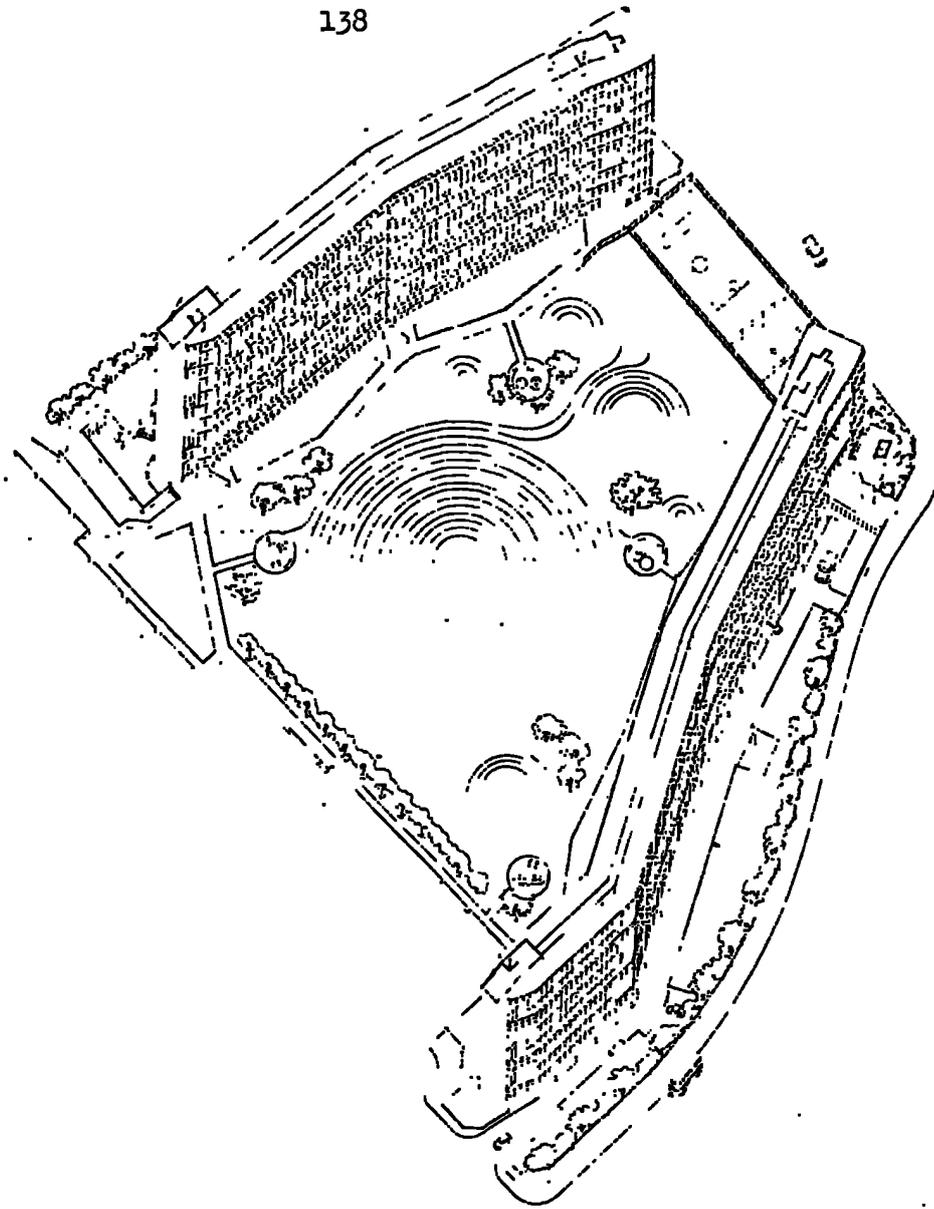
In the first half we wish to describe three stages in the development of the idea of deck housing. Firstly, the failure of the idea in the first half of the 1960's, secondly the new popularity of the building form in the second half of the decade, which, while supported by a new level of agreement between supporters of modern and picturesque approaches to architecture, still failed to evolve into a general plan and theory of deckhousing; and thirdly, the decline of the idea in the 1970's and early 1980's.

The Absence of Deck Housing. 1960-65

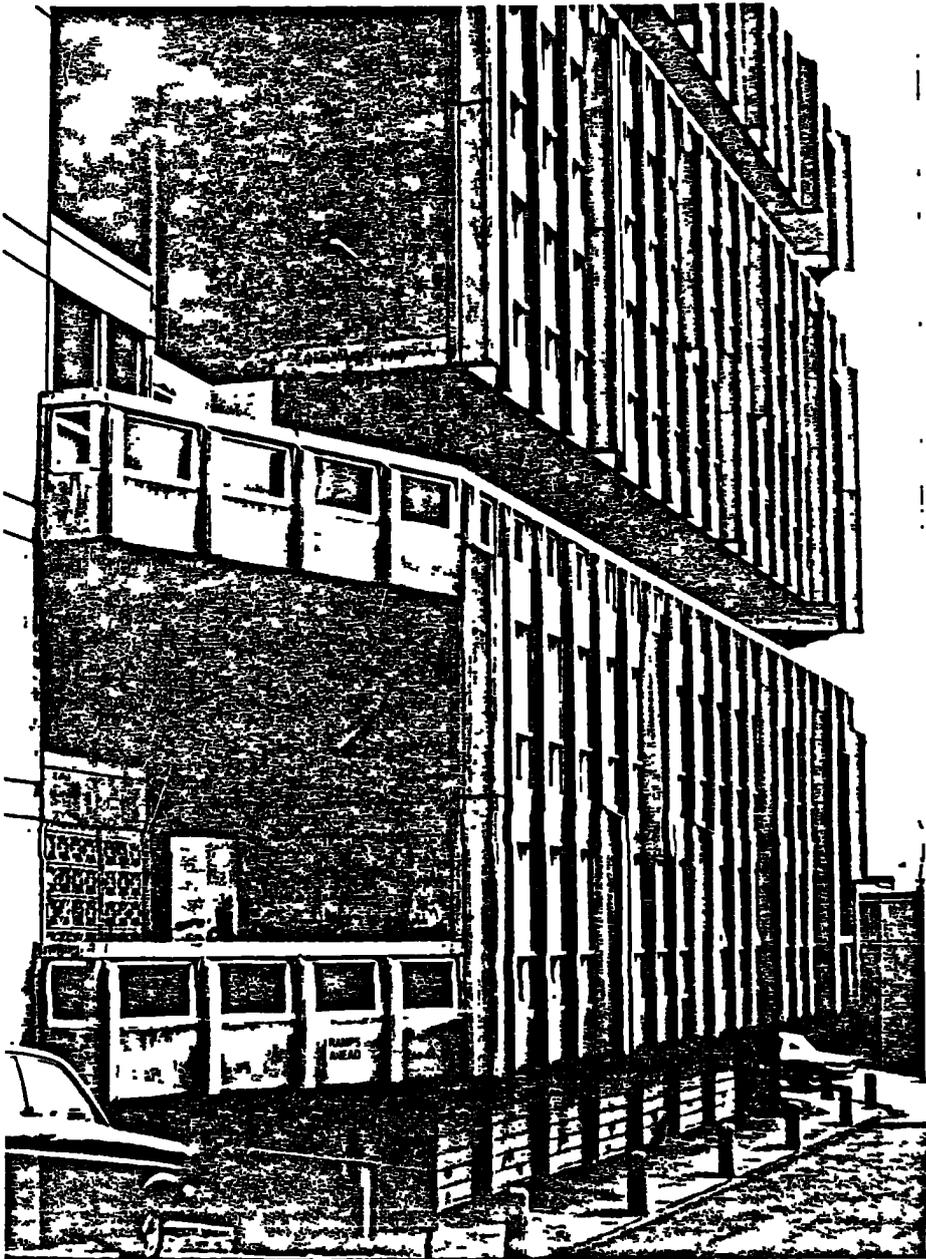
The inadequate development of this "new" urban housing form, in spite of the intellectual build up of the 1950's, the unprecedented and unequalled publicity given to Park Hill in the first half of the 1960's and the continuation of the idea of the multi-level city, can be traced by looking at architectural practice in local and central government in the 60's.

To begin with, the members of MARS, C.I.A. or Team 10 were not asked by government to consolidate or extend their investigations into new housing; on the contrary, most of their commissions were for new universities and cultural or commercial projects. It was through these grand building programmes that the reputation of Lasdun, Stirling and even the Smithsons were fashioned. The few housing projects only added to their prestige and authority, that is, the Smithson's Robin Hood Garden's estate 1963-70 (Illus 44 and 45) (p.139/40) Theo Crosby's Fulham Stud, in 1963 (Illus.55) (p.163) James Stirling's Southgate "walkway" estate at Runcorn in 1967 and James Gowan's small balcony access schemes in North London.

At the same time, within government, a number of well organised and progressive architecture departments were breaking up, notably those at



44. The Smithsons' Robin Hood Gardens, 1963-70.
Source: (top) Ordinariness and Light, 1970



45. Pedestrian level views of Robin Hood Gardens.

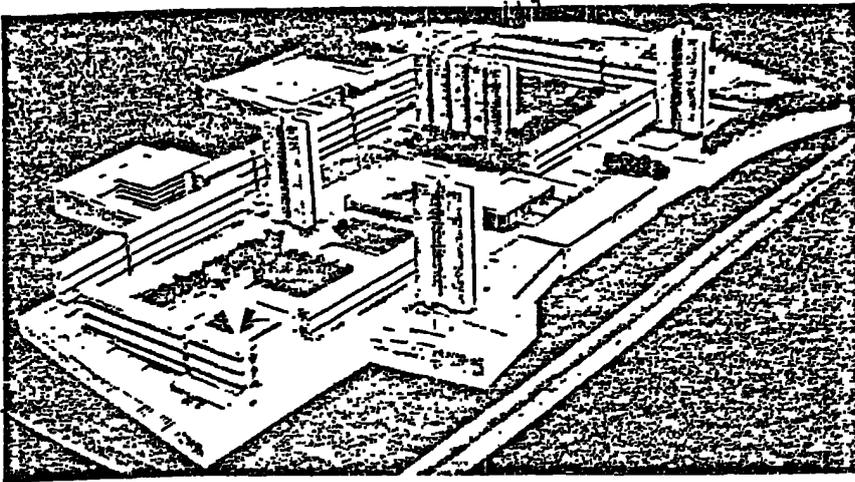
Sheffield and at the L.C.C. In the latter case leaders of the professional individuals directly involved in designing multi-level urban form, moved out into private practice or into other areas of government. Shankland and Cox became consultants to Liverpool City Council before the latter also worked at the MHLG; they would soon be joined by Walter P. K as City Planning Officer, moving from the LCC Clive-Barry became Chief Architect at the MHLG 1959-64 and then moved on again to become head of the N.B.A. His colleague Whitefield Lewis replaced him at the MHLG for the period 1964-71. Other former LCC employees included P. Johnson-Marshall who moved to Edinburgh and E.G. Hollaby who took up the senior post at Lambeth. Even S.F.U.K. (many of whose members were employed by the LCC) formed in 1958, disbanded in 1963. Other leading figures, such as L.H. Wilson, Chief architect and Planning Officer of Cumbernauld new town from 1956-62 joined with Wormersley in 1964. Together they became consultants to Manchester City Council.

In so far as there was any new clustering of the most experienced and talented architect-planners, it tended to be in the North West of England where, as we will note, most of the deck housing was subsequently designed and built. However, even here the two consultancy firms tended to concentrate on the redesign of the central business district rather than housing.

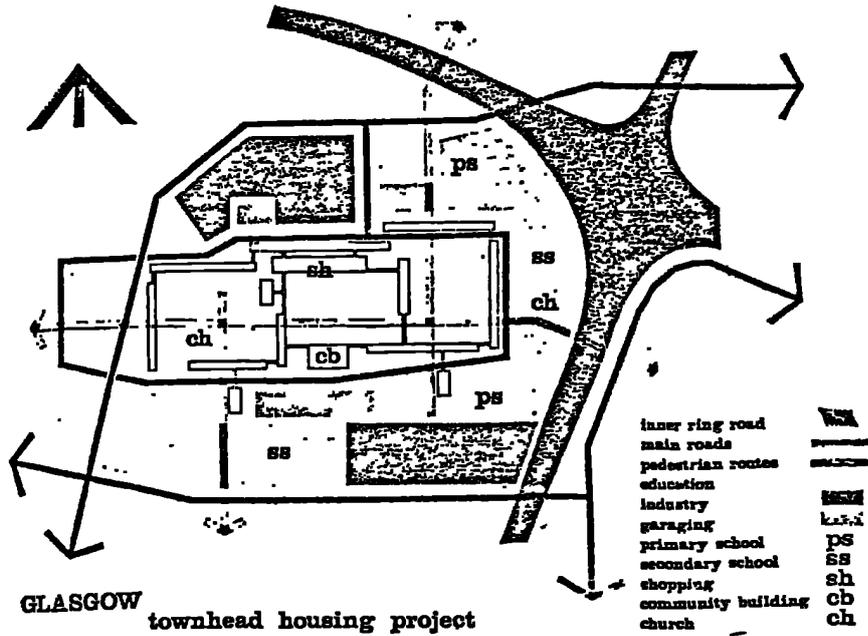
In central government, in spite of the influence of Wormersley (on the CHAC 1956-61 and Parker Morris Committee 1958-60) and former LCC architects, new ideas were not often encountered. However the prestigious Parker Morris report on new housing standards, published in 1961, did at least note the existence of an alternative type of high-rise family housing. It stated:

"The human problem for the future in the design of flats and maisonettes is to provide for people who live in them an environment which is as workable, and as satisfactory, as for people who live in houses. Often most of the needs are met in mixed developments of flats, maisonettes and houses, which provide the opportunity for larger families to live at ground level or near it. For other households, sometimes including families with children, the problems of living at a distance from the ground remains. Ways of meeting the need for outdoor space may come to be found in newer forms of access to the dwellings associated with covered space in the open air at the level of the home, and providing some of the virtues of the backyard and the pedestrian street. Some local authorities are already trying to do something on these lines". (1)

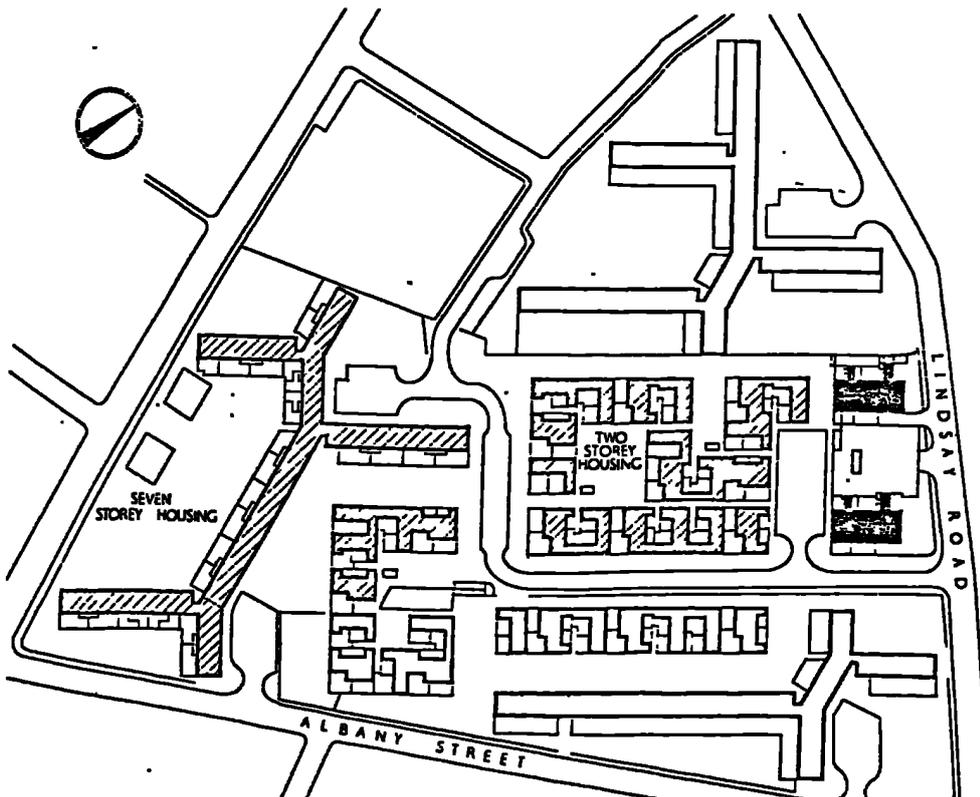
These "newer forms of access" to multi-storey housing were only hinted at in the most important government report of the period, Traffic in Towns. The study team, headed by Colin Buchanan, foresaw the end of the "corridor street" and the complete redesign of urban areas, following the need to separate vehicles and pedestrians. A new specialism entitled "traffic



Positioning of roads and buildings



46. Deck Access
 Housing in Scot-
 land. The
 Townhead scheme,
 1962 (not built)
 and the Leith
 Fort estate (only
 hatched and soli
 areas built) 1961
 Source:
Architects'
Journal Jan. 1963
 and April 1965



architecture" was identified. It was characterised by an apparently new approach to the problem of urban design:

"If buildings and access ways are thought of together as constituting the basic material of cities, then they can be moulded and combined in all sorts of ways, many of which are more advantageous than the conventional street. A useful term with which to describe this process is "traffic architecture" which conveys the idea of buildings and building groups being purposefully designed for the efficient handling of traffic". (2)

Here was a return to the premodernist ideas formulated in the Survey and Plan for New York and its Annals, only now the modern building form and the idea of super-decking were being included. It was the ideas and the principles found at Park Hill and Block, applied to the national problem of congested cities. It was also an extremely optimistic and confident statement of planning principles; on the new upper ground level an improved, organised and complex architecture could be developed on picturesque principles:

"Although traffic architecture techniques would involve a 'new look' for urban areas, in many ways it could still result in an 'old look' freed from the domination of the motor vehicle. To take an extreme but simplified case, the central area of a town might be redeveloped with traffic at ground level underneath a 'building deck'. This deck would rise in a pattern related to but not dictated by the traffic below. On the deck it would be possible to recreate, in an even better form, the things that have delighted man for generations in towns, the snug, close, varied atmosphere, the narrow alleys, the contrasting open squares, the effects of light and shade, and the fountains and the sculpture. The deck would be so literally new ground that buildings could be erected upon it and in due course taken down and replaced and sites could be sold or leased in the normal way". (3)

In the suggestion for "partial redevelopment" (illus 47) - the most likely to be advocated as a compromise solution - only Middlesex hospital and Fitzroy Square remain; almost everything else in this important part of central London is demolished to make way for the raised deck supports and traffic routes. A section through a typical shopping street show deck access to housing over shops. Also a layout plan for the Fitzroy Square area proposes what looks like a deck access block linked to the adjacent tower blocks and upper level open space. But this can only be supposition. The report makes no mention of high density urban housing form as such; only suburban Radburn schemes are illustrated in detail.

In contrast, the main architectural research work undertaken by the MHLG - the Fulham study and the Oldham project - in the first half of the 1960's, specifically advocated or actually used in the latter case, deck housing. At Oldham, the MHLG new Research and Development Group in cooperation with Eax Lock and Partners and John Laing Ltd. undertook a trial housing redevelopment scheme. The project combined architects, sociologists,

builders and quantity surveyors. Its task was to build cheaply, quickly and efficiently to a high standard and high density for a cross-section of household sizes. Cost limits had been outlined in Design Bulletin No. 7 and in circular 40/63, standards had been recommended by the Parker Morris committee, dimensional coordination for industrialised building had been requested by the MPB, and higher densities, but not high-rise had been called for in the MHLG Planning Bulletin No. 2 "Residential Areas Higher Densities".

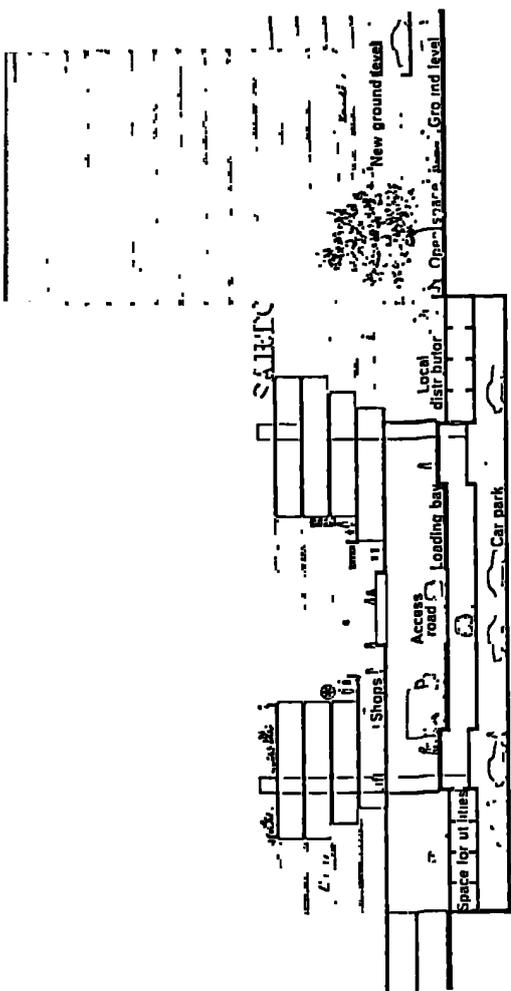
The final scheme was for 520 dwellings and 1,778 people at a density of 110 ppa and 520 car spaces on a Radburn layout. About 75 per cent of the population were to be in long deck housing blocks. These increased from three to five storeys as the ground fell away; no lifts were provided. Subsequently a number of large estates with lifts were built in various parts of the country using deck housing only. Meanwhile the MHLG continued with the sociological surveys it had undertaken before slum clearance, only now with the purpose of discovering "user" satisfaction. Other high density housing schemes were studied for comparison and guidance. The whole project was the first and most ambitious of central governments investigations into the solutions to the problems of urban housing renewal (4).

The principles of traffic architecture without deck housing were applied at Erith (later redesigned and renamed Thamesmead) and World's End (later redesigned) for example. Both included tower blocks in preference to medium rise solutions. Elsewhere, the first deck housing schemes were being built. The Wendling and Bacton estates in Camden, the well-known Edith Avenue scheme in Usworth (later Washington newtown) by J.H.Napper and Partners and the Yorkshire Development Group consortium, all used deck access to multi-storey medium to low rise housing.

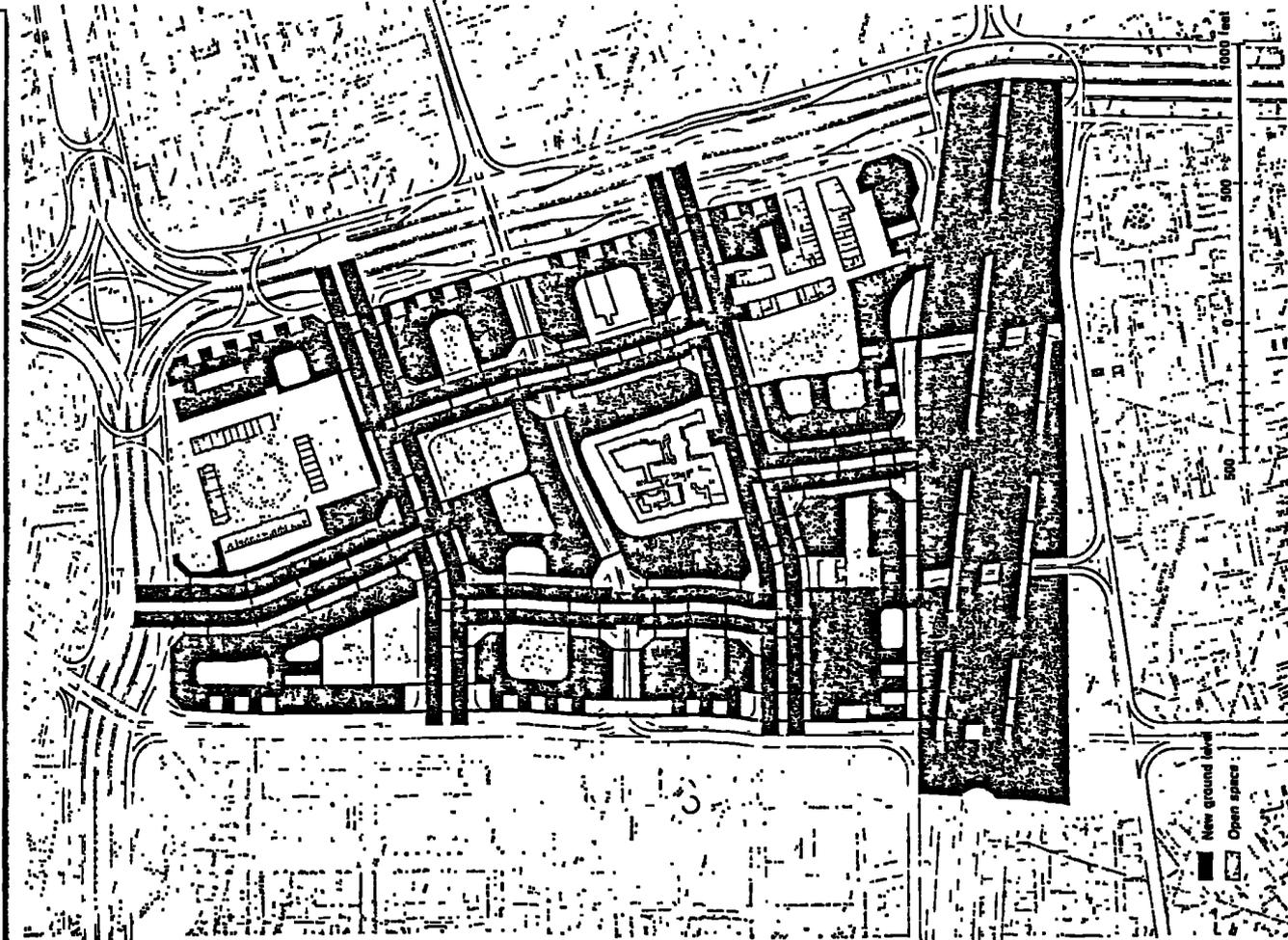
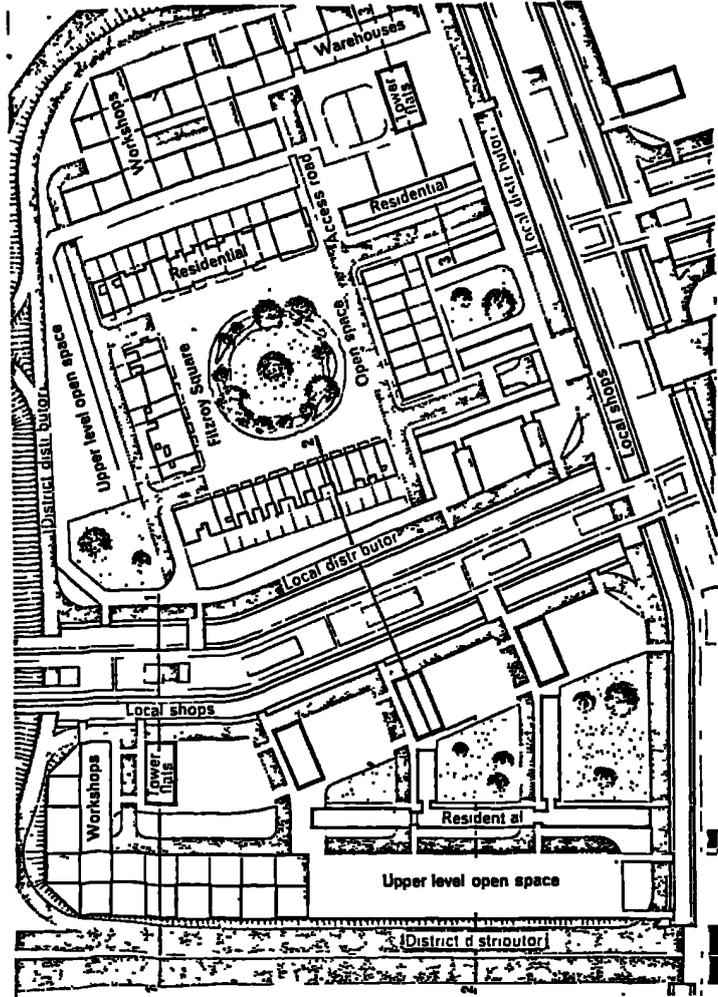
In Scotland the Brutalist Leith Fort estate, which alone applied the Modular principles, was completed in 1961. In the following year, one of the first of Glasgow's redevelopment projects; the Townhead housing scheme, was to continue the ideas expressed clearly at Park Hill. Over 16 hectares (40 acres) was to be cleared to provide housing for 6,000 people. A mixture of tower blocks (one twenty storey and three 25 storey) for small households and several six to nine storey family maisonette blocks would be linked by upper level streets:

"Continuous horizontal circulation under cover for pedestrians will be provided by means of walkways or decks lying within the depth of the wall blocks and spanning between blocks and across service roads. These walks would provide busy high level streets with kiosks, seats and play corners for children, and allow for milk trolleys and other services". (5)

The design was never carried into practice. Also the second half of the Edith Avenue and Leith Fort schemes were not built. Only in Sheffield was an equally ambitious but in many respects retrograde step taken in the



195 The design for partial redevelopment. Layout plan for the area around Fitzroy Square. The three sectional views (marked 1-1, 2-2, and 3-3 on this plan will be found in Figure 193).



47. Traffic in Towns, 1963. Scheme for partial redevelopment.

building of streets-in-the-sky in the first half of the 1960's.

The second stage of Park Hill, the Hyde Park estate, was designed in 1961-62 and opened in 1965, while the similar Kelvin estate was designed in 1964 and opened in 1969. In both cases, the community consciousness, the compromise with a more gradual renewal process, the importance of easy pedestrian circulation and the establishing of the 'part' within the 'whole' were absent. In many respects while the Brutalist aesthetic had been rejected - the concrete and brickwork no longer had a "gutsy finish" - it had been replaced by a new type of inhuman architectural and social fashion. This was a reliance on material things, that is, on technology and grandeur. The Sheffield architects and the local authority were now far more confident that they could rely on their own skills, and plentiful resources (including Parker Morris standards) instead of looking, in part, to the materials at hand. This is not to deny the importance of the new and more difficult sites, at the top of a steep ridge at Hyde Park and at the bottom of a valley at Kelvin.

In the former case, the combination of new circumstances led to features such as the rooftop "penthouse flats" at St. John's garden and "panorama" lifts (that is, large glass panels in the lift shafts which overlooked the city). The whole estate would provide, through its vertical contrast to the horizontality of Park Hill, a "Manhattan Skyline" to the city as a whole (6).

Within the estate it was clear that the whole scheme had lost the continuity of the pedestrian system found in its elder brother. To begin with, the estate was effectively divided into four parts. One consisted of two three storey terraces running in parallel and monotonous straight lines, almost the same length as the Park Hill scheme. Also the design and location produced a serious loss of privacy at the rear of each block. The other sections of Hyde Park consisted of one large crescent form positioned on the crown of the hill, and reaching up to 18 storeys, and two similar large blocks of housing to the north east and north west. The whole estate had the monumental form of a hill fortress while the poorly related parts soon gave it the nickname, the "concrete jigsaw puzzle". Moreover, the largest sections of the scheme were particularly exposed to wind and rain, and seemed to accentuate the noises made by residents. It was a different place as Jack Lynn, its designer, had wished. Unfortunately this difference was not of a welcome character. The scheme soon proved to be unpopular with a significant number of tenants, principally because of the anti-social use of the deck. The problems have continued and grown considerably in scale up to the present day, an interpretation confirmed

by numerous press reports.

The Kelvin estate has only fared a little better. Built about a mile from the city centre, it thereby denied residents any of the benefits of a location near to central shops and amenities. Also, located at the bottom of a valley, adjacent to a main road and reaching up to 14 storeys, it appeared no less monumental to the general public travelling past the estate. However, it did provide greater continuity of access as it increased in height over the site from four to fourteen storeys.

Thus relative to the promise represented by Park Hill, the first five years of the new decade gave little hope that a new improved type of multi-storey housing would be developed throughout the United Kingdom. There was neither the quantity nor the quality one would have expected. Added to this there was the absence or direct opposition to the social and economic principles of streets-in-the-sky contained in the leading textbooks of the period.

For example, Cullingworth's Housing Needs and Flannery Policy, published in 1960, considers the houses versus flats debate and concludes:

"high density redevelopment is comparatively unpopular, expensive, uneconomic and cannot possibly obviate the need for overspill". (7)

But this evaluation was made on the basis of the expensive and anti-social tower block.

Wilfred Burns in his well known study of the "technique of urban renewal" entitled New Towns for Old and published in 1963, advocated mixed development partly for the reason that "flats can never be satisfactory for children".(8) The result was, like Cullingworth's analysis, the inevitable dispersal of the overcrowded inner city population as a consequence of redevelopment to higher physical standards. In an often quoted passage Burns argued a contrary sociological perspective to that behind Park Hill and British streets-in-the-sky. He stated:

"One result of slum clearance is that a considerable movement of people takes place over long distances, with devastating effect on the social groupings built up over the years. But, one might argue, this is a good thing when we are dealing with people who have no initiative or civic pride. The task, surely, is to break up such groupings even though the people seem to be satisfied with their miserable environment and seem to enjoy an extrovert social life in their own locality". (9)

There was, therefore, a powerful current of expert opinion running against the principles of Park Hill in spite of the general consensus that seemed to surround the building itself. In particular the mainly premodernist writings of Lewis Keeble, an influential academic and member of the Town Planning Institute, stand out as highly critical of all the modernist

tendencies emerging since the second world war (10)

1964-70: The Realisation of the Deck Housing Idea

From the mid 1960's the plans being drawn up by the architectural profession, in public and private practice, foretold a new confidence about building a modern urban culture. The idea of a "new age" of realism of scientific enterprise and urbanity was encapsulated in the election speeches delivered by Harold Wilson in 1964. Under the title "The New Britain" he began his first speech:

"I want to speak to you today about a new Britain and how we intend to bring home to our people the excitement there will be in building it.

For 1964 is the year in which we can take our destiny into our hands again.

Since the war, the world has been rushing forward at an unprecedented, an exhilarating speed. In two decades, the scientists have made more progress than in the past two thousand years. They have made it possible for man to reach out to the stars, and to bring abundance from the earth. They have made it possible to end the dark ages of poverty and want, to take mankind forward to a future which our fathers would not have dreamed possible. Yet Britain lags behind, lacking the will or the plan which can bring this future within the reach of all". (11)

This future would include a vastly improved physical environment:

"we are going to create a great breakthrough in science and technology.....to construct the cities of the future, cities worthy of our people". (12)

New forecasts of the remarkable population growth over the next 20 years and the increased demand for all kinds of commodities, combined with the new technology to push the idea of the multi-level city and the high density urban form - to prevent the complete coalescing of urban areas - to the fore. New textbooks provided some background to the deck housing form including Paul Ritter's Planning for Man and Motor, published in 1964, and Tetlow and Goss's popular Homes, Towns and Traffic first published in 1965. The outstanding schemes which were described included Park Hill, Edith Avenue, Leicester's Highgate, the Fulham Study and Fulme 5.

Over the next five years the Smithson's ideas were broadcast to the wider ranks of the profession through Urban Structuring, published in 1967 and Le Corbusier's through The Radiant City translated and also published in 1967. In addition Munz and Kunstler's study of Loos was published in the same year with Lissitsky's major work and Kopp's history of "Town and Revolution" both translated and published three years later in 1970. Brinkman's Spangon estate was discussed briefly in the Architects' Journal in 1967 (13), the history of inter war and post war British deck housing was available to anyone who cared to piece it together.

Of equal, if not greater importance, the architectural and planning

journals, especially the AR and the AJ, began to repeatedly publicise housing, and deckhousing projects in particular. It included those underway in Manchester, Oldham, Yorkshire and several London boroughs.

Evidence for the new confidence in the value and power of modernist architectural ideas and the deck form was to be found in the call for larger areas of urban renewal. The AR noted in its Housing Review for 1966:

"The replacement of the traditional point block versus cottage struggle in the centre of towns by a sane solution of high density low rise housing, linked by decks and penetrated by covered service roads, needs one commodity above all, land. Last year must have been a lucky one, as the housing section of the Preview had several such schemes. They cannot be done on half an acre, whereas the traditional point block can/". (14)

Most of the leading architects of the period were designing deck housing during the second half of the 1960's. This included the Belle Vale scheme by Shankland and Cox; the Portsmouth, Southampton and then Hulme 5 schemes by Wilson and Womersley (aided by Jack Lynn and J.Snow from Sheffield and other junior members of staff); the other schemes for Manchester by the Housing Development Group within Manchester City Council, headed by R.C.Stones, J.H. Napper and Partners, continuing the ideas they developed at Edith Avenue for designs at Spennymore and Hartlepool; St. Ann's, Oak Hill, Claremont and other unrealised schemes by Gillinson, Barnett and Partners mainly in Rotherham; E.A.Hollanby at Lambeth plus the Kingshold and Osprey estates in London by Yorke, Rosenberg and Mardall. However Colin Buchanan and Partners plan for Cardiff, published in 1966, excluded detailed consideration of the relevant city centre housing areas; the upper level pedestrian system would simply "extend beyond the business areas into the residential areas adjacent". (15)

In general large city centre plans tended to exclude the identification of specific housing forms linked to new central business area, except tall flats and maisonettes over shopping. And yet the logical extension of the principles of multi-storey development, without high-rise for families, made streets-in-the-sky almost inevitable. Thus although plans for London, Liverpool, Newcastle, Leeds and Manchester, for example, kept deck housing to the new "district centres" there were probably also little publicised schemes to run the upper level deck out to the nearest housing redevelopment area or district centre; at Manchester there were actually plans to link the new University deck into the adjacent housing at Hulme.

Other cities, such as Leicester and Sheffield, placed deck housing within the city centre plan but did not connect it up with a high level pedestrian system. To find a clear linear linkage between new cultural,

shopping and housing blocks, within one settlement, we have to look to the smaller city centre plans at Rotherham and Killingworth and the large cities district centres (Illus. 48-50 and 70) (pp. 150-152 and 163).

In contrast the other relatively small settlements, the new towns, never really used deckhousing. The original model for Cumbernauld and the design for Hook were never built or built according to plan (except a small scheme at Carbrain, Cumbernauld) the Edith Avenue estate was completed before the design of Washington newtown, was underway, after which it became peripheral to the core of the new settlement; the Southgate scheme in Runcorn, by James Stirling, did not really use a proper wide deck and the Oldham-type building system proposed for Livingston new town was, in no uncertain terms, rejected by the architects in favour of a more traditional Scottish design:

"The choice is not simply between deck access on the one hand or a walk up stair on the other. Deck access means no private open space, an artificially-lit kitchen and a heavily over-shadowed dining space. The dining-room windows open directly on to the deck.At Livingston an attempt has been made to make flat dwelling more acceptable to tenants by providing good private open space to the south with open drying areas". (16)

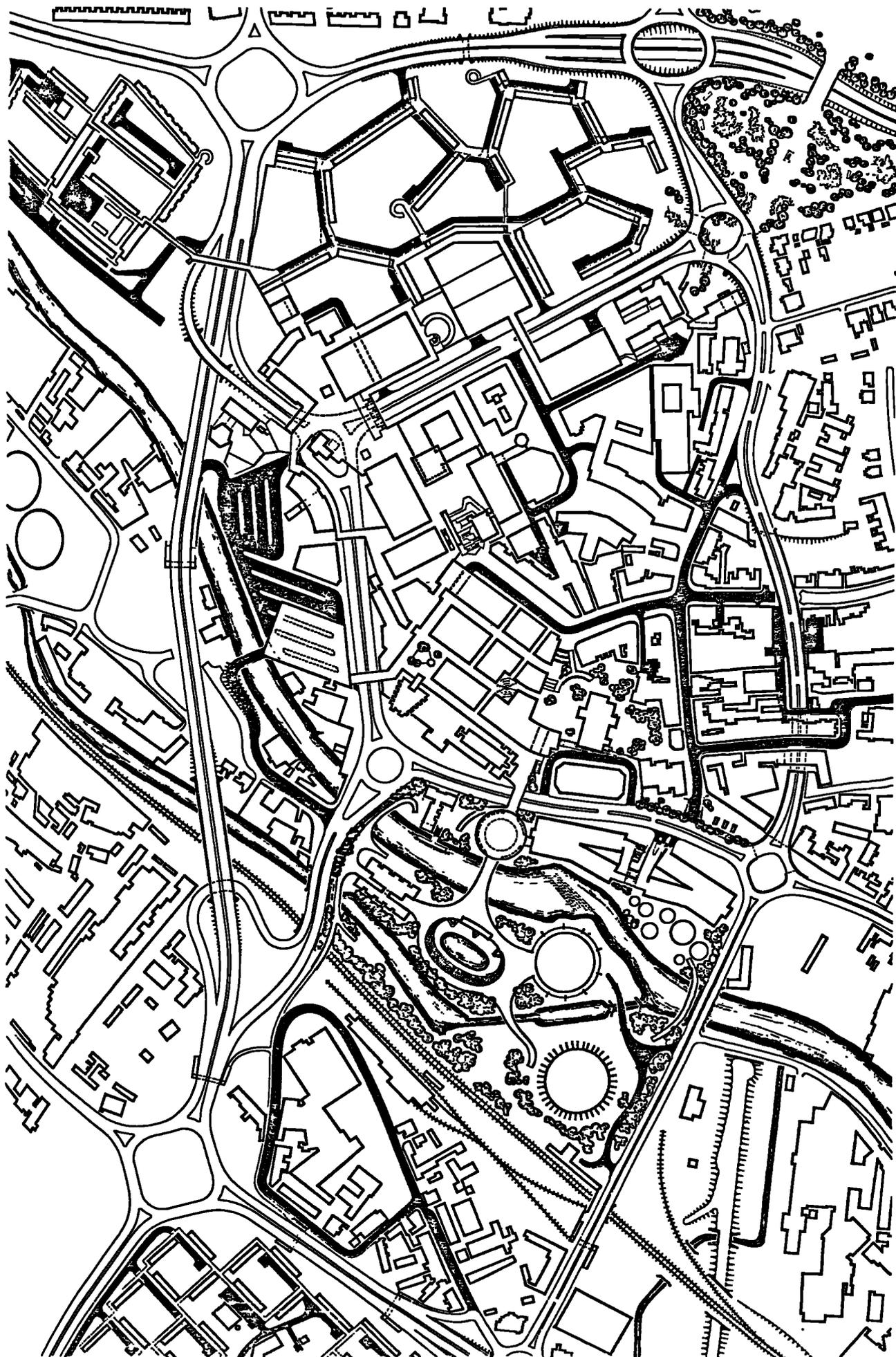
In a similar manner deckhousing is missing from the plans for the expanded towns of the Southeast of England, for example, Basildon and Basingstoke.

The one city where deckhousing was planned to be very clearly integrated into the overall urban structure was Liverpool. And this was the only area of the country to positively express all the current new theories of urban planning summarised under the notion of "cluster city" and represented in the form of a "structure plan" within which smaller detailed local ("district" and "action area") plans would follow - thereby implementing the proposals made by the Planning Advisory Group (17)

The "future city structure" basically involved replacing the complex rail and road routes with a simpler and more effective system linking new roads and rapid rail services at the town centre and "park and ride points". Also, it meant replacing the pyramidal residential density pattern and linear shopping with a mixture of medium range residential densities containing points of high density about the new shopping centres; together these "clusters" formed compact district centres. The city population was, therefore, to be decentralised within its own boundaries.

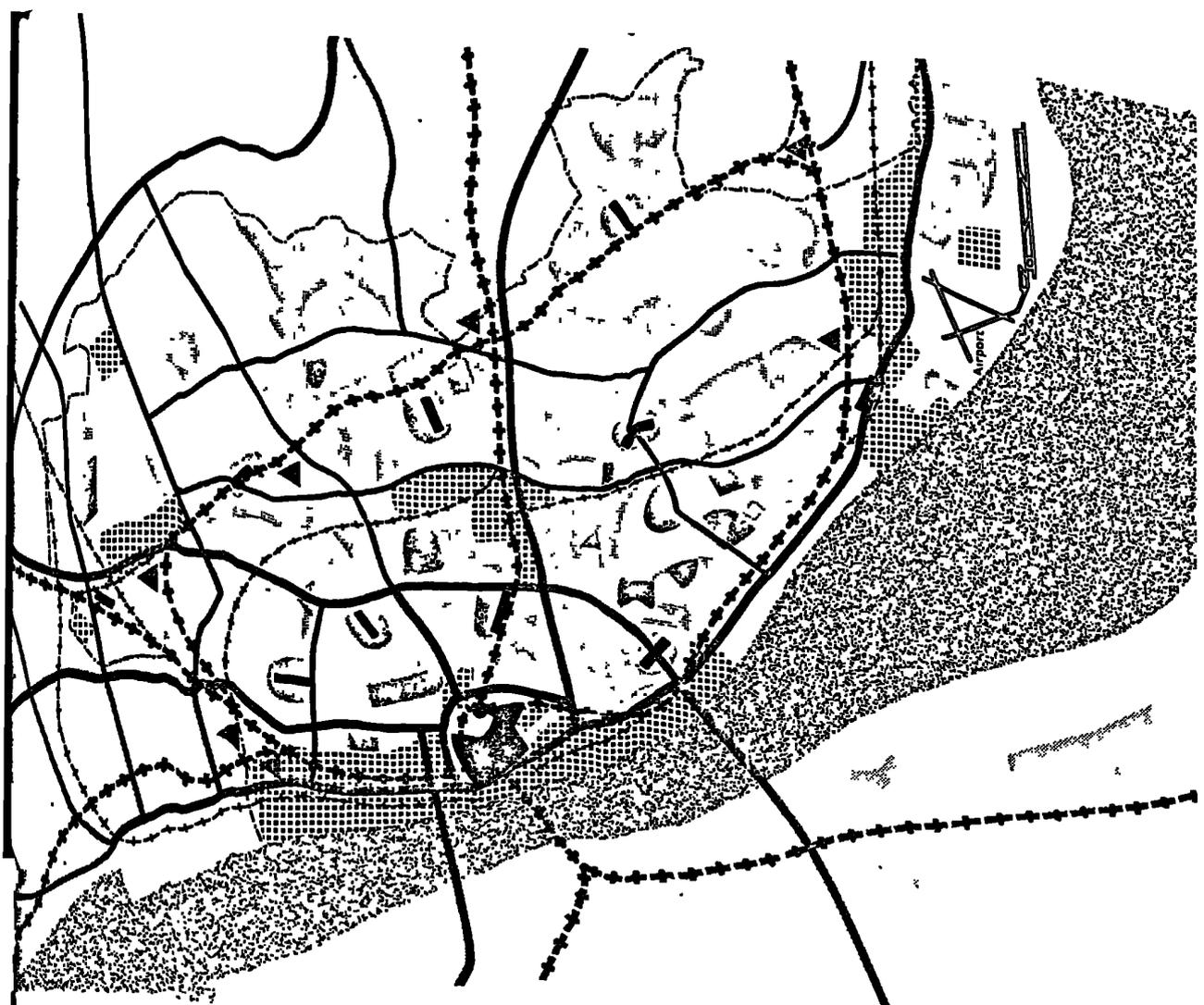
Each district centre would be multi-level with shopping, employment and deck housing at 375 ppha and over. The structure plan would include action area plans for each of the ten new clusters of work and home.

Behind this new type of city there lay a desire for an end to the imposed tree-like simple hierarchy of land use and transportation found in the premodernist and modernist master plans. Walter Bar noted in 1966:

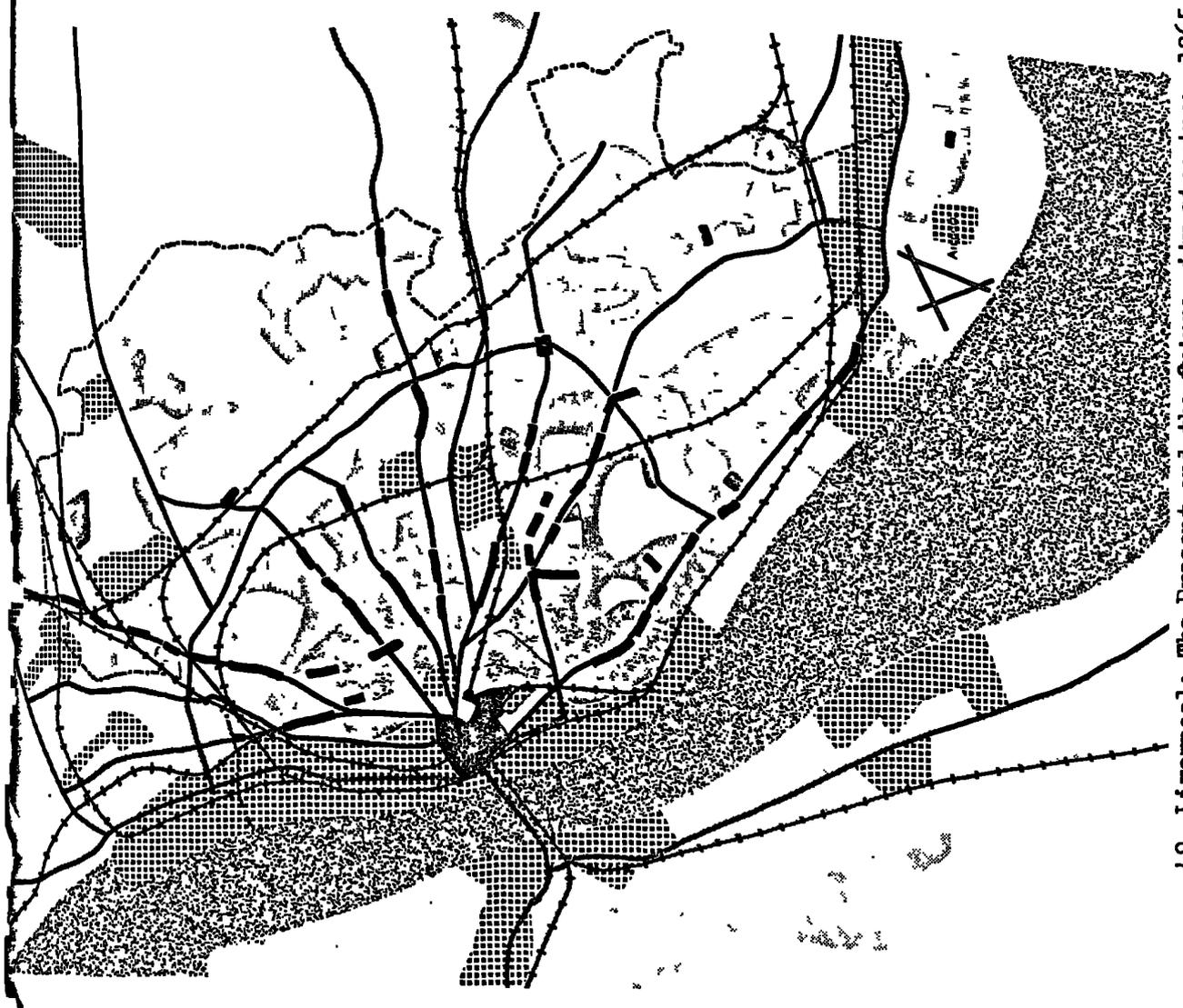


48. Proposals for Rotherham Town Centre, 1965

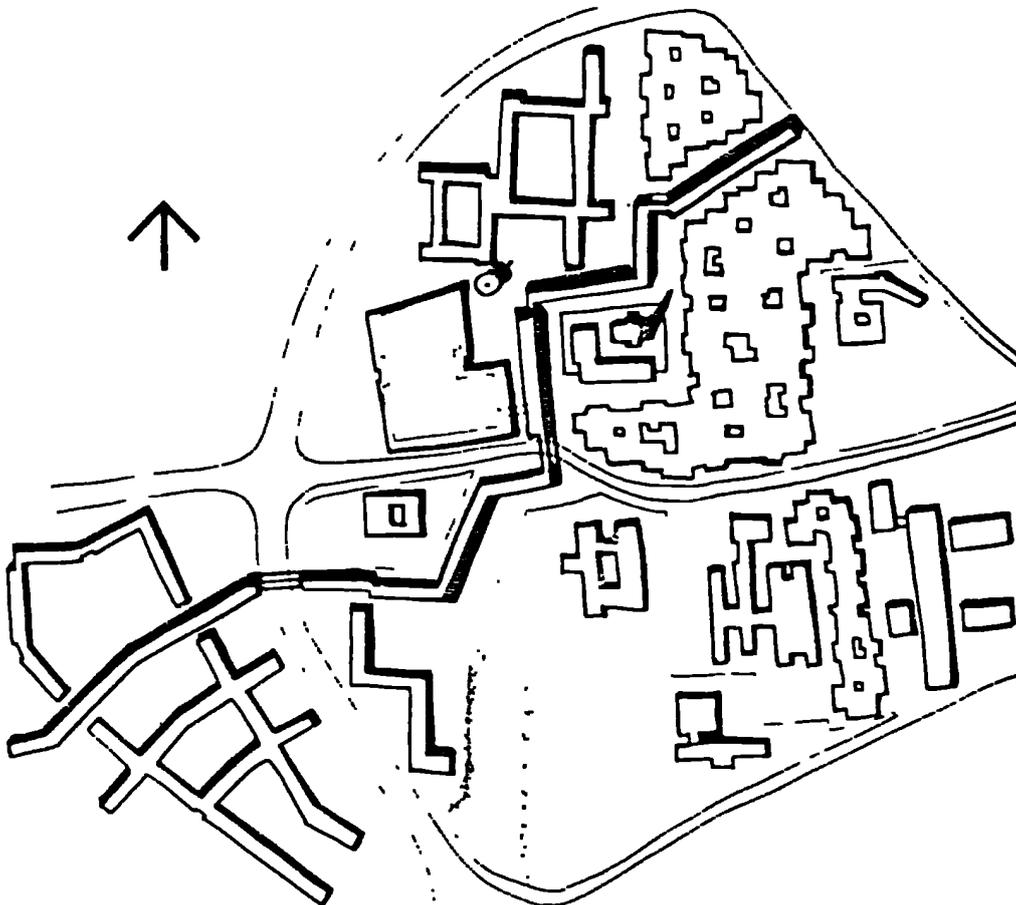
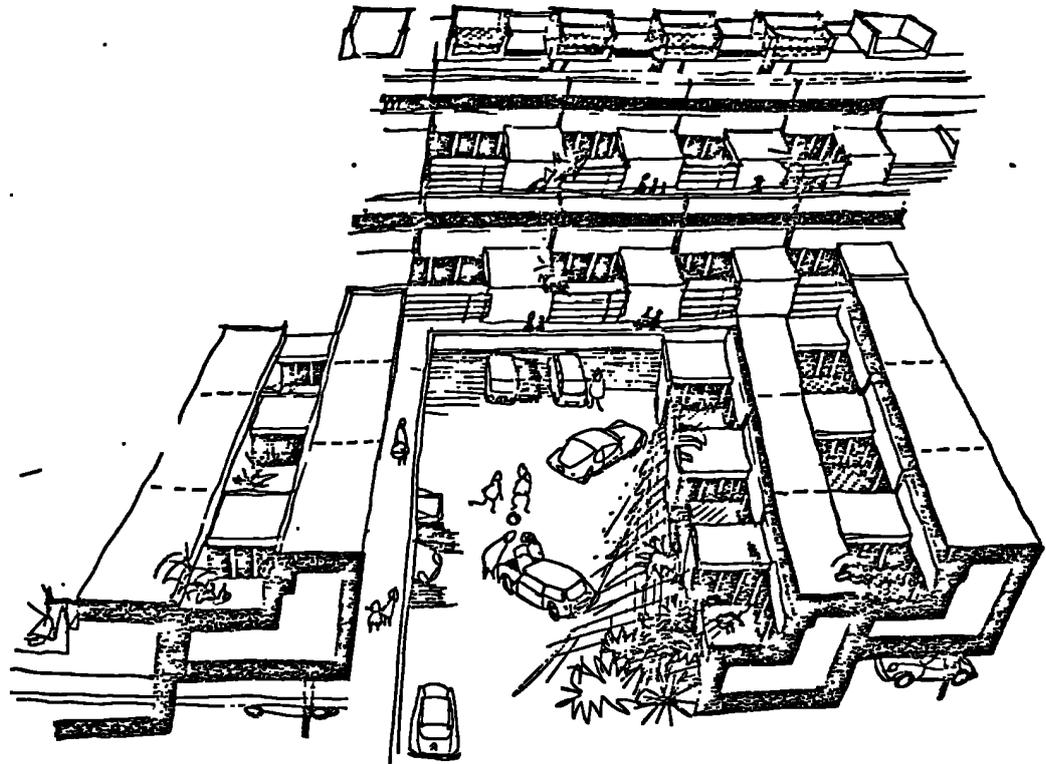
Source: Rotherham Central Area Redevelopment Town Centre Map 1966



(The future city structure, above)



49. Liverpool: The Present and the future city structure, 1965
Source: Interim Planning Policy Statement 1965



50. Liverpool: Proposals of deck access housing in the future city
General model (top), deck access spine in the Queens Road Action
Area Plan, 1966

"I think we may still be insufficiently aware of the complexity, particularly in social terms, for which we must plan to provide the physical conditions which would optimise the freedom of choice and the richness of life. In simple terms this means an approach to planning which not only does not attempt to prescribe everything - however well meaning - that is plannable, but positively provides the fullest scope of foreseeable and unforeseeable opportunities which will not fall into the neat pattern we may have in mind with our perhaps over-orderly and somewhat clinical approach. Jane Jacobs tried to convey some of this thinking in her book, The Death and Life of Great American Cities, but failed to convince fully many of us, partly I think because of her highly subjective and emotional approach.

Christopher Alexander in his essay, 'A city is not a tree'..... puts the Jane Jacobs approach on a rational basis and argues cogently against the hierarchical tree structure which planners almost invariably give to new towns." (18)

The same desire to work with the market and with the current progress of rational scientific argument so as to achieve a picturesque "organised complexity" can be found in the two other outstanding plans for deck housing. These were the cleared sites of Manchester (other than Hulme) redesigned by the local authorities Housing Development Group, and the largest vacant site in London at Erith, redesigned by the GLC as the new town within the capital, Thamesmead. Almost contemporary with these urban designs similar would-be "open-ended" but less "urban" plans were being devised for South Hampshire (by Colin Buchanan and Partners), for Warrington New Town (by Llewellyn Davies and Partners) and, most spectacular of all, Milton Keynes new town. None of these contained proposals for deck housing.

The national pattern of streets-in-the-sky estates reveals that, in terms of English economic planning regions, relatively little was built in the West Midlands, South West or the South East around London, while a similar small percentage of the total multi-storey housing was constructed in Wales, Scotland and Northern Ireland.

Within regions, very little or none at all is present in Teesside, Tyneside, West Yorkshire - because none was built in Bradford - or South Wales. Within London no deck housing was undertaken by three inner area boroughs, Newham, Wandsworth and Merton. The first, like the West Midlands and central Scotland chose to use mixed development schemes with a dominant role for the tower block, while the latter two, like Newcastle and Gateshead on Tyneside built large internal street or corridor multi-storey estates.

Overall deck housing was to be concentrated in many of the county boroughs of the North West, Yorkshire and Humberside and East Midlands economic planning regions, several of the urban district councils of the North East and most of the London boroughs.

1964-70: The New Deck Housing

The desire to, as Bar put it, "optimise the freedom of choice and the richness of life", reflected back upon the model estate of Park Hill. In an influential evaluation of modern housing by the AR in November 1967, a scientific justification was found for rejecting the honest "brutalist" character of the Sheffield scheme; New Brutalism one should note, had been declared defunct by Banham the year before (19) acknowledged by the Smithsons a few months later (20)

The new interpretation of Park Hill for the journal (actually by Nicolas Taylor (21) suggested that the scheme was a remarkable example of the achievements of "community building" in the 1950's. This did not, however, offset its serious architectural limitations. Apparently, Mrs. Demers scientifically based social survey found, for example, that the most frequently volunteered reason for approval of the decks was not "sociological" but that they were dry (34 per cent) sheltered (31 per cent) and made it possible to "walk under cover from one end of the estate to the other" (11 per cent). Furthermore:

"only 9 per cent mentioned the value of being able to stand on the decks and look at the view - the decks are always on the shady side of the block and thus are permanently dingy - and only 4 per cent remembered that the decks made it possible to stand out and talk to people. This discounts a good deal of romantic nonsense about the decks being a hive of activity; as any visitor knows, they are not.

This may partly be because there is a lack of "doorstep space". The individual homes are identified on the decks only by door and doormat, there is no attempt to recess them irregularly within the framework. The deck itself turns corners and crosses from one side of the block to the other, but that is all the individuality there is.

Functionally, there is a shortage of space for the hobbies, equipment and dry rubbish usually stored in a porch. Seventy per cent of the residents commented unfavourably to Mrs. Demers on the external appearance of Park Hill and some emphasised that it gave a false impression of the excellent internal quality of their homes. On such a vast scale 'regularity' has produced an undeniable feeling of living in a barracks".

And there were other drawbacks:

"The major problem is its uncertain vertical circulation. The thirteen passenger lifts and three goods lifts, although cleaned daily, are frequently dirty and out of action; and so great are the delays that many people do not bother to wait for them."

The only attractive feature of the estate was to be found at ground level.

Only here:

"does the grimy concrete come to life; pubs and shops are slotted irregularly into the frame, with exactly the right balance between its fixed anonymity and the changeable individualism of their tenant's own choice of facias and fittings". (22)

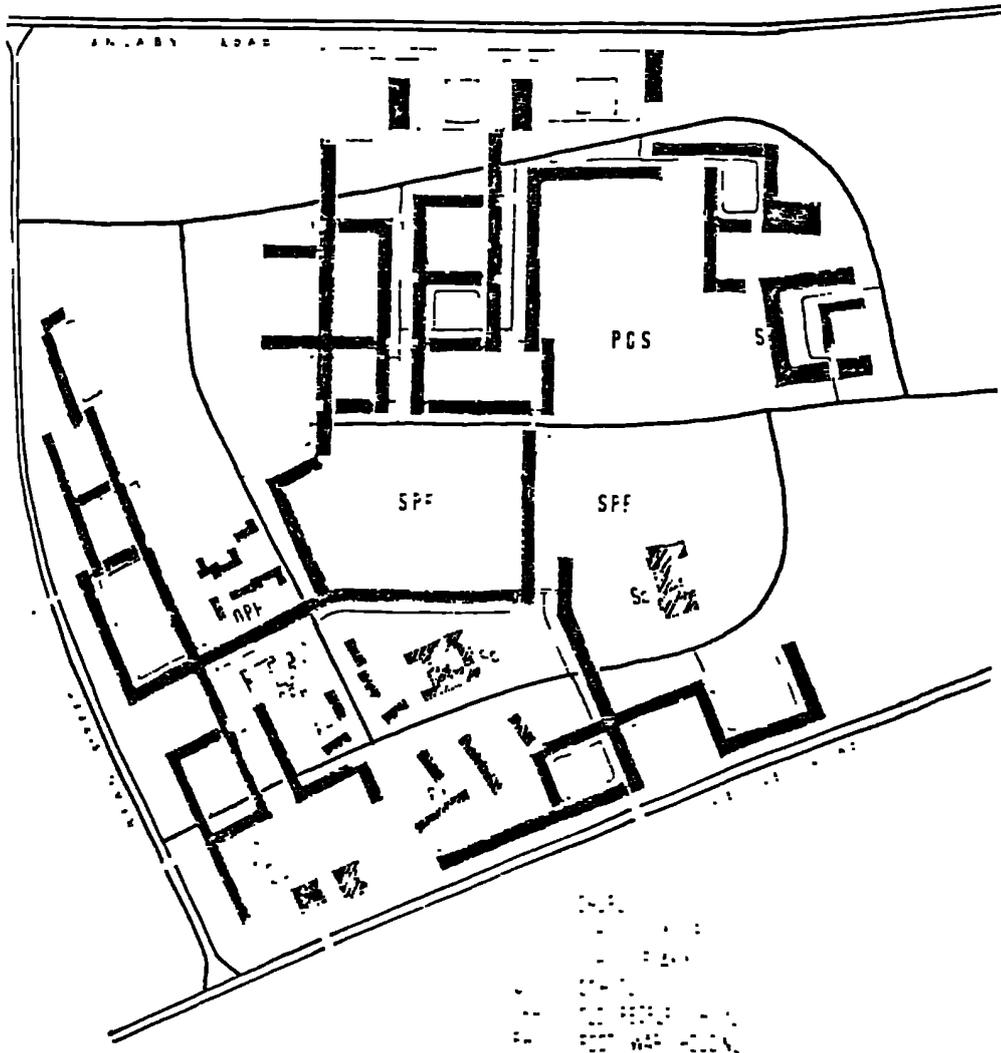
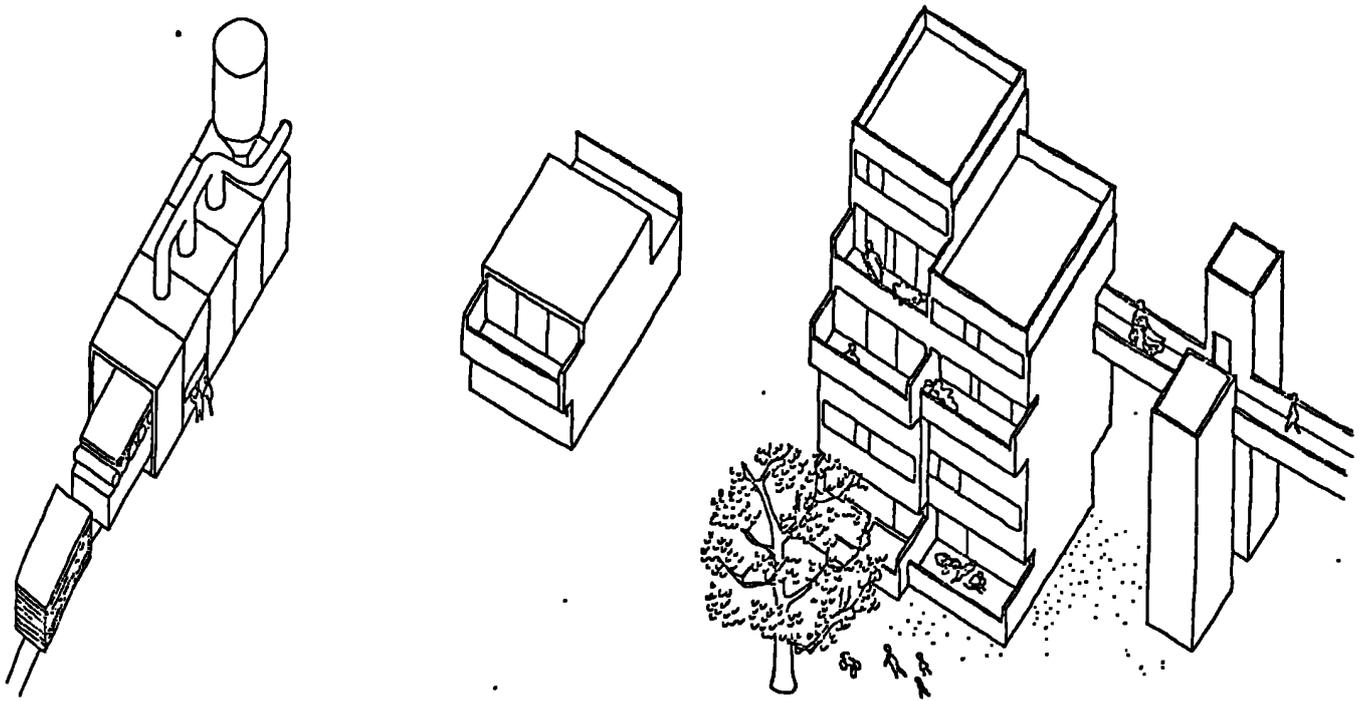
Here, almost overnight, expert opinion decided that the street-decks of Park Hill no longer provided for a valid type of community life, the blocks gave no sense of individuality, the elevations were ugly and the system of pedestrian circulation inefficient. The whole estate was far from satisfactory.

The remarkable fact about this new interpretation was not that it reflected what many people considered to be true - as evidenced by the MHLG survey of tenants opinions conducted in 1967 (23) - or that it ignored the original intentions of the architects, whose ideals were compromised when the plans were implemented. Rather, it was remarkable because it used evidence which did not exist in order to support its claims. Mrs. Demer's survey contains none of the findings quoted above, if it had done it would have been impossible to conclude that the project was such a success story up until 1967.

The claims of the AR were used to support the picturesque, pro-market approach also found in particular at the Liverpool, Manchester, Thamesmead and Yorkshire Development Group projects. The editorial claimed that architects needed to take greater account of the demands and character of the local place and local community. Houses, it was suggested, used to be an integral part of the fabric of the town; now they were being separated out with disastrous consequences socially and visually. Preferences for a private rather than a public area of ground were being denied to tenants and possibilities for growth and change in the dwelling minimised. The architect must "learn to be less arrogant about what he thinks people ought to want". (24) The artistic aims of many professionals and the attempts to apply the simplistic formula of urbanity - high population density means community and diversity - were overriding the needs of the individual. More sensitive and detailed investigations into design had to be followed otherwise more slums would be built "in the next five years than in the past twenty". (25)

The three especially notable examples of a new type of deck housing were, as we have already noted, Thamesmead, Yorkshire Development group and Manchester's Housing Development group projects (Illus. 51-54) (p.156,158-160).

In the case of YDG, Martin Richardson, the architect in charge of the design of an especially flexible type of industrialised building, professed at the outset to being dissatisfied with the "illogic" behind the development of Roehampton mixed development - the variety of house types and materials with the lack of social significance in the design - and the overbearing logic of Park Hill where the individual "was too subordinate to the grand social and constructional organisation". (26) Richardson was so pleased with the results of his research that he stated: "Without false modesty, I believe that



51. Yorkshire Development Group: The basic principles (top) and the proposals for Hull, Area 17, 1964 (bottom)

Mark I (that is, the first YDG industrialised house building system) was a good candidate as a deckhousing volkswagen" (27) It could be used efficiently as a flat or shopping site, with a density range of 250 to 500 ppha, and provide a mixture of dwelling sizes varying from 1 to 6 persons, all up to full Parker Morris standards.

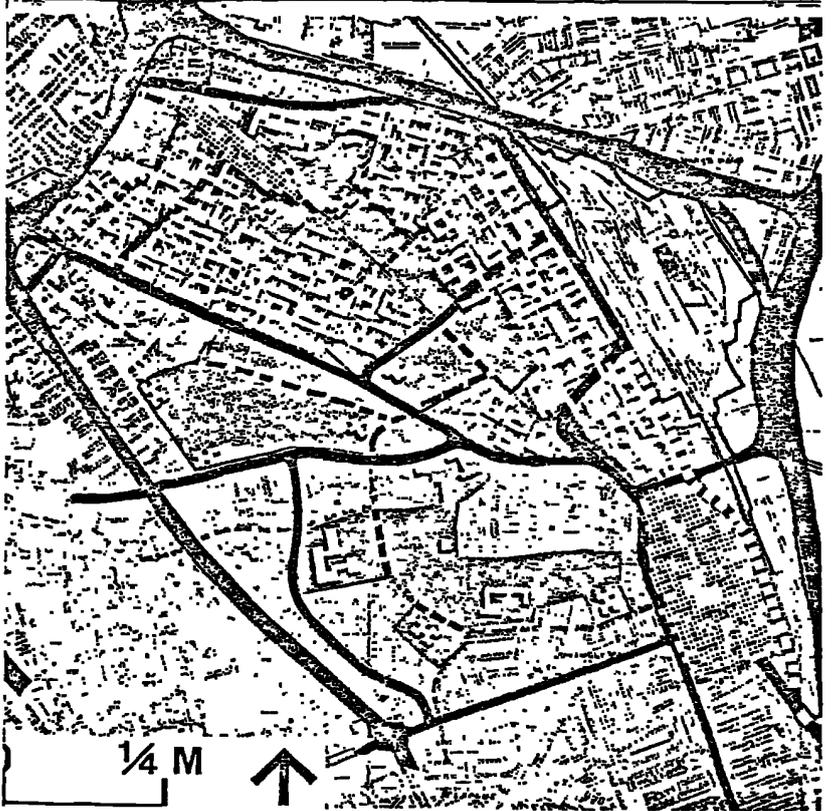
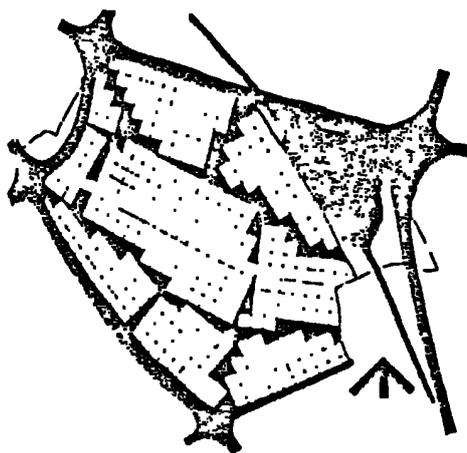
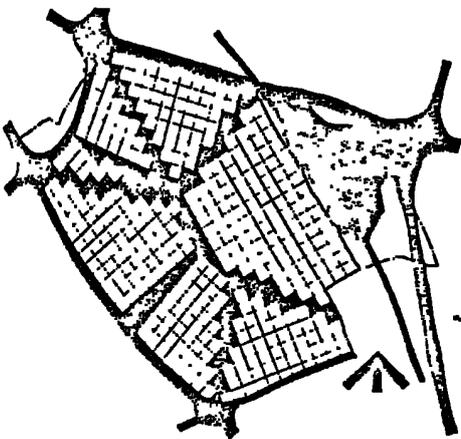
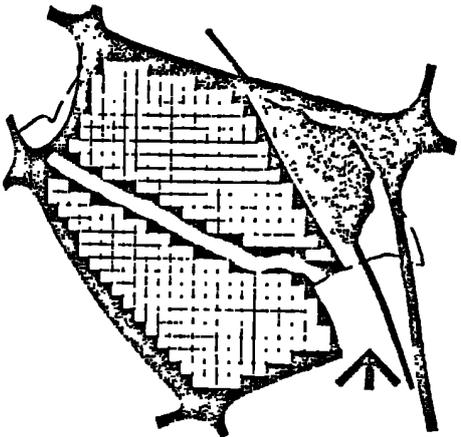
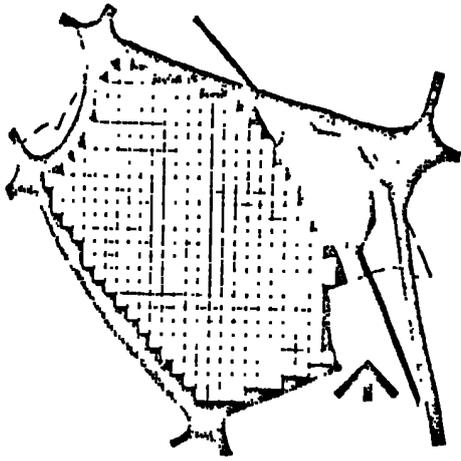
When the system came to be used by architects working for either Nottingham, Sheffield, Leeds or Hull, large scale projects were developed. The plan for Area 17, Hull (Illus. 51) was designed to cover one whole neighbourhood of the city, linking existing tower blocks to the North, via the upper level pedestrian system, with other housing areas on the other side of the main roads on two sides of the site. In the event only about one quarter of this proposal was completed with no such connections to the tower blocks or surrounding areas.

In Manchester in 1967 the Housing Department established the Housing Development group. Its task was to review and consider in greater depth the problems involved in comprehensive clearance and rebuilding. The outcome was a report called Urban Renewal in Manchester (28) Here ideas were put forward in the form of a general theory applicable to any urban renewal project.

The aim was to specify "precepts" which were flexible enough not to restrict attempts to return to the cleared site some of the "organic city form" which had previously existed. The area must be free to evolve an intricate and humane environment.

Two sets of precepts were established: those relating to the built form and those relating to the layout. The former included, for example: "city environment means concentration", "multi-level living is now necessary in the city" and "upper level living should be as attractive as ground level living". And in regard to the dwelling there were such precepts as "every dwelling at every level must have a private open space of room size", "individual dwelling identity is essential" and "architecture must allow individual expression". Other form precepts included those relating to focal points and pathways of one sort or another which would aid the identification of an area.

The layout precepts were to be used to link architecture to site constraints, so that each irregular shaped site could develop a distinctive and complex environment. The theory therefore began with the precept that there was no reason why a rectangular or regular shaped site should not be developed with a perfectly ordered grid system. Internal structure would be "generated from the shape of the area and the elements of city structure building or passing through it". The city wide transport system, in particular, would provide the "structure" or "shape" of the site. What was called the "grain" was the size of the grid system and its directional quality (horizontal and vertical



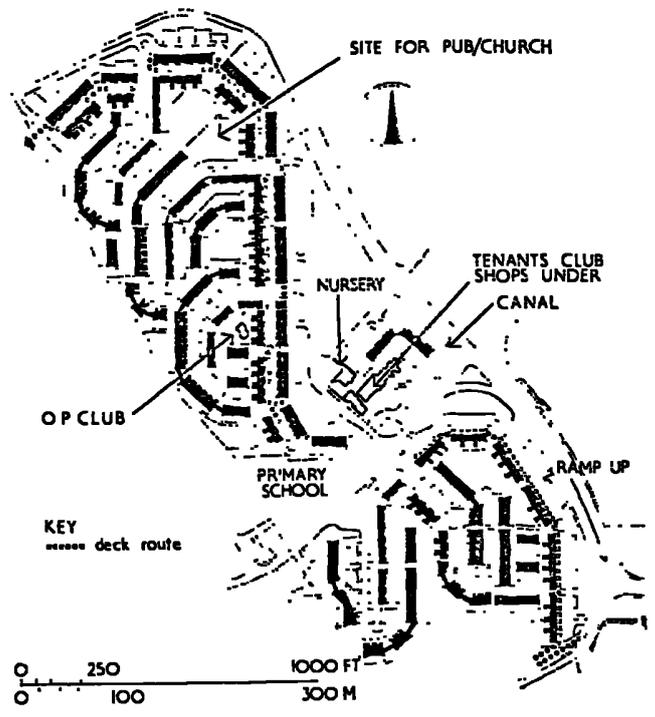
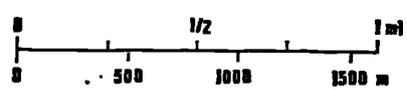
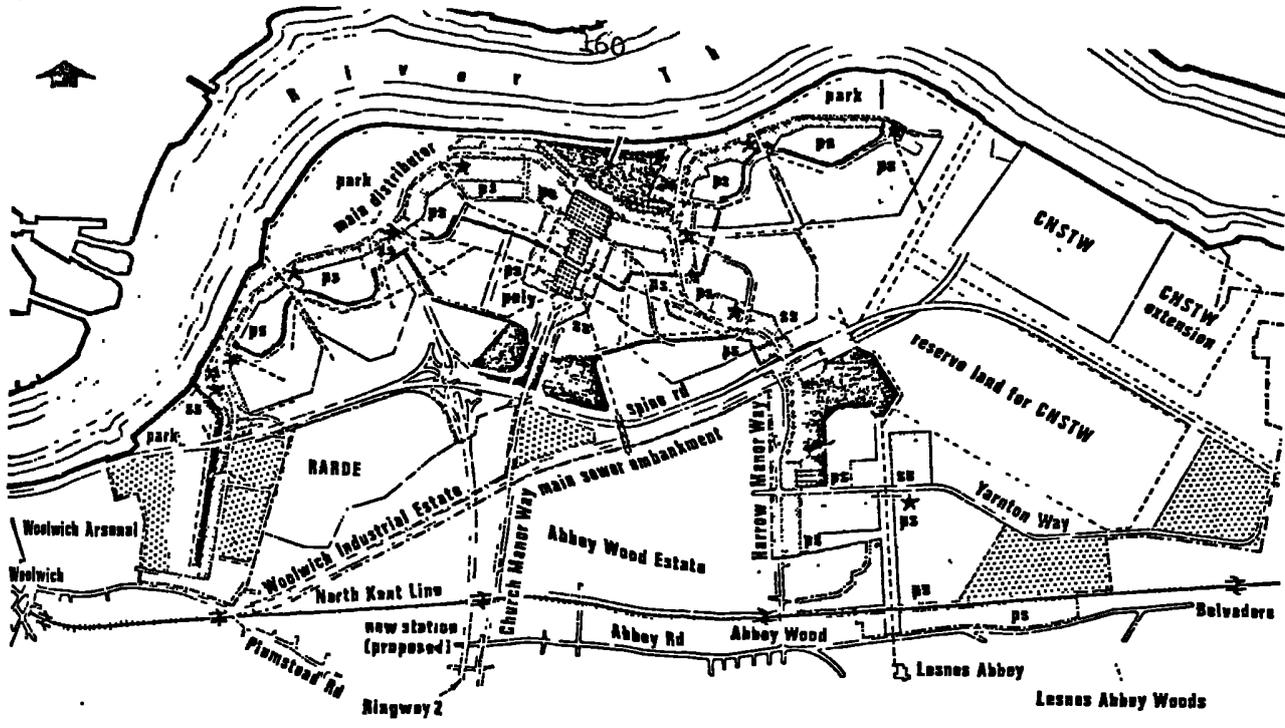
52. Principles from Urban Renewal in Manchester 1967 (1)

Left: Fitting the grid to an irregular shaped site

Above: Before and after re-design



53. Principles from Urban Renewal in Manchester 1967 (2)
From design (top) to proposals (bottom)



54. Thamesmead: Plan, model and plan of phase III.
 Source: Architects' Journal
 October 1972

in the example of a square or rectangular site). The problem was to find a grid system that could "fit" into an irregular shaped site and provide a guide to layout. The answer was to use pieces of grid of various sizes and arrange them in the site area so that no "discordant" areas appeared at the edges and in the centre (Illus 52) (p.158) Instead each piece of grid should be as near as possible parallel with the "structure" of the site (i.e. its edges) and interesting and useful spaces or "feathers" left in the spaces between the grid pieces. In other words, given a "clean sheet" but one with particular irregular characteristics, the task was to divide it up into regular pieces on which the architect could begin his design work (Illus.53) (p.159)

The housing form which somehow followed from this general theory was a mixture of deck housing and a variety of low rise designs. The former was placed on the outside of the site either in the form of a "barrier block", a "route and cluster block" (joining up with various community facilities) and "spur blocks" (a barrier block with building spurs off it into the centre of the site). The three schemes proposed for the city corresponded to each of these "models" that is, the Gibson street estate at Langsight, the Wellington Street estate at Beswick and the Turkey Lane estate at Harpurley respectively

The related idea of greater "public participation" in the planning process had been counselled since the report of the Planning Advisory Group in 1965 (29). Also, a similar criticism, that of "architectural determinism" was being voiced by sociologists in the late 1960's. Maurice Broady, working sometimes at the Architectural Association - where deck housing was again popular (30) - defined this apparent misconception of the determinants of human behaviour.

In 1966 he decried the idea of developing community life for working class areas by attempting to simply reproduce the street associated with the worthwhile culture of the slums. Architects could not determine social activities by simply relying upon the physical environment. He stated:

"Of much more importance in explaining neighbourliness are the social facts, first, that the people who lived in the slums had often lived in the same street for several generations and thus had long-standing contacts with their neighbours and kin, and second, that people who suffer economic hardship are prone to bond together for mutual help and protection. It is true that neighbourliness is induced by environmental factors. Of these, however, the most relevant are social and economic rather than physical". (31)

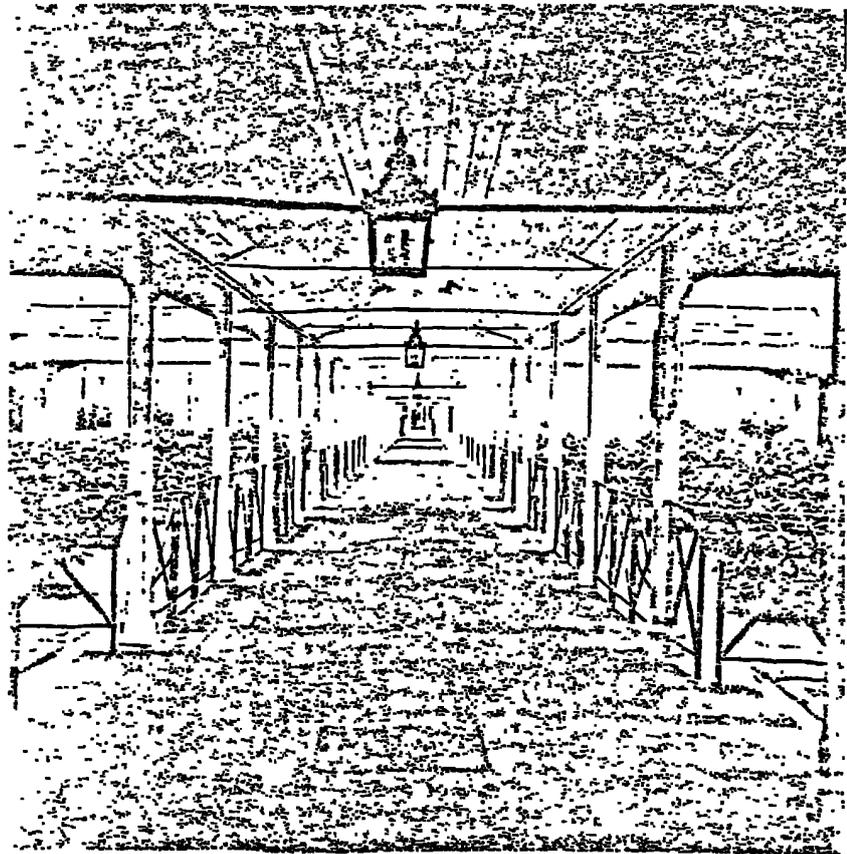
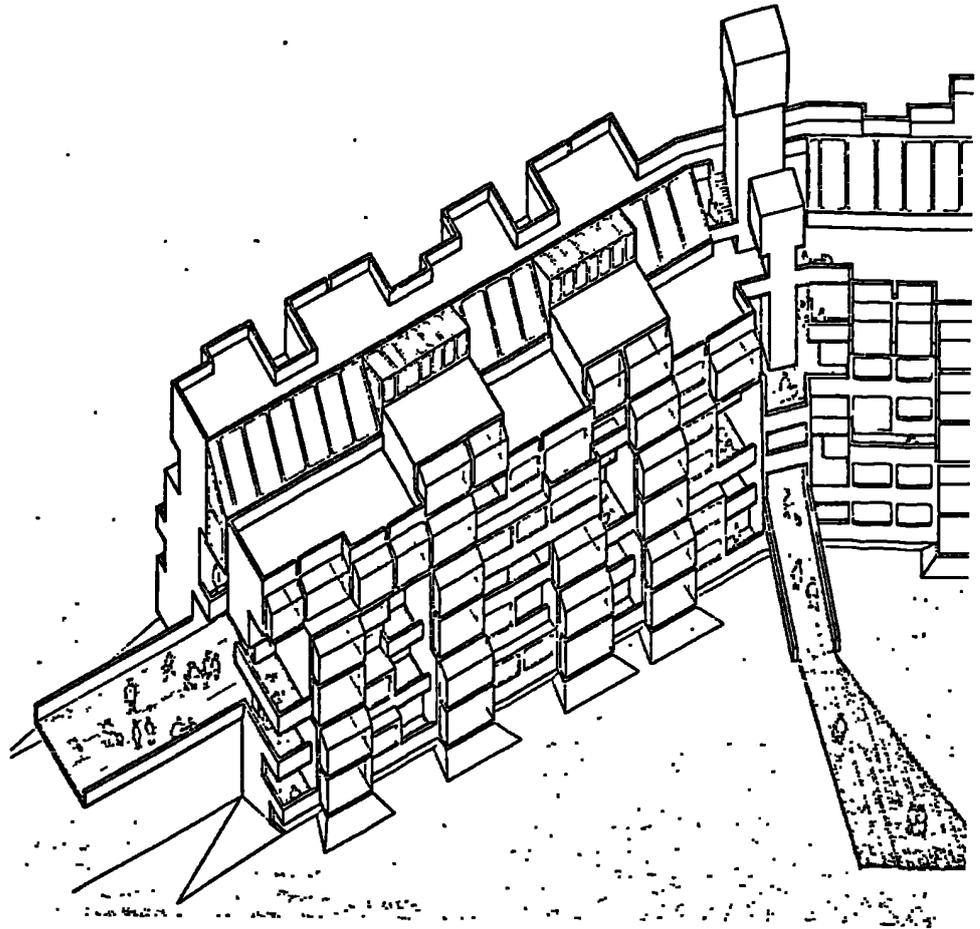
The idea of recapturing or even returning a community to its own patch in new streets-in-the-sky was, by inference, no longer valid in itself, (although in the case of Park Hill there was never any such simplistic plan of relying completely on the form of the building). Broady continued by citing, presumably with greater accuracy than A.R. a similar survey to that undertaken at Park Hill. This was an unpublished study undertaken by the Institute of Community Studies also in the early 1960's of the Cluster Blocks in Bethnal Green. He notes:

"Conversely, social intercourse, if deeply rooted, may continue in the teeth of architectural disincentives. The Institute of Community Studies, for instance, in a study of tenant reaction to four contrasting types of housing in the East End of London, found that the people who felt most out of from their neighbours and who considered that the layout of the building made it particularly difficult to keep in touch with other tenants, were the residents of Denys Lasdun's cluster block, but that these same tenants were nevertheless much more sociable than the residents of the other types of building. The reason had to do with their social background. For most of them had previously lived in one of the most gregarious tenements in the district and they simply carried on these social activities".(32)

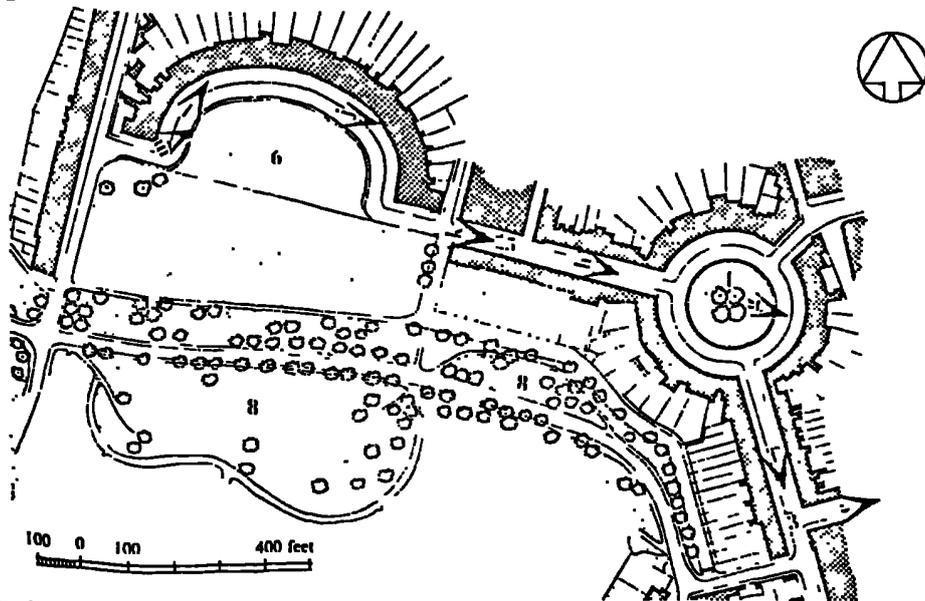
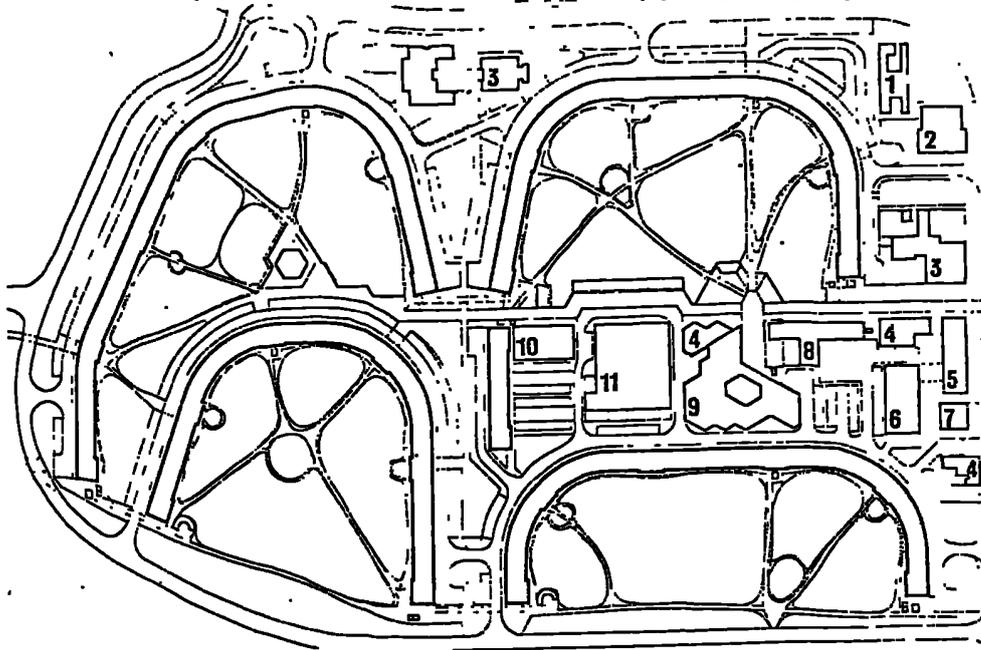
A similar inference may well have been made at this time to explain the initial success of Park Hill.

It was in this mixture of new ideas and values from architecture, planning and sociology that a new style was followed in the design of deck housing. As we have already noted, this was one of a planned picturesqueness and complexity, suggestive of an historically evolving individuality and adaptation of the environment. The most obvious way of incorporating a greater appreciation of "user needs" was to use plenty of brick, landscaping and variety in the built form. Darbo and Darke's Lillington Street estate - 525 ppha, a maximum of eight storeys and 60 percent of dwellings with their own front garden or patio (33) - which epitomised the new vision of ideal high density housing but was basically gallery access was, so to speak, joined with the deck access of Park Hill. Other popular models of the new style were the Spangen estate, the centrepiece of Expo' 67 - Habitat '67 (34) and the mediaeval Chester Rows. In the latter case the contrast between the modern form and the original could be rather striking (Illus 57) (p. 165) The upper level streets in Chester were not for residential but commercial use, did not go above the first floor and had a constant variety from one to the next by virtue of the individuality of each building, its ornamentation and overall design. Here the 'part' really was distinct within, but still contributed to the 'whole' street. All the Rows had changed gradually over time while retaining the basic unifying structure, the upper level deck. When building firms and architects developed estates such as Netherley (constructed partly by Unit Construction Co. Ltd.) the contrast was even more striking. (see Illus. 58) (p. 189).

A different model, and one whose limited success led to a search for a greater variety in built form, was Georgian architecture and planning. The squares and crescents of Edinburgh, Bath and London were a direct inspiration to a large number of schemes, especially in the former case, to the many courtyard layouts used for deck housing. The mixture of 'machine-like' finish, that is, not a Brutalist aesthetic and generous landscaping, formed a type of



55. Fulham study (above) and Albany, Piccadilly, pedestrian covered way.
Source: Theo Crosby, City Sense 1965



56. Georgian Model: Hulme 5 and Crescent and Circle at Bath.

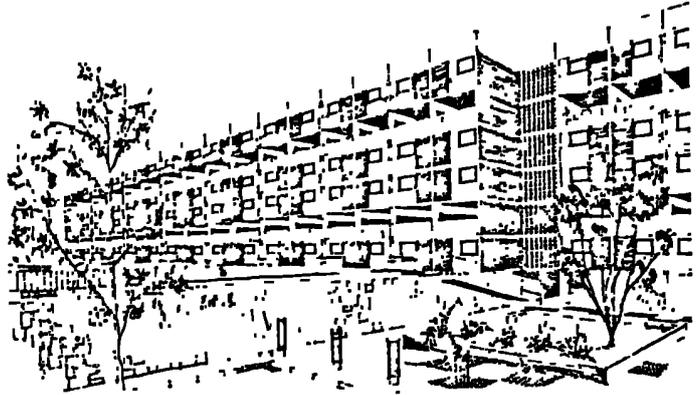
Source: Architectural Review, Jan. 1969

Unit System Mid-Rise

A Middle Ages idea for better living

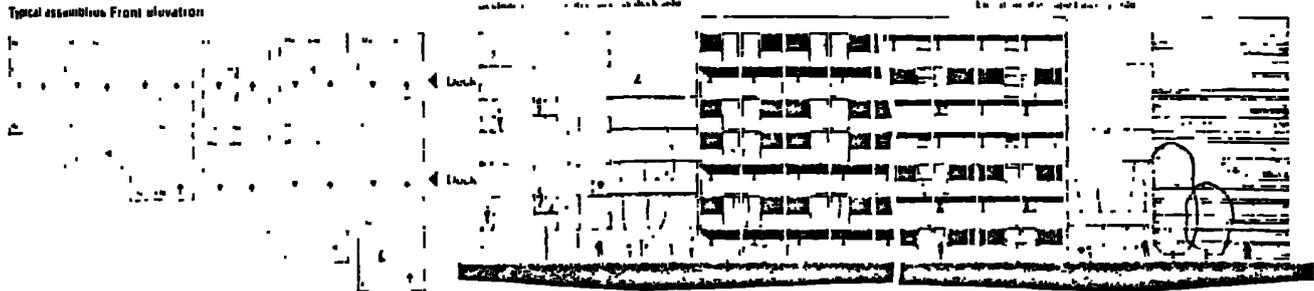
Anyone who has ever walked the medieval first floor-level streets of Chester will see where we drew our inspiration for Unit Mid-Rise. A wide access deck is the principal design feature of the 4 to 7 storey groups of flats and maisonettes. Separating people from cars, this elevated street takes prams and small vehicles such as milk floats—forms a place for neighbours to gossip, for children to play.

What does Mid-Rise offer? The high densities of multi-storey flats. A closer community environment than in high flats where each tower is an island, friendlier than traditional 2 storey developments where individual houses and gardens promote insularity. Highly suitable, too, for sloping and irregular sites.



Package deal service for local authorities: everything from site design to construction and landscaping. Write today for data sheets.

Typical assemblies Front elevation



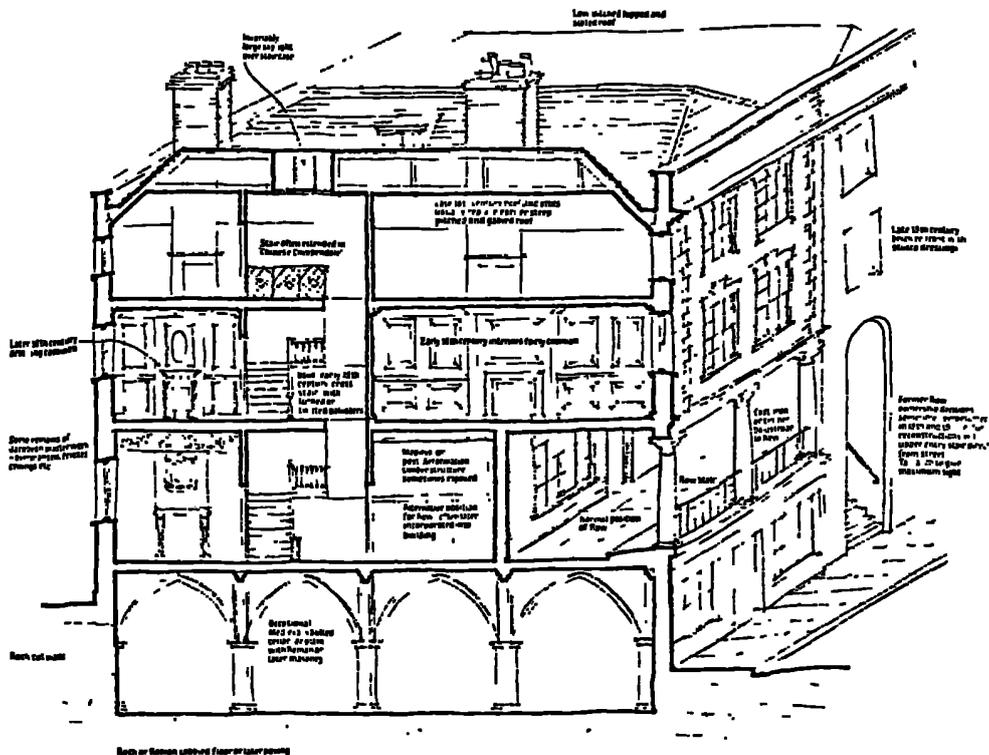
UNIT

Construction Co Ltd

Projects Director 46-48 Mount Pleasant Liverpool 3



an Alfred South Company



57. Medieval Model: The Rows at Chester.

Source: Official Architecture and Planning Sept. 1968 (top) and MHLG Chester: A Study in Conservation HMSO 1968

cultural modernist" image. Notable examples were the '12M Jespersen' estate following on from the Oldham experiment, Fulham Study, White City project in Hammersmith, the Lisson Green estate in Westminster, the Southgate scheme in Runcorn and the Robin Hood Gardens estate.

Perhaps the largest and best known area to attempt to continue the tradition of Georgian quality and accomplishment was Hulme. Here the 12M Jespersen blocks were arranged in approximate squares, and while the Hulme 5 crescents followed the example of 18th century urban planning. The consultants report stated:

"We feel that the analogy we have made with Georgian London and Bath is excitingly valid. By the use of similar shapes and proportions, large scale building groups and open spaces, and, above all, by skilful landscaping and extensive tree planting, it is our endeavour to achieve at Hulme, a solution to the problem of 20th century urban living which would be the equivalent in quality of that reached for the requirements of the 18th century in Bristol and Bath". (35)

Here the aesthetic interest of architecture had blinded the designers to the difference in quality between the middle and upper class stone built residences of Bath and the public housing at Hulme; a theme which also ran through the picturesque aesthetic associated with the wealthy shops which made up the Chester Rows.

There was one crucial difference, other than in the quality, between Georgian housing and the deckhousing of the late 1960's - access. The economies underlying the provision of an upper level deck denied residents the freedom of movement associated with the ground level access of the wealthy housing areas. No amount of sociological justification could hide the basic inequality. The analogy with the working class street behind the building of Park Hill had been replaced by a very different model which was even less realistic and valid than the original.

1964-70: Opposition to the tower block

In general most deck housing schemes of the late 1960's were designed in deliberate reaction against the tower block. That is, they were a technical alteration to building form undertaken to answer the shortage of satisfactory accommodation for working class families, and especially the inadequate provision for children's play. The idea of the street-in-the-sky was valid from this sociological perspective, if it was not devalued and abused. As the AR noted in its 1967 critical review of modern housing:

"Children's play is a major reason for having as many houses as possible at ground level. It is possible that 'street decks' at an upper level could be satisfactory for toddlers, particularly if a whole floor in a tall block could be filled up as a supervised playground. But many so called deck schemes have merely narrow access balconies dressed up under the fashionable past Park Hill name. There is much work to be done on decks;

to give good aspect to the houses they tend to be on the north side and to be environmentally just as bleak as the no-man's land of the ground floor lift hall, with its fierce gusts of waste paper". (36)

The reaction against the tower block was especially typical of many of the women involved in urban planning and housing (37) - what Dunleavy calls the "child's lobby". In 1967 Jane Drew, for example, called for a new policy which put families and their needs at the top of the list of priorities" (38). And in the following year one suggested that the problem of high rise living lay in "relating accommodation to the needs of differing categories of tenants". (39) The correct high rise for families was deck housing:

"There is no doubt that an ideal high block of flats would be based on the philosophy behind Habitat in Canada - each flat would have its own terrace or garden formed on the roof of another flat and protected both for security and weather reasons. High flats would interconnect by raised walkways and would connect with pedestrian shopping areas.

Several little moves have been made in this direction: the well-known solution at Sheffield by Lewis Womersley with its interior "streets" on alternate floors; the excellent landscaping on top of garages at Lillington street housing estate by Darbonne and Darke, and the World's End scheme at Chdsea by Eric Lyons". (40)

Pearl Jephcott's famous study Homes in High Flats published in 1971 following research between 1966 and 1969 concludes on a similar theme. And this conclusion is reinforced by a small study, included in the book, comparing the experiences of small households in tall flats and deck housing - the Balgrayhill estate - opened in May 1968. The study found that "six of the twenty households in the flats, but only one of the ten in the deck access homes had not yet made any friend on the estate" (41). Those in the deck housing:

"consistently agreed that it was a place where you met folks. The other set referred to the peacefulness of their high flats but the very absence of sound made them feel cut off. They also said they lacked the casual sight of known faces, whereas the deck access people did not refer to this". (42)

Evidence could still be found, therefore, for the social value of the street-deck form. At the close of the 1960's architects, planners and sociologists were still preoccupied with the idea of deck housing albeit in an uncoordinated manner. In 1969 Maxwell Fry could seriously represent Park Hill to his fellow professionals in the following rather sentimental fashion:

"Park Hill was thought of, you might say, by Gropius and Le Corbusier, and the MARS Group, and by Ruskin and Morris, and by Blaks, for there has hovered above all movements of reform in England, the haunting possibility of " a new Jerusalem in England...." Thus you may see the process of architectural creation exemplifying itself in a series of unified conceptions, each gathering a wide conspectus of contemporary events into a work of art with enduring

elements, and not finite or closed, but rather offering itself to be fertilised further in works that gather new events in new circumstances". (43)

Thus while deck housing was widely publicised in the journals and textbooks of the second half of the 1960's, was being built by the most important local authorities in the country and was, in the last resort, the only logical outcome of the accepted planning principles of the period, what was the response of central government? Did it attempt to encourage and coordinate an otherwise piecemeal planning process?

1964-70: Central Government Initiatives

In 1966 H.Whitefield Lewis, Chief Architect at the MHLG, could record the growing popularity of deck housing as a solution to the problem of high car ownership and pedestrian vehicle segregation in urban housing areas. He noted:

"The problems are much more acute at higher densities where the car takes a greater and greater toll of space on the ground for movement and parking. There is a general move towards the conception of the street-in-the-air or deck access principle, first used on a big scale by Lewis Womersley at Park Hill, Sheffield" (44)

The following year Lewis noted that Park Hill was designed when one hundred per cent car provision was hardly a thought, let alone a reality, "and at 200 ppa the solution to the additional problem of 50-60 cars per acre, probably would have used a rather different scheme". (45) There was a need for the Ministry to undertake a detailed study of the practicality and suitability of deck housing:

"This is an investigation, in some depth, of layout in density bands over 80 ppa, taking into account the recent trends towards high density, medium rise housing using access decks and other multi-level modes of pedestrian vehicle segregation. The need for this study arose sharply at the end of 1965 out of the increasing number of unusual schemes submitted to us for approval". (45)

The investigation would include tenant reaction and costs:

"Cost benefit studies are needed to show whether some of the claimed advantages, achieved often by a high degree of complication, and therefore cost, are worth it in terms of overall user satisfaction i.e. satisfaction with both the dwelling and the environment". (47)

Such a study never materialised. What did appear were various investigations of design in relation to costs (. . . and a separate study of tenant reactions at Park Hill and other high density estates by the MHLG Research and Development Group. This was later published in two reports, the most comprehensive appearing in 1972 as Design Bulletin No. 25 under the title "The Estate outside the Dwelling".

The findings of this report suggested that the most important factor with regard to "user satisfaction" was the management of the estate and not the design, that term including density, building form, living on or off the

ground and problems with children's play. And yet when the survey was started in 1967:

"it was thought that building form, defined in terms of access type, would prove to be a major determinant of satisfaction, and the estates were selected to provide evidence about some of the forms in most common use - houses, deck and balcony access blocks, point blocks and internal corridor blocks". (48)

However, judging by the results:

"No type of building form, whether houses or multi-storey blocks, high or low, emerged as being generally more satisfactory than any other. Housewives in any one type of building form were not more often lonely or nervous, nor did they have greater problems with their children's play, nor did they more frequently wish to move out". (49)

The report does, however, qualify their conclusion by noting that, "it is preferable for families with young children to live on the ground, and that:

"subsequent surveys, however, have shown that the play problem gets worse as density increases and that the problem is most acute in building forms with internal access arrangements and least in dwellings on the ground". (50)

There was, therefore, a disagreement within central government which did not appear so forcefully at the local level. Some evidence was found, through interviews, that housing managers in, for example, Leeds, Liverpool and Sunderland, resisted the City Architects and ~~Manning~~ Officer's attempts to implement plans for deck housing. This was due to what were effectively, the tenants representative in the bureaucracy, insisting on people's preference for the freedom of ground level movement; being confined to an upper level street, especially over long distances, was considered an unpopular design feature.

Thus, in the second half of the 1960's while on the one hand deck housing appears to have been the unchallenged model for urban multi-storey housing, on the other hand, no cost benefit analysis or overall plan was produced to guide or encourage its development. At no time, therefore, in spite of the professional consensus created in the early 1960's by Park Hill, and in the second half of the decade by the new picturesque Park Hill combination, was the idea of streets-in-the-sky given a coordinated and rational basis for development

The rather Utopian character of its development in the second half of the 1960's is therefore, undeniable. From the "freedom" and democracy associated with the radical social and economic change behind the "cluster city" idea, through the false data presented in order to discredit Park Hill, to the analogy between working class housing and the quality of environment associated with the Chester Rows and the crescents and squares of Georgian Britain, there was very little contact with the society which would in the 1970's, reject the whole idea of streets-in-the-sky. Aesthetic interests seemed to have

obscured social, economic and political realities. And the attempt to reach "reality" and be non-utopian only led to a contradictory, that is, impossible, compromise with the market and with history. The ideas of Jane Jacobs and Christopher Alexander were contrary to the whole notion of comprehensive planning. Any attempt to use their scientifically and historically justified ideas to place urban planning on a sound and legitimate footing could only lead to failure, while the master plan was still, effectively, being produced by the expert professionals. In the 1970's another attempt would be made to legitimate the practice of planned urban renewal, this time in response to widespread public criticism and not an abstract modernist or Brutalist conception of "reality".

The Emergence of Postmodernism

In the late 1960's and early 1970's many of the academics behind the 1950's social and architectural critiques formed an "Open Group". The basic aim of the group, which included Reyner Banham and Peter Wilmott, amongst its members, was to oppose the unnecessary extremes of bureaucracy and planning. It was, in many respects, simply a continuation of their original ideas (51). At the same time the so called "Counter Culture" had effectively presented a critical voice regarding the ways and means of the establishment. Such writers as Sennett, Rosak, Illich, Goodman and Lens-Romeiss concentrated upon the ills of the over-planned city (52). Sociologists also began to take a more questioning position vis a vis urban planning and the progress of comprehensive clearance and rebuilding (53) while new cultural studies, such as those of Jeremy Seabrooke, described the worthwhile life-of-the streets which had been lost in the course of redevelopment (54). Rehabilitation, conservation, a sense of place and community and the need for public participation - all these principles of urban renewal outlined in the 1950's, returned with a new purpose. The anti-master plan studies by Geddes, Jacobs, Alexander, Young and Wilmott and even briefly Habraken, supposedly reappeared to become "classics" apparently ignored for much of the 1960's (55). The Smithsons' vision of a street-deck city and theory of architecture did not, however, return in quite the same way.

In 1969 Robert Venturi, who advocated "complexity and contradiction in architecture" (56) criticised the Smithsons' evaluation of the work of Lutjens made in the centenary of his birth, earlier in the year. Instead of approaching his architecture determined to learn from and celebrate his skill they had dismissed it in an outmoded and doctrinaire fashion:

"This polemic was effective in the heroic period of modern architecture as a basis for simplistic and moralistic slogans, but is irrelevant today". (57)

It was no longer appropriate to consider his work retrogressive because he

took 'the wrong path' or lived 'at the wrong time'; a new zeitgeist appeared which left the Smithson's stance outdated. Venturi noted: "we have our own battles to fight - different ones, real and relevant". (58) And most of all this meant an end to architectural arrogance:

"But the most disturbing aspect of these articles for us is the hollow-heroic stance of the saviour-architect, contemptuous of the mess and sure of the answers". (59)

For examples of the work of the would-be-saviour architect critics often turned to the barrack-like multi-storey housing blocks dotted all over the modern city. In 1970 the second AR special on housing dismissed many of the new estates, especially the deck housing examples, as alien and inadequate environments (60)

In the same year, one prominent architectural historian, Anthony Jackson, bemoaned the results of modern housing architecture, taking Park Hill as a prime example of the mistaken policies. He stated that:

"Unfortunately, as built, they were also ugly and ill shaped with doorways stunted in scale, and quasi doorsteps. Swept with wind and echoing with noise, they have an even meaner character than the East End slums of London whose street life was much admired by the Smithsons and some of their associates. Overreacting to a supposed prissiness associated with the architecture of the older generation, the architects have consciously sought a tough aesthetic that has simply degenerated into squalor". (61)

In the following year Martin Pawley, another important critic, published Architecture versus Housing. Here Park Hill and Hyde Park were cited as unprecedented examples of architectural megalomania and sociological failure (using the AR's misleading figures published in 1967) In a related article in New Society, Pawley noted in the conclusion:

"Unfortunately, from the hard-headed economics that produced the still empty Centre Point, to the sociological baloney that went into Sheffield's 'streets-in-the-sky' - the result has been a failure". (62)

Nevertheless, some deckhousing estates could still attract positive evaluations, notably the YDG schemes and the super-picturesque Dawson Heights in Southwark (63). Even the Smithson's Robin Hood Gardens was welcomed by AD and BD (64)

However, the design of many other schemes was found to be inimical to human presence and community development. This was especially true of the plan for and the first stage to be completed at Thamesmead. In 1972 the AJ found that:

".....with the easy wisdom of hindsight, it is difficult not to feel that something altogether more modest and private might have been achieved, appropriate to a potentially suburban situation, without betraying social and aesthetic ideals..... The plan also assumes the public authority distanced from the user in order to speculate about his needs and engineer his social environment.

Over the next decade this situation must change as the paternalism of local authorities is challenged by the tenant's associations and cooperatives articulate about their own values". (65)

Another case was the Aylesbury deck housing estate in Southwark. Critics described the estate as a prime example of a "one-class, one income, architecturally totalitarian township". (66) One writer asked:

"Will the large scale repetition of similar dwellings and blocks, and the drill-square geometry of the layout, offer residents any advantages other than quick provision of roofs over their heads? Is it possible to reconcile people's often stated preferences for small estates, spaciousness, good landscaping, visual variety and an intimate personal scale around the home with the constraints imposed by large-scale redevelopment, high densities, system building and only one type of tenant". (67)

One American critic, visiting London, pointed to Aylesbury as an estate noticeably lacking in what he terms "defensible space".

Deck Housing and Defensible Space

Oscar Newman, who visited London in 1974 - when Pritt-Igoe was in process of demolition - stated:

"When you see the Aylesbury estate from the surrounding streets, its almost as if creatures from another world have come down and built their own environment - its that foreign. The Aylesbury Estate has cut the surrounding streets off from itself, isolated itself with walls on all sides". (68)

How does one overcome this problem of an alien environment? Newman's answer was that you try to create "defensible space" that is, a positive relationship between behaviour and design such that you return market-type rules to individual and social behaviour in the city. The problem was that:

"We have been raising generations of young people who are totally lacking in any experience of individuality, of personal space, and by extension, of the personal rights and property of others". (69)

Hence the first objective was to remedy the social disorder prevalent in the American city; that is, to help crime prevention through urban design.

The solution to the problem in regard to housing, was the removal of areas of anonymous space. Specific types of access encouraged while others discouraged vandalism and crime. Where a caretaker or resident could keep a casual watch over a semi-public or semi-private circulation area, the anti-social activities of strangers could be discouraged and the environment defended against attack. As a result of its successful operation:

"the building complex and the residents are integrated into the community. The complex protects the street as well as itself. The street life helps in turn, to protect the complex. Instead of being an act of withdrawal, this design reinforces residents in their expression of concern for their own domain and for the streets and activity areas to which it is tied". (70)

The problem was that modern architecture had apparently failed to establish a proper relationship between the building and the ground level activity. The architect had approached his work as if it were an artistic composition,

"endeavouring to arrange a series of vertical elements into a compositionally pleasing whole". (71) A correct approach was to begin "by viewing buildings and ground as an organically interrelated whole" (72) This would produce a "territorially intact project". (73)

The new conception of private and semi-private space would be expanded considerably by central government in the 1970's as it tried to tackle the problem of difficult-to-let local authority housing (74) An important report in this regard was Shankland and Cox's Housing Management and Design for the Lambeth Inner Area Study (75)

Two Examples: Sheffield and Manchester

During the 1970's and early 1980's Newman's ideas would be applied in particular to the problem of anti-social activities occurring on deck housing. This was in spite of the fact that the street-deck had actually been born of the desire for a "territorially intact project". The new ideas led to the breaking up of the deck and the housing estate into small isolated sectors (76). This may have reduced the crime level on particular estates, but it also negated the very raison d'être of streets-in-the sky, instead of enabling the rediscovery of street-life as Newman wished.

In view of the shortcomings in the theory and practice of defensible space, Reyner Banham attempted to negate the empirical evidence, supplied by Newman. In "The Park Hill Victory" he argued that the Sheffield estate "broke the rules" (77) because in spite of the supposed lack of defensible space there was very little vandalism, or evidence of crime against the environment. A year before two architect-sociologists, Roy and Jane Darke, gave implicit support to this thesis. They concluded their study of Park Hill and Hyde Park with the opinion that the former "must be considered a success relative, at least, to the latter (78).

Conflicting evidence came from the MHLG social survey published in 1972(79). This showed that, in 1967, 55 per cent of the residents included in the survey considered vandalism a problem - although this was actually almost the same percentage as that found on all estates. In 1974, another social survey, this time of neighbour relations on Hyde Park estate found less social contact - and by inference less defensible space - on that scheme than on the more traditional designs elsewhere in the city. The authors considered they had found scientific evidence, like Newman and the MHLG - which Banham and the Darkes did not supply - which denied the sociological basis to streets-in-the-sky. They concluded with the claim that the "physical design was in some way fundamentally inhibitive", (80) regardless of the unusual nature and history of Hyde Park relative to Park Hill and other deck housing schemes. Hence the

"reality" of life in Park Hill was not settled by the scientific evidence; in spite of criticism it was still surviving at this stage.

A different situation prevailed in Manchester. There, an attempt to defend the idea of deck housing and to minimise the initial problems of the new estates in the city, was simply overwhelmed by events.

The leader of Manchester's HDG, R.C.Stones, published a report on Access in Dwellings in 1974 (81) On the basis of social and economic criteria and tenant reactions Stones argued that, in spite of its unpopularity, deck housing still had a role to play in urban development. He concluded:

"If more sophisticated means of collecting and interpreting social data and total costs become available and if there is a reaction to the unrelieved tracts of low-rise housing which results from an implementation of current policy, then a more varied formal language for housing will emerge". (82)

However, judging by other expert opinion, this was an extremely unlikely course of events.

In a report entitled "Challenging Rubbish" New Society, the ideal and the reality of Hulme 5 were compared:

"In the corporation's planning department there was talk that Hulme 5 would provide 'urban scale' and that building seven storeys high would allow the creation of green space around the crescents, which it was felt Hulme as a whole rather lacked. But no one had considered that deck access, communal facilities and pedestrian segregation might create a new set of clearing and maintenance problems; or dreamt that communal rubbish chutes could cope with the great amounts of rubbish produced by modern packaging, and the lack of a coal fire to burn some of it on, might quickly turn Manchester's touch of 18th century Bath into something approaching a 20th century rubbish tip". (83)

The issue of vandalism and the lack of defensible space was probably of greater consequence than the related cleansing and maintenance problems.

A BBC TV documentary broadcast in 1974 recorded how in all the deck housing estates:

"Few of the Corporation officials who manage these blocks, or the tenants who live in them regard them as other than a sad mistake. In Manchester they come in two forms, the 'forts' which look like outposts in the Sahara, and the Crescents, which form the huge housing complex near the city centre. The common and fatal feature is the landings...."streets-in-the-sky" as some optimistic lad called them. The landings are intolerable. Children fly round, hooligans break windows and pip off down the stairs; dogs relieve themselves. And in some places the landing forms part of the roof of the flat below. "You can hear the noises all the time" a tenant said. "Through the night the bloody things going, somebody's roaming about. One on top of the other. The landing is halfway across our bedroom and if anybody walks across, its thump, thump, thump, in the middle of the night". (84)

And the sad record continued:

"Vandalism is largely concentrated on the medium-rise blocks where the streets-in-the-sky' make easy escape routes. Lifts are a special target. The most spectacular game is to light a fire inside

a lift and then start the smoking cage moving up and down its shaft". (85)

The conclusion was hardly surprising:

"These huge blocks have been built and there is no prospect of getting rid of them for years to come. But in Manchester at least, they have stopped putting up any more: no more flats, no more crescents, no more streets-in-the-sky. From now on council houses will be two, or at most, three storeys. They look pretty much like the old terraced streets which the planner swept away. Sometimes even experts learn". (86)

The following year Manchester began a policy of "defensible space" alterations to most of the deck housing estates, (87) although the problems continued into the late 1970's as two ITV World in Action programmes in early 1978 on Hulme 5 described in detail (8c)

The deck housing in Manchester was almost a lost cause by the late 1970's (89) A more difficult and more important model estate to criticise if an end to modernist architectural forms was being sought by post-modernists, remained Park Hill. The now avowedly "post modern" architects had, once more, to distort the facts in order to describe the social deficiencies of the famous scheme.

In 1977 Conrad Jameson wrote an article for the Sunday Times entitled "British Architecture: 30 wasted years." Here it was asked:

"Where is the building that is as big as the sociology?" asked Reyner Banham. "Sheffield gave the answer". A fairer question would be, where was the sociology that was as big as a building of more than 2,000 flats? The design came from a pure speculation of Le Corbusier that the neighbourliness of the traditional street would reappear with street decks in the air. Later evidence showed that only 4 per cent thought that the street decks encouraged neighbourliness. Unhastened the architects built more of the same, this time in blocks 14 storeys high". (90)

A number of important inaccuracies are present in this description of Park Hill. Reference to "2,000", "Le Corbusier", "speculation", "only 4 per cent" and "unhastened" seemed to portray the estate as the work of architectural megalomania whose design bore no relation to the existing conditions or the success of the earlier project. All of the supposed facts are incorrect as we have shown; the whole passage is simply a jumble of words which serves to deny completely the validity of modern architecture.

In the same year the AR review of post war urban planning cited Park Hill as a prime example of how not to rebuild the city. Under a photograph of Sheffield's model deck housing estate - actually Hyde Park - it was stated that "in the late 1960's planners decreed that these unendurable barracks at Park Hill, Sheffield, were the latest ideal homes". (91) In fact neither Park Hill nor Hyde Park, was opened in the late 1960's - when a labour government was in power - and nor was Park Hill an "unendurable barracks" according to a

survey carried out by the local authority in 1976; for from it the estate was providing "something approaching an ideal community". (92)

Under another photograph, this time of a pedestrian bridge at Park Hill, there was the comment "mugger's corner - the concrete streets in the air that are the threshold to the Park Hill homes". In this case, although no mugging had taken place in the estate up to this time - and none appears to have taken place to date - it was a comment which could have been applied to any rather anonymous street. The important point, however, was not the accuracy of the statement but the supposition that such an event was inevitable on these now "concrete" streets-in-the-air.

In early 1978 Bqnham once more, but only briefly this time, defended the estate (93).

A more serious but no less distorted criticism came in 1980 from Lawson's How Designers Think. Here it was proposed, building upon the work of Alexander, that the designer's ability to reflect the real world was seriously limited. As a result the imagination tended to simplify and produce "images" of reality which were actually no more than misleading illusions. For example, the image of streets-in-the-sky relative to what are, according to Lawson, no more than corridors. He notes " "streets" have been loaded with a positive image of fresh open air and sociability while "corridors" are neutral, inhibiting and ambiguous". He concludes:

"It is difficult to see the physical resemblance to a traditional Sheffield street, let alone the social resemblance so imaginatively described by the architects". (94)

The photograph of the busy street deck in 1960 is replaced by the photograph of a deserted corridor in 1980. While the images which architects used - the bye-law street, medieval row or Georgian crescent - was seriously misleading and, in a sense, a simplification of reality, the final result often did not, as at Park Hill, reveal the original more complex intention of the architect. The new description of the "corridor" which is providing a "muggers' corner", underlines the important political significance of the exaggerated images of both modernism and post modernism; the limitations of the image have little relation to the designer's ability and far more to the shortcomings of the architectural and urban planning professions producing our particular kinds of buildings.

In 1981 Lord Esher's uncritical history of post war urban planning and modern architecture (95) highlighted this conflict of opinion over the correct interpretation of estates such as Park Hill. Working from a visit to the building and the facts contained in Mrs. Demers (1962) and the local authority's (1976) uncritical surveys he painted an attractive picture. He began:

"Its great faceted cliffs dominate the central city in rather the

same manner as Avignon is dominated by the Palace of the Popes, and against the sunrise its silhouette has the mystery and austerity of a giant crusader castle". (96)

In describing the estate in detail Lord Escher notes, in regard to the appearance:

"And the architecture, in plain protest against the blandness of Greenhill and Gleadless, is by later standards not affectedly brutalist, it is simply incredibly plain, no doubt reflecting the no-nonsense tradition of artisan Sheffield, modified somewhat by the changes of brick colour that denote the different 'Rows' and by variations in weathering, it has not worn badly". (97)

And he concludes:

"There can alas be no doubt' wrote Reysner in his West Riding Guide, 'that such a vast scheme of closely set high blocks will be a slum in a half century or less, but hopefully a cosy slum! There seems to be some determination to prove him wrong". (98)

This modernist-picturesque interpretation was decried by Booker. Reviewing the book for the Daily Telegraph he referred to the "terrifying complex of 'slab blocks" that make up Park Hill and then quoted Lord Escher's comparison to the Palace of the Pope at Avignon. Booker concluded his critical article:

"In their heads and their speeches, on their plans and their models, it all looked fine - very futuristic and exciting. But when it came to fit real, living, breathing people into their celebrated visions of an inhuman, technological perfection, it simply did not work. But, alas, as Lord Escher's book demonstrates, the architects still, by and large, haven't a clue why it did not work". (99)

Such a misleading exaggeration of the limits to modern urban planning and architecture is partner to the similar misrepresentation of the worthwhile achievements of that tradition. The opposing images presented by Booker and Lord Escher reflect and are part of a wider social-ideological apparatus which has taken estates such as Park Hill from a self-fulfilling prophecy of success to a self-fulfilling prophecy of failure. Facts have been interpreted to suit the abstract class-bound needs of professional architecture, which has served under political and economic forces detailed in Part 2. The new postmodernism is, therefore, no different fundamentally, from that which it has supposedly replaced, except that the professed aim of being anti-utopian, and more "realistic" in relation to people's needs and wants, is no more likely to achieve the correct results. A new image and a new search for legitimacy will then be necessary.

The Model Estates and their Problems

As we can see from table 1 deck housing was not built uniformly throughout the United Kingdom. A regional pattern emerges. Although the comparison with the only regional figures given by the NPLG/DOE is not entirely valid, it does reveal a basic grouping of this type of multi-storey

housing in the North West, Northern, Yorkshire and Humberside, East Midlands and Greater London regions. Similarly it shows the absence of deck housing from the West Midlands, South East excluding Greater London and the South West.

TABLE 1 Deck Housing in the United Kingdom as a percentage of all local authority flatted housing

(1) Economic Planning Region (a)	(2) No. of Schemes	(3) Approx. no. of Dwellings. 4 storeys + 1961-75 (b)	(4) High Rise Approvals 5 storey + 1966-71 (c)	(5) Percen- tage (3) / (4)
Northern	14	5,000 (d)	7,715	64.8
North West	32	19,300	25,317	76.2
Yorks & Humberside	10	7,200	13,300	54.1
East Midlands	8	3,100	5,559	55.8
West Midlands	4	1,800	15,531	11.6
East Anglia	2	900 (d)	727	-
South East (excluding G.London)	-	-	8,662	-
Greater London	46	26,000	67,985	38.2
South West	-	-	1,052	-
Wales	3	470(d)	1,047	-
Scotland	14	9,000(d)	40,460	22.2
N.Ireland	3	1,000	n.a.	n.a.
Total	136	73,770	187,355	39.4

(a) Used by central government for regional economic planning.

(b) to nearest hundred

(c) From Dunleavy (1961) Table 2.3

(d) Includes a significant number four storeys high. Hence comparison with totals for five and over storeys is invalid.

n.a. refers to no comparable figures available.

We have already commented upon its sub-regional distribution. However, we would add that it is significant by its presence in the smaller settlements of the North East, the South Yorkshire subregion, the Manchester, Oldham and Rochdale zone in the North West and Nottingham in the East Midlands. Within London there is an especially large number of dwellings in Lambeth, Southwark Brent and Haringay.

What is excluded from these considerations is the large number of projects that were never built. For example, Thamesmead, YDG, several London boroughs, Killingworth, Washington/Edith Avenue, Leicester, Liverpool, Rotherham, Newcastle, and Glasgow all had notable plans for deck housing that were never realised. As much as three or even four times the actual number of deck housing schemes may now exist if the design and the building programme had been successful. The history of streets-in-the-sky is perhaps particularly significant as a failed utopia relative to the success of the premodernist plans for garden suburbs and newtowns. Overall, as built, deck housing forms

an insignificant percentage of the total local authority housing development in the United Kingdom between 1961-75, only 2 per cent of all post-war multi-storey local authority housing and only 7 percent of all similar post war housing completed in England and Wales, where 85 per cent of all deck housing development was concentrated. Between 1965 and 1973, when the majority of such schemes were completed this figure increases to 11 per cent (100)

However, if we consider only those figures for medium rise housing, five to nine storeys, whose tenders were approved in the second half of the 1960's (the nearest we can get to a definition of deckhousing which does not include reference to access type) the percentage figures rise to nearer 75 per cent. And this was during a period to which for the first time the total percentage in the five to nine storey category was greater than the percentage in other categories, 10 to 14, 15 to 19 and 20+. Between 1960-64 tenders approved for 5 to 9 storey housing were 25 per cent of the total number over 5 storeys and a lower total than in the 10 to 14 and 15 to 19 storey groups. In the years 1965-70 the figure for 5 to 9 storeys rose to 41 per cent of the total and was a larger number than any of the other categories. (101) For a short period, therefore, medium rise and that deck housing, was an important type of multi-storey local authority housing.

The Problem Estates

The nature of the problems found in deckhousing today, and present in some estates from their opening, can be divided into three categories. These relate to use of the deck, the standard of construction and the reputation of the estate.

In the first case the circulation area is especially suitable for a variety of anti-social purposes, from vandalism to the exercising of dogs or cats, because of the ease of access and escape, and the absence, sometimes, of any residents view on to the deck and in other cases of only a kitchen/dining room window. It is difficult to achieve a balance of public and private life on these 'streets' and therefore to sustain a pattern of organised social interaction and surveillance. Tenants may only meet neighbours by chance unless they stand out on the deck for some time which may be tiring and which may be considered the sign of an over inquisitive nature. The keeping of pets which need exercise can conflict with the children's use of the deck to a larger extent than at ground level, simply because of the restrictions on movement.

In these circumstances the deck can become only a means of reaching the relative freedom of ground level while the deck itself is left to strangers or vandals. It becomes a neutral or positively dangerous area,

when there are attacks on the individual. When this trend becomes established the local authority response can be to begin moving families out and single people in, begin police patrols and then divide the deck up into smaller, less publicly accessible sections where some privacy can be guaranteed; so called "defensible space". In this case the very basis of streets-in-the-sky has been permanently negated; it becomes housing which denies full community life instead of encouraging it.

All deck housing estates were built using some kind of industrialised building method. In many cases they were constructed following the maximum industrialisation of the building process, whereby heavy concrete panels are mass produced in a factory and then brought to the site and assembled according to some particular "system" of construction. Without proper safeguards such a "system" can collapse like a pack of cards as shown at Ronan Point.

Whatever the method of construction, there were two problems. Firstly, the omission of sufficient heat and sound insulation required on the additional exposed surfaces adjoining the deck and secondly the unusual complexity of the interlocking flats and maisonettes. These accentuated the problems present with what were already relatively experimental building methods.

Below -par standard of design and construction have seriously affected the balance of heating, ventilation and humidity. The outcome can be severe problems of condensation, damp and even water penetration, at the same time as extremely high heating bills. There is therefore a real contrast between the aim of a cheap and efficient new building form and the expensive and inefficient result.

These two problems are compounded by the size and type of deck housing architecture which can often attract adverse comment from the public and the press, particularly at the present time when we are turning to promodernist traditional forms of housing. The reputation an estate obtains as an "Alcatraz" or a "Valium Valley", regardless of actual social conditions, can often be as serious a threat to its continued successful occupation as the problem of vandalism or heating. In other words the housing design which was meant to fit neatly into the existing urban culture is now seen as a negation of urban culture, as an alien building form.

This serious and unparalleled combination of problems has led, in a number of cases, to arguably, the most determined and well-known tenant protest movements in this country in the second half of the 1970's and the

early 1980's. The Netterley Flat Dwellers Action Group, the tenants of Hulme 5 in Manchester, the tenants of the Yorkshire Development group schemes in Hull, Leeds, Sheffield and Nottingham, the Hutchesontown 'E' anti-dampness campaign in Glasgow and the tenants of the Divis flats in Belfast, are only the most persistent and outspoken protest movements; there have been, and are today, many others.

It would appear that because this type of urban multi-storey housing attempted to answer both economic and social problems in such a novel and comprehensive way that the outcome has been the opposite; a type of modern architecture especially susceptible to the economic and social problems of society as a whole. A particularly complex urban planning exercise has led to an unusually complex urban planning problem. The consequence is, on average, an urban phenomena which fails as a shelter and a home. Instead of overcoming the perceived problems of a material and spiritual poverty, deck housing has brought these social characteristics to a quite new and intolerable level. From the planners dream to the tenants (and the local authorities) nightmare.

Design Characteristics

If we now turn to the characteristics of particular schemes, it is clear that in the design work there was a balance to be struck between the economic gains to be made by reducing the number of roads and lifts to a minimum, and narrowing the deck to a balcony and the sociological gains to be made by having an easy and pleasureable access system.

In regard to lifts, the English and Welsh housing standards of the 1960's which became obligatory in 1969 (102) required one lift in blocks of flats exceeding three storeys and one in blocks of maisonettes exceeding four storeys. In buildings of six or more storeys, two lifts were required. There was, however, no stipulation regarding the number of units of accommodation per lift.

Some deck housing up to six storeys avoided the need for lifts altogether by the auspicious use of the deck with ramps, e.g. School street, Hebburn. Others provided only one lift shaft for the whole development and staircase access to the highest dwellings reached from the third floor deck-level; for example, the Ward Royal estate of 279 dwellings at Windsor.

In the case of the deck width, the 3m wide passage of Park Hill was only repeated in a small number of estates; the Hyde Park and Kelvin schemes in Sheffield, the Chalkhill, Stonebridge and Kilburn Square schemes in Brent, the Wendling and Bacton schemes in Camden, the World's End and Lancaster Road schemes in Kensington and Chelsea, the Osprey and Kingshold estates developed by the GLC and the Hutchesontown 'E' scheme in Glasgow. Other estates included only one deck of this width, for example, the Aylesbury and North Peckham schemes in Southwark, Roundshaw scheme in Sutton, Heath Town in Wolverhampton and Killingworth scheme in North Tyneside. Besides these the majority were

slightly larger than the normal balcony or gallery at approximately 2m width (6.0ft).

Economies could also be made by omitting balconies e.g. at Oldham, increasing the amount of family accommodation (i.e. decreasing the number of party walls and services required) for example up to 95 per cent of accommodation is for three or more people at the Killingworth estate (compared to 60 per cent at Lisson Green or 20 per cent at Park Hill) and omitting the better community facilities, e.g. the central heating system and garden.

Following these problems and economies a national picture emerges.

The deck housing in the North West, Yorkshire and Humberside, the North East and the East Midlands of England, is, on the whole, a disaster - judging by its status as the local authority 'sink' estates. There are exceptions. This would include estates in Rotherham and Tyneside. Also in the West Midlands and Greater London the picture is not so clear cut. Nevertheless, those estates which are "surviving" are not necessarily successful - they have not been proved to be problem estates - and may well gradually attract or develop the same social, economic and physical problems found elsewhere.

In other parts of the United Kingdom there is a different pattern of development and problems. Northern Ireland has two large and very unpopular schemes while the scale of Scotland's mainly unsuccessful estates are unparalleled anywhere else in the country. Only Wales seems to have practically avoided the whole issue and its attendant problems.

The remedial work which has been necessary to date includes demolition or planned demolition at Daxley, Netherley, Belle Vale, Divis, Pearly Bank and Beswick/Wellington Street. Other estates have fundamental constructional problems as yet unresolved. This includes the YDG estates, Roundshaw, Hulme 5, Hutchesontown 'E', Bessener Park, the other parts of Divis and Rossville Street.

Comprehensive environmental improvements inside and outside the home, including on occasion the division of the estate into areas of defensible space, is characteristic of Chalkhill, Broadwater Farm, Aylesbury, the other Manchester estates, all the Nottingham estates, Hyde Park, School street, Felling, Ashfield valley, Oldford, Killingworth, Edith Avenue, Lisson Green, Stockwell Park, Thamesmead, the "12m Jespersen" estates, Flanborough Walk, most of the Glasgow estates, the West Pitton estates and Whitefield in Dundee. And still more are in need of attention, for example, the schemes in Tower Hamlet

On the basis of this general picture we can now turn to consider each estate in greater detail.

The North-West of England

Liverpool

The Liverpool City Centre Plan, prepared by consultants Shankland and Cox

in 1962-3, was the first to apply Buchanan-type principles to the centre of a major urban area. About two thirds of the area was redesigned around an upper level pedestrian deck system. A new rail loop and motorway system would link the central area with the district centres in the inner area and suburbs. These would be miniature versions of the city centre, with an additional element of multi-storey housing for families as well as other households.

In a report to the City Council in 1963 Walter Bor, head of the new City Planning Department, discussed the aim and method of building low to medium rise high density housing in the city (103). The existing tower block at the city centre and pyramidal density profile of an urban area produced an anti-social and congested city unsuited to modern needs. District centres, including alternative types of housing to the tower block, produced a far more varied density profile and thereby a more efficient and humane habitat.

The Interim Planning Policy Statement published in 1965 made these ideas a fundamental aspect of the city's future development. Hence local plans (called District and Action Area plans after the recommendations of the Planning Advisory Group report published in 1964) were prepared to specify proposals for the district centres and in most cases, their deck housing. Only three Action Area Plans actually reached the state of sketching out designs. Netherley (with Belle Vale), Queens Road and Chatsworth.

Netherley was to be the model estate for the new Liverpool. The Interim Planning Policy Statement described the plans, first published in 1964, as involving the "full application of the most advanced principles of good design" (104). Built upon the only remaining vacant site within the city, it would incorporate shopping, industry, housing (at 250-200 ppha, 80-100 ppa) a park system and most other social amenities. In all 170 ha (430 acres) for 20,000 people.

Behind this plan there was the concept of "an interlocking system of vehicular access roads and pedestrian routes". It was envisaged that:

"The areas of higher density (housing) will be four and six storeys high with deck and balcony access. Intermediate levels with play areas, changes in levels at shops and other social foci should be used to make the progress of the pedestrian easy and interesting". (105)

In 1965 a revised plan was published. The district shopping centre was moved to nearby Belle Vale; pedestrian and traffic routes reduced in scale and a more sympathetic relationship to the landscape created. Pedestrian circulation would now be via a "spine", upon which "will hang the whole framework of the layout". (106) Here was a "new concept", that of a "village street" which would give a "clearly recognisable form and unity to the whole development" as well as linking with the "country walk"

planned for the area. The built form would present an essentially "urban" townscape, due to its multi-storey high density character.

Two years later the consultants' proposals for the adjacent housing site of Belle Vale were made known. They were based upon a "social study" of an adjacent and traditional suburban council estate (107) The aim was to discover the type of housing and environment preferred by the future tenants. The design for a four to six storey "spine block" of deck housing with two storey housing on one side was supposed to satisfy the findings of the research, for example, large families in two storey housing. The whole estate, built to a density of 250 ppha (100 rpa) would house 6,600 people in 2,035 dwellings, 1,344 in the spine block. Near the middle of the spine a local centre would provide one or two shops, a laundry, community centre and old person's flatlets.

Thus by 1967 the proposals for Netherley included the Netherley housing and industry and the Belle Vale housing and district shopping centre, all linked together by a deck system centred upon the multi-storey housing.

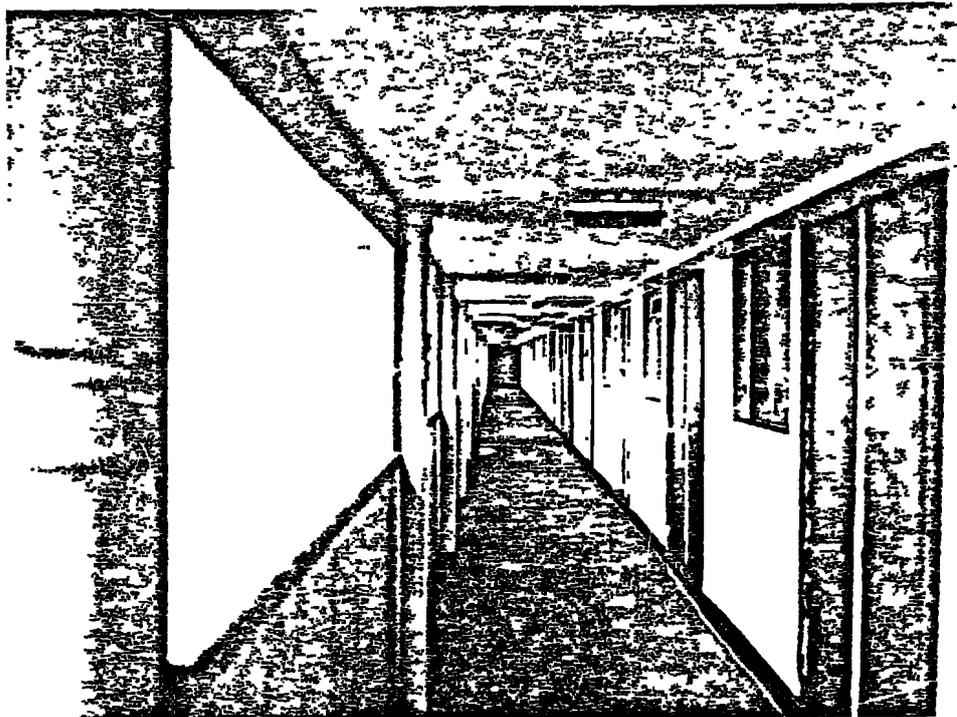
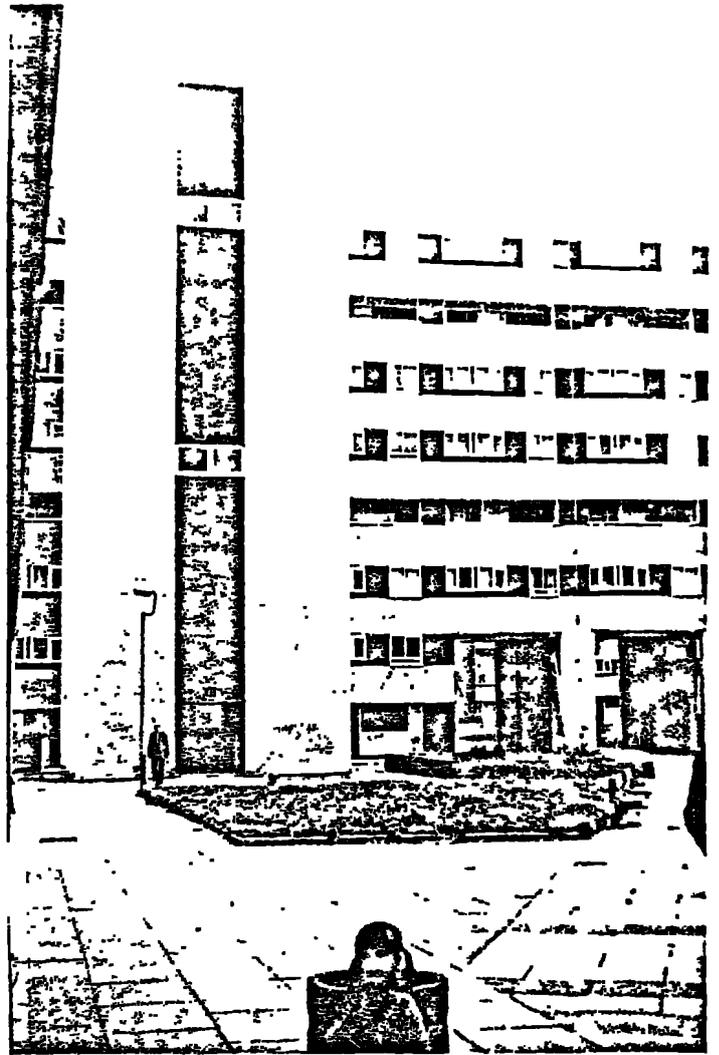
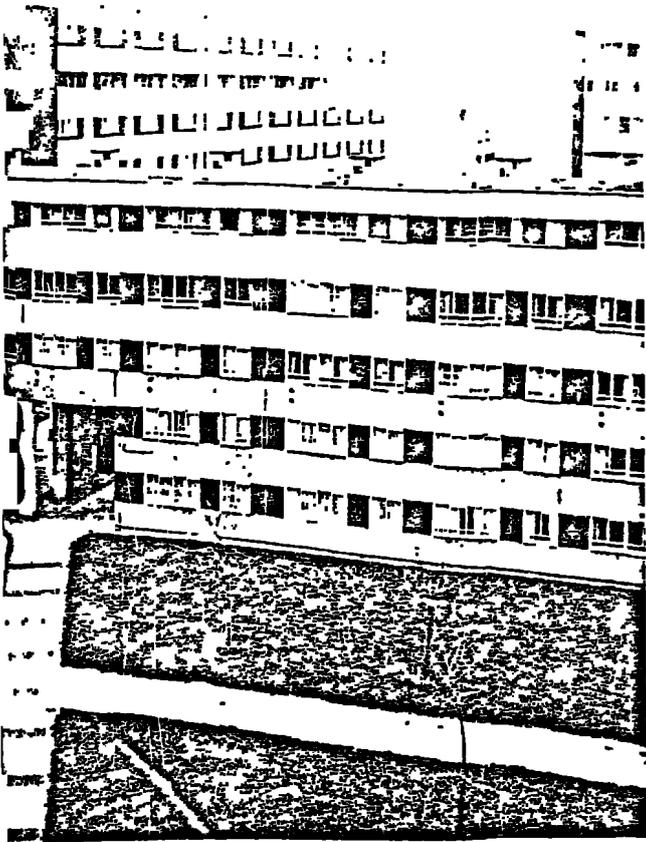
The other district centre plans were not quite so ambitious. The Queens Road Action Area plan (part of the Everton District Plan) included a sketch layout for an upper level street linking the shopping and housing together (fig.50) Pedestrian circulation, it was stated "should be maintained at an upper level" (108) with the main part of the pedestrian spine provided by a deck housing scheme at Gleave Street.

The Chatsworth Action Area plan found advantages to the use "for at least part of this area" of a deck housing scheme. This would maintain:

"reasonably high densities without the problems of social isolation and other difficulties created by separate multi-storey blocks. Continuity of pedestrian access at upper levels is desirable and will assist in achieving separation of pedestrian and vehicular traffic but must be carefully related to the pattern of community uses in the District Centre". (109)

None of these plans for district centres were realised as intended. In particular at Netherley and Belle Vale the housing, situated apart and some distance away from the shopping centre, was of a very poor quality, both in terms of the balcony character of the deck, the poor design of the whole structure and the very low standard of construction. No rapid transit links were established with the city centre and the area soon became an isolated and below standard form of council housing, with the appropriate reputation as "Vallum Valley, Alcatraz" (110) One local press report in 1979 began its description of Netherley with these words:

"Gale force winds whistle around the endless blocks of grey and grim-looking flats, whipping up the litter in swirling streams. Up the stairs, stinking of urine and rotting scraps of discarded



58. Netherley: General views and the deck.

food, you unconsciously side-step broken glass that seems to be everywhere.

Along the hundreds of yards of walkways, or streets in the sky, dozens of flats have been blitzed by vandals, often the front doors are wide open. Here and there, you have to duck a light fitting dangling by electrical wiring from the balcony ceiling. Some flats are boarded up and on some floors you occasionally find one that is occupied. It can be a hazardous walk along the landings, with pools of water flooding parts of the walkway. The water has leaked from above after water tanks and pipes had been removed by thieves.

You gaze in wonderment when a lift button is pressed and it actually works. Though more often than not the stench of urine sends you to the stairway to walk up the concrete steps". (111)

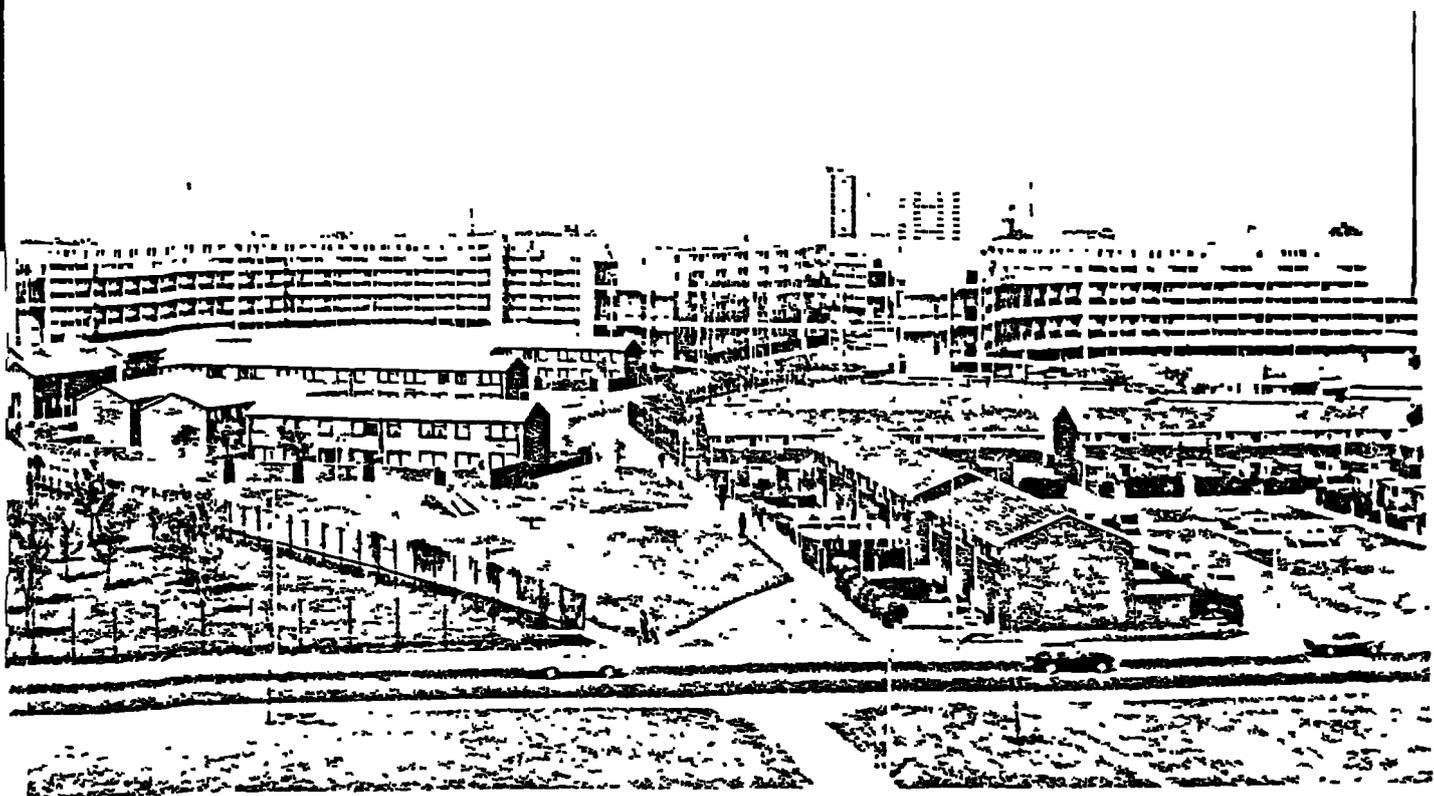
In 1974 the Netherley Flats Dwellers Action Group was formed before conditions became quite as bad as the foregoing details suggest. But five years later, when they were often in such a poor state at least in one part of the scheme, the tenants protest organisation produced their own report (with assistance from the Polytechnic) called "The Scandal of Netherley" on the standard of the environment— and this led to the press coverage. After several types of remedial work and new management techniques had been tried without success the worst part of the estate was declared a slum clearance area, due for demolition (112). The protest movement had been successful; its history had even been publicised in Woman's Own! (113) (Illus. 58) (p.185)

The Belle Vale estate was smaller and of a different design but certainly in no better condition than its neighbour. Although a report on its problems was produced and the matter even raised in the House of Commons by the local M.P. (114) it has never generated the same level of tenant protest.

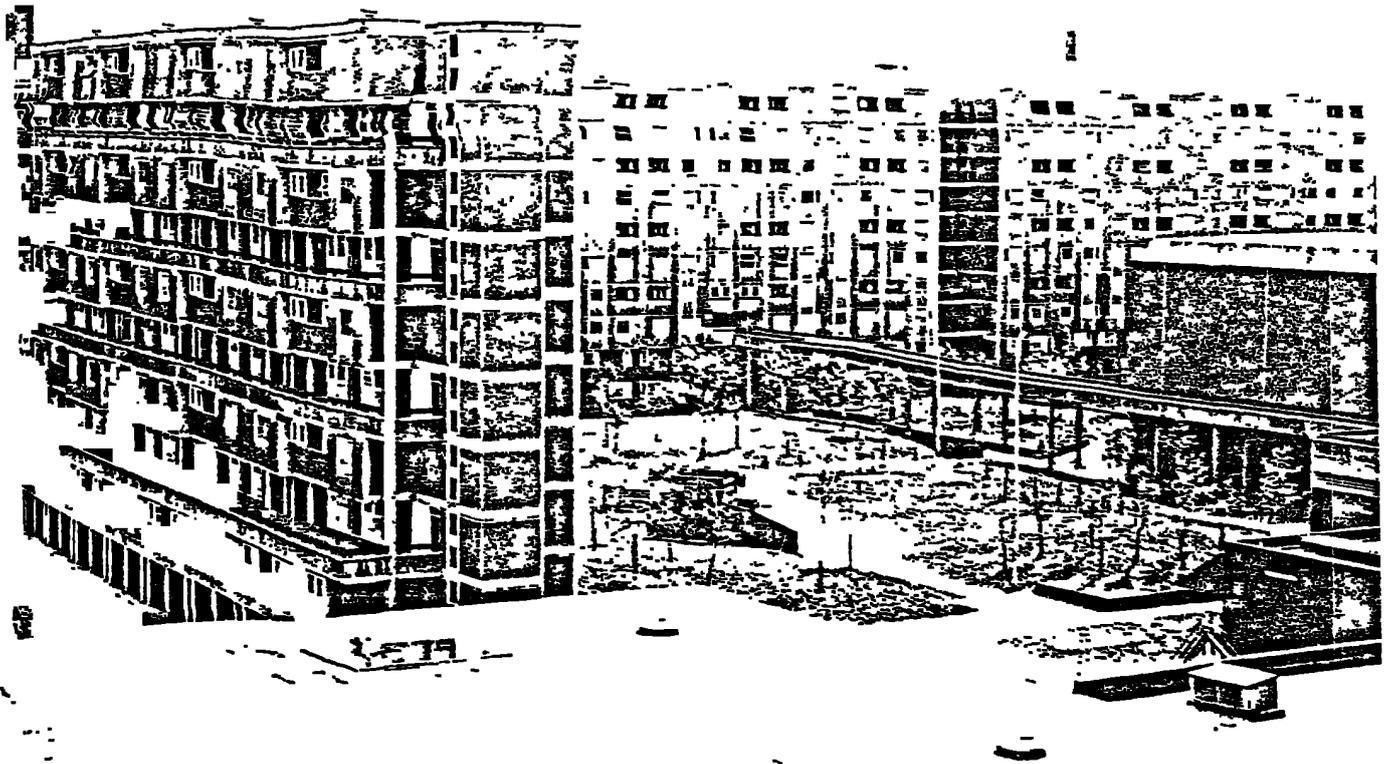
Manchester

In 1963 Manchester founded a City Planning Department, under J.S.Millar, to guide the redevelopment of the city, aided by the City Architect's Department, the Housing Department and the consultants, Wilson and Womersely. Together they replanned the city centre according to the multi-level principles of Buchanan, established a new inner ring road system and pinpointed four surrounding residential districts in need of comprehensive renewal. These were Hulme and Moss side, Longsight, Beswick and Bradford, and Harpurley. Together there was over 300 hectares (2,000 acres) of land contained within these areas of which about half was considered ripe for redevelopment to a new net housing density of 170-200 ppha (70-80 ppa) or gross density of 65-80 ppha (40-50 ppa) According to the planning briefs (equivalent to Action Area Plans) prepared between 1964 and 1966 all areas would have a district centre with a number of neighbourhood centres and a mixture of deck access and two storey housing.

The first district to be the subject of detailed design work was the



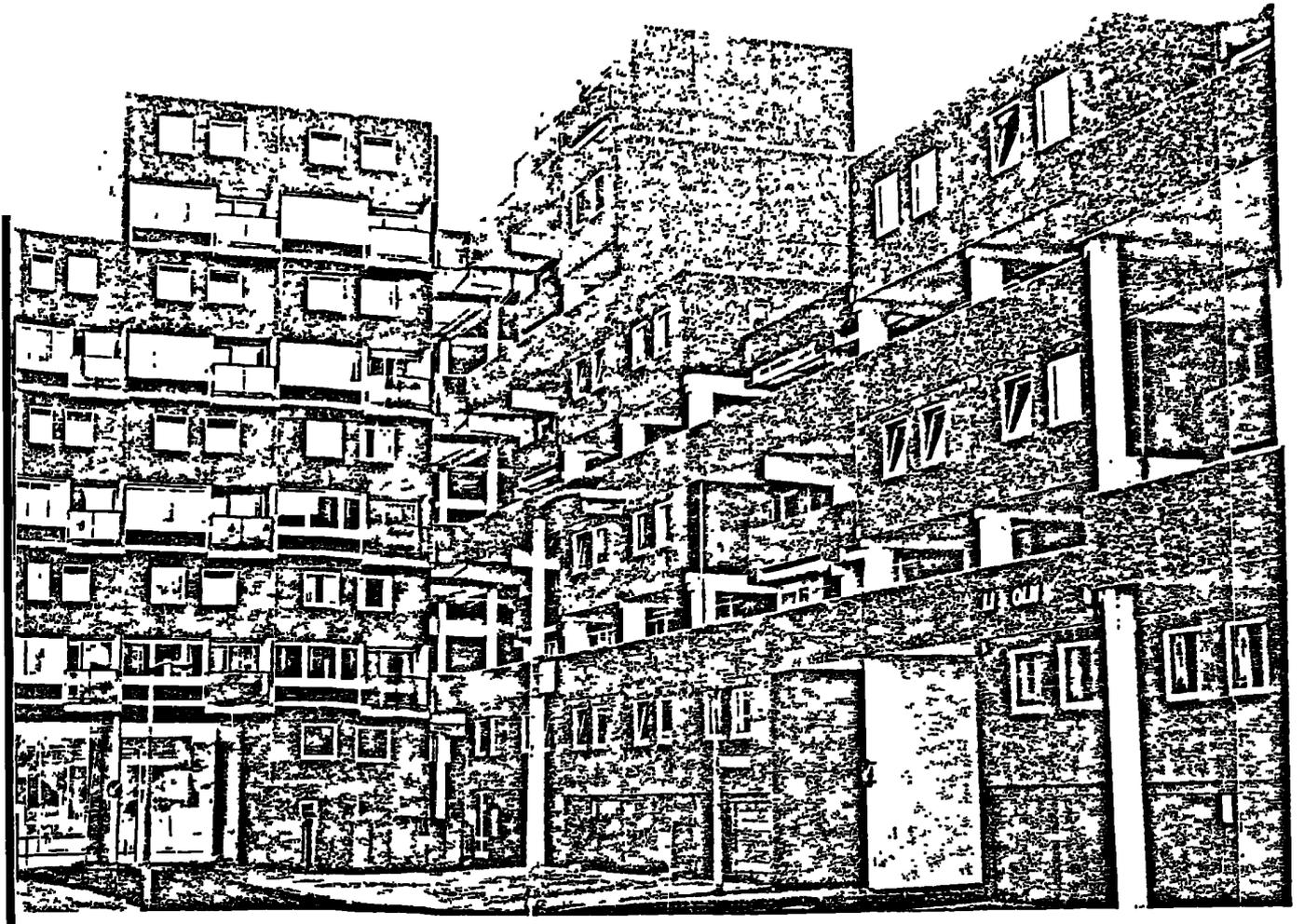
59. Hulme and view of Hulme 5



60. Hulme: The Jespersen system and Moss Side (bottom)



61. Various types of deck in Manchester: Hulme 5 (top) Moss Side (middle)



62. Gibson Street, Manchester

870 hectare (350 acres) area of Hulme and Moss side. Here a new community would be created, drawn from the "sense of identity and neighbourliness which was characteristic of the area". (115) Pedestrian ways linking the two neighbourhood centres and the district centre, with additional social amenities adjoining the route, would provide a meeting place and ensure the continuance of the community established in the area. The form would be that of a high and ground level "street" or spine with high density housing on one or both sides. Families would be housed in dwellings which had direct access to gardens or ground level. But whether living on ground or above ground level there would be full pedestrian vehicle segregation, no through traffic and 100 per cent car parking available to residents plus additional space for visitors.

The outcome of these proposals and principles was an area covered in deck housing and various community facilities but without the main artery, the "nerve centre of the new community both by day and by night." There were no well-defined routes to encourage social contact save the decks themselves, which, however, simply followed the layout of the housing blocks and were not the most convenient route for the majority of pedestrian movements. The whole area was effectively divided into six independent sections one of which was Hulme 5, the four crescents linked together to provide Manchester's model housing scheme (Illus. 55-61) (p.p. 187-189)

The plans and results for Hulme (3,480 dwellings of which about 250 were houses) appear to have instilled some uneasiness in the City Council. For the remaining three areas, the Housing Department established a Housing Development Group to renew and consider in greater depth the problems involved in comprehensive clearance and rebuilding. The leader of the HDG maintained in 1970, with regard to his scheme at Longsight (Illus.62) (p. 190) :

"In conclusion it can be said that the Gibson street scheme successfully realizes the theory of urban renewal advanced by Manchester Housing Development Group and illustrates its validity in practical terms. It is satisfactory to note that the original scheme.....has survived intact all the constructional tests, cost controls and administrative procedures, without any radical changes or delays and that the finished scheme will faithfully reproduce the original model". (116)

Nevertheless, the outcome was a very unpopular form of council housing, whose decks were not appreciated, whose form was particularly "alien" - they became known as the "forts" - and whose construction was, in most cases, below an acceptable standard. By 1975, only a couple of years after their completion, the Chairman of the Housing committee "admits forts were a big mistake".(117) There then began a series of new management techniques improving the appearance of the blocks and dividing up the decks into areas of "defensible space".

While they were, judging by press reports, less popular with tenants than the majority of courtyard deck housing predominant in the Hulme development, they were not as unpopular as the Moss side and Hulme 5 schemes. In 1974 and 1975 the Moss Side estate was the subject of repeated protests from tenants

over the general living conditions: "terraces in the sky" a big flop" recorded the local press (118). In October 1975 all families with children under the age of 16 years were given the opportunity of moving from the deck housing estates into traditional two storey houses with gardens. About 60 per cent had been moved off by late 1979 and a large number of students moved into the estate.

This was especially the case at Hulme 5, the most unpopular of the streets-in-the-sky. All the extreme problems of this type of multi-storey housing found at Netherley were repeated at this one-time model estate for the new Manchester. The vision of the revitalised capital of the North West, represented by the deck housing schemes up until the early 1970's (119) and which could well have included other similar estates at Withenshaw for example (120) was now in ruins and a new level of problems presented to the City Council.

Other parts of the North West

The relatively unambitious courtyard-layout deck housing in Hulme was produced by Laing Construction Ltd. using their "12m Jespersen" building method: This type of deck housing was also used at large estates at Oldham, Blackburn, Bolton and Macclesfield and was proposed but not built at Stockport (121).

The original design was developed at Oldham in the early 1960's by the Ministry of Housing and Local Government in co-operation with Laings. The Danish system had to be converted to incorporate maisonettes, a variety of dwellings in one block and deck access. It was also to be used for two storey housing.

The Chief Architect at the Ministry, H. Whitefield Lewis, and his deputy Oliver Cox, along with a team of social scientists began work on a trial scheme near the centre of the city. Lewis maintained that British architects had much to learn from Scandinavian practice, in particular their modest and well tried designs for multi storey housing. It was the traditional modernist virtues:

"What is outstanding about Scandinavian housing is the general quality of finish and internal equipment and, of course, the care taken over landscape and the environment generally. These tend to blind one to the simplicity, repetition and sometimes monotony of the buildings themselves. One of the advantages of this repetition is seen in the rapid advance of industrialised methods.... Most of our current heavy concrete panel systems are either made under licence from Scandinavia or have developed directly from Scandinavian techniques". (122)

The resulting scheme, which used a sloping site, was a mixture of two storey and deck housing arranged on a courtyard layout. The multi-storey housing, which had no lift access, increased from three to five storeys. Several amenities, good quality finish and landscaping, were included and through traffic excluded.

Local authorities in the North East and inner London used this type of deck housing as well as the areas of the North West already noted. These totalled about 500 on Tyneside although it could have been a great deal more when the original plans for the Byker area of Newcastle were for a Laings deckhousing development. In the London borough of Southwark the Aylesbury estate for 2,500 such dwelling units was the largest deckhousing scheme undertaken in England (only the Whitfield estate in Dundee developed by Crudens Ltd. is a similar size).

About 4,000 units exist in the North west; about 1,300 in Oldham (St. Mary's I, II and III), 503 on the Victoria Park Estate in Macclesfield (Illus. 03 (p.194) 369 at the Chasworth (Queens Park estate in Blackburn, 239 on the Skagen Court estate in Bolton and the rest in Manchester. The schemes in Macclesfield and Blackburn are large, almost monumental in scale and on sloping sites adjacent to municipal parks; the first is adjacent to the town centre, the latter out in the suburbs. The Shaw Road scheme (St. Mary's III) is of a larger and more monumental form than its earlier partners. All estates reach up to six or seven storeys; in Macclesfield there are thirteen interconnected blocks, in Blackburn nine.

All three estates were the pride of the local authority (including the whole of St. Mary's) when they were opened around 1966-70 and had therefore been given the best sites available, i.e. adjacent to parks and open spaces. By 1980 all of them were very unpopular with residents with the possible exception of the first two phases of St. Mary's.

For example in a report to the Macclesfield Housing Services Committee in May 1980, it was reported that:

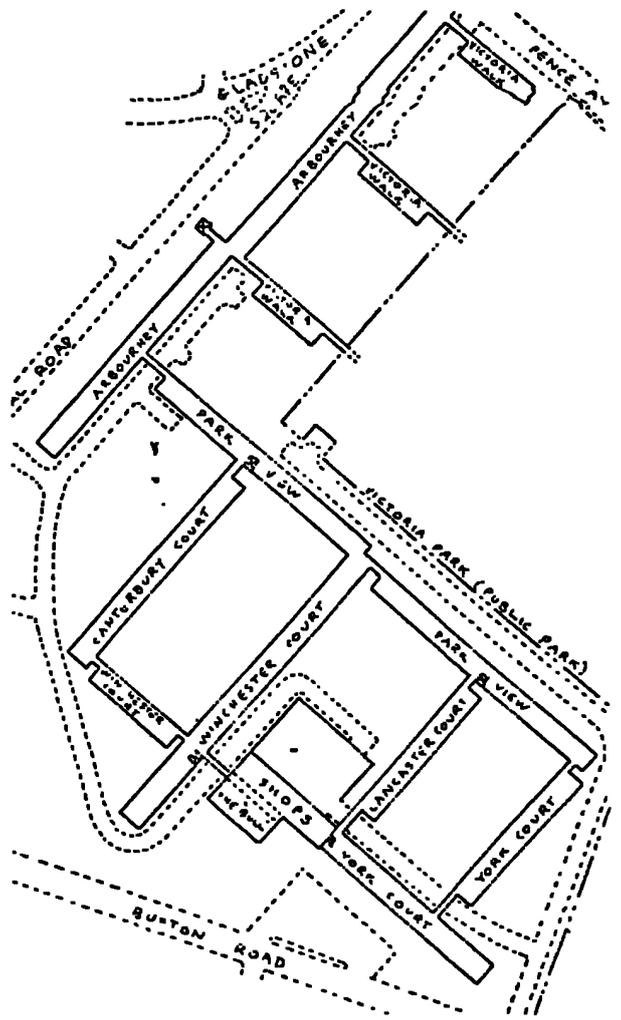
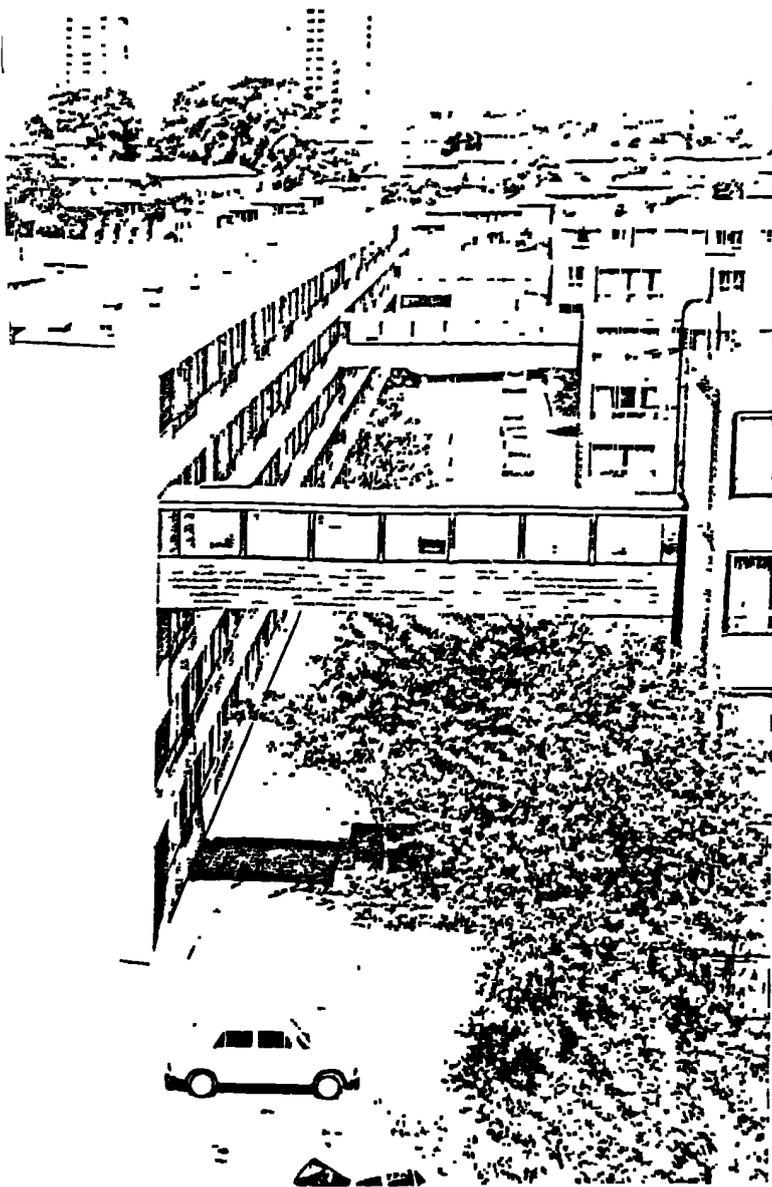
"The effectiveness of caretaking and maintenance services is being undermined as the communal areas become the subject of increasing vandalism and general misuse. The environment is discouraging to most residents, and as the letting potential of the flats reduces, there is an unavoidable trend towards allocations to those families in most urgent need of rehousing, some of whom have and exhibit social problems.

The letting difficulties are compounded by the close proximity of attractive, traditional estates on two sides of Victoria Park, and by the poor publicity which the conditions on the estate engender".

The recommendations for action included:

".....division of blocks, provision of an entry-phone system, and upgrading of communal areas and estate features, and improvements to parking and traffic arrangements".

At Blackburn there was a long history of misuses of the deck system going back to the early 1970's (123). The keeping of dogs, the continuous vandalism, the rubbish and low standard of the environment and the reputation of the estate as "Villain's Paradise" and "Alc-traz" all led eventually to a major improvement programme and attempt to make the estate "vandal proof", in 1979. Families with children under 16 years were moved to other estates



63. Macclesfield: Victoria Park Estate

and the dwellings let mostly to students. At the same time it was necessary to improve safety standards in the event of fire, particularly in those dwellings situated below the entrance at deck level. On the recommendation of the Fire Officer structural alterations were undertaken to ensure that all bedrooms were closer to the exit than the living room, the number of fire doors was increased and redundant heating ducts were sealed off.

These problems have probably been present at Macclesfield and elsewhere. And in a similar manner the major reason given for people requesting transfer from the Victoria Park estate (37A in May, 1966) - cost of heating/condensation 19.5%, noise causing loss of sleep 10.4% - that is inadequate heat and sound insulation, will probably have been present elsewhere in the North West. In May 1966 Macclesfield Housing Services Committee acknowledged only the need for "advice on heating and condensation", and the need for measures to reduce noise nuisance while the main effort was put into altering and upgrading the environment.

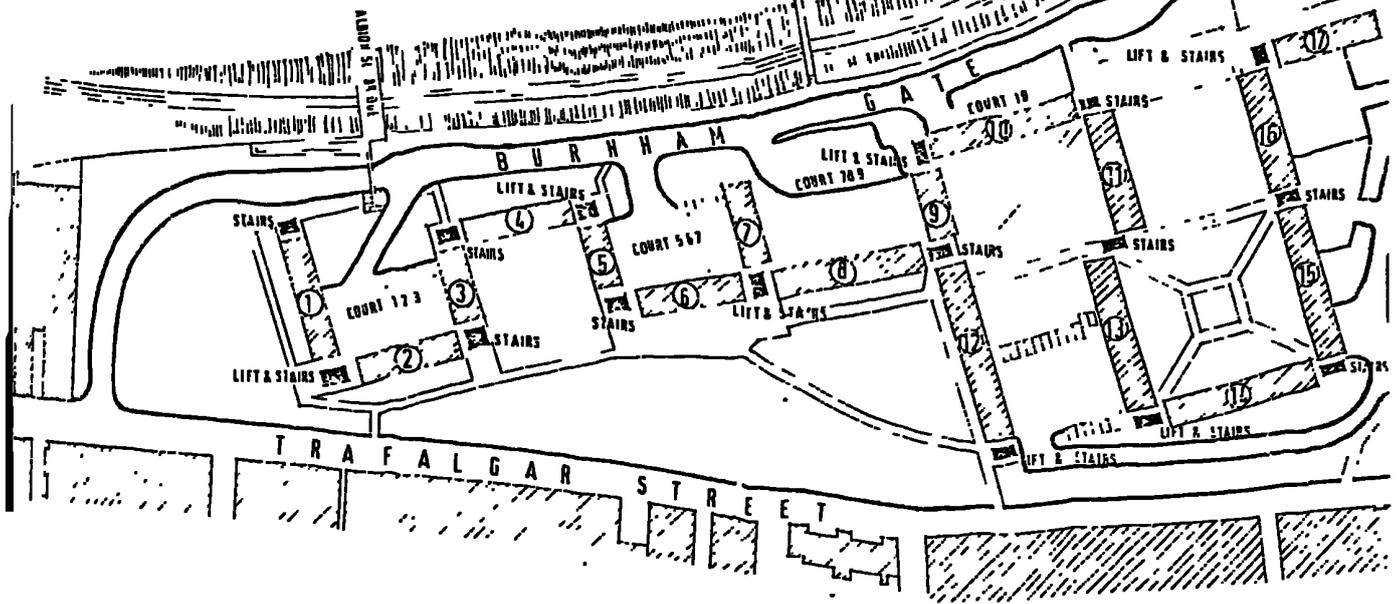
All these problems will probably have been experienced in Bolton, Manchester and elsewhere in England because of the standard type of Jespersen construction. Other types of decoupling in the North West have similar problems. In Clitham the Pearly Bank housing block on the Hulver estate some way from the city centre, was such a thorny problem to the local authority, that in January 1980 it was decided to reduce it to a single storey terrace of flats and maisonettes (124). A similar development half a mile away did not have the same scale of problems at the time.

Rochdale built three large schemes; Ashfield Valley, Freehold and Falings. The first is one of the largest in the region at just over 1,000 dwellings. (Illus. 65)(p. 197, Twenty-six blocks, from four to eight storeys, are linked into two giant complexes. The whole estate has a monumentalism and drabness, due to the heavy concrete panel construction, which is only rivalled by the other Crudens "karne" system built estate at Killingworth. In 1979 the local authority began work on removing all the bridges connecting the blocks together in an attempt to answer the tenants' protests about vandalism. However the problems seemed to be related just as much to the heating and condensation difficulties, the public health standards (insects in the drainage system, found on other estates, for example Hyde Park) and the lack of community facilities, e.g. community centre and adventure playground (125).

The Trafalgar Gardens estate in Burnley is of a similar kind of architecture (Illus. 66)(p. 198) Seventeen blocks containing 379 dwellings are linked in a courtyard pattern, on a sloping site. When it was opened, and up until the late 1970's, this estate was claimed to be "probably the most ambitious residential development ever carried out by this local authority".(126)

- 1 HARDY HOUSE
- 2 COLLINGWOOD HOUSE
- 3 AJAX HOUSE
- 4 ROONEY HOUSE
- 5 ORION HOUSE

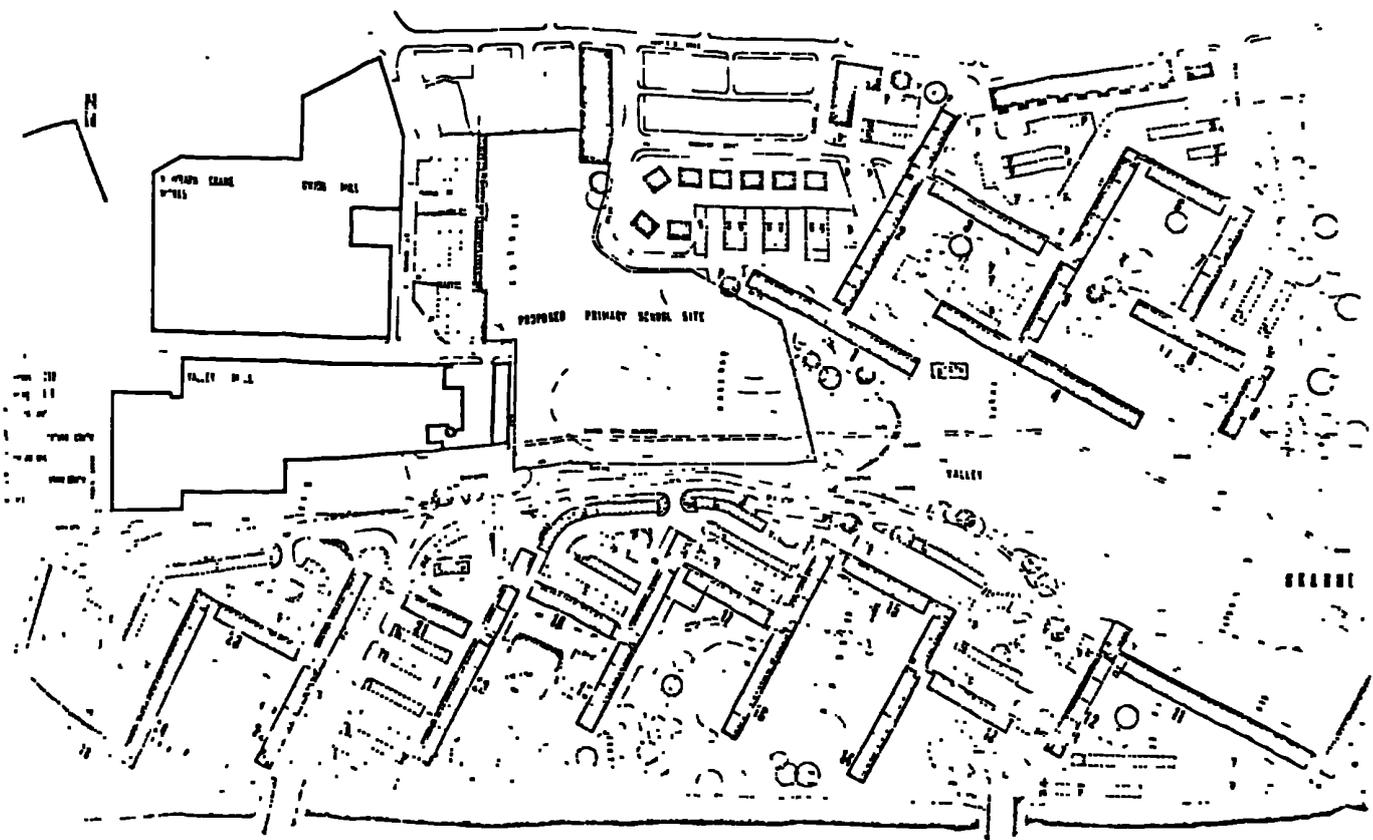
- 6 BLACKWOOD HOUSE 196
- 7 MARS HOUSE
- 8 VANGUARD HOUSE
- 9 HAMILTON HOUSE
- 10 VICTORY HOUSE



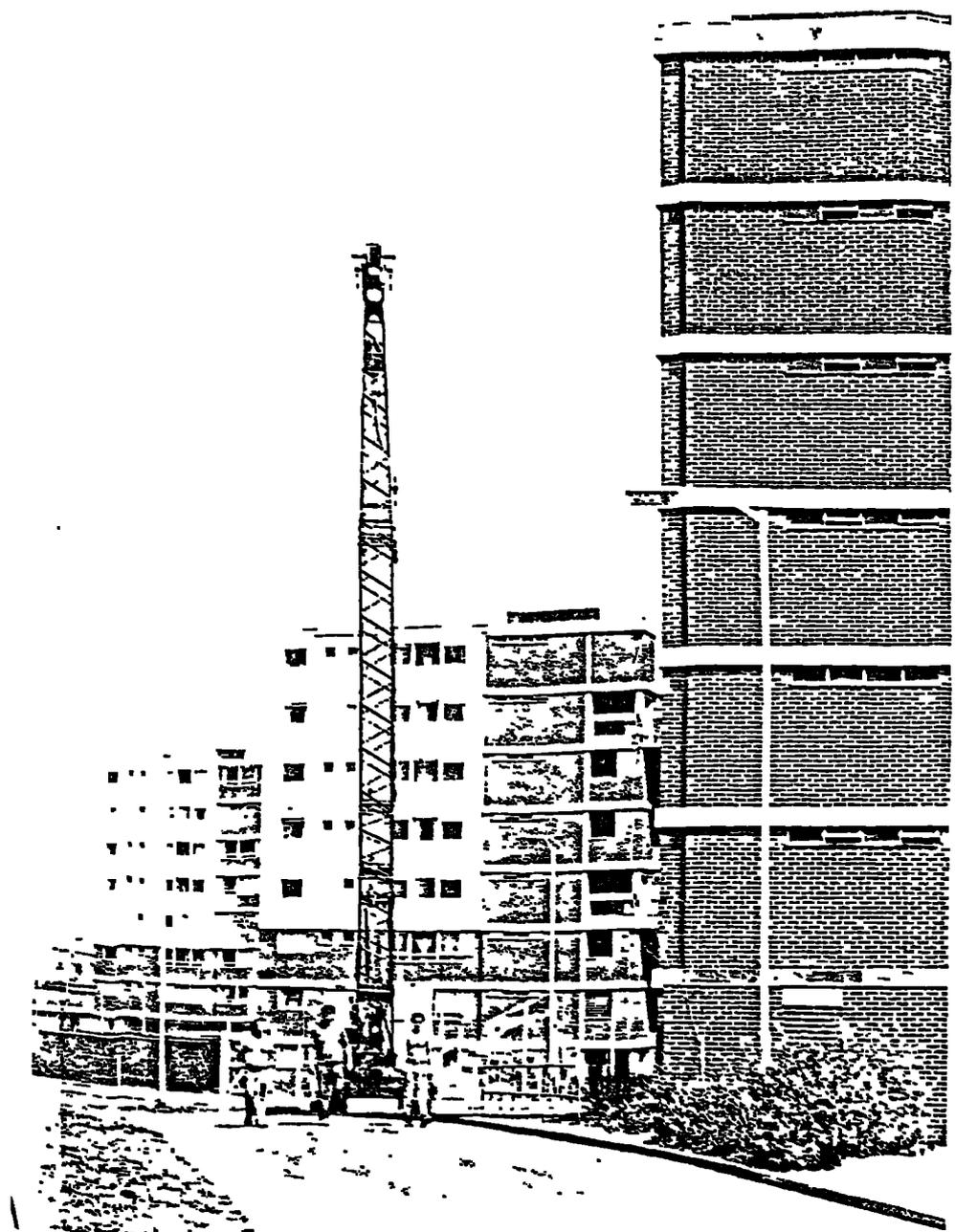
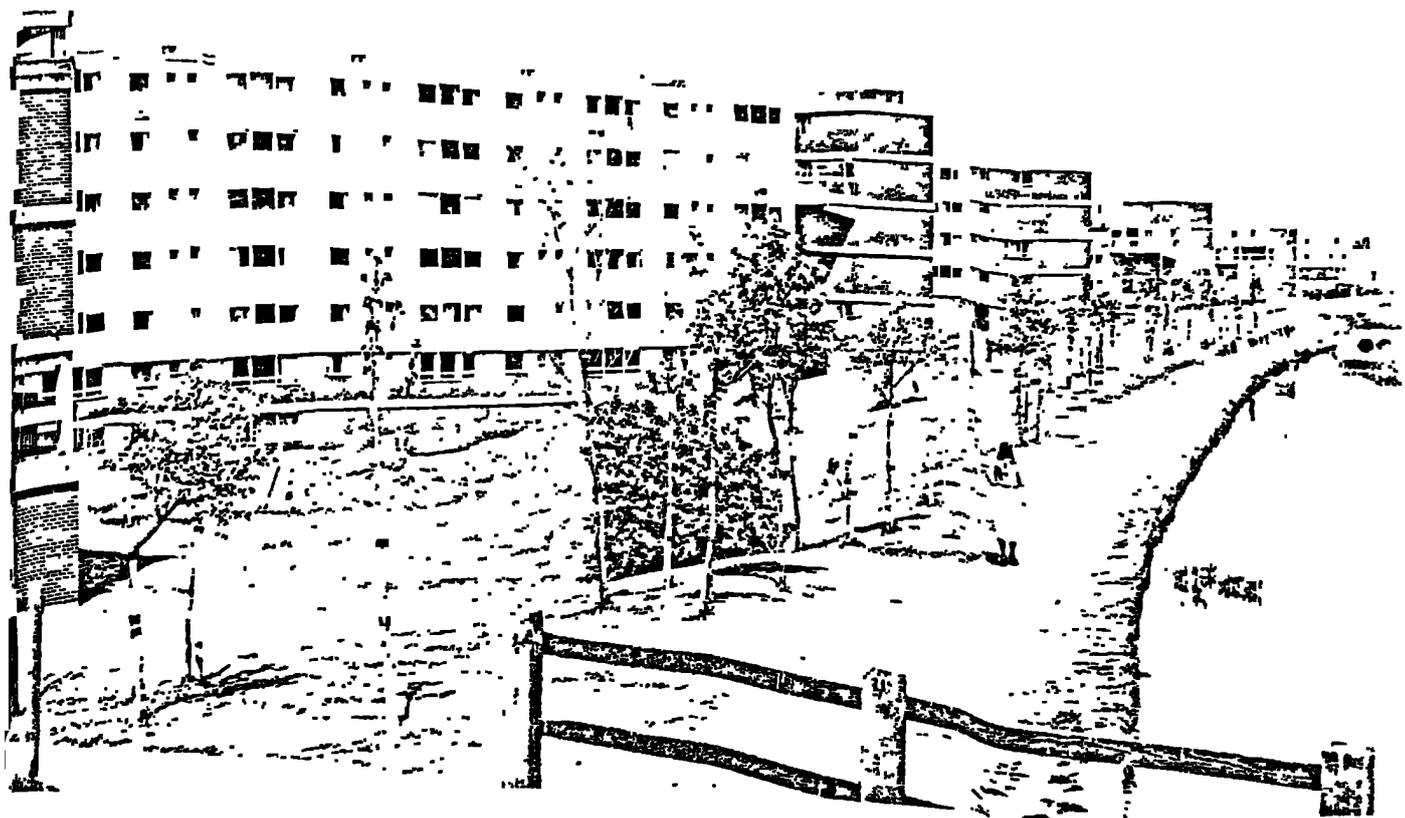
- 11 HORATIO HOUSE
- 12 MCNARCH HOUSE
- 13 GRESHAM HOUSE
- 14 TRIUMPH HOUSE

- 15 DOLPHIN HOUSE
- 16 NEPTUNE HOUSE
- 17 ALBEMARLE HOUSE

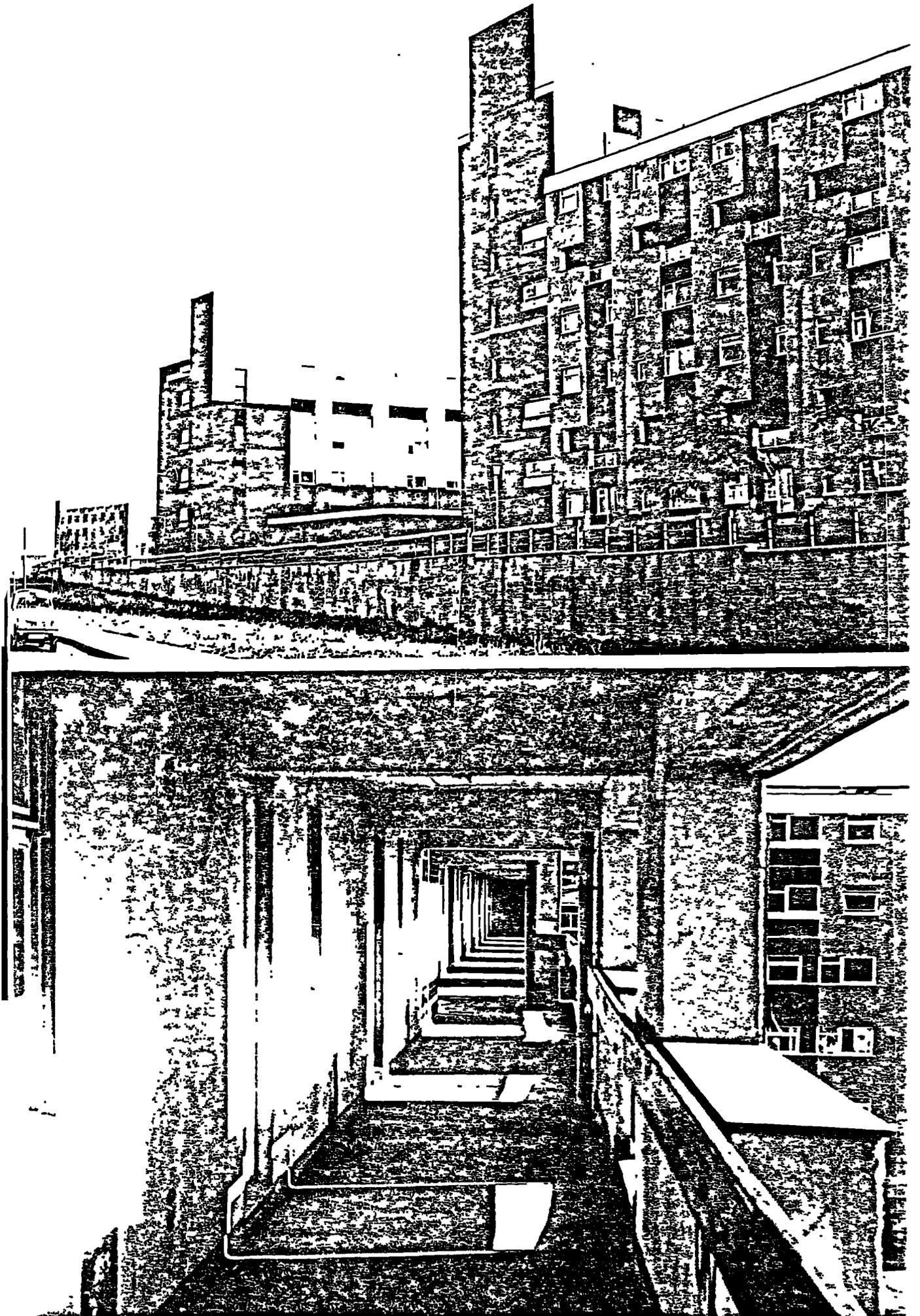
TRAFALGAR GARDENS
Street Plan
not to scale



64. Trafalgar Gardens, Burnley (top) and Ashfield Valley Estate, Rochdale.



65. Ashfield Valley,
Rochdale.
Left: The crane arrives
to remove pedestrian
bridges.



66. Trafalgar Gardens, Burnley

"Obviously", it was suggested, "a tremendous amount of time, thought and money has been spent in providing these homes, which one considered to be amongst the most up-to-date and comfortable of their type in the country". (127) In consequence the estate was named after a most important event in British history - the Battle of Trafalgar! Each block bears the name of one of the ships in the victorious fleet.

However, no amount of propaganda regarding the "model" status of the scheme could hide its poor construction and below standard environment. A large amount of remedial work has been necessary (128).

At Knowsley, the Tower Hill estate built by the same firm that was responsible for part of Netherley and the Turkey Lane scheme in Manchester (and Whitefield square in Knowsley and Southgate in Muncorn) that is, Unit Construction Ltd., has been entirely vacant since 1979. Its history of problems surpasses even the Netherley experience, although the record of vandalism is probably not quite so serious in view of the independent nature of each block: the estate is not truly deconcentrating because a large number of blocks are not linked together to provide an upper level pedestrian system.

The smaller schemes at Salford, Knowsley, Bootle, Birkenhead and Preston have a relatively successful history. The Russell Street scheme in Preston by James Stirling and James Gowan was almost contemporary with Park Hill (129). It is far smaller (forming only one part of a larger scheme) and doesn't have a deck in any way comparable to Park Hill's, but in contrast to the Sheffield estate did use some materials and detailing derived from the local culture. In other words it has a few small features as "monuments of worktown" (130). Otherwise its architects were interested in similar ideas to Lynn and Smith:

"The character of a society is formed to a very great extent by the buildings it inhabits, and we have tried here to maintain the vital spirit ("Saturday Night and Sunday Morning") of the alley, yard and street houses that the new development is replacing and from which its occupants have recently moved". (131)

Another and very different scheme by James Stirling exists in the centre of Muncorn new town, adjacent to the shopping centre. This is the Southgate estate, a high density example of truly remarkable modern architecture. Interlocking 5 storey rectangular shapes with central open spaces, mainly for children's play and distinctive circular windows have been used following the inspiration of the Georgian squares and their large windows. Frequent stair wells link what is little more than a gallery with the ground level while originally there were bridges linking the estate with the shopping centre and surrounding sites; now there is only one bridge into the shopping centre. Pedestrian traffic along the decks, through the estate, was curtailed at the

request of the tenants. The whole scheme was not completed until 1973, about two years behind schedule and even this was after part of the 'deck' housing had been replaced in the plans by two storey housing designs.

The Castlefield estate in the Newtown, makes a complete contrast to the Southgate design. A mixture of long three to five storey deck housing blocks (without lifts) and two storey housing are spread over a hillside a little way from the town centre. The busway public transport system passes through the centre of the site. The whole scheme has the layout and generous landscaping associated with the Garden city and not the Georgian city of its better known rival for new tenants. Southgate is almost certainly the least popular of all housing estates in Runcorn; Castlefields probably one of the most popular.

Yorkshire and Humberside

Most of the deckhousing in Sheffield has already been described. Two other schemes at Netherthorpe and Little Sheffield, have deck access to between six and four storey maisonette blocks, which are partially linked into an upper level pedestrian system. Both estates are at the lower density of 250-300 ppha (100-120 ppa), have some tower blocks for small households and are built from traditional materials (i.e. more brickwork, tiling and coloured fascia boards); the decks are correspondingly not as wide or as continuous as the real Sheffield "streets-in-the-sky" but relative to elsewhere in the country fall into the deckhousing category. These schemes were excluded from a special working party study of the four deck housing estates in Sheffield in 1976 (132).

The remaining schemes in the region were designed by the Yorkshire Development Group Consortium or the Leeds based consultants, Gillinson, Barrett and Partners. We will deal with the local authority organisation first.

In late 1962 Hull, Leeds and Sheffield (joined a little later by Nottingham) City Councils joined forces to produce at first high quality system built deckhousing, (traditional two storey housing came a few years afterwards). Their combined resources and demand for such multi storey high to medium density housing would, they supposed, ensure that an efficient, economic and flexible type of building method could be devised and then mass produced. This was the only local authority consortium (and the first of all consortiums) to undertake such a complex planning exercise. Similar organisations formed a little later throughout the United Kingdom discussed the idea of developing deck access housing, for example, in the West Midlands, North East and North West of England, but kept instead to the mass production of traditional housing forms with new materials.

The initial programme was for a minimum of 4,500 dwellings spread over eight sites in four cities. Each scheme would be assigned by the local authority responsible for its development. All building, to be undertaken by F. Shepherd and Son Ltd. of York, would be completed three years after commencement in 1966. The eight schemes were as follows:

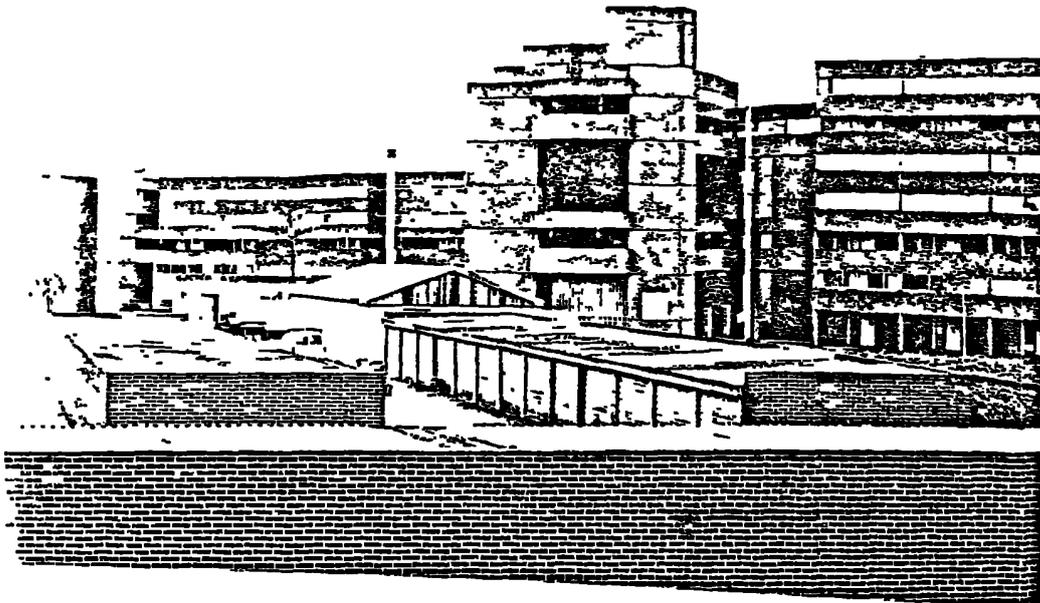
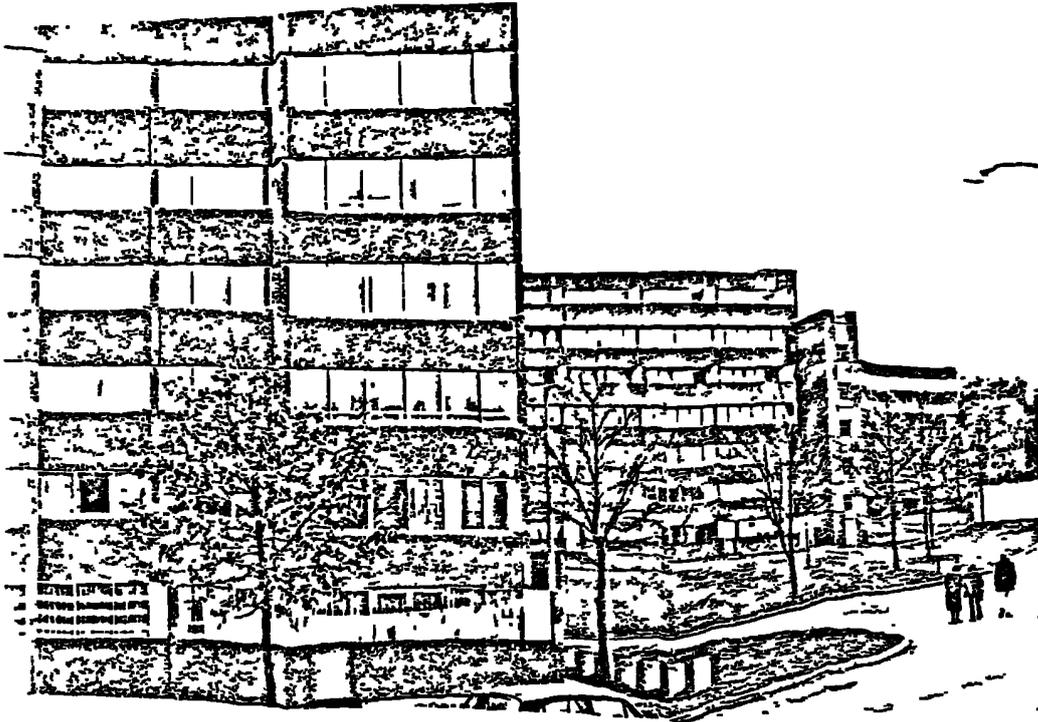
Local Authority	Phase I	Phase II
Leeds	Leek St.	Anchor St.
Sheffield	Broomhall	Lansdowne
Nottingham	Balloon Wood I	Balloon Wood II
Hull	Area 17	Brandholme (Area A3)

Norwich (which along with Chesterfield and Louthorpe, had joined the consortium after this programme had been agreed) planned for one large estate but in the event built a smaller scheme, using a concrete frame and brick infill construction, to the YDG design.

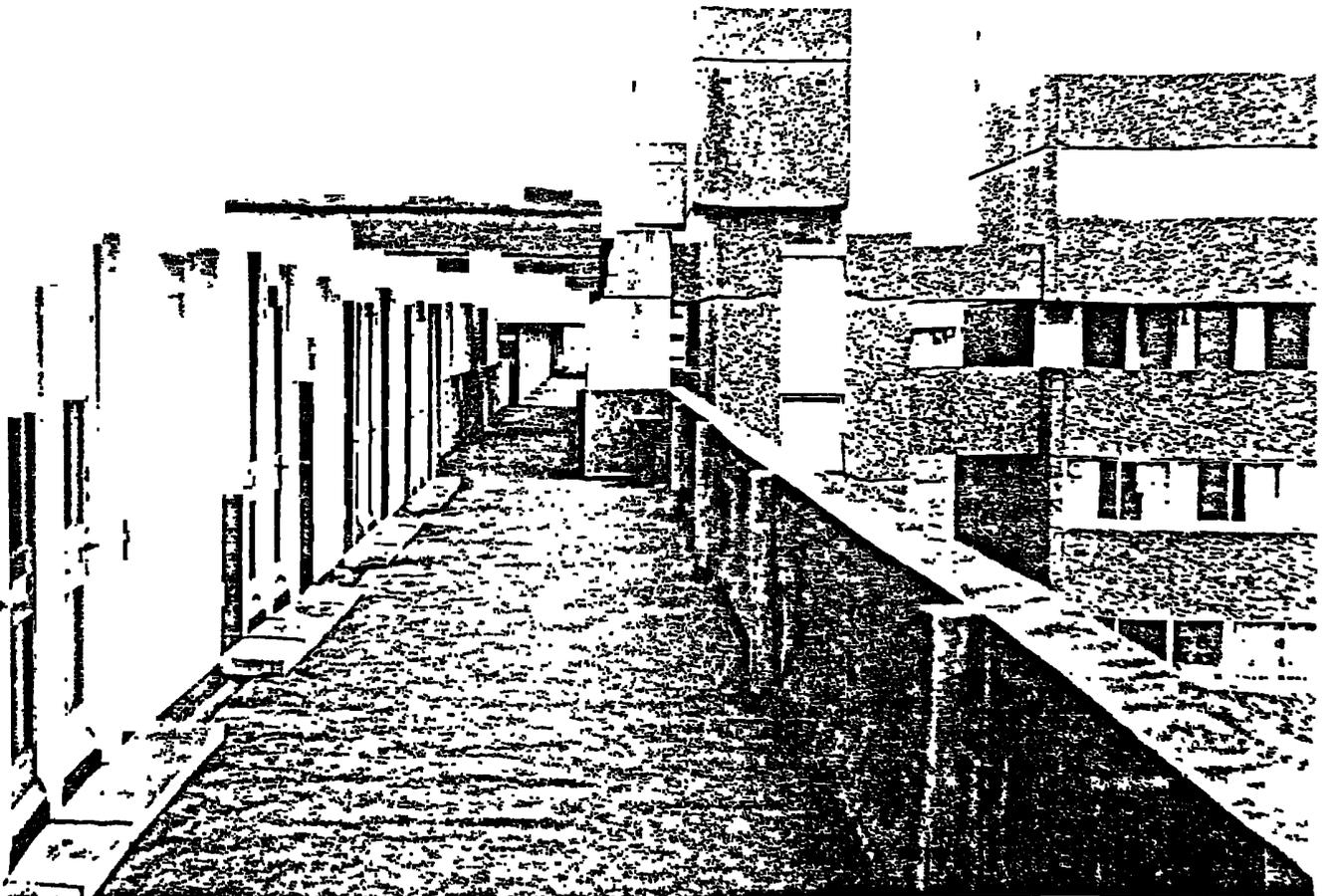
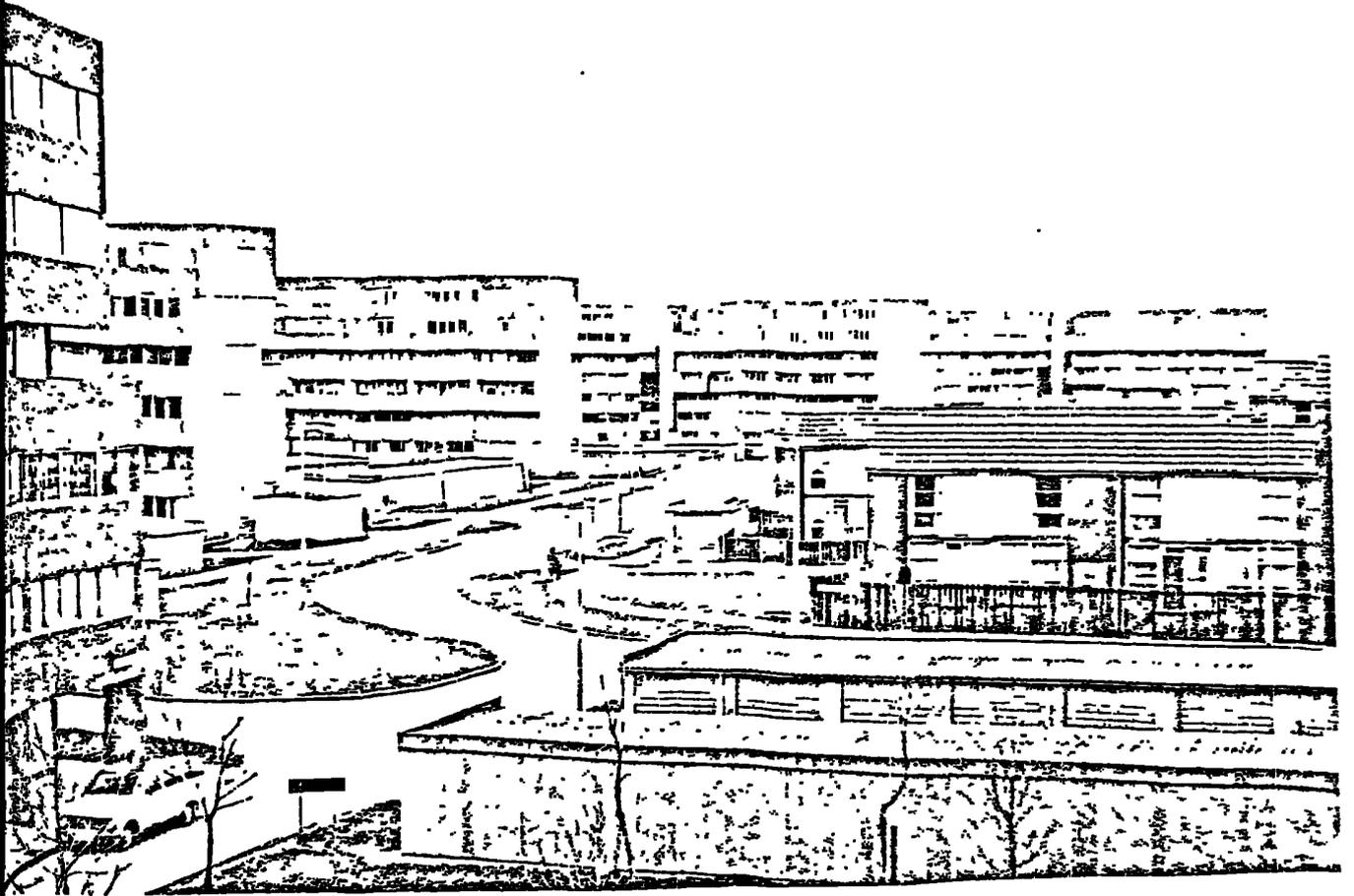
Although the initial plan had been for 6,000 dwellings even this second best production run was soon running into difficulties due to the standard of design and construction, and tenant response. Sheffield and Nottingham withdrew from the second phase while Anchor street was altered so that it could no longer link its pedestrian system into the Leek Street estate next door (both forming the Hurslet Grange estate - located where Richard Hoggart had been brought up and where he based the reminiscences contained in the first half of The Uses of Literacy). As a result only 3,735 dwellings were produced and all of these were found to be deficient in quality in one way or another, some more seriously than others. None of the estates provided the kind of upper level pedestrian system which had been envisaged, notably in the two estates in Hull and none had the kind of social amenities required, particularly Balloon Woods isolated on the outskirts of Nottingham (the second phase had been going to include the shops and play areas). Sheffield and Nottingham did, at least, use generous landscaping as part of the design (Illus. 67 and 68) (p 222/3)

All these estates have proved to be very unpopular with tenants, relative to traditional types of council housing, and have witnessed determined long-term protest movements from the residents, especially in Leeds and Nottingham.

The first phase of the Leeds estate was opened with the claim that it marked "the rebirth of Hurslet" (133). By 1973 when the second phase was completed, serious objections were being made to the quality of life available on the new housing estate. A large-scale repair programme was instigated. However, three years later protests were reaching a new stage and from 1976 to 1978 the estate was rarely out of the local news (134). The question now was not whether or not to repair the dwellings but whether or not to rebuild the whole estate. This episode in the history of Hurslet Grange, the "all



67. Balloon Woods, Nottingham (YDG)



68. Bransholme, Hull (YDG)

electric Alcatraz" was due principally to the work of the Hunslet Grange Heating Action Group. In May 1976 they produced a report "Hunslet Grange: An Experiment and its Victims". This detailed the continuing problems of high electricity bills, inefficient central heating and lack of repairs, many of which when undertaken were ineffective. But by May 1978 little progress had been made." "Alcatraz" of Dapair" read one press heading (135) In 1979 the City Council did however begin proceedings against F. Shepherd and Son Ltd. of York in order to establish their liability for the "gerry-building". Hull City Council joined forces with Leeds and claimed £1m damages.

Hunslet Grange, a couple of miles from the city centre, at least had a distinct shopping centre built at one end of the 11 hectare (28 acre) site in 1976. Balloon Woods had severe construction and design problems plus an isolated location without proper neighbourhood amenities save a pub, small community centre and mobile shop.

In 1975 tenant protest over Balloon Woods reached the local press (136) Anti-condensation measures in 1970-71 had not proved effective. A report was produced by local groups (the Balloon Wood Information Centre, Tenants Association and Self Help Association for Tenants) which called for an investigation into all aspects of dampness (both water penetration and condensation within the flats), 'heat loss', potential fire hazards, structural maintenance, drainage, improvement of the environment and community facilities, and rehousing policies. And the report to be followed up by repair work.

Some positive steps were taken. By 1980 a large number of families had been moved out and students in. But the basic problems remained.

In Hull the problems have been well known for some time; in August 1980 the tenants were repeating yet again their anger with the local council over the appalling conditions on the estates and especially Fransholme (137).

The Brookhall estate in Sheffield has a long history of tenants' protests over poor housing conditions which began with the setbacks which arose during construction. In 1968 work was halted after two workmen were killed when a concrete slab slipped off its supports. This was followed by a second and third incident when workmen narrowly escaped similarly dangerous circumstances. Those building the new housing estate claimed that there were structural faults in the flats due to poor workmanship; concrete wall panels designed to lock together were so distorted on arrival from the factory that they would not fit together without adjustment(138)

Objections from residents began almost immediately the estate was fully occupied in 1969. From that year until the present there have been repeated complaints principally about the heating bills, damp and condensation but also referring to the lack of neighbourhood facilities. Repair work has followed

while families continue to leave the estate and the same complaints arise with each new tenant. The most effective protest arose in 1978 when the tenants association (with the help of a professional architect) submitted a 32 page report on the physical condition of the estate to the City Council. Many of its suggestions were still being followed up in 1981.

The second type of deckhousing developed in this region has been far more successful. Allinson, Barnett and Partners were primarily consultants to Rotherham City Council although they also designed a small estate at Pudsey, West of Leeds. At Rotherham, they were responsible for the St. Ann's estate, the Central Area redevelopment plan Report and last of all, the Oakhill estate.

The first project was for the towns main slum clearance area, right in the centre of Rotherham. Traditional mixed development was rejected by the City Council for social and economic reasons. Deck housing was accepted as the suitable answer to the problem and in 1966 the St. Ann's estate, nearing completion, was incorporated in a plan for the centre of Rotherham as a whole. Most of the proposals for a multi-level centre have not been realised, including the Park Hill-like housing scheme which was to link St. Ann's with Clifton Park.

A second project for a large estate on the outskirts was, however, successfully implemented. Designed in the late 1960's and completed in 1974 its landscaping amenities, brick and concrete structure and varied form makes a striking contrast to the shortage of amenities and heavy concrete panel construction used at St. Ann's.

The Northern Region of England

The main cities on Tyneside do not have a great deal of the kind of multi-storey housing found in the North West and Yorkshire and Humberside. North and South Shields and Gateshead did not, originally, (before their boundaries were changed in 1974) have any; now they each have one scheme. Newcastle and Sunderland did take a close interest in the new type of high density urban housing, although with relatively little material result.

In 1960 Newcastle established a new City Planning Department under Wilfred Burns. By 1964 plans had been produced for a multi-level city centre and various mixed development slum clearance housing estates. In that year the Planning Department published the first volume of a report on the housing problems of the city (139). Here, for the first time, deckhousing was highlighted as a praiseworthy alternative to traditional types of multi-storey housing. Park Hill was cited as an example of the effective balancing of the needs of privacy and social contact. Another report in 1967 considered various types of low to medium rise high density housing including streets-in-the-sky.

Meanwhile "neighbourhood plans" were produced for Sheildfeld (1966) and

Blakelaw (1966) and a "district plan" for Melbourne Street (1966). Each of these areas of the city was subsequently developed with a portion of deck housing. The latter, plus the contemporary redevelopment area of Gloucester street, had a large amount. Particularly notable is the St. Ann's Close estate in the Melbourn street district similar to Rotherham's Oakhill.

Two other areas of Newcastle nearly built large deck housing schemes. At Benwell a large number of administrative delays led to its abandonment (140). And at Byker the design work already underway (141) was replaced by the design of the consultant called in to tackle the redevelopment project, Ralph Erskine. The local authority plan included a housing "wall" or "barrier block" with deck access housing and two storey housing. Erskine took a similar approach but with a far more picturesque interpretation. One other scheme, at Arthurs Hill, was developed by a housing association.

The limited amount of deck housing in Newcastle can probably be put down to the innovatory role which the city played in urban planning in the early 1960's and the early 1970's. The streets-in-the-sky, which actually have an access arrangement to the dwellings similar to the Tyneside Flat (hence Park Hill and a street of Tyneside flats have a similar "extra" number of front doors,) fell between the two periods. They have probably saved themselves a great deal of trouble! The Laing's "12a Jespersen" system used at Shieldfield, Melbourne Street and Blaklaw is causing some heating and ventilation problems. However, overall there was little evidence of "problem estates" in this category at the end of 1980.

Sunderland also established a Planning Department in the early 1960's. Its first two plans included sketches of deckhousing schemes, but only one small estate was built.

The Southwick Area District Plan which applied Buchanan's principles and P.A.G. concepts to one part of the city included in its area what appears to be the Hajremann Street deck housing scheme. Another plan, the East End Sub-District Plan, recommended a small scheme that was never built. The former estate was proving very unpopular until it was converted for use almost entirely by old people. It is presently a "model" of this type of "sheltered" accommodation.

Outside of what were the county boroughs of the Northern region (including Teeside, where, as we have already noted, there is no deck housing) there is a distinctive concentration of the deck access type of multi-storey housing in what were called urban district councils, local authorities partly under the control of the County Councils of Durham and Northumberland (there being no such housing on the Cumberland coast or in Carlisle). These are the schemes in Washington newtown (formerly Usworth urban district council, Felling,

Hebburn, Spennymore, Longbenton (Killingworth expanded town) and Hartlepool, a Municipal borough (Illus. 69 and 70)

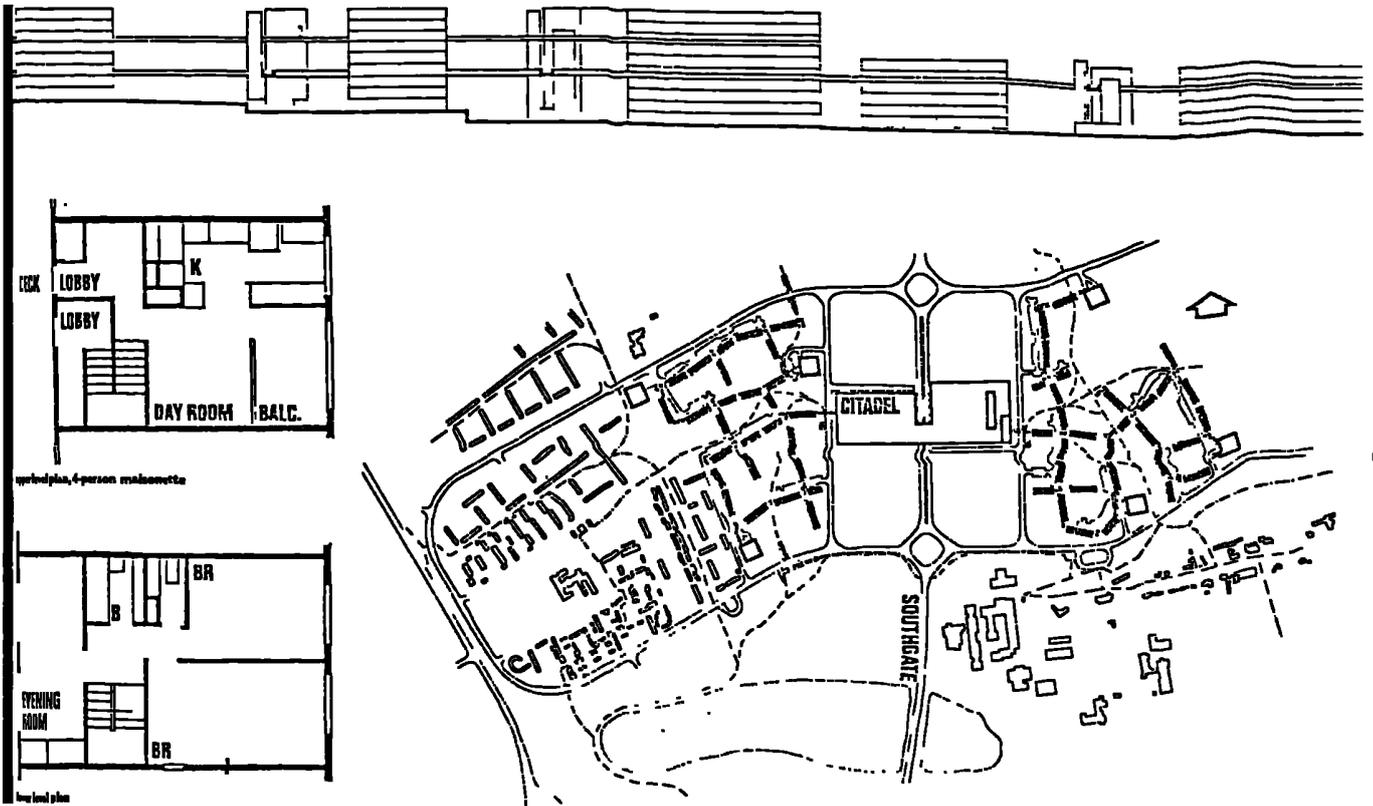
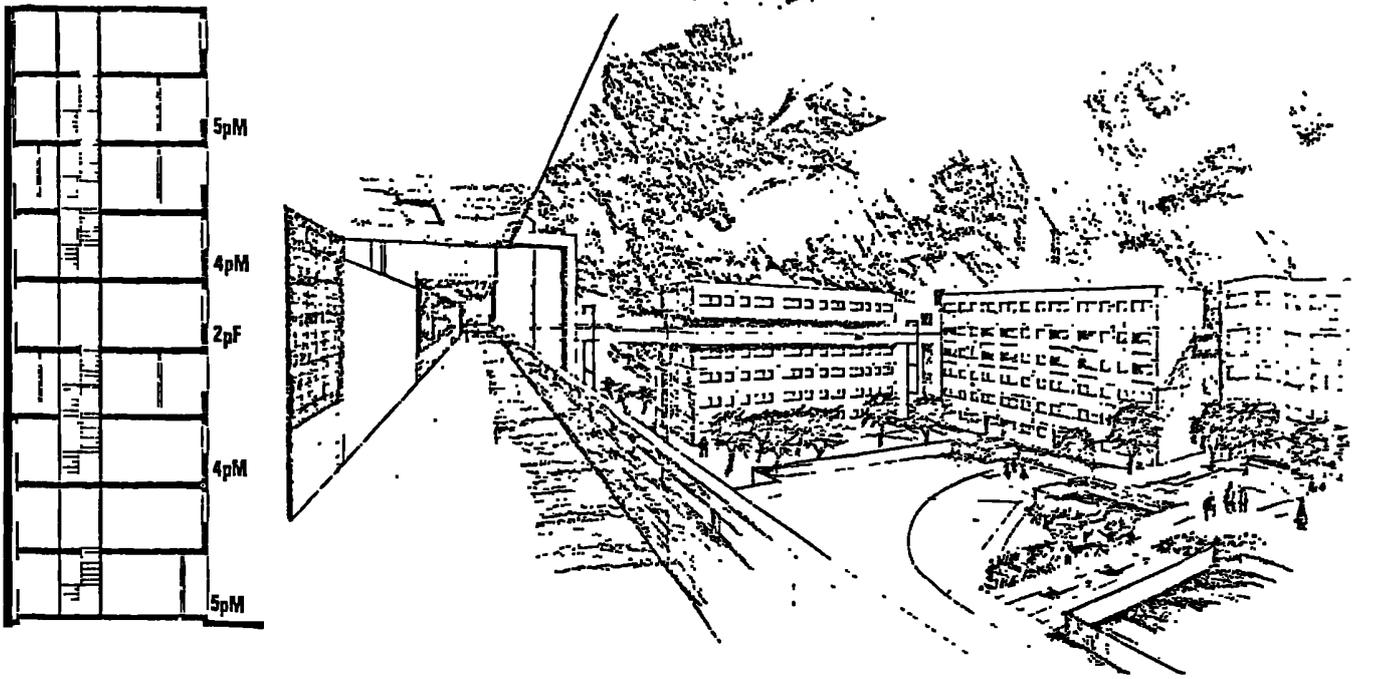
The Edith Avenue estate, developed before the area was declared a new town in 1964, was designed by A.Collerton and W.Barnett of J.H.Napper and Partners (who also designed the schemes at Spennymore and Hartlepool). Only the first phase of the scheme was developed, 6.5 ha of the 16 ha site (16 acre of the 4 acre site). This included 673 dwellings at 340ppha (136 ppa) with district heating and 100 per cent car provision. Built on a sloping site increasing from 3 to 5 storeys and designed to form six linked courtyard areas, it provided family maisonettes, with their own gardens, at ground level, and smaller units above, with direct access to the deck or "high level street". The later phases were to include schools, adventure playground, a church, communal buildings and more housing. Unfortunately not only was the 'urban' settlement never completed but the design for Washington newtown placed the town centre on the other side of the designated area to the high density housing scheme. The Edith Avenue estate was thereby left adjacent to a new industrial estate and bounded on its other sides by a pit heap, railway and 19th century terrace housing. Thus both its design and location tended to militate against it.

By the early 1970's the estate had become very unpopular. When Sunderland Borough Council became managers of the scheme under Local Government Reforms in 1974, measures were taken to rehouse as many of the dissatisfied people as possible and to attempt, by careful planning and community work, to minimise the vandalism, overcome heating problems, remove the stigma attached to the area and develop a viable neighbourhood. However, by late 1979 it had been decided that the only option open was to sell the estate, by individual dwellings, at bargain prices and minimise the social and economic costs of the scheme. Its name was changed to Waterloo Gardens, substantial environmental improvements undertaken and its advantages advertised: the new brochure for prospective purchasers noted that "it is situated equidistant between Sunderland and Washington town centres, being close to all local amenities yet in a quiet rural atmosphere". Here, furthermore, were low cost homes on offer; "an exceptional chance to own your own home".

Nearby at Hebburn, now in South Tyneside, there are two estates, one of forty-four linked five storey blocks in an isolated spot near the Tyne and another of three linked blocks, 8, 11 and 17 storeys, adjacent to the town centre. The first has the dull appearance and minimum landscaping associated with local authority housing schemes developed by Crudens Ltd; the second has a slightly more attractive appearance. Both were the subject of extensive dwelling and environmental improvements in 1979 and 1980.



69. Flanborough Walk, Hartlepool.



70. The Towers Estate, Killingworth. Original Proposals.
 Source: Architectural Review Jan. 1968

At Felling, also on the Tyne and now in Gateshead, a very large scheme was developed next to the town centre (what is little more than a neighbourhood centre within Gateshead). Although it covers only a relatively small area and reaches up to six storeys, the bulk of the development gives it a monumental character. In 1970 a special council report found "a multitude of management problems" at the estate (142). Two years later extensive improvements had been made to the outside of the scheme. Another deck housing block of a similar design (Laing's "12m Jespersen") was situated a little way outside of Felling town centre.

Spennymore, near Durham (now part of Sedgefield District Council) was the subject of a town improvement project, organised by Durham County Council in 1967. This meant virtually rebuilding the town, concentrating public investment in this one "growth point" rather than spreading it thinly over the declining coal villages of the region. The report on the planning proposals for the town anticipated the building of a model estate:

"The improvement of the town's environment can be aided if all future developments are well designed from the outset. The U.D.C. have set very high standards for their next major housing project. Consultant architects have prepared a scheme at a fairly high density on the reclaimed site of the former Tudhoe Ironworks. The houses will be of the standards set out in the Parker Morris Report.....and the layout will allow for increasing car ownership and usage by separating the footpath system from the roads. This area, to be known as "Bessemer Park" will be linked to the town centre by a pedestrian way". (143)

The outcome was a "spine" of fourteen, five storey blocks set in a courtyard layout, with two storey housing to the South. The whole scheme was of an extremely dull, heavy concrete panel appearance, with the minimum of landscaping. No special pedestrian way linked the Scheme with the town centre.

Possibly more important was the fact that the scheme was not well designed or built, but was an example of "jerry-building" second only to Netterley. In 1978 a full report on the scheme found it in need of extensive alterations and repairs. But by mid 1980 little action had been taken.

The Flanborough Walk estate at Hartlepool was a smaller version of Bessemer Park. Originally intended to be adjacent to the town centre, the commercial activities of Hartlepool had, in the event, become concentrated elsewhere. In mid 1980 some repair work was in progress.

The only deckhousing scheme north of the Tyne, now in North Tyneside, is the Killingworth estate, known locally as the Towers. This was part of the expanded town developed jointly by Northumberland County Council, Longbenton Urban District Council and Newcastle County Borough. An original plan for the town foresaw a high density 'urban' form with terraced two storey housing adjacent to the centre of the settlement. However in 1965 three years

after this plan had been published, it was decided to build a giant deck housing estate either side of the new shopping centre; a total of 61 five to ten storey blocks linked by two deck levels. The 1,562 dwelling units would have six multi-storey car parks.

By 1970, when barely half of one side of the whole scheme had been completed (a scheme which had to be altered to include more high blocks) the second phase was cancelled for social and economic reasons (144) In the event, therefore only 30 blocks were completed. But this was enough. The estate was unpopular in 1970. By 1979 when a study was made of Killingworth's housing management problems, within the North Tyneside Metropolitan Borough the Towers were "difficult to let", "difficult-to-live-in" and "difficult-to-get-out-of" (145)

The East Midlands

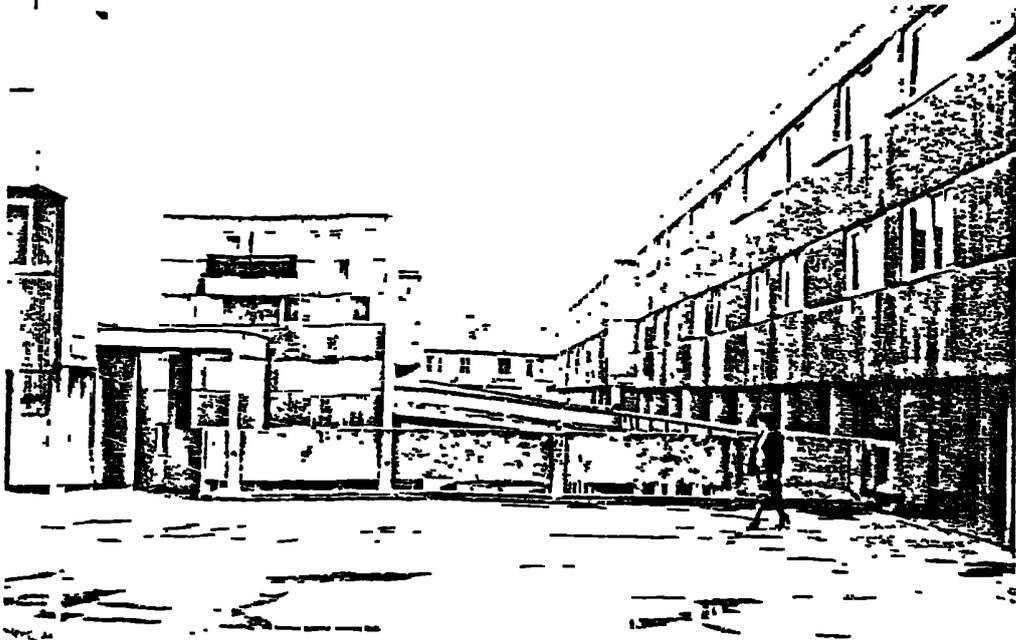
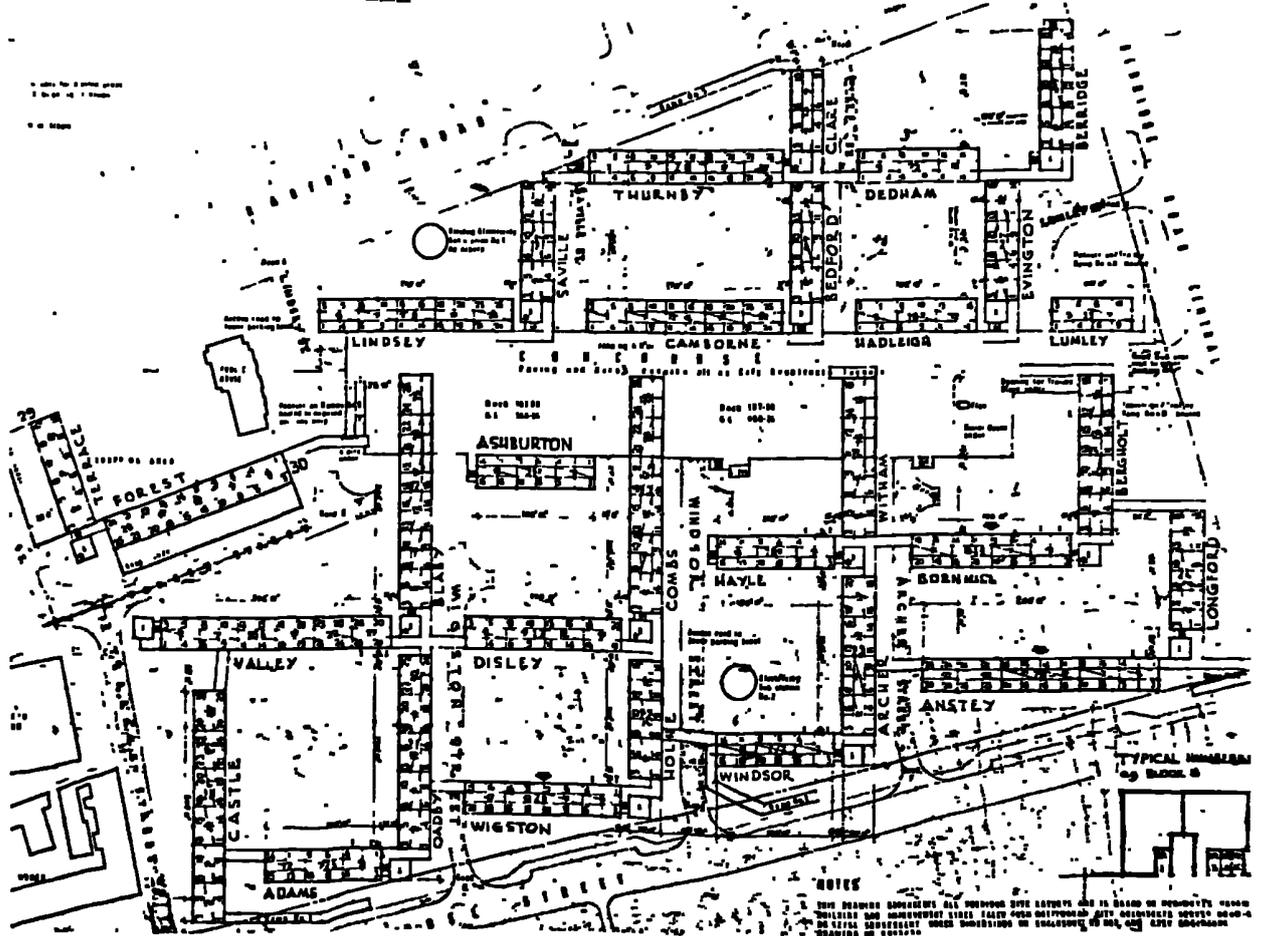
Nottingham and Leicester present a real contrast in their development of deck housing. The former has six very different schemes in a mixture of locations. The absence of any plan behind these examples of modern housing architecture was not mirrored in Leicester. But here the development of an estate of national importance proved to be impossible, the plan was unrealistic.

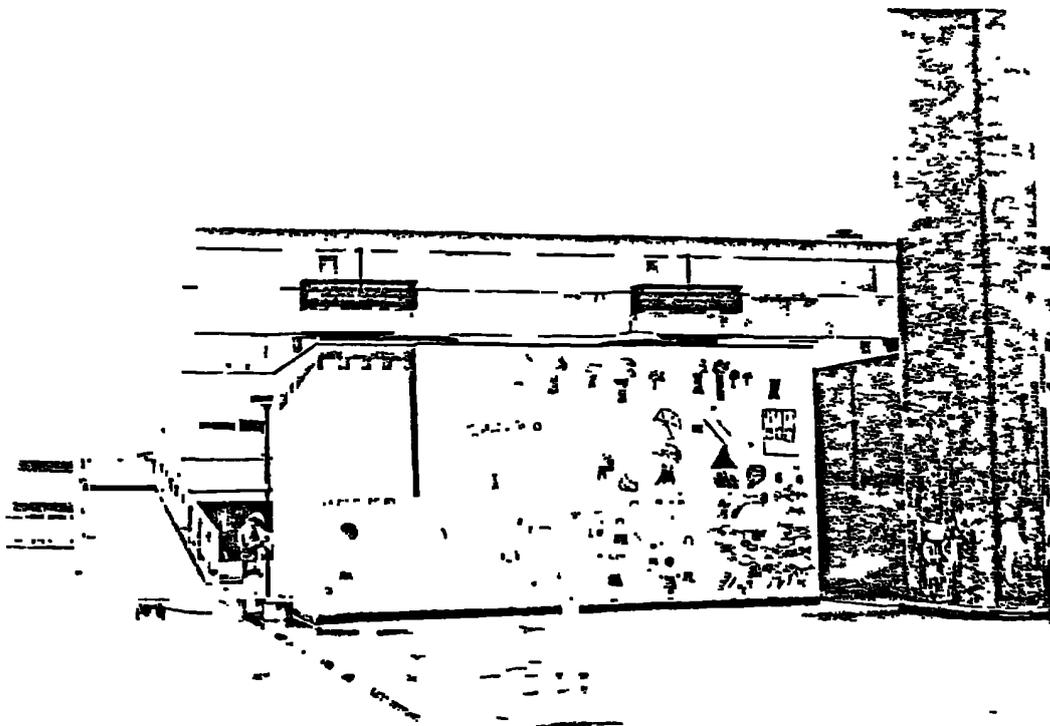
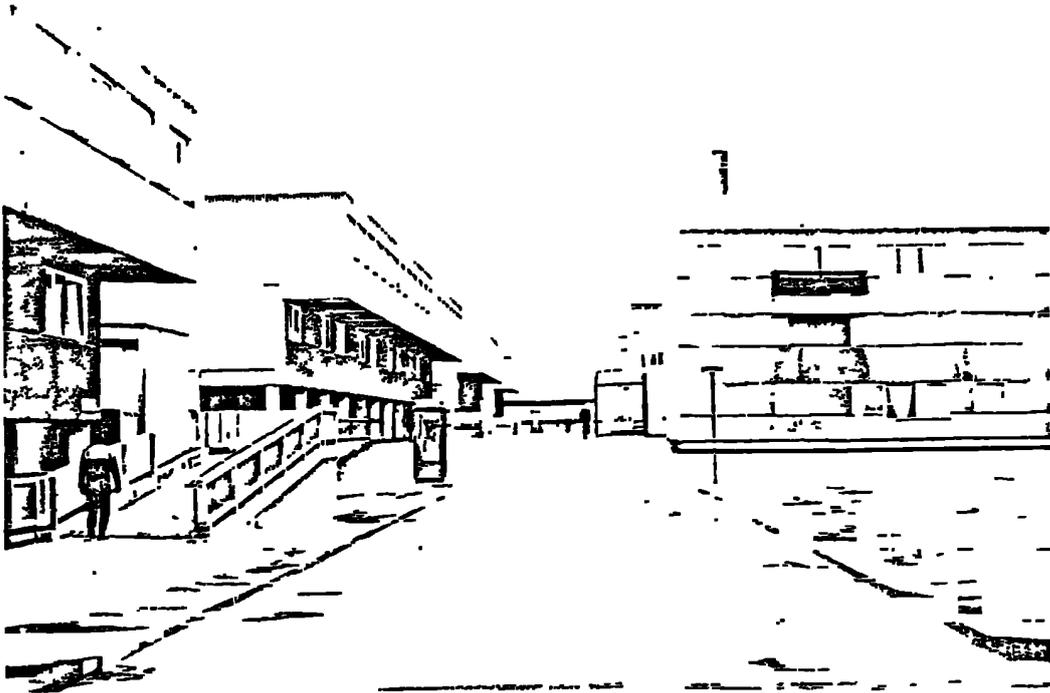
Leicester established a City Planning Department in 1962, under W.K.Smigielski. The plan produced by 1965 concentrated upon the needs of vehicular and pedestrian traffic, with the latter kept at ground level wherever possible. Two deck housing estates were to be built just outside the city centre. The first and most prestigious was Highfields, later called St. Peters. The original design envisaged the use of 56 four storey blocks linked into squares around a neighbourhood centre. In the mid 1960's Stephan George, the City Architect, created a new design which used a mixture of very tall point blocks and low rise maisonette blocks. All buildings were to be joined by a raised and completely separate deck system. When construction began in 1968 it soon became apparent that the scheme was architecturally and financially impossible. A modified design was devised which reduced the height of the tallest blocks (from twenty to fourteen storeys) and scrapped the walkway system. The press reports of the time recorded the deep felt disappointment at this alteration:

"When the scheme was originally announced it was described as the most exciting new look housing estate ever to be undertaken in Britain with one of its most striking features, a network of elevated walkways allowing residents on the twentyone acre estate to reach every part of the estate without ever touching the ground". (146)

By the end of 1969 the entire project had been scrapped. All that remained was a few maisonette blocks which had been altered to allow ground level access.

The St.Andrews scheme, the second of the two projects, was successfully





72. Hyson Green, Nottingham

designed and built with a similar independent deck system providing access to medium-rise housing blocks. It is now one of the city's least popular housing estates (147)

Nottingham never attempted to build such a "futuristic" scheme as St. Peter's and nor did it produce an overall plan for the city in any way comparable with Leicester's. It did undertake a large and somewhat prestigious redevelopment scheme at St. Ann's, the early sketches for which suggest a deck housing form (148); this never materialised. And with the help of Paul Ritter (as an interested observer) and David Jenkins City Architect, leader of the Y.D.G. in the late 1960's and one-time City Architect of Hull, it did embark upon some overall urban design for the city. However, the deck housing estates give little evidence of any coordination and logic behind the development of the city relative to the activities to the north of the East Midlands, within England.

The Kildare Road and Caunton Avenue schemes to the east are small and low rise, with brick and concrete, breeze block-type construction, respectively. Hyson Green, just to the north of the City Centre is a far larger estate. There are 31 five storey blocks linked around a large concourse, or upper level deck, underneath which there is extensive garage provision. The whole scheme has a very drab appearance: the heavy concrete panels have a "finish" identical to that found at the Elephant House in London Zoo! (Illus. 71 and 72) (p. 212-213).

Old Radford is an even more accomplished example of monumental concrete-aesthetic architecture than Hyson Green. Situated about three miles north of the city centre, it has linked six storey blocks with four tower blocks incorporated in the scheme. Only the Balloon Woods scheme already described looks as inhospitable as this estate - which does at least have some shops and proper neighbourhood amenities. The Radford estate is little more tolerable. Over 50 linked small five storey blocks of brick and concrete construction are arranged into an irregular layout.

All six estates have become the most unpopular of Nottingham's local authority housing. Extensive remedial work has been necessary at Kildare Road, Radford, Old Radford and Balloon Woods; Caunton Avenue and Hyson Green may well have faults which have not been dealt with to date. Environmental improvements and alterations have been carried out at all of the estates except Radford. Tenant protest movements have been active at all estates except Radford and Caunton Avenue.

South East England including Greater London

This region can be divided into four parts according to the nature of its deckhousing. These are: inner London north, inner London south, outer London and South-East excluding Greater London.

Hammersmith, just to the north of the Thames, witnessed two exceptional projects for the building of super-deck housing schemes. The first was the Fulham Study, headed by Theo. Crosby, and completed in 1963. This attempted to demonstrate that for pedestrian vehicle segregation to be viable, housing densities must be between 500 and 750 ppha (200-300ppa) Otherwise the cost of providing vertical segregation would not be spread over a sufficient number of people. Moreover at that density a diversity of human activities could be supported, within walking distance of the home; the second floor "pedestrian way" set within the six storey terraced housing, would perform a crucial service (149)

A slightly less theoretical exercise was the White City scheme; it was, however, no less ambitious and no less impossible. The plan, published in 1967, proposed an unequalled mix of urban activities within one enormous multi-level structure, covering 28 hectares (69 acres). At ground and first floor levels there would be industry and vehicular traffic, including parking space. Above this a large deck would support housing and all the amenities necessary to serve the residents of the low rise maisonettes and high rise flats. Decks or "streets" would join together the squares of maisonette blocks, apparently suggestive of the Georgian squares found elsewhere in the capital. The milk and bread floats allowed at this upper level would be an important ingredient of the new life-of-the-streets. The report states in this connection:

"A central theme of the planning of this development is to create by planning, a renewal of the community neighbourliness which is being destroyed by the average redevelopment going on in our towns. The courtyard approach prevailing throughout the scheme is a step towards recreating the 19th century street in 20th century terms but without the destructive bisection brought about by the motor car....The treatment of these squares between the buildings is of the utmost importance and must be such that recreates the London Street and square atmosphere, where residents can meet and children can play in absolute peace and safety, the children easily supervised by their mothers from the maisonettes". (150)

After such grand architectural conceptions the only scheme completed was a small and apparently successful one at Cheesman's Terrace, elsewhere in the borough

The borough of Kensington and Chelsea next to Hammersmith, were similarly aspiring to build a housing development of national importance. Two schemes were prepared, one by the borough of Chelsea prior to its amalgamation with Kensington in 1965, and one, a little later, within the Kensington area of the new borough.

The former was the World's End housing estate designed by Eric Lyons and Partners. Originally designed for housing and associated amenities at a density of 500 ppha (200 ppa) above the G.L.C. zoning of 340 ppha (at 136 ppa) on a multi-level principle, it was an impossible vision by the late 1960's

when approval was finally given to break the density zoning. (A similar problem would have arisen in Hammersmith if the projects had gone ahead). The final design, which was constructed between 1969 and 1977, kept community facilities at ground level, modified the first tower block design to incorporate some variation in form (compared to the flat surfaces of concrete panel construction) and included medium rise deck housing to link the tower blocks together (151).

The second scheme was prepared by Clifford Wearden and Associates. The multi-level scheme for Lancaster Road incorporated virtually every type of land use activity bar industry and covered 11 hectares (27 acres). It was never built. Another housing scheme on the same site has a small section using deck access.

There was no record of these being particularly unpopular types of modern urban housing.

To the east of Kensington and Chelsea is the borough of Westminster. Lillington Gardens estate was built here in the early 1960's. No less ambitious an innovation was the Lisson Green development; although it made a direct contrast in its use of system building techniques and a comprehensive deck access design. The first design was unveiled in 1966. It included eight storey and tower blocks linked by a very generous and extensive deck system, which even went over adjacent railway lines and channelled the pedestrian towards Regents Park. A large number of social amenities were to be provided for the 5,000 people housed in 1700 dwellings.

This design was modified in the late 1960's. The tower blocks were excluded and the deck reduced in width and length. Nevertheless, it remained a large scheme with two deck levels and a number of community facilities; the blocks were arranged into squares comparable, apparently, with those of Georgian London. In late 1980 it became necessary to introduce "defensible space" alterations to the estate.

A second scheme, the Brunel estate, followed the Lisson Green tradition but with a much less impressive deck system; it was, in all, one step removed from the architectural status of Lisson Green. Another scheme, Wessex Gardens, had closer ties with the Lillington Gardens estate although it did use an upper level pedestrian system.

The Gospel Oak scheme in Camden next to Westminster, was another would-be model estate. It was part of the Kentish Town redevelopment area designed by consultants Armstrong and MacManus and included the Wendling and Bacton estates. Both these have very wide decks incorporated in the four storey buildings. The Dundoyne Road, Gresby and Westheath estates do not quite fit into the category of deck housing because of the limited nature of their deck access design; they are really part of the remarkable mixture of architectural work

undertaken in the borough in the 1960's, culminating in the Alexandra Road balcony access scheme (152). None of them appear to have the status of "problem estates" found elsewhere.

Islington built the reasonably successful Packington Street estate (153) otherwise it steered clear of "modernist" forms; hence the development of the Margress Road picturesque scheme by Darborne and Darke (the architects of Lillington Gardens; Darke designing phase 1 of that estate).

The only other inner London borough north of the Thames to build deck housing was Tower Hamlets, in the East End. Two large estates (plus a single isolated block at Manchester Road) were built at Old Ford. These were the Tredegar Road and Lefevre Road schemes, similar to the "12m Jespersen" estates found in the towns of the North West, like Macclesfield and Blackburn (and built by Laings using a similar building method called "sectra") Both are very unpopular in the borough.

South of the river, Lambeth, Southwark and Greenwich developed a great deal of deck housing in a far more comprehensive and coordinated manner than that found in the inner London boroughs, whose situation we have just described.

Lambeth aimed to redevelop its commercial heart at Brixton and establish a new multi-level centre (a distinct centre in the Greater London Plan) with deck housing estates linked to each other and into the new shops and offices, by high level pedestrian ways. Unfortunately, although the modern housing was completed, the commercial centre was hardly touched (save a new underground link into central London). Stockwell Park, Angell Town and Loughborough Park (the latter still under construction in 1980) have used traditional materials and in the first two cases are low rise buildings without lifts; the latter is a "barrier block". All estates, plus the Flaxman Road scheme to the east of Angell Town, were provided with a large number of neighbourhood amenities. Stockwell Park has, however, become the problem estate in the borough due to vandalism; preventive measures were beginning to be taken in mid 1980 (154).

Neighbouring Southwark has three enormous estates. Two of these, at the northern end of the borough, namely, the North Peckham and Aylesbury estates, were meant to form part of a pedestrian system linking the Elephant and Castle in central London with Peckham town centre (155). The rather informal plan was never realised and it is doubtful whether it would have proved popular with residents; both estates have had considerable problems in making themselves acceptable to residents, especially Aylesbury - the largest deck housing estate in England.

The third estate is Dawson Heights at Overhill Road. Set in suburban London on a similar site to Park Hill, its irregular form and predominant use

of brick make it a picturesque alternative to the design of the Sheffield scheme (156).

Greenwich, further to the east, built three large estates: Cardwell, Connaught and Glyndon. The first would have been similar to but larger than Park Hill if the original plans had been implemented; only nine of thirty-two blocks were completed. They are located around Woolwich town centre and were intended to form part of a pedestrian system, mainly ground level, which would have resembled the rim and spokes of a wheel in layout. They appear to be successful developments (Illus.73)(p. 219)

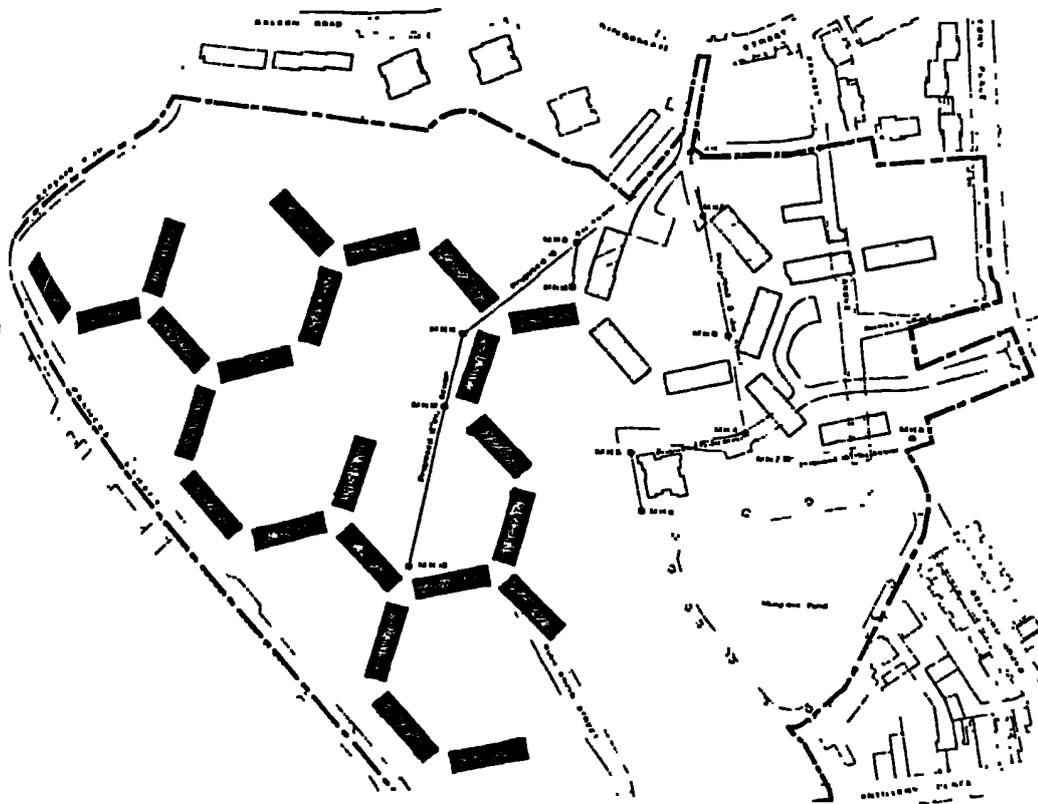
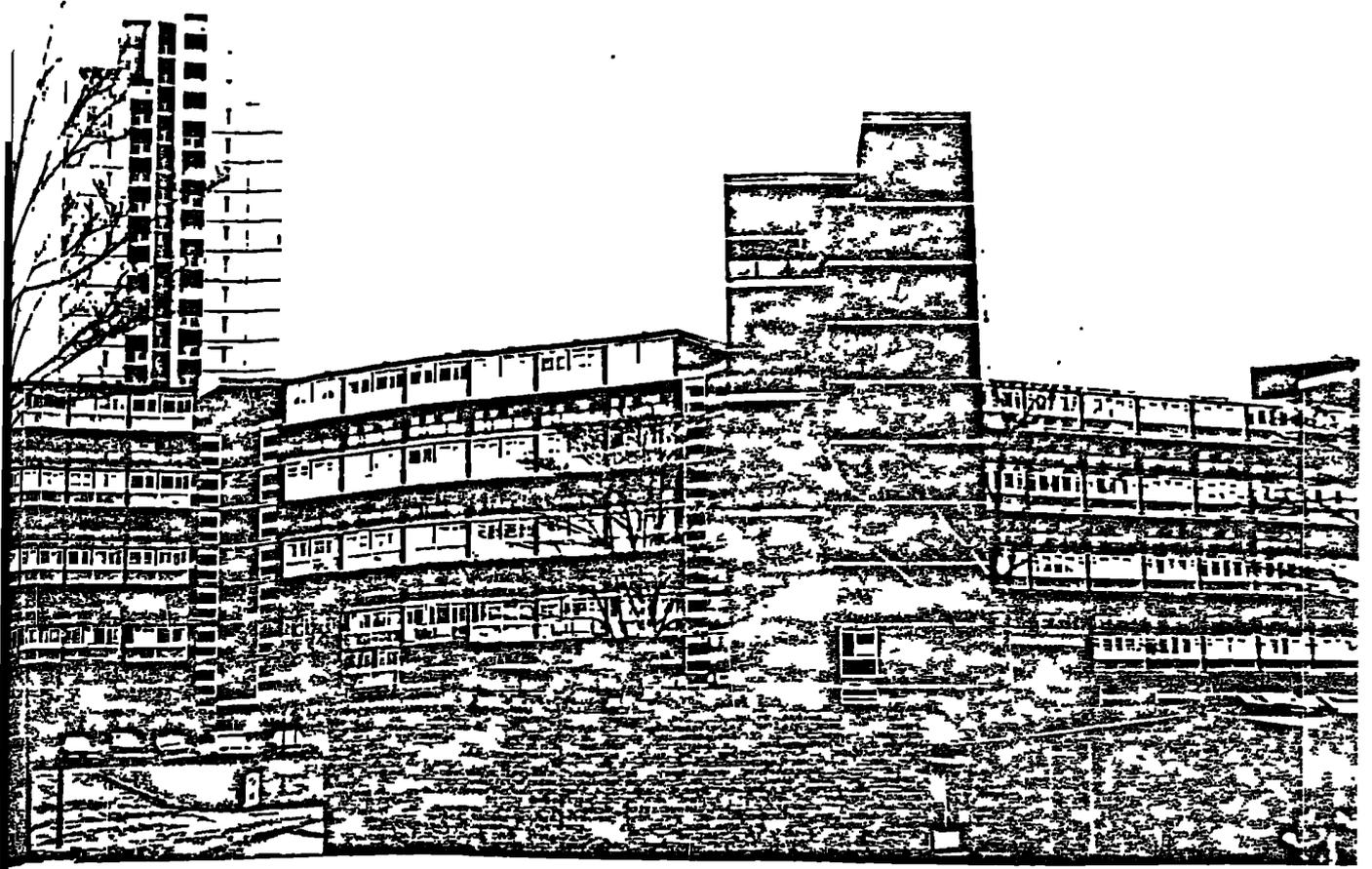
The outer London boroughs of Brent, Harringey, Waltham Forest and Sutton present a rather different picture. The first built a near-copy of Park Hill a couple of miles from Wembley Stadium. This scheme, called the Chalkhill estate, can be distinguished by its lower height (reaching up to six storeys), basically level site, industrialised construction and variation in design. (Park Hill's crescent shapes have become "claws") It has also been very unpopular and rarely out of the local news for one reason or another (Illus.74) (p.220) Another large scheme, using similar building methods, exists at Stonebridge with a small development included in a mixed development estate at Malvern Road. The Kilburn Square estate is a more attractive example of modern housing, near to shops and open space on the Kilburn Road.

The three other boroughs have monumental examples of deck housing equivalent to Chalkhill: Harringey's Broadwater Farm estate, Waltham Forests' Capwell Road and Hollywood estates and Sutton's Roundshaw estate. All have been unpopular; Roundshaw the subject of serious design and construction faults.

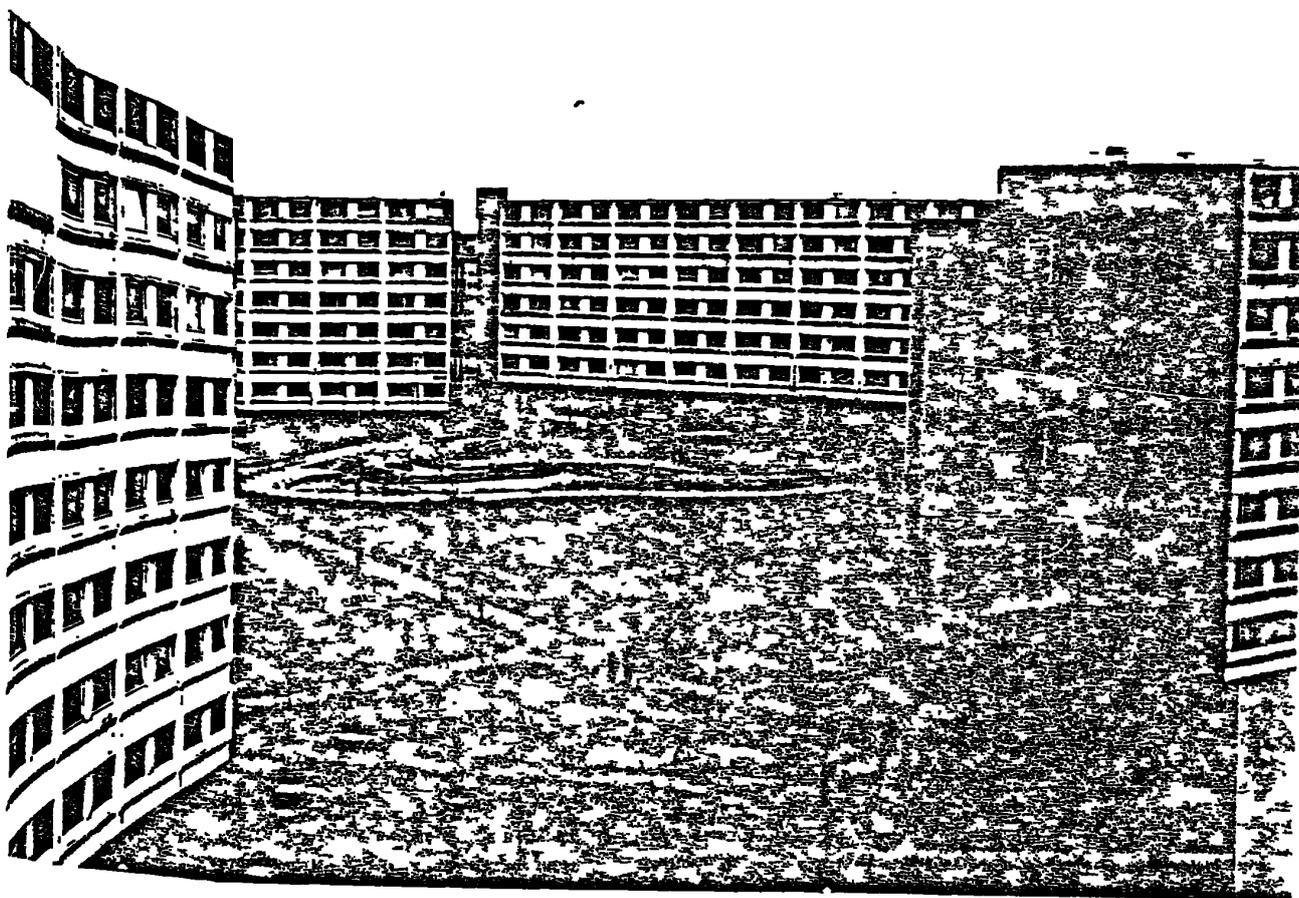
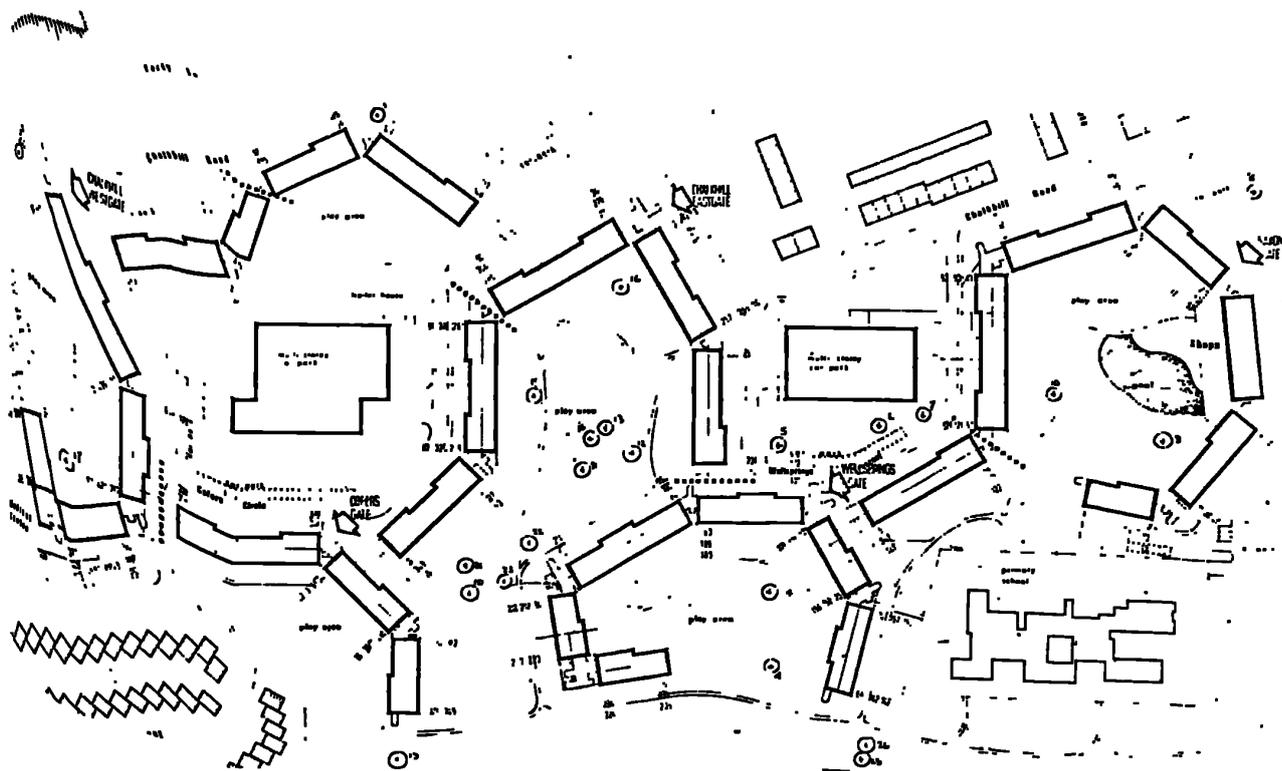
Harringey has a number of smaller lowrise brick built schemes, which, by all accounts, are satisfactory types of urban housing. These are at Park Lane, Benbury Road, Pelham Road, Uplands Road, Riverton Road and Braemar Road. Sutton also has a smaller and more acceptable scheme in the Benhill estate.

The Greater London Council built five proper deck housing schemes, none of which appear to merit the "problem" status, although they are not, by all accounts very popular. These are the Smithson's Robin Hood Garden estates, two giant 'brutal' blocks of housing located on what is little more than a traffic island in the East End; Yorke, Rosenberg and Mardall's Osprey Estate in Southwark, a relatively small scheme adjacent to a shopping area near the Surrey docks and the much larger Kingshold estate in Hackney. Both schemes have wide decks which travel throughout the entire housing estate. Another less ambitious scheme is the Shanklin estate in Sutton.

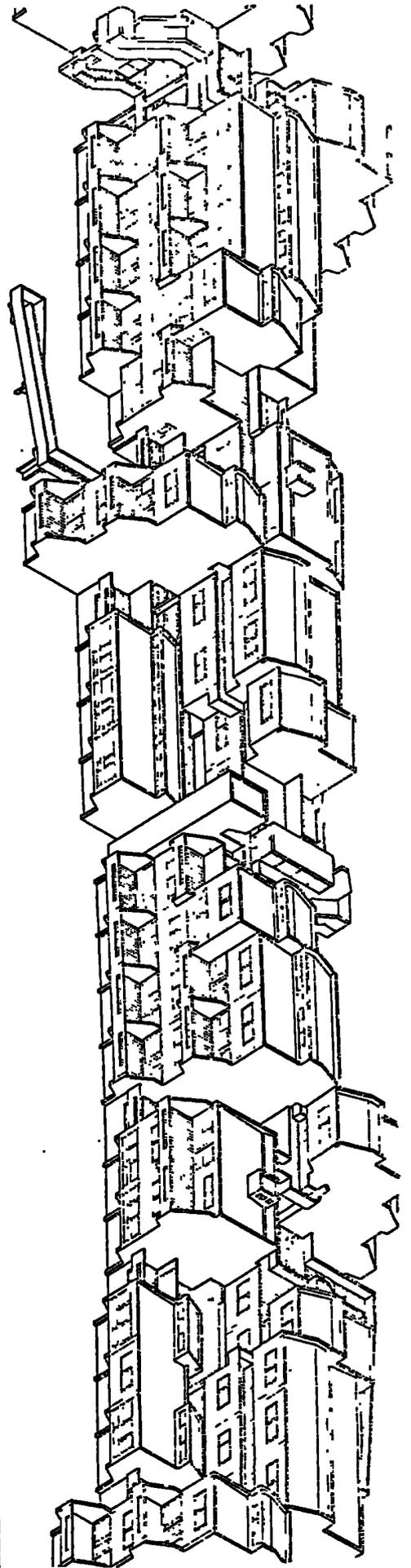
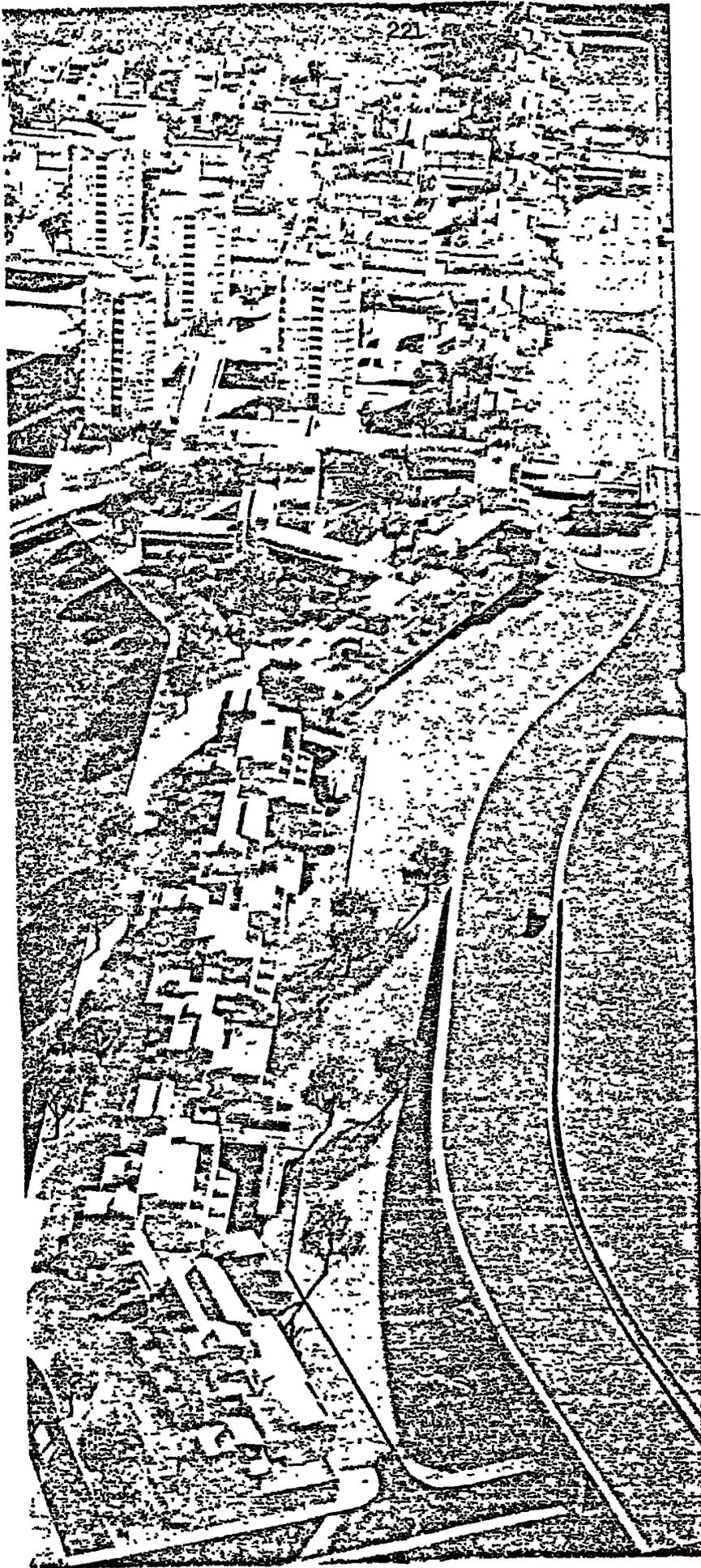
Over and above in importance, all the deck housing in London is the Thamesmead development by the G.L.C. located in Greenwich. The original design, for what was then called Erith, consisted of a series of tower blocks and low rise housing resting on an upper level pedestrian deck. However, when a



73. Cardwell Estate, Greenwich (only the hatched area was completed)



74. Chalkhill Estate, Brent.



75. Thamesmead Estate: completed section.

Source: Architects' Journal
Oct. 1972

new plan was unveiled in 1967 it was clear that a completely new type of modern housing architecture had been evolved for this new town within London (Illus.75) (p.) A "spine" of six to eight storey deck housing, derived from the architecture of Park Hill, but with a more irregular form and picturesque deck, would wind through the whole of London's modern equivalent of Venice, joining up the highway system, waterways, open space, high and low rise, public and private housing and industry. Hence the deck housing would not only be a "barrier block" against the noise from the roads but a unifying visual landmark and a social equivalent to the village street.

In the event however only stages I, II and III were completed, the latter in an emasculated form, leaving the more adventurous and Park Hill-like structures of stages IV to VIII to the north, unrealised. Moreover the deck housing that was built was altered so that the upper level street lost its purpose; not only were the links between stages II and III lost but the brewers wanted the pub on the road not on the decks, the primary school and youth clubs were placed adjacent to the playing fields, not the deck, and the old peoples' clubroom was detached from the upper level access route. Thus it was concluded:

"Unfortunately the vision of a village street in the air, alive with corner shops, occasional small industries, nursery schools and so on, has not been realised". (157)

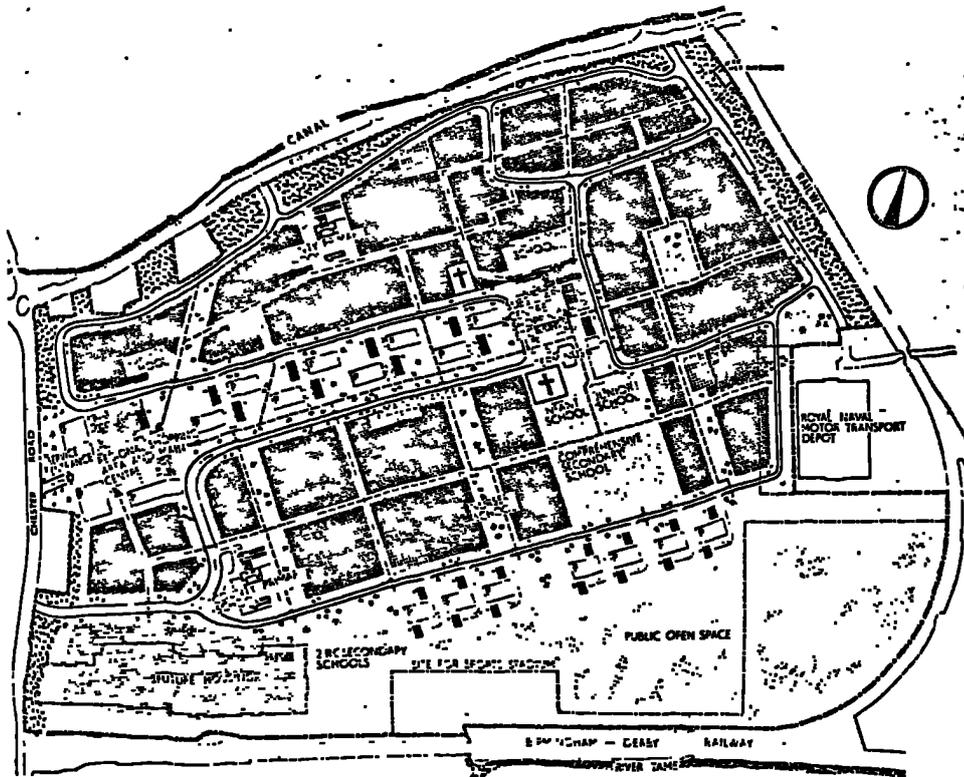
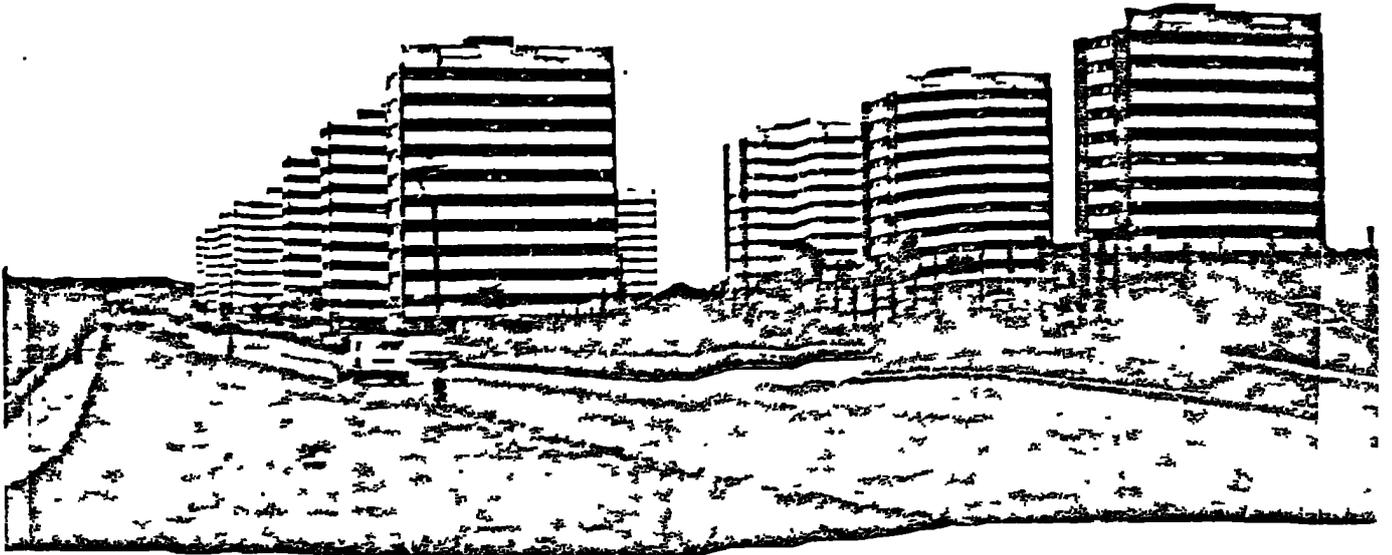
When the first stages were opened serious problems arose with the accommodation (158) and in 1980 "defensible space" alterations were being planned; the history of Thamesmead has all the usual ingredients of a history of deck housing.

Outside of Greater London, the Ward Royal estate in Windsor, the Cannock Lawn scheme in Portsmouth and the Pleasant View estate in Southampton are unpopular housing developments; the first has only one lift for 279 dwellings, the last no lift in a four storey scheme of 124 dwellings; the first is in the town centre with little relation to surrounding uses, the last incongruous in a suburban location. Cannock town was so unsatisfactory that the tenants' protests set a precedent for later action against the local authority (159).

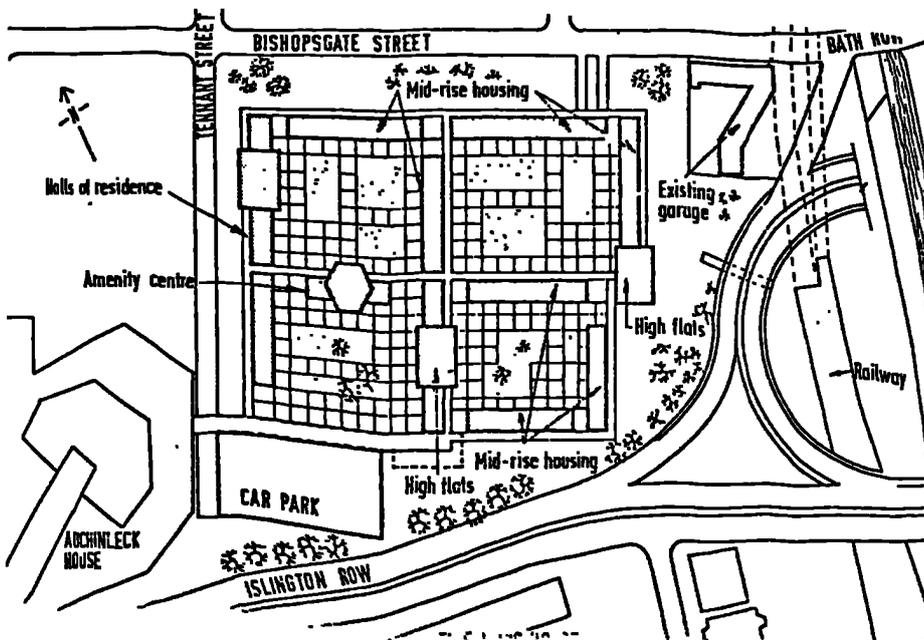
Other Regions of England

Probably the most successful large deck housing scheme is the Heath Town estate in Wolverhampton. Four 21 storey blocks, three nine storey and several four to seven storey stand either side of a main road, connected together by an upper level deck which leads to other rather narrow decks; some of these are accessible from the higher end of the sloping site. The whole estate is located about a large neighbourhood centre. The Park Village estate nearby is little more than a balcony access scheme and is therefore excluded from this study.

The other schemes in the West Midlands are the Islington Row estate in



76. Castle Bromwich Estate (top) and original proposals for Islington Row (bottom). Source: Municipal and Public Services Journal Feb. 1967



Birmingham (160) (which now only has a deck over garages providing access to stair wells within the housing blocks, although the original plan was more ambitious) and the Sponend estate in Coventry. Both are modest schemes, the latter has had considerable construction problems.

The typical urban housing estate of the West Midlands is however of a mixed development design. Outstanding in this category is the Castle Bromwich estate. Here the 5,000 dwellings are provided in the form of two and four storey dwellings and 25 sixteen storey tower blocks (161) The whole design makes a striking contrast to the equivalent modern housing architecture found in the North West of England (Illus.76)

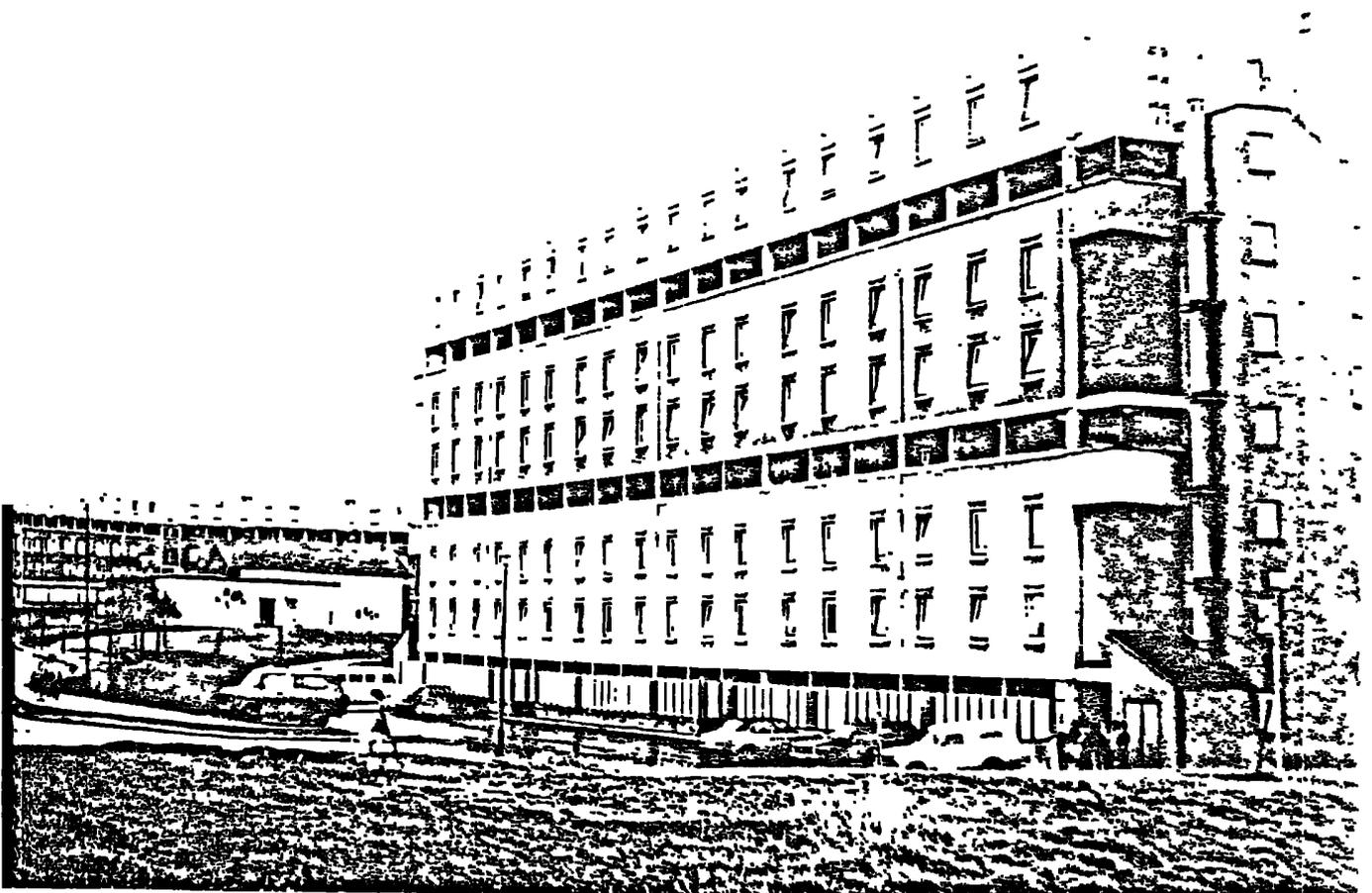
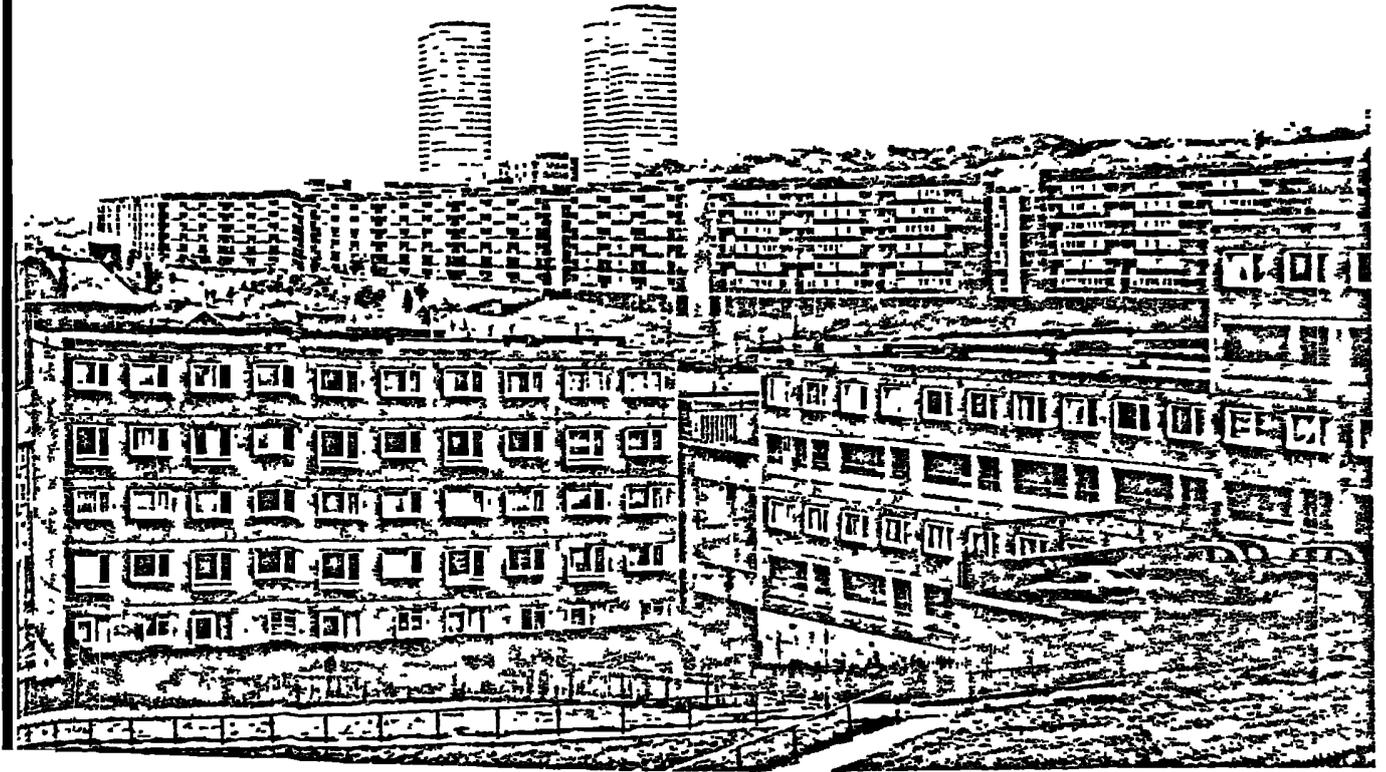
In East Anglia there are two schemes, one in Norwich and another in Cambridge. Although Norwich planned to build an equivalent to the Park Hill estate and a YDG scheme, neither were realised. Instead the far more modest Vauxhall Street scheme was developed; it had serious construction problems which had finally been resolved in mid 1980. The Roseford Road estate in Cambridge has an urban appearance and location (162).

Other Regions of the United Kingdom

In Wales there is the Oldford estate in Welshpool, the Hightown flats estate in Wrexham and a few blocks included in the central housing redevelopment of Flint. The former has proved a serious mistake for the local authority both in terms of design, building construction problems and tenant reactions. The other two schemes are relatively successful.

Scotland has an unusual history. The Leith Fort estate in Edinburgh was almost contemporary with Park Hill and included two deck access maisonette blocks with another two which were never built. The whole scheme proved to be unpopular in spite of the fact that it applied Modulor principles which were of course, supposed to be a means of creating popular architecture (163)

In Glasgow one of the first of the twenty nine comprehensive redevelopment areas included in the Development Plan was to be a superdeckhousing scheme. This was the Townhead estate in the city centre. The design was never implemented. Instead after innumerable tower blocks (including the famous Red Road estate) had been completed or were still underway, Park Hill was rediscovered and three estates built in that tradition - but without the positive ideas contained in the Townhead scheme. These were Balgrayhill, hillpark and St. Andrews Drive estates (164). Three other relatively modest designs were the Woodside, Fernbank and Greenhill Court (originally outside the city) estates. Hutchersontown 'E' in the Gorbals was a far more monumental example of modern architecture and Darnley in the suburbs, almost a complete deck housing new town, but without any of the attractive amenities associated either with the original idea of streets-in-the-sky or with a typical new town (Illus.77)



77. Glasgow: Balgrayhill with Fernibank in the foreground (top) and Darnley (bottom)

The Hutchesontown 'E' scheme was a disaster from its very inception. The power of the tenants' protest movement against the problem of damp and the whole alien environment, which left the estate virtually empty by mid 1980, has perhaps not been rivalled anywhere in the United Kingdom (165). The Darnley estate was the subject of a major local scandal after part of the proposed scheme was cancelled and one block demolished shortly after its completion and before it could be occupied (166). The whole project came at the tail end of the deck housing development programme. The three Park Hill-like estates have been divided into areas of "defensible space". The Fernibank estate appeared to have the typical problems of damp and vandalism in mid 1980.

Dundee has another deckhousing suburban new town in the Whitefield estate; this is just as unpopular and troublesome as Darnley though not quite so monumental in form. The Maxwell Town estate near the city centre is not a typical streets-in-the-sky estate because the narrow decks are accessible mainly from a raised upper level on which stand typical lower blocks; they are really an extension of this upper deck rather than "streets".

Edinburgh's Leith Fort and Carnegie Court, in the South side, were completed in the early 1960's and are still reasonably tolerable housing estates, although the former has a poor reputation within Leith and the latter has a 'brutal' Scottish fortress-like appearance. Two larger estates are West Pilton 'A' and West Pilton 'B'. Both have unusual access designs, the first with a two level deck, the second with an independent deck similar to that found on the St. Andrew's estate in Leicester. Design alterations were in course of preparation in late 1980 for the division of each estate into areas of "defensible space".

In Northern Ireland there are two infamous deck housing estates; the Divis complex in central Belfast and the Rossville Street flats in the centre of Londonderry. There is also a small scheme at Tallyconett on the outskirts of Belfast.

The two largest schemes probably provide the worst physical and social environment of all deck housing in the United Kingdom. In January 1980 a comprehensive package of improvements was put forward to solve the problems of the Divis complex, which as Mr. C. E. B. Brett (Chairman of the Northern Ireland Housing Executive) said at the time, "are amongst the most difficult which the Executive faces in Belfast or elsewhere". (167) The main problems were listed as inadequate and poorly maintained refuse disposal system, ventilation system and vertical circulation, plus the problems of insulation within the dwellings, noise, vandalism and social isolation. Proposals included the demolition of 2 of the 7 blocks with new housing to replace that lost, and improvements in the services, insulation, environment and management, at a total cost of £8 million.

In Londonderry the smaller Rossville street scheme was, literally, an example of "jerry-building" in political and constructional terms. On top of this it had the service problems and extreme vandalism found in Belfast. Some remedial work has been undertaken.

P A R T 2

A POLITICAL ECONOMY OF DECK HOUSING
IN THE UNITED KINGDOM

CHAPTER 5. PARK HILL, SHEFFIELD and the 1950's.

In this chapter we aim to answer the questions: Why was the first deck housing estate in the United Kingdom built in Sheffield in the 1950's? What were the forces determining its design and location within the city? And how was its "success" guaranteed given the inherent disadvantages of the new housing form?

We outlined in chapter 1 the basic theory of political and economic forces behind the history of deckhousing. In regard to the history of Sheffield we have to consider how the local political and cultural factors combined with the latest design of urban multi-storey housing to present a 'resistance' to the dominance of finance capital in the United Kingdom economy. What was the relationship between on the one hand the socialist local authority and its advisors and on the other hand the fortunes of industrial capital and the scarcity of land, labour and capital for council housing? How did local government adapt to central government's control over the restructuring of industry and urban form? And, thus, what were the unique combination of circumstances which evolved in Sheffield and not elsewhere in the country?

These questions can be addressed bearing in mind that Park Hill was not developed where one might expect, that is, in one of the two largest cities in the United Kingdom - London or Glasgow. Both cities had inadequate supplies of land (and, inevitably, labour and capital) for new local authority housing in the 1950's; hence the building of the new towns, notably Cumbernauld in the case of Glasgow. And at the same time there were also substantial demands for slum clearance and rehousing, both places had a strong tradition of working class labour party politics, a distinctive sense of urban community street-life, a dislike of the idea of moving people away from their home territory following redevelopment (as the sociological studies of Young and Wilmott and Brennan (1) emphasised) and a recent history of attempts to introduce new types of multi-storey housing; the cluster-block in Bethnal Green and the Townhead project near the centre of Glasgow bore witness to these pressures for change (2). However, neither city embarked upon any building scheme as radical as the design of fully-fledged streets-in-the-sky during the 1950's.

In order to explain the political and economic conditions of Park Hill's development we will begin with the national context (industry, land supply and housing finance) and then detail the local situation and response.

Industrial Capital and Sheffield

A "bonfire of controls" followed the departure of the Labour Government in 1951. The freedom of the market was to replace the austerity and

centralised planning associated with the 1940's; the consumer society and the pursuit of private affluence in place of public programmes for reform.

Nevertheless, one sector of industrial capital survived with a measure of government planning and control. This was the steel industry. Although it was denationalised under the 1953 Iron and Steel Act, the Iron and Steel Board, which had produced plans for controlled expansion under the previous Labour administration, was continued to allow, "an adequate measure of public supervision". (3) The consequent national economic planning practice of the Board was an especially important undertaking for the later development of state intervention in the fortunes of industrial capital. Shanfield noted in 1965:

"The Iron and Steel Board.....found that its attempts to guide the direction of steel investment and to check whether its volume was adequate required a close examination of trends over the economy as a whole. The third five year development programme issued in 1961 was in some ways a pilot project for the full scale planning operation on which the British Government embarked with the establishment of the N.E.D.C. in 1962. It was not accidental that the first Director-General of N.E.D.C. Sir Robert Shone, was an outstanding steel economist who, as a member of the Iron and Steel Board had been responsible for working out the long-range investment programmes of the industry.

In steel there was a special relationship between the Government and private enterprise, which supplied a propitious soil for this type of experiment. It was unique in the Britain of the 1950's". (4)

Sheffield had a 'unique' part to play in this attempt to regenerate one sector of industrial capital because it was "steel city", the "most important centre in Great Britain for the manufacture of high quality steel". (5) Moreover, it had a large concentration of related metal industries, including of course, cutlery and machine tools, which made the local economy an especially interdependent one; steel production relied for much of its raw material upon scrap from the local industries while those same industries looked to the city's steel manufacturers for their supply of raw material.(6)

But why was the steel industry so important and how did the modernisation of Sheffield fit into this modernisation of the steel industry?

The low productivity of the steel industry was a real, and potentially even greater, bottleneck on the growth and competitiveness of the national economy in the 1950's (7). This was because steel formed the basic material essential to capital goods such as armaments, vehicles and buildings. It was needed at home and for exports. Also, the growth of durable consumer goods, on which so much of the increased income of the period was expended, depended upon this raw material. Demand was outstripping supply in an expanding economy; productivity and capacity had to be increased and capital had to be attracted while profits were maximised through mergers and rationalisation of the industry. State planning was essential to coordinate operations and ensure

that finance and industrial capital worked together at least in this one important sector of the economy.

If this programme was to be successful it should be reflected in the fortunes of the city of Sheffield. Just as the planned restructuring of the steel industry was important to the international competitiveness of the United Kingdom, so the rapid and comprehensive modernisation of Sheffield, ahead of other urban centres in the country, was important to the progress being made in the steel industry. Thus, presented with the same constraints, in terms of the supplies of land, labour and capital for the city council's slum clearance programme, as were other parts of the country, an innovation in the means of modernising the city centre using local authority housing was essential. The central urban environment had to be transformed and taken from the largely 19th century chaos and decay present in the early 1950's, to an ordered efficient and healthy mid 20th century system which could retain and attract greater amounts of capital and labour. Such local modernisation, removing the constraints on demand and supply, would depend in large measure, upon the condition of the building industry. If rapid progress could be made slum clearance and new council house building could proceed, new roads be established and space provided for industry and commerce to expand. The new educational and shopping facilities (the University, technical college and market) were part of this rebuilding project. Thus public investment in urban redevelopment was a prerequisite to the spiral of local economic growth.

An innovation by a socialist local authority in urban renewal policies thus represented an attempt to aid the improvement of British industrial capital. As a result, while the reorganisation of the steel industry was a model for later economic planning, so the reorganisation of Sheffield was seen as the model for physical planning in the 1960's, when comprehensive urban redevelopment was a widespread activity. There were, of course, other examples to follow, especially French economic planning and American physical planning. However, Sheffield did receive an unparalleled amount of publicity in the early 1960's (with Park Hill as the centre piece) as a model for new types of multi-storey and suburban Radburn housing, for the plan to make the city centre into a multi-level complex and for the overall comprehensive plan into which each new element was meant to fit. This is clear from the long articles appearing in the early 1960's in AJ, the RIBA J and AD (8), Ian Nairn's BBC TV programme (9), The Economist's article (10) and Banham's original praise of the City as "one of the most heartening architectural prospects in England".(11) There was also the MHLG's inclusion of the multi-level city centre design in an early Planning Bulletin (12) and Sheffield's own and unusual publication Ten Years of Housing in Sheffield, 1953-63, which included a general portrayal

of planning activity in the city obviously meant for international as well as national circulation.

This was the background to the radical initiative taken in Sheffield in the 1950's. However this need not have led to Park Hill. The high density design was due primarily to the political and economic problems consequent upon the unwelcome sprawl of the city. And this was due to the unusual power of finance capitals investment in land in and around Sheffield.

Landed Capital and Sheffield

Much of the pre second world war suburban house building, especially by the local authority, was undertaken on the land owned either by the Duke of Norfolk (to the east and north of the city centre) or the Earl Fitzwilliam (to the west of the city centre) (13). These giant estates, particularly the Duke of Norfolk's were developed through town planning schemes prepared under the 1909 Housing, Town Planning etc. Act. They covered much of suburban Sheffield by the close of the first world war; an exceptional rate of progress(14) By this time "a large section of the landed interest had already transformed themselves into finance capitalists to all intents and purposes".(15) Although all the town planning schemes were not realised immediately, the basic principle was followed throughout the interwar period. When the 1909 Bill was being debated in the House of Commons one member made the implication of following this principle, clear:

"The principle of town planning will extend the market for building. Instead of landowners being forced, as they are at present, to sell small parcels of land upon which houses are packed at immense inconvenience and great unsightliness, the tendency of this legislation ought to be to extend the zones in the suburbs, to spread the building operation, and therefore, to bring much more land into profitable occupation and by that means to create a larger area upon which the profits of building may be made to recoup the landlords for the lesser number of houses which they will be permitted to place upon the acre".(16)

The resulting spread of the city, had, by the close of the 1940's become an uncontrolled sprawl. This was also due to the power of the county councils, representing the farmers and rural landowners, following on from the big urban landlords. The West Riding of Yorkshire to the north and Derbyshire to the west and south, had reluctantly accepted population overspill from Sheffield from the late 1930's, but only if they could build at a lower density than the city desired and after considerable administrative delay lasting up to 18 months. The loss of revenue to the city, i.e. the loss of rates with the cost of construction outside the city boundary shared amongst fewer ratepayers, was compounded after 1948 when, from that year onwards, a loss of population and property could lead to a sizeable reduction in the level of exchequer grant to local government (17). Thus, as we will note in due course, if Park Hill had been built outside Sheffield there would have been a loss to the city, in the form of the "exchequer equalisation grant", of £32,373 (more than half the

total exchequer contribution to the actual cost of building and paying for Park Hill) (18).

After the houses had been built and occupied permission could and was usually, obtained by Private Bill through both Houses of Parliament for the extension of the city boundary to include the developed portion of land. By this time, considerable time and money had been lost and the city had been spread out even further; this was not conducive to efficient and effective local government. In this way urban sprawl could be associated with the power of the county councils over the expanding country boroughs.

It was against this background that the Sheffield Extension Bill was drawn up in 1951, in an attempt to gain more council house building land for the city before the boundary was extended, and thus save time and money. As Fred Hulley, the new Member of Parliament for the Park constituency, stated when introducing the Extension Bill to the House of Commons:

"the planning authorities insist upon planning the city's overspill population on rural lines. Sheffield has, therefore, experienced cuts up to 25 per cent on the sites we have planned. The city has been forced to become bigger than it wanted to be". (19)

The City Council felt that, if normal procedures were followed, Sheffield would pass the point at which it could be organised into the required compact optimum size. However, the Minister of Local Government and Planning in the Labour Government, Hugh Dalton, opposed the Bill on the grounds that it would preempt the planned reform of local government. He thereby effectively accepted the arguments of the rural districts (Chesterfield and Wortley) and county councils opposing the Bill, that the extension would lead to an unnecessary loss of farmland and power from the local authorities surrounding Sheffield (which would presumably not be so seriously affected if the county councils could exert control over Sheffield's overspill projects) (20)

Sheffield attempted without success to rally support for its proposals from other local authorities wishing to widen their catchment area, prior to the proposed (if unlikely) initiative of local government reform. Its aim of extending the City boundary before the required housing development was, it seems unusual. (21) Dalton had warned the City Council that he would, if necessary, stop the Bill in the second chamber. In the event the Bill was, indeed, defeated in the House of Lords (22). Thus unless the city council were prepared to build outside the city boundary at this time or to use the slow and cumbersome powers for "expanded town" agreements under the 1952 Town Development Act, a large "overspill" estate had to be built quickly and cheaply on socially valuable or financially expensive sloping or substandard sites within the city. Piecemeal, slow and inadequate rebuilding had to be avoided if the city was to progress as a whole. It would appear that a large scale high density and low cost local authority housing scheme, which could be legitimated

in the eyes of the public (while breaking the tradition of garden suburb housing) was essential to the future of Sheffield and possibly the steel industry and hence even the economy as a whole, in spite of and indeed because of the restrictions imposed by the dominance of finance capital (on urban-industrial expansion and public investment).

We now turn to the history of local authority house building in the 1950's as a context to the specific development of Park Hill.

Housing Finance and House Building.

Elizabeth Layton in Building by Local Authorities (1961) described the basic relationship between the political and economic structure and local authority housing projects in the 1950's:

"Throughout almost the whole post war period the country has been faced with the problems of inflation and with the difficulties in the balance of payments. These have erupted at roughly two year intervals into a situation of financial crisis: each crisis has had immediate repercussions on the local authorities, since this is the sector of the economy, apart from its own operations, on which the Government has the most direct influence. Calls for savings in costs, reassessments of programmes or for the postponement of less essential schemes have succeeded one another so frequently that authorities have felt much uncertainty and frustration". (23)

The monetarist policy behind the Housing Acts of the 1950's can be seen clearly in the second reading of the first Housing Bill. On gaining office the Tory party had inherited a grave balance of payments deficit, a three per cent sale of interest and a new level of subsidy available to local authorities to provide housing for all, under the 1949 Housing Act. By early 1952 the interest rate had been increased to 4½ per cent. The Minister of Housing and Local Government, Harold MacMillan, when introducing the Bill, justified a "policy of monetary stringency to meet an inflationary situation" in the following manner:

"It is not merely a piece of sadism or masochism by which we are torturing ourselves to no purpose, for if it succeeds it will be justified in every sphere of our national life. Nowhere can it be of more value than in the sphere of housing, for it will result, let us hope, in a reduction, or at least a halt, in the increasing costs of house-building which have been such a malignant feature of recent housing history. When I am told, therefore - which, incidentally is not true - that the increased rate of interest will put so many shillings on the rent of the tenant, I would remind the House that if this monetary policy succeeds it will do just the opposite, for it will prevent that general increase in rent which higher costs must in some form or another eventually involve. It may even lead to a reduction of costs and to a corresponding reduction of rents.

However, apart from this reason, it is obvious that an expanding housing programme can only be based upon a healthy national economy. If we cannot solve the urgent economic problems of the day, if we cannot deal with the question of the balance of payments then goodbye to the whole housing drive - for even if the local loans on housing were reduced to 1 per cent or less, there would be no foreign exchange with which to buy timber, pulp and all the rest of it, which go to make up the

essentials of housing. Therefore, if this monetary policy can succeed in helping to avert national bankruptcy it will save not only the whole life of the country but also those social services of which housing today is perhaps the most important". (24)

Several Labour members took exception to the content of this speech (Mr.G. de Freitas (Lincoln) and Mr.C.Parnell (Leeds, West)). They claimed as we do in this study, that the increases in interest rates would produce a substantial rent increase, and thereby rates increase, or, in other words fuel rather than halt, inflation. In the long run this could only damage the balance of payments and mean the loss of foreign exchange. The increases in the exchequer subsidy provided under the 1952 Housing Act, £26.14s for houses (more on expensive sites) and a flats subsidy of £52.16s (increasing according to site costs, with a lift subsidy increased to £10.10s) were a means of increasing the output of local authorities, but also, and primarily a means of financing the rise in costs for local authorities consequent upon the increase in interest rates.

Hence from 1953 the number of starts and completions by local authorities actually began to fall as the subsidy did not cover the increase in costs (25) A good deal of the new subsidy level represented a direct transfer of taxpayers money to the bankers, along with the increased amount also passing to finance capital from the ratepayers and tenants. When private completions began to increase, public housing subsidies also became burdensome (about £60m in 1954) and the total number of houses completed, 264,000 in 1953 and over 314,000 in 1954, threatened to overload the economy and further encourage inflation. Hence the subsidies were lowered (to £22.1s for houses, £45.18s for flats) on 1st April 1955 and the interest rate increased to 4.6 per cent (1955-56). This further curtailed local authority house building.

But this was not enough. In 1955 the new Minister of Housing and Local Government, Duncan Sandys, introduced a new Housing Bill which would eventually remove altogether general needs subsidy and concentrate local government activity on slum clearance leaving more room for private house building. Following the financial crisis of that year the new legislation was justified by its sponsors as a means of reducing investment and spending power while at the same time encouraging new building for special purposes and "economic" rents.

The need for slum clearance was noted in the 1953 White Paper Houses: The Next Step (cmd 8996) In 1954 the Housing Repairs and Rent Act required local authorities to estimate the size of their slum problem and to submit to the Minister a five year plan for dealing with it. With the passing of the 1956 Housing Subsidies Act increased subsidies (backdated to 3rd November 1955) were available for multi-storey housing, increasing with the increase in

height especially for dwellings built for slum clearance, for new town corporations or "expanded" towns. There was also an additional expensive site subsidy. The separate lift subsidy and density adjustment (under the 1949 Act) were discontinued. The general needs subsidy for houses was cut to £10 per annum and then abolished as part of the abolition of general needs subsidy under the 1956 Housing subsidies Order. The only exception was one bedroom dwellings.

Contemporary with this change in central government policy - a change which represented the very antithesis of the proposals enshrined in the 1949 Housing Act of high quality public housing for the whole community, houses and low to medium rise flats - interest rates increased from 3.8 per cent in 1954-55 to 4.6 per cent in 1955-56 and 5.6 per cent in 1956-57. The Labour party spokesmen thereby repeated their earlier criticisms. Mr. G. Lindgren, M.P. (Wellingborough) for example, suggested that:

"The increased subsidies have gone not towards the production of more and better houses but straight into the pockets of the financiers".(26)

In actual fact the higher costs of multi-storey housing meant a larger transfer of capital to both finance and industrial capital, along with the increased amount going to the City consequent upon the rise in interest rates.

The 1956 Housing Subsidies Act, and the subsidy it provided, was to remain until the 1961 Housing Act became law; there was therefore some continuity ensured for the design and building of multi-storey housing by local authorities. In 1958 a new design manual Flats and Houses was published to aid local government architects and surveyors keep their costs to a minimum. This was an ever more pressing need as interest rates rose to 6 per cent in 1957, following another "credit squeeze", continued at this level to 1959, fell to 5.8 per cent in 1959-60 and then rose once more, this time to 6.1 per cent in 1960-61. Between 1953 and 1961 the number of dwellings completed by local government fell from 229,305 to 105,529, a fall of nearly 54 per cent. Over the same period the number of multi-storey dwellings increased dramatically (although the requisite data is not available).

The growth in this type of public housing was really part of a general lowering of standards. As Layton noted in regard to the period:

"local authority housing designs were rigorously examined and pruned, and an all-out effort was made by the Ministry to keep housing costs from rising as fast as building costs and to economise on the use of scarce materials. In this it achieved considerable success, though at the price of a detailed scrutiny of housing schemes, the sacrifice of many amenities and the risk of higher maintenance costs during the life of the houses" (27)

The supplements to the 1949 Housing Manual, published in 1952 and 1953, were used to describe the means by which this economy in design could be achieved. The first illustrated how, "by compact design, building costs

could be cut by £150 a house, and space and materials saved without loss of standard or amenity". (28) thereby compensating for the rise in rent and building costs. The second manual (and third supplement) emphasised the need to "raise densities and reduce development costs by better integration of house design and layout" This meant that "economy in the use of land, in the construction of roads and services, and in the cost of houses must constantly be kept in mind from the start" (29). Housing schemes within the gross density range of 75-100 ppha or 30-340 ppa, with a large number in terrace form and arranged on a Radburn-like design (minimising road space) was the ideal. An accompanying document entitled The Density of Residential Areas, published in 1952, analysed a variety of layouts and justified the new approach by decrying low density "sprawl" and noting the:

"general aim to economise land and to redevelop towns so that they are compact and urban, with a wide variety of accommodation in flats and houses to suit different tastes and with a rich and characterful variety of scene". (30)

Whether such a variety was economically preferable at this time in the urban areas, seems doubtful. Only on expensive sites was the flats subsidy (double the housing subsidy although twelve storey and over flats were only about 70 per cent higher cost (31)) available, between £1,500 and £4,000 per acre and increasing when above this amount, while the subsidy to houses only increased for sites of £3,000 per acre and over. In other words, on city centre sites a much higher subsidy was available for flats. Henry Brooke noted in the second reading debate of the 1952 Housing Bill:

"I submit that the effect of these new subsidy rates will be to make it much more attractive to urban local authorities to build all flats and no houses where the site costs are between £1,500 and say £7,000". (31)

This lowering of standards was compounded by the reduction in living space and the production of "the people's house" having a gross house area of about 900 sq. ft (three bedroom, five person dwelling). However, in the case of flats standards could be even lower. A two bedroom, four person house was to have a gross house area of 770 sq. ft. but a similar type of flat approximately 650 sq. ft. (33). As a leading architect noted at the time:

"Flats have always been officially regarded as "non-family" dwellings and the only space criteria insisted upon have been minimum bedroom and living room sizes. When one considers such vast schemes of multi-storey "family" dwellings as have been built in some cities it seems a strange anomaly that such lower space standards should be permitted, and that some compensating living-space area, for example, a balcony or enclosed sun-room, have not been made obligatory on all local authorities - at least for family dwellings". (34)

An important reason given for the reduction in dwelling space was not only the lowering of costs and rents (even though, as we have noted the principal reason was to offset the increase in interest rates) but, along

with the use of multi-storey housing, was stated to be the preservation of the countryside and agricultural land. Harold MacMillan emphasised its importance in the foreword to The Density of Residential Areas. He stated:

"Many acres of land are being taken for development every year; and much of this is good agricultural land.....it is essential that the amount of land taken should be kept as small as possible". (35)

In 1955 Duncan Sandys (founder of the Civic Trust in 1956) expressed his concern at the unrestricted sprawl of the great cities and asked all relevant local authorities to consider defining green belts around the city. (36) Decentralisation, which could possibly be associated at this time with anti-urban sprawl, was minimised in the 1950's. No new towns were established in England and Wales during the decade and, under the Town Development Act 1952, population overspill into "expanded" towns was a slow, cumbersome and expensive process (37).

Hence by appealing to the universal values, on the one hand, of countryside preservation and urbanity and on the other hand to the control of inflation, the supply of land, labour and capital for local authority house building was minimised; even though very little land was actually saved and only at great cost (38) - hence fuelling inflation. Meanwhile private sector house building and agriculture benefitted. Above all finance capital gained through the increase in interest rates (which were supposed to cure inflation but actually just transferred more capital from the state, i.e. from the taxpayer, ratepayer and tenant, to the bankers) and the increase in government spending overall as local government was guided towards redeveloping the expensive and difficult city centre sites with costly multi-storey housing - an exercise which the private sector was no doubt unwilling and unable to contemplate due to the financial constraints and need for keeping rents low for those moving from the slums or off the waiting list.

Multi-storey dwellings cost more than traditional houses in Britain because according to one prominent architect:

- "(1) a block of flats requires public circulation areas (entrance halls, lifts, staircases and balconies or corridors) as well as amenities which are not usually provided for houses: private balconies, play-spaces or shelter at ground-floor level, privacy for ground-floor tenants by raising the block off the ground or by fences, paving, gardens or other means of keeping the public at bay, laundries, drying-rooms, stores, etc. These public access areas and amenities amount to 10 to 25 per cent of the cost.
- (2) The services generally require more extensive mains systems, and often require a higher standard of specification either for protection against fire or noise, or for maintenance purposes (e.g. electric cables in concrete floors, access to plumbing and water services in ducts).
- (3) The structure, including roof, floors and foundations, although shared between many dwellings, is intrinsically more expensive,

partly to meet higher standards of fire protection (walls, floors and roofs) and sound insulation (floors) as well as for reasons of stability.

- (4) Both from the point of view of design and of erection, a block of flats is more complex than a house or a terrace of houses. It requires more complicated drawings and specification, the employment, perhaps, of structural and mechanical engineers, as well as of specialist firms and a higher standard of organisation and supervision. This complexity is reflected in the costs of production or overheads of both architects and builders". (35)

The omission and minimising of some of these standard characteristics of multi-storey housing will have been prevalent in the 1950's. However, over and above these differences there was the lack of investment and competition within the building industry which left it short of low cost innovatory techniques, for example, regarding the construction of high rise buildings, and tied it instead to the traditional production of, for example, private sector two storey houses; a typical or perhaps extreme case (4) of a section of industrial capital denied the kind of support of the State and finance capital which would have made it internationally competitive in the period before the 1960's. As the one detailed study of the building industry up to the early 1960's concluded:

"at important stages of the building process there appeared to be an extraordinary lack either of effective stimulus to enterprise and efficiency or of penalties for their absence, neither juicy carrots nor big "sticks" ". (40)

Old fashioned and expensive designs were still being used in the 1950's. Steel, for example, was still the predominant material in multi-storey structures up until the close of the decade, although reinforced concrete, perfected some time before was from 20 to 25 per cent cheaper. It may, in fact, have been partly the inefficiency in this industry and the need for multi-storey housing, which led central government to pay special attention to the reform of the steel industry (41). And, in a similar manner, the eventual introduction of reinforced concrete, and later industrialised building, could have been to some extent a response to the long term failure of the plans to rationalise the steel industry.

Overall it was the free market monetarist policy which formed the background to the development of Park Hill as an example of 1950's local authority housing. This was a policy which actually encouraged inflation (in terms of rents, rates, building costs) and demanded that the most unpopular and expensive accommodation, on the most expensive sites, be provided for those least able to pay. Sheffield City Council had to resolve this contradiction by providing low cost and low rent, but acceptable housing on difficult city centre sites, if it and the steel industry were to grow and prosper within the United Kingdom.

The Park Hill Project: The Politics and the Problem

A calendar of the main events in the history of the Park Hill project is provided in Table 1. Central government initiatives are clearly

Table 1. The Park Hill Project

<u>Date</u>	<u>Event</u>
Dec. 1936	Application to the Ministry of Health for confirmation of clearance orders Nos. 200-204 (fig.1 in Notes to Chapter 4)(confirmed November 1937) under the 1930 Housing Act.
July 1937	Application to the Ministry of Health for confirmation of clearance orders Nos. 255-204 (fig.1 in Notes to Chapter 4) (confirmed April 1938)
May 1939	Purchase of a large quantity of freehold property (South Street, CPO No. 202a 1935) from the Duke of Norfolk for £17,600.
April 1949	Housing Committee (Chairman Alderman Albert Smith, appointed 1948) consider prospect of erecting multi-storey housing with lifts.
Sept. 1949	Housing Committee (Special, 29th Sept.) agree policy of erecting multi-storey housing up to six storeys within the city.
Nov. 1950	Sheffield Extension Bill ready (backed by Con.Lib.)
July 1951	Sheffield Extension Bill rejected by the House of Lords)
Jan.1953	J.Lewis Womersley becomes Sheffield City Architect (W.G.Davies having retired); F.G.Jones, City Treasurer, had been appointed in 1952.
May 1953	Jack Lynn and Ivor Smith begin work on the Park area (and cease work on Norfolk Park site).
July 1953	First scheme completed (maximum 11 storeys). Also, City Architects Dept. reorganised and enlarged.
Nov. 1953	Begin work on the second scheme (maximum 13 storeys).
Feb. 1954	Appointment of consultant engineers.
August 1954	Council decide to send deputation to Europe to study cost and character of multi-storey housing with particular regard to the evaluation of the designs for Park Hill stage 1.
Sept. 1954	European Tour by Ald.C.W.Gascoigne (leader of the Council and Labour party, and member of the Housing Committee) Cn.H.Lambert and Ald. P.J.L.Turner (Con-Lib member of the Housing Committee). Also J.L.Womersley and Henry Smith (Head of the Public Works Dept.)
	Remaining clearance order, CPO Park Hill 1955 (fig.2 in Notes to Chapter 5) applied for and Quantity Surveyors appointed, Cyril Sweett and Partners.
Feb. 1955	Flats versus Houses debate between leaders of the two parties in the local press (The Star 15.2.55)
March 1955	Housing Committee approve the building of Park Hill.
April 1955	Full Council approve Park Hill.
May 1955	Exhibition of model of "Flat Town".
Jan. 1956	Ministry of Housing and Local Government approval.
Feb. 1956	Public Inquiry CPO Park Hill 1955 and invitation to seven leading firms plus the Direct Labour Dept. to tender for the contract.

- August 1956 CPO Park Hill 1955, Town Clerk authorised to proceed.
- Nov. 1956 Public Works Dept. tender accepted.
- April 1957 Work commences.
- April 1958 Foundation stone laid by two members of the Housing Committee who are also the longest serving Aldermen on the Council, Alderman Gascoigne (leader of the Labour party) and Ald.P.J.M.Turner (Con. Lib). Also Park Hill shops completed and Cn.Harold Lambert became chairman of the Housing Committee in 1958.
- April 1959 First dwelling completed. Housing Committee and officials visit multi-storey housing in London to decide on the best social, recreational and general amenities for Park Hill.
- June 1959 A small number and variety of furnished dwellings are opened to the general public.
- Oct. 1959 Public Meeting at Park's school hall (2 sittings)
- Nov. 1959 Mrs.Demers begins residence and first dwelling let.
- March 1960 Serious problems on the estate: Report to the Housing Management Committee (S.Telegraph 22.3.60)
- May 1960 Local Press report success of Park Hill as accommodation and as a community (The Star and Telegraph 19.5.60 and The Star 27.4.60)
- June 1960 Community Hall opened replacing temporary location at 120 Hague Row. The laundry had been opened the previous month.
- Jan. 1961 Park Hill completed.
- June 1961 Park Hill opened by Hugh Gaitskell.
- Aug. 1961 - Park Hill Survey by Mrs.Demers (and Hyde Park design up to
Mar.1962 18 storeys, completed)
- 1964 J.L.Womersley and Jack Lynn leave Sheffield (Ivor Smith left Dec.'60)

reflected at the local level. The Housing Acts of 1930 (consolidated in 1936) and 1949 provided for the first and essential ingredients of redevelopment with multi-storey housing. The absence of a Local Government Act ensured that the Extension Bill was rejected and then the subsidies provided by the 1952 Housing Act, the recognition of the need for slum clearance in Houses: The next Step and the design guidance in the housing manuals, formed the context to the completion of the design for Park Hill in 1954. By the time the scheme had been accepted by the politicians, the local press and, to a certain extent, the Sheffield public, the new subsidies available under the 1956 Housing Subsidies Act and the new rate of interest on loans (4.1 per cent in 1953-4, 5-6 per cent in 1956-7) had appeared. And with the completion of the scheme in 1959 and its occupation in 1960, after which full rent and rates could be collected, interest rates had again risen to 6.1 per cent by 1960-61. Hence there were two distinct periods; the first, when the architectural exercise was completed, was a period of central government encouragement to local authority house and especially flat building for general needs, while the second represented a time during which local government was guided towards providing high rise housing at minimum cost for special needs only i.e. mainly

slum clearance for the working class. And over the quarter of a century from clearance to rebuilding there were overall a good many changes in local circumstances which tended to pivot about problems of the changes in the costs of land, labour and capital, as controlled by central government. How did the local labour-controlled city council cope with these constraints?

The record of socialist achievement in Sheffield really began with the election of a labour party majority in 1926; the first provincial county borough council to become labour controlled (42). In the following years up to the second world war, with the exception of 1932-33 when the Con-Lib group gained control, remarkable progress was made in laying the basis for municipal socialism, with efficient local services, including a large direct labour department, and an exceptional quantity and quality of new council housing. Between 1933 and 1939 when the National and Conservative government were making an attack upon council house provision, 45 per cent of Sheffield's housing was built by the local authority; twice the national average. Also the rate of new dwelling construction: 44 per cent of those cleared, was the highest in the country (43). The following claims therefore may well be justified. The pamphlet "Six Years of Labour Rule", published in 1932 suggested of the period 1926-32:

"in the period we were in office more property was condemned, and larger numbers of families rehoused from slum areas than in any other comparable city in the country". (44)

And in 1959 V.M.Hughes (the City's Housing Manager) stated that:

"Between 1930 and 1939 there took place the biggest housing push ever in this country and the speed of construction was such that Sheffield Corporation was reaching unequalled production of nearly 3,000 annually, a record among all housing authorities at the time". (45)

In addition the houses provided were of a high quality. Hence, for example, the council managed to resist the temptation to build the rows of tenement flats and the new multi-storey schemes typical of the 1930's, and found in London, Birmingham, Manchester, Liverpool and Leeds.(46) The prevalence of the garden suburb-type development may, of course, have been a contributory factor in the large size and low density of the city and in the reaction which appeared in the early 1950's (47).

In the 1950's labour politics was supreme; between 1953 and 1959 the majority in council was the highest on record taking between 70 and 72 per cent of the seats (48). As the city competed with other county boroughs it may well have determined, given the context of building for urbanity in place of "sprawl", to take up and better the example set by other large cities and their well known multi-storey housing schemes completed in the 1930's. Although there is no direct evidence that this was the case, the example set by nearby Leeds with its world famous Quarry Hill flats was noted by Roy Hattersley M.P.

(Chairman of the Local Committee 1961-63 and 1964) in his Guide to Yorkshire (1976), he states:

"Leeds was in constant competition with my native Sheffield we had a bigger majority than theirs and we had a thirty year history of continuous Labour rule which they could not match. But Leeds had two manifestations of genuine civic virtue unrivalled throughout Yorkshire and beyond. They had Leeds town hall and Quarry Hill Flats". (49)

Hence, he later concludes (referring to Rev. Charles Jenkinson, leader of Leeds Labour Party in the 1930's):

"Twenty years after Quarry Hill was completed, putting aside our prejudices and our pride, we went from Sheffield to learn from Leeds. The no., and much better, flats we built are a tribute to Jenkinson even if no one in South Yorkshire would ever admit it. They will remain in praise of him long after Quarry Hill is pulled down". (50)

It should also be noted that in February, 1955 Sheffield ceased to be Yorkshire's largest city and England's fifth largest; the Registrar General estimated Leeds population at 507,000 and Sheffield's at 503,400. This was blamed on the fact that Sheffield had built 20,000 houses outside the city boundary in Wortley and Chesterfield. There was a other reason for wishing to extend the city boundary to include these areas. Only on the 1st April 1967 did the city regain its position with the inclusion of a large area of Chesterfield (under the 1956 Local Government Act). By that time the city's population, in the old boundary, had fallen to 490,930 while Leeds stood at 508,790 people. The attempt to improve the city and retain its population was not therefore proving to be very successful in these terms.

Given the existence of a determined local authority, in which there was a large measure of agreement between Labour and Con-Lib groups, how did it cope with the problems confronting house building and slum clearance in the 1950's? And how did the struggle with economic and political conditions come to resolve itself in the form and location of Quarry Hill?

We can first consider the problems of the demand for accommodation and the supply of land for council housing. During the decade the demand for housing increased, especially among single and aged persons, while the supply of land decreased.

In 1957 there were 29,000 families on the waiting list and 20,000 houses unfit for human habitation; by 1953 there were 37,976 households on the waiting list. Between 1939 and 1953 only 1,632 houses in slum clearance areas were vacated and only 723 of these by the local authority. The composition of the queue for better accommodation, over the period 1954 to 1960, is shown in Table 2. Clearly although families and married couples especially were gradually being rehoused during the 1950's - nearly 13,000 dwellings were completed in the city between 1954 and 1961 of which only about 6 per cent were at Quarry Hill.

there was still a substantial demand for all types of accommodation in 1959 and 1960 as they had originally planned for in 1953 when Park redevelopment began.

Table 2 Composition of the Waiting List 1954-1960

<u>Household</u>	<u>1954</u>	<u>1955</u>	<u>1956</u>	<u>1957</u>	<u>1958</u>	<u>1959</u>	<u>1960</u>
Single People	9,119	11,140	13,588	14,659	14,902	15,201	15,049
Married Couples	25,373	23,830	21,817	20,677	20,049	17,875	15,992
Aged Persons	5,143	6,415	7,417	8,240	8,793	9,062	10,120
Total:	39,635	41,385	42,876	43,576	43,744	42,138	41,161

Source: Housing Reports, Sheffield City Council 1954-60. All figures were given for 31st March.

The shortage of land to answer the increasing demand for all sizes of dwellings was apparent immediately after the war. The report Sheffield Replanned by the City Planning Officer, J.M.Collie, published in 1945, admitted that, "the area available for new housing within the city boundary is, however, not entirely adequate for the future housing needs of the city" (51) The future Park Hill site was designated for flatted housing; "a continuation of the present 'flats' development, but enhanced by the suggested green belt of terraced gardens below the flats area". (52)

By the beginning of 1949, when the Housing Act was passing through Parliament (the second reading was in March) it was decided to consider the prospect of building multi-storey housing with lifts, to provide more dwellings, of a greater variety, on the land remaining undeveloped within the city(53). After the inspection of flatted housing in London and Scandinavia, it was recommended to the City Council at a special meeting of the Housing Committee on the 29th September that "the policy of erecting flats within the City (as a general rule not exceeding six storeys high, with lifts in flats exceeding three storeys) be approved in principle". Hence, the Local authority was taking one step further along the road to Park Hill (and the other mixed house and tall flats developments) and away from the example set by the Duke Street and Edward Street flats begun in the mid 1930's and nearing completion at this time.(53)

Other decisions taken at this meeting were to lay the basis for the Park Hill project. Besides the move to include flats and a flat scheme in the suburban estates being designed at the time (Manor Park, Broadway and Greenhill), the City Architect was requested to prepare basic information on flats, 3 to 6 storeys high, the City Treasurer to prepare comparative costings of houses and flats, the Planning Officer and City Architect to prepare a rough layout for Norfolk Park including, "the area which they suggest is suitable for development

as a flat scheme" and the City Architect and Superintendent of the Refuse and Cleansing Department prepare a report upon, "the various methods of central and district heating now available with estimates of cost, including a plant which will destroy refuse and which (if necessary supplemented by normal fuel) will provide hot water for the flats and the laundries and central heating for the flats" to the new Norfolk Park estate.

This, however, would not be enough to satisfy the growing demand for local authority housing. Hence at the same meeting the Parliamentary and General Purposes committee were requested, "to consider and report upon the desirability of taking steps to extend the boundaries of the City on the lines suggested to the Boundary Commission". The Sheffield Extension Bill was the result. The original proposal was for the inclusion of 3,970 ha (9,925 acres). This was reduced to 3,010 ha (7,525 acres) after consultation with agricultural interests. Of this area only 904 ha (2,261 acres) was suitable for housing, - 13,500 houses in fact. This represented a six or seven years building programme, or if prewar conditions returned, only enough land for three years. Even this was, of course, welcome because, it was claimed, there was only 300 acres of housing land left within the city boundary after "every step to economise land within the city consistent with decent standards has been taken". (54).

The rejection of the Extension Bill and the effect it had upon the location and supply of housing within Sheffield became apparent at the Public Local Inquiry into the proposed Sheffield Development Plan (prepared under the 1947 Town and Country Planning Act) in 1953. Land in Norfolk Park, in the green belt and a small area in the central business district (Devonshire street) was to be used for local authority housing, while half of the 49,000 new homes required were to be built outside the present city boundary at some future date. In 1951, at the time of the Extension Bill, 44,940 houses were to be built outside Sheffield.

When the approved Development Plan was published in 1957 these figures were altered to reduce the demand and increase the supply within the city. Thus, the level of demand had fallen to 47,500 houses, while the 34,000 unfit dwellings which, in 1953, it had been hoped to clear by 1971, had now been reduced to 20,813, only half of the 17,000 dwellings situated in the areas zoned for industry would be cleared within the plan period (i.e. by 1971) and the number of dwellings in areas over a net density of 143 ppha (60 ppa) - and therefore considered in need of redevelopment - had fallen from a 1953 figure of 133,000 to 46,217, for no apparent reason; three residential zones (Nos. 33, 35 and 61) were to be over the permitted level (i.e. 68ppa, 69 ppa and 64 ppa respectively).

At the same time 69 per cent of the required local authority houses would

be built inside the city boundary; that is, 29,205 and not 24,500 as suggested by the city council in 1953. And this left only 13,295 and not 24,500 to be found space outside the city. While there was a 22 per cent increase in the number of houses to be built in Sheffield by 1971, the Development Plan included proposals for only 12,500 dwellings to be built by the local authority in the first five year period (8,515 on the slum clearance sites and 4,000 in the Green belt at Gleadless) while 12,298 dwellings were to be lost to other land uses during the plan period and various sites left vacant for other uses; for example, only 20 per cent of the industrial land at Tinsley would be developed in the first five years.

Thus following the Development Plan inquiry the pressure on council house building land, and open space, within the city was further increased, as, it seems, they received the lowest priority after agriculture, industry, commerce and private housing. These further constraints upon the redevelopment of the city were however some way in the future when a start was made in 1953, following the reorganisation, enlargement and new importance given to the City Architect's Department (replacing the dominant role of the City Engineer and Planning Officers' Department).

Various reasons were given at the local level for the decision to go ahead with larger and more ambitious multi-storey housing schemes, than hitherto. The need to reduce or minimise journey to work distances and the immobility of the heavy industry making decentralisation of industry and work force into a new or expanded town, difficult if not impossible. In the case of Park Hill there was the desire for a city centre population and a 'lively' and busy core to the urban area after 5 p.m. which could supposedly be ensured by building for a large population within walking distance of the central shops and recreational facilities.

However, the principal reason was based on the need to modernise Sheffield. In partnership with the new subsidies available under the 1952 Housing Act, (for flats only when erected on expensive sites (over £1,500 per acre) relative to the suburbs or say Norfolk Park with an extra £10,105 for the lifts required in blocks of four storeys or more and a statutory rate fund contribution of one third of government subsidy plus one half of lift subsidy) for the size and location of Park Hill and Hyde Park, was the fact that their partly cleared site, if developed with a high density scheme could provide the surplus population, which followed slum clearances with accommodation, as this was not available elsewhere. In 1953 there were only 800 dwellings left at the Park; the new multi-storey housing could provide about 2,300 units of accommodation, a surplus of 1,500, which while not approaching the 13,500 which were to be built in Wortley and Chesterfield (before the 1952 Housing Act had

been contemplated) was a large enough number to allow clearance of the other "slum" areas in the city. The first five year slum clearance programme included four central area sites: Park Hill, Netherthorpe, Woodside and Burngreave, the latter three developed at the lower ^{net} density of 250 ppha (100 ppa). } All four schemes were different in design although the latter three were similar mixtures of tall 13 storey blocks for one and two person households, and 4 to 6 storey maisonette blocks and a few large houses for families; only Netherthorpe included the deck form in the 4 to 6 storey blocks, although these were not linked round the site and nor were they as substantial as those at Park Hill. The four estates did, however, all make the best advantage of the sloping sites, with some kind of balcony access from ground level where possible, taking the pedestrian horizontally to higher levels. The main contractors for the schemes were W.J. Simms Sons and Cooke Ltd, of Nottingham, M.J. Gleeson Ltd. of Sheffield, George Wimpey and Co. Ltd, of Hammersmith and the city councils public works department. All four placed a considerable demand upon the local labour force and industry and thereby ensured that this was something of a "boom" period in the city when joined to the other building projects underway in the centre and the suburbs.

The site behind the railway station where Park Hill now stands had a small number of dwellings, about 180, relative to its actual capacity if measured by the other slum areas, because of the break in housing renewal between 1939 and 1953. The clearance orders declared in the area in the 1930's totalled fourteen and contained 1,218 houses, a large number of which were "back to backs" (CPO's 202, 260 and 261 included over 70 per cent of this type of accommodation). And although by 1939 a total of 22,808 houses were included ⁱⁿ all clearance orders of which 10,368 had been vacated and 9,441 demolished throughout the city, this had not left the Park area ready for rebuilding prior to the war. A substantial number of people were moved out into the new suburbs, particularly the Parson Cross estate. Nevertheless some houses, most of the shops, pubs and schools remained after the war, with the addition of several prefabricated houses.

The future site of Park Hill therefore presented an opportunity for housing gain and for the minimising of the costs of land and property purchase, and clearance, and the minimising of delay in the administrative process of housing redevelopment, because so much of that work had already been completed. Other low cost factors were the strong geological structure of the site (55), which reduced the cost of the otherwise expensive foundations required for multi-storey housing, and the slope of the site (from 190' OD at the Midland station to 400' OD at the highest point where Hyde Park would rest) which was well suited to the use of the balcony access principle and the consequent reduced number of lifts. The other physical and economic reasons for the location

included the position of the site close to but on the windward side of the Don Valley, the natural amenities of plentiful light and air, and magnificent views and the easy access to nearby open space at Skye Edge and Norfolk Park. Furthermore this was the ideal location for the new model housing scheme, the symbol of the new progressive Sheffield which was leaving behind it the depressing 19th century environment, replacing it with a clean well built and ultra-modern city centre. Here architectural projects could be well integrated into a unified plan, with shops, transport and other amenities near to the multi-storey high density housing, justifying its existence against the spread out or absent amenities of the suburbs. Those visitors to this part of England, as well as the general Sheffield public, would inevitably be impressed and encouraged in a manner impossible if the Park slums had been left untouched or replaced with a typical mixed development scheme. The new estate was unlikely therefore to have been developed in Norfolk Park, even if subsidies had been available, because the location, a little way from the city centre, was not so well suited to such a remarkable exercise in civic design.

Jack Lynn and Ivor Smith ceased work on the Norfolk Park site, which had first attracted attention in 1949, and in May 1953 began to investigate the Park area. Their first design for 2,000 dwellings, an extra 1,200 ready just two to three months later, was based upon avoiding, as far as possible, further redevelopment costs. The buildings followed the street pattern and skirted round the larger dwellings, the schools and pubs and the shops. Lewis Womersley noted in 1958 (50) that the site, including the Hyde Park area, contained 635 unfit and 432 "fit" dwellings. And in regard to the whole slum clearance programme he noted:

"The number of fit houses which will have to be demolished to carry out this redevelopment on comprehensive lines is large and will be a heavy financial burden. Over 1,000 dwellings in the four areas are classified as "fit" and replacements will generally have to be provided without subsidy. It is hoped that for the future of proper planning the standards of unfitness will be revised to avoid this burden". (57)

Toward the close of the year the City Architect and City Treasurer took the unusual step, at the time of joining forces, to decide the most economically realistic "corporate" approach; here was the first example of the preplanning and co-ordination between experts and departments (mainly the City Architects, City Treasurers and Public Works) which was to prove such a crucial factor in the success of the scheme. It was decided that a larger cheaper and better building could be constructed if the whole area was cleared to allow the economies of scale to operate. One of the main reasons for the European Tour (Copenhagen, Hamburg, Netherlands, Antwerp, France and Zurich) in September 1954, by officers and councillors, was for the City Architect (and thereby

the City Treasurer) to convince the people's representatives that comprehensive rebuilding with multi-storey housing, was preferable. The consultant quantity surveyor, Cyril Sweett, noted in 1963:

"Just before he went on tour with his councillors Mr. Womersley had told him (Mr. Sweett) that he was going to take them abroad to convince them that living in flats was a reasonable thing". (58)

Womersley was singularly successful in this objective; the conclusion to Multi-Storey Housing in Europe, states:

"The schemes visited focussed attention on the fact that to obtain the fullest advantage of multi-storey building, large redevelopment areas are required whereby such schemes may become important examples of Civic Design, playing a major part in the redevelopment of the City as a whole and at the same time reducing the costs of construction and communal services". (59).

There can be little doubt that there was widespread agreement, amongst the elite of the Sheffield Labour party, that comprehensive clearance and rebuilding with multi-storey housing was the correct step to take. This would include Alderman Albert Smith, Chairman of the Housing Committee 1948-58, Councillor Harold Lambert, Vice Chairman of the Housing Committee 1955-58 and Chairman 1958-74 (except 1968) Alderman C.W. Gascoigne (1884-1967) leader of the party, Chairman of the Estates Committee 1952-56 and deputy chairman of the Town Planning Committee 1947-62, Councillor S.I. Dyson deputy chairman of the Public Works committee 1947-55, Chairman of the Transport Committee and a member of the Housing Committee for much of the 1950's and 1960's, Councillor P. Dinsley, chairman of the Public Works committee 1952-60, Vice chairman of the Housing Committee 1948-54 and Alderman J.W. Sterland chairman of the Town Planning Committee for nearly 30 years, 1946-74, with the exception of 1968. Councillor P.J.K. Turner, Con-Lib, was an influential member of the Housing Committee who accompanied Gascoigne and Lambert on the European Tour. Hence there was no more than say ten Aldermen and Councillors and about the same number of officers, who occupied key positions in the local authority and carried Sheffield forward into the new age. And it was fitting that the Park area should witness the building of the most ambitious part of the plan because important members of the labour party leadership had been Councillors in the area, C.W. Gascoigne between the two wars, J.W. Sterland 1937-52 and S.I. Dyson in the 1950's.

Following the decision to scrap the first design for the rebuilding of the Park area, a second scheme, this time only for Park Hill, was undertaken and completed in 1954. Towards the close of the year the remaining previously unaffected area was the subject of another compulsory purchase order, CPO Park Hill 1955. The total cost of this section of the Park Hill area was about £105,500 or 60 per cent of the total of £176,000 paid out between 1937 and 1957; this percentage figure does not take account of the inflation in

land and property prices over the twenty year period. Especially large sums were exchanged in the 1950's for the pubs, £18,000 for Brampton Brewers Co. Ltd., leasehold and freehold rights, £7,000 for Hope and Anchor Brewery freehold rights and £5,900 to Duncan Gilmour and Co. Ltd. for freehold rights. In addition large sums went to the Co-op (£8,000) and a number of small firms, with the Church (Sheffield Diocesan Trust and Board of Finance, the Vicar and Church warden of St. John's Church) receiving £12,000. The figure would have been larger but for the retention of the school, a church and some of the original roads. In total there were over 150 vendors of freehold and leasehold property rights within the 13 ha (33.21acre) site. In March 1955 ground rents for the area came to just £1,500 in other words most land was purchased freehold. A new headquarters for the Salvation Army to replace the one demolished was built nearby. Also the return to the site of a number of the original shopowners and the inclusion of four pubs within the new building (which minimised the cost of building separate public houses as they had existed before) were further testimony to the original idea of retaining much of the existing buildings and uses. However the variety and complexity of uses, for example 14 pubs, which had existed in the early 1930's and which had developed gradually over half a century, were slowly lost over the twenty five years leading up to the design of Park Hill; to all intents and purposes there was nothing substantial left of the original social and economic life of the area, prior to comprehensive clearance and rebuilding.

In 1955 and 1956 the design was accepted by local and central government. Controversy meanwhile arose in Sheffield regarding the decision to accept the tender from the Public Works Department. Following the invitation to seven leading firms to tender for the building contract, J. Laing and Sons submitted a proposal to build Park Hill in one year less than the time to be taken by the Public Works Department - one of the largest in the country - although it would cost £200,000 more. This type of multi-storey housing had to be completed in large sections before it could be let, thereby delaying the speedy collection of rent to begin paying off the loan as soon as possible. However, the Public Works department tender was £76,349 below the ceiling set by the architects and quantity surveyor and over the next few years, in close co-operation with the other local authority departments it could aim for a lowering of the cost still further and a speeding up of the building process. In the event Park Hill was completed several months ahead of schedule with a saving of £325,891 or 4 per cent of the original figure of £2,158,587; the labour party insistence upon using its own direct labour department was justified (60) as was its faith in the careful planning of the project. The quantity surveyor, Cyril Sweett, noted in 1963 regarding the importance of the planning exercise:

"So the contractor did have an enormous amount of information, and

and as a result of that, the tenders when they came in (much to their relief) were at about £1,900 per basic unit, which was quite remarkable. He (Cyril Sweett) thought it was the result of complete integration of all the professional skills at the design stage. This had continued right through: every variation was costed and looked at carefully....." (61)

Park Hill and Local Government Finance

We have so far described the corporate planning practice behind the Park Hill project and the basic economic objectives behind its design and location. But how exactly could Park Hill be economically defended relative to suburban housing? If it was proving to be much more expensive than this could undermine the legitimacy of its socially experimental character and make the planned model estate into a costly mistake.

The original justification for Park Hill was presented by the City Treasurer at the Housing Committee meeting in March 1955. He divided his analysis into the effect the scheme would have upon the Housing Revenue Account and the General Rate fund Account. All calculations were based on the contributions payable under the 1952 Housing Act. The site costs were given as £9,512 per acre (taking the net residential area of 17.91 acres and the site cost at £170,364). Hence the subsidy for flats on expensive sites between £8,000 but not more than £10,000 in blocks of 4 storeys or more with lifts was £59.9s per flat per annum, with a compulsory site fund contribution per flat per annum of £24.18s. This would have produced an exchequer contribution for the 976 dwellings included in the scheme at this time (the final number was 995) of £67,793 per annum with a compulsory rate fund contribution of £24,302. However the City Treasurer calculated the respective contributions on the basis of the lowest subsidy of £63.6s and £22.17s respectively. The figures were included in the housing revenue account presented at the time and are reproduced in Table 3. If the Housing Committee had waited another week or so until the 1st April 1955 they would have known that the basic exchequer contribution would fall to £45.18s for flats and £22.1s for houses. And the interest rate (i.e. debt charges incurred) rise from 3.8 per cent 1954-55 to 4.6 per cent 1955-56 (Financial years also run April-March). Thus while the flat subsidy was reduced by 13 per cent, the house subsidy fell by over 17 per cent. The overall effect was a larger increase in rent for the houses than the flats to compensate for the smaller contributions and higher debt charges; an added reason for building Park Hill and building it at as low a cost as possible. A leading architect noted in the 1950's: "A rise in interest rates of 1 per cent on the capital sum borrowed for a dwelling costing say £2,000, represents an additional weekly amount of 6s.8d to be met for 60 yrs. from local rates or rents". (62)

Table 3. Estimated Annual Effect on the Housing RevenueHead of Account

<u>Expenditure</u>	<u>Account</u>	
	<u>Park Hill £</u>	<u>Houses £</u>
1. Debt charges	108,886	71,182
2. Repairs	7,776	7,776
Supervision and Management -		
3. General Expenses	2,916	2,916
4. Special Expenses	14,094	243
Total:	133,672	82,117
<u>Income</u>		
5. Exchequer Contribution	61,965	21,435
6. Rate Fund Contribution	22,365	7,144
7. Ground Rents	1,500	
Sub-total	65,821	28,577
8. Rent	47,851	53,540
Total:	£133,672	£82,117
9. Net rent per week (50 weeks collection)	15/8d	£1.2s. 0d

Source: Park Hill Redevelopment Proposals, Sheffield. March 1955 Table "A"

The total cost of the Scheme at the time, estimated by Cyril Sweett, was £2,293,228 or £2,360 per dwelling. The costs are summarised in Table 4 (per dwelling to the nearest £) This was compared to the cost of a suburban house

Table 4. Construction and Site Development Costs

<u>Details</u>	<u>Cost £</u>
Site Clearance	27
Foundations	116
Superstructure (972 dwelling exclusive of services - note 976 was the number used elsewhere)	1,300
Passenger and goods lifts installations	27
Lightning conductors	4
Plumbing	126
Fire Hydrants etc.	3
Heating and Hot water services	184
boiler House and Fuel store	29
Extract ventilation Fans	2
Gachey refuse disposal system	84
Refuse disposal station	23
Electrical installation	50
Builders' work	70
Site layout	91
Add 5 per cent unforeseen items	107
Consultants fees	112
Preliminary expenses for site exploration	5
Estimated cost per dwelling	<u>2,360</u>

Source: Park Hill Redevelopment Proposals. Sheffield March 1955. Table "A" page 1

just £1,650 and the cost of suburban land, only £110 per acre compared to

£9,512 per acre in the city centre. This meant that the total cost of suburban development (16 dwellings per acre, 60 acres total) was £1,584,000 or 31 per cent less than the city centre scheme; this was reflected in the different debt charges. The final expenditure (Table 3) would be nearly 39 per cent below that incurred at Park Hill. There was therefore considerable pressure to minimise the cost of the multi-storey scheme in spite of the 65 per cent greater exchequer and rate fund contribution per flats in contrast to houses. Only in this way could the debt charges rate contribution and rent level be minimised.

If we work gradually through the items listed in Table 4 we can note the economies made. Site clearance and foundations we have already noted. However, the latter fact is substantiated in large measure by two studies. In the first, the foundations cost of an eleven storey eighty dwelling, balcony access, maisonette block, is given as £281 with a total dwelling cost of £2,816 (63). Hence a similar multi-storey housing scheme had, in this case, well over twice the cost of foundations at Park Hill. The second calculation was made in the Architect's Journal in 1961 (23rd August). The comparison was as follows:

	<u>Bowater house</u>	<u>Southgate</u>	<u>Park Hill</u>
1. Preliminaries, work below ground floor level	10s 9¼d	9s 10d	3s 7¼d
2. Structure	27s 0½d	27s 11¼d	27s 9½d
3. Finish and Fillings	11s 5d	12s 6¼d	8s 4½d
4. Services	12s 1¼d	25s 2d	13s 9¾d
Total cost per sq.ft of net dwelling area	61s 4d	75s 5½d	53s 7¾d
Tender date	Aug. '53 & Sept. '54	Nov. '58	Sept. '58

Note also the low relative cost of the finish and fittings. Hence the AJ maintained that, "Park Hill seems to owe its remarkably low cost mainly to good site conditions and simple foundations, and to the very economical finishes such as exposed concrete for the ceilings". What these figures seem to contradict, however, is the low cost of the structure at Park Hill, which made up 55 per cent of the total cost of each dwelling.

The report of March 1955 nevertheless emphasises the low cost of the superstructure: Womersley's report notes for example, "The primary economy of the scheme lies in the use of a standard repetitive structure into which the variety of dwelling types referred to have been fitted". And the City Treasurer noted that, "the Park Hill flats are estimated to cost considerably less than is normal for multi-storey development due to the system of construction and layout employed". (64) In general Womersley stated in another report in comparison to houses:

"Something like plus 40 per cent should be sufficient to cover

such items as heating, lifts, refuse disposal, balconies, lift wells, ducts etc. At Sheffield they had concentrated on simplicity in building form and repetitive work. Consulting engineers and surveyors were appointed early, and the surveyors produced supplementary data showing the amount of repetitive work involved. This additional data, bringing the contractor into the minds of the designers, was important. An all-out effort had been made to create an economical scheme which would have all amenities, and this the team had achieved.....Buildings lasted sixty to 100 years, so that there must be time to do the preliminary work properly. In their first postwar multi-storey schemes, Sheffield had allowed the technical advisers plenty of time to make their plans. This was very wise, and others would do well to follow the same course". (65)

Cyril Sweett, in an article which compared the cost of balcony access and staircase access flats (66) according to variation in the size and height of dwellings, showed that the superstructure costs were the crucial item. And A.W.Cleeve Barr, Assistant Housing Architect to the L.C.C. proclaimed, in 1958, that Park Hill, "comprises one of the most economical structural and plan forms yet devised, in which four dwellings (each with a private balcony) are contained within a three storey "basic unit" which is repeated throughout the site". (67) Undoubtedly this was, therefore, the central design exercise; the unusual form and layout of Park Hill would appear to have been a method of maximising the building development on the site using the three bay unit given the need for various amenities within the scheme (68.)

The design of deck housing, as we noted in Chapter 4, was based upon economy in the use of circulation areas and flexibility in the number of lifts. Hence one of the Architect's Departments reports noted:

"The design of the deck system was based on the fact that the most economical form of access to high flats is the traditional balcony serving the maximum number of flats from one lift point". (69)

Cyril Sweett, in the article already referred to, illustrated this argument by comparing staircase access with balcony access flats. The difference was most pronounced with small dwellings at six storeys and over. Hence if a 400 sq.ft. balcony access dwelling was costed at 100 units, at six storeys it was 126 and at 12 storeys 143 while a similar dwelling in a staircase access block was 155 at six storeys and 164 at 12 storeys. Park Hill practised precisely this economy by going to 13 storeys and using the small dwelling sizes preferred by the Ministry of Housing and Local Government. In 1955 the dwelling sizes for Park Hill were:

5 person maisonette	Total area	797 sq.ft
4 " "	" "	721 "
4 " flat	" "	699 "
3 " "	" "	664 "
2 " "	" "	444 "
1 " "	" "	409 "

These sizes of accommodation contrasted sharply with the size of a three

bedroom house in 1951, 1,050 sq.ft and in 1954, 909 sq.ft.

The subsidy available under the 1952 Act was increased to £10.10s for flats on expensive sites in blocks of four storeys or more with lifts (but only up to 50 dwellings per lift). Hence by minimising the number of lifts a larger amount of exchequer and rate fund contribution could be used to offset the exorbitant costs of vertical movement. At Park Hill there were 13 passenger and 3 goods lifts. Hence, in 1955 there were 61 dwellings per lift (or, assuming a population of 3,187 with occupancy rate of 0.89 pp room, 200 people per lift). More realistically there were 75 dwellings per passenger lift (or 245 people per passenger lift) and with only eight lift points (five lift shafts had two lifts) 122 dwellings per lift point (or nearly 400 people per lift point) In spite of all these economies, the cost of £27 per dwelling for the lifts was still nearly three times the extra subsidy available.

And yet in comparison with the 11 storey balcony access block referred to earlier, with 40 dwellings per lift shaft, this was an economy because here, in 1957 the total came to £133 per dwelling, which was about average; for staircase access schemes it could be three times as much.(70) In 1958 A.W.Cleeve Barr described Park Hill as, "probably the most economical scheme in the use of lifts ever designed in this country".(71) Further savings were probably to be made in builders' work and rate layout due to the Radburn-type design which minimised the number of roads.

In direct contrast there were the amenities - the plumbing, district-heating and hot water services, boiler house and fuel store, Gachey refuse disposal system and refuse disposal station; nearly 19 per cent of the total cost. The latter item cost well over double the normal refuse chutes (and plumbing). However, it probably saved the additional expense required in site layout and labour for the collection of refuse from the refuse chute bins. In the 11 storey balcony access block the cost of refuse chutes and chamber, alone, was £17; at Park Hill the Gachey refuse disposal system was an extra £77.12s per dwelling.

Given this remarkable mixture of "extreme" economies and especially generous amenities both representing particularly unusual features of multi-storey housing scheme in the 1950's, how did the product compare in terms of rent and rate fund contribution? As we can see from Table 3 the rent level was below that of a suburban scheme; no rent pooling and subsidies from the rents of other inter war estates, where the debt charges had decreased, was necessary. In terms of the rates due from the Sheffield public, we can see from Table 5 that an actual gain was predicted, in spite of a near trebling of the amount contributed (£22,365 instead of £7,144)..The main reason was firstly the omission of various services from street lighting and highway maintenance

to removal of refuse although these were actually paid for in the "special expenses" category of Table 3 (from which the six staff and 22 workpeople required to run and maintain the estate and its deck were employed) and secondly the omission of a library, park and recreation ground and school at Park Hill because these facilities already existed on or near the site.

TABLE 5. Estimated Annual Effect on the General Rate Fund

<u>Development inside the City boundary</u>			<u>Development outside the City boundary</u>
<u>Park Hill</u>	<u>Houses £</u>	<u>Description of service</u>	<u>Houses £</u>
22,365	7,144	Housing (net charge)	7,144
19	106	Fire Brigade	-
	82	Street and Gully cleansing	-
	580	Highway maintenance	-
	646	Street lighting	-
	1,265	Sewers	-
	1,500	Removal of Refuse	-
	1,940	Library	-
	2,915	Park and Recreation Ground	-
1,253	25,420	Education	-
23,628	41,798	Total (sub)	7,144
757	15,278	Less Specific Govt. Grants	-
27,871	26,520	Total (sub)	7,144
21,598	23,116	Less Addn. rate income	-
1,273	3,404	Total (sub)	-
2,859	3,315	Less Exchequer Equal. Grant	32,373 (loss)
1,506 (Reduction)	69	•• Net Increase in Rate burden	39,517

Source: Park Hill Redevelopment Proposals, Sheffield March 1955 Table "B"

The main difference in Table 5, after this, therefore lies in the specific government grants to houses within the city. Park Hill was an economically justifiable proposition because the £14,977 extra (i.e. £15,278 less £757) going to the suburbs was far less than the £40,532 extra (i.e. £61,965 less £21,433) going to Park Hill. Overall central government was paying an extra £25,555 per annum (i.e. £40,532 less £14,977) for the building of a city centre estate while the local authority was gaining overall in terms of rent and rates. There was also the saving to the tenant on transport and shop prices by living in the city centre. The City Treasurer therefore concluded his report:

"it would seem that flats built on the Park Hill site could be let at rents less than the economic rent for houses now being constructed; that the cost to the tenants for rents and other outgoings would be materially less; and that the overall charge to the General Rate Fund would be little different" (72)

And he had not included the savings to other bodies, that is, the necessity with a suburban estate of new water and transport undertakings, the extension

of gas, electric and postal services and private development of shops and churches, for example.

Development outside the city boundary would save the cost of providing community facilities because these would be financed by the county council and rural district authorities. However, the loss of the rate income and exchequer equalisation grant made this a completely impractical proposition.

Hence we can say, in conclusion, that the reason for the design and location of Park Hill, as proposed and agreed in March 1955, lay in its superficial ability to balance the potentially conflicting demands of:

- (a) central and local government;
- (b) the county borough of Sheffield and the surrounding county councils with their supporters in the National Farmers Union, the Council for the Preservation of Rural England and with the local authority itself;
- (c) the professionals in favour of urban containment and "humane" multi-storey housing and the local politicians, both Labour and Con-Lib, who desired local economic development and progress and an improvement in social conditions;
- (d) the other urban land users and the local authority as the provider of new council housing;
- (e) the ratepayers and the Council tenants; and
- (f) industrial capital, the local steel based economy, and the building industry, through the process of modernisation, and finance capital because of the increase in debt charges in the housing revenue account (which amounted to a transfer of the tax levied by central government to the bankers).

also insofar as this physical renewal of one part of the national economy was to be achieved with the minimum increase in public expenditure, it reinforced the free-market ideology expressed by the Conservative Government and finance capital. All this could not have been achieved with a suburban housing estate within or outside the city.

However, behind this facade of agreement and compromise there remained, in fact, a serious imbalance of political and economic forces. Besides the serious social disadvantages inherent in the design of Park Hill, and its limitations as a housing estate, which we will detail later in this chapter there was the fact that the city of Sheffield had not found it possible to expand in a rational manner by building the most popular type of council housing in a sufficient quantity to satisfy demand. Instead it had been forced firstly to experiment and build a below standard expensive structure, secondly to develop an inadequate amount of new housing, and thirdly to build on valuable open space elsewhere in the city. Central government, both Labour and Tory, had in fact been the guiding and in some instances commanding force behind the changes occurring in Sheffield; that is through central control of the steel industry, the Sheffield Extension Bill and local government reform, the Development Plan, the relevant Housing Acts and the approval of the Park Hill project itself.

Thus on reflection it is clear that in addition the aims of the county councils had in fact emerged successfully compared to the aims of the county borough, the professionals, especially the architects, had been able to express themselves and use their technical expertise in the process guiding the councillors toward the acceptable evolution of modern housing architecture, the other urban land users had gained by the clearance of unfit housing, the building of roads etc. and the ratepayers had benefitted to the extent of a cheap rehoming development with the disadvantage falling on future council tenants. For over due to the slow progress made with inadequate resources, the plan was, in fact, slow to materialise; the Park Hill project represented a limited form of progress for the local industrial capital, whereas financial capital stood to gain & lose with success or failure of the new multi-storey housing schemes. The only groups who may not have benefitted immediately were the variety of small businesses and landlords previously established at the Park, and the private builders who failed to receive the contract for Park Hill. However these interests had other areas to turn to for investment or markets.

It should be noted that a number of other alternative designs for multi-storey or lowrise housing at the Park could have been considered in 1955, and in addition to the calculations contained in Tables 3 and 5. They would not, however, have represented any more viable solutions to the problems of the period than the suburban schemes. Traditional two storey housing would not have provided the extra accommodation required for overspill from other slum clearance areas. Mixed development schemes would have been expensive and socially unacceptable.

To achieve a similar density of 178 ppa or 450 ppha, with up to 70 per cent family accommodation as at Park Hill, would probably have required a series of ten to fifteen storey blocks with only a very small number of houses. The contemporary Alton Estate at Rochampton with a net density of 100 ppa or 250 ppha, could only provide 27 per cent of accommodation in four storey, maisonette blocks and terraced housing. The use of internal corridor designs, say, a series of linked unite-like blocks, while possibly economically acceptable, would not have been able to suggest a continuation of the life-of-the-streets, i.e. a combination of modern amenities such as central heating and continuous hot water with a proper community life. Park Hill was a particularly fantastic and potentially alien structure rising amidst the nineteenth century low rise city centre; its legitimisation in the eyes of the public and future tenants was essential. A balcony or central corridor or "street" design could not have guaranteed this important means of creating consensus and minimising dissent.

The New Subsidies

This was the situation early in 1955. From the 1st April, as we have noted, subsidies were reduced while interest rates increased. In 1956 the Housing Subsidies Act was passed, with new exchequer contributions backdated to the 3rd November 1955. Under this Act the basic subsidy provided for multi-storey housing in replacement of slum dwellings increased with height and with the cost of the site. However, the exchequer contribution at 4 and 5 storeys, £32 and £38 per dwelling per year respectively, was clearly below that available even after the reduction made on the 1st April 1955. Also, as the dwelling density and thus height increased, so the amount of subsidy per dwelling obviously decreased; for example, between £4,000 per acre and £5,000 per acre, at 40 dwellings per acre, £1.2 per dwelling. For each £1,000 or part of £1,000 in excess of £5,000 per acre an additional £34 per acre was made available. In table 6 a comparison is made between the three subsidy levels with variation in site cost, taking 40 dwellings per acre as an average density for multi-storey housing. At 6 storeys, £50 is available with increases of £1.15s per flat for each storey in excess of six. The

Table 6. Multi-storey Housing subsidies: rates of Annual Exchequer subsidy payable under the 1952 Housing Act and 1956 Housing Subsidies Act.

Site Cost £	1952 Act	1952 Act	1956 Act 40 dg's/acre		
	4 storeys or more with lifts to 31.3.55	4 storeys or more with lifts from 1.4.55	Slum clearance from 3.11.55 No. of storeys		
			6	10	15
1,500-4,000	£63.3	£56.4	£50	£57	£65.75
4,000-5,000	£64.95	£58.05	£51.5	£58.5	£67.25
5,000-6,000	£66.0	£59.1	£52.5	£59.35	£68.1
6,000-7,000	£67.5	£60.6	£53.2	£60.2	£68.95
7,000-8,000	£67.5	£60.6	£53.55	£60.55	£69.1
8,000-9,000	£69.45	£62.55	£54.4	£61.4	£70.15
9,000-10,000	£69.45	£62.55	£55.25	£62.25	£71
10,000-11,000	£71.4	£64.5	£56.1	£63.1	£71.85
11,000-12,000	£71.4	£64.5	£56.95	£63.95	£72.1
12,000 +	£71.4 plus £1.95 for each addn. £2,000 per acre	£64.5 plus £1.95 for each addn. £2,000 per acre	£56.95+	£63.95+	£72.1 + plus for each addn. £1,000 or part of £278 plus £34-40

figures in the table show clearly that multi-storey housing would have to reach 10 storeys before it deserved a subsidy comparable to the one available from the 1st April and up to 15 storeys if it wished to attract a marginally larger contribution than that available prior to the 1st April. The only compensation was the abolition of the compulsory rate fund contribution following the 1956 Act. Local authorities could now either subsidise the

housing developments to a greater percentage from local rates, or they could increase the rents, and possibly move toward a system of raising local revenue tied more closely to "economic" or free market criteria. Given the serious nature of the cutbacks involved in the new subsidies most local authorities will have raised both rent and rates, especially when interest rates increased in 1956-57 to an all time high of 5.6 per cent.

Later in the year the Housing Subsidies Order brought an end to general needs subsidy except for one bedroom dwellings. Following the 1954 Housing Repairs and Rents Act, Sheffield had decided to let 50 per cent of its dwellings for slum clearance purposes (73). Following the 1956 Act when much lower subsidies were available for general needs, current projects will have been reorganised to attract the higher subsidies; the almost total abolition of general needs subsidy will only have tended to complete this process and move current building away from letting for a mixture of tenants towards the "one class" slum clearance provision. In the case of Park Hill the percentage was altered to 70 per cent slum clearance and about 30 per cent general needs i.e. there were to be 296 one and two person dwellings out of a final total of 995.

How did the new central government policies affect the design and building of Park Hill? It must have been very difficult to calculate the new subsidy when the scheme changed in height from 4 to 13 storeys or from a subsidy (for a 54 dwelling per acre density on a £9,512 per acre site) of £35.18s at the lowest end to £66.3s at the highest point. If say, 11 storeys had been taken as the average, there being far more dwellings at the taller end of the estate, then the total subsidy for the final figure of 995 dwellings would have been almost the same as that available in March 1955, excluding adjustments for inflation. Some alterations in the Park Hill project were nevertheless necessary in the interests of economy.

Two alterations were made, between 1955 and 1961, in the types of dwellings available in the model estate. The number of one person dwellings was nearly halved while the number of two person dwellings was doubled; and the number of four person flats was reduced from a possible 191, to just 59, while the number of three person flats was increased from 0 to 140. This had the effect of increasing the rent income from small households and decreasing the total cost by building more small dwellings. Overall, however, after the total number had been increased by nineteen, the number of six person maisonettes increased and four person maisonettes decreased slightly, the total number of people who could be contained on the estate remained roughly the same, 3,420 compared to 3,448 in 1961. The net result was a fall in the number of four person families to be housed on the estate involving a

drop in the potential child population of one hundred or nearly 6 per cent i.e. from 1,659 to 1,565. Hence both social and economic criteria were probably behind this decision (74.) The relevant figures for 1955, and on the estates completion in 1961, are shown in Table 7. From this we can see

Table 7. Population and Density at Park Hill, 1955 and 1961

Accommodation Maisonettes	1955 (possible)	1955 (No. of habit- able rooms)	1961 (as built)	1961 (No. of habit- able rooms)	1955 (No. of people)	1961 (No. of people)
6 person 5 room	30	150	46	230	180	276
5 " 5 "	213	1065	215	1075	1065	1075
4 " 4 "	259	1036	239	956	1036	956
<u>Flats</u>						
4 person 4 room	191	764	59	236	764	236
3 " 4 "	-	-	140	560	-	420
2 " 2 "	92	184	189	378	184	378
1 " 2 "	191	382	107	214	191	107
Total	976	3581	995	3789	3420	3448

Note: Nett Residential Area 17.91 acres, Gross omitting Park 21.41 Gross including Park 33.21. Also no. of people assumes 1 p p room.

that the actual capacity of the estate had increased by 208 rooms or nearly 6 per cent. when Park Hill was opened the maximum occupancy was given as 3,448 people or 3.4 people per dwelling. The initial occupancy was, however, stated to be 2,900 people or 2.9 people per dwelling (and 362 people per lift point). The net density (under imperial measurements) was therefore 162 ppa and not the 192.5 ppa maximum. Also the gross residential density, after including the 3.5 acres for the schools and shops and the 11.8 acres for the park area was 87 ppa instead of a possible 104 ppa. Hence the 200 ppa net density often referred to regarding Park Hill is actually derived from the 1955 figure of the number of habitable rooms divided by the nett residential area, 17.91 acres. The 1961 equivalent was 212 ppa. These are figures for the nett accommodation density, not the population density. Hence, when the first deck housing estate was opened, the density zones of the city were given as 150 ppa, 100 ppa and 70 ppa; the central zone had been reduced from the generally recognised and aimed for level of 200 ppa net density. Thus national economic pressure on Sheffield City Council did not lead to an overcrowding of Park Hill. In fact, just the reverse; its most accomplished multi-storey housing estate was not going to be threatened by these "destabilising" forces.

In other ways, however, this was to be the case. When completed in 1959 and 1960 Park Hill had lost some of the features which had characterised it in 1955. Garages were reduced in number from about 100 to 74, although a

brochure published in 1960 by the council suggested the number would be 239; parking spaces numbered 100. The omission of shops and laundries at the foot of each lift shaft, special windbreaks, adequate play and public open space facilities and within the dwelling, the lack of cupboard space, sufficient radiators (in the large dwellings) and easy-to-clean windows, was due to a reduction in expenditure. The poor finish and low quality materials were testimony to the cost-cutting exercise followed by the Public Works Department (75)

however, it should not be thought that the estate represented an ideal form even in 1955. As Jack Lynn noted in regard to economy; "it was on this basis that the design had proceeded and this had been the major discipline of its development" (76).

Before the European Tour, the quality surveyor and the design team were set the task of producing an average dwelling, with Gachey system, for £2,000. Sweett later suggested that it was remarkable that the costs had been kept down to a tendering figure of £1,900 with all in costs nearer £2,400(77). A member of the consultant heating engineers team thought that the low cost was due to "ruthless rationalisation of the scheme", which, if anything, had been cut "a little too drastically" (78) and one architect who attended the R.I.B.A. discussion about the Park Hill project in 1963 stated: "the architects have done remarkably well on far, far too little money" (79)

The whole project represented a dilution and compromise of modernist ideas and aims. Lynn and Smith's original objective had been for a large housing block suitable for a cross section of the community, built to the quality found at the Unite in Marseilles, with lift operators (attendants were present for a brief moving-in period), pigeon lofts on the roof, all modern amenities in the home, including "trench" windows and a generous number of communal facilities, especially a new school designed as part of the project. This was not to be. Lynn was aware of the problems. In conclusion to his article on "The Development of the Design" published in the RIBA J in December 1962, he notes in regard to costs and rent:

"So often it is in the regions of activity which lie beyond the architect's responsibility where the most telling contributions could be made to the problem of rehousing urban communities. How long, for instance, will architects be content to disregard problems of financing?.....while our profession is put to such pains to plan the costs and control the costs of housing within very fine limits, the means of financing the projects are so crudely conceived that basic costs are often multiplied by as much as four times in the process of obtaining credit to pay them". (80)

The rent level of Park Hill, based largely upon the interest rate was, when opened, above the level charged on pre-war estates, but with heating and other savings approximately equal to post war schemes (81). It seems unlikely, therefore, that the original community could have returned even if

the redevelopment process had been carefully managed to achieve such an objective; most poorer occupants of unfit housing would have chosen the low rent prewar housing estates. Park Hill, as the model estate and one of the first slum clearance schemes, was probably occupied by the model citizens near the head of the queue and carefully chosen by the Housing Department.

However, Jack Lynn only acknowledged the effect which the financial arrangements had upon materials and design. In regard to the first he points out the effect which cost cutting has upon the long-term life of the building whereby architects are forced "to select materials which have low initial costs but which often require a lot of maintenance. A large part of the huge labour force employed full-time on maintenance work could eventually be freed for new building if we were allowed to select materials for housing work unbiased by the concern for keeping down initial costs". But his concluding comment refers to the economic constraints on architectural form and standards:

"There are great advances to be made in the design of housing environment, in the means of access to the houses, in space standards of houses themselves, most of all, perhaps, in the provision of a really private open space on a generous scale. Only the financial structure is likely to hold back these important developments". (81)

We have so far in this chapter, attempted to provide an explanation for the development, form and location of Park Hill. The theory put forward suggests that local political and economic interests in the form of aiding the steel industry and overcoming the shortage of land, labour and capital for housing development, have been the crucial determining factors. We must now turn to consider those other causes which are often used to explain the building of the model deck housing estate and legitimate it as a "success" story.

Local Political and Cultural Conditions

Regardless of the actual advantages and disadvantages of Park Hill there were various local cultural circumstances behind the building project which helped to secure its development and widespread acceptance amongst the general public. These circumstances tended to revolve around the notion of a sense of pride in place and people. This meant that Sheffield was seen as making progress ahead of many other areas of the country without losing sight of or sacrificing, such universally held values as tradition, public service, community and a fit and proper physical environment. And, to a certain extent, there followed from these values a sense of pride in the labour party as true representatives of the people, especially, of course, amongst the leaders and members of the party. The "radical" tradition

had been continued by building a model housing estate of unequalled technical skill and social purpose. Here was evidence for the whole country, and beyond, that Sheffield was a city which could justifiably be proud of itself. As the Municipal Journal suggested in 1960:

"Sheffield people like being good neighbours. They are interested in everyday events in their own localities. They do not want to be cut off from their neighbours in huge blocks of flats of the old style where the individual feels of least importance. So neighbourliness is the inspiration of Sheffield's current redevelopment scheme. In planning them Mr. J. L. Womersley, the city architect, has thought in terms of people, not of housing units. After considerable research on the social problems involved Mr. Womersley and his staff have designed specially for the tenants - the people of Sheffield". (82)

What, besides the strength of socialist politics, planning and idealism lay behind the success story?

Firstly, there was the tradition of excellent municipal and public services. On the one hand this can be seen as an explanation for the innovation in social work and housing management which led to the deputy estate manager, Mrs. J. F. Demers, being the first resident of the Park Hill estate. Her task, as a woman, was to persuade and help the tenants, mainly housewives, to accept or adapt to the conditions, to get to know the neighbours and help each other to form a lively and healthy community. Given the unfamiliar nature of the surroundings, the disadvantages, and the crucial importance of the estate to the whole redevelopment programme, Mrs. Demers' stay at Park Hill for over two years, was an important undertaking. The social survey she conducted and published before leaving the estate was also especially valuable in helping to secure agreement regarding the success of the experiment amongst those in authority, mainly men, and especially those in the architectural profession. An equally important aspect of her work was the feedback she provided regarding the experience of the 'users' which could then be evaluated in time for the improvement of the design of Hyde Park. The criticisms voiced by the new tenants were not, however, ones regarding the fundamental in-built disadvantages of the scheme. Instead of noting the difficulty in having control of the "street" and social life due to the absence of a private view, i.e. a window, on to the deck, Mrs. Demers noted:

"People could have maximum privacy or maximum contact, whichever they wished. In other words, once one closed the front door one was completely cut off; but if one wished one could come out and join in with new neighbours or see what was going on on the deck". (83)

And in regard to children's play on the deck and the danger of an adventurous individual climbing over the railing, i.e. falling from the deck, unless continuously supervised by the mother, and the general problem of

supervision which at ground level, for example, the danger of falling from the large-scale play equipment, she stated:

"The younger children, the under-fives, would play quite happily on the deck with their toys; or their elder brothers and sisters, or the parents, would take them down to the play areas. One found this happening at school holiday time, when the older siblings would take the younger children down to the play areas or to the park, which was not so far away. Otherwise, they would play quite happily on the decks. She had asked parents if they had any fears and they had said: "On the contrary we are less worried here because there is no traffic, and there is always someone about on the deck who can see them, and we know they are safe". (84)

Clearly at this stage in the history of Park Hill, the fact that "Sheffield people like to be good neighbours" was paramount for one reason or another.

This tradition of a caring community would also appear to lie behind the exceptional importance which the Christian church attached to the housing scheme. In October 1959 nearly 30 representatives of the religious denominations in the city offered their help with regard to the development of a full social life at Park Hill; the offer was politely refused. (85) However, in April 1960 a church of England vicar, the Rev. Brian Fritchard, and his wife, moved on to the estate, with the express purpose of promoting a proper community and religious life (86). Aside from this "social work" a Rev. G. Stanley Whitby founded the Sheffield Civic Society in 1961 and remained its chairman until 1966. He seems to have been particularly impressed by Park Hill (87).

A third example of a sense of social responsibility was the work of the Social Studies Department at the University of Sheffield. In 1954 E.W. Hodges and C. Smith conducted, in cooperation with Liverpool University, a study of the Vybzarn estate to see what community life had developed; this was a rather unusual exercise in the early 1950's (88). They found that rehousing policy had concentrated on physical planning without giving adequate thought to the social implications. As the sociologist John Pencer noted:

"The research team very wisely conclude from their study that there is a need for rehousing to be regarded more as a social service and that more attention should be paid to the "community building" aspect of housing management'. (89)

And this, of course, is precisely what was attempted, as part of the Park Hill project.

A second cause for pride in Sheffield was the remarkable tradition of town planning and countryside preservation which had developed in the area. This had begun with the work of the Liberal party in the suburbs before the 1st world war and then in a variety of ways after the war (90). An interesting example in the latter case is provided by Sir John Tudor Walters (1868-1933) who was M.P. for the Brightside division of the City for 16 years, 1906 to 1922.

he was adviser to Lloyd George on town planning matters, chairman of the local government boards committee on building construction, whose report in 1918 led to the 1919 Housing and Town Planning Act, a director of the Hamstead Garden Suburb Trust and President of the Housing and Town Planning Trust Ltd. Between 1922 and 1929 Walters planned and built through an organisation called the Industrial Housing Association, 31 model villages within 20 miles of Sheffield. In all 12,000 houses were built at a cost of £6m. The project was funded by Lord Aberconway (1879-1953) who, amongst other things, was chairman of John Brown Ltd. of Sheffield and Yorkshire Amalgamated Collieries (91).

For part of this period Patrick Abercrombie, the leader of premodernist planning in Britain, was producing his first large urban plan. This was undertaken for Sheffield between 1919 and 1924. The resulting Civic Survey and Plan was followed by a sub-regional plan published in 1931. The unusual amount of time Abercrombie spent in the area was continued when, from 1936 to 1939 he was joint consultant (with the City Engineer) to the New Town Planning and Civic Centre Committee, which had a full time Planning Officer, C.G. Craven, working under its guidance. A city centre plan of some merit was produced during the three year period (92).

In the 1950's it was therefore no accident that the city council managed to attract leading or future leading members of the town planning and architectural professions such as Womersley, Ivor Smith and Andrew Derbyshire, the latter being mainly responsible for the city centre plan produced between 1955 and 1961. Womersley, it should be noted, was an important figure in central government circles while at Sheffield. From 1956 until 1961 he was a member of the Ministry of Housing and Local Governments Central Housing Advisory Committee and from 1958 until 1961 a member of that ministry's Parker Morris Committee on housing standards.

Parallel with this movement for the re-planning of the city there arose a powerful group whose aim was to secure the preservation of as much countryside in and around Sheffield as possible; a group which would attract the support of Abercrombie, Craven, Collie and Womersley. This was the Sheffield and Peak District branch of the Council for the Preservation of Rural England, whose first President was Patrick Abercrombie. Founded in 1925, in the same year as the National organisation, it campaigned with some success. In 1927 there was a Save the Countryside Exhibition in Cutler's Hall, Sheffield and in 1937 a second exhibition attended by over 16,000 people (93). In 1938 the group secured the declaration of a green belt round part of the City; in 1943 they organised, in conjunction with the Town and Country Planning Association, a Planning Conference attended by over 20 local authorities

and in 1951 they could boast the founding of the first National Park - the Peak District National Park - under the 1949 National Parks and Access to the Countryside Act. For most of its really influential period Sir William Rothenstein (1872-1945) was President. One of the leading art historians and teachers of his day, President of the Royal College of Art 1920-35, he took a special interest in Sheffield. From 1916-1922 he was Professor of Civic Art at the University.

A third feature of the Sheffield cultural context was the strength of opposition to multi-storey housing, especially for families, and the reaction, in the post war period, against the featureless and isolated council house suburbs.

In the mid 1930's when other English cities such as London, Liverpool Manchester, Birmingham and Leeds, were building large multi-storey housing estates, as we have already noted, Sheffield was only embarking upon two relatively small projects at Duke Street and Edward Street, amid prolonged controversy as to their value and suitability (94) By 1966, even after much housing redevelopment had been completed Sheffield still had the lowest percentage of houses in multi-storey buildings, in comparison to the other five cities. The figures were, Greater London 23.8 per cent, Liverpool 12 per cent, Leeds 11 per cent, Birmingham 9.5 per cent, Manchester 9 per cent and Sheffield 8.9 per cent (95)

As we have already noted there was widespread concern regarding the unwelcome sprawl of the city in the 1940's and 1950's. The housing estate which was detached from the main body of the city, without real character or proper amenities was a symbol and a cause of this problem. In the case of the Wybourn estate these disadvantages existed even when the scheme was near the city centre as Hodges and Smith discovered.

Park Hill was a reaction against both the inadequate suburban and flattened housing and the grim and patently unacceptable nineteenth century housing, including some back to backs, still existing at the Park in the early 1950's. But it was also an attempt to capture the advantages of these alternative types of habitat. The first deck housing scheme aimed to combine an environment of variety, character and amenity, inside and outside the home, with a sense of tradition and neighbourliness for all types of household, families and aged persons.

A fourth feature of Sheffield's local culture was its reputation as the "largest village in England". Other areas, such as Young and Wilmott's Bethnal Green, and Hoggart's Menslet were only parts of cities. Abercrombie noted, in 1924, using his own language, that Sheffield was "perhaps the largest example of mass Heredity in an English Town" (96) And over thirty years

later another student of urbanism maintained that Sheffield retained "many of the essential characteristics of the small market town of about five thousand people from which it has grown in the space of two and a half centuries". (97)

The reasons for this opinion lie in the social and economic characteristics of the population. Up until the mid 1960's Sheffield was a largely working class area with a lower proportion of non married workers than any other English City of comparable size. Within the working class the skilled manual workers formed a higher percentage of the labour force than in other cities. These facts can be joined with the notion of a stable non-mobile population:

"There has been no great movement of population into Sheffield, either from overseas or from the more distant parts of the British Isles; nor has there been a high rate of emigration from the city. The general impression remains therefore of a city which is homogeneous in its population, relatively static in its composition and comparatively unaffected by the outside influences that affect a major centre of commerce or communication".(98)

The last local cultural circumstance we wish to consider is that relating to the desire to change the regional and national image of the city from one of an extremely grim and unhealthy heavy industrial area without any attractive features to one of beauty and progress. This was especially important in the case of the Park area because of the social disorder which erupted in the city in the early 1920's and which was concentrated in the locality. For a short period Sheffield was known as England's "Little Chicago" because of the violent struggle between two organised gangs for the control of an open air gambling ring on Skye Edge, behind the Park Hill site.

The so-called "tossing ring" in the Park was the scene of a new scale of illegal public gambling in the years 1923-25 when the number of unemployed reached a new high level. Because of its position the police could be seen approaching and the proceedings halted so as to avoid disturbance and capture. As profits increased so the Mooney and Gavin gangs fought for control of the site. Sir Percy Sillitoe (chief constable from 1926) is credited with bringing the new crime wave to an end. He recalled how one of the gangs:

"had virtually complete control of the poorest districts.....these districts were without doubt as rough and lawless as any to be found in England. The publicans and shopkeepers lived in daily terror. Frequently victims were taken to the infirmary terribly injured. But the gangsters had spread such terror that the injured victim would rarely be persuaded to come voluntarily to court" (99)

This was certainly how a good many people in Sheffield imagined the situation, especially in the Park district. Hence Park Hill, built near the site of this unhappy event, and rising amidst the decaying fabric of the 19th century city centre, symbolised a new age and a new Sheffield to the local and national public

The Public Acceptance of Park Hill

As we have already noted, the first deck housing estate had serious disadvantages. These can be summarised as follows:

- (a) difficult access to ground level, along the deck and then down in the lift (which is especially busy at the 14 storey end) or stairs after leaving the dwelling. Within the maisonettes, the living room is often on the first floor, furthest from the front door (and on a different level to the kitchen). Flats (often used by older people) are below deck making access to and from troublesome. Overall the supervision of children's play at ground level and communication with old people (especially when they are in poor health) is beset with problems. (In the final scheme there were 76 dwellings per passenger lift)
- (b) the deck is not equivalent to a street because there are no gardens or yards (even at ground level) nor windows on to the deck which makes the meeting of neighbours or strangers and the control of children a chance affair unless the individual is prepared (as they were in the early days especially) to stand out and wait for people to come along or until the children have finished playing. The 'supervision' of the general public and the dogs and cats which residents keep (unlawfully until 1981) and whose exercise can conflict with children's play, is a full time occupation.

The casual and accidental meetings between people using the corner shops, cleaning windows or the pavement is not possible on the deck. Also all decks face east or north and therefore have relatively little sunshine and can be rather inhospitable places (given the poor appearance of the concrete, poor drainage especially on the bridges, and the lack of any landscaping) to sit out on and pass the time of day (especially popular with the older people isolated in their flats). The complex interlocking of the dwellings not found on a street also interrupts the normal process of identifying neighbours. The failure to move whole streets into the new estate as originally intended made the process of making friends even more difficult. Miss Demers sample survey found that about 15 per cent of the original residents of the site in 1930 (before clearance began) approximately 5,000 people, had returned. Basically the estate was the normal mixture of people from various parts of the city with some familiar and some unfamiliar faces.

- (c) problems in the dwelling due to the nature of the dwelling itself and its position within the scheme. The unusable escape balconies in the small flats, the poor finish of the ceilings, woodwork and walls

(passing expensive decorations or to the resident) problems associated with the Gachey waste disposal system, window cleaning, cupboard space and achieving the right balance of heat and ventilation are all small but important details. Flats below deck, dwellings adjacent to lifts and children's play areas (on many parts of the estate) or above shops and pubs can be subject to an unwelcome level of noise during the day and even at night, and disturbance (apart from that coming from adjacent dwellings)

- (d) many of these problems are combined in a particularly unsatisfactory design at the junction between the stair well and lift shaft and the dwellings. The result is that some dwellings can only be entered from the stairs, some dwellings are below the area where people wait for the lifts, others have a continuous "double" balcony (which prevents adequate daylight and sunlight entering the dwelling) and, at the 14 storey end, the dwellings which adjoin the external stair well have a serious loss of privacy.
- (e) one other unsatisfactory architectural exercise was the design of the whole structure which provided little means of identifying the individual dwelling (hence the "rabbit warren" label) and ensured, through the inadequately designed finish (and painting, although this was altered in the early years to minimise the drab appearance) that the estate would obtain a reputation as a "prison-like" structure, whose decks were reminiscent of the uniformity of barracks.

Of course relative to traditional types of multi-storey and unfit housing the estate had distinct advantages inside and outside the home due to the modern amenities (central heating, gachey waste disposal, large balcony in most cases, pubs, shops, launderette, police station, play areas, nursery school and garages) the opportunities presented by the deck for social interaction and street-like activities for the whole community (milk delivery, children's play) and the location near the city centre. As the Council's report on Multi-storey Housing in Europe published in 1955 concluded:

"housing development in the form of the well-designed multi-storey flat can provide living standards which are in every way adequate as an alternative to two storey housing. For families who do not desire life in a suburban house with a garden, a multi-storey flat can give exceptional amenities in the form of open space, community buildings, services and equipment - amenities which, it is considered may have a particular appeal to the younger generation of parents".(10)

This was a comment made in regard to all the slum clearance schemes planned for the city, but it applied especially to the Park Hill estate. The local press reports referring to the project made that abundantly clear. This was to be the scheme which Sheffield could be proud of; it, above all, encapsulated

all that the city stood for (and which we have summarised above).

Publicity began as early as 1953 when the Minister of Housing and Local Government, Harold Macmillan, visited the city. He was shown on the front page of The Star admiring an early model of Park Hill (Illus.79) (p.302) The headline confidently proclaimed "City Skyscrapers will draw world" (101) Two years later when the full Council gave the go-ahead for the project the local press maintained that, "the scheme would set a standard for flat development throughout the country" (102) One month later it was reported that "Crowd flock to model Town" (103). It was even suggested that "Flats scheme may start this year", so that soon one could read "Hundreds asking: when do we go. (104) The experts and the politicians working with the press were getting rather carried away with the idea that a "breakthrough" was being made.

By the time the scheme was under construction in 1959 prospective tenants and the public at large had repeatedly been told about the merits and status of Park Hill. One headline only in the year read "National watch City scheme - Flats to be tallest in provinces" (105) When part of the estate was nearing completion and was ready for public inspection (along with part of the Hetherington estate) journalists were allowed a preview. Consequently on open day local press headlines were ready with, "Lucky people in Sky-high homes". (106) Further encouragement followed: "If there is any feeling against the multi-storey flats now being built by the Corporation in Sheffield, I should like to try to dispel it". The article then described how the "better homes" were "spacious, airy, conveniently situated and labour saving". (107) And on the following day there was the predictable headline: "The Verdict: wonderful", with a number of appropriate quotes from enthusiastic members of the public (108) Some criticism could be found in the Manchester Guardian and in a couple of short letters published by the local press (109) but these were really inadmissible comments at this time when everyone was so apparently united behind the project.

The public meeting held soon after the open day in Park School hall for all those interested in moving into Park Hill represented an opportunity for the officials and politicians to push home the advantages of the new estate. Press reports record how the Chairman of the Housing Committee (Councillor Harold Lambert) told those present at the meeting that Park Hill was one of the finest modern housing estates in Europe, a development of which Sheffields should be proud. It was being realised because of the hard work of their own local authority, designed by the City Architects' department and built by the Direct Labour department. Councillor Lambert continued:

"The scheme has the finest contemporary features, semi-detached houses are 'square' in comparison, and forward looking people should look forward to living there. They are almost perfect dwellings. It is now up to you, the would-be tenants, to make this a worthwhile community which is not just technically correct but socially correct". (110)

Far more people turned up to hear the news than had been anticipated (in spite of a bus strike) two meetings had to be held instead of one.

One month later the first tenants moved in. They were a couple who had lived just across the road all their lives (111). In early 1960 success seemed to be guaranteed. One headline read "Flats becoming more popular: Sheffield change". (112) A social event at Park Hill organised for residents and officials was reported as "social big Business" at a "getting to know you affair". (113) In May 1960 a full length article on the estate was headlined "The Verdict: It's "omashing" living right up in the sky". (114) Details suggested there was a "rip-roaring" success because of the sense of continuity provided by the estate for old residents of the Park, combined with an active participation of a large number of tenants in the many well organised activities. There was none of the loss of individuality or amenities in comparison to traditional housing, such as might have been expected (115).

In January 1961 the public works Department basked in the limelight (116) Six months later Park Hill was opened by the leader of the Labour Party, Mr. Hugh Gaitskell. The special edition of the Morning Telegraph on the estate proclaimed Park Hill to be a real urban community, in contrast to that found on the typical suburban estate (117) - a judgement which could be supported by the facts collected by Mrs. Demers.

Tenant Reactions

Nevertheless certain problems were apparent from the press reports and the social surveys carried out in 1961 (by Mrs. Demers) and in 1967 (by the Ministry of Housing and Local Government).

In early 1960 one press report of a "sociological study" carried out for the Housing Management Committee described how the estate was "becoming a nightmare for many tenants pestered by canvassers, children playing in the lifts and violence from teenage groups"(118) Part of the problem originated in a coffee bar, at the shopping centre, which was open until late into the evening. The disruption the young people caused was leaving some residents "at their wits end". (119) Another problem was that due to the noise from the nearby steel works in the Don Valley which seemed to be caught and increased by the form of Park Hill. A silencer put an end to this relatively minor difficulty (120).

The residents found other more serious and long term drawbacks in the new environment. When the community hall was opened Mrs. Demers reported that the amenity was essential partly because many of the old people "are lonely

and spend the day sitting in the libraries or out of doors". (121) - hardly the kind of activity one would expect from a "proper community".

Mrs. Demers' survey revealed some other problems. Although it was only based upon a 20 per cent sample it did suggest that, in general, there was a large minority dissatisfied with the living conditions. Thus only 68 per cent had actually chosen to live on the estate; the other 32 per cent had been indifferent or actually opposed to the move. Over 58 per cent were in dwellings the same size or even smaller than their previous homes. Hence 44 per cent actually had to dispose of furniture due to the lack of space and 37 per cent found they had storage difficulties, especially families in maisonettes.

For 37 per cent the noise level was a problem. Over two thirds of those complaining lived in flats below deck. The vast majority saw no problem regarding privacy, although nearly 64 per cent saw less of their neighbours and only 15 per cent considered they saw more of them than in their previous home (which may not have been in a normal street). A total of 28 per cent missed or would have liked a garden. The lack of proper neighbours and of a garden or yard was probably compensated for by the active community organisation in the early years, although Mrs. Demers found that only 11 per cent attended tenants association meetings. The vast majority of those participating, 74 per cent, attended the tombola (i.e. bingo), tote, ladies social and old people's club which suggests that family and children's activities were far less in evidence.

Only 19 per cent used the new laundry (48 per cent suggested this was due to the delay in opening). The pedestrian routes were well used. However 27 per cent found delays with the lifts caused annoyance and some did not bother to wait.

Questions about the Gachey system revealed that 20 per cent found the smell a problem, 49 per cent had had blockages and 13 per cent were worried about the overflows of rubbish into the kitchen. Dry rubbish collection more than once a week was requested by 22 per cent and 47 per cent would have liked space for a dry rubbish cupboard. Dissatisfaction was also expressed regarding window cleaning and the exposed concrete ceiling.

Children's play seriously worried 21 per cent of the sample. However, as a whole, the survey found considerable satisfaction with the deck and the appearance of the whole scheme.

The results of this analysis of tenants' reactions did not really justify Mrs. Demers conclusions (referred to in Chapter 3) because they testify to an appreciable level of discontent even amongst people who had just moved from the "slums" to which many of them had been confined for up to thirty years (1930-1960) Moreover many crucial questions had not been asked, for example, regarding the location of flats below deck, the access problems and the

supervision of children, the keeping of pets, the low quality of the finish inside and outside the home and the particular problems of those living in dwellings adjoining the lift shafts and stair well.

However when a press report in 1964 aimed to answer the question "Has the hilltop castle become a home?" (122) it only found complaints about the pollution from the railway station, the high prices in the shops, the drabness of the concrete and the difficulty of cleaning the windows. It concluded by referring to the strength of the community, a fact which was confirmed a year later when a "meals for aged plan" initiated by residents was noted by the local press. (123).

In 1966 the City Architect, J.B. Arren, expressed his concern about Park Hill. Only when the landscaping had matured, the pollution departed and the city centre been rebuilt could the estate begin to be a real success by attracting the younger and more energetic families (124). Otherwise the estate would move toward a below standard one-class environment. The following year opinion expressed by the local press began to turn against the estate. (125) And one report referred for the first time to vandalism, on this occasion, in the shopping centre. (126)

The survey by the Sociological Research Section of the Ministry of Housing and Local Government in that same year (but published only in 1969 and 1972 (127) found only 17 per cent really dissatisfied with the estate. A much larger percentage were ready to complain about particular problems especially those related to children's play and management of the estate. Thus 49 per cent thought that the provision for play and recreation was unsatisfactory, 60 per cent experienced problems as a result of children's play, 55 per cent thought vandalism a problem and 59 per cent considered the lift service unsatisfactory (suggesting some trouble with vandalism as well as over use). In the year 1967-8 there were, in fact, the largest number of children (under 18 yrs) on the estate in its history and this probably explains why it was such a dominant factor. (128) However there were other unfavourable reactions: 48 per cent found the estate unattractive, 35 per cent did not want to come to the estate and 52 per cent found the rent too high. Also 30 per cent were not proud of Park Hill and another 30 per cent just considered it "alright". Particular problems inside the dwelling related to noise, waste disposal and window cleaning. And probably the most damning statistic was the 35 per cent of housewives with children who were unhappy living off the ground.

Other data reveals that by 1967, 38 per cent of the original "pioneer" group had left Park Hill (129) And a survey of political opinion in the city in the same year found that the residents of the Park area (including Wybourn and Hyde Park) had the least attachment to their surroundings and the least

interest in local politics of all areas in Sheffield.(130)

Clearly it is difficult to decide whether or not Park Hill was a "success" up until 1967. To many people, more than was recognised by the local authority and to local press, it was not a satisfactory environment. For those who stayed there was the important determinant of the self-fulfilling prophecy of success. That is as the leaders of public opinion and the many admiring experts from all over the world testified to its success, therefore it became a success (131) The resident could feel privileged and important to be living at Park Hill. But when the local politicians and experts stopped admiring the scheme and the visitors dwindled to an insignificant number, tenants were probably not so sure of the advantages of the estate. And then, after 1966-67, as public opinion actually began to turn against the design and find fault in its form and standards a self-fulfilling prophecy of decline could gradually replace the previous certainty of success.

Thus in answer to the questions raised at the beginning of this chapter we have suggested the following explanation: that the first deck housing estate was built in Sheffield in the 1950's because of the interaction of important local socialist and cultural traditions with unrivalled concentrations of industrial and landed capital combined with the particular scarcity of capital for local authority urban housing. Its design and location were the result of Park Hill's role within the local political economy, that is, as the overspill estate required quickly and efficiently for all households so as to allow a start on clearing the slums and restructuring the city centre. Behind this process lay the need to compromise and thereby build an estate with certain disadvantages. Nevertheless its success was guaranteed by the strength of the local political and cultural forces as expressed through the local press.

The outcome of this progress in urban renewal was a model for the physical planning of the 1960's to partner the model for the economic planning of the same decade; both activities being aimed at overcoming the domination of finance capital in the political economy of the United Kingdom.

CHAPTER 6. The Restructuring of British Cities. 1961-81

In the previous chapter we suggested that the explanation for the location, form and standard of accommodation provided by the first deck housing estate lay in the interaction of economic and political-cultural forces, and the national and local government attempts to modernise the economy. We now turn to the other schemes, using the understanding gained from the case study of Park Hill to shed light upon a total of six issues apparent from the details contained in Chapter 4. These are the (i) quantity (ii) timing, (iii) form, (iv) distribution (inter-regional) (v) quality and (vi) decline, of the estates designed, built and managed in the 1960's and 1970's as part of the restructuring of British cities.

The facts regarding each aspect of deck housing in the United Kingdom are as follows:

- (i) Deck housing amounts to only a small percentage of all post war local authority housing and multi-storey housing in the country, but a large percentage of local authority houses built during the second half of the 1960's when the most radical restructuring of British cities was underway; however there could have been a far greater total number if all the plans had been realised;
- (ii) only a small number of designs for deck housing were actually implemented up until the mid 1960's and from the early 1970's, with the vast majority begun or completed in the late 1960's;
- (iii) there are one hundred and forty different designs having in common a high population density (250-500 ppha) high family occupancy (50 to 95 per cent for three person and over households), high car parking space provision (between 50 and 100 per cent, and over on occasion), medium rise design (usually 4 to 14 storeys) and, on average, a large scale development (about 250 dwellings) with some amenities.
- (iv) they were built on inner city or suburban sites, sometimes adjoining district centres providing an urban distribution of some variety with, however, a concentration in Liverpool, Manchester, Sheffield, Nottingham, Oldham, Rochdale, Hull, Leeds and the London boroughs of Lambeth, Southwark, Greenwich, Brent, Haringay and Sutton; also a sub regional concentration in Merseyside, the Manchester conurbation South Yorkshire and the inner London boroughs; and finally regional concentration in England, and within that country, the economic planning regions of the North West, Yorkshire and Humberside, East Midlands, North East and Greater London;
- (v) this was^a supposedly "model" scheme in design and construction

standards but only a small number were completed to a high quality (such as Park Hill, the Greenwich estates, Oak Hill, St. Ann's Close). The large majority were produced to a low standard, and finally

- (vi) on average they provide an extremely unpopular design of multi-storey housing, difficult-to-let, difficult-to-live-in and difficult-to-get-out-of.

We cannot pretend to explain or attempt to explain all these aspects of the history of streets-in-the-sky in the United Kingdom; this would require 140 case studies. Our approach can only indicate the general reasons why these issues came to characterise deck housing.

Overall our approach tried to link the failure to achieve the desired quantity and quality of deck housing to the failure to regenerate the United Kingdom economy and the failure to produce and implement Labour Party policies supporting home-based industrial capital. That is, ^{how} the example set by Sheffield for comprehensive urban physical planning and the steel industry model for economic planning were not carried forward. The Conservative Government and the new planning

The struggle for an improved rate and standard of slum clearance reached a high point in the early 1960's (1). In 1961 a Labour Party-Fabian group of experts on physical planning, including Alison and Peter Smithson, Peter Wilmott and Graeme Shankland, produced a programme for reform (2). It called for a Ministry of Town and Country Planning to be established whose task was to "have supreme control over planning for location of employment; for house building; and for communications"(3) One of its most important tasks, through ad hoc Regional Planning Authorities and a National Development Corporation, would be comprehensive rebuilding of urban areas. The report stated:

"Large decaying and congested areas within towns - and some obsolete towns in their entirety - should be redeveloped simultaneously according to three-dimensional comprehensive development plans. Urban renewal should no longer be carried through piecemeal". (4)

The failure to proceed with required urban renewal - especially housing renewal - was tied to the problem of the decline of the United Kingdom economy. Another Fabian, J.B.Cullingworth, produced both Housing Needs and Planning Policy in 1960, and, with S.C.Orr, Regional and Urban Studies in 1961. The latter formed part of the new interest in inter-regional economic planning (5). Under, in particular D.J.Robertson, at the University of Glasgow, new links would be forged between physical and economic, intra and inter-regional planning.

The Conservative Government also combined the two problems; as we have

noted, by the early 1960's, "the poor growth performance of the United Kingdom became one of the main preoccupations of economists and policy makers". The hitherto free-market ideology changed rapidly into a pro-planning ideology. And the boost to the building industry consequent upon the 4 per cent national growth target, set by the new National Economic Development Council, represented an opportunity to tackle both the problems of alum clearance and economic decline.

Two reports were produced by the NLDC, the corporatist body in charge of "Great Britain Ltd". These were Growth of the United Kingdom Economy 1961-66, in 1963, and in the following year The Growth of the Economy. In each report the problem of the "bottleneck" - the one sector which stood in the way of all round growth - was emphasised. As Shonfield noted in regard to national economic planning:

"The problem here is the identification of individual bottlenecks - whether in capital equipment, in the supply of certain goods and services, or in particular types of labour - which threaten to hold up the advance on a much wider front. To eliminate these requires the active concentration of effort and resources at particular points in the productive system". (6)

The building industry was identified as a bottleneck, especially in the reconstruction of the congested city centres and yet in addition, as a potential "multiplier" in the national and regional economy (7). As the greater influence on this sector came from the government, they were in an especially important position to boost the economy. Shonfield noted that in the early 1960's:

"the public sector as a whole was responsible for over 40 per cent of all fixed investment and for as much as 50 per cent of the building work done in the country. In terms of strategic control this gave the Government outright possession of the 'commanding heights of the economy'". (8)

Because this control only produced its effects over long periods and could not be shifted or changed in response to short term fluctuations in the state of business or the balance of payments, an overall reform of the relevant section of government was required. This led to the creation of the Ministry of Public Buildings and Works under Geoffrey Rippon (a future Chairman of Cubitts Construction Systems Ltd. 1964-69) The justification for the new department ran as follows:

"The construction industries stand at the centre of economic growth. The tasks before them are very great. They must dramatically expand output but with virtually no increase in the total labour force. To do this they and the professions associated with them must make the maximum use of the most modern techniques. They must seek the best balance between capital cost and maintenance. They must combine high quality with economy.....The scale on which modernisation is required is so large and the problems involved are so complex that a strong lead from the centre is essential". (9)

Rippon consciously set out to use the vast mass of construction under his control - some £250m a year - to induce builders to adopt new methods. These would raise productivity and reduce the need for skilled labour, especially in housing. The consequent increased industrialisation - mass production of components in factories before site erection - reached its most efficient form with "systems building". It was essential that a few large and progressive firms captured the majority of the business because "the distribution of out put in industry ought preferably to be such that something close to 80 per cent of production comes from about 20 per cent of the firms". (10)

One of the tasks of Keith Joseph (a director and then chairman of Bovis Construction Ltd. in the 1950's) the new head of the MHLG, was to persuade local authorities, and especially consortiums of local authorities to order system built high density housing. This was achieved using circulars (e.g. 40/63 and 59/63) and the new Design and Planning Bulletins. The basic message was that large orders would ensure greater productivity and speed of construction combined with lower costs and superior quality.

The Yorkshire Development Group, set up in 1962 was the first to follow this advice. In the North West, the new MHLG Research and Development Group project at Oldham was to follow a similar path. Both aimed to use the new Parker Morris standards and apply the recently established Housing Cost Yardsticks. These, and the other local authorities, could look to the National Building Agency for advice on industrialised building. This was a quango set up in 1963 to encourage the use of the new methods and mediate between local government and the building industry (11)

Other changes, besides the reform of the Treasury, Cabinet, two vital Ministries and the new guidance to local authorities, such as the higher and simplified housing standards contained in Homes for Today and Tomorrow (1961), included the Planning Advisory Group set up in 1964 and the Ministry of Transport's report Traffic in Towns of 1963. The former, when it reported in 1965 on The Future of Development Plans, provided a new procedural theory for broadening, simplifying and speeding up the plan making process which complemented the new substantive theory outlined by the Buchanan Report. Together these two documents plus the Parker Morris report, provided expert guidance to local authorities wishing to embark as soon as possible, on the modernisation of their local housing and infrastructure. This had to be done as quickly, efficiently, and spectacularly as possible, in order to be ahead of other areas in the race for resources. Outstanding in this regard was Newcastle, with T. Dan Smith and his Planning Officer Wilfred Burns, and the two new planning departments established at Liverpool and Manchester. Sunderland and Leicester were

also ahead of many other areas of the Country. Physical and Economic planning, the modernisation sought by architect-planners and by national or local government, were therefore working together as never before.

At the regional level other reforms in government administration and policy making were underway. The MELG established its first regional office in Manchester in 1962. In the North East and Central Scotland, following the rationalisation of the coal and shipbuilding industries and the deflationary policies of 1961 and 1962, a regional "growth point" policy was introduced (12). By this method public investment in new infrastructure was concentrated outside of the major cities, in declining areas of high unemployment in an attempt to attract new private investment. This, so the theory went, would then lead to self-perpetuating growth. At the opposite extreme, and at the other end of the country, congestion, a shortage of labour and an inflation in land and property prices led to the publication of a special report on the problems of the South East of England (13)

The contemporary opinion and policy was summed up by an article in The Economist in late 1962 (14). It suggested that urban redevelopment the creator of "new cities", lay at the "heart of the most urgent of Britain's regional problems". It stated:

"The essence of the matter is twofold, to cater for the growth industries in the growth areas by relieving congestion on a regional scale, including the release of land for building new planned communities; and equally to reinforce the viable sectors of the declining areas by improving their amenities and encouraging the establishment of new industries in those regional localities where they are most likely to take root". (15)

It suggested that there were three aims in redevelopment:

"First to concentrate the housing effort, particularly in the North West, on the replacement of obsolete buildings.....second, to redevelop central areas both as attractive foci for recovery in declining areas and to cope with new growth in growing areas. Third, to take proper account of traffic and parking problems in these urban areas in terms of the doubling or trebling of car ownership in the next generation". (16)

All three were being tackled by central and local government, along with important attempts to restructure the coal and shipbuilding industry, as we have noted (17), the textile industry especially in the North West (18) and to switch the whole economy from a continuing reliance on rail and coal to road or air transport and oil. (19) The Beeching Report on The Reshaping of British Railways, in 1963, was a logical partner to the Buchanan Report of the same year.

The main push for reform via the local authorities continued to be housing. The 1961 Housing Act perpetuated the incentives to high rise housing found in the 1956 Act (under which the Hyde Park estate was developed)

to those local authorities considered "deserving", by means of two rates of standard annual subsidy.(20) It was effectively a means of reducing government expenditure and concentrating what remained in "urban areas with high land costs and a large proportion of high rise developments", (21) although this was not linked to regional policy but rather to an attempt to force local authorities to charge economic rents. (22)

Overall, however, there was a "very strong upward trend in municipal starts after 1961" (23) After the mild recession of 1961 and 1962 the Chancellor of the Exchequer (and chairman of N.L.D.C) Reginald Maudling announced in October 1962 a series of stimulating measures including an increase in public expenditure for the following year. This so called "dash for growth" continued into 1963 "in which year real output exceeded that of 1962 by 5-6 per cent" (24). Total housing output was to increase to 350,000 each year following the 1963 White Paper: Housing (25) A few months later, the Minister raised the objective to 400,000.

These were optimistic targets and spending programmes because the building industry did not appear to be responding sufficiently to calls for modernisation. At the same time there was the constant worry about "overheating" with consequent inflation in building costs. A special report on the construction industry by the NEDC, published in 1964, stated:

"There must be a marked acceleration in performance during 1964. Even if additional labour can be obtained and there is a drive for improvement in all sectors, the industry will still be operating at full stretch and there will probably be overloading in some regions and in some types of work. Moreover, there are already delays in the delivery of certain building materials and the very high rate at which houses were started at the end of 1963 could lead to some shortages of materials during 1964". (26)

System building was proving to be of limited value in attempts to speed up and reduce the cost of the rebuilding process:

"It must unfortunately be accepted that the amount of building using industrialised techniques which has so far been completed in this country provides little conclusive quantitative evidence on their advantages" (27)

The report concluded on a pessimistic note:

"What is clear is that there is no certainty, in present conditions, that the industry will be able to meet the demands upon it. And the possibility cannot be ruled out that by falling short it may hold back the expansion of the economy as a whole". (28)

Thus in the space of two years the planning experiment had reached a low ebb. The attempt to inflate the economy over the long term had led to little prospect of success and, instead, a short term prospect of high inflation with little increase in productivity. In 1964 there was an unmatched balance of payments deficit of £751m combined with a continuing hesitancy about the wisdom of a fully fledged planning operation; the Conservative

government preferred preferred an indicative or advisory lead from the centre so as not to jeopardise the ideology of the free market. This may have increased the income to finance capital which fought against incorporation into the NEDC machinery, but gave industrial capital little hope of the accelerated growth required to catch up with foreign competitors and retain the long-term confidence of the Banks. In the face of this difficulty the Labour party found an opportunity to take office with the promise of increasing the scope of central and local planning and channelling sufficient public investment into the country to attract private capital over the long term.

Clearly, therefore, in the first half of the 1960's, the political conditions for a rapid and comprehensive modernisation of the United Kingdom economy did not exist. Nevertheless, the ground work was laid for further expansion in the second half of the decade, especially in the North West and North East of England, Central Scotland and to a lesser extent, in Yorkshire and Humberside. In spite of the incentive to build high-rise not linked to any specific modernisation policy under the 1961 Housing Act, a start was made on deck housing in the North East "growth points" at the future Washington Newtown site (Edith Avenue) and Killingworth (before it proposed to use deck housing at the new town centre (29) in the North West with the Clitham project in Yorkshire and Humberside with the YDG consortium and with experiments in a small number of London boroughs. In Central Scotland the small schemes in Edinburgh (Leith Fort and Carnegie Court) were to be followed by the ambitious Townhead estate in Glasgow. However, such an ideal kind of local authority multi-storey housing appears to have flouted the plans for extremely high rise - and thus eventually low cost - high density housing in this part of central Scotland. In many respects there was still insufficient time and resources to experiment with new types of high density housing. Architects and the building industry, instead of innovating in production, chose to attempt to increase the rate of production of traditional designs; for example, the tower block. As Bowley has shown (Table 6.1) between 1945 and 1955 non-traditional types of housing construction became well-established in Scotland, the South West, Wales, Midlands, North Midlands, East and West Ridings of Yorkshire and the South. At the same time, non-traditional types were little used in the Northern, East, London, North West and South East districts. Here was an approximate base to the later development of deck housing, an industrial innovation in the basic industries in the North West, North East, East Midlands and Yorkshire and Humberside economic planning regions of England. In Sheffield this tendency to continue an established building tradition was especially apparent with the building of Lyle Park and Kelvin and the

Table 6 (1) Regional Distribution of permanent houses built by local authorities in Great Britain (2), 1 April 1945 to 31 March '55.

District (1)	Total permanent houses (thousands) (2)	Permanent non-traditional houses (thousands) (3)	Col.(3) as % of Col.(2) (4)
Northern	122.5	16.8	13.7
East and West Ridings, Yorks.	112.1	24.6	21.9
North Midlands	122.2	30.3	25.8
East	125.3	17.2	13.7
London	186.6	14.8	8.0
South	88.3	18.9	21.4
South-west	96.0	44.4	45.0
Wales	80.0	25.6	32.0
Midlands	139.5	32.9	23.6
North-west	162.4	23.3	14.3
South-east	84.6	7.9	9.3
Scotland	203.2 *	100.6*	49.5*

(1) Source: Bowley, M. The British Building Industry: Four studies in Response and Resistance to change CUP 1966 Table III p.203

(2) Includes houses built by Development Corporations for new towns in England and Wales and by the SSHA and the new towns in Scotland

* From 1 Jan.1945 to 31 Dec. 1954

important role played in the founding of the YDG, also in the early development of low rise industrialised building, the so-called system (30). This, in turn, we have argued, was due in part to the importance of the steel industry in the city and in the national economy.

The Labour Government and the new planning

The leader of the Labour party, Harold Wilson, made a series of election speeches in 1964 under the title, The New Britain (31). In these speeches - already described briefly in Chapter 4 - Wilson emphasised the failure of the Tories economic management techniques and their alliance with finance capital. They had thereby failed to harness the technological progress required for economic growth:

"The Tories have proved that they are incapable of mobilising Britain to take full advantage of the scientific breakthrough. Their approach and methods are fifty years out of date". (32)

It was necessary to:

"Streamline our institutions, modernise methods of government, bring the entire nation into a working partnership with the state". (33)

The problem was that there had been:

"a complete failure to plan ahead for the future.....our industrial system is held down, stagnating, every spurt of expansion followed by crisis and long periods of reconstruction". (34)

Hence, Wilson suggested that:

"The key to a strong pound lies not in Britain's finances but in the nation's industry. Finance must be the index, not the determinant of economic strength". (35)

There must, therefore, be an end to a philosophy:

"which identifies the national interest with the interests of those who make money rather than those who earn money, with, if you like, speculation rather than industry". (36)

The ideas voiced by the Labour Party Fabian group in 1961 were, therefore, going to be realised: at the centre of the effort for social and economic progress stood the desire to "constrict cities of the future, cities worthy of our people". (37).

The new plans for urban construction and renewal involved a boost to house building - partly by holding back unnecessary and speculative office building - the rational non-speculative development of urban land, by taking into public ownership all land scheduled for new building or rebuilding and putting into force the "socialist plans to guarantee reasonable interest rates to local authorities for their house building programmes". (38) Also, the building industry would be mobilised by a new organisation, the National Building Corporation, "of which the Government's last minute National Building Agency was a faint carbon copy". (39) A body such as this could tackle the development of system building with new purpose and confidence:

"To encourage new methods, there is a lot to be said for handing over the building programme of a complete new town to one or two big contractors who are prepared to use non-traditional methods". (40)

Such an exercise "cannot be done from Whitehall. Regional regeneration and urban renewal will require a courageous degree of administrative decentralisation". (41)

A Labour Government was formed in 1964 with its programmes for reform contained in the provisions and organisation of the National Plan. This was prepared and published in 1965, by the new Department of Economic Affairs, under George Brown, the First Secretary of State. This department received assistance from the N.B.C., the Board of Trade and the new Ministry of Technology and worked in cooperation with the new regional economic planning councils. Each of these councils produced its own economic plan (42) These sections of the state stood in direct, but unacknowledged, opposition to the power of the Treasury and the Bank of England representing the ideology of monetary control of the free market and the power of finance capital.

When the National Plan was published the impossible task before the new Government became apparent. Its aim was nothing less than to resolve

the basic contradiction at the heart of the British economy; that is, it accepted:

"The task of correcting the balance of payments and achieving the surplus necessary to repay our debts, while at the same time fostering the rapid growth of the economy". (43)

Given the very serious balance of payments problem inherited by the new government this stated objective amounted to achieving both the contraction and the expansion of the economy. The National Plan recognised that it was only by overcoming this seemingly impossible situation that we could:

"pay our way in an increasingly competitive world in which we have for too long been losing ground steadily to other industrial countries". (44)

The Plan was designed to achieve a 25 per cent increase in national output between 1964 and 1970, 3.8 per cent per year. The main body of this, 3.4 per cent, would have to come from increased productivity and not just from a larger labour force. In regard to the construction industry, a "specific area of strain", a 31 per cent increase in output was planned; 4.6 per cent per annum (or 5.3 per cent, if repairs and maintenance were excluded). This would be secured, as in all sectors, by joint planning, by tying government expenditure to private expenditure and to the rate of growth of the economy. Hence the Plan noted:

"Care will be taken not to destroy the complex mechanisms on which the market is based. The end product of both cooperative planning and the market economy is an internationally competitive industry; and in securing this aim they complement each other". (45)

Hence, for example, the aim for housing production was to achieve annual completions of 500,000 dwellings by 1970 with the total divided equally between the public and private sector.

The MHLG, under Richard Crossman until 1966, was responsible for reaching this target, partly by promoting the use of system building within the public sector; a method which, it was believed, would achieve the maximum growth in the economy at the minimum cost. However, while the government and the architectural-planning experts promoted this technique the basic contradiction at the heart of the economy reasserted itself. Richard Crossman recalled in his Diaries one typical meeting with civil servants and representatives of the largest building contractors:

"I found Dame Evelyn entertaining Maurice Laing, McAlpine and others. We had a lively little dinner. If we are really going to get industrialised building going it will only be through the collaboration of these men. Donald Gibson, who was our old city architect at Coventry and is now boss of the ministry of works, has been insisting that we ought to establish at least sixteen factories for the basic parts of industrialised building, and here I found Laing and McAlpine saying the same thing. But the difficulty revealed itself when all of them at that dinner expressed doubts as to whether the Government would be prepared in a period of crisis and economic

difficulty to sustain the industrialised building, and whether we were going to cut back the building programme". (46)

With little cooperation from the NBA (no NBC was founded) and few personal contacts (unlike the Tory Ministers) Crossman appointed two experts from the building industry itself to promote system building - Peter Lederer of Costain and then Ken Wood of Concrete Ltd. Such incorporation was necessary in the attempt to get the economy moving and minimise the doubts expressed by the major builders about long-term prospects for growth. Crossman also made special personal efforts to gain the confidence of the construction industry. When he visited the Ministry's R.& D.G. working on the 5m and 12m systems in cooperation with Laings, the opportunity, backed up by the architect-planners, was not to be missed:

"In conversation I asked why it was only 750 houses they were building at Oldham; why not rebuild the whole thing? wouldn't that help Laing, the builders? "Of course it would" said Oliver, "and it would help Oldham too", "well, why don't we do it?" "It depends on the Minister". And Whitefield Lewis, the Chief Architect, smiled and I said, "why shouldn't we? why shouldn't we assume that instead of doing one little bit of the centre of Oldham we should use the whole 300 acres and have a real demonstration that our system building can work and really does reduce costs. Let's see that one piece of central redevelopment is really finished by us.

I drove back to the Ministry...warmed and excited. I'm going to insist if I can that we should persuade Oldham to let us do the whole thing; there's no doubt that Laing would be delighted because they will be mass producing for a long continuous run, so that costs can be cut". (47)

Oldham was not redeveloped completely, although the St.Mary's scheme was extended into two further phases, totalling another 1,000 dwellings. Nevertheless, Laing became a very important builder, two of whose four systems were used to build deck housing in the North West, North East, Inner London and Northern Ireland. They had a sufficiently large run on production to claim economy and speed of construction - or "completion on time" (illus 78) (p.286)

Overall, about twenty five firms built deck housing during the boom period of the second half of the 1960's. Of these only Laing, Shepherds, Unit and Crudens concentrated on the new form of high density housing. The largest builders, Wimpey, ^{Concrete} and Wates, built relatively little. Other big firms, Reema, Bryant and Nowlem also built very little. Between 1964 (when figures were collected for the first time) and 1971 (when the building boom, at least for deck housing was over) thirteen firms with their own systems took nearly 60 per cent of the whole industrialised building market with Wimpey outstanding at 23 per cent. In total there were 170 systems in use. They had been used to complete about 332,000 dwellings by 1971 of which about 20 per cent were, at this time, deck housing.

LAING HOUSING SYSTEMS

Easiform

System of rapid *in situ* concrete cavity construction for houses, flats, and cottages. Easiform has provided 3000 homes for local authorities throughout the United Kingdom. An official Certificate endorsing the use of the system has been issued by the National Building Agency.

12M Jespersen

The 12M Jespersen system produces 'storey-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

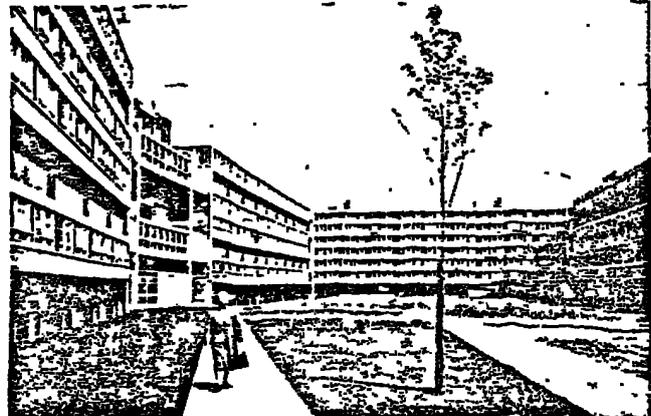
components and extensive mechanical handling, for the rapid erection of residential buildings of between four and 30 storeys. Sectra is particularly suitable for local authorities who require the advantages of industrialised building in medium-sized projects spread over a large area.

Storiform

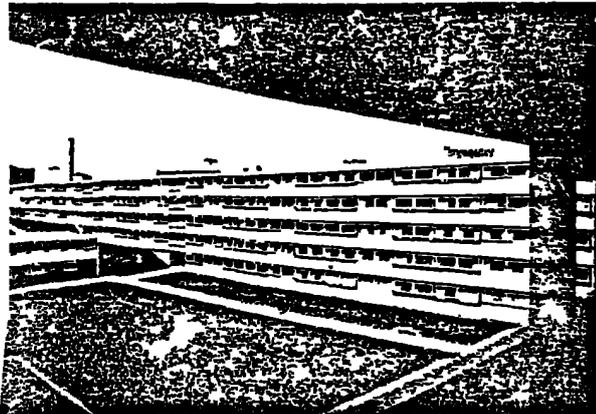
A rationalised system of *in situ* concrete wall and floor construction for multi-storey flats, incorporating the extensive use of prefabricated components. Flexibility of design to suit the particular requirements of architects and local authorities is a feature of this economical method of construction.



EASIFORM—CWMBRAN



SECTRA—SUNDERLAND



12M JESPERSEN—ST. MARY'S, OLDHAM



STORIFORM—BLACKBURN

LAING

for completion on time

Laing Construction Limited, London NW7. Telephone 01-959 3636. Great Britain and Overseas

LTD/LC75

78. System Building and deck housing: The Jespersen Example.
Source: Housing and Planning Review. Dec. 1967

The top twelve builders of deck housing who took nearly two-thirds of the market are shown in Table 6.2 along with the comparison to their total production by the respective building firms and the role of those firms in the grand total of production. Clearly the failure to build as many deck housing estates as the architectural, urban planning professions would have wished must have been due, in part, to the failure to persuade both the largest builders, including other local authority consortiums, and the many small firms to experiment in this way.

Table 6.2 The Construction of Deck Housing 1964-71

(to nearest 100)

(1) Building Firm and Deck Housing System	(2) Total Deck housing	(3) Total Constr. all systems	(4) Per Cent Deck Hsg.	(5) Per Cent of all Production Grand Total(1971)
Laing - Sectra and 12m	10,000	22,700	44.0	6.8
Crudens - Scarne	5,000	7,400	68.3	2.2
Cubitts - Balency(1)	4,800	9,100	53.0	2.7
Unit - Comus	4,500	7,900	57.0	2.4
Sheffield - YDG	3,700	7,800	47.0	2.4
Wates - System	3,500	19,000	18.0	5.7
Concrete - Bison W.F.	3,500	28,600	12.0	8.6
Larsen & Neuber) Analia) T.A	2,500	8,000	31.0	2.5
Seinic Keolis - System	2,000	8,800	23.0	2.6
Wimpey -	1,000	76,400	1.3	23.0
Parkinson (2)	1,000	3,200	31.0	1.0
Direct labour (3)	7,500	14,000	54.0	4.0
Totals	49,000	212,900	23.0	64.0

- (1) A much smaller number were actually in deck form.
- (2) Sir Lindsay Parkinson actually used Concrete Ltd's BWF system on occasion - for example, at St. Ann's, Rotherham.
- (3) Not all direct labour used a proper "system", for example in Sheffield only the Broomhall estate used advanced industrialisation techniques.

For further details see Appendix 2.

The Labour Government: The Housing and Planning Reforms

Administrative and financial reforms in the means of local government planning control and house building continued many of the previous government's initiatives and thereby acted in partnership with the cost-saving and time-saving aims of systems building. The recommendations of the Planning Advisory Group resulted, directly, in the new powers and procedures of the 1968 Town and Country Planning Act. The "Structure Plan" speeded up and lessened the bureaucratic costs of schemes for restructuring urban areas, leaving the subsequent rather awkward detailed working out of the broad principles to the autonomous local authority Action Area and District Plans.

Crossman began this programme of change at the same time and as complementary to the reforms in the management and performance of local government as a whole. The Redcliffe Maud Royal Commission on Local Government in England and Wales, appointed in 1965, stated in paragraph 41:

"The general point is this. Everything conspires to increase the demands made on local government and, therefore, the need for the highest possible level, in local authorities, of management skill and technical efficiency".

The increased demands came principally from central government; paragraph 36 recorded:

"It is the fact that so much is now asked of local government that is in part responsible for the increased involvement of Whitehall. The reverse side of the coin is that central government has become increasingly dependent on local authorities. Ministers cannot secure the results they want.....except by means of fully competent authorities.... it has, indeed, been the recognition of this that has led successive Governments to struggle for reorganisation of local government, and finally to our appointment".

This increased interdependence of the two levels of government was, in turn, due to the developing interaction of physical and economic planning.

Paragraph 51 stated:

"If central government is inextricably involved in local planning, so is local government in central planning. It seems often to be assumed that economic planning is a matter for central government, while land planning is, initially at any rate, for local government. But the two are indivisible..... In an area where the prospects are poor, one of the main concerns of local government ought to be what it can do to improve them, to increase the attractiveness of the area to employers, to help labour to move from declining to new employment, to provide new opportunities for employment. Local government has not, so far, been encouraged to do much in this way... partly because it is not geared to do it but partly also because its responsibility for economic planning is not recognised".

Hence the new Provincial authorities would make possible "a better informed and a better coordinated approach to regional development" (paragraph 522); they would overcome the principal drawback of the previous arrangement whereby "no single authority is responsible for thinking about the totality of related services and their inadequacy for local needs; no single authority is responsible for considering the community as a whole". (paragraph 92)

The provisions of the Housing Subsidies Bill, eventually passed in 1967, were complementary to these aims because it provided central government with the power to subsidise all new housing costs over a 4 per cent interest rate. Local authorities with different needs and problems could design and plan ahead with the confident understanding that the quantity and quality of new accommodation would not be affected, at the last minute, by an increase in borrowing rates. When Robert Mellish first introduced the Bill, in December 1965, he emphasised the assistance it offered to

relatively poor authorities and to the need for long-term production.

Thus he stated:

"a flat rate unit subsidy payable irrespective of the actual cost of the house leaves too much burden on the authorities in areas where costs are especially high". (48)

And then emphasised that:

"an essential requirement of increased housing production - especially where increased production requires industrialised building - is the forward planning of housing programmes and the placing of long run contracts. For years uncertainty about interest rates likely to be payable on houses yet to be built has put a curse on long term planning". (49)

Besides the aim to ensure proper planning there was the need to raise subsidies to pay for higher costs and higher standards. Hence, in addition to the interest rate subsidy multi-storey housing was also subsidised £8, 4 storey, £14, 5 storey and £26, 6 storey - but not, as was usual above six storeys. Kellish maintained that:

"with the increased use of industrialised building methods, it is no longer true, as it was as recently as 1961, that building very high is very much more expensive than building to 6 or 8 storeys". (50)

Although Crossman suggested that the particular discrimination in favour of high buildings "has in fact been removed" Kellish insisted otherwise. In reply to a question from Frank Allaun M.P. he stated:

"I would not like it to go out from this house that somehow we are providing a disincentive to build high, particularly in the conurbations, where we must build high in order to achieve the housing target. I assure my friend that this aspect has been thought out very carefully. We are convinced that, with our new basic subsidy up to six storeys, and bearing in mind the cost of building each storey above six, is nothing like it was, there will be no disincentive to any local authority building as high as it can in order to cope with its housing problem". (51)

Dunleavy has calculated that the net result of the new interest rate subsidy - which increased with the cost of the building - and the multi-storey subsidy was to lower the cost of medium-rise housing. He states:

"These figures are calculated on the basis that high flats would cost no more than houses; in fact they would receive a larger basic subsidy plus the high flat addition, implying that flats up to around 6 storeys in height would receive almost as large an increase in subsidy as houses, and that the incentive to build high built into the 1956 structure would only begin to be reduced significantly at the upper storey height levels. High flat subsidies were effectively doubled, and their higher costs more fully offset than at any time in the past, particularly below about 10 storeys". (52)

The new arrangements actually became operative from November 1965. Soon afterwards the TCPA criticised the provisions and proposals of the new Bill; in the process largely confirming Dunleavy's calculations. They calculated that, under the Housing Subsidies Act, a flat in a 12 storey block costing £4,800 would receive a £60.5 per annum subsidy under the 1961 Housing Act,

£74 p.a. under the new Act when there was a 5 per cent rate of interest and £122 p.a. when there was a 6 per cent rate of interest (53) Their report noted that "the extra subsidy cost of tall flats, already very substantial, is going to be greatly increased in terms of both unit cost and annual total". (54). The increased annual total was estimated as follows in Table 3 (in 1967-8 the subsidy actually rose to 7 per cent.)

Table 3. Financial Implications of the 1967 Housing Subsidies Act for England and Wales

Year	Total L.A.dg's completed	No. of flats over 4 storeys	Cost of extra subsidy
1964	147,000	47,700	£1.3m
1966	200,000	66,666 (2:1)	£1.8m
1966 (new sub 6 percent)	200,000	66,666	£2.5 approx.
1966 6 percent	20,000	Assume much larger proportion due to emphasis in urban renewal.	£3m

Central government was, therefore, increasing public expenditure in order to increase the quantity and quality of high density housing, and to increase the speed of production, as part of a coordinated, total approach to local authority needs; and that meant, if possible, linking physical and economic long term planning at the local level to ensure rapid and efficient restructuring of British cities.

The problem was how to control this new freedom from the centre. The old mechanism, of increasing interest rates to curtail activity and lowering them to increase activity, was no longer in use. The cost yardsticks introduced in 1967 (circular 36/67) were meant to provide clear guidance regarding the type and standard of accommodation; if local authorities went above the yardsticks the scheme would not be approved by central government. Unfortunately the quantity of new housing could not be controlled so easily, while the deck housing now often recommended, and financially encouraged by central government from 1965, was not proving to be especially economical according to the MHLC "Desk Appraisals". (55) Hence the total number of new dwellings in multi-storey blocks was costing the same, at constant prices, as earlier forms of high rise; with inflation and high interest rates high density housing thus became simply too expensive in comparison to a traditional two storey dwelling. The especially prestigious YMG estates cost well over 30 per cent more than an equivalent number of suburban houses. For example a three bedroomed maisonette on Balloon Woods in Nottingham cost between £4,275 and £4,293 to build in November 1967 while a three-bedroomed house in the East Midlands (900 sq.ft.) cost £2,617 to build with a selling price of £3,140 to £3,210 (56) Much of the increased cost was actually met from higher rents (on the estate, and

by rent pooling, on all other estates) and rates, that is from the local level. In comparison to Park Hill there had been a noticeable shift of the cost of repaying the loan as we can see from Table 4.

Table 4. Revenue sources for two deck housing schemes.

	<u>YDG (Balloon Woods)</u>	<u>Park Hill</u>
Rents	45	36
H.R.Acct.	22	18
Ex. Suby.	33	46
Total.	100 per cent	100 per cent

Source: see note (56)

The Labour government plans were gradually going astray; they were attracting the displeasure of the local populace as evidenced in the unprecedented defeat of labour councillors at the local elections in 1963 (57) and the outright opposition of those at the opposite end of the political power grouping namely the financiers, as the scale of public spending outstripped the rate of growth of the economy.

The Labour Government: The Local Plans Defeated

In the 1960's the principal centre for the building of deck housing was Manchester. Here could be found a legacy of industrial and housing obsolescence requiring radical modernisation if the city was to progress ahead of other urban areas of the country. In 1965 it was estimated that the city region had a housing deficit up to the year 2,000 of 386,000 dwellings. And during this period 294,700 dwellings would be required following slum clearance alone; hence some of them would no doubt fall within the deficit total (58).

In the industrial sector, there was a general change of employment over the period 1959-64 of -4.7 per cent in the County borough compared to +6.9 per cent nationally. Overall employment during the same period fell by 29.7 per cent in the primary, 12 per cent in the secondary and rose by only 1 per cent in the service industrial sector; this compared with the Great Britain figures of -24.7, +5.7 and +11.7 per cent respectively. Although there was a substantial loss in the vehicle manufacturing sector the most serious problem came from the restructuring of the textile industry following the Cotton Industry Act of 1959 (59). Between 1959 and 1964 employment in the city fell by 38.6 and 22.2 per cent in the textile and clothing industries respectively. This compared with Great Britain figures of only -9.5 and -3.3 per cent respectively (60). On top of this rapid and very serious restructuring the city was excluded from development area status; it received none of the regional employment incentives available elsewhere to aid recovery from these social and economic changes especially in the basic export industries.

Manchester therefore had a serious task ahead in the mid 1960's. The Planning Department set up in 1963 had produced its first report for urban renewal two years later. This was entitled 'A New Community: The Redevelopment of Hulme'. It proposed a rebuilding project structured around an upper and ground level 'street'. The immediate outcome was a series of linked '12m Jespersen' deck housing blocks to the east and north of the site. Later in the year the consultants to the City Council, Wilson and Formesley, produced their proposals for the "Hulme 5" area. This was to be the model estate for Manchester. Its deck access design was the outcome of considerable experience in dealing with this building form. Formesley plus Jack Lynn, J.S. Lackie, P. Wright and J. Snow had all worked on or studied the Park Hill estate while Wilson had included such schemes in the original design for Cumbernauld. Moreover, the consultancy had already experimented with two crescent-shaped system built schemes in the south-east of England. These were the Connock Lawn estate in Portsmouth and the Pleasant View estate in Southampton. Both used an adaptation of the Reema system after the design of the deck housing blocks was completed.

The design for the 38 acre site in the centre of Hulme 1 four inter-linked crescents, was therefore an extension of the consultants' earlier work. The building firm, Frans Gerard, were selected to devise a means of satisfactory construction. Meanwhile the politicians were persuaded that here was the matchless kind of housing project they had been looking for. In contrast to the working-class bye-law street idea behind the Park Hill estate this was a scheme whose design would apparently emulate and deserve comparison with some of the most famous upper-class domestic architecture in the world - the crescents of Bath. (61)

Clearly, however, there could never have been anything in common between the materials, standards and costs of Georgian residences and working class housing in Manchester. To make my comparison was the outcome of an extreme type of idealism - ideas abstracted completely from their social context. And yet in a desperate attempt to push ahead of other cities it seems that government and media were prepared to believe this stupendous claim. Even the architects can hardly have made the suggestion in all seriousness, although it was referred to approvingly in professional circles (62). There were a couple of improvements on the Park Hill estate - the deck and the living room on the sunny south side, and the avoidance of stairs down to dwellings. However, many of the saving features of the earlier scheme were missing; ease of access on a sloping site, the wide and safe deck, the privacy in the home, the central heating and garbage waste disposal system plus the solid construction. The new design was therefore

inferior to Park Hill, let alone Georgian Crescents. And behind these features there was, at Sheffield, close cooperation between architect and builder, architect quantity surveyor and city treasurer and architect and politician backed up by a sympathetic public and well-prepared housing department. At Manchester there was a completely different set of relationships, a private architectural practice interested in selling an idea, a private building firm intent upon an experiment from which they had little to lose and a city council determined to regain legitimacy after the dramatic wholesale clearance of Hulme.

Moreover, there was some disagreement in professional circles over the modernist character of Hulme and the linkage of the projects within the whole plan. As a result in 1966 the Housing Committee set up a Housing Development Group (HDG) to study the remaining three clearance areas in greater depth. The outcome was the more picturesque design detailed in Chapter 4. Behind this superficial change there lay the same utopian ideal and objectives. Although there was no mention of historic examples, parallels might well have been drawn by the professionals between the Wellington Street, Gibsol Street and Turrey Lane schemes and the best medieval architecture. Moreover, the whole design package was produced without any study of tenant preferences and no investigation into costs and construction techniques. In the event the first two schemes were built by Concrete Ltd. and the last by Unit Construction Ltd. mainly while the Labour Government's national policies were under attack.

The Labour Government: The National Plans Defeated

The Crossman Diaries clearly record the struggle between the political and economic forces represented by the Treasury and the spending departments within the new Government. It was a struggle which characterised the Labour party in power from 1964 to 1970.

In July 1965 a spending programme, to Labour's regret only £200m over and above that of the Tory government, because of the threat of inflation, was agreed. Less than a year later Crossman described his "first really big reverse":

"Finally we got to my housing subsidies. I stated the case for increasing my allocation. Callaghan stated his case against giving me a single extra house, and rallied every spending minister to his side by asserting that Housing could not be given any more concessions without destroying the whole FIES (Public Expenditure Survey Committee) agreement of last July". (63)

The outbacks were to no avail. In July 1966, as we have noted in Chapter 1, Wilson announced the most savage set of deflationary measures since the war; £500m in total. And the cuts, with corresponding increases in interest rates continued into 1968 and 1969. The number of housing starts fell from a figure of 191,985 (the highest since 1954) in 1967 to 149,394 in 1969.

Cost yardsticks were not updated with the inflation in building costs making some projects impossible while others already in the pipeline were cut back to such an extent as to jeopardise their whole basis as satisfactory forms of accommodation and environment.

On top of this the plans for⁸ system-built housing boom collapsed. The basis to a proper and efficient encouragement of this section of industrial capital never materialised. As one commentator noted:

"Economic problems were formidable. Costs per sq.ft proved higher in Britain than Europe due to relatively small production runs, smaller dispersed contracts; there was a lack of "fit" between the closed systems and the requirements of British space standards, dwelling mix and the unwillingness of many architects to accept the constraints of the system used. The proliferation of about 300 sites was self-defeating. Many factories attempted to operate on a plant utilisation factor as low as 30 per cent with inevitable financial failure. Finally many of the factories were closed or converted to other uses". (64)

In early 1973 the progressive collapse of a section of Ronan Point, a local authority system built tower block in Newham, was the almost predictable outcome of the whole history of industrialised multi-storey house building. The report of the inquiry recorded many shortcomings throughout the building process besides the failure to design the tower block with sufficient safeguards against progressive collapse. Thus, for example, the report noted that the consultants to the building firm:

"erred in appointing so young and inexperienced a man as the resident engineer on a contract of this magnitude and novelty. He was a young Chinese, not yet fully qualified as an engineer. He had difficulty in expressing himself when giving evidence to the tribunal, and this, coupled with his youth and inexperience, would undoubtedly place him at a serious disadvantage had it been necessary to assert his authority on the site". (65)

The Ronan Point disaster and the subsequent inquiry thus uncovered an extremely inefficient and hurried building process. The construction of many deck housing estates almost certainly followed a similar path. After the debate surrounding the collapse had died down structural alterations to strengthen system-built blocks plus the replacement of gas with electric heating, was ordered by central government, with local government footing up to half the cost. The resulting often last minute change in construction seriously upset the financial and design calculations behind individual estates, for example, the YDG schemes.

The use of electric heating also tended to further unbalance the heating/ventilation/insulation technology. The condensation problem sometimes already in existence was exacerbated. Already in June 1970 the AJ could note that "Condensation has been compared with Ronan Point and described as a national disaster". (66) It continued, "This is surely alarmist exaggeration" - a statement that could not be qualified as the new decade

progressed and more and more such problems became apparent. The AJ's advice in 1970 would soon appear a gross understatement:

"Every architect should be worried about condensation. Although nobody knows how many post-war buildings are affected, evidence suggests that it has become a serious problem, particularly in the last few years and particularly in public sector housing. But it is likely to occur in any building where the architect has not taken account of the latest advice on the subject in his design".

Meanwhile, local government reform had been the subject of an intensive inquiry whose proposals were only made public and then scrutinised by the Government shortly before they were replaced by a Conservative administration in 1970. By 1972 when the Local Government Reform Bill was passed, the new process of town and country planning had often been long delayed awaiting the new authorities with their division of powers and services between the counties and districts; the task of restructuring for growth had been replaced by plans for stability and rehabilitation in preference to redevelopment. The hopes of widespread modernisation of the industrial-urban base had been well and truly halted.

Economic Decline and Political Protest

Stephen Perrett describes the effect of the decline of the national economy on the public housing programme in the following terms:

"The central impact of the crisis on the local authority housing sector was in raising the unit prices of land and construction output; in lifting the rate of interest on new and outstanding debt, and in persuading the government and senior civil servants at particular turning points in economic policy that state housing production had to be cut back (or held down) in order to reduce effective demand and the public sector borrowing requirement".(67)

As the estates were completed and occupied in the early 1970's there was, therefore, no option but to ensure their use as long as possible; finance for proper remedial work, better management or new construction was not available. Those moving on to the model housing schemes were often chosen quickly and without due consideration to their needs and wants, given the need to collect rent as quickly as possible especially when interest rates were high. Also, with the overall decline in the economy and the consequent fall in the rate of population growth and slum clearance, demand was falling. Hence deck housing residents were often chosen from a relatively small waiting list.

In these circumstances the two main problems of the new type of high density housing were very important. Firstly, they had often not been constructed efficiently or properly. They were usually hurriedly adapted from continental system building methods, had additional exposed surfaces occasioned by the three sides of the deck and, as we have noted, were built at the tail end of the public housing drive, when expenditure was low and

interest rates high. Deck housing therefore played an important part in the developing crisis in industrialised house building that occurred between 1974 and 1980 (and continues today). The journal ED highlighted the problems in March 1976 and November 1979, on both occasions showing clearly the national scale of the construction faults; condensation, water penetration and unstable structures.

Secondly, they were unpopular with the residents, mainly due to the presence of the deck which actually provided unsuitable and dangerous areas for children's play and facilitated anti-social behaviour, that is, vandalism, and public health danger from litter and noise. Housing management was not ready and failed to cope with these new problems. By the second half of the decade the lack of "defensible space" was part of the "urban problem" as outlined by the Report for the Inner Cities, the white paper published in 1977. This defined a phenomenon called "collective deprivation". It arose from:

"a pervasive sense of decay and neglect which affects the whole area through the decline of community spirit, through an often low standard of neighbourhood facilities and through the greater exposure to crime and vandalism, which is a real form of deprivation, especially to old people". (68)

The Department of Environment investigation into "difficult to let" accommodation between 1974 and 1980 was an unacknowledged part of the attempt to remedy "collective deprivation". A three volume report published in 1980 (HDD Occasional papers 3/80, 4/80 and 5/80) brought together many of their findings.

Following their refusal to isolate any one design as particularly troublesome - as outlined in the reports, The Estate outside the dwelling (1972), and The Social effects of living off the ground (1974) - the HDD defined a management problem, one of fitting the correct tenants to the appropriate building type. As P.J. Taylor has noted:

"The problems of difficult-to-let housing estates are to be used to increase the status of housing managers. The relatively low status of housing managers in local government and in the Department of the Environment are explicitly referred to and the opportunity is taken to link their striving for recognition with a problem which the Department's own research shows goes far beyond local government relationships". (69)

The conclusion to the three volume study serves to emphasise how the problem of difficult to let accommodation is tied to "local government relationships" and therefore is totally inadequate to the scale and seriousness of the problem.

"There can be no single prescription for remedial measures which will vary with the circumstances of each estate. Where technical defects exist, rapid and effective remedial action is essential. There is an especial need for increased technical expertise to deal with water

penetration, condensation and heating. Where a programme of improvements is proposed it must be related to current policies for allocation, new build and disposal, closely tailored to local needs, and preceded by very thorough discussion to establish tenants' priorities. It is essential that any programme is supported by continuity of funds and personnel". (70)

The purpose of better management was to overcome the "impersonal management, backlogs of repairs, stigma and social isolation" and the poor design and location and poor coordination between local authority departments.

The general conclusions were based on case studies of a mixture of estates. Netherly and Broadwater Farm were considered in the final report as representative of deck access. The "general findings" included this comment on deck housing:

"Deck access blocks in particular had extensive pedestrian routes, some shared by over a hundred dwellings, many so bleak that they reduced incentives to tenants to care for them, and some so intricate that it was difficult to find ones way around. Entrances, staircases and decks often had nooks and crannies which could be exploited by vandals or intruders". (71)

But it was not just the lack of "defensible space" which made them difficult-to-let.

For example for the new Metropolitan borough of North Tyneside the Killingworth Towers presented an historical problem repeated in many other parts of the country. A study undertaken in the late 1970's found that:

"Despite the fact that there were over thirteen hundred families on the waiting list and willing to move within or into the Killingworth district of North Tyneside, the Towers have never been fully occupied. In the period under discussion (1976-78) there were always between thirty and sixty units available to let. The only families accepting tenancies are those in the most desperate housing situations - the homeless and those on the waiting list willing to accept almost anything. The end result of the process of avoidance by all but the most desperate is a concentration of families with real financial and social problems in this one part of the council sector". (72)

The Towers became a well-known symbol of inhuman modern architecture. Possibly even better known within the whole country were the problems in Manchester. At the beginning of the considerable national media coverage - detailed in Chapter 4 - the House of Commons debated the problem of multi-storey housing, the only such debate in the 1970's. The subject was Manchester's deck access housing.

In the first debate in May 1974 Gerald Kaufmann MP for Ardwick and Under Secretary of State for the Environment, pinpointed the unpopular diameter of deck housing in comparison to traditional tower blocks. And then in November of that year, Frank Hutton, M.P. for Moss Side (which includes Hulme) exchanged experiences with Kauffmann. It was clear that a great deal of feeling lay behind public discussion. As Hutton noted:

'It is not difficult for me to describe the anger, bitterness and frustration of tenants who reside in this accommodation. I receive their cries of anguish in my daily post bag and when I meet them in my constituency at the weekend". (73)

Kauffmann agreed and criticised the "architects' fantasies in which people have to live". (74)

Over the next five years the protests continued. In October 1977 the Hulme People's Rights Centre published Inner City Crisis: Manchester's Hulme. As a result the ITV World in Action team broadcast its critical study of the whole phenomenon of decaying housing in May 1978. Problems continued, and on the other Manchester estates, tenant resistance to occupation led eventually to the decision to demolish most of the Wellington Street/Port Lesica estate. The result was national publicity with features on BBC TV's popular news programmes Newsnight (3rd Nov. 1981) and Nationwide (19th Jan. 1982). In January 1982 the New Statesman reported that Port Lesica was found to have:

- Structural failures of bridge joints - all bridge supports, some of them 6 feet up, are described as 'suspect'.
- Private balconies failing due to 'original inadequate structural design'.
- Stair towers starting to lean away from the main blocks.
- Water penetration throughout the concrete.
- 'Rapid deterioration' of the roof asphalt (75)

Almost equally well known were the problems of the Ketherley and Belle Vale estates in Liverpool; the latter had been described in detail in the House of Commons in May 1979 (76). One section of Ketherley had been demolished by January 1982; the remainder was almost entirely vacant.

Meanwhile some estates were surviving only to be attacked and undermined, as a community, by the "establishment". Park Hill represents a striking example.

Park Hill: A Broken Estate?

In the history of Park Hill local opinion has tended to mirror national opinion and vice versa. In 1967 when the AR turned against the model estate, criticism was for the first time seriously levelled against the scheme within Sheffield. Thus local councillors felt moved to respond in a letter to The Star. It began, "As a social experiment these estates are a resounding success and the sudden denigration of them for obscure reasons wants nipping in the bud". (77) A heightened level of antagonistic publicity continued until in 1974 Benham's praise of Park Hill provoked one local councillor to suggest that the flats were a "gigantic failure"; the tenants apparently lived in "utter desperation" due to the conditions on the estate (78). Earlier in the year Bryant and Knowles study findings were quoted approvingly in the

local press. They now claimed that "ours was possibly the first voice to be raised against Hyde Park, Park Hill and Kelvin". Indeed, "it was as a direct result of our findings (in a survey of old people's housing problems) that the deck access principle was dropped from Corporation housing schemes".(7) The local press therefore took this opportunity to persuade the local populace that it represented their interests.

Two years later the local authority policy committee's investigation into the four deck housing estates in the city, which concentrated on the problem of vandalism, found little evidence of a lack of community spirit and instead a satisfactory level of tenant attachment to the estate. (80) Park Hill was "providing something approaching a model in terms of community interest and pride". A related study of residents reasons for leaving the scheme found that the small size of the accommodation, health reasons, "no reason" and the preference for a house were most important. The lack of play area, vandalism and problems of living off the ground were ranked only fifth to seventh in the records. The outcome of the inquiry - to begin to move families with young children out of high density/deck access housing - was therefore applied only to Hyde Park and Kelvin to begin with.

The 1971 census figures also suggested that a community had become established - or still existed - at Park Hill. Since 1961 about 20 per cent of the total number had left leaving a population of 2,486. In the process two distinct resident groups had evolved, the pioneer group and the new comers. The first tended to live in underoccupied accommodation following the departure of some members of the family; the second were in overcrowded accommodation as a temporary measure, earning the right to move on to a better estate. There had therefore been a trebling of the number of one person households, a 48 per cent increase in two person households and a 63 per cent fall in four and five person households. These figures contrasted with the 22 per cent increase in the number of 6 person households. Moreover 35 per cent were living at less than one person per room and 7 per cent at more than one person per room.

The electoral role suggests - no doubt not very accurately - that after 1971 the two groups became even more clearly distinguishable. Thus although after 1971 the annual percentage leaving the pioneer group fell from 5 per cent (1961-71) to 2 per cent (as those remaining longest were less likely to leave) by 1979 the number who have lived in Park Hill for more than ten years ("pioneers) for the first time fell below the number who had lived there for less than ten years ("newcomers").

At the same time there is no concrete evidence that this was an unusually high rate of decline of the number in the pioneer group. In comparison to two other estates the position is unclear (partly because

turnover does, of course depend upon a good many other factors than the condition of the estate, for example, the availability of other and better accommodation). Table 6.5 summarises the position on three estates after 20 years occupation.

Table 6.5 Population Turnover on three local authority housing estates (0-20 years, percentage figures)

Length of stay (years)	Park Hill (1979) (1)	Quarry Hill, Leeds (1958)(2)	Wybourn Estate (1952) (3)
15-20	36.8	31.0	49.6
10-14	12.4	13.1	18.4
5-9	19.4	18.5	13.3
1-4	31.4	37.4	18.7
Total	100.0	100.0	100.0

(1) Based upon an analysis of the electoral roll

(2) See Alison Davetz Model Estate 1974

(3) See Baldwin J "Problem Housing Estates - Perceptions of Tenants, City Officials and Criminologists" Social and Econ. Admin. 8: pp 116-35 and

Note

Quarry Hill was a model multi-storey housing estate before Park Hill, using staircase access; Wybourn, an inter-war suburban estate, was the problem scheme before the deck housing estates took its place in the mid 1970's.

Other information on Park Hill suggests that its problems may not be as serious as suggested by the local press. This was the local survey of the characteristics of the population (49 per cent sample) for the Sheffield inner city study (in response to Policy for the Inner City). The details are shown in Table 6.6

Table 6.6 Household Survey Data 1977 (percentage figures)

Folling District	Elderley	H'Capped	Damp	No Bath	Unem- ployed	Single parent	6+ family	Sharing
City	22.4	12.2	13.1	6.8	6.1	2.7	4.2	1.8
Inner City	22.2	13.8	18.6	10.1	7.0	2.9	5.2	2.6
Wybourn	10.9	17.0	27.8	1.4	13.6	4.1	10.2	3.1
Castle (1)	21.2	16.6	14.7	0.7	9.4	4.1	4.9	1.1

(1) Includes Park Hill, Hyde Park and Duke St. flats.

Here we can see that there is no clear evidence of a "disproportionate share of unskilled and semi-skilled workers, of unemployment of one parent families, of concentration of immigrant communities and overcrowded and inadequate accommodation"; this was the definition supplied by the White Paper. Nor is there necessarily evidence of "collective deprivation". Although the figures for handicapped, unemployed and single parent are high many of these would certainly have been concentrated in the two estates adjoining Park Hill.

Meanwhile the numbers of elderly, large family damp and sharing were not especially high. Overall the case was better proven against Wybourn than the three "problem" estates, two of which were certainly less popular than Park Hill in 1977.

In spite of these facts there was little public objection - save from some tenants - to a letter published in the local press in mid 1979 entitled the "Prisoner of Park Hill" (81) The remarkable tone and distorted view of this communication warrants its reproduction in full (illus.79) (p.302) Virtually every social problem and physical discomfort that can be imagined was noted as existing on the housing scheme. There was a "distorted and abnormal world" of "daily tortures and torments" fostered by drug addicts, prostitutes, recurrent bad language and behaviour (day and night) blatant damage to and abuse of person and property, widespread and permitted fouling of the area by dogs and cats, foul rubbish thrown deliberately from the decks, continually faulty lift service, excessive amounts of graffiti and vandalism and inadequate and damaged landscape and play facilities. While an occasional example of each of these problems would be found on the scheme at the time -I speak as a one-time resident and student of the social conditions - as they could be on many housing estates, they were certainly not as prevalent as the letter suggested and led the general public to believe.

However, no public figure or representative came to the defence of the environment and its residents. Roy Hattersley highlighted the importance of Park Hill in his personal history of Sheffield for Yorkshire Television in June 1981 ("The name on the knife blade" broadcast on the 8th June) but did not seek to uncover the "reality" of the community life still existing. Instead he tended to emphasise its problems, mixed with a sense of pride at its achievement in the context of the 1950's and early 1960's. The result was an ambiguous statement:

"Looking back these were probably the wrong houses to build at any time; it probably would have been better if we had tried to build two storey traditional houses with little gardens and their own front gates. But I'm sure what we did in 1961 was the right thing to do then. If we hadn't built this sort of development quickly and I think built them well, we wouldn't have had the change in 1981 to argue about the sort of homes people wanted to live in for the rest of the century. It was by building this way then, at this speed, and in this style, that we were able to clear the slums and end the waiting list. Looking back it might have been the wrong thing to do; I'm sure it was the right thing then".

How long can Park Hill survive? The neighbourhood centre established in 1979 for the whole Park area brought together a number of local authority departments, councillors, local teachers and interested tenants under finance from central government (75 per cent, urban aid) and local government. It helped to establish a new youth club in the Bard street flats, for the

11-Storey Flats Should Give Sheffield Tremendous Fillip

CITY SKYSCRAPERS WILL

DRAW WORLD

Rest of the world will come to Sheffield to see the semi-skyscraper flats which the Corporation intends to build in Duke Street slum clearance area.

Mr. Harold Macmillan, Minister of Housing and Local Government, said this to "The Star" today during his visit to the city.

OVERCAST



It is mild, and cloudy with light rain or drizzle, and mist in this area tomorrow. 4:30 p.m. to 7:45 a.m. WEDNESDAY 17th Dec. to 7:45 a.m.

BROTHERS IMPRISONED

I HAVE SUFFERED a life sentence of 20 years, without remission, in Sheffield's Park Hill flats.

In that time I have grown cynical, suspicious and even more convinced than I was 10 years ago that the designers, architects and builders of these high density monstrosities called flats (together with the city council officials who sanctioned them) should be made to suffer the same daily tortures and torments, and all the inadequacies, frustrations and conditions of the tenants who have to live in them.

Let them have a taste at the fruits of their folly, for which tenants pay so dearly.

Existence in such surroundings and conditions creates changes in the behaviour of ordinary, self-respecting, law-abiding people — until they inevitably become distortions of the so-called acceptable standards of their more affluent and well-housed counterparts in society.

Young mothers and their babies, old people and invalids, become virtual prisoners trapped in their flats.

Children have inadequate, unsuitable and insufficient play areas.

Teenagers often become members of gangs of vandals and hooligans, running riot, creating mayhem, and damaging all and everything in their path, for want of either a job or something better to do. Adults eventually revel in complete apathy, bingo, booze and betting shops, then tranquilisers.

The whole area exudes an atmosphere of resigned, apathetic and utter hopelessness, as if to say, "Here you live, and here you stay, whether you like it or not."

Arrangements, fights, blatant damage, abuse of person and property, complete and utter disregard of conditions of tenancy and the law, are as commonplace as the pigeons, starlings, sparrows and vermin, and the dogs and cats that continually foul the whole area, often in sight of and with the approval of their proud owners.

The docks (landings) are converted into launching platforms for every conceivable type of missile, rubbish

views of Park Hill: 25 years apart. The Star 12 12 53 and The Star 6 6 70

BOY KILLED AS LORRY RUNS ON VERGE

A THREE-YEAR-OLD boy was killed when a heavily laden coal lorry, out of control, mounted the grass verge in Williamthorpe Road, North Wingfield, today, and ran into him.

The boy, John Tomella, Crossbrook Avenue, North Wingfield, was with his mother, Mrs. Roma Tomella and his four-year-old sister, Jennifer.

Mrs. Tomella and Jennifer were taken to Chesterfield Royal Hospital suffering from shock. Jennifer was detained and her mother allowed to go home.

LEFT SHOP They had just left a general store and crossed the road on to the grass verge when the accident happened.

It is understood the coal lorry travelled some distance on the grass verge.

John's father is a Polish miner working at Holmewood Colliery.

This is the third week-end in



MR. HAROLD MACMILLAN, Minister of Housing and Local Government (LEFT), is shown a model of proposed slum clearance for Duke Street, by the Sheffield City Architect, Mr. J. L. Womersley (RIGHT). Looking on are Ald. A. Smith and Ald. C. W. Gascoigne, chairmen of the Housing and Estates Committee respectively.

4 Children Gassed In Kitchen

THE wife of a Sheffield policeman found her four children overcome by coal gas fumes at their home in Halsall Road, Darnall, when she returned from a shopping expedition this afternoon.

The children who were

Rail Union Men Get 'Formula'

A "FORMULA" on wages was given to leader of the railway union by the British Transport Commission during talks in London today.

This was the fourth discussion on the wages since the 4s. a week award the Railway Staffs' National Tribunal which is rejected by the unions.

FOR EXECUTIVES

Mr. J. S. Campbell, secretary of the National Union Railwaymen, said after meeting: "We have had formula presented to us and shall consult our executive." It is understood that the Commission has not made specific flat rate offer at that of the 4s. award and still urging the railwaymen to accept it.

It is believed, however, they have indicated willingness to examine the structure of the railway mainly with a view to removing anomalies on differences in wages of various grades.

British Railways stated that small goods traffic, on which a ban was placed yesterday at Edge Hill and Kirkby Gledits, Liverpool, is now diverted to other depots prevented a serious piling up of parcels intended for Christmas trade.

LITTLEWOOD

tendencies and its future — the trend would be a sharp downward slope.

This thought, though not necessarily expressed in these terms, usually crosses the minds of the unfortunate tenants who have to rely on the lifts — those latrine, black, smelly boxes, sometimes ascending, sometimes descending, frequently stuck between decks with occupants, very frequently not working, and generally vandalised.

CHILDREN learn quickly at an early age, not nursery rhymes, but obscene expressions far too filthy to put into print. This vocabulary soon enlarges to include appropriate gestures as they are absorbed into the marauding gangs.

Complete oratories and performances may occur at any time between families, neighbours, gangs, and often across the whole length and breadth of the flats. Any attempt to admonish a group of children or youths results in torrents of this abusive and filthy vernacular.

Park Hill is, however, still the perfect district for insomniacs and nocturnal creatures. A rude awakening is definitely guaranteed by inebriated, sub-normal, often violent hooligans between 2 and 3 a.m. on any day of the week, particularly on stag-nights.

Their brawling, shouting and filthy operatic prowess is transferred from club and disco for the benefit of all tenants, healthy, ill or dyne, young or old.

If the whole area is a microcosm of the macrocosm, then we know what we are in for. Whatever sociologists, religious leaders, councillors, MPs, or governments may try to make us believe, ethnic groups will not integrate within the foreseeable future; society will continue to degenerate and decline; apathy will predominate indefinitely; and this civilisation will eventually pass into obscurity as did its predecessors.

This is not a prophecy of doom. It is the regrettable conclusion after 20 years of living, experiencing and observing life in the distorted and abnormal world of those "Design - Award - Winning," "Ex-showpiece," "Model - of - High - Density - Dwellings," "Biggest Blunder," Park Hill Flats.

— A despairing lifer.

* Editor's note: It is not The Star's general policy to give un-quoted articles. But we felt this one was important enough to respect the writer's fears of what could happen if the name was given.

A cry of despair from a

PRISONER OF PARK HILL

bottles, urine and spittle. From time to time the assortment is varied by the occasional random quantity of human excreta neatly packaged in old newspaper that bursts with spectacular effect on impact.

NOT A SINGLE item of property is safe. An unattended car may be stolen, damaged permanently or have its tyres slashed or deflated.

Graffiti adorns most surfaces, some almost inaccessible. Grassed areas, or what is left of them; are often used as driving ranges for golfing teenagers, and for knife-throwing practice, archery, cricket, football, rounders, tennis, etc., with complete disregard for windows or tenants.

Most of the still surviving trees are ravaged by constant climbing and defoliated by the breaking off of branches. Grass is stripped or dug up leaving a dust that blows up like a sand-storm and settles everywhere.

The "Garchey" system of waste disposal in which all liquid, small and perishable waste is disposed of down the sink unit, often gets blocked by thoughtless tenants stuffing empty beer cans and other oversize rubbish down

This immediately causes an overflow of communal effluent into the kitchens of tenants directly below the offenders, inflicting permanent damage to the contents of the kitchens and permeating the whole flats with an indescribable stench which lingers for weeks.

All service areas have become so infested with rats and other species of vermin, that workmen, including Post Office telephone engineers, refuse to enter them to carry out necessary repairs.

There is festering and sometimes hidden prejudice, racism, drug addiction, theft, violence, obscenity, prostitution and corruption — phenomena that are the inevitable results of a declining high-density area.

Within 20 years, thanks to a variety of reasons, Park Hill has developed in many ways into a slum to compare with the Gorbals in Glasgow, and there seems to be only one logical conclusion, difficult and costly as it may be, and that is to demolish the whole thing quickly before it gets worse and make room for decent housing.

If a graph were plotted containing all the data of this degenerating society — its morals, its standards, its destructive

use of all young people in the area, including residents of Park Hill, and it encouraged the founding of a new tenants' association on Park Hill, run by some of those originally involved in the development of a strong community life. Also it may well have helped to defeat a local authority move to ban all pets in shared access dwellings in the city, particularly in deck housing. The local press also played its part in voicing public objections to the new policy. In late 1980 it gave considerable publicity to the problem and posed the issues in an editorial:

"...the Housing Committee Chairman, Clive Betts, says the majority of all tenants in flats are backing the ban.

They are, he says, fed up of the mess and dirt that pets in flats are causing in the walk-ways. In some places, caretakers are refusing to clear up the mess.

What is the case of tenants with pets? On the whole, they say, it is stray dogs from outside the flats that cause the problems. Certainly almost all owners we spoke to stressed that their dogs went out only on a lead.....

To judge from some of the remarks we encountered, the Housing Committee is likely to face a series of martyrs when the time comes for enforcing the ban.

Is it too late to hope there may be a middle way?" (82)

The end result was probably that a number of 'pioneer' or "respectable" tenants who took care of their dogs moved out prior to the deadline of 1st January 1981 (after which residents had to leave or dispose of their pets) leaving room for newcomers to further threaten the decline of the community spirit. When the ban was removed under public pressure it was too late. Thereafter the problem worsened as the caretakers refused to clear up the mess which had only increased as a result of the attempted imposition of a no pets policy.

In this situation it seems that the spiral of decline is inevitable. The disadvantages in the estate became major stumbling blocks, which, combined with the adverse or inadequate management by the local authority and the 'biased' publicity from the local press (prepared to inaccurately criticise all local authority housing, especially if it is multi-storey and monumental/inhuman in design) leads gradually to an irreversible process; the estate becomes a major "problem" even if a significant number of tenants think otherwise.

CHAPTER 7 Conclusion

The history of deck housing that we have traced has been a pattern of conflict and consensus between opposed ideas and interests. In the first half of this century the reflective-romanticism of premodernist urban design evolved in opposition to the realist-romanticism of the modernist approach. Evidence for such a contrast in aims and methods was found in the modern movement's evolution of a streets-in-the-sky type of urban housing. Underlying this building form was the idea of anti-functionalism, whether it was expressed as the "world of the spirit" of the Futurists, the anti-rationalism of the Expressionists, the "simple logical entities" of the Austrian school, the supremacy of feeling in the art of Malevich and the Russian tradition or the "spiritual mechanics" of Le Corbusier and C.I./M. In each of these examples the belief remained that architecture should somehow go beyond the essential reasoning of the machine age engineer without falling into the trap of mere self-expression divorced from the needs and demands of society. Although we did not consider all forms of multi-storey housing deck-access emerged as the most obvious expression of the basic aim of combining sound economic construction with anaesthetic and social purpose.

The British-American premodernist tradition of architecture and urban planning, while no less anti-functionalist, was tied to the vision of a past golden age. This limitation led to an inability to answer the demands for urban (as opposed to suburban) working class housing renewal; the two plans for London clearly revealed that shortcoming.

The contrast in built form and land use planning could be seen most clearly in the comparison between Le Corbusier's Radiant City proposals for a Paris slum clearance area (Illus. 13 to 16) and Forshaw and Abercrombie's equivalent proposal for the East End of London (Illus. 23). If the former had been built it would have contained two large buildings designed for pedestrian movement on three levels - the ground level park, the upper level "streets" and the roof level. The appearance, and behind that, the construction, would be the expression of machine age architecture. Alternatively, if the latter had been completed, the pedestrian would have been far more restricted on all three levels, with the appearance and construction providing a synthesis of British pseudo-Georgian and pseudo-modern architecture.

In the post-war period, the British modern movement began to realise the importance of survey, place, community and the market processes. The discovery of these "realities" was, however, based upon the dismissal of inter-war modernism as functionalist. The consequent move over to an

even greater reliance upon realist-romantic philosophy led Team 10 and especially the Smithsons to become tied more closely, on the one hand, to the political status quo, and on the other hand, to utopian speculations and proposals. Furthermore, the 'end of ideology' perspective, whereby the open city of the open society would be free to respond to growth and change divorced from any intellectual preconceptions, led to serious contradictions in the analysis and proposals. Thus the Smithsons advocated the retention of community in a 'mass culture' but, at the same time, wished to introduce a completely new building form and planning system. Gradual but nevertheless wholesale clearance followed by reconstruction with the communication 'fixes' applicable to the new age - the street-deck and the motorway - were symptomatic of the rejection of the 'old' society. Reflective and realist romanticism, the market processes and planning, the architectural elite and the demands of the general public - all these apparently contrary principles were to be combined in modern urbanism.

And yet, despite the contradictions, a synthesis of these ideas did develop. There were two reasons for this. Firstly, because followers of the premodernist tradition came to realise the limitations of their past models for urban housing, especially in view of the experience at Roehampton; only by combining the two aspects of the Scheme - the picturesque modern Alton West and the pseudo-Brutalist Alton East - could a fragile consensus be ensured in the architectural profession. And, in any case, the estate was not adequate to the task of providing a model for urban housing renewal because of its low density and low provision of family accommodation. It provided neither an aesthetic model nor a socially realistic answer to the problems of post-war redevelopment.

Secondly, a synthesis developed because influential sociological, literary and artistic innovations gave support to the rediscovery of the working class neighbourhood while Jane Jacobs's important work was highly critical, like the Smithsons, of the master planning aspect of inter-war modern and premodern proposals. Hence there were notable areas of agreement in the culture of the 1950's about the idea of combining tradition with new forms. A housing project which expressed urbanism and identity in the sprawl of the modern city, community and working class street-life, Englishness and a sense of place, freedom and openness relative to the restrictions of the past, would consequently receive much implicit support.

Allied to this consensus, there was the theme found in the policy making of the Conservative government from the early 1950's to the early 1960's. Their ideological stance and direct control over the supplies

of land, labour and capital for council house building, especially multi-storey council housing, proved to be uncontroversial. A monetarist philosophy, using high interest rates and a restriction on the growth of cities based upon a limitation of the land required for working class housing and slum clearance, did not conflict with architectural and associated interests.

The Park Hill estate emerged from this set of circumstances creating a firmer-based consensus between architects, political, social and economic interests than at Roshampton. There were a number of reasons. Firstly, there was a compromise between the two types of Romanticism. Wormesley and the Smithsons, Lynn and Smith were all a direct influence on the building project, while other architect planners such as Oliver Cox (architect of Alton West's high rise blocks, Hock new town with Graham Shankland, and of Oldhams 12m Jespersen scheme) and the Modernist historian Reyner Banham were agreed on its value as a model housing scheme. In addition the sociological interest was carried forward by Mrs. Demers work in the process creating a broad area of agreement that Park Hill was an architectural and planning success story.

Secondly, a 'balance' was apparently achieved between the opposed demands of several pairs of interests. Industrial and finance capital, central and local government, Conservatives and Socialists (at local and national level), county council and county borough, professionals and politicians (and thus the Romantic and Socialist intellectual traditions), other urban land users and council house building land provision, rate-payers and council tenants - all appeared to be in agreement or, at least, not opposed to the scheme, because of the perceived advantages and consequences of this form of development. Behind this initial success lay the combination of excellent facilities and technical innovations such as garchey waste disposal and district central heating with a low cost but acceptable form of construction and access (based upon maximum industrialisation and minimum expensive circulation areas). It was a building whose form, location and existence were explained, on the one hand by national and international forces such as the importance of the steel industry, the power of landed capital and the overall control of central government (the latter through the rejection of local government reform and the Sheffield Extension Bill, the provisions of the 1952 and 1956 Housing Acts, the steel industry plans and the final approval of the scheme) and on the other hand by local forces and interests including the local socialist tradition of rapid and thoughtful slum clearance, comprehensive provisions for municipal enterprise and a caring community. Together, these varied forces and interests ensured that Park Hill, as the first city centre clearance estate (i.e. the overspill scheme) was

successful in solving the housing problem and the modernisation problem (being the need to restructure the core of Sheffield as quickly and efficiently as possible).

Nevertheless, this superficial and temporary consensus could not hide the fact that a distortion of the real costs and benefits had been necessary. The architectural experts' interpretations of Park Hill were 'biased' in favour of its social and aesthetic advantages while the local politicians and press carried this bias into the active efforts to persuade tenants of these perceived advantages. This meant that the disadvantages of the new estate relative to the preferred option of extending the city boundary were not made apparent. Industrial capital, local government, the labour movement, the county borough, council housing and council tenants were all to suffer costs in the long term as a result of compromise, from the alternative of a low density and premodernist form of peripheral housing.

However, regardless of these underlying problems, the scheme was considered successful for a long period of time. On this basis the first deck housing estate in the United Kingdom became a model for urban working class housing during much of the 1960's (in competition with other designs such as balcony access, mixed development etc.) In addition the planning approach taken by Sheffield became an important model for comprehensive physical planning, while the experience of attempts to regenerate the steel industry in the 1950's provided a vital ingredient in the economic planning of the 1960s. Together these experiences helped foster a consensual form of corporate planning which emerged in the new decade.

And yet, in the 1960's the uneasy juxtaposition of interests and potential conflicts which had been successfully synthesised around the Park Hill scheme was not so well contained either in the architectural or the political and economic spheres. In Manchester, for example (whose importance, for our purposes, was matched only by planning activity in Liverpool and Thamesmead) the "cultural-modernist" Georgian and the "picturesque-modern" medieval architectural styles provided alternative influences on building design. And underlying this uneasy coexistence of "ideal" forms there lay an ill-fitting division of labour in the redevelopment process, between public and private and public interests. It was on this basis that various deck housing estates were built in Hulme, Mossdale, Longsight, Beswick and Bradford and Harpurley; none of these, in spite of the promises, even had the merits of the original streets-in-the-sky in Sheffield.

In more general terms a fragile consensus was built upon reaction against the tower block and the supposed functionalist principles behind

housing design in the previous decade - symbolised by the new and unfounded interpretation of Park Hill which produced an "undeniable feeling of living in a barracks". (AR November 1967). Within Central Government there was a split in professional opinion between the possibility of creating an ideal type of access to multi-storey housing suitable for all circumstances and the notion of filling tenants to accommodation. As a result of this ambivalence the MELG failed to produce a cost-benefit analysis or any thorough evaluation of deck housing. In fact no satisfactory central government plan or architectural-social science research policy materialised in relation to deck housing; instead it existed in the 1960s only as a short-lived, rather utopian experiment.

Complementary to this limited progress was the struggle between finance and industrial capital for control over the physical and economic plans for the modernisation of the United Kingdom. The attempt to expand the economy in the interests of industrial home-based capital led to widespread and rapid upheaval in the machinery and policy of government. Indeed, such was the urgency of this task, in order to keep finance capital at bay, that the end of regeneration of the national economy tended to justify the means. Crossman's efforts and the official appointments he made in regard to promoting system building, encouragement of local government reform, the new urban planning system following P.A.G. and the 1967 Housing Act - all these initiatives were attempts to ensure that local authorities could restructure their cities as rapidly as possible at minimum cost, free from the restrictions of the central government bureaucracy and local resistance to change. However, as the money available for the replanning began to dwindle and the cost of deck housing remained high, the possibility of comprehensive modernisation of the urban fabric alongside the regeneration of the economy diminished. Increased public spending by the labour government was halted and many of its policies and plans put on the shelf as finance capital asserted its authority. Also, industrial capital represented by the largest builders (Wimpey, Concrete and Rates) was not convinced of the benefits of innovation in terms of deck access housing design.

However, amidst all this turmoil and uncertainty a consensus was established sufficient to produce 140 estates and 75,000 dwellings scattered throughout the United Kingdom. The small quantity, the timing and the unsatisfactory quality of these schemes have been attributed to the rapid expansion and then equally rapid contraction of the economy during this period. The regional location of the estates, away from the congested areas of London, has been related to the location of the economically

declining or static regions of England. That is, where the basic export industries of coal, iron and steel, shipbuilding and textiles were subject to the most comprehensive state controlled restructuring (excluding Scotland, Wales and Northern Ireland) this new and innovative type of multi-storey housing was constructed. The large-scale public investment in these areas was often accompanied by labour resistance to change in the industrial sector in the 1960's. Government sponsorship of a form of high density housing which made it more acceptable (then the tower block for example) to financially over-burdened local authorities and appeased the 'anti-flats' culture of the English can be seen as an attempt to find a way through the policy minefield. The physical planning of urban housing areas undertaken by local government can therefore be seen as politically and economically complementary to national economic industrial planning.

After the completion or commencement of street-deck schemes another type of perspective and consensus began to emerge. It was derived from two new tendencies. Firstly, the anti-functionalism and anti-master planning of post-modernism which was in part a reaction against the perceived architectural implications of street-deck housing. Secondly, the gradual move against "going for growth" by national planning led on to a long term monetarist policy and return to market philosophy.

We can, therefore, begin to perceive that the defined "success" or "failure" of deck housing estates was connected to the overall changes in state capitalism (and not to any final and objective measurement of "user satisfaction"). The connection can be typified in four stages. The economic expansion and political optimism of the 1950's, when streets-in-the-sky were first designed in Britain; the enthusiastic reception of Park Hill in the early 1960's when the economy was beginning to grow at an accelerated pace (and architect-planners required a model housing form to help in the task of an expected and widespread urban renewal programme); the mixed fortunes of the economy in the 1960's and the mounting criticism of modern architecture and finally, to the economic decline of the 1970's when deck housing estates were often defined as subject to "collective deprivation" regardless of the facts and circumstances.

In the space of a quarter of a century we have therefore moved from a self-fulfilling prophecy of success to a self-fulfilling prophecy of failure. This process has been aided by four consensus-forming mechanisms. Firstly, the frequent changes to new types of anti-functionalist architectural thinking i.e. Team 10, the late 1960's, early 1970's and the emergence of post-modernism. Secondly, the 'scientific' surveys, including Forshaw and Abercrombie's, Mrs. Demers, the AR's report in 1967

and Bryant and Knowles study of Hyde Park in 1974. Thirdly, the opinions of the professional and government elites in the 1950's, late 1960's and today. Fourthly the corporate organisation of government with control from the centre especially following the establishment of comprehensive physical and economic planning in the 1960's. Lastly, the 'bias' of the media, especially the local press. Park Hill is an especially obvious example of the power of propaganda. Overall, consensus has been based either upon a false interpretation of history and/or a distortion of the facts collected by government, the professions or the media.

We have thus attempted to trace, through this study, the history of deck housing by following a dialectical framework of analysis. This has applied both to the history of ideas (the synthesis of contradictory realist and reflective romanticism and market and planning processes) and the political economy of the United Kingdom (the synthesis of contradictory, financial and industrial interests). We have also attempted to explain a particular design or form of housing by referring to both ideas and the general cultural context, and political and economic circumstances, rather than to one or the other. This explanation has been helped by an analysis of most, if not all, the major deck housing schemes in the United Kingdom and, before the second world war, in Europe. The final outcome is, as we proposed in Chapter 1, an interpretation of the development of working class housing in the public sector contrasting directly with the alternatives prevalent in contemporary culture. These are the post-modernist and neo-marxist theories of urban form and change (while the more traditional work of, for example, Alison Ravetz (1) has here been incorporated into a much wider and more theoretically structured framework of analysis).

Our disagreement with the post-modernists has led to four criticisms. These are, of their interpretation of the supposedly functionalist tradition of urban planning and architecture, their portrayal of the ideal modernist housing form as the inhuman tower block, their analysis of the socialist tradition behind plans for urban renewal (in place of which we suggest the dominance of the Romantic philosophy and, in the political economic sphere, of finance capital) and, implicitly, of their Popperian simple empirical method of analysis (rather than a theoretical and dialectical analysis which recognises the need to explain the contradictions inherent in society).

Our conflict with the neo-marxist position has been based upon replacing the rather divisive and ineffective approach led by Castells with a broader picture of the totality. Most important, we have tried to show two things. Firstly, that urban phenomenon and urban planning cannot

be understood aside from their roles in the economy and particularly in relation to industrial production and international competition for markets which has forced upon government the need for economic planning accompanied by the rapid and wholesale restructuring of our cities. Secondly, we feel that marxist theories must confront ideological and cultural issues and begin seriously to debate the relationship between architectural form and urban change and development. In the process the broader significance of cultural movements such as post-modernism can be assessed.

It is on this basis that we are forced to look at Dunleavy's important work in a highly critical way. At the beginning of this study of multi-storey housing (which in some ways complements our own work), Dunleavy describes how the process of urban renewal:

"destroyed 'a landscape of small houses' and the community life which went along with it and replaced it with 'mass housing' - large flatted estates of uniform housing quite distinct in form from the kinds of housing provided by market mechanisms". (84)

The idea of streets-in-the-sky was, however, an attempt to continue the form and community life of the 'landscape of small houses' originally provided by the market mechanism; there is no simple contrast to be made between a model British mass housing of the 1950's and 1960's as Dunleavy sees it and traditional housing because the street-deck idea (which Dunleavy conveniently chooses to disregard) was meant to provide a physical and social synthesis of the two.

Dunleavy also describes a crude environmental determinism behind the idea of deck housing (denied by Sheffield City Council's use of a social worker to settle incomers to Park Hill) and dismisses the outcome of Sheffield's famous experiment as an outright failure. Thus he notes the architects' sense of responsibility which:

"came to mean incorporating in high flat designs features which it was supposed would produce desired forms of social behaviour. The leading instance of this was the adoption of Le Corbusier's 'streets-in-the-air' idea at Sheffield to improve contact between neighbours (an effort in which they failed dismally)". (85)

If we logically follow Dunleavy's line of argument there will be a tendency to reach an agreement with the postmodernist ideology and culture. We feel that this represents a major failing in his work, which otherwise amounts to the first attempt to link architecture and design with the overall processes of urban change and conflict.

As we suggested earlier Park Hill emerged as a building form to be explained on the one hand by national and international forces and on the other by local forces and interests. Following its development the new

housing estate had a small but significant impact on architectural thinking and government action during the 1960's. We have argued that, in terms of completed street-deck schemes, there is evidence of a regional pattern of location. This has been presented as further evidence of the combined national/local forces which underlay the initial innovation. Inevitably there are exceptions to the inter-regional perspective and we have not been able to pursue discussion of the complex intra-regional patterns without further exploration of the impact of important and peculiar local interests. However, in relation to the explanation of the relationship between built form and the context for understanding innovation we feel that this study of street-deck housing goes much beyond the simple neo-marxist arguments (which see built form as a mere 'reflection' of dominant economic forces in the 'base' or as a secondary process of creation of surplus value) and the equally simplified analysis offered by the postmodernists (who concentrate their attention upon the history of ideas).

How, then, can the critique voiced here be further developed in view of methodological problems and the validity of the kind of analysis we have undertaken? What obstacles stand in the way of the advance of theoretical understanding of the evolution of housing design and urban planning?

To begin with, let us state more clearly our methodological and epistemological position and then proceed to identify specific problems within that framework.

In this study it has been found necessary to break new methodological ground (in relation to previous research on the development of housing form) in three ways. Firstly, by investigating the historical basis of contemporary issues. Secondly, by attempting a summary and assessment of the totality of social relations which impinge upon the provision of housing at a particular period in history; and, thirdly, we have used a dialectical approach in order to understand the structure of that totality. We have, in other words, as we maintained in Chapter 1, attempted to "comprehend using facts and hypotheses, the whole of society (base and superstructure) as a dialectically structured system whose inherent contradictions lead to an historical process of motion and change".

By so doing we aimed to fulfil the aims expressed by Castells - to demystify the dominant ideology held by the dominant class and provide a source of reflection for opposing political tendencies - thereby challenging the "establishments new definition of the modern housing situation as a socialist disaster". The two problems requiring simultaneous

resolution were the basis of postmodernist ideology and culture and the socialist explanations of urbanism and urban planning which only went so far as to provide "an alternative but not a critique".

Although in the first chapter we attempted to 'complete' the various forms of interaction of the five levels identified by Castells, in the study itself the principles of dialectical analysis led to a more straightforward investigation of the interaction of the economic structure or base of society with political and cultural or superstructural elements. Our alternative to an ahistorical, deterministic and divisive "structuralist" analysis can be summarised by referring to the following simple interaction diagram and the resulting four types of analytical category.

	Base	Superstructure
Base	1	2
Superstructure	3	4

The first category (base only) deals with the relations within the economic structure which, in the instance studied here, was seen as dominated by finance capital. The second (Superstructure - Base) interaction deals with the effects of superstructural elements on the economic base i.e. the positive and influential role which the state, media, labour movement and ideas regarding housing design, housing construction and urban planning, had upon the cycle of production and consumption in general and on the legitimation of the social relations within this process. The third interaction (Base-Superstructure) deals with the influence of the base on the superstructure where, in our study, it is suggested that specific ideas and the synthesis of opposing ideas only achieved importance or a determining effect when the economy was either undergoing expansion or contraction. The fourth category (superstructure only) is concerned with the history of ideas and culture in itself as a relatively autonomous sphere of change and development. Part 1 of this study was concerned with the last category, whilst Part 2 with categories 1 to 3.

Several problems are attached to the more complex explanation suggested by this categorisation - (that is, relative to the 'structuralist' explanations). Those problems are intrinsic to our understanding of the phenomenon of deck housing. They are: the question of the selection of particular facts and the interconnection (often implicitly assumed) between these facts given the wealth of historical material from which to choose; the question of the specific interpretation to be made of the concept of totality given the enormous number of possible uses of the term; the question of the isolation of so-called opposites in society as a whole with the attendant possibilities of oversimplification and distortion and,

lastly, the question of the relativity of knowledge as social circumstances change.

In response to the first question it is clear that facts and theories, interpretations and presuppositions, interact and can develop so long as one explicitly recognises the importance of both as sources of knowledge and understanding. Hence, our view of the 1950's, for example (Chapter 4) was assembled not simply by the gathering of all information about street architecture and social life, nor by the omission of facts which did not suit our dialectical framework of analysis, but by the gradual evolution of facts and explanations for them. This would include noting where there was frequent reference to a factor by more than one person. In terms of the development of ideas and links between strands of thought during a particular period in time the attempt to follow up and only consider information if there was a direct connection between two people or institutions was soon abandoned in the belief that important connections and insights were produced in a context of general social movements and conditions; they were not produced only by personal contacts between specific individuals, for example, Young and Wilmott and the Smithsons who were interested in the East End of London at the same time.

It is therefore the case that, in the interests of advancing the theory put forward in this study, we require both additional facts to support theoretical insights (for example, regarding the importance of the steel industry for the unusual progress in the modernising of Sheffield) and further theoretical investigation to explain certain facts (for example regarding the inter and intra regional distribution of deckhousing). However, from our conversations with key individuals who were working in architectural design and have insight into this period of recent history, we feel that enough support and collaboration has been given to the approach and conclusions for us to have some confidence in them. Additionally, without considerably more intensive delving and interviewing, we feel that it would not be possible, if at all, to achieve any greater confidence in the conclusions. They will have to stand the test of possible future refutation or revision like any other scientific statement.

The second and third questions can be considered by referring to the open-ended nature of the concept of totality. As theory and empirical investigation continue (for example, into the economic causes of modernist and premodernist ideas or the other elements of the superstructure, such as the influence of American and Continental ideas in the post war period) so the particular interpretation of the 'whole' will inevitably widen.

Similarly, with regard to the danger of oversimplification in the interest of identifying opposing tendencies, with more research it may become apparent that there was a more complex evolution of, say, architectural and urban planning ideas. The principles of dialectical inquiry and science do not exclude that possibility.

Lastly the problem of the relativity of knowledge (saying that values and beliefs are relative to the social contexts of their production) raised the question of the researchers' own perceptions and insights as themselves being relative. Thus, when deciding whether or not Park Hill was or is a success or failure in any absolute sense (that is, apart from the description of the "self-fulfilling prophecy") this can only be made according to certain agreed criteria. The important factor is to note the purpose of the evaluation and whose interest is being considered. Thus Park Hill can only be defined as a success or a failure from the point of view of say, finance capital versus industrial capital or the county councils versus the county borough etc. For the former it was a success and for the latter a failure in comparison to the preferred option of building a suburban overspill estate.

Hence the answer to each of the four original questions regarding methodology and epistemology is that they cannot be resolved definitely but that confidence in any one can be increased by broadening the scope of the inquiry. We are of the view that explanation can be more comprehensive and embracing of all relevant information if undertaken within the basic framework we have established - that of a dialectical analysis which considers the interaction between basic and superstructural factors in an historical political and social context. In the final analysis a fruitful way forward for such an analysis is by direct confrontation of opposites in the manner that is encapsulated within this thesis whereby postmodernist ideology and the neo-marxist theory have been analysed and transcended.

Appendix 1. Analysis of the two plans for London, 1943 and 1944.

The population capacity of the County of London and Greater London was basically calculated under the following arrangement:

- (1) density within dwellings and site;
- (2) density of dwellings on the ground;
- (3) density of the whole neighbourhood; and
- (e) density of the "industrial boroughs".

We will discuss each section in turn (using imperial units).

(1) Density within the dwelling and the site.

For any group of people, the number, size and type of dwelling must correspond to the number, size and type of household. For example, the greater the number of large families, the consequent increase in the number of large houses.

Abercrombie and Forshaw based their analysis of the household sizes present in the London communities upon the 1931 national census figures (Table 3 Analysis II p 172 CLP) However, the population of the industrial boroughs of the East End and South London, the subject of comprehensive clearance and rebuilding, were not typical of the whole country. A more realistic figure was in fact provided in the Greater London Plan for purposes of calculating the housing needs of the new towns (Appendix 24 p 211, M.A.Abrams, Housing of the Working Classes, London 1937). We can therefore make the following comparison:

Table 1. Household Size and Number of Rooms

No. of persons in household	Percentage (1931 Census)	Percentage (1937 study)	No. of Rooms(1)
1	3.5	3.1	1
2	19.5	14.2	2
3	27.0	22.6	2/3
4	22.5	22.6	3/4
5 & 6	19.5	24.8	4/5
7+	8.0	12.7	6+
Total	100.0	100.0	-

(1) Abercrombie assumed an average of 1 p.p.room, with a maximum of 1.5
Also an average of 3.6 p p dwelling

The 1937 study clearly makes a substantial difference: there are nearly 10 per cent less people in households with 1 to 3 persons and 10 per cent more people in families of 5 or more persons. Hence if the 1931 census figure were used in calculating the needs of a working class population, overcrowding would occur - for every 100 people 324 rooms would be provided when 360 were in fact required - and a sizeable number of families would be

forced to live in the multi-storey housing supposedly provided only for the needs of the smaller households.

Two residential densities are considered in the plan for these areas; 100 ppa (250 ppha) and 136 ppa (340 ppha). Table I and II of the CLP (Appendix 3 p 171) suggests that at 100 ppa between 86.5 per cent and 80.6 per cent of a given population would be housed in two and three storey dwellings and at 136 ppa between 38.9 per cent and 38 per cent. Therefore at the preferred plan density of 100 ppa with 1931 census figures only people in 1 and 2 person households would be in multi-storey housing (8 storey in this case). However, since 136 ppa was the agreed density in the plans and the 1937 survey represented the actual breakdown of household sizes only those people in 5 or more person households would have been housed in two or three storey accommodation.

Another analysis of density and accommodation, (Table 5 p 174 CLP) considering this time only 2 and 3 storey houses at 130 ppa, suggests an even more depressing picture. On an actual site (Column C) only 24.5 per cent of the population could be in houses - possibly only those in the 6 or more person households.

However, were any of these based upon accurate estimates of the number of houses which could be included at these densities?

(2) Density of dwellings on the ground.

The number of dwellings that can be included upon any area of ground will depend upon the size of the rooms and dwelling itself and the distance between the buildings (which will depend in part upon daylight and sunlight standards). The plans used the following figures for the size of room and dwelling:

Table 2. Size of Dwellings and Rooms (sq. ft.)

<u>Dwelling</u>	<u>Ground</u>	<u>Frontage</u>	<u>Total</u>	<u>No.of</u>	<u>Area of</u>
			<u>Area</u>	<u>Rooms</u>	<u>Rooms</u>
(a) 3 bedroom 2 storey house	425	20	850	4	212.5
(b) 4 bedroom 2 storey house	489	22.8	978	5	196
(c) 3 bedroom 3 storey house	341	13	1023	4	256
(d) Average size of Flat	625	25	625	1.4	Variable

Source: Analysis 2 p 172 CLP

and the following for the distances between buildings:

Table 3 Distance between buildings (in feet)

<u>Dwelling</u>	<u>Front to Front</u>	<u>Back to Back</u>
(a) 2 storey houses (rear gardens)	54	80
(b) 3 storey houses (communal gardens)	90	75
(c) 3/4 storey flats	80	80
(d) 7 storey flats	150	150
(e) 10 storey flats	200	200

Source: Analysis 2 p 172 CLP

Clearly flats, and in particular the larger accommodation in multi-storey housing, had much the inferior standards relative to those of traditional two to four storey houses. Area per person was adequate for the typical house (in comparison with the 1949 Housing Manual range of 200-300 sq. ft/p) but for any flats above two room size there would appear to have been inadequate extra space allocated. Distance between blocks decreased as the height increased; hence at two storeys there was an average of 33.5 ft. at ten storeys an average of 20 ft. As the Architectural Review noted at the time (Vol. 96 1944, p 84):

"Twenty two-storey houses are to have 41,000 sq. ft. of land, while the same number of flats in a ten-storey block get a mere 6,200 sq. ft; two-storey houses are spaced at a distance apart equal to approximately four times their height, while ten storey blocks are grouped together (which is quite unnecessary) and spaced at a distance equal to barely twice their height, which gives a poor outlook and poor lighting conditions on the lower floors".

(3) Density in relation to the neighbourhood

Besides the demand on space from the dwellings themselves there are also the other parts of the neighbourhood required to support the population, namely schools, shops, public buildings, open space, roads and light industry; heavy industry is excluded. Additional space has to be allocated to account for difficulties with the existing topography and other site factors e.g. preservation of existing buildings. Forshaw and Abercrombie allowed 20 per cent of the site area for this kind of "inefficiency".

From the totalling up of all these demands upon the land, at various densities, the actual number and percentage of the original population who can remain can be calculated and, correspondingly, the number required to move out of the area decided upon. However the standards adopted for such a calculation are inconsistent and therefore questionable.

For example, in the "theoretical" (i.e. excluding 20 per cent inefficiency) neighbourhood developments (Ch. 5 figs 11 and 12, p 30 and 31 CLP) the space required for main roads, schools, shops and community buildings is taken as 25 per cent of the residential area. Thus for an area of constant size where the population and density is increasing the space remaining for neighbourhood needs actually falls (2.5 acres on the 100 ppa site, 1.8 acres on the 136 ppa site and 1.25 acres on the 200 ppa site). In the actual exercises on supposedly realistic sites the figure actually remains fairly constant (2.5 acres on the 100 ppa and 200 ppa sites and 2.8 acres on the 136 ppa site) Nevertheless it does not actually increase with population increase.

In a calculation made elsewhere (Appendix 1 C.I.F) there is an allowance of only 10 per cent of the residential area "including roads" for "public buildings" excluding open space. And in the examples already quoted for the development of a proper site the actual percentage of the residential area is not taken as 25 per cent but 25.4 per cent at 100 ppa, 33.4 per cent at 136 ppa and 50 per cent at 200 ppa.

Another investigation, this time into an area of London, uses much lower standards (Table 6 Appendix 3 pp 175-176 CLP). At 100 ppa non-residential land is 27.9 acres while the population of 5,954 will require 23.8 acres of open space. The 6.1 acres remaining is only 6.9 per cent of the residential area. At the other densities of 130 ppa, 160 ppa and 200 ppa open space needs actually exceed the non-residential land available. Hence standards must have been broken in an effort to retain the maximum population. Nevertheless at 130 ppa for example, there is still estimated to be a 23.4 per cent necessary reduction in population, while only 34 per cent of those remaining can occupy houses.

A further demand upon the land was that due to the 20 per cent "inefficiency" loss. In a separate calculation (Table 5 Appendix III p 174 CLP) the impact which this loss would have upon the population and housing type are calculated. For example at 130 ppa there is to be either a 15 per cent reduction in population or a decrease from 42 per cent to 24.5 per cent of the population in two and three storey houses.

Over and above all these neighbourhood calculations, the standards actually adopted in the plans (Ch.5 fig. 13 p 82 2.5 acres/1 ppa) are actually about half that found in other contemporary reports:

Table 4 Neighbourhood standards

<u>Land Use</u>	<u>Acres/1000 p pa</u>	<u>Source</u>
All Schools	3.75	199 Education Act
Community Buildings (including light industry)	1.4	Dudley Report
Main streets and car parking	1.0	"

Aside from these ideal standards the actual "squeeze" of demands, on standards, upon the land can be appreciated further by looking at the practical examples provided in the County of London plan. There are suggested layouts for Stepney/Poplar and Bermondsey (Chapter 7) with detailed analyses included (unlike other illustrations in the plan) These can be tabulated in the following manner including comparison with the "theoretical" scheme (Ch.5 Fig.12 p 81) of the same density:

Table 5 Neighbourhood Examples

<u>Land Use</u>	Stepney per cent of area	Bermondsey per cent of area	Fig 12(1) per cent area	Fig 12 (1) per cent area
Residential	43.2	44.4	55.7	51.7
Schools	4.0	3.4		
Hospitals	4.32	2.4		
Public Buildings	5.65	4.7		
Shops	1.53	1.6		
General Bus.	17.2	4.2		
Industrial Commerce	4.0	14.4		
Main Roads	7.05	5.6		
Total Non.Res.	43.75	34.3	30.4	28.4
Open Space	13.05	21.3	13.9	19.9

	<u>Acres</u>	<u>Acres</u>
Residential	184.3	522.0
Open Space	55.28	250.75
Non. Resid.	186.68	402.0
Population	24,900	70,932
Open Space Req'd.	99.6	283.7

Here we find a decrease in the percentage of residential land and an increase in non-residential excluding open space in comparison to Fig 12. The 17.2 acres of general business at Stepney and the 14.4 acres of industry and commerce at Bermondsey are the most obvious reasons. In total the non-residential area excluding open space, far exceeds the 25 per cent and 38.4 per cent of residential area in Figs. 12(1) and (11); the figures are 101 per cent at Stepney and 7 per cent at Bermondsey. Moreover the amount of open space is below standard by 44.5 per cent at Stepney and 11.6 per cent at Bermondsey, although the absolute percentages compare closely with Fig.12

The reduction in the residential area relative to the quantity provided in Fig 12 leads nevertheless to a correct residential density of 135.1 ppa at Stepney and 135.9 ppa at Bermondsey. At this density Stepney has 33.8 per cent and Bermondsey 22.1 per cent of its population in two storey houses. The majority of the housing stock are in the form of four storey flats (41.6 per cent in Stepney and 51.6 per cent in Bermondsey). Full details are included in the following table:

Table 6. Dwellings and population at Stepney and Bermondsey proposed neighbourhood units.

<u>Accommodation</u>	<u>Dwellings</u>		<u>Population</u>		<u>Neighbourhood</u>
	<u>No.</u>	<u>per cent</u>	<u>No.</u>	<u>per cent</u>	
2 storey houses	1486	22.3	8470	33.8	Stepney
2 " "	2655	15.1	15701	22.1	Bermondsey
3 storey flats	429	6.5	1372	5.5	Stepney
3 " "	1286	7.3	4148	5.9	Bermondsey
4 " "	2715	41.6	10359	41.9	Stepney
4 " "	9061	51.6	35191	49.6	Bermondsey
7 " "	562	3.2	1040	1.5	Stepney
10 " "	1480	22.3	3054	12.1	Bermondsey
Existing flats	470	7.8	1700	6.8	Stepney
" "	4014	22.8	14852	20.9	Bermondsey
Total	8574	100	24900	100	Stepney
"	17578	100	70932	100	Bermondsey

Another 45.1 per cent of the stock at Bermondsey are either in the form of ten storey flats or existing flats.

Other figures provided show that the overwhelming majority of the population in each neighbourhood (7) percent at Stepney and 90 per cent at Bermondsey required more than 1 bedroom accommodation; the former accords with the 1931 census and the latter nearer the 1937 study, at this end of the household scale. These two examples were also made on the assumption that there would be 1.85 people per room (a very high number) and a 55 per cent reduction in population at Bermondsey (no figure was given for Stepney.)

The general picture therefore is of an overwhelming majority of the population in overcrowded flatted housing especially in Bermondsey, with inadequate open space but a large amount of land given over to general business, industry and commerce and main roads. And this is after over half of the original population has been moved out of the area (at least in Bermondsey) and a complete new alien and regimented environment established which bears no resemblance to the original area except in name and location. A new urban village as attractive as the distant suburbs indeed!

(4) Density of the "industrial boroughs"

The total number to be moved out of London is calculated from a table on p.156, Appendix 1 (in the County of London Plan). Here fifteen boroughs are listed, fourteen of them to loose sufficient population to lower their density to 136 ppa, with a gross density which allows open space to be at a standard of 4 acres per 1,000 persons. The table is not, however, consistent or comprehensive in several ways. Firstly several boroughs or parts of boroughs which must have had an overcrowded population, including families, are excluded. Parts of Lambeth, Southwark, Bermondsey, Finsbury and Holborn plus the Cities of Westminster and London are included in the plan

TABLE 7

1	2	3	4	5	6	7	8	9	10	11	12
Density Zoning	No. of Factory Loss 1932-38 (2)	% Popn. Loss 1901-38 (3)	1938 Popn. (4)	Planned Popn. Redn. (5)	Resulting Popn. (6)	Appen. 2 1945 Popn. (7)	Popn. Redn. 1938-45 Col. 4-7 (8)	Popn. Redn. 1945 Col. 6-7 (9)	Popn. Recn. Col. 5 (10)	Popn. Redn. Col. 6 (11)	Popn. % Redn. Col. 7 (12)
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
battersea	3	-16.2	144,700	29,709	111,991	108,000	33,700	3,991	28.0	27.0	23.8
Bermondsey	7	-25.5	97,420	36,061	61,359	61,000	36,420	359	37.0	37.0	37.4
Bethnal Grn.	8	-28.4	92,910	45,363	47,547	48,000	44,910	+453	48.0	48.8	48.3
Camberwell	6	-14.2	222,400	30,285	192,115	181,000	44,400	11,115	21.0	13.6	18.6
Chelsea	-	-24.1	56,050	-	56,050	54,000	20,500	2,050	0	0	3.7
City of London	-	-66.0	91,800	-	91,800	7,000	21,800	2,180	0	0	23.7
Deptford	5	-13.5	95,460	22,803	72,657	69,000	26,460	3,657	33.0	23.9	27.7
Winsbury	19	-43.9	56,960	20,960	36,000	36,000	20,960	0	37.0	36.8	36.8
Mulham	4	+0.3	137,700	-	137,700	124,000	13,700	15,700	0	0	10.0
Greenwich	1	0	95,770	18,784	76,986	65,000	30,770	11,986	46.0	19.6	32.1
Hickney	21	-6.5	205,200	-	205,200	195,000	10,200	10,200	0	0	5.0
Hammersmith	11	+11.5	125,100	-	125,100	115,000	10,100	10,100	0	0	8.1
Hampstead	2	+10.4	90,480	-	90,480	92,000	+1,520	+1,520	0	0	+1.7
Holborn	7	-42.2	34,350	-	34,350	30,000	4,350	4,350	0	0	12.7
Islington	14	-12.7	292,300	48,340	243,960	227,000	65,300	16,960	39.0	16.5	22.3
Kensington	2	-1.4	174,100	-	174,100	168,000	6,100	6,100	0	0	3.5
Lambeth	4	-9.6	272,800	48,158	224,642	215,000	57,800	9,642	31.0	17.7	21.2
Lewisham	1	+79.6	229,000	-	229,000	238,000	+9,000	+9,000	0	0	+3.9
Paddington	5	-4.6	137,400	-	137,400	130,000	7,400	7,400	0	0	5.4
Poplar	8	-20.4	134,400	52,740	81,660	82,000	52,400	+440	40.0	39.2	39.0
St. Marylebone	1	-32.0	90,680	-	90,680	84,000	6,680	6,680	0	0	7.4
St. Pancras	21	-37.2	179,400	40,345	139,055	135,000	4,400	4,055	28.0	22.5	24.5
Shoreditch	15	-32.3	80,360	46,020	34,340	34,000	4,600	340	58.0	57.3	57.7
Southwark	9	-29.5	145,300	65,070	80,230	80,000	65,300	230	45.0	44.8	44.9
St. John	12	-32.9	200,500	106,230	94,270	94,000	106,500	270	53.0	53.0	53.1
Stoke Newington	4	-1.5	50,480	-	50,480	50,000	480	480	0	0	1.0
Strawinsk	4	+46.6	340,100	+16,700	341,970	327,000	13,100	14,970	+140	+0.6	3.9
St. Pancras	9	-32.0	124,400	-	124,400	122,000	2,400	2,400	0	0	1.9
St. Dunstons	-	+28.8	150,900	-	150,900	155,000	+4,100	+4,100	0	0	+2.7
St. George	-	-	332,600	67,848	314,752	332,600	73,600	12,932	39.0	15.0	18.1

in the 200 ppa zone, which is given over to business, main roads and single or two person households only living in multi-storey housing only. Also within the 136 ppa zone the boroughs of Kensington, Paddington, St. Marylebon and Chelsea are not mentioned, as if there were no overcrowding or inadequate amenities in these areas and no plans for new roads which would inevitably displace some of the population. The fourteen boroughs (or parts of those boroughs) have been selected without any explanation; there are no details about the severity of the problems and the consequent scale of migration of population and employment out of the area.

We have attempted to rectify this omission by the inclusion of Table 7. Here the figures for factory and population loss are included, the population of the boroughs in 1938, the planned population reduction and the resulting population in 1945 from Table 2 Appendix 2), which presumably includes an allowance for war-time reductions. The percentage population loss is given in the final three columns, the planned reduction in columns 10 and 11 and actual reduction in column 12.

From this table it is possible to see the overall inconsistency of the decentralisation proposals. For example a large and unplanned population loss is somehow assumed from the City of London (23.7 per cent), Fulham (10 per cent) Hammersmith (8.1 per cent) Holborn (17.7 per cent) and St. Marylebone (7.4 per cent) with additional substantial losses from the original boroughs suitable for redevelopment that is, Camberwell, Greenwich, Islington and Lambeth. This leaves a total of 125,932 people above that envisaged in the Table of Appendix 1 (i.e. a reduction of 736,800 and a net 610,868) for whom there are no plans of resettlement. But how are these reductions to be justified given past trends? Fulham and Hammersmith gained in population between 1901 - 38 while the City of London, Holborn and St. Marylebone were subject to exceptional reductions, in excess of those predicted. Others were to be the subject of very little decline up to 1945 although they suffered notable losses up to 1938 e.g. Chelsea and Finsbury.

Overall there appears to have been no necessary connection between the zoning, the factory and population loss up to 1938 and the planned and unplanned population loss up to 1945. The selection of the fourteen boroughs and parts of burroughs therefore appears arbitrary.

The second inconsistency in the original table (Appendix 1 p 156) relates to standards. Hence the 10 per cent allowance for "public buildings" is clearly inadequate, there is no mention of the 20 per cent allowance for

"inefficiency" and the open space needs are calculated from the lower 1945 population level (i.e. the 125,932 less population in Table 2 Appendix 2 than in the decentralisation table of Appendix 1 means that 503 less acres would be required for London) instead of the "proposed population" in the original table.

The end result of the planned population reduction of 610,868 from the fourteen boroughs was a gross density of 54.3 ppa and for the whole County of London 46.1 ppa. This had fallen to 44.4 ppa in 1945 if, in view of the overcrowding of the boroughs which the plan proposals have suggested was inevitable, the gross density of the capital were reduced from the 1938 figure of 54.3 ppa to 40 ppa (the 1952 MHLC study *The Density of Residential areas* recommended between 30 ppa and 40 ppa for a neighbourhood unit) the population in need of a home in the outlying areas would have been 1,068,000 (26 per cent of the population and not 15 per cent) a 43 per cent increase on the original figure or over 50 per cent, if the proposed decentralisation were to be only half a million (which the County of London plan assumed for the period after 1945).

The Greater London Plan

The second of the two plans for the capital also included some proposals for population loss, this time from the so called Inner Urban Ring. This included twenty two local authorities near the boundary with the County, including West Ham, East Ham, Leyton, Walthamstow, Tottenham, Willsden and Croydon. The total suggested for dispersal was 415,668 (69 per cent from the seven main authorities). If however all these areas were redeveloped to a gross density of 40 ppa (i.e. net 75 ppa, see Appendix 7 p 192, and assuming 137,780 total from West Ham and 71,994 from Willsden) then an additional 129,175 (or 31 per cent) would have to be moved out; a total of 544,843. The need for further decentralisation over and above that recommended, is illustrated in the two examples included in the plan for redevelopment at West Ham (see chapter 11). Here, in the first case, industry once more makes a large claim upon the land to the loss of open space provision; in the second case 25 per cent of the population are in ten storey flats and a low percentage (relative to the first case) given over to "other uses" (i.e. 23 per cent of residential land in comparison to 35 per cent).

The total number of "regrouped population" given in the plan is 1,033,000 (the figure for the GLP upped to 618,000). We would suggest from the foregoing analysis that a more realistic figure would have been 1,614,643 (say 1,615,000) or 56 per cent more than the plans suggested; approximately

16 per cent and not 10 per cent of the total Greater London population in 1938 of 9,956,000. And according to our calculations Abercrombie's conclusions, in the second plan regarding the number who would be housed in multi storey housing was also thereby seriously misleading. He maintained:

"It cannot be said, therefore, that the effect of these two plans will be to turn London from a city of small houses so characteristic of this country, into a city of flats on the continental model". (P.175)

This statement was based upon the following table (Table A p 175 Ch.12 GLP)

Table 8 Proposed provision of Houses and Flats under the County of London and Greater London plans

<u>Greater London Plan</u>	<u>Population in Houses</u>	<u>Population in Flats</u>
1 Population proposed between 30 and 75 per acre plus that decentralised from the boroughs with a density over 100 ppa.	5,935,000	none
2 Population proposed in boroughs which will be reduced to a max. of 100 per acre, 721,000 at 25 per cent in flats, 75 per cent in houses.	541,000	180,000
<u>Country of London Plan</u>		
3 Population proposed in boroughs which will be reduced to a max. of 136 per acre, 900,000 at 67 per cent flats and 33 per cent houses.	297,000	603,000
4 Population proposed in boroughs allowed a max. of 100 per acre 1,800,000; 25 per cent redevelopment of which half might be in flats.	1,575,000	225,000
5 Population proposed in West End boroughs, 600,000; 90 per cent redevelopment at 200 per acre	60,000	540,000
TOTALS:	8,408,000	1,548,000

We are not able to give an alternative set of numbers for the population in flats because the congestion need not find expression in multi storey housing - it could also lead to deficiencies of open space and community needs. However, it can be appreciated that if groups (2) and (3) were forced to place all their population in flats, as one way out of this problem for inadequate supply of land, 2,386,000 people would not be in houses, 24 per cent instead of 15.5 per cent or 48 per cent in the County of London instead of 39 per cent i.e. about half the population of London.

Appendix 2.Deck Housing in the United Kingdom

Local Authority and Estate	Total No. of Dwellings and bedspaces		Date from design to completion
<u>Liverpool</u>			
Netherley	1,812		1964-71
Belle Vale	461		1970-74
Gleave Street			1967-70
<u>Manchester</u>			
Hulme 2	420	1,512	1965-68
Hulme 3	1,301	4,658	1965-70
Hulme 4	424	1,526	1965-69
Hulme 5	918	3,300	1968-71
Moss Side	900	3,002	1968-71
Gibson Street	591		1965-71
Wellington Street	844		1965-71
Turkey Lane	740	2,870	1965-71
<u>Oldham</u>			
St. Mary's I	400	1,778	1964-67
" II	266		
" III	700		
Sholver	411		
Crete Street	290		
Priarose Street	290		
<u>Rochdale</u>			
Ashfield Valley	1,004	3,526	
Freehold	414	900	
Falinge	529	1,266	
<u>Blackburn</u>			
Queens Park	369	1,410	
<u>Burnley</u>			
Trafalgar Park	392		1967-71
<u>Salford</u>			
Brindleheath	245	878	1969-81
<u>Runcorn</u>			
Castlefields	1,379	5,000	1968-71
Southgate	1,355	4,500	1967-75
<u>Bolton</u>			
Skagen Court	239		
<u>Macclesfield</u>			
Victoria Park	503	2,078	1967-69

Sefton

Bootle Village 186 858

Knowsley

Tower Hill 611 1966-73
Whitefield Square 1970-74

Wirral

Exmouth Street 1969-73

Preston

Russell Street 1957-61

Sheffield

Park Hill 992 1954-61
Hyde Park 1,169 1961-65
Kelvin 945 1964-70
Broomhall 653 1967-69

Rotherham

St. Ann's 780 1,042 1966-68
Oak Hill 607 1,915 1969-74

Leeds

Hunslet Grange 1,249 1967-70

Pudsey

Claremont 135 365 1968-70

Hull

Thornton/Area 17 558 2,106 1968-70
Bransholme 627 2,501 1969-71

Newcastle

Gloucester St. I 174 605
Gloucester St. II
Shieldfield
Melbourne St. I 151
Melbourne St. II 258 887 1974-77
Blakelaw

Gateshead

Felling

South Tyneside

School Street 854 3,536 1966-71
Hebburn NewTown 339 1,356 1971-75

Sunderland

Hammerton St. 208 708 1965-68
Edith Avenue 673 2,207 1964-66

Sedgefield

Bessener Park 557

Hartlepool

Flanborough Walk	73	140	
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North Tyneside

Killingworth	740	3,292	1968-73
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Leicester

St. Andrews	198	594	1968-71
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Nottingham

Balloon Woods	647	2,387	1966-68
Kildare Road	201	743	1966-69
Hyson Green	697		1967-70
Canton Avenue	50	160	1967-71
Radford	520		1967-70
Old Basford	822		1968-72

Westminster

Lisson Green	1,467	5,532	1965-75
Brunel	417	1,203	1967-74

Kensington and Chelsea

World's End	340		1963-77
Lancaster West	51		

Hammersmith

Cheeseman's Terr.	287		1970-75
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Lambeth

Stockwell Park	893	3,400	1968-72
Flaxman Road	261	938	1968-72
Angell Town	731	2,707	1969-72
Longborough Pk.	693	2,536	1972-80

Southwark

North Peckham	1,401	5,500	1965-73
Aylesbury	2,400	8,000	1967-71
Dawson Heights	296	1,232	1968-72

Greenwich

Cardwell Est.	268	1,023	1965-68
Connaught Gdns.	330		1965-68
Glyndon Est.	188		1965-68

Tower Hamlets

Lefevre Road	567	2,318	1967-70
Tredgar Road	608	2,224	1973-76
Manchester Road	72	283	1965-70

Islington

Packington St.	538		1965-68
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Camden

Nendling	120		1963-67
Baeton			1963-67
Fleet Road	69	255	
Gresby			
Webheath	146	297	

Brent

Chalkhill	1,263	4,500	
Stonebridge			
Kilburn Sq.			
Malvern Rd.			
Harringey			
<u>Harringey</u>			
Broadwater Fm.	1,063		1965-69
Park Lane	255		
Fenbury Rd.	186		1965-70
Pekham Rd.			
Uplands Rd.	82	205	1965-68
Tiverton Rd.			
Braemar Rd.			

Waltham Forest

Catthall Rd.	850		1963-75
Holywood			

Sutton

Benhill			
Roundshaw	1,400		

G.I.C.

Thamesmead	4,500		1967-73
Osprey Est.	167	524	1964-69
Kingshold	712	2,486	
Robin Hood Gardens	214	698	1963-72
Shanklin			

London

Ward Royal	279	781	1966-69
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Southampton

Pleasant View	124	558	1966-69
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Portsmouth

Hyde Park Road	113	526	1965-67
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Cambridge

Roseford Road	682		1964-67
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Norwich

Vauxhall St.	212	668	1967-69
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<u>Coventry</u>			
Sponend	158	711	
<u>Birmingham</u>			
Islington Row	216	722	1967-72
<u>Wolverhampton</u>			
Heath Town	1,765	4,574	1966-69
Park Village	184	(1,000)	1968-70
<u>Walspool</u>			
Oldford	208		
<u>Flint</u>			
	(50)		
<u>Wrexham</u>			
Lighttown	212	808	
<u>Glasgow</u>			
Woodside	543		
A, B & D			
Balgrayhill	557		1965-68
Fernibank	199		
Greenhill Ct.	135		
St. Andrew Drive	320		
Hill park	210		
Darnley	1,338		1970-76
Hutchilton town 'A'	759		
<u>Edinburgh</u>			
West Pilton 'A'	515	1,186	1965-67
West Pilton 'B'	585	1,487	1965-67
Carnegie Court	65		1964-66
Leith Fort	157	510	1958-63
<u>Dundee</u>			
Whitefield	2,469		1968-72
Maxwell Town			
<u>Belfast</u>			
DUCS	700	7,634	
Tullyconett	120		
<u>Londonderry</u>			
Rossville St.	178		
<u>Cumbernauld</u>			

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Examples of Construction Costs

<u>Estate</u>	<u>£m</u>	<u>No. of dwellings</u>	
Netherley	7.5	1,812	
Hulme 5	4.5	918	
Wellington St.	4.0	844	
Turkey Lane	3.4	740	
St. Mary's	1.75	400	
Queen's Park	2.4	369	
Trafalgar Park	1.8	392	
Brindleheath	1.0	245	
Southgate	12.5	1,355	
Victoria Park	3.25	503	
St. Ann's	1.1	780	
Oak Hill	2.2	607	
Hunslet Grange	4.4	1,249	
School St.	3.5	854	
Hebbum New Town	3.0	339	
Hahnemann Street.	0.9	208	Total Cost £152.65m
Edith Ave.	2.0	673	
Bessener Park	3.75	557	Total number of
Flanborough Walk	0.5	73	Dwellings 37,918
Balloon Woods	2.5	647	
Kildare Road	0.7	201	Approximate Total
Hyson Green	2.8	697	Cost of 75,000
Radford	2.1	520	dwellings £300m
Old Basford	3.4	822	1961-1975
Lisson Green	13.38	1,467	
Cheesmans Terr.	3.0	287	
North Peckham	8.5	1,401	
Aylesbury	1	2,400	
Dawson Heights	1.6	796	
Lefevre Road	3.0	567	
Tredegar Road	6.4	608	
Packington St.	.5	538	
Wendling	0.9	120	
Chalkhill	5.72	1,763	
Broadwater Fm.	6.3	1,063	
Park Lane	1.1	255	
Warley Royal	1.3	279	
West Pigeon	3.5	1,100	
Whitefield	8.5	2,469	

Construction: Examples of Companies and EstatesTaylor Woodrow Anglica Ltd.

Lisson Green, Broadwater Farm (approx. 2,530)

Laing

Aylesbury, Cardwell Estate, Lefevre Road, Tredegar Road, Manchester Road, Park Lane, Radford, St. Mary I, II, III, Queen's Park, Skager Court, Sheildfield, Melbourne St. I, Blakelaw, Felling Halnham St, Divis, Tullycornell, Rosville St., Victoria Park (approx. 9,000)

Fates

Packington St. Roundshaw, Ward Royal, Heath Town (approx. 3,480)

Cubitts

World's End, Thamesmead (approx. 4,800)

Gleeson

Cheesmons Terrace, Wendling (approx. 400)

Direct Labour

North Peckham (with Bovis) Connaught, Clyndon, Park Hill, Hyde Park, Kelvin, Balgrayhill, Darnley (part) (approx. 7,500)

Concrete Ltd. (Bison Wall Frame)

Chalkhill, Stonebridge, Malvern Road, Oldford, Gibson St. Sholver, Bessemer Park, Flanborough Walk (approx. 3,500)

Shepherd Ltd.

YOG, Vauxhall St. Oak Hill (approx 4,000)

Unit Construction Ltd. (Comms)

Turkey Lane, Netherley, Southgate, Tower Hill, Whitefield Sq. (approx 4,500)

Parkinson

St. Ann's, Gleave St. (approx 1,000)

Selnie Nicholls

Castlefields (approx 2,000)

Crudens (Skane)

Ashfield Valley, Killingworth, School St. Whitefield (approx. 5,000)

Wimpey

Netherley, Trafalgar Park (approx. 1,000)

Gilbert Ash

Hutcheson Town "E" (approx. 800)

Most of the remaining estates were built by smaller or more local firms. Clearly no one developer built a disproportionate amount of deck housing except Laing.

Other details relating to the estates and their construction were extremely varied. This includes:

- Number of parking spaces (usually 100 per cent)
- gross and net density (usually between 100 and 200 ppa)
- range of accommodation (usually between 50 and 90 per cent 3+ h/h's)
- neighbourhood facilities
- layout and landscaping ("spine"/wall or country ad)
- room and dwelling arrangement
- standard of accommodation (balconies, heating etc.)
- width of deck and extent
- size of site and buildings
- materials (concrete or block)
- remedial work (defensible space, other alterations and improvements)

There are, in fact, 140 very different estates. In many respects the only feature they had in common was the deck type of access - and even this was difficult to separate on occasion from gallery access or a completely new upper ground level access.

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Introduction and Acknowledgements

- (1) See Don, M. 'The Jungle Crumbles' New Statesman 29th Jan. 1982.
Also BBC TV Newsnight 30th Nov. 1981 and Nationwide 19th Jan. 1982.

Chapter 1

- (1) After Harvey D. Social Justice and the City, Edward Arnold 1973
Ch. 4 and especially pages 150-152.
- (2) In regard to this study relevant works by this 'status quo'
grouping are Sutcliffe, A. (ed) Multi-storey living: The British
Working Class Experience, London Groom Helm 1974; Ratzel, A.
Model Estate: Planned Housing at Quarry Hill, Leeds, London,
Groom Helm 1974 and King, A.D. (ed) Buildings and Society Routledge
Kegan Paul 1980.
- (3) See Watkin D. Morality and Architecture Clarendon Press 1977,
Jeroka, C. The Language of Post Modern Architecture Academy Press 1977
Hughes, R. The Shock of the New Part IV 'Architecture and the Utopian
Dream' BBC 2 1980 Published in The Listener 16th Nov. 1980 and,
above all, (though not explicitly 'counter-revolutionary')
Booker, C. The City of Towers BBC TV 19th Feb. 1979
- (4) The most popular text putting forward this view is Jane Jacobs
The Death and Life of Great American Cities originally published
in 1961 and first published in this country in 1962 by Jonathan Cape.
- (5) Booker's basic thesis can be found in "Physical Planning: Another
Illusion Shattered" in National Westminster Bank Quarterly Review
Feb. 1977 pp.56-64. See also The Neophiliacs Fontana 1970
- (6) Capital Vol. 1 Penguin 1976 pp 811-812 Originally published 1867
- (7) Thompson, L.F. "The Poverty of Theory: or Orrery of Errors" published
in The Poverty of Theory and other Essays Merlin Press 1980
- (8) For details of the debate regarding the nature of the 'totality' and
'dialectics' see Engels, F. Anti-Duhring (1876-8) and Dialectics
of Nature (1873-83) Callinos, A. Aldhuser's Marxism Pluto Press 1978,
Marouse, M. Reason and Revolution (1945) and Albert, H. The Myth of
Total Reason in Giddens, A. (ed) Positivism and Sociology Heinemann 1974
- (9) For a general introduction to the ideas of Castells see Saunders P.
Social Theory and the Urban Question Hutchinson 1981, Chs.5 to 8. Also
Harloe, M. (ed) Captive Cities London J.Wiley 1977 and Pickvance, C.(ed)
Urban Sociology: Critical Essays, London. Tavistock 1976
- (10) The Urban Question Edward Arnold 1977 p. 2
- (11) op cit. p.97
- (12) The Condition of the Working Class in England Panther 1976 pp.57-58
- (13) George, H. Progress and Poverty (1885), Veblen, T. The Theory of the
Leisure Class (1898) and Bellamy, E. Looking Backwards (1888)
- (14) An interesting example is Kenneth Campbell, member of the Communist
Party and employed by the LCC/GLC from 1949 to 1974 as a leading
housing architect.
- (15) see Saunders op. cit. p.169
- (16) *ibid.* p.185
- (17) *ibid.* Ch.5

Notes. Chapter 1

- (18) Harvey op. cit. pp. 302-313
- (19) Quoted as the Preface to Ambrose, P. and Colenutt, B. The Property Machine Penguin 1975.
- (20) Shonfield, A. Modern Capitalism Oxford University Press 1969 Part 1.
- (21) "British Housing Policy and the House Building Industry in Capital and Class Spring 1978 pp 78-99
- (22) Castells 1977 op. cit. p.221
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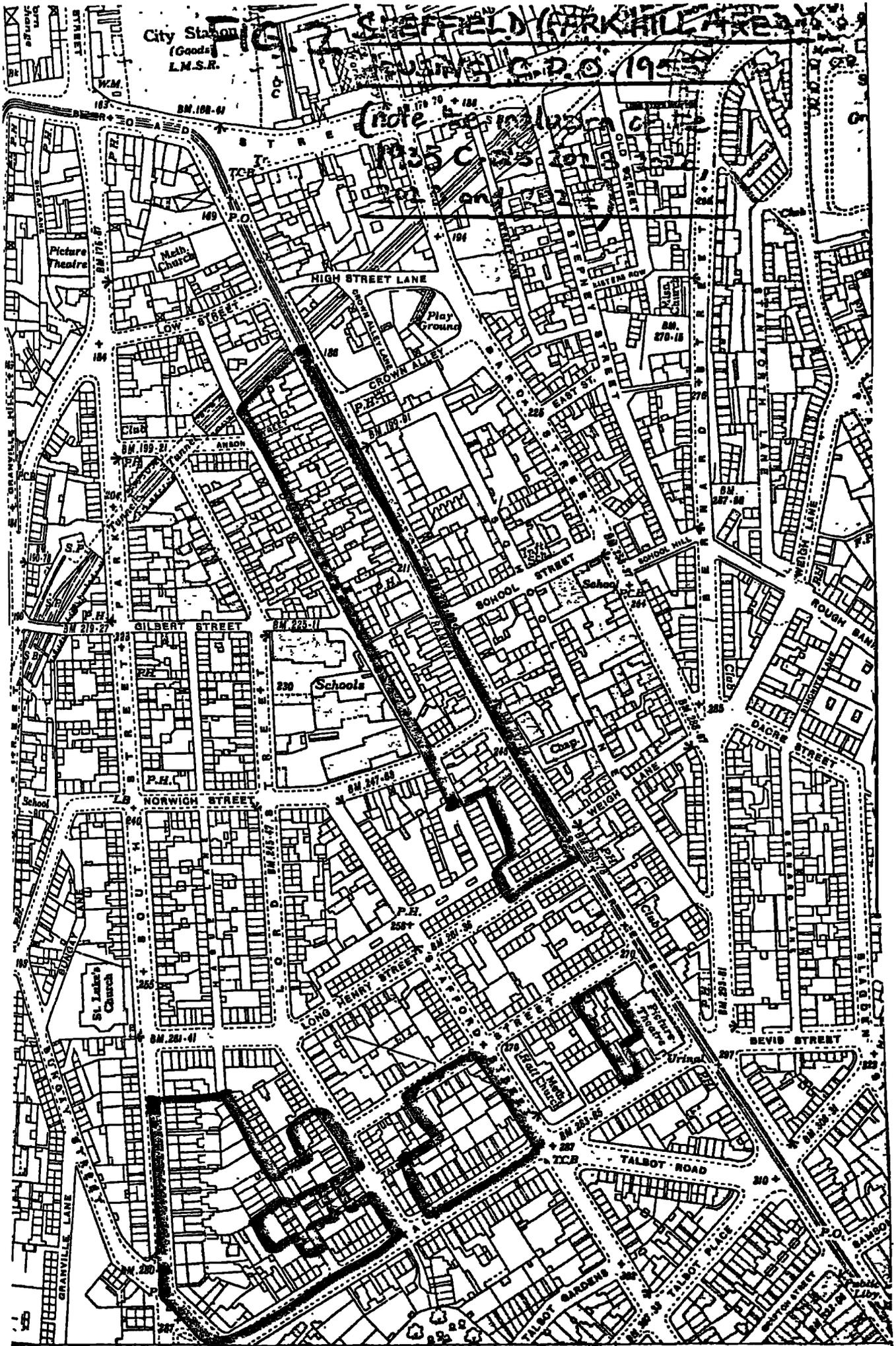
FIG. 1. PARK SLIGHT CLEARANCE AREA 1935 & 1936

C.P.O.'s & C.O.'s - scheduled areas
 C.P.O. additional areas

Areas to be cleared from the clearance area for historical/commercial uses (see below for details)

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- (34) AR August 1967 The whole issue deals with "Habitat - 67".
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- (74) AJ 26.1 .77 pp.795-798
- (75) Lambeth Inner Area Study IAS/LA/10 1977
- (76) See the second half of this chapter for details.
- (77) New Society Vol. 26 1973 pp.154-156 See also IS vol. 26 p.421 for Mrs. Womersley's criticisms of Banham's thesis.
- (78) BL Nov. 1972 "Sheffield Revisited" pp.557-561
- (79) Design Bulletin No. 25
- (80) Bryant D and Knowles D "Social Contacts on Ryde Park Estate, Sheffield" Town Planning Review vol.145 1974 See also "Sociability and Internal Streets" AJ vol. 159 1974 p.1067
- (81) Interim Report. Manchester School of Architecture, University of Manchester 1974. J.L.Womersley acted as consultant to the research and report.
- (82) op. cit.
- (83) New Society 29.8.74 pp.5480519
- (84) "The Corporation and the People" The Listener 30.5.74 pp.694-696 (quote from p.695
- (85) ibid. p.696
- (86) ibid.
- (87) BD 6.6.75 p.3 and 20.2.76 and HR June 1975 pp.84-87
- (88) Granada production 1978 March
- (89) New Statesman 29.1.82, BBC Newsnight 3.11.81 and Nationwide 19.1.82
- (90) Sunday Times 6.2.77
- (91) AR Nov. 1977 p.271
- (92) Report of the Working Party on High Density Flats 1976 Policy Committee Sheffield City Council.
- (93) AR Jan.1970 Letter from Reyner Banham p.2

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- (94) Lawson, B. Architectural Press 1980 p.168
- (95) A Broken Wave: The Rebuilding of England 1940-1980 Allen Lane 1981
- (96) *ibid.* p.204
- (97) *ibid.* p.207.
- (98) *ibid.* p.208
- (99) "The architects' dream that turned city life into a nightmare"
Daily Telegraph 8.10.81 p.18
- (100) MILG/DOL Housing Statistics (1966-72) and Housing and Construction Statistics(1972-80)
- (101) See Table 10, Housing Statistics 1971
- | | (1) | (2) | (3) | (4) |
|---------|-------------------|---------------------|---------------------|---------------------------|
| | <u>5-9 storey</u> | <u>10-14 storey</u> | <u>15-19 storey</u> | <u>20 storey and over</u> |
| 1960-64 | 29,231 | 43,685 | 32,265 | 9,436 |
| 1965-70 | 71,272 | 35,925 | 30,380 | 28,564 |
- From 1960-64 (1) formed 25 per cent of all multi-storey housing over five storeys; from 1965-70 41 percent.
- (102) Homes for Today and Tomorrow 1961 paras. 122 to 129
- (103) See Residential Development and Building Form. This report was, at first, presented to the Planning Committee. Unfortunately the Housing Committee was committed to building the high rise dwellings advocated by Ronald Bradbury. A conflict between the two ensued until the mid 1960's.
- (104) See part 2. Chapters Four and Six
- (105) Netherley Development 1. W.G.Bor p.19
- (106) Netherley Development 2. 1965 p.9
- (107) Belle Vale Housing Design Proposals Shankland Cox and Associates. Oct.1967
- (108) para. 5.7
- (109) para. 4.8
- (110) Liverpool Echo 25.5.79
- (111) *ibid.*
- (112) October 1979. The decision was taken by the City Council.
- (113) Nov. 12th 1977 "How they brought hope to a high-rise hell"
- (114) Mr.Anthony Steen. Hansard No.1139 18th May - 25th May 1979 Cols.1452-1464
- (115) A New Community: The Redevelopment of Hulme. Manchester City Council 1965
- (116) Town Planning Review Oct.1970 pp.354-356 "Grain Theory in Practice"
- (117) Manchester Evening News 14.11.75
- (118) Manchester Evening News 11.3.75
- (119) Publicity Pamphlet, no date. "Manchester: Centre of a Region (probably early 1970's)
- (120) *ibid.* for details
- (121) Municipal and Public Services Journal 19.1.68 p.149
- (122) "What Should our New houses be like?" Housing Review March/April 1967 p.167

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- (123) There were innumerable articles in the local press. See, for example, the Elackburn Times 21.12.73, 18.2.73, 4.3.77, 25.4.77, 7.5.77, 8.7.77, 11.7.77 and 27.7.77
- (124) Evening Chronicle, Oldham 7.1.80 p.12
- (125) Manchester Evening News 30.8.79
- (126) Pamphlet for new residents published by the Housing Department.
- (127) *ibid.*
- (128) Personal communication from the Director of the Housing Department.
- (129) AJ 8.6.61 "Rehousing at Preston" pp 845-850
- (130) *ibid.* p.845
- (131) *ibid.* "
- (132) see ref. (92)
- (133) Yorkshire Evening Post 27.3.68
- (134) See Community Action Nos. 14, 24, 27, 28
- (135) Yorkshire Evening Post 15.5.78
- (136) Evening Post 28.1.75 and 23.1.75
- (137) Hull Daily Mail 16.8.80
- (138) Sheffield Telegraph 11.11.68, 12.11.68, 14.11.68, 19.11.68, 28.11.68 and 20.12.68
- (139) Housing: A Review of current problems and policies Vol.1. Nov. '64 Report of the City Planning Officer No. 17
- (140) Kalpass, A "Professionalism and the role of architects in local authority housing" RIBA J June 1975 pp.67-29
- (141) The Future of Byker, Newcastle City Council 1969
- (142) Evening Chronicle 10.11.78
- (143) Town Map. No.16 (Spennymore) written Analysis 1967.
- (144) A special report was produced in 1970 for all three interested parties by the Killingworth Design Group.
- (145) Taylor, P.J. " 'Difficult to let', 'difficult-to-live-in' and sometimes 'difficult-to-get-out-of': an essay on the provision of council housing, with special reference to Killingworth" Environment and Planning 1979 Vol.11 pp 1305-1320
- (146) Leicester Mercury 15.11.69 See also 26.11.69, 17.12.69, 13.12.69 and 31.12.69
- (147) Leicester Inner Area Programme. Tower Street/Walnut Street Area Review. First Report July 1978 p.27
- (148) St. Ann's: Towards Renewal Nottingham City Council City Planning Officer May 1967
- (149) AJ 6.11.63 pp 944-945
- (150) White City Development Prepared by the Borough Architect and Planning Officer, London Borough of Hammersmith Nov.1967 p.10
- (151) AJ 20.4.77
- (152) AJ 8.9.76 pp 441-455
- (153) AJ 9.9.70 pp 578-579

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- (154) Personal communication
- (155) AJ 27.5.70 pp.1288-1290
- (156) AJ 25.4.73 pp.976-995
- (157) AJ 11.10.72 and 18.10.72 pp 817-831 and 879-896 respectively.
Quotation from p.886
- (158) BD 13.8.71, 29.10.71 and 1.6.73
- (159) Guy, F "The Lessons of Cannock Lavn" in BD 7.11.76
- (160) Municipal and Public Services Journal 10.2.67 pp 374-376
- (161) AJ 29.7.64 pp 259-260
- (162) AJ 10.4.68 pp 753-765
- (163) AJ 7.4.65
- (164) Municipal and Public Services Journal 3.5.68
- (165) Bryant, R. The Damness Monster Scottish Council of Social Services 1979
- (166) BD 22.10.76 and 9.9.77
- (167) Press release by the Northern Ireland Housing Executive 17.1.80

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- (1) See Reshaping a City House of Grant 1959
- (2) See Smith, R. "Multi-dwelling Building in Scotland 1750-1970. A study based on housing in the Clyde Valley" in Sutcliffe, A. (ed) Multi-Storey living: The British Working Class Experience Croom Helm 1974 and Garside, F.L. "Local Authority Policy Making and High Density Housing in London 1945-70". Paper presented at the Planning History Group Conference on High Density Housing 18.9.81
- (3) Youngson, A.J. Britain's Economic Growth 1921-1966 1967 p.217 quoted in Pollard, J. The Development of the British Economy Arnold 1969 p.419
- (4) Modern Capitalism OUP 1969 (originally published 1965) p.98
- (5) Pounds, A.J.G. The Geography of Iron and Steel Hutchinson Univ. Liby. 1971 p.00
- (6) Development in the Iron and Steel Industry. Iron and Steel Board 1961 Ch.14 and p.101
- (7) Pollard op. cit. pp.419-421 for evidence of Sheffield's concern about the condition of the steel industry see Hansard 2.7.51 Mr.J.B.Hynd 128/2/52 cols. 1438 and 1439 and Sheffield Telegraph 14.1.52, 16.1.52, 19.1.52, 23.2.52, 5.3.52 and 1.4.52. Also the Yorkshire Post Trade Review January 1956.
- (8) See AJ 23.0.61 pp.271-286, 21.7.65 pp.157-170 RIBA J July 1963 pp.281-286 and AL Sept. 1961 p.381-415
- (9) The Listener 6.4.61 pp.605-607
- (10) "Sheffield Experiments" The Economist Vol.204 1962, pp.937-938
- (11) "The Vertical Community" New Statesman 30.6.61
- (12) MUG Town Centres: Approach to Renewal Planning Bulletin No. 1 HMSO 1962
- (13) See Hawson, H.Keeble The Growth of a City 1893-1926 J.W.Northend Ltd. 1968
- (14) See Abercrombie, P. "Sheffield under the Town Planning Act" Town Planning Review vol.3 No. 1 1912 pp.125-132 and Hawson op. cit.
- (15) McDougall, G. "The History of Town Planning Revisited" Journal of International Urban and Regional Research 1977 pp.3610378, p.370
- (16) *ibid.* p.306 quoted from Parliamentary Debates, House of Commons 1909 vol. 3 col.744 HMSO
- (17) See Drummond, J.M. The Finance of Local Government 1964 pp.108-115 George Allen and Unwin.
- (18) Park Hill Redevelopment Proposals Sheffield March 1955 Report of the City Treasurer Table "B". Reproduced as Table 5.
- (19) Hansard 14th March 1951 col. 1619
- (20) For details see the Sheffield Telegraph 5.3.51, 26.4.51, 27.4.51, 4.5.51 and 11.5.51
- (21) For details see the correspondence etc. regarding the Sheffield Extension Bill in the Archives section of the Sheffield City Library.
- (22) 10.7.51 "Report from the Select Committee; that it is not expedient to proceed further the Bill: Read and ordered to be on the table" (having been brought from the House of Commons 13.5.61). The boundaries of county boroughs could only be extended by Private Bill and all such Bills had to be passed by both Houses of Parliament i.e. extension was "ultra vires".

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- (24) Hansard 22.4.52 2nd Reading of the Housing Bill Vol.499 cols.225-226
- (25) Merrett, S. State Housing in Britain RJP 1979 Appendix 2
- (26) Hansard vol. 546 1955-56 2nd Reading of the Housing Subsidies Bill 17.11.55 Col.817
- (27) p.38 Building by Local Authorities op. cit.
- (28) Houses 1953 H.50 1953 p.1
- (29) *ibid.*
- (30) para. 93 p.53 *ibid.*
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- (32) Hansard vol. 499 1951-52 22.4.52 col. 274-275
- (33) houses 1953 op. cit. p.11
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- (37) Cullingworth, J.B. Town and Country Planning in England and Wales George Allen and Unwin Ltd. 1970 pp.257-258
- (38) Stone, P.A. "The Economics of Housing and Urban Development" Journal of the Royal Statistical Society Vol.CXXII Part 4 1959 pp.18-477
- (39) Cleeve Barr op. cit. p.138
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- (48) Hampton, W. Democracy and Community London Oxford University Press 1970. Appendix B.
- (49) London, Victor Gollancz Ltd. 1976 p.158

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- (51) p.5
- (52) p.29
- (53) Sheffield City Council Estates Committee 18.8.40
- (54) For full details of the inquiry and the city councils representations made to the House of Commons and House of Lords Select Committees see the correspondence etc. kept in the Archives section of the Sheffield City Library.
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- (58) "Appraisal of Park Hill Redevelopment, Sheffield" RIBA J July 1963 p.284
- (59) p.37
- (60) For details see The Star 3.9.59
- (61) "Appraisal of Park Hill Redevelopment, Sheffield" RIBA J July 1963 p.284
- (62) Cleeve Barr, A.W. op. cit. p.130
- (63) ibid. p.131 "A" in Table VIII
- (64) Park Hill Redevelopment Proposals op. cit. p.22
- (65) Discussion following Cyril Sweett's "Building Costs in Relation to Design and Construction" p.151 Housing Review vol.7 No. 5 Sept./Oct. 1958
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- (97) Hampten, M. op. cit. p.49
- (98) ibid. p.47
- (99) Clock without Dagger Cassell and Co. 1955 p.50. See for further details Sheffield Independent June to September 1973 and Sheffield Morning Telegraph 11.10.73, 17.10.73 and The Star 15.11.76
- (100) p.46
- (101) 12.12.53
- (102) The Star 15.3.55
- (103) The Star 13.4.55 and 14.4.55
- (104) The Star 9.9.55
- (105) The Star 13.2.59. See also The Star 27.10.59, 22.8.59, 28.4.59, 21.4.59, 5.3.59, 17.4.59 and ST 9.6.59, 7.1.59, 25.4.58, 26.4.58 and 14.9.60
- (106) The Star 4.6.59 Front page
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- (111) The Star 11.11.59 See also the same newspaper 5.11.59 and 7.11.59
- (112) ST 5.1.60
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- (116) The Star 19.1.61
- (117) Sheffield W. Telegraph 16.6.61 See also Sheffield City Council's publication Park Hill: An Urban Community 1961
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- (124) The Star 28.11.66
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- (128) From analysis of the electoral roll
- (129) op. cit. See Chapter 6 Table 6.5
- (130) Hampton, W. 1970 op. cit. p.114
- (131) National media coverage included two BBC TV programmes ("Tonight" October 1961 see The Star 24.10.61 and Dec. 1966 See ST 1.12.66); Manchester Guardian 3.3.55, 16.3.55, 6.4.55, 19.6.56, 12.11.58 and 6.6.59, The Times 24.3.55, Sunday Times 27.12.59 and Daily Mail 14.1.60

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- (17) ref. note (12) In general see Pollard S. The Development of the British Economy 1914-67 E.Arnold 1969 Ch.8
- (18) 1959 Cotton Industry Act. By 1959 the overcapacity in the cotton industry had reached 30 per cent in spinning, 60 percent in doubling and 25-40 per cent in finishing. In the year 1959-60 300 mills were closed completely while a total of £30 m was ultimately paid out for scrapping and for new plant. See Pollard *op. cit.*
- (19) Pollard *op. cit.* p.4160418
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- (27) *ibid.* . p.17
- (28) *ibid.* . p.22
- (29) The original plan envisaged high density two/three storey housing; this was in 1961. By 1965 slow production and MHLG pressure led to the plan for high rise deck housing at the town centre.
- (30) Design Bulletin No. 18 "Designing a low rise housing system" (1970)
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- (33) ibid. p.20
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- (63) Crossman op. cit. p.403

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- (66) "The Condensation Problem" W/6/70 p.1422
- (67) State Housing in Britain CKP 1979 p.260
- (68) Policy for the Inner Cities op. cit p.7
- (69) "Difficult-to-let, Difficult -to-live-in and sometimes Difficult-to-get-out-of: an essay on the provision of council housing with special reference to Killingworth". Environment and Planning 1979 Vol.11 pp 1305-1320.
- (70) Vol.1 p.17 Housing Development directorate HMSO 1980
- (71) ibid. p.4
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- (80) Sheffield City Council Policy Committee Report of working parties on High Density Developments, 1976
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