UNISON OPEN COLLEGE

BLOCK HCPM.103

DESIGN ISSUES

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Preface

This third block in the module on Housing Construction and Property Management will introduce you to issues and debates which have influenced, and continue to influence, the design of housing and housing estates and environments. You will also learn practical skills in housing design evaluation, which you will need as a housing manager dealing with architects and other housing professionals.

We begin by briefly distinguishing between the functional aspects of housing as shelter and comfort, and what housing means to people, over and above its functional aspects: the values of status, security, respectability etc. This includes a discussion of the distinction between use value and exchange value, and the significance of that for social housing providers.

The issue of what housing means to people, and how they react to housing environments, is dealt with more fully in the second section. Here you will look at the theories of social scientists, and the continuing debates among them and housing providers; and the effects those debates and theories have had on housing provision and design, in particular in post-war Britain.

In the third section, you will learn some practical skills: you will look at examples of architectural drawings and site plans, and learn to read and interpret them, as you will need to do in dealing with design professionals on behalf of your tenants. You will learn how to carry out a feasibility study of a proposed housing site; to apply standards to proposals and plans. You will also be introduced to what is required to prepare a full brief for a development. We close the section by looking at the changing constraints, controls and guidelines on housing development in Britain.

We return to some of the theoretical and investigative work which has influenced development of new neighbourhood communities, including slum clearance estates and new towns. We will see that such developments have been seen as a way to provide services and community facilities efficiently; as a way of creating certain kinds of communities and community spirit; and as a way of balancing the needs of people with the growing demands of traffic.

Objectives

When you have completed this block, you will be able to:

- Suggest some of the values which people attach to housing, over and above shelter and comfort.
- Distinguish between use value and exchange value.
- Briefly explain what is meant by architectural determinism.
- Outline the modern movement in architecture.
- Understand what is meant by "residualisation" of housing estates and ways to reduce it.
- Outline the "defensible space" theory and solutions.
- Outline criticism of "utopian" architecture and planning, and the proposed solutions.
- Explain what is meant by treating housing provision as a process.
- Summarise housing approaches to social problems.
- Interpret and evaluate architects drawings, and site plans.
- Compare different standard house types and evaluate them.
- Understand the role of specification in good quality housing both for low maintenance and energy efficiency.
- Understand the purpose of a feasibility study.
- Understand the purpose of a design brief.

Contents

A. Introduction

In this introductory section, we look briefly at two aspects of housing; we might call them the functional and the symbolic. The functional aspects concern housing as a physical source of shelter and comfort. The symbolic are those aspects of housing which stand for, or symbolise, certain values: success, happiness, respectability, identity. In our society, these aspects are very important. Tenants of social housing are just as likely to share some of these values, as those who are able to express their preferences by buying their own houses.

1. Housing: Shelter and Comfort

What do we look for in the design of a house? The starting point is the idea of shelter, a 'roof over our heads'. But a house is more than a roof, or walls and doors and windows. It is more than shelter from the outside world, from the cold and wet, or privacy and security from other people. We also look for comfort. Two crucial aspects of comfort are space and services. The house must provide the spaces we need to live our domestic lives, and meet the needs of the people who make up our household. It must also provide 'services' - the means to keep warm; prepare food; keep ourselves entertained. Much of the task of designing housing is about producing packages of spaces and services which work for the people who live in them, and later you will be asked to look in some detail at how to do this.

However, housing is more than this; it is more than the practical issues of comfort and shelter.

Activity 1

Think about what you would look for in choosing a house. If your local newspaper has a 'houses-for-sale' supplement, have a look at it. Are there particular houses which attract you? What are the things which you like about these houses? If you have had the experience of looking for a new house, think about what you were looking for an which influenced your choice. Briefly outline or list your ideas in this space.

Time allocation 10 minutes

It is likely that the combination of factors you have come up with is far more wide-ranging and complex than the practical issues of comfort and shelter. Perhaps it was a modern kitchen which attracted you, or oak beams and an inglenook fireplace. Perhaps it was things outside the house - an old apple tree in the garden, or convenience for the town centre.

In the first half of this century, one of the most fashionable ideas among architects was to regard housing as a 'machine for living in'. This concept led designers of housing towards an approach which pared down the design of the house to basic functional requirements. As will be suggested later, this approach has not really stood the test of time, and produced much housing which is now seen as not very desirable.

The answer to the question 'what do people want from the design of their housing?' is complicated not only because there are a wide range of factors, but also because some of these factors are not concerned with 'practical' issues of shelter and comfort. Rather, many of the things which matter in making housing attractive or unattractive are concerned with values.

2. Housing: Values

In our society, housing is also about values. The way people define themselves and their style of life, their social status, and place in the community, are all strongly related to their housing.

(a) The house

A house is no more "a machine for living in", than a Rolls Royce is merely "a tin box on wheels for moving from A to B." The design of the house is important, not just for the way it functions, but for the image it projects, and the values it reflects: such values as success, happiness, respectability.

(b) The setting

As I am sure you know, it is not just the house itself which stands for these values, but where it is. In the private housing market, the single most important determinant of price is the location of the house. As a result, identical houses can have very difference prices: with each house or flat comes a slice of the neighbourhood - geographical and social - in which it is set.

(c) Ownership

In the UK, the forms of ownership and tenure are also important. Owner occupation is particularly valued. For the owner-occupier, the house has worth as a place to live, and as an investment. Some economists distinguish between "use value" and "exchange value".

(i) Use value

For housing, the concept of 'use value' implies taking a long-term view of the benefits the housing provides. Use value is concerned with the practical issues of services and space discussed above. One concern might be efficiency - features which minimise long-term costs of running the house. Another concern might be flexibility - the ability to adapt and change the space within the house to meet your own requirements. You will learn more about this, in the later section on housing design.

(ii) Exchange value

How does this differ from the kinds of concerns that arise with the 'exchange value' of a house. Think about offering a house for sale. In terms of the use value of the house, it might make sense to emphasise efficiency and flexibility - in effect to offer a well-insulated and serviced, but undecorated shell. But this is not what people actually do. When people are looking to realise the exchange value of their house through selling, they are more likely to redecorate and put in a new kitchen.

Concern with 'exchange value' changes the issue from 'what will be efficient and comfortable to live in?' to 'what sells?' What would attract a potential buyer? The individual owner may take a cue here from the house-building industry. In general, houses are sold by providing features which 'catch the eye'. Private

builders use market research, and their own experience of public tastes, to develop a whole 'language' of features in the design of a house to convey a message about the lifestyle the housing can offer. For example, one of the most common selling features of new housing in recent times has been the provision of an en-suite bathroom. It is suggested that this draws on memories of the foreign holiday hotel and images of luxury and self-indulgence.

(d) Housing values and social housing

Within the social housing sector, it may seem clear that it is in the use value of housing which matters. There may be an attitude that the 'gimmicks' of the private sector, the concerns which are emphasised in an 'exchange value' view of housing, are essentially frivolous. Certainly, there is a need in setting housing standards to take a long-term view. Important issues - such as the production of housing which is more 'green' and environmentally sustainable - may not be expressed in the exchange values of the housing market. However, the kinds of factor which influence house buyers should provide a warning to the social sector. Housing is not just about function and practicalities. It is also about values - and you ignore them at your peril. The negative values attached to this housing may play a part in a process of social decline.

Activity 2

For what reason(s) do you think that providers of social housing have under-rated the importance of their customers' 'values} in relation to housing?

Time allocation 5 minutes

Undoubtedly, one of the main factors has been cost constraints. A feature which has no apparent 'useful' purpose may be viewed as wasteful of scarce public funds.

B. Housing Design and Social Behaviour

1. Introduction

1.1 Housing and social theories

In this section, we will be looking at some social theories which have affected, and still effect, the way we think about housing and therefore, the way we plan and design housing and housing projects. You will be aware, from your reading of the daily papers, that the idea that forms of housing have direct effects upon human happiness, behaviour, and crime, is widely accepted in various forms. It is important that as someone working in housing, you are familiar with the debates, and their consequences.

1.2 The questions

Does the design of housing, and of residential areas, have an effect on human behaviour? Can some kinds of housing encourage people to be more friendly with their neighbours, and develop a sense of community spirit, while others create a sense of isolation? Do some kinds of housing make the people who live there anti-social, neglecting and vandalising their environment, while other kinds of housing encourage people to care for and take a pride in where they live? Does some housing attract crime, or make criminals of the people who live there? These kinds of questions have been posed and debated for a very long time, and still today they raise fierce controversy.

Activity 3

Take a few minutes to think for yourself about these questions – are there any examples from your own experience which would suggest that the design of housing can have an effect on the way people behave - either positive or negative? You may like to note some of your ideas in the space below.

Time allocation 10 minutes

In looking at some answers to these questions, we shall be examining the relationship between designers and users of housing; at the debate about ***architectural determinism****; at attempts to use design to create neighbourliness and community; at ideas about links between design - especially of large estates - and crime; and at the influential notion of* ***defensible space****. We shall also look at some of the practical solutions to problem designs attempted since the 1970s.*

Don't worry if some of these terms are new to you. They will be explained as they occur in the text.

2. Design and Social Science

While much of the thinking about the relationship between housing design and human behaviour is at the everyday, common sense level, this relationship has also been looked at by many social scientists. Those involved in the design of housing have in some cases looked to social science to provide answers about the likely social effects of the housing they design - what the people who live in the house will need, and what effect the housing might have on them. Why should this be?

One answer might be that the relationship between the designers and the users of housing has changed over time, and that this relationship now poses problems about how to design housing.

2.1 Designer and user, then and now

What is presented below is a simplified account of the ways in which housing was produced in the past, and the ways in which it is produced now.

(a) The past

Before the 20th century, there were perhaps two main processes of providing housing, each with their own way of linking design to need:

(i) Architecture for the rich

Before this century, housing architecture - in the sense of a consciously-creative design process - was essentially for the wealthy. Often this involved a direct relationship between the designer and the consumer. A member of the landed gentry or aristocracy, for example, would employ an architect to build a new country house to his tastes and to his requirements. Even without this direct consumer/client relationship, the production of housing for the wealthy - the Georgian squares of Bath, for example - would take place in a situation where the designer and the consumer of housing shared a common social background, and sense of taste, and shared an understanding of the social functions and lifestyle which the house was designed to accommodate.

(ii) Building for the poor

The production of housing for the poorer classes involved, not 'architecture', but building by craftsmen based on tradition, and the slow evolution of designs to meet local needs. Here it was not the tastes and preferences of consumer, but economic pressures and practicalities which shaped the design of housing.

In the woollen textile areas of the West Yorkshire Pennines you can see some striking examples of this process, of local housing forms evolving to meet local economic needs.

The origins of the textile industry - before the Industrial Revolution - were in domestic production, and the cottages of the domestic handloom weavers can still be seen in this area. They are in a rural setting where domestic industry was combined with agriculture - individual cottages or a short row, perhaps with an attached barn for livestock. Their characteristic feature is a long row of almost continuous windows in the upper storey. This was to provide light for those working on the looms in the workshop on the upper floor.

When the woollen industry was industrialised and moved into factories, another adaptation appeared which is typical of this area. Factories and workers

homes were brought together in towns such as Huddersfield and Halifax, cramped onto what little flat land there was, and built over the steep Pennine slopes. The standard form of workers houses in the 19th century - terraces - was used, but builders faced the problem of lack of land and steep slopes. In this situation an adaptation of the standard terrace housing form was evolved by, in effect, stacking two terraces of housing one on top of the other along the slope. At the bottom of the slope was the lane or path giving access to the lower dwelling, and further up the slope, two storeys above on the other side of the building, the access to the upper dwelling.

You may be familiar with all kinds of other local variations in housing forms from the past.

What these two kinds of process of housing production shared was that the question of whether housing provided what people wanted did not really become an issue.

(b) The present

Contrast this with the systems of housing production typical of the 20th century. Two main processes of production can be distinguished. On the one hand there is production for private ownership, mainly for owner-occupation; on the other hand the production of social housing.

(i) Design for the market

The first of these processes involves designing housing as a consumer product. This rarely now involves a direct contact between designer and consumer. Most people don't commission an architect to design them a home. A home is bought on the 'housing market'. Nevertheless, there is a mechanism to match design with consumer needs and preferences. This is the market itself: the house purchaser can, within the limits set by their ability to pay, express their preferences through exercising choice in the housing market. It can also be claimed that the market offers a guide to the designer of housing: in that it will be housing which meets people's needs and preferences which will sell.

(ii) Architecture v social needs

Whether the market really does express what people want and need in housing may be open to question. However, it was the advent in the 20th century of large-

scale social housing which really brought to the fore the question of the social effects of housing, and how to match design with what people want and need. It has been suggested that this is a 'problem' because of the nature of the designer-user relationship in the social housing sector. Unlike the production of housing for the less wealthy in the past, 'architecture' has been a feature of modern social housing. Indeed, it is the social housing sector which has been the scene of much of the experimentation and innovation in housing architecture during this century - some of it far from successful!

However, architectural design has for the most part taken place in a situation of distance between the designer and the user of the housing. This is partly a matter of the contractual relationship. The architect is commissioned by, or directly employed by, a housing agency such as a local authority or a housing association. It is the housing agency which is the client of the architect, able to specify what is required from the design - not the people who will live in the housing. There is often also a question of distance between all of these parties - the designer, the housing agency, and the tenants - in terms of education, lifestyle and values. It cannot be assumed that they share the same assumptions about what is desirable or necessary in the design of housing. It is this distance - contractual and social - which has led designers to look for answers to the question of how design affects behaviour, especially in relation to large-scale social housing. It has also resulted in more recent concerns to involve customers in the design itself, to ensure that their values are adequately reflected.

Summary

1. **In the past the issue of designing to meet people's needs was not a problem.**
2. **Designing for the wealthy was based on a direct relationship of designer and user, and shared social values.**
3. **Designing for the poor was based on economic necessity, and the gradual evolution of tradition.**
4. **In the 20th century, large-scale social housing brought architecture to the designing of housing for the less wealthy, but with an indirect relationship between designer and user, and an absence of shared values.**

3. Architectural Determinism

The question of how design affects human behaviour brings us face to face with one of the greatest and most long-running debates in social science. This is the issue of what is usually referred to as 'Architectural Determinism'.

Architectural determinism is the view that the design of the physical environment directly affects and ***determines*** *the behaviour of people within that environment. It is a view which has been very controversial, and which has been the subject of arguments between different social scientists, and between social scientists and designers.*

Go back to the task which was suggested earlier; the examples from your own experience of situations where you felt that the design of housing had some kind of effect on behaviour of people living in that housing. Do these examples support the idea of architectural determinism? Do you think they suggest that the design of the housing directly causes behaviour? Or are there other factors at work which make the issue of what causes what more complicated?

If the theory could be proved correct, it would be very useful to architects. They could be supplied with laws of human behaviour like the laws of physics, which would allow them to predict the social effects of their buildings, and to build to please the residents, and foster social peace and harmony.

Some social scientists agree with the basic ideas of environmental determinism.

Others do not agree. Why is this?

3.1 Life and snooker

Think about the difference between snooker balls and people. The movement of snooker balls is governed by the laws of physics - specifically the laws of motion. When a snooker ball strikes another, the speed and angle of impact of one ball will *determine* the direction and speed of movement of the ball it hits. These physical laws are fixed and unchanging, the effect of one ball on another can be predicted.

The determinists believe that people are something like the snooker balls: the environment acts upon them like the cue on the balls, and their behaviour then will be quite predictable.

Others do not believe that social science can be like physics or chemistry, or that life is like snooker. They emphasise that human beings have consciousness, that they interpret situations and react to them in different ways, that they are not merely passive, but interact with their environment.

3.2 Architects and institutions

This may all seem rather obscure. Perhaps it can best be explained with an example about people rather than snooker. An architect was investigating what kind of design best met the needs of elderly people in a residential home. The starting point was an assumption based on architectural determinism - that by observing residents in a number of homes it would be possible to discover which designs matched their needs.

However, the architect began to realise that the design of the home was not the main issue. The main issue was the conflict between staff and residents about how space should be used. The focus of this conflict was the issue of control and privacy. For residents, the main priority was to create areas over which they could exercise some ownership and control, and create a degree of privacy and autonomy. In contrast, the priority of staff was to retain their own control over the use of space, to deny residents 'ownership' and exclusive use of space.

Three points emerge from this example.

(a) The research began with architectural determinism, and a concern for the qualities of the design itself. It moved to a concern with the way in which different people reacted to the environment, and its significance for them.

(b) The research suggests that reactions to environments are not simply because of individual differences between people. In this case it was suggested that the variations in viewpoint reflected the social division between staff and residents, and the different interests and priorities of these two groups.

(c) The research pointed to another crucial issue - that of power. The two groups in the homes for the elderly did not have an equal share of power. Essentially, power lay with the staff, and this meant that, on the whole, it was their interpretation of the use of the environment of the home which dominated.

Activity 4

Can you think of any examples of such differences in viewpoint about the meaning of a housing environment. You may like to use the space below to make some notes.

Time allocation 10 minutes

3.3 Modernism

An example which comes immediately to my mind is that of the high-rise tower blocks. It now seems almost inconceivable that anyone thought this was a good way of providing housing for people. One way of understanding how they came to be built is to think about 'meaning' and 'power' in relation to housing environments. In particular, it brings us back to the point made earlier about the nature of the relationship in social housing between the architect, the housing agency and the tenants. (2.1 Designer and user)

(a) The architects

For the architects of the 1950s and 1960s, the dominant set of architectural ideas and values were those of the Modern Movement. These ideas were first developed in the early years of the century. The Modernist wanted buildings which were pure and functional, and expressed the nature of modern industrial society. The high-rise tower block was the central visual symbol of the Modern Movement. To the architects of the time, tower block housing was the essence of the new, the modern, the exciting, and it gave them an opportunity to use and experiment with the latest in materials and building forms.

(b) The housing organisations

To the officials in central and local government who promoted the building of high-rise, and to the local councillors who approved these schemes, the 'meaning' of high-rise was also positive. On the one hand, to them too, it was a symbol of modernisation and change. Especially in the old industrial cities of Britain, tower blocks indicated a deliberate break with the Victorian past, a pointer to a new, high-technology future. On the other hand, the high technology of the tower block itself, built with new construction methods, also promised a more cost-effective method of large-scale house-building.

(c) The tenants

To those who came to live in tower blocks, it is doubtful that they were ever seen in such positive terms. The mostly working-class residents of tower blocks built by local councils did not share the architectural and aesthetic values of the architects of the Modern Movement. To most ordinary people the design of the tower block was brutal, oppressive and alien. Nor did they necessarily share the visionary desire for modernisation. They perhaps placed greater value on the familiar and the understood. They did, perhaps, suspect that these building forms reflected a concern for 'cost-effectiveness' - but they took that to mean 'second-class housing for second-class people'.

(d) The social divide

There was, in effect, a huge distance between the residents of tower blocks, and those who designed and commissioned them in terms of their social background and values, but there was also distance in terms of power. In this situation, too, power lay with one group and not the other. While it can be argued that a range of influences were at work in the 1950s and 1960s to persuade local authorities to build high-rise (see Dunleavy 1981), what is clear is that their eventual residents had very little say. Those being rehoused in tower blocks from demolished slums and housing waiting lists had little power or choice over what housing was provided, and would have been unlikely to choose high-rise if they had. Thus the positive 'meaning' of high-rise to the architects and councillors was imposed on the tenants.

3.4 Housing as an object: housing as a process

One important distinction between the determinists and their opponents, is the extent to which they see the housing as an object or as a process.

Architectural determinism emphasises housing as an object - the physical bricks and mortar, or concrete and steel, of the dwelling itself, which will have a direct, causal effect on the behaviour of people living in it.

The view that emphasises the interaction of people and the environment, tends to be more interested in housing as a social process. The question of power and choice is crucial in this perspective.

In the post-war era, two issues have focused concern with the social effects of housing design, especially the design of large-scale social housing. The first is the creation, or re-creation, of neighbourliness and 'community spirit' in housing areas. The second concerns the link between housing design, crime and vandalism. It is perhaps significant that the issue of design and community spirit dominated the immediate post-war years, whereas in more recent times the issue of design and crime has been more important. However, both of these issues clearly demonstrate the debate between architectural determinism and its critics.

Summary

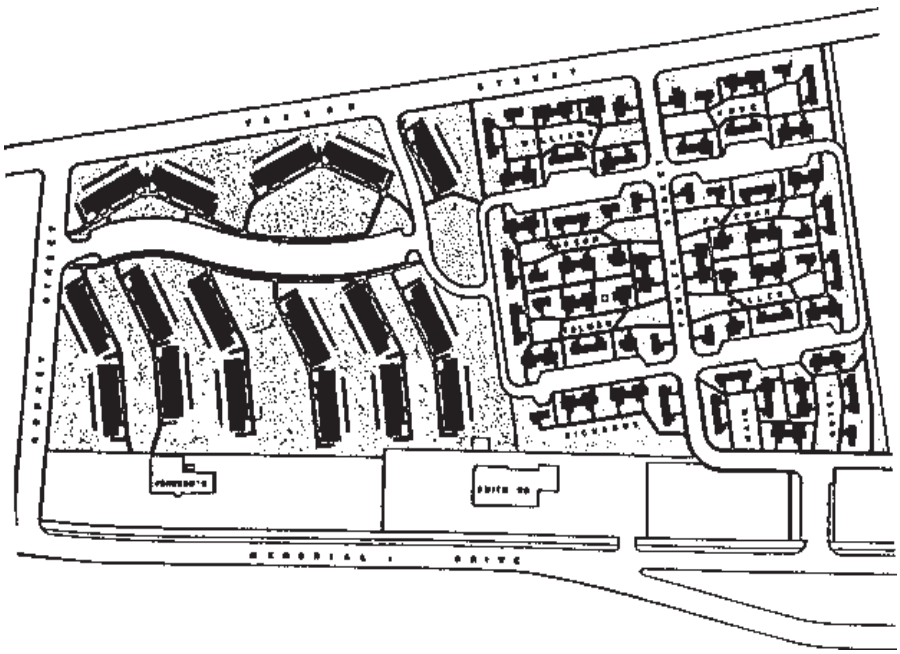
1. **Architectural determinism assumes that the physical environment has a direct, causal effect on human behaviour, and that the environment can be designed to produce predictable effects on people using or living in it.**
2. **An opposite view is that the relationship between environment and behaviour is variable, because people attach meaning to and respond to the environment in different ways.**
3. **The way the environment is interpreted and used may reflect differences in power between different groups involved in producing, managing and using the environment.**
4. **In post-war Britain, the two major issues in the relationship between design and behaviour have been *neighbourliness* and *crime*.**

4. Designing for Neighbourliness

4.1 The Westgate Experiment

In the USA immediately after the Second World War, a group of social psychologists, led by Leon Festinger (Festinger, Schachter & Back, 1959), conducted an experiment which appeared to demonstrate that the layout of housing areas had a direct effect on friendship patterns and group formation.

The experiment began in 1948 and was carried out at the Massachusetts Institute of Technology (MIT) in two adjacent areas of student housing called Westgate and Westgate West. The housing was allocated to married graduate students who were veterans (that is ex-servicemen) returning to their studies after the war. The two areas were very different in form and layout. Westgate consisted of semi-detached prefabricated bungalows, arranged in U-shaped cul-de-sacs. Westgate West consisted of two-storey apartment blocks converted from navy barracks. It was this combination, of a similar group of people living in two very different types of housing, which provided the focal question of the experiment - would the form of the housing effect the social interaction of the people who lived there?



Site Plan of Westgate and Westgate West

(Source: L Festinger, S Schater & K Back: Social Pressures in Formal Groups, Tavistock Publications 1959)

(a) Friendships

The researchers interviewed students' wives, about their social contacts, and plotted the patterns of social contacts onto the layout plans of the area (a technique known as 'sociometric plotting' which has been used in many studies of social interaction). It was found - not surprisingly - that friendship links were more likely the closer people lived to one another, and that the location of the dwelling would influence range of social contacts. For example, in the Westgate West apartment blocks it was found that those living in apartments which were in the main stream of movement within the block had a greater range of social contacts than those living in more isolated locations.

(b) Group attitudes

The next stage of the experiment was to investigate whether the layout of blocks would influence the formation of groups with common attitudes and values. During the course of the experiment, a tenants organisation was formed in the Westgate bungalows. The researchers undertook a study of attitudes to the tenants organisation to see if there were any identifiable 'group attitudes'. They predicted that, if layout did have this effect, then each of the nine cul-de-sacs of bungalows in Westgate would be expected to develop its own group attitude towards the tenants organisation. This did prove to be the case. People within each cul-de-sac tended to have similar attitudes to the tenants organisation, but attitudes differed between cul-de-sacs. Within each cul-de-sac, it seems, group values and group pressures operated to influence people's attitudes. Moreover, it was found that 'deviations' from the values of the cul-de-sac were most likely to be found among people living in bungalows at the mouth of the cul-de-sac, in locations more physically isolated and therefore less subject to friendship formation and subsequent group pressures. When, somewhat later, the barrack blocks of Westgate West were occupied and their residents invited to join the residents group it was found that there was no particular tendency for group values to develop in the more 'impersonal' layout of these blocks.

(c) Conclusions

The conclusions of the research can be summarised as follows.

(i) The layout of housing determines the number of chance contacts.

(ii) These contacts are the basis of friendship formation.

(iii) Overlapping friendship links are the basis for group formation, and again the layout determines the number of overlapping friendship links.

(iv) Where groups form they become channels for communication and the formation of common attitudes and values.

This experiment became very widely known and influential, and it seemed to confirm the idea that the design of the housing environment has a direct effect on the social behaviour of its residents. However, a major limitation - identified by Festinger and his colleagues but perhaps forgotten in the enthusiasm for their findings (Mercer 1975) - was that this experiment had been carried out with an unusually uniform population. The people of Westgate were very similar to each other. They were almost all middle-class, white, educated young adults with similar life experience and at a similar stage in their 'life cycle' - in the early years of marriage. The question which the experiment left unanswered was 'would physical design and layout have such a clear-cut effect on social behaviour in a more normal residential area with a more mixed population?

4.2 Design and neighbourliness in post-war Britain

The question of the effect of housing on social behaviour was also a key focus of sociological study in Britain in the 1950s. In particular, it was a major concern of the 'community studies' of the time which carried out in-depth investigation of the lifestyle of different kinds of local communities. Most of all, the question was associated with the study of one of the major social changes of that time - the demolition of large areas of old inner city working-class housing and the re-housing of their population in new suburban council estates.

(a) The Inner City

This was the theme of the most famous of the community studies of the 1950s and 1960s, Peter Willmott and Michael Young's *'Family and Kinship in East London'* (Willmott and Young 1957). This study of the old working-class district of Bethnall Green in East London found an intense network of family and friendship ties. This was contrasted with the lifestyle of the new suburbs (which they referred to as 'Greenleigh') where people from Bethnall Green were re-housed as a result of slum clearance. Life in Greenleigh was seen as characterised by social isolation and uncertainty. The work of Willmott and Young in East London, and their championing of the richness and values of life in traditional inner city communities was one contribution to the groundswell of opinion in the 1960s against large-scale slum clearance, and the switch of support to policies of improvement and rehabilitation.

(b) The suburbs

Peter Willmott went on to investigate whether the strong traditional ties of family and friendship within a neighbourhood might re-assert themselves in a new suburban setting given time. He examined this in a study of Dagenham in Essex (Willmott 1963), developed from the 1920s as a new industrial town and, in effect, one of the first and largest areas of suburban council house development.

Looking at Dagenham in the early 1960s he found that strong community ties had indeed developed in the stable, working-class communities of the town.

He also found evidence similar to that of Festinger that housing layout could play a part. In particular, he too found that housing arranged in short cul-de-sac (a common format for the inter-war housing of the town) was especially conducive to strong community ties. He did, though, suggest that this was a mixed blessing for residents what they gained in friendliness they lost in privacy.

As with the work of Festinger, though, there is a question mark over the general applicability of the findings. Again, the study involved a very uniform population - in this case uniform in terms of being almost all families of the industrial working class.

The study also took place before many of the social and economic changes which disrupted and fragmented traditional working-class lifestyles (Roberts et al, 1977).

(c) The mixed population

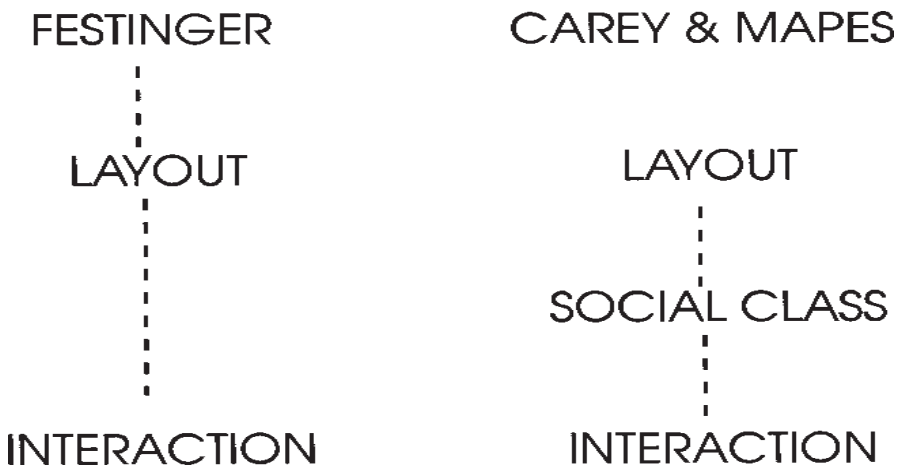
Another UK study of social interaction in residential areas, and the effect of design and layout, cast light on this question of whether physical or 'ecological' factors would have less weight in the more usual situation of a more mixed population. The study was carried out in the mid-1970s by two sociologists - Carey and Mapes (1972). They set out to study the same issues as Festinger - the effect of physical proximity and housing layout - but in the more 'normal' situation of modern private housing estates in the North Midlands. A range of estates were chosen which were based on different layout forms - some more enclosed layouts in courtyards etc., some with housing strung out along roads. Again, women living on the estates were questioned about their friendship patterns, and again 'sociometric plotting' was carried out to map the direction and intensity of friendship links.

In direct contrast to the experiment by Festinger, Carey and Mapes found that the level of social interaction on an estate - the number and intensity of friendship links - was not correlated (that is statistically associated) with the form of layout of estates. Rather, the more similar people were to one another in terms of social class, the more likely it was that there would be a high level of social interaction.

A more detailed analysis showed that the number and intensity of friendship links was associated with individuals being 'matched' in terms of social class, age, and age of children. A high level of interaction arose when large number of matched individuals lived next to each other.

Thus, the physical layout could have an effect in bringing individuals into proximity - but tended only to work when they were matched in terms of class and life cycle stage.

What the work of Carey and Mapes suggested was that, in the more normal circumstances of a socially-mixed residential area, social factors link environment and behaviour, and that these social factors are a more powerful influence than the form of the built environment. The difference between the conclusions of Festinger, and those of Carey and Mapes, are expressed in the diagram below:



(d) Conclusion

While the findings of Festinger seemed to support determinism, those of Carey and Mapes support the opposite view - that the physical environment does not have a direct causal effect on behaviour. What this suggests is not that the design of the physical environment is irrelevant to social behaviour, but rather that it sets a framework within which a range of human responses are possible - responses which are likely to be strongly influenced by social factors.

Summary

1. **A celebrated experiment in the USA after the War strongly suggested that the physical layout of housing areas could influence the patterns of friendship and social group formation.**
2. **A later study in Britain suggested that, in the situation of more socially-mixed areas than those studied in the American experiment, physical layout was less important than social class, and life cycle stage, in affecting patterns of friendship and neighbourliness.**

5. Design and Crime

The idea that particular housing areas gave rise to crime and social disorder has a very long history. Since the 1970s, though, a more specific link has been made, in research which has become both influential and controversial, between particular forms of housing design, and the incidence of crime, violence, vandalism and antisocial behaviour. In Britain, two books, one American, one British, have been especially influential in developing ideas about the link between housing design and criminal behaviour. These two books, 'Defensible Space' by Oscar Newman and *'Utopia on Trial'* by Alice Coleman, therefore provide the main focus for this Section.

5.1 Defensible space

In the early 1970s, American architect Oscar Newman had become concerned with the way in which some modern public housing estates in America had suffered a breakdown of social order, and become plagued by crime and violence, along with other symptoms of physical and social decline. Perhaps the most notorious example was Pruitt-Igoe in St Louis, a modern public housing scheme with a mostly poor, black population, which in the 1960s became a byword for crime, violence and social breakdown. Living conditions became so intolerable that Pruitt-Igoe became one of the first housing areas which was demolished, not because of physical decay, but because of social breakdown; an example which has been followed by many similar stories in cities around the world.

(a) The superblock

Newman undertook a research project in which he examined all of the public housing projects in New York, looking for links between their physical form and their vulnerability to crime and vandalism. His conclusion was that it was the architectural forms of the Modern Movement in architecture which were especially associated with vulnerability to crime. In particular, he saw the root of the problem in public housing constructed in the form of large-scale, high-rise apartment buildings, set within what he referred to as a 'superblock', that is placed within large areas of landscaped grounds, rather than fronting onto a traditional street.

(b) Indefensible space

The problem which Oscar Newman identified with this building form was that it created a whole range of spaces which were neither fully in the 'public' realm of the street nor in the private realm of the individual dwelling. Such 'semi-public' spaces were, therefore, not within the control or responsibility of either the

individual resident, or the police and the public. These were 'indefensible' spaces which were especially vulnerable to crime and antisocial behaviour.

Within and around the high-rise buildings in the Modern Movement style were many such 'indefensible spaces'- entrance hallways, lifts and stairways, corridors and walkways, isolated paths and entrances concealed from the street. Such housing accounted for a high proportion of public housing schemes in New York. Newman suggested that an architectural fashion which had originally been seen in American cities in apartment housing for the wealthy had been adopted for the provision of mass housing for the poor, but without the essential elements of control - such as a porter or caretaker - to oversee the semi-public spaces.

(c) Vulnerability

There is a crucially important point about the ideas of Newman concerning the connection between crime and design, which made his ideas very different from those of the past. Newman's contention was that certain physical design features made housing areas *vulnerable to crime*. He did not say that the design of housing made the residents more likely to *commit* crimes. What concerned him was the things which made housing areas the target of crime, whether this was carried out by residents or by people from outside. His suggested remedies were intended to make the *buildings* less vulnerable, not to make the residents better, more law-abiding people.

In *'Defensible Space'* Newman illustrated his point by referring to two adjacent public housing schemes in Brooklyn, similar in terms of the people living there but with very different crime rates. The area with a high crime rate was Modern Movement architecture, characterized by lack of control of public areas. That with a low crime rate was in a more traditional form which facilitated control of the space outside the dwelling. Newman conducted an experiment to adapt the design of high-crime blocks to create 'defensible' space, and succeeding in reducing its vulnerability to crime.

(d) Solutions

Newman's suggestions for how housing areas could be made more defensible can be summarised in the following four principles:

(i) **Territorial definition of space.** Someone should have specific responsibility for all space around dwellings. This should be organised in a hierarchy of space, moving from space clearly identified as under the control of an individual dwelling (such as a private garden), to space which is clearly controlled by a specific group of residents (such as an entrance landing or a common open area), to space which is clearly and fully in the public domain.

(ii) **Visibility.** Space outside of the dwellings should be visible to those who have responsibility. For example, windows should give clear oversight of gardens, entrance ways etc to the individual resident, or group of residents concerned. Public spaces should be visible both from inside the dwellings and from the public street so that 'natural policing' of these areas can take place.

Taken together, the principles of territorial definition and visibility formed the basis of designing 'defensible space'.

(iii) **Built form.** The built form of dwellings should avoid designs which have come to create a social stigma for residents.

(iv) **Functionally-sympathetic area.** Housing should be located in 'functionally sympathetic areas'; that is in areas which provide a pleasant and clearly residential environment.

It is important to consider the implications of these recommendations, especially numbers 3 and 4. These show quite clearly that Newman's work is not a clear-cut example of environmental determinism. Newman was not concerned purely with issues of physical design, but was concerned to place the problems of the housing areas he was studying in the context of the public housing system of the USA.

In the USA, public-sector or social housing has traditionally played a smaller part in the housing system than in the UK and much of the rest of Europe. Public housing in the USA was always seen very much as 'welfare' housing for the very poorest - clearly distinguished from the 'normal' forms of housing for most Americans of buying or renting in the private sector. The status of public housing as marginal, welfare housing for the poor was often clearly expressed in the form and location of the housing. Soulless, high density blocks built in unattractive inner city locations is typical of much of this housing. It was this aspect of public housing in the USA that Newman was addressing in the third and fourth of his key principles above.

Activity 5

Does the stigma attached to public housing in the USA have any relevance to the UK? Think about the changes in the local authority housing sector which were discussed in the Housing Policy Unit. Do you think council housing in the UK has become more like public housing in the USA? Set down a few arguments below:

Time allocation 15 minutes

(e) Housing and social stigma

The social stigma attached to some housing was discussed by the British writer Colin Ward, in writing about vandalism in residential areas (Ward 1973). As with Newman, Ward was concerned with the fact that some buildings were more vulnerable to vandalism than others. However, while Newman talked mainly about *functional* features of the design such as the visibility of space and the existence of escape routes for criminals, Ward talked mainly about the *symbolic* meaning of design. By this he meant the meaning, the messages, that a particular kind of environment gives out. In our brief discussion of high-rise housing, we suggested that such housing gave out different messages to designers and officials, and to tenants and the general public. To one it meant 'modern and new', to the other it meant 'cheap housing for the poor'. Ward reinforced the point, made by Newman, that housing which is clearly public housing may be stigmatised in the eyes of its tenants and the public.

A study by the Department of the Environment (DoE 1972) of responses of tenants to the design of local authority housing illustrates this point. What the research found was not a preference for any particular housing type - for example houses over flats. Rather the main concern was that housing should look well cared-for, and should look as much as possible like private sector housing. Ward also emphasised the importance, not only of the initial design, but also the ongoing process of maintenance of the environment. For example, it is a well-established principle that if an area is well maintained and damage quickly repaired, it suffers less vandalism, while a neglected, poorly-maintained environment tends to attract further attack and damage.

As you have learned, it is largely homes in the best ('most desired') environments which have been purchased under Right to Buy. This has resulted in local authority stock consisting increasingly of 'less desirable' sorts of properties, which is likely further to increase the social stigma attached to public housing.

5.2 Using the concept of 'defensible space'

The ideas of Oscar Newman were very influential, in the USA and around the world. However, the use of the principles described above has tended to be selective. In general the officials, politicians and designers who enthusiastically took up Newman's ideas concentrated on the first two recommendations, and ignored the last two. Why do you think that was?

The first two principles, and the notion of creating defensible space through the design or re-design of housing, appeared to offer what is sometimes referred to as a 'technical fix' for the

problems of crime in public housing schemes. The last two points raised much more fundamental and difficult issues about the consequences of social inequality in US society, and the way this was reflected in the housing system. Not surprisingly it was the design solutions which appealed to politicians and officials, despite Newman's insistence that these should not be seen in isolation from the social context of the housing.

It is very likely, especially if you have had experience of re-design and remodelling schemes for 'difficult-to-let' estates, that you have seen the ideas of Newman applied in practice, even if you were previously unaware of his name and his work. His notions of creating defensible space have become very much a commonplace of estate renovation schemes in Britain and elsewhere.

Activity 6

Can you think of a housing area with which you are familiar which has the problems of 'indefensible space' suggested by Newman? If so list the design features and the kinds of problems you see.

Time allocation 20 minutes

5.3 Defensible space - a practical example

The case study described here to illustrate the ideas of defensible space is taken from the City of Newcastle upon Tyne, but examples could be found in most towns and cities around the country.

The examples are taken from an estate called North Kenton, a large local authority estate in a suburban location built in the 1950s. The estate was built with a mixture of conventional two-storey houses with gardens, and a range of types of low to medium rise flats and maisonettes. While the conventional houses have generally remained popular, much of the stock of maisonettes in particular became by the 1970s run-down, difficult to let, and associated with a range of social and management problems.

The particular dwelling type we will look at is one of the styles of maisonette block.

- In its original form this was a three-storey block, with a lower tier of flats, and an upper tier of two-storey maisonette units, seven flats and seven maisonettes in each block.

- The blocks were surrounded by grassed open space, with no private or enclosed space for individual ground-floor flats.

- Access to the upper units was by a semi-enclosed walkway with a single stairway in the centre of the block.

Housing of this kind was very common in the local authority sector in the 1950s.

The maisonette blocks in their original form

This housing did not correspond to the usual image of 'problem' housing. These were not high-rise towers or massive deck-access complexes crowded together in an inner city area. These were small, 3-storey blocks in a suburban estate with relatively low densities and plenty of open space. Nevertheless, within 20 years of their construction they were experiencing severe problems of social stress and unpopularity.

- Although built to a fairly basic standard, it would seem that it was not the dwellings themselves that caused concern but their surroundings and relationships with each other.

- Of particular concern was the insecure and uncared for character of the spaces around the dwellings, especially the grassed open space and the access stairway and deck.

- In addition, the typical pattern of allocation, with elderly people in the ground floor flats and families with children in the maisonette units above, seemed designed to create neighbour conflict - a conflict often exacerbated by the fact that the middle maisonette, above the stairway, was a larger unit housing a large family.

From the late 1970s and throughout the 1980s a gradual programme of renovation and re-design was carried out on these and other types of maisonette blocks throughout the North Kenton estate. Over this period, three different re-design solution were tried out on the maisonette blocks described above, each of them in one way or another reflecting the notions of defensible space:

(a) The 'town house' scheme

The first approach to the re-design of these blocks involved the fairly radical solution of transforming each pairing of lower flat and upper maisonette into one three-storey 'town house'.

- Each house has a conventional ground-floor entrance and integral garage, and fenced front and rear gardens, with a short street between each block. Clearly, this approach achieved the requirements of creating defensible space.

- 'Semi-public' open space was replaced by a clear definition and hierarchy of the external space, with private gardens and a public street.

- The semi-public and hidden deck access was removed; access was by individual front doors at the end of a visible and private entrance pathway.

- Unfortunately, the scheme was relatively costly, and the units were large and expensive to maintain for local authority tenants. Indeed, most of the blocks converted in this way were part of an improvement for sale scheme. The local authority, therefore, looked for an alternative solution which was less expensive and retained the smaller housing units.

(b) The 'staircase' scheme

This is perhaps the most interesting of the re-design schemes for these blocks, in the sense of attempting to incorporate 'defensible space' principles while minimising change to the structure of the blocks. In this case the basic format of lower flats and upper maisonettes was maintained; the re-design concentrated on the issues of access and semi-public space.

(i) In place of the deck access, an individual, free standing enclosed staircase was built for each maisonette, giving an individual, secure ground floor entrance, and also giving the scheme its name and characteristic appearance.

(ii) The surrounding open space was fenced and sub-divided to give small garden spaces to flats and maisonettes.

This interesting solution did increase the security and popularity of these blocks, but of course some of the inherent problems remained, especially the neighbour conflict caused by the flat/ maisonette arrangement.

(c) The 'top-sliced' scheme

The final stage in the redesign of these blocks saw a return to a more radical transformation.

(i) In this scheme the number of units was again halved, and the top storey of the three-storey block removed - 'top-sliced' - to create a short terrace of conventional two-storey houses.

(ii) Individual front doors were created, together with a small private space at the rear.

(iii) Instead of providing relatively large private gardens a heavily-fenced common green was created between the dwellings.

As with the town houses scheme the conventional house was the model, but in this case less costly and difficult for the tenant to maintain.

(d) Other solutions

The 'top-sliced' schemes were carried out in the late 1980s and completed the re-design of these blocks in North Kenton. By that time, in the UK, the ideas of Newman had been re-packaged and extended in another highly influential and controversial book - Alice Coleman's *'Utopia on Trial'* (Coleman 1985, 1990). The idea of the conventional two-storey house as the ideal model was central to the arguments of this book. The book was controversial because it suggested design problems as the most important cause of social decline in public sector housing areas. Before turning to that controversy, though, it should be pointed out that, in the case of the North Kenton estate, dwelling re-design and renewal did not stand alone as the only means of addressing problems in the area. During the same period the estate benefitted from a wide range of community initiatives, there was substantial investment in community and leisure facilities, and the estate was also the location for an early scheme of housing management decentralisation.

Activity 7

Return to the housing area you thought about in Activity 6. Can you think of any re-design ideas, of the kind talked about in our case study above, which could be applied to the problems you identified? List them below. It may be that changes have already been carried out. If so, say what they were and explain what you think they were trying to achieve. If you like, try sketching out the changes rather than writing about them.

Time allocation 30 minutes

Summary

1. **Oscar Newman developed the idea that certain design features of US public housing areas built on Modern Movement principles made the areas vulnerable to crime.**
2. **He suggested that design changes could create 'defensible space' around such dwellings and reduce their vulnerability. The main principles were:**
   - **the territorial definition of space;**
   - **visibility.**
3. **He also suggested that the problems of these housing areas should be set in the social context of the US public housing system, and that often the form and location of such housing created a social stigma. This aspect of his ideas was less readily accepted by policy-makers.**

6. Utopia on Trial

Alice Coleman's *Utopia on Trial* was first published in 1985. A revised edition appeared in 1990, and it is this second edition which is referred to below. The book was sub-titled *'Vision and Reality in Planned Housing'*, and was essentially a critique of the housing environments produced by the public sector in the post-war years. Like the work of Newman, it was based on a very large-scale study of housing areas, mainly in inner London. Over 4,000 blocks of flats with over 100,000 dwellings were investigated, and, for comparison, 4,000 houses. Great emphasis was placed in the study, and in the presentation of the results, on the 'scientific' nature of the investigation.

6.1 Design and social problems

Essentially, the investigation sought to examine the relationship between a range of housing design features, and the existence in the housing area of what was termed 'social malaise'. While interview surveys with tenants did form part of the study, the indicators of social malaise used were based largely on data collected by observation.

The indicators were as follows:

(a) The indicators

- Litter
- Graffiti
- Vandalism
- Children in care
- Urine pollution
- Faeces pollution

They were intended to be progressive, in the sense their incidence indicated successively worse stages of social malaise.

The incidence of these indicators was recorded for each block of flats, or house, and related to design features. In general, these were features of what the book referred to as 'Utopian housing': large-scale, high density local authority estates of flats, usually dating from the 1960s and 1970s.

(b) The design features

Fifteen design features were examined in this way, falling into four categories:

- *Size variables* included height and size of blocks and the number of dwellings served by each entrance.

- *Circulation variables* included overhead walkways, inter-connecting exits, vertical routes and long access corridors and decks.

- *Entrance characteristics* included the position of doors - whether they were set back or hidden - and blocks with garages on the ground floor or raised on stilts.

- *Features of the grounds* included spatial organisation - the existence of 'confused' or semi-public space; the number of blocks on the site, the number of access points to the site and the existence of play areas.

(c) The links

In the case of all of the size and circulation variables, there was found to be a strong statistical link with the scores on the social malaise indicators. For example, the bigger the block, and the more homes served by each entrance, the more likely it was that there would be litter, graffiti, vandalism, etc.

The links between entrance type and features of the grounds and litter, etc. were less clear-cut. Some of these factors, such as a large number of access points into the housing area, were also strongly related to malaise. For other factors the relationship was weaker or more complex: nevertheless such features as recessed or hidden entrances; dwellings with stilts or garages on the ground floor; confused, semi-public space around dwellings; and even the existence of children's play areas, were all suggested to be undesirable.

6.2 Coleman and Newman: the similarities

Coleman discusses the works of Newman and links her ideas to his (Coleman, p13). In particular, she identifies three themes - anonymity, surveillance and escape routes - derived from his ideas which correspond to many of the problems she attributes to the design features of large-scale, high density housing developments.

(a) *Anonymity* is seen as a function of the size and complexity of such housing. All of the size variables discussed above are seen as creating problems of anonymity. Anonymity is also associated with the lack of territorial definition and responsibility for space around dwellings. Coleman uses the term 'confused space' to refer to the kind of space, identified by Newman, which is neither fully private nor fully public.

(b) *Surveillance* clearly relates to Newman's concept of visibility. It is particularly the issue of entrance characteristics which raises problems of surveillance, when the location of doors, and of windows overlooking doors, are such that surveillance of people coming to and from the dwelling is not possible.

(c) Housing layouts which create multiple access and exit points in a housing area were identified by Newman as a factor making areas vulnerable to crime by providing *escape routes* for criminals, and Coleman puts a great deal of stress on this issue. This is particularly related to circulation variables, especially housing areas with a complex network of walkways, decks, stairways etc.

6.3 Coleman and Newman: differences

While the ideas of Newman and those of Coleman overlap, there are some significant differences.

(a) Making criminals

One additional theme raised by Coleman which is not discussed by Newman (Coleman 1990, p170) is the notion that 'Utopian architecture' disturbs *child-rearing practices* and leads to children not being properly brought up to respect other people and their property. The concern with child-rearing is signalled partly by the inclusion of 'children in care' in the list of indicators of malaise. This clearly begins to depart from Newman's emphasis on design *making areas vulnerable to crime*, rather than *making criminals of their residents*. In Coleman's ideas there are elements of both - design is seen as producing criminal or anti-social behaviour in residents, especially children and young people, as well as making areas vulnerable to crime.

There are other important differences of emphasis, and these can be seen as being linked to some of the wider criticisms of 'Utopia on Trial':

(b) Design as cause and cure

Coleman insists that her views do not constitute 'architectural determinism' in that she does not suggest that design is the sole cause of social malaise. Indeed, she suggests that it was the architectural determinism of the utopian planners and architects, seeking to create a brave new world through new forms of housing, which was the root of the problems.

Nevertheless, the case is strongly argued in 'Utopia on Trial' that design is the primary cause of social malaise in these areas, and the book presents evidence and arguments to refute the idea that other factors, especially social factors, might be more

important. While Newman was at pains to set his design theories in the social context of the US public housing system, the emphasis in 'Utopia on Trial' is to minimise the significance of the social context, and to focus on design as the cause and remedy of problems. Especially in the 1990 edition which, in effect, includes some of Coleman's responses to the criticisms arising from the first publication, arguments are presented (Coleman 1990, p81-99) against the propositions that poverty, unemployment, child density, allocation policies etc, are more important factors than design.

(c) The market solution

Utopia on Trial has been criticised for underplaying the significance of the social and economic problems of the residents of social housing, and also for what some see as *an underlying political message* (Anson 1986). While the book does concentrate on problems associated with specific design features, it also in a number of places goes beyond this to question the whole process of public planning and provision of housing, and suggests that the private sector and the market are a superior basis for housing provision. For example: "Market forces appear to be a positive power for good in housing design" (Coleman 1990, p16). Certainly the ideas in the book seem to have met with a ready response on the part of the Conservative government, although their appeal has also been much wider than this; and while controversial, the book has also been very influential in terms of practical applications, as well as at the level of ideas.

6.4 Practical applications

Utopia on Trial not only includes an analysis of the problems of so-called utopian housing, but also recommendations about how these should be remedied. Since the publication of the book there have been many applications of these ideas to the re-modelling of housing areas. Alice Coleman and her unit have also been funded by the Department of the Environment in setting up DICE - the Design Improvement Controlled Experiment - to undertake systematic trials of these ideas in housing areas.

(a) Houses, not flats

The basic proposition is that houses are better than flats and that, whenever possible, flats should not be built. However, not all houses are the same, and Coleman suggests that it is the suburban semi-detached home of the 1920s and 1930s that provides the ideal model.

"The inter-war semi-detached was the most advanced design achieved by British mass housing before natural evolution was broken off by planning control" (Coleman 1990, p103).

In contrast, it is suggested that even houses built in the 'utopian era', especially in the public sector, have many features which create design disadvantage - such as lack of private gardens, houses which do not face a public street, doors and windows which do not allow for surveillance.

(b) Modifying flats

However, it is flats, and particularly flats in large scale complexes which are seen by Coleman as presenting the most serious problems. The application of the DICE design modification ideas can best be seen in the treatment of the Mozart Estate in Westminster, the first and most famous example of this work. This estate was a complex of flat blocks with interconnecting walkways. The design modifications were mainly concerned with circulation variables mentioned above. Proposals for the estate included removing overhead walkways linking blocks; surrounding each block by a wall with a single entrance; and removing or re-organising areas of 'confused' space and play areas.

There are, though, debates about the effectiveness of these measures. One study of the effects of the first stages of design modification on the Mozart estate, especially the removal of walkways, questioned whether this had reduced crime and found that it caused inconvenience to some residents (Brimacombe 1989). When questioned residents cited improved cleaning and maintenance, rather than design modifications, as the most important improvement they would like to see.

Summary

1 **In 'Utopia on Trial', Coleman suggests that specific design features associated with 'utopian' planned housing give rise to crime, vandalism and the breakdown of civilised behaviour.**

2. **The discussion of design features is similar to that of Newman's. Large size and complexity, anonymity, complex circulation and access arrangements and 'confused' external space are identified as sources of problems.**

3. **Coleman differs from Newman in playing down social factors, and in suggesting that design 'creates criminals' as well as attracting crime, especially for the young.**

4. **The ideal housing model for Coleman is the inter-War semi-detached house. Flats are seen as intrinsically less desirable than houses, but can be improved by specific design modifications.**

7. Housing and Social Problems: Which Approach?

It might be helpful here if we distinguish the main dimensions of the debate about housing and social problems, which can be seen as either for or against the idea of architectural determinism.

7.1 Housing design

(a) Problems of Modernism

The experience of some of the housing areas produced through 'innovative, utopian' design experiments in the post-war years does seem to support the argument that some housing design features are, in themselves, a source of problems and undesirable. For example, the provision of external decks and walkways as means of access to housing has so often proved disastrous that it does seem reasonable to regard this as an intrinsically poor design feature. This is especially so because, as illustrated in the case study above (5.3) deck access has caused problems even in relatively small-scale, low rise housing. One of the great benefits of the works of Newman and Coleman is to identify clearly these kinds of housing design features, and to provide a framework of ideas and understanding about why they cause problems.

(b) Traditional housing and social problems

This is, though, a long way from accepting that design can provide the primary explanations and solutions to crime and other social problems in housing areas. One common feature of the housing environment in Britain, especially outside London, is the existence of local authority estates with housing of conventional design which are, nevertheless, plagued by crime and social breakdown. In the second edition of her book Coleman does address this point (Coleman op cit, p118), but suggests that even here it is the design detail of the houses which generates problems. This does not seem to accord with the widespread experience of problems in, for example, cottage-style inter-war housing which accords almost exactly with the ideal model of the inter-war semi-detached.

> The 'design' approach to social problems in housing areas is in the tradition of architectural determinism, in as far as it assumes that these problems can be solved through design solutions. It is this interpretation of the lessons of Newman and Coleman that may be questioned.

7.2 Housing management

(a) PEP

The management-based approach to rehabilitating problem local authority housing areas is probably most closely associated in Britain with the writings of Ann Power, and her work with the

Priority Estates Project (Power, 1987, 1991). This suggests that physical decay and social breakdown in such estates can be tackled by making management more responsive and sensitive to the needs of tenants. Key elements in this approach are:

- the decentralisation of management services to the estate level;
- tenant consultation and participation in decision-making;
- more local and effective repairs and maintenance services;
- more local and sensitive allocations policies.

These issues were examined in some detail in the double Unit, Housing Practice and Quality Service.

The debate about 'problem' social housing areas is often presented as a *conflict* between two alternative approaches to estate improvement; design *versus* management. However, in the practical application of estate regeneration policies to run-down estates by, for example, the Priority Estates Project there is usually a mixture of management change and physical renewal (although this does often fall short of the fundamental design re-modelling recommended by Coleman).

(b) Estates Action

The actual practice of estate regeneration in England was probably most strongly influenced by *Estates Action*, the Department of the Environment unit which allocated resources for specific local authority estate regeneration schemes. Again the Estate Action approach to regeneration was usually a broadly-based one, which combines design modification and physical renewal with management changes.

(c) Housing as process

It is easy to see management change as another set of technical solutions imposed on a housing area to produce predictable change - substituting 'managerial determinism' for 'architectural determinism'. However, some versions of this approach - such as that favoured by Power - have more in common with the 'interactive' approach to the relationship of design and behaviour discussed above (B: 3.4). Here the emphasis is on consultation and participation, which enables people to exercise some degree of *choice and control* about the places they live in. A concern with management involves a move from housing as an object to housing as a process. Here the answer is seen, not in the imposition of a 'right' solution, whether of design or of management, but in creating a process whereby people can

exercise choices about their housing environments, based on their own interpretation of that environment. Experience suggests that it is often symbolic rather than functional dimension of the housing environment which matter most. An environment which is cleaned and maintained and projects a respectable image to the outside world, may be more important than any specific design feature or improvement.

7.3 The social context

We suggested that one of the key differences between the work of Newman and that of Coleman was that Newman set his ideas within a wider social context, while in general Coleman sought to play down that context. We are saying that, in general, social factors cannot be ignored.

It is important, not just to understand the issues, but to use them as a basis for practical intervention. As you have seen, Newman's ideas about the social context of inequality and stigma in the US public housing system were largely ignored by policy-makers, because perhaps they implied the kind of changes which went way beyond their policy agenda.

The same might be said of issues such as poverty and unemployment in social housing areas in the UK. On the other hand, the policy packages which have been developed for problem estates do now tend to address issues such as employment, if only in a small-scale way. For example, some Estates Action schemes include such things as the development of small industrial workshops. Where estate regeneration is part of a wider urban regeneration initiative - such as with the City Challenge programme in England and Wales, and the Scottish 'Partnership' estates - employment training and economic development is often more fully integrated with housing renewal.

8. Building Communities

The Joseph Rowntree Foundation published an influential report in 1993 written by David Page "Building Communities: A study of new housing association estates".

Page's theme is that housing associations as the most recent developers of social housing have a "responsibility not just to build homes but to build a community."

Although much of the report is not directly about development it is relevant because it takes further the issues raised by Coleman and Newman and emphasises that the development process must involve housing managers because decisions made, including those in the name of economy, can cause long term and expensive problems.

8.1 Residualisation

David Page describes the problems of the increasing concentrations of poor unemployed people and social problems in large estates. He refers to Anne Power's book "Housing Management" which describes stigmatised estates with downward spirals of, low demand, high turnover, poor image, weakening social controls, increasing apathy, disrepair and empty dwellings.

(a) Factors contributing to residualisation

He describes the changes that have occurred since 1980:

- New housing association tenants are now younger, poorer and less likely to be in work than local authority tenants before 1979 and therefore there is increasing, sometimes up to 100%, benefit dependency.

- Before 1980 local authorities were the main providers of general needs rented housing and housing associations provided for single people and those with special needs. Since 1989 local authorities almost entirely stopped building and housing associations became the developers of general needs housing, including estates.

- Grant levels to housing associations decreased and competition and the requirement to be cost effective increased.

- Increasing use of transfer of land at no or low cost from local authorities to housing associations to subsidise costs; increasing use by local authorities of nominations, often 100%, homeless families into new estates.

- Impact of the Right to Buy was to encourage better off council tenants to leave council estates and thus decrease the social and income diversity on estates.

- Increasingly high level of child densities where children under 16 can outnumber adults.

8.2 Design Issues

He reviews research by Jane Jacobs, Oscar Newman, Alice Coleman, Barry Poyner and Barry Webb; and concludes "it is not 'just about crime' the importance of creating a safe and secure estate environment cannot be overstated.... If residents are confident and secure about going about the estate and in their homes, they may not retreat from behind locked doors and leave the common parts of the estate to those who will misuse them."

Page stresses that it is not just development or management that cause the problems; but the interaction of both can solve problems.

8.3 Trends in development that contribute to residualisation

- Shortage of good quality affordable residential sites.

- The requirement to be cost effective encourages the use of cheaper and therefore less desirable residential sites near industrial areas or peripheral to town centres.

- Decreasing levels of social housing grant encourages cost effectiveness and economies of scale are best offered by building in large volume.

- Increasing competitiveness for sites has encouraged housing associations to form consortia (groups) to buy and develop larger sites they could not otherwise get.

8.4 Summary

Page summarises that two "credit worthy" policy aims have been central to the problems:

- giving priority to those in greatest housing need;
- increasing cost effectiveness of the use of public money in building social housing.

Page states that these short term policy aims have had a long term joint effect creating "a singular concentration of serious disadvantage and vulnerability…. this is clearly a result nobody wanted and apparently no-one foresaw. It has…. built up over a decade of reduced supply, which led once again to the short term lack of perspective that characterised housing in the 1960s."

8.5 D. Page Recommendations

(a) He recommends these changes:

Development issues:

- Volume building not in one large contract on one site, but serial contracts building no more than 40 houses on any one site.

- Developing scattered properties in existing communities, e.g., rehabilitation.

- Ensure housing management staff are involved with the development process including where housing association consortia are developing sites, so that decisions are not all development driven.

- Where large estates are built - ensure a mix of tenure, e.g., include housing for sale or shared ownership that is integrated with social housing.

- Increase the household type mix to ensure that no one unit type dominates.

(b) Housing management issues:

- Mix income and age range by offering transfers to existing tenants onto new estates.

- Use local authority nominations to make transfers within existing stock so that new tenants are not all in new stock.

- Review use of 100% nominations - it splits selection and allocation and "effectively surrendered the ability to produce diversity."

- Appoint a resident caretaker/site supervisor when estates are first occupied. This will encourage good morale and set standards for the landlord and tenants.

- On estates where several housing associations have housing, harmonise policies on rent, pets, satellite dishes etc., to reduce neighbour disputes and ill feeling.

David Page has also written "Developing Communities" published by Sutton Hastoe HA, Harlequin House, 7 High Street, Teddington, Middlesex TW11 8EL. In it, he outlines an action programme to develop communities on new estates; it starts at scheme design stage and continues until 2-3 years after handover. It includes community development workers, credit unions, welfare benefits advice, community provision including play areas and local services.

Summary

1. **The design of the housing environment provides an important framework for human behaviour, but it does not determine that behaviour. There is, rather, an interaction of people with their housing environment.**
2. **In looking at how people respond to housing, we should consider not just the functional questions: does the roof leak? Are the rooms big enough? We should also think about what we have called the symbolism of that environment. Does a design suggest that its tenants are second-class citizens? Does the level of maintenance project a cared-for image?**
3. **It is important to consider housing as a process, as well as a physical object. Satisfaction with, and a positive response to housing, is more likely if that process provides people with power and choice over their housing.**
4. **Social factors 'intervene' between the housing environment and the behaviour of individuals, whether it be the effects of social similarity and difference on friendship patterns in a housing area, or the effects of social disadvantage in public housing areas.**
5. **David Page described the residualisation of large housing estates; and he states that two major factors were government policies in the 1980s which prioritised those in greatest housing need and the increasing cost effectiveness of and the decreasing amount of social housing grant. He proposes changes in both development and housing management practice to help remedy these problems.**

This section has been packed with material, much of which may have been new to you. Before going on, it may help to test your grasp of the material so far.

Self Test 1

1. *What is the difference between the 'use' value and 'exchange' value of a house?*

2. *Briefly outline what is meant by architectural determinism.*

3. *Also briefly, what do the opponents of determinism say about this?*

4. *What is meant by defensible space?*

5. *What do you think is meant by "utopian" design?*

6. *How did Alice Coleman demonstrate the connection of modernist housing developments with social problems?*

7. *What is the important difference between the theories of Newman and Coleman?*

8 *Briefly outline the approaches of housing organisations to social problems.*

9. *What is "residualisation"?*

10. *What changes to development practice does David Page recommend?*

Now turn to the Answers at the end of the Block.

C. Designing Housing

1. Introduction

This section of the course is very much about developing practical skills. It should give you an understanding of some aspects of the work of an architect which will help you to play a fuller part in the development decisions of your housing organisation.

Good design is important. Not just the big decisions about whether the housing should be high-rise or low-rise, but in the detailed design of the dwellings and the surrounding area. Our homes are relatively simple structures which cater for an enormous number and range of activities in our social, family and individual lives. For example, it is not just a matter of having rooms of an adequate size that is important, they have to be the right shape with doors and windows in positions that allow for good arrangements of furniture. Similarly, the design of the local area around the dwelling is critical and user surveys show that this is just as important to satisfaction levels as the design quality and space standards of the dwelling itself.

Developing good housing requires a strong, open and creative relationship between the housing organisation and the designer. You should be prepared to work hard at understanding all aspects of the proposed design so that you can contribute fully at each stage of the design process.

Housing is being developed in many different forms for increasingly diverse lifestyles. But, still more than 70% of new housing is being built in the form of one or two-storey family houses. Consequently, we have concentrated on the design of low-rise housing, both family houses and two-storey flats. Many of the lessons learned can be applied in the development of other forms of housing.

2. How to Understand Architect's Plans and Drawings

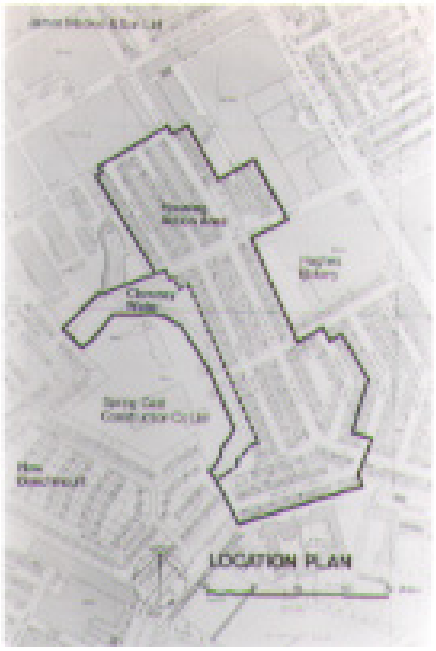
The drawings that an architect shows to his client, and which have to be submitted for Planning and Building Regulations Approval, are prepared along fairly standard lines. They normally include:

- a small-scale location plan;
- a site layout plan drawn to a slightly larger scale;
- plans, sections and elevations of the building drawn to a still larger scale.

These drawings give a complete picture of the position, size and shape of the building. Anyone employing an architect - or hiring a builder to perform a similar service - should learn to understand the essential points about drawings. This will provide a picture of what is proposed while there is still time to change the design.

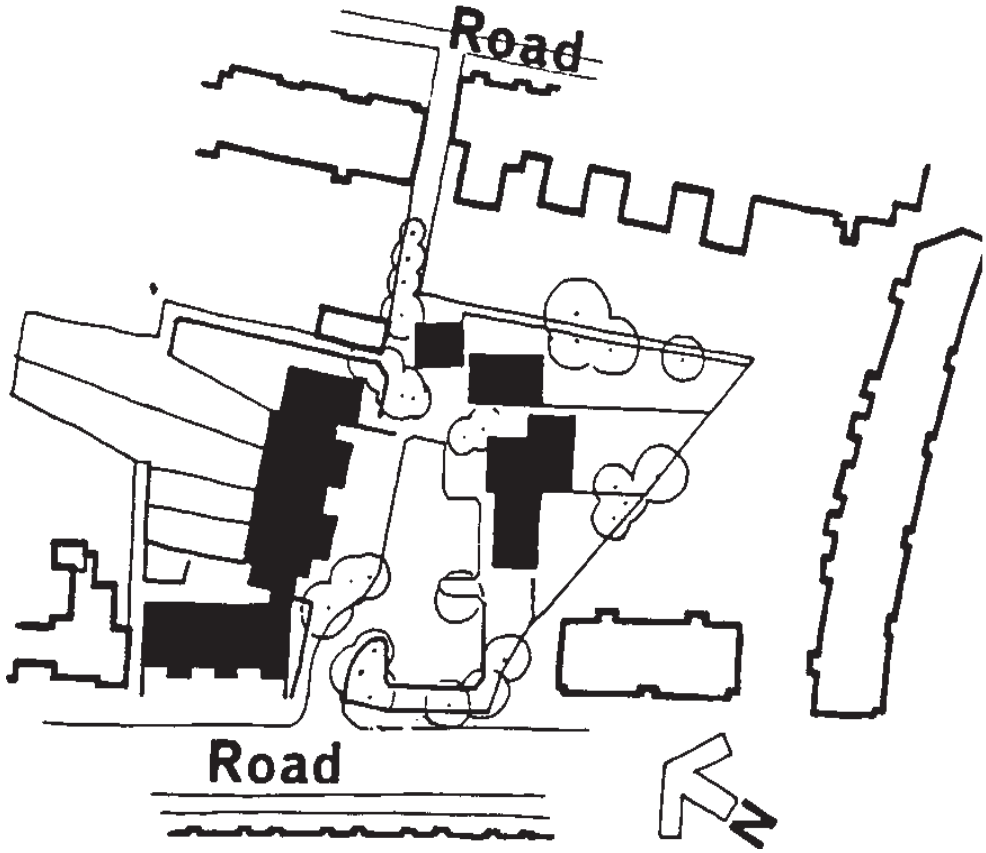
2.1 Location plan

This shows the site's relationship to the local area, with sufficient adjoining roads shown to make the site easy to identify. The location plan will include a North-pointing arrow and the scale is usually 1:2500 or 1:1250. That means that for every 2500 or 1250 units of measurement on the ground, the plan has 1 unit of measurement.



2.2 Site layout plan

Here the usual scale is 1:500 with a North-pointing arrow included. The purpose is to show how the houses relate to the site. It will show footpaths, trees, private gardens, children's play areas, and enough of the neighbouring area for the effect of the new development to be judged. If it is a sloping site, contours should be shown.

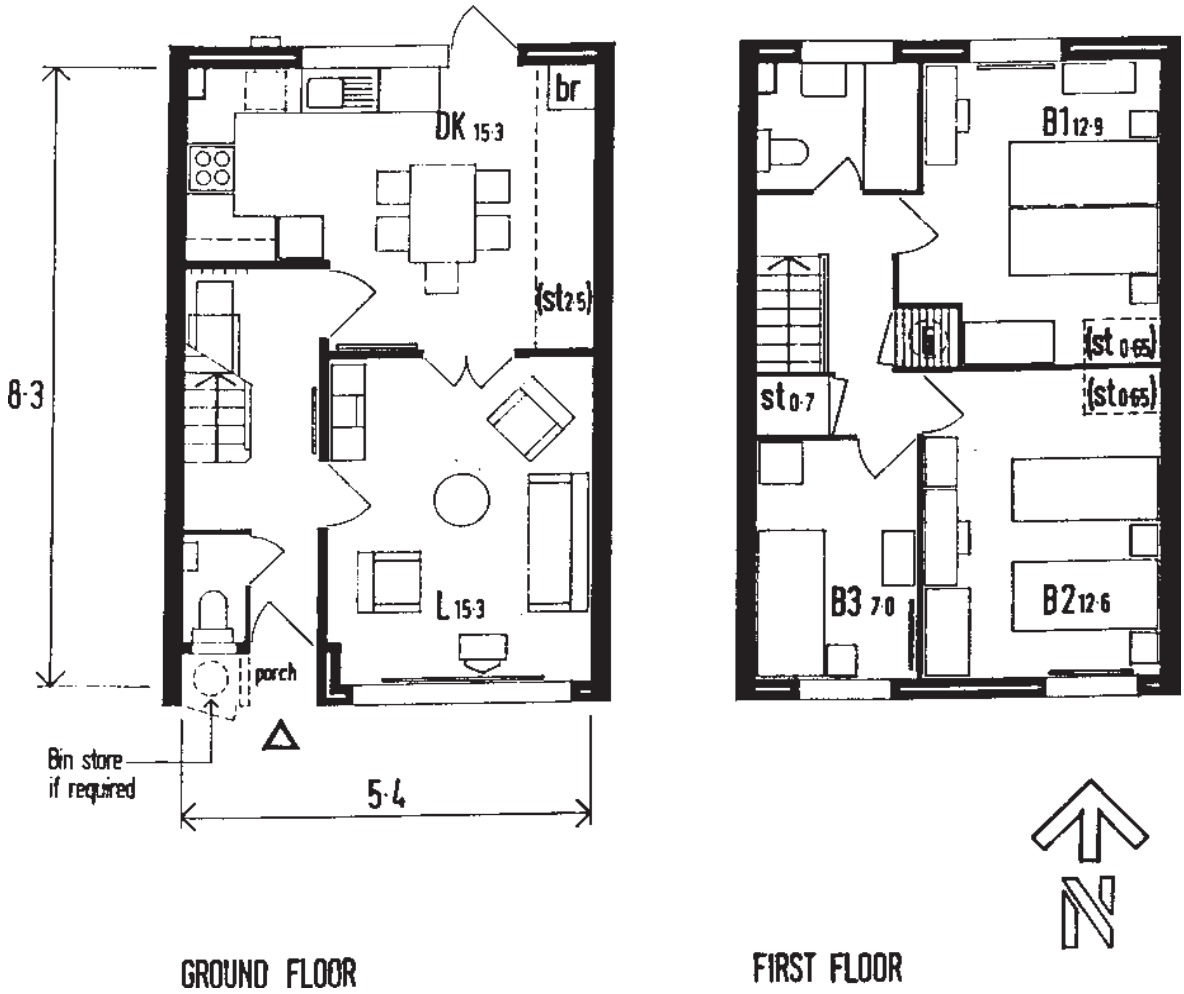


Site Layout Plan

(Source: Department of Architecture and Civic Design of the Greater London Council, An Introduction to Housing Layout, London: Architectural Press, 1978)

2.3 Floor plans

These can be drawn to a scale of 1:100 or 1:50. A scale of 1:50 is preferred, as it allows more detail to be included. You should ask the architect to include furniture layouts on these drawings, as this will help you to judge how usable the rooms are.

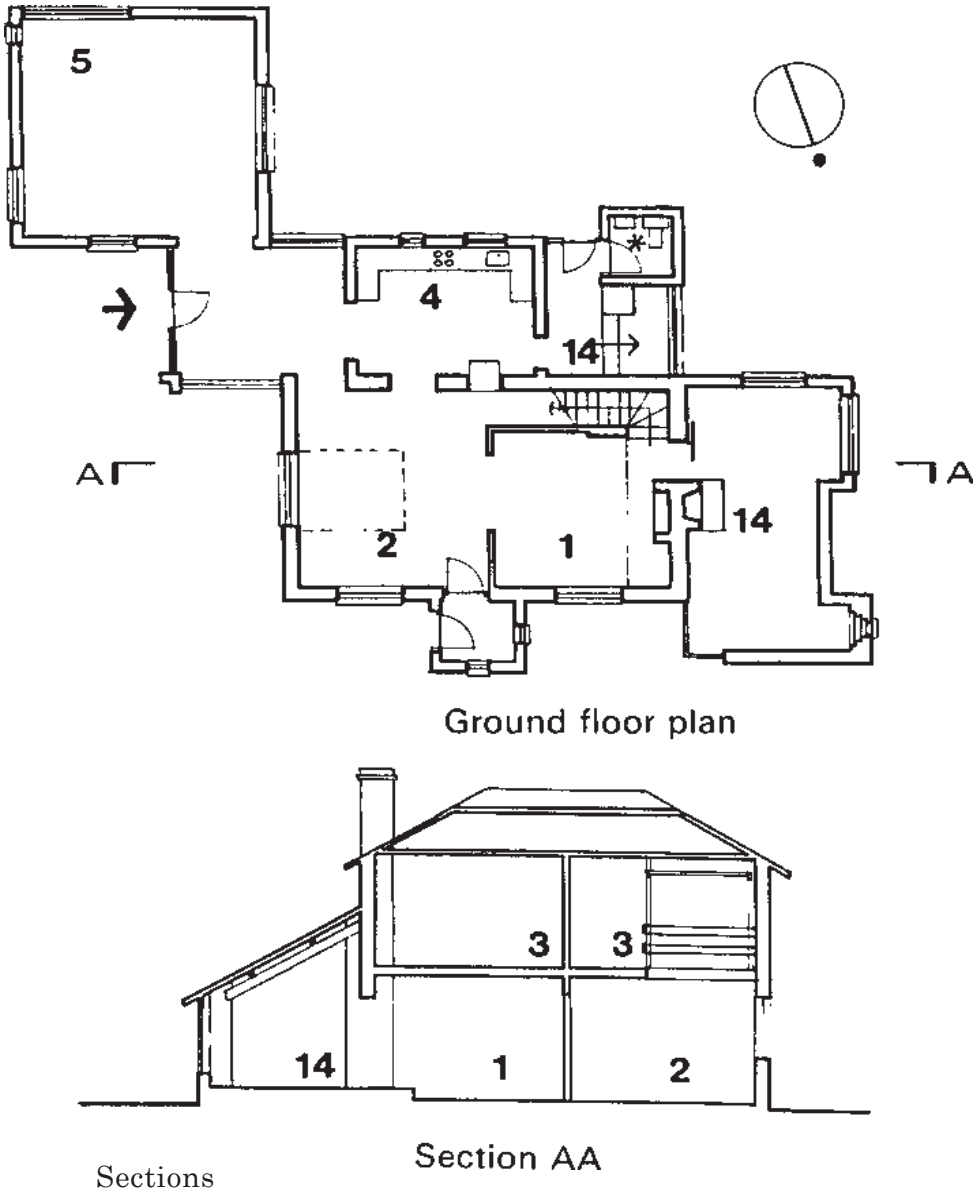


Floor Plans

(Source: Department of Architecture and Civic Design of the Greater London Council, GLC Preferred Dwelling Plans London: Architectural Press, 1977)

2.4 Sections

You may see lines drawn across the plan, with identical letters at the end of each line (AA, BB, etc). These mark the positions of imaginary slices through the house, with arrows to show the direction from which the section is to be viewed. The identifying letters are repeated under the actual section drawings. These drawings will show ceiling heights, and floor levels, and should help you to judge the spaciousness and proportions of the rooms.

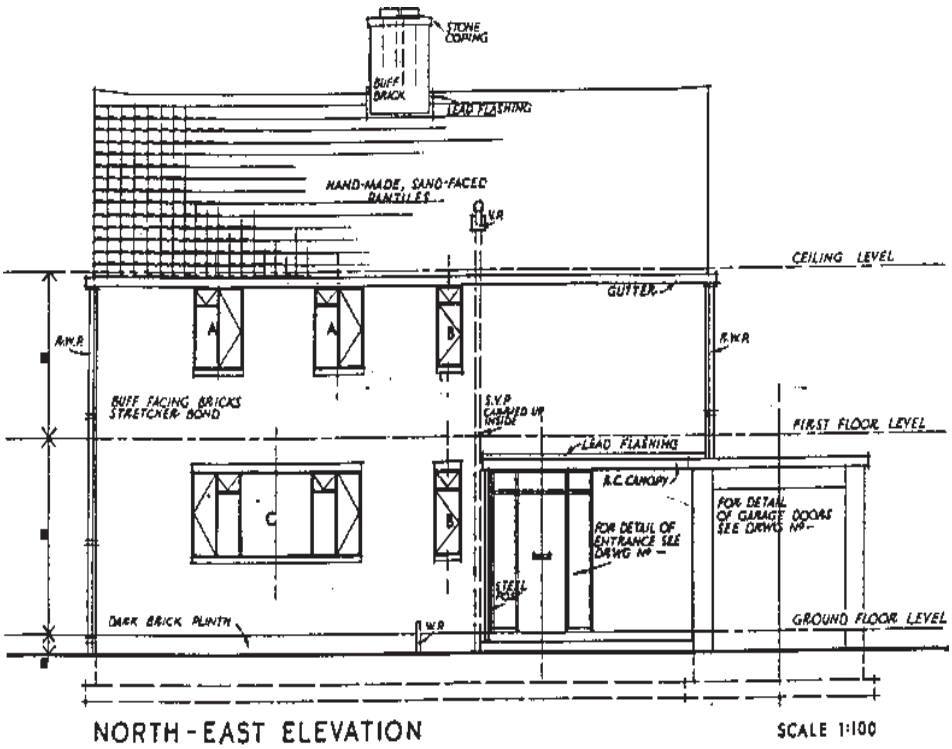


Sections

(Source: Peter Collymore House Conversion and Renewal, London: Architectural Press, 1975)

2.5 Elevations

These are two dimensional views of the outside of the house. The drawings normally indicate the materials and colour of the walls and roof.

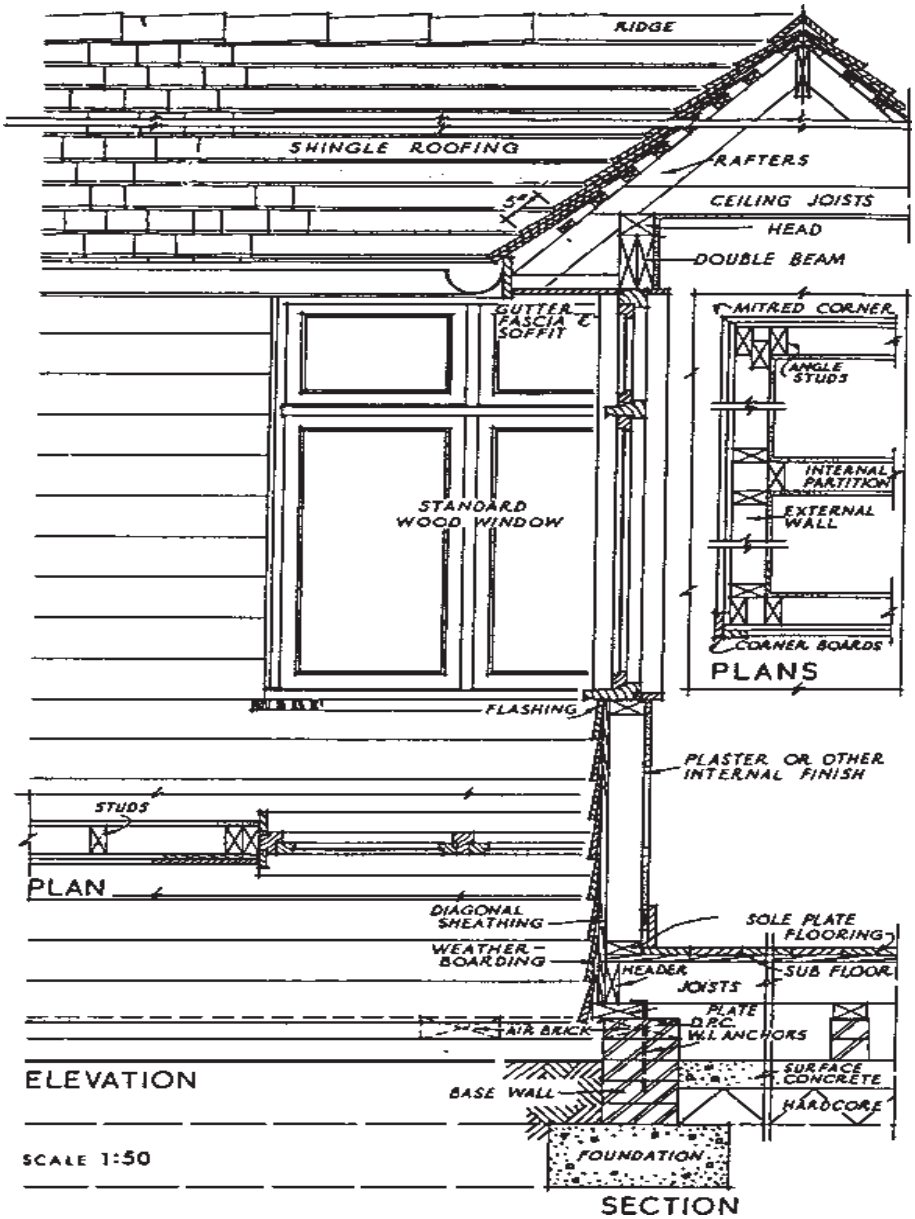


Elevations

(Source: Fraser Reekie, Draughtmanship, London: Arnold, 1976)

2.6 Construction drawings

After the design drawings have been completed and approved by the client and the Planning Authority, the architect prepares constructional drawings. These drawings show the method and details of construction, services, structure and drainage. These have to be approved by the building control authority and are then used as part of the instructions to the builder.



Construction Drawings

(Source: Fraser Reekie, Draughtmanship, London: Arnold, 1976)

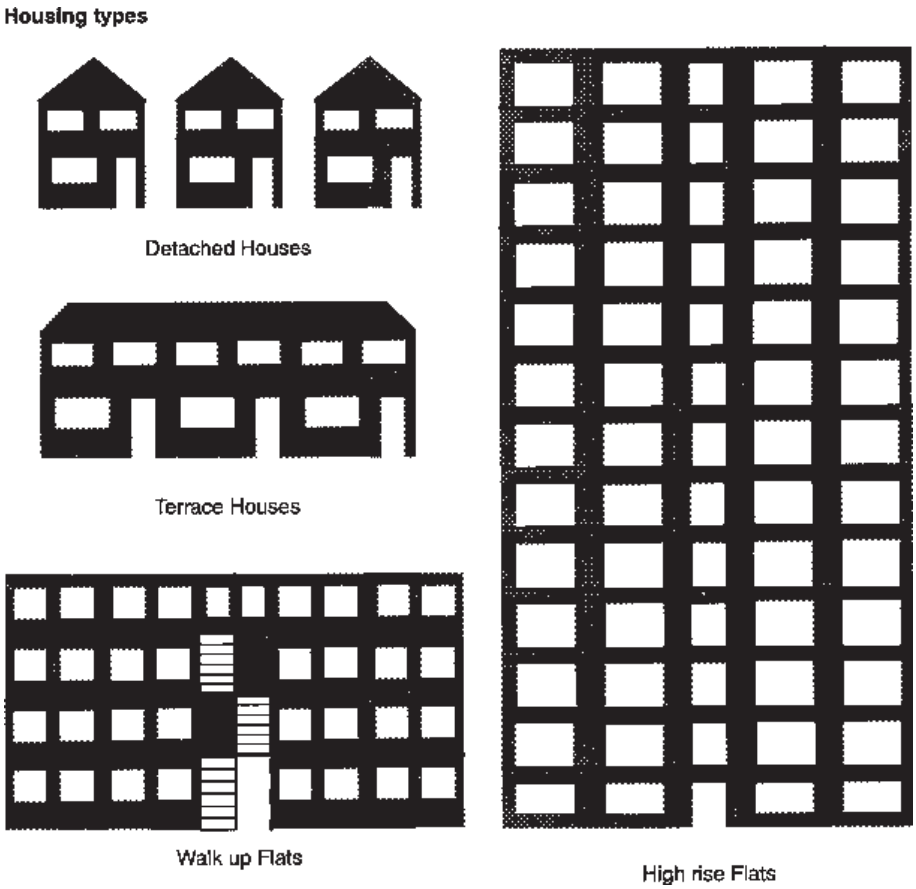
2.7 Drawing to scale

One of the keys to being an effective client is to have a good understanding of the drawings presented to you by the architect. You should be prepared to check the drawings by trying alternative furniture layouts and making your own suggestions for improvements to the overall design. The trick is to keep everything on the drawing in proportion - in other words 'to scale.' For plans of a house a scale of 1:50 is commonly used. This

means that 1 unit on the plan represents 50 units in actuality. A good idea is to make paper cutouts of standard pieces of furniture to a scale of 1:50 and then to arrange them on the drawings to test how well the design works. Improvements might be possible with some alteration of room proportions, and door or window positions.

2.8 Analysing a drawing

To conclude this section we want you to analyse the drawings of housing types. The solid lines in these two dimensional, front-view drawings (elevations) indicate the walls, floors or ceilings that are shared by neighbours. Although architectural variations within a single housing type, such as thickness of walls and the internal layout of flats in relation to one another can make a big difference between housing that looks similar from the outside, it is also obvious that housing types make a difference per se.



Activity 8

For each of the housing types list the ways in which neighbours can impinge on each other.

Time allocation 15 minutes

In the detached house a family shares no walls with other people. In the typical terrace house at least one and usually two walls are shared with other families, adding a medium through which each could impinge on the other. But, each family still has its own front door. In a typical walk-up flat, floors and ceilings start to be shared and people begin to come into contact with other people in shared entrances, stairways, and hallways. In the high-rise flat the sharing of walls, floors and ceilings is more the rule than the exception, and contact in lifts is with a potentially more diverse group of people than in the stairway of the walk-up flats.

3. Checking Architect's Proposals

Although an architect is employed to be responsible for design, it is legitimate and necessary for the client who is employing them, to contribute their own views and check their proposals, and if necessary insist on changes. These are some of the practical matters to be considered at design stage.

3.1 Estate layout

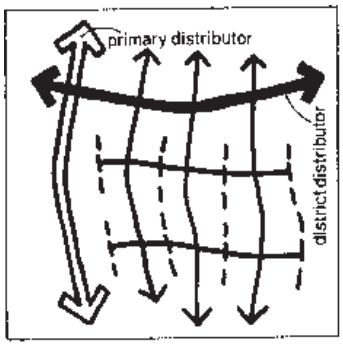
It is important for the housing professional to understand some of the general principles governing the layout of housing.

(a) Access roads

Roads are such a dominant feature of housing layout that their route and form must be considered with the spatial organisation of the site. In the past, roads engineers insisted that estate roads were designed with wide carriageways and long viewing distances. They argued for these on the grounds of safety and the free flow of traffic, but it tended to produce rather bleak and open housing environments. More recently the trend has been towards the scaling down of residential roads and the consequent slowing down of vehicle speeds. This has had the effect of creating more intimate and human-scaled environments. In *An Introduction to Housing Layout* (GLC 1978) the following possibilities for residential road layouts were suggested:

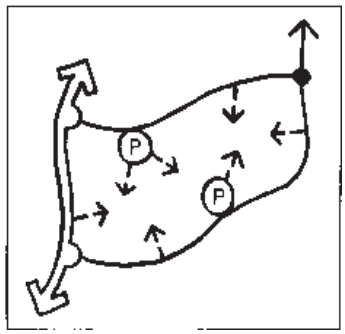
(i)

The layout consists of a grid of interconnecting access roads. This is a traditional pattern providing very short distances between the vehicle and front door with maximum car accessibility. It has the inherent disadvantages of a residential environment dominated by vehicular requirements. Low traffic speeds and integrated parking should make it less hazardous for pedestrians to cross the street from between parked cars.



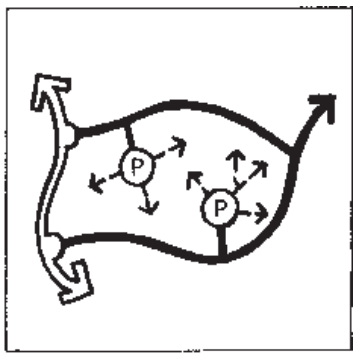
(ii)

Parking off a perimeter road - this allows the residential area to remain completely free of cars.



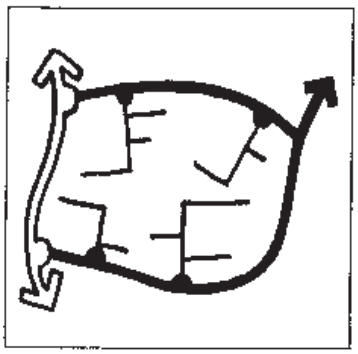
(iii)

Short access roads terminating in parking courts penetrate the housing area. Walking distances from cars to front doors can be reduced, whilst retaining a relatively car-free environment. Access for service and emergency vehicles may need to be provided separately.



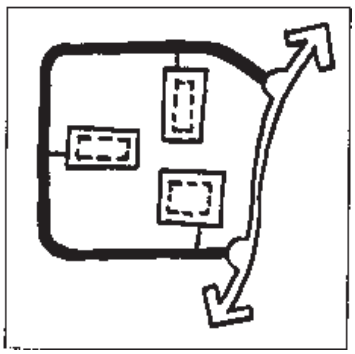
(iv)

Access is by means of a series of cul-de-sacs. Curves and bends in the roads will reduce vehicle speed. Cars and service vehicles can approach close to the dwellings. Pedestrian movement tends to follow the line of the road.



(v)

'Mews' courts; a layout in which dwellings are grouped round a single dual use area.



(b) Traffic calming

This is often requested by residents after construction, but is best included initially. Problems particularly occur where roads on an estate are through roads rather than just serving the estate. Motorists often drive too fast to be safe and some areas also have problems of stolen cars being driven very dangerously.

Traffic calming measures include "sleeping policemen" or speed bumps constructed across the width of the road marked with white stripes. Others combine zebra crossings with narrowing the road to single file at intervals to force drives to stop.

(c) The approach to the dwelling

In the 1960s many housing layouts were developed using the 'Radburn' principle. This was named after a housing development in the United States and was based on the idea of separating pedestrian pathways from vehicle roads for safety reasons. Vehicles came to park at the backs of houses and flats whilst the main approach to the dwelling was from the pedestrian pathway system.

It turned out to be an unpopular innovation because of the confusion it set up as to which was the public or private side of the dwelling. Many visitors arrived by car to the 'wrong' side of the dwelling. It seems that people like houses with a clear difference between back and front - a smart face to the outside world and a private back area for the mess of life that we would rather keep hidden.

A better solution than Radburn is to integrate cars and pedestrian movement at the front of the dwelling and to use design features to slow the car down to walking pace.

(d) Car accommodation

It is usual to provide an average of 1.5 spaces per dwelling. Avoid 'hidden' car parking or garage courts because of vandalism. Most people like to have their car next to the dwelling, but this may conflict with other requirements, such as children's safety when playing.

(e) Private outdoor space

Preferably on the sunny side of the dwelling. Children should be able to circulate freely between the dwelling, a safe private space and communal open space and play areas. Enough space needs to be provided for clothes drying and the storage of refuse, fuel and garden equipment.

(f) Children's play areas

The whole housing area will be used for play by young children and should be designed with that in mind. Footpaths should provide play 'circuits' with small play areas set to one side of the path for different types of play. Small ball games areas are also needed close to family dwellings. Play areas should be designed and located to prevent nuisance to residents, particularly the elderly.

(g) Landscaping

Landscaping is a common area for savings to be made so plans should therefore be checked to ensure that they will be attractive and durable and low cost to maintain. Grass is cheap to plant but is labour intensive to maintain; so these costs must be calculated. Paths over extensive grassed areas should be provided to follow the routes people will wish to use, e.g., the quickest way to the shops. Where areas will get particular wear different paving treatment will be more suitable. Avoid creating any areas that no-one is responsible for.

Trees will need protection from vandalism until they are at least several years old; in some areas it will be necessary to secure them at underground level with wire and pegs to prevent removal. Large slow growing trees such as oak should not be close to houses; they can be planted in a group with other quick growing but shorter lived trees, which will provide some wind protection and can be removed when the large trees are well established.

Shrubs will survive better if planted in large batches not as single specimens; there are many hardy varieties available e.g., cotoneaster and pyracantha and they will only require annual pruning. Annual flowers are not advisable as they are labour intensive and are easy to steal.

If costs have been cut, back gardens may be left untreated or with top soil only; this will quickly become untidy. Topsoil and grass seed will be more likely to be kept neat by occupiers.

(h) Enclosures and boundaries

Open plan front gardens are often included as they are low cost; but they often become messy and neighbour disputes arise. If at all possible enclosure of front gardens in addition to back gardens is desirable. Low level fences or walls can be used to reduce costs. The cheapest boundary is strands of wire or wire net stapled to wooden posts. But this is unattractive, gives no privacy and does not prevent children or pets from entry.

Screening the appearance of the scheme may be a planning requirement or may help make a scheme more acceptable to antagonistic neighbours. But boundaries are expensive; brick walls require foundations and if 5-6ft high will cost over a hundred pounds per linear metre; wooden posts with wooden rails across and overlapping boards is substantial and less expensive; wooden panel fencing is cheapest but will need replacing at least in 5-8 years.

(i) Reducing vandalism

There has been much research on this and many issues are beyond those of design. But some simple ideas include:

- omission of gravel because it gets thrown;
- protection of vulnerable walls with silicone based coating which allows graffiti to be washed off;
- ensuring that shared areas, e.g., for drying of washing or bin collection are enclosed with locking doors;
- that where bedrooms in flats are on the ground floor that they are protected by an enclosed area;
- access to shared stairs and landings and mail boxes in flats are kept secure and are not accessible to the public without authority.

(j) Services

The refuse collection service and emergency fire service should be sent drawings of access with dimensions to check that their vehicles will be able to service all dwellings.

If a large number of houses is being built the client should also arrange for extra public phone boxes, post boxes and bus stops to be provided.

(k) Appearance

For most people the appearance of the dwelling and the development can be just as important as functional performance. In Section B it was pointed out that the appearance of much post-war housing, designed by Modern Movement architects, had a positive image only in the eyes of the designers. For ordinary people it appeared to be drab and utilitarian. In recent years housing designers seem to have produced designs with more popular appeal. This has been due, in past, to the more extensive processes of community participation in new housing schemes.

3.2 Site density

High density housing is associated with high rise flats and social problems; but the planning requirements for open space around them means their overall density is similar to that of conventional 2 storey terraced housing with gardens.

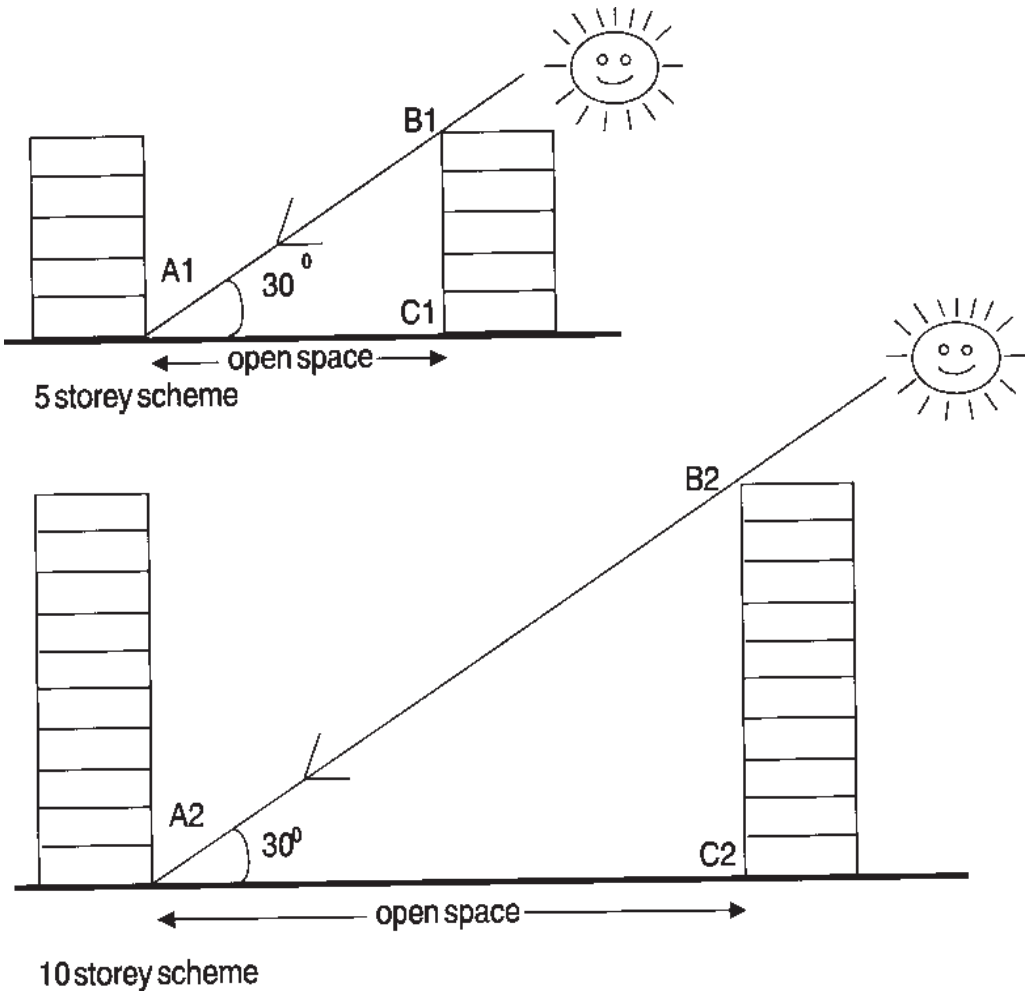
The trends that have encouraged high density have been:

- high cost of land;
- short supply of land;
- government policy requirements to produce the maximum number of dwellings for the grant given.

The most spacious guidelines on density were those of Parker Morris, where semi-detached houses are separated by gardens which could often accommodate another pair of semi-detached houses. The Housing Corporation does not now dictate site density. Housing for Wales give a guideline of 12-15 dwellings per acre. There are no specific planning requirements and consequently in the private sector particularly, lower cost dwellings are now built as small units in high densities.

Activity 9

Block spacing is frequently calculated using a sunlighting angle of 30°. The two illustrations show site sections of two theoretical layouts, the first is based on five-storey blocks and the second on ten-storey blocks. The amount of accommodation in each block is in proportion to the heights of the blocks, i.e. the ten-storey blocks contain twice as many flats as the five-storey blocks. Now calculate the difference in the densities of the two schemes.



Time allocation 5 minutes

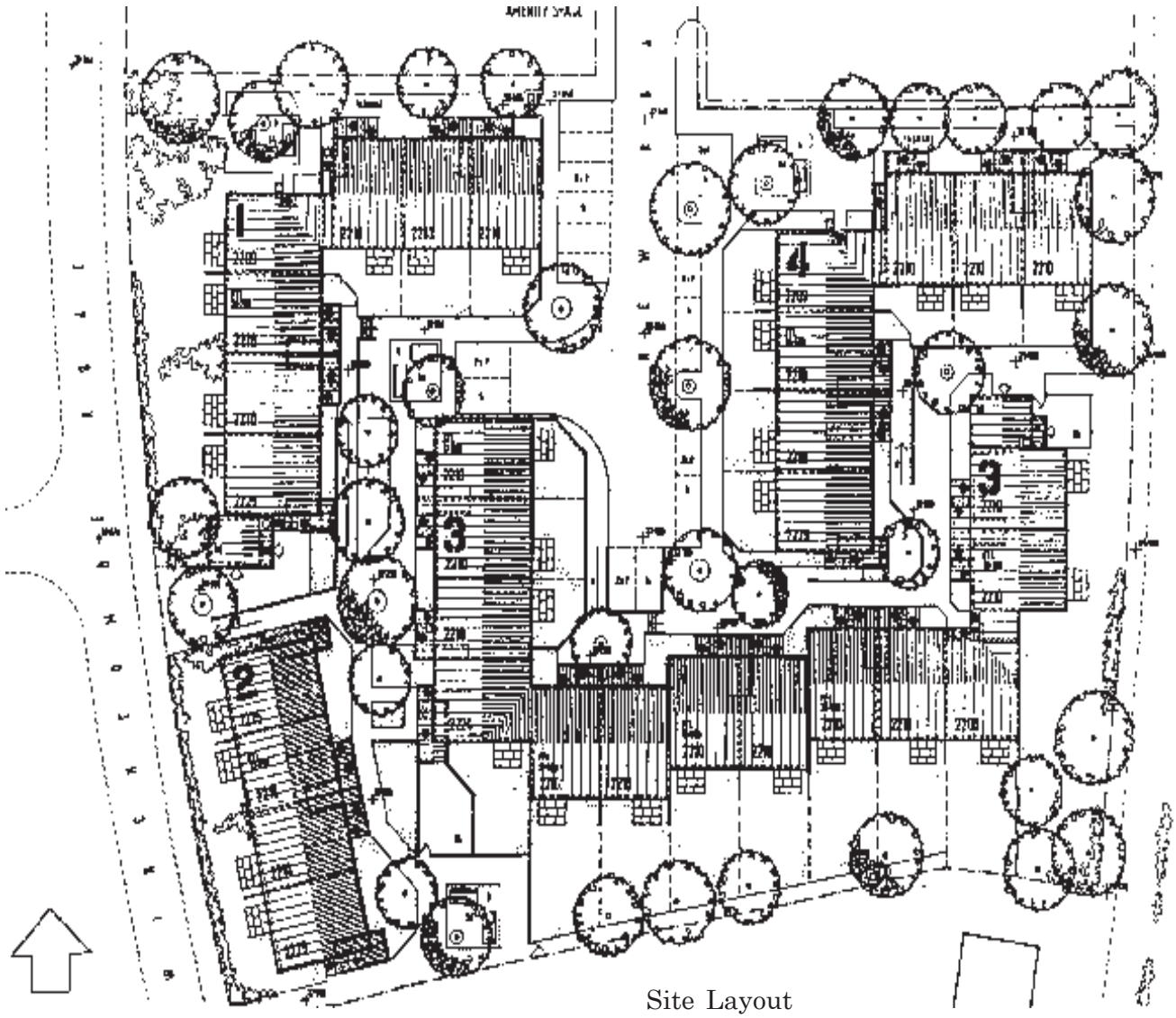
Since the sunlighting angle remains constant:

The triangle A1B1C1 is similar to the triangle A2B2C2. In the ten-storey scheme, the height (B2C2) has doubled compared to the five-storey scheme (B1C1), therefore, the open space between the blocks has also doubled. This means that the densities of the two schemes are the same.

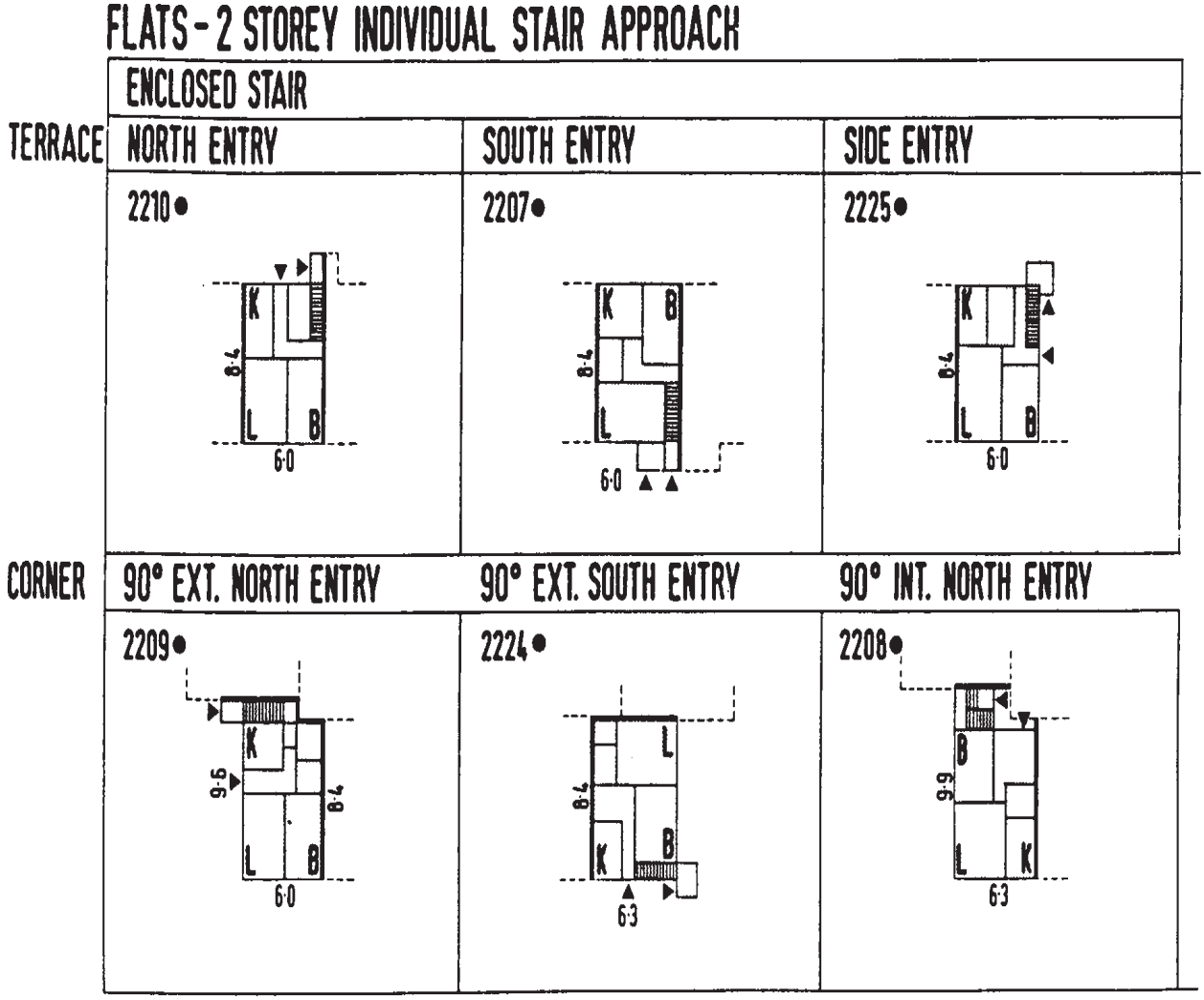
3.3 Analysing an estate layout

To conclude this section we want you to analyse this estate layout and make comments of the quality of the design in terms of road layout, car parking, private gardens and approach to the dwelling.

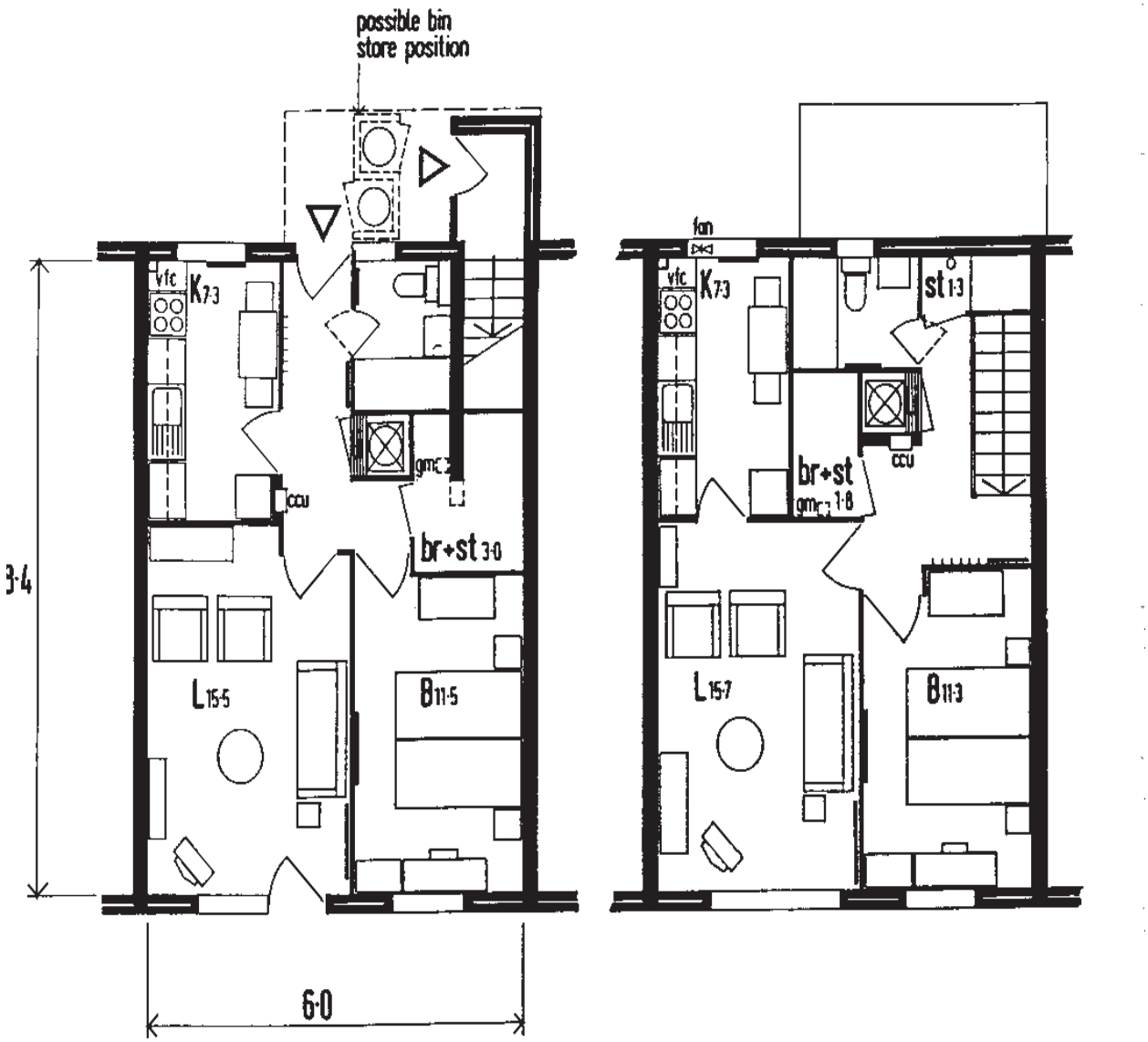
The development consists of 62 two-person old people's flats and was designed by the GLC Architects' Department for a 0.6 hectare (1.6 acre) site on an existing housing estate. Each flat has its own front door at ground level. The front doors are indicated by the heavy black arrows on the site layout plan. The small diagrams indicate the basic layout of the flat types used in the design. The most common is Type 2210 and this is illustrated in more detail in the 1:100 scale drawings.



Site Layout


FLATS - 2 STOREY INDIVIDUAL STAIR APPROACH
ENCLOSED STAIR
TERRACE
NORTH ENTRY
SOUTH ENTRY
SIDE ENTRY
2210
2207
2225
CORNER
90° EXT. NORTH ENTRY
90° EXT. SOUTH ENTRY
90° INT. NORTH ENTRY
2209
2224
2208

Flat Types



Floor Plans: Flat Type 2210 Scale 1:100

(Source: GLC Preferred Dwelling Plans (Second Edition) Architectural Press, London, 1978)

Activity 10

Comment on:

1. *The safety of the road layout.*

2. *The adequacy of car parking provision. What parking ratio has been achieved?*

3. *The size, orientation and privacy of private gardens.*

4. *The treatment of the approach to the dwelling. Is there a clear definition of the public and private sides of the dwelling?*

Time allocation 30 minutes

(a) Roads

The road layout is a simple cul-de-sac which means that vehicles will be moving slowly within the housing site. The road enters the site centrally and this provides short walking distances from cars to front doors.

(b) Parking

16 car parking spaces have been provided for 64 dwellings. This is a ratio of only 0.25 car spaces per dwelling and is dramatically less than the usual standard of 1.5 spaces per dwelling. The planning authority might agree to such low provision on the grounds of low car ownership amongst the elderly.

(c) Gardens

Only the ground floor flats have the potential for private gardens. In some cases private gardens have been provided but in other cases gardens have been treated in an open plan manner.

Gardens range in size from $20m^2$ to $70m^2$ and should be adequate for most needs. Some of the elderly may be enthusiastic gardeners, whilst for others looking after a garden may be an unwelcome burden.

Living rooms overlook gardens which face south or west for most dwellings and will receive sunlight in the afternoons and evenings. About 15% of dwellings have living rooms and gardens which face east and this means that they will only get sun in the mornings.

The flats facing the east side of the cul-de-sac have living rooms and unscreened gardens that overlook the parking area. This may provide some useful casual supervision of the area but might have costs in terms of lack of privacy for the residents of the ground floor flats. Also, they will not be able to use their gardens for private activities such as clothes drying.

(d) Approach

Access to most of the flats is by short pathways from the parking area, but most front doors cannot be seen from the parking area and this may cause confusion for visitors who are unfamiliar with the area.

4. Good Quality Construction

In this block so far we have covered many aspects of bad housing and the problems that it causes, and we have looked at various ways that design can alleviate this.

But design does not just mean the appearance and layout and dimensions of the estate, houses and rooms. Good quality homes are also about the materials, components and processes used in construction. A window will provide light and ventilation and may well be placed to give good surveillance of an area. It may be ideally designed so that a person in a wheelchair can open and shut it and it may have window locks; but if it is installed wrongly without complete damp-proofing around it or it is a poor badly fitting window then it will be a source of damp and cause damage to plaster and any wall coverings.

The required materials, fittings, components, processes and installation should be recorded in a specification document commonly known as "the spec" and incorporated into the building contract.

The specification should take into account future maintenance, the ease and cost of use for occupants and energy efficiency.

4.1 Design for low maintenance

As you learn more about the Construction Process you will be aware how the pressure of time and cost can exert negative influences on housing built. It is very important that long term quality is achieved in spite of short term objectives. Of the issues described here many can be solved satisfactorily without extra cost; often the missing ingredient is care and a willingness to anticipate problems at the design stage before they are put into a building contract and built.

4.2 Good quality specification

Poor house condition in Britain is a large escalating problem and much of it relates to those built since 1960. This underlines the importance of consulting maintenance staff and specifying good quality materials and designs and methods in the building contract.

Different types of contract permit different control and input into specification; but even with design and build contracts, conscientious Development Managers/Directors will command a good standard and not simply accept that which is offered.

Products should be chosen because of their long life, low maintenance/repair needs and previous known experience. Architects may want different external finishes; but softwood boarding and to a lesser extent, render, require more attention than bricks and mortar. If new products or finishes are tried it is best to limit it to a small number of dwellings as a pilot to monitor performance.

Best practice is to establish a standard specification covering all components and processes of construction; from types of windows, roof tiles to taps. Standard specification document will take a lot of work to put together; but when it is used consistently in building contracts, maintenance and repair staff can report back on product and process failures and then specification can be amended and thus continuously improved.

Cost cutting is a fact of life and often has to take place to make sure a scheme is possible. Care must therefore be taken that it does not cause major future maintenance problems. Heating systems are expensive but cheaper versions can breakdown more often and be more difficult to get parts for. They may also be more expensive for people to use.

Some savings can be acceptable. For example, a particular brick may be specified and another brick of the same quality but from a different manufacturer, or of a different appearance may be cheaper.

Summary

1. **The client should look at and assess architects' plans and not assume they are acceptable. The issues to bear in mind are: estate design, landscaping, enclosures and boundaries, reducing vandalism, services, appearance, site density, aspect of dwellings and natural light, gardens, traffic calming, parking and road layout.**
2. **The client should also check the specification proposed and preferably use their own which they update regularly. Fittings and components should be good quality, requiring little or no maintenance, as energy-efficient as possible and low cost for occupants to use.**

5. Design Guides and Standard House Types

The wish to achieve good quality housing and to avoid past mistakes has led at various times to the publication and use of both design guides and standard house types.

5.1 Design Guides

These are usually general principles recommended; some have specific purposes such as accommodating wheelchair use, and some are, or have been, mandatory for public funded housing.

The following examples are included in this section:

Housing for Wales/Tai Cymru

Lifetime Homes

Habinteg Housing Association

Parker Morris Standards

Ministry of Housing: Space in the Home

5.2 Housing for Wales/Tai Cymru

This is a comprehensive manual covering internal and external standards. It covers house design where their standard house types are not being used, e.g., dimensions and numbers of items of furniture that are expected to fit into bedrooms and living rooms. It also sets general principles for the external works and landscaping, of all schemes. The guide takes into account many of the issues of surveillance and access highlighted by Newman and Coleman.

Semi detached houses are usually favoured in place of terraces; back access by foot to each garden is required; gardens must be of a minimum size; traffic calming measures are recommended; all schemes designs must also be separately submitted to the Police for confirmation that they meet their "Secured by Design" standards.

5.3 The Lifetime Homes design concept

A relatively new approach to housing design has been developed by the ***Joseph Rowntree Foundation Lifetime Homes Group***. The basic principle is that the homes should be suitable for the occupiers throughout their lifetimes, whether as young families or as disabled elderly. This means, for example, that the home should be able to accommodate a wheelchair user.

A full list of the features which form this lifetime approach are listed below:

Lifetime Home Criteria

OUTSIDE THE LIFETIME HOME

1 Where car parking is adjacent to the home, it should be capable of enlargement to attain 3.6m width.

2 The distance from car parking space to the home should be kept to a minimum, and should be level or gently sloping.

3 The approach to the entrance should be level or gently sloping.

4 Where homes are reached by a lift, the lift should be wheelchair accessible.

(Gradients for paths, and widths for lifts should be the same as for public buildings in the Building Regulations: see Annex 1.)

ENTERING THE LIFETIME HOME

5 The entrances should be covered and illuminated and have level access over the threshold.

6 The width of the doorways and hallways should accord with the Access Committee for England's standards. (***See Annex 2***)

7 There should be space for turning circles for wheelchairs in all ground floor rooms. (This requires a width of 1500mm).

GROUND FLOOR/ENTRANCE LEVEL IN THE LIFETIME HOME

8 The downstairs toilet should be wheelchair accessible, with drainage and service provision enabling a shower to be fitted at any time.

9 The sitting room should be at entrance level.

10 Walls in bathrooms and toilets should be capable of taking adaptations such as hand-rails.

11 In two storey houses, there should be space on the ground floor which could be used as a bedspace.

UPSTAIRS IN THE LIFETIME HOME

12 The bath/bedroom ceiling should be strong enough to support a hoist. The bath/bedroom wall should have a removable panel, from floor to ceiling, to enable tracking to connect the two rooms.

13 The design should incorporate provision for a future stair chairlift and a suitable identified space for a through-the-floor lift from the ground to the first floor, e.g. to a bedroom next to the bathroom.

14 The bathroom layout should be designed to incorporate ease of access, probably from a side approach, to the bath and WC. The wash basin should also be accessible.

FEATURES AND FITTINGS IN THE LIFETIME HOMES

15 Window sills should be no higher than 750mm (except in exceptional circumstances such as certain kitchens) and windows should be easy to open/operate.

16 Switches, socket outlets, heater controls, fuse boxes, etc should be at a height usable by all (i.e. between 600mm and 1200mm from the floor).

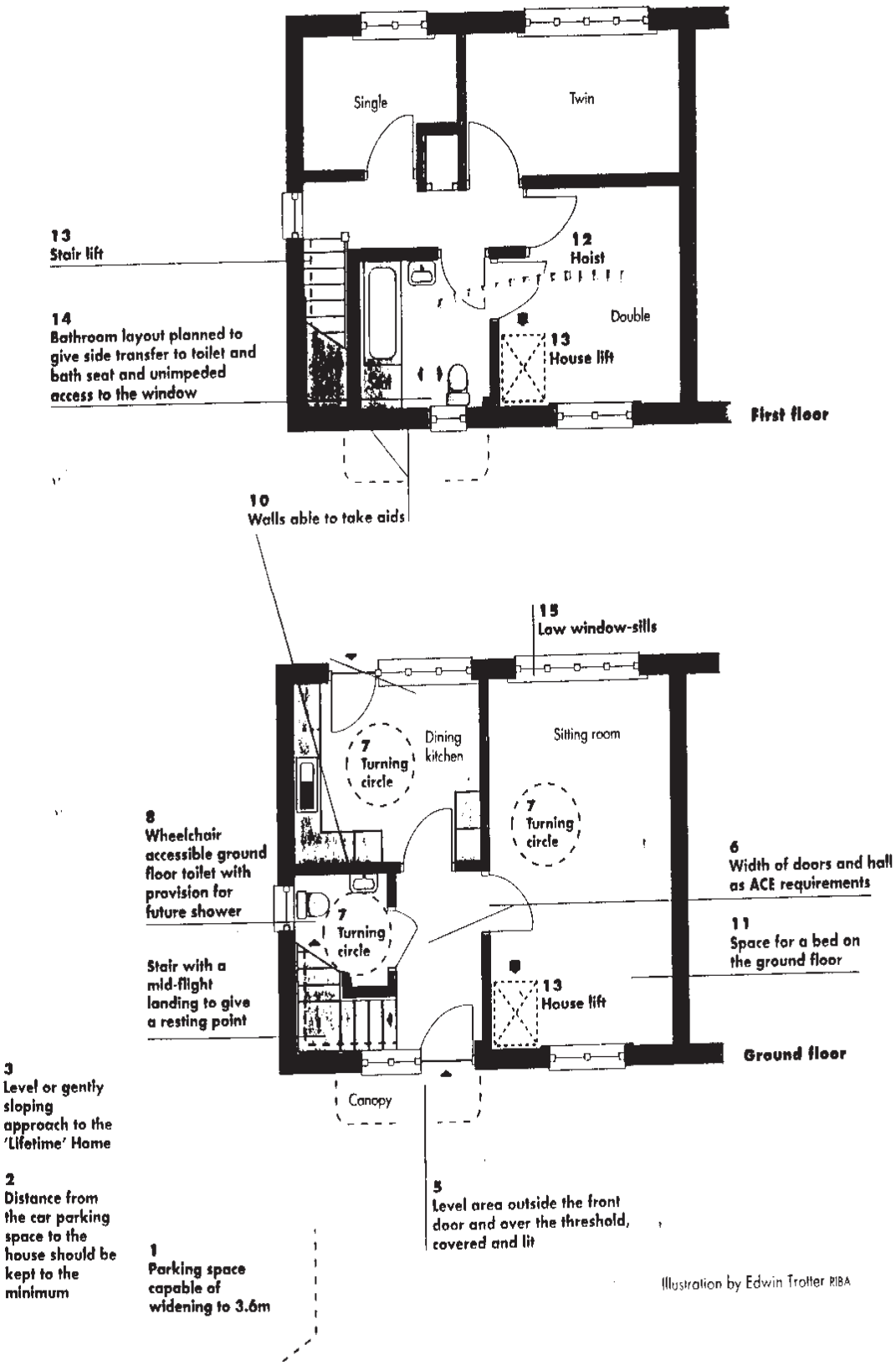
These points (except 4 and 16) are illustrated in the diagram which follows.

Although not part of the Lifetime Homes Criteria, it would be expected that heating and insulation arrangements would achieve a National Home Energy Rating of 8.

Attention should be given to good kitchen design - i.e. using D-handles, easily operated and accessible units - and carefully positioning sinks, etc; the kitchen should be capable of adaptation by replacement of units to meet individual requirements.

An example of how these criteria translate into house design is shown by the following plans:

Example of Lifetime homes criteria



These plans were drawn by Edwin Trotter, who designed the scheme which will be examined in the 2nd Year Unit, Planning and Developing Housing. This "case study" scheme has been designed to Lifetime Homes criteria, so you will have a further opportunity to identify their implications for design later.

5.4 Drawing a balance

Houses should last a long time and satisfy future generations as well as the first occupants. A balance has to be drawn between what we can afford now and what will last into the future. At the moment space standards are being set by today's consumers and providers. There are strong arguments that a wider community interest should influence the decisions but it is a very complex question which may take some time to resolve. You should follow the debate through the housing press.

Here are some questions on those parts of this section not covered by activities.

5.5 Habinteg Housing Association

Habinteg Housing Association is registered with the Housing Corporation and has offices in London and Bradford. Their philosophy is that "people with disabilities are hindered from leading an ordinary life by the physical barriers they encounter in their daily lives. It seeks to enable disabled people and their families to live independently within an ordinary setting.... Habinteg's housing is designed to encourage freedom of movement, especially for those in wheelchairs, and to enable those whose mobility is restricted to do as many physical tasks as possible for themselves so that they can be independent. Usually, housing specially designed for disabled people is segregated and tends to reinforce the exclusion of disabled people and their families from ordinary aspects of social living. Habinteg seeks to promote integration. Good, "barrier-free" design is good for everyone including those with children, and the elderly, not just for those who are in wheelchairs."

When Habinteg build homes, one quarter of them are bungalows designed to full wheelchair standards. These are of all sizes from one to four bedrooms and they are scattered through the scheme. The other houses are designed to mobility standards with wider doors and level access; this is to allow people who use wheelchairs to be able to visit their neighbours. It also helps when there are young children or elderly people in the family.

Kitchens and bathrooms are designed in consultation with the future tenant who is the wheelchair user, so that the height of worktops, sinks, switches, handles, door entry system etc., are

suited to the individual. Baths or wheel-in showers may need specialist fittings in particular positions. Habinteg's schemes are supported by a warden and/or a 24 hour emergency cover service. Wheelchair users' homes are linked with a two-way speech call system for emergencies.

The design guide includes:

- ventilated areas/cupboards for the storage and recharging of electric wheelchairs (the fumes can be noxious);

- turning circle in every room including the hall (you don't want to have to reverse to or from the front door);

- the use of kitchen units whose height can be adjusted up and down; the inclusion of knee space under sink and worktops;

- the inclusion of seating at the end of the bath to allow for sitting whilst undressing and swivelling into bath;

- wheel-in shower areas with controls at a low level;

- space for a wheelchair at the side or in front of the toilet;

- car ports next to the front door are provided with space to unload and unfold a wheelchair;

- windows installed at a height to allow a seated person to be able to see out;

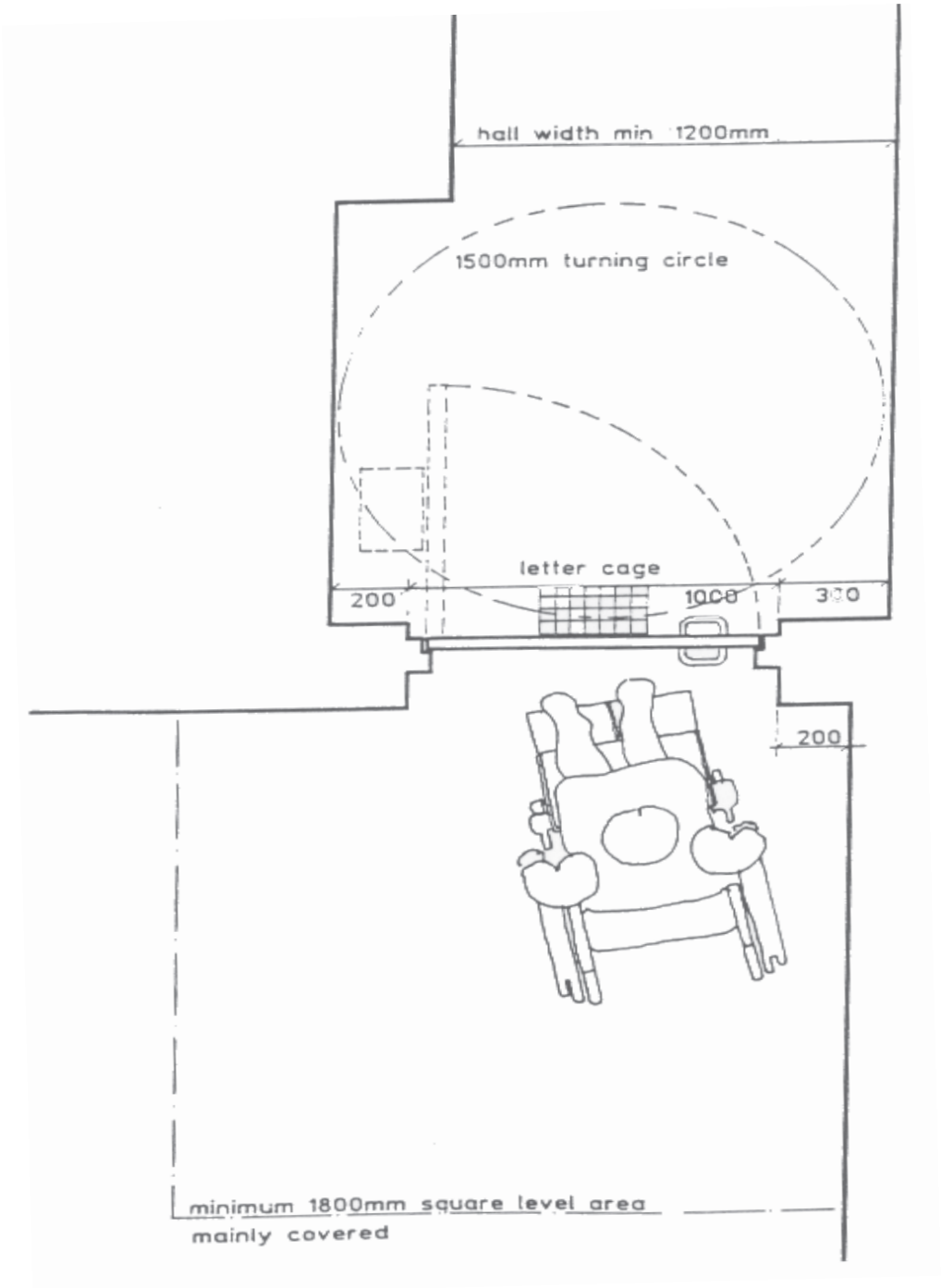
- provision for the addition of tracking for severely disabled people who need to be undressed in the bedroom and moved in a fabric sling that can lift and move them over and into the bath.

Their design guide is over 160 pages and includes general design principles, specific guidance on internal and external design, some drawings with details, e.g., of bath installation and height etc., specification of products, suppliers, etc. It can be purchased from Habinteg Housing Association, Head Office, 10 Nottingham Place, London W1M 8FL.

Habinteg Housing Association Design Guide:

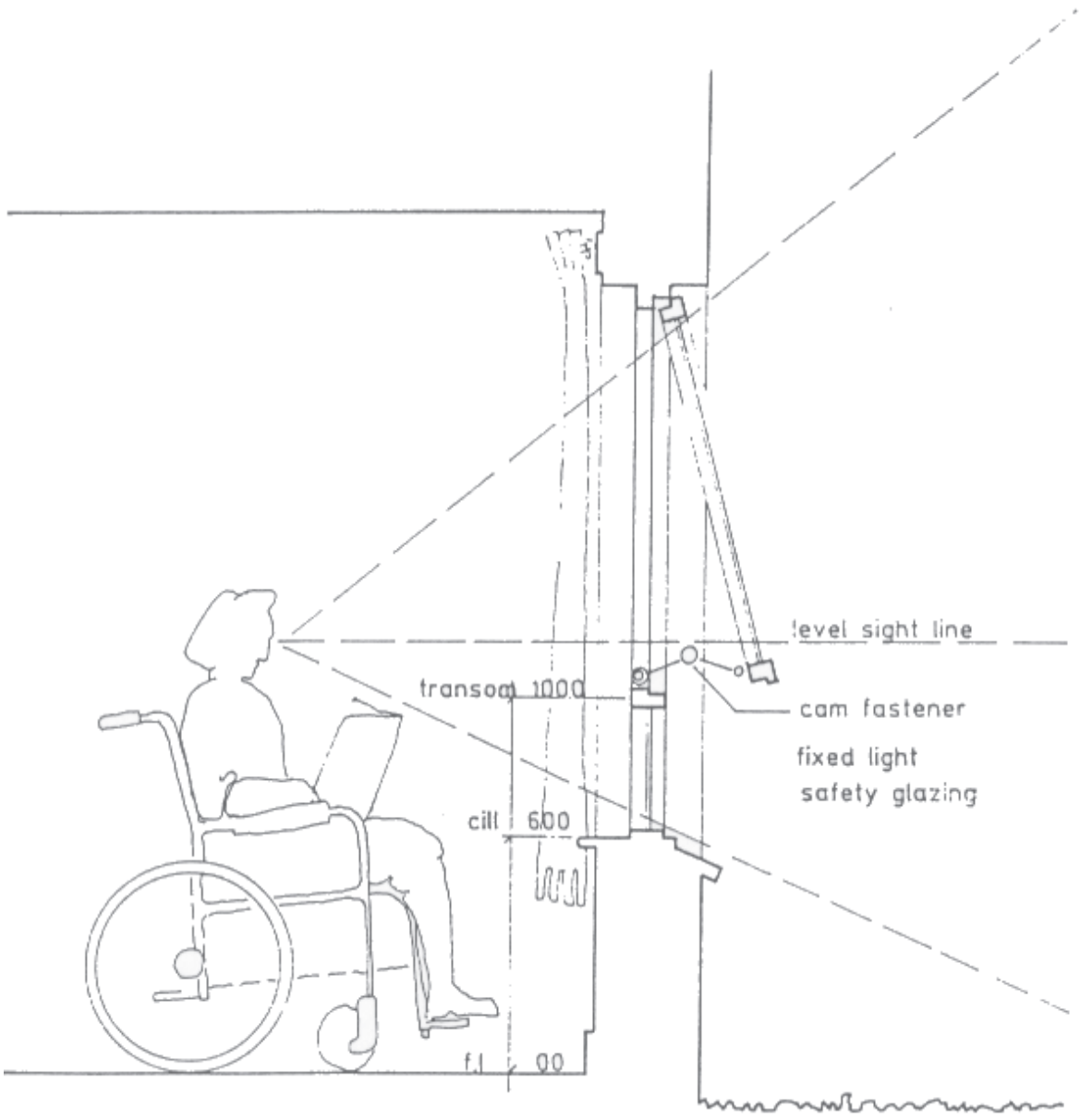
Habinteg Design Guide

Illustration No 1 - Entrance
Application: Wheelchair users' dwellings only
Reference: Item 2.2.2.3



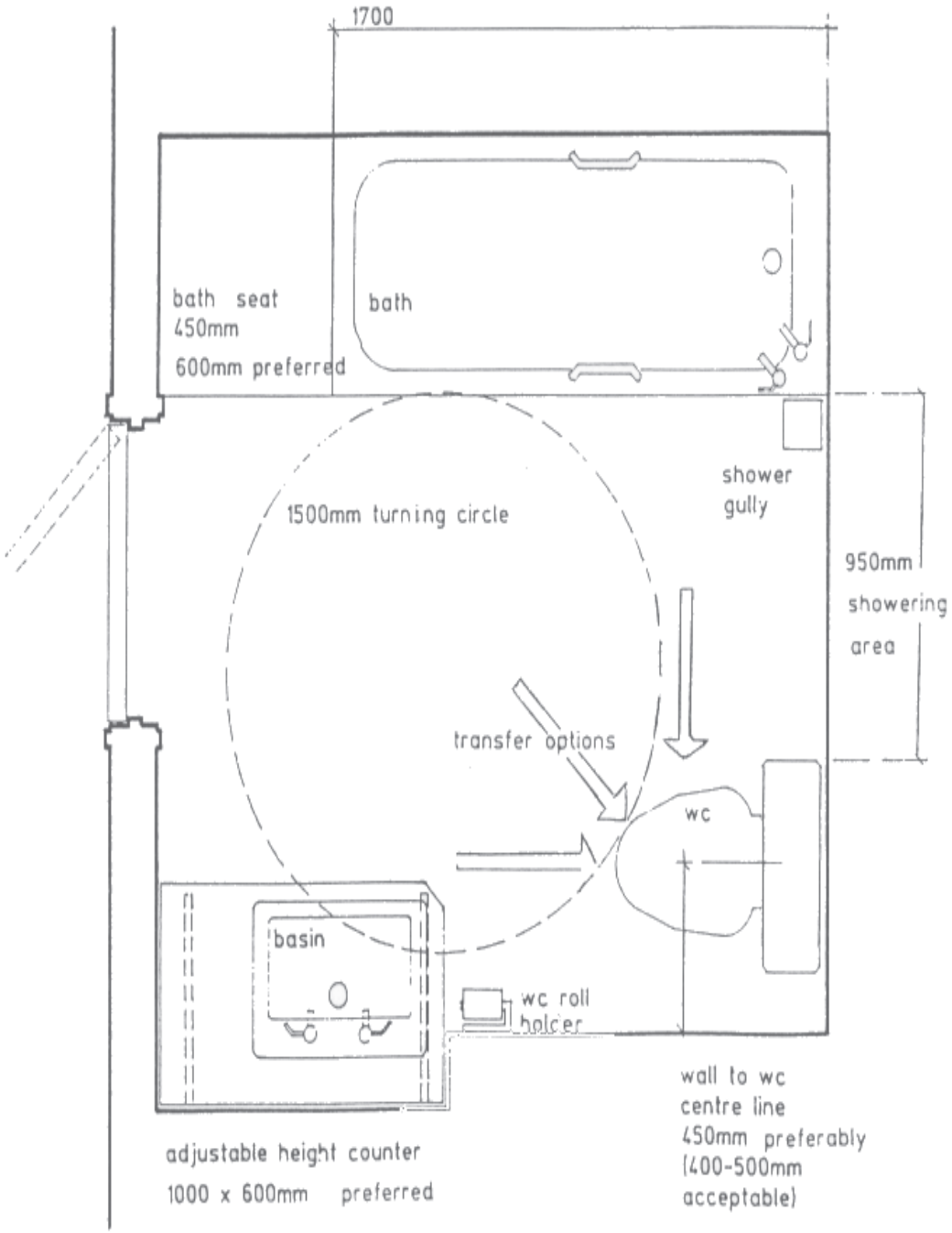
Habinteg Design Guide

Illustration No 3 - Window
Application; Wheelchair users' dwellings generally, not applicable in bathrooms, some bedrooms, or kitchens over worktops. Also generally applicable to the ground floor of all other dwelling types, except cam fastener not required.
Reference: Item 2.2.4 (See also items 3.3.1 and 3.13.5.2)



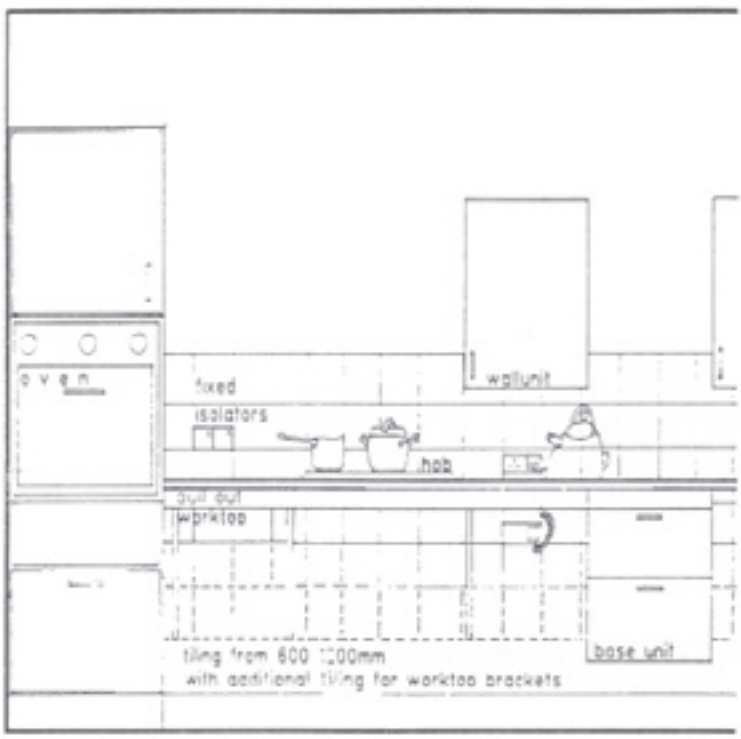
Habinteg Design Guide

Illustration No 4 - Bathroom
Application: Wheelchair users' dwellings only
Reference: Item 2.2.7.1 (see also item 3.6.3)



Habinteg Design Guide

Illustration No 10 - Kitchen units and worktop
Application: Wheelchair users' dwellings only
Reference: Item 3.4.1 (see also items 2.2.6.4 and 3.9.2.3)



elevation

worktops and base units mounted on adjustable height brackets
wall unit fixing height adjustable

section

laboratory type sockets with connection to outlet below worktops

5.6 Parker Morris Standards

These were mandatory minimum standards for local authority housing established by the Government in 1969 and based on the recommendations of the Parker Morris Committee. They were withdrawn in 1981 but still remain a benchmark for quality housing. They were never required in the private sector. The floor areas, provision of storage and gardens have never since been as generous in publicly funded housing.

It was required that each dwelling had:

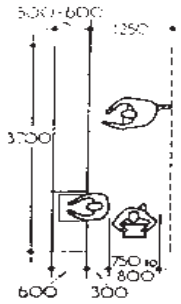
- entrance lobby or hall with hanging space and if for over 3 people, a space for a pram;
- if for more than 2 people, room to eat meals in the kitchen, and no access to bathroom through a bedroom;
- if for up to 3 people - one toilet;
- if for up to 4 people - one toilet separate to bathroom;
- if for 5 or 6 people - two toilets with one separate to bathroom;
- a cupboard of $0.4m^3$ size and if for over 4 people it should be $0.6m^3$;
- kitchens should have enclosed storage of up to $1.7m^3$ or if over 4 people $2.3m^3$ including a broom cupboard and ventilated food cupboard;
- space for a cooker, fridge and washing machine to be provided;
- worktops on either side of a sink and cooker to be provided next to each other with no break for doors etc.

There were requirements on minimum numbers of electric sockets per room, e g., 4 in kitchen, 3 in living area. Heating to certain temperatures was specified. All plans had to have certain furniture drawn on at certain sizes.

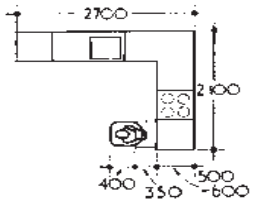
5.7 Ministry of Housing: space in the home

Not only is it important to have enough space, but it should be the right shape, without poorly positioned doors and windows. The former Ministry of Housing (DoE) has published research on how much space is needed for various activities and the relationship between different activities in the home (Design Bulletin No. 6: *Space in the Home*). This is not a current requirement but it is a useful reference in checking house designs.

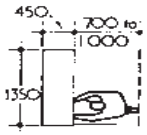
FOOD PREPARATION



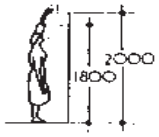
26.3 *At sink: passing with tray; at oven (new BS in preparation will supersede* **26.3** *and* **26.4***) depth and length of fitments in*



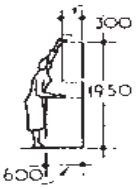
26.4 *Sitting at pull-out work top*



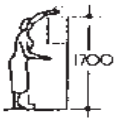
26.5 *Taking things from a sideboard or low cupboard*



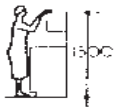
26.6 *Maximum vertical reach and maximum shelf height for general use*



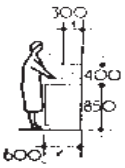
26.7 *Maximum vertical reach over work top*



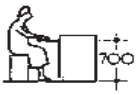
26.8 *Comfortable vertical reach over work top*



26.9 *Shelf at eye level*

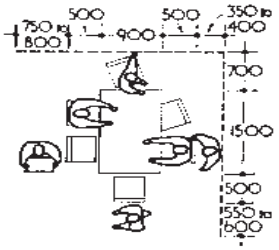


26.10 *Comfortable height of work top for standing position and clearances for cupboards above. Larger dimension of 450mm above top would allow for use of a mixer or similar appliance*

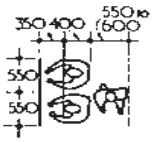


26.11 *Comfortable height of work top for seated position. Seat height 400 mm*

EATING



26.12 *Sitting at table and moving around*

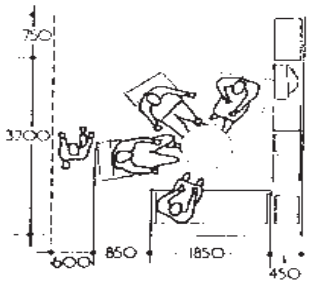


26.13 *Sitting at work top with person passing*

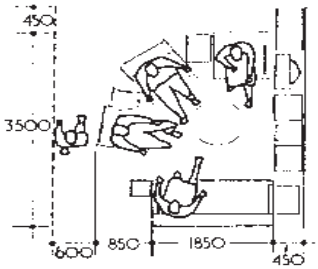
REFUSE DISPOSAL

26.14 *Using dustbin*

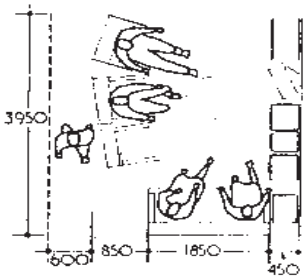
LEISURE (five person family)



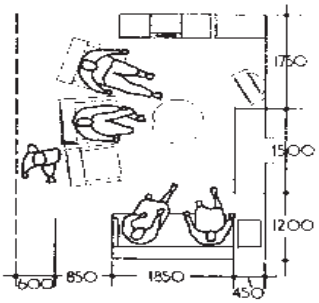
26.15 *Eating at a coffee table*



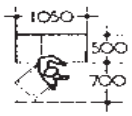
26.16 *Talking and reading*



26.17 *Looking at tv*



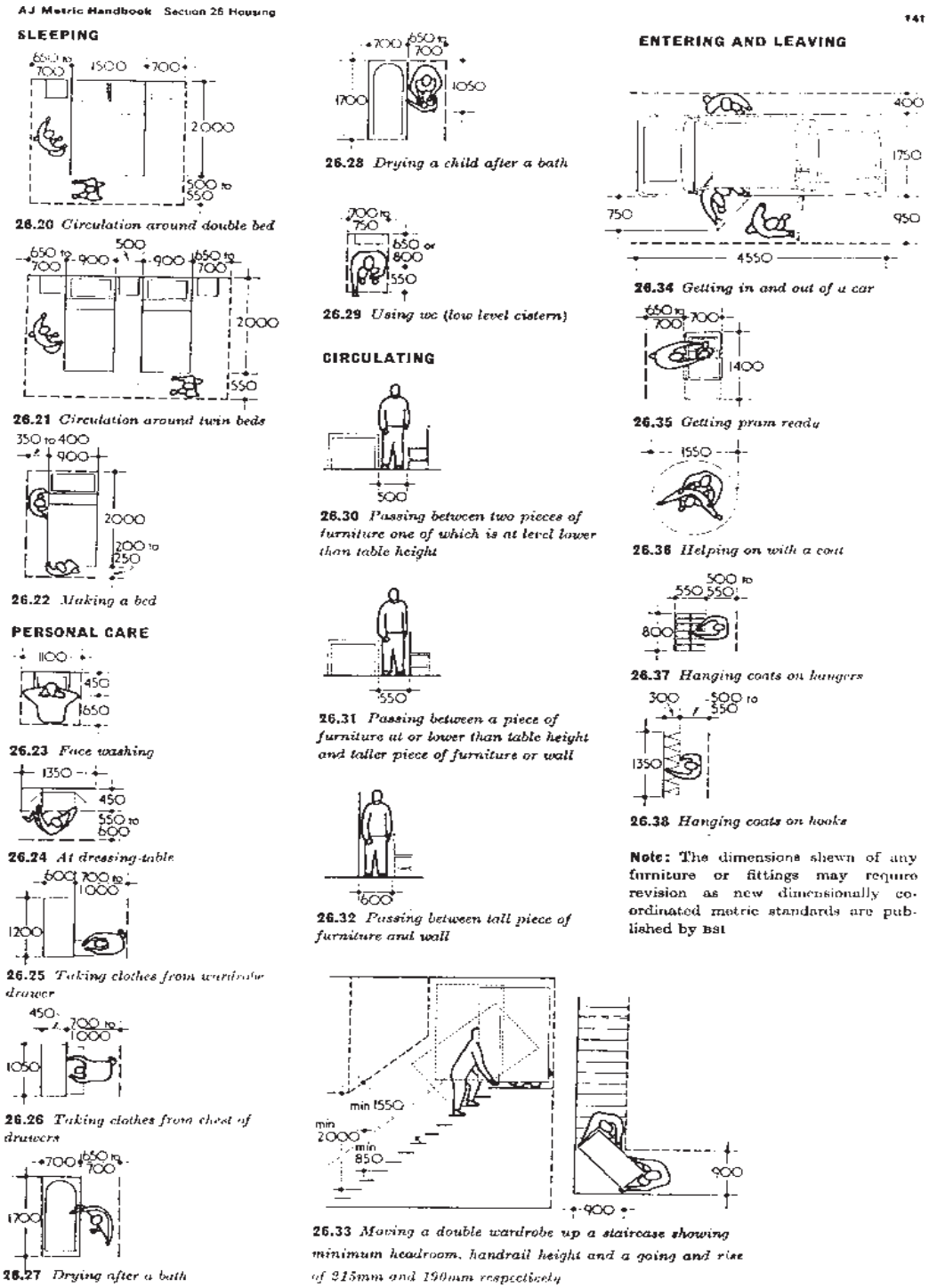
26.18 *Sitting around fireplace while watching tv*



26.19 *Getting up from a table, desk or writing bureau*

Space requirements related to activities

(Source: *Ministry of Housing Design Bulletin No 6: Space in the Home London: HMSO, 1968 republished in A J Metric Handbook London: Architectural Press, 1968*)



Space requirements related to activities

(Source: *Ministry of Housing Design Bulletin No 6: Space in the Home London: HMSO, 1968 republished in A J Metric Handbook London: Architectural Press, 1968*)

6. Standards House Types

These are used widely in the private sector and often are advertised with their names. The advantage is that design costs are cut and that designs can be amended and evolve following feedback. The disadvantages can be that there is no house type suitable and that designs are compromised. For example, some sites may require a house with a wider frontage than available; or a corner has to be turned and a side not front entrance is needed; or the houses face north and would benefit from moving living rooms to face south etc. These problems can be solved by having a wide range of house types for different situations.

The following examples are included in this section:

Housing for Wales/Tai Cymru

Habinteg Housing Association

Lovell Partnerships Ltd

6.1 Housing for Wales

Standard house type are required for new build social housing in Wales unless there are particular difficulties that make a customised design necessary; any variations have to be approved and must be able to accommodate specific furniture of specific dimensions. There are 11 house types and 6 flat/bungalow types all intended to accommodate a wheelchair on the ground floor. The larger houses have a large kitchen with dining areas and an additional small scullery with a second sink by the back door. All 3 and 4 bedroom houses have downstairs toilets. The largest house has a room that could be a downstairs double bedroom. Flats are designed for shared or separate access. Kitchen and bathroom layouts and fittings are also prescribed.

Illustrations of Housing for Wales/Tai Cymru House Types

The full range is shown in reduced size, on the following page, followed by a sample of each type:

1 bed 2 person flat	"walk up", i.e., including stairs and landing for access.
2 bed 3 person flat	"common access", i.e., external staircase to each flat.

2 bed 3 person bungalow

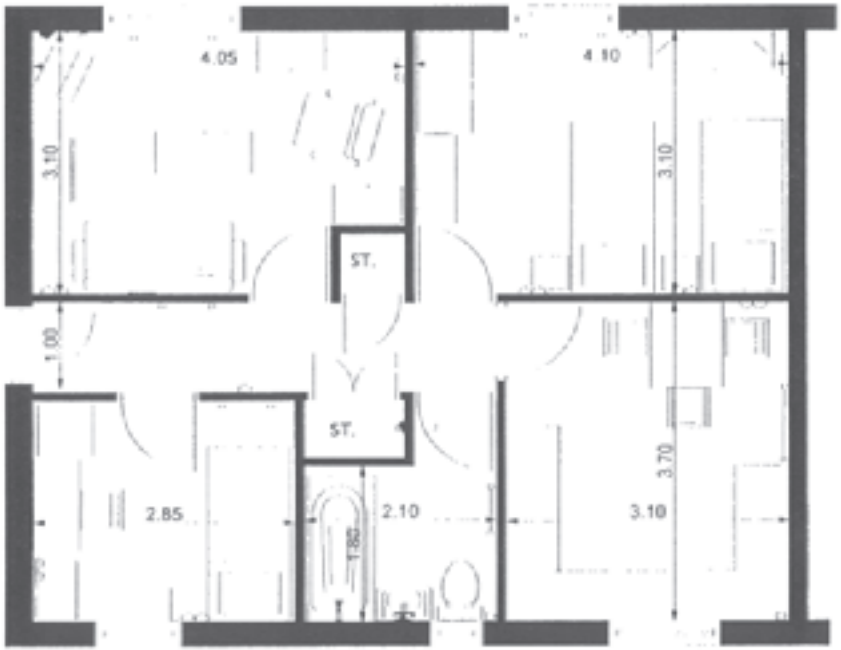
2 bed 4 person house

3 bed 4 person house	downstairs w.c., and kitchen layout E2.
3 bed 5 person house	downstairs w.c., and kitchen at front.
3 bed 5 person house	downstairs w.c., wide frontage and kitchen layout F3.
4 bed 6 person house	downstairs w.c., and kitchen layout G1.
4 bed 7 person house	downstairs w.c., and bedroom.

Note: all ground floors of houses and all bungalows are to wheelchair mobility standards.

1996a
PATTERN
BOOK
RANGE
HOUSES
FLATS & BUNGALOWS
C2
D1
D2
E1
E2
F1
F2
F3
F4
G1
H1
A1
A2
A3
B1
B2a
C1a


switched single socket
switched double socket
unswitched fused spur
double T.V. aerial point
telephone point
shaver point & light strip
NOMINAL AREA 49.0m² average
TAI CYMRU
HOUSING FOR WALES
ONE BEDROOM FLAT
2 PERSON
WALK UP
A3
FIRST
GROUND
ST.
4.60
0.90
2.80
3.30
3.40
4.30
1.00
0 1m 2m 3m 4m 5m 6m



switched single socket

switched double socket

unswitched fused spur

double T.V. aerial point

telephone point

shaver point & light strip

NOMINAL AREA 56.9m²

TAI CYMRU
HOUSING FOR WALES

TWO BEDROOM FLAT

3 PERSON
COMMON ACCESS

B2 a

0 1m 2m 3m 4m 5m 6m

switched single socket

switched double socket

unswitched fused spur

double T.V. aerial point

telephone point

shaver point & light strip

0 1m 2m 3m 4m 5m 6m

NOMINAL AREA 57.8m²

TAI CYMRU
HOUSING FOR WALES

TWO BEDROOM BUNGALOW

3 PERSON C1.


switched angle socket
switched double socket
unswitched fused spur
double T.V. aerial point
telephone point
shaver point & light strip
NOMINAL AREA 69.7m²
TAI CYMRU
HOUSING FOR WALES
TWO BEDROOM HOUSE
4 PERSON
D1
FIRST
GROUND
robe
ST.
0
1m
2m
3m
4m
5m
6m


switched single socket
switched double socket
unswitched fused spur
double T.V. aerial point
telephone point
shaver point & light strip
NOMINAL AREA 78.5m²
TAI CYMRU
HOUSING FOR WALES
THREE BEDROOM HOUSE
E1
4 PERSON
FIRST
GROUND
ST.
ROBE
0
1m
2m
3m
4m
5m
6m

switched single socket
switched double socket
unswitched fused spur
double T.V. aerial point
telephone point
shaver point & light strip
NOMINAL AREA 84.9m²
TAI CYMRU
HOUSING FOR WALES
THREE BEDROOM HOUSE
5 PERSON
F2
FIRST
GROUND
robe
ST.

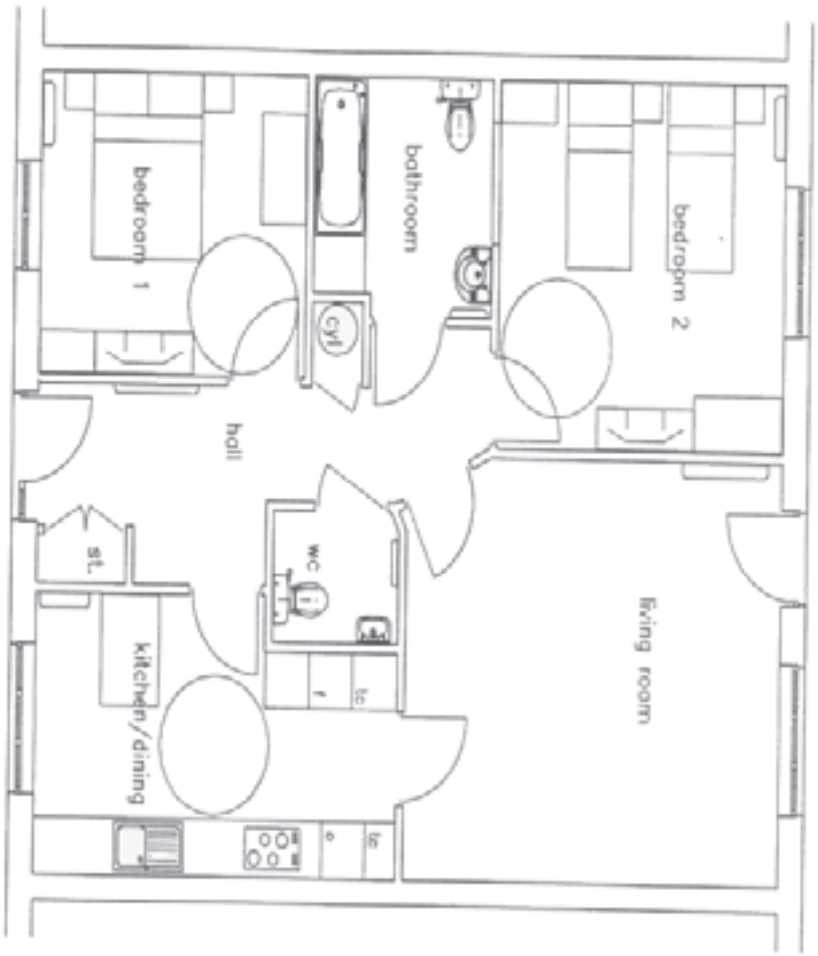

NOMINAL AREA 84.8m²
TAI CYMRU
HOUSING FOR WALES
THREE BEDROOM HOUSE
5 PERSON
P3
switched single socket
switched double socket
unswitched fused spur
double T.V. aerial point
telephone point
shaver point & light strip
FIRST
GROUND
robe
robe
ST.
ST.
ST.
ST.
4.25
2.80
2.30
3.20
3.20
1.80
1.80
2.00
4.75
2.40
1.80
3.30
5.20
1.00


TAI CYMRU
HOUSING FOR WALES
FOUR BEDROOM HOUSE
6 PERSON
G1
NOMINAL AREA 99.4m²
FIRST
GROUND
ST.
robe
switched single socket
switched double socket
unswitched fused spur
double T.V. aerial point
telephone point
shaver point & light strip


TAI CYMRU
HOUSING FOR WALES
FOUR BEDROOM HOUSE
7 PERSON
H1
NOMINAL AREA 107.2m²
FIRST
GROUND
robe
robe
ST.
ST.
ST.
ST.
ST.
3.20
3.20
4.05
2.80
2.40
1.90
2.00
1.80
3.10
4.25
3.40
1.80
1.60
2.20
3.30
1.60
switched single socket
switched double socket
unswitched fused spur
double T.V. aerial point
telephone point
shaver point & light strip
0
1m
2m
3m
4m
5m
6m

6.2 Habinteg Housing Association

A sample of a 2 bed and person wheelchair users bungalow layout and elevations.



1a

Habinteg Housing Association Ltd.
STANDARD DWELLING RANGE
2b 4p Wheelchair Users Bungalow

LAYOUT PLAN

1:75 | 1a | Rev.

Front Elevation

Rear Elevation

1a

Habinteg Housing Association Ltd.
STANDARD DWELLING RANGE
2b 4p Wheelchair Users Bungalow

FRONT & REAR ELEVATIONS

1:75	1a 11.0	Rev.

6.3 Lovell Partnerships Limited

Lovell Partnerships Limited are a private sector company who build and sell housing; they work with housing associations and local/unitary authorities in newbuild and regeneration schemes. They develop housing for sale and have their own standard house types from one bed to four bedroomed semi-detached homes. Examples are included on the following pages.

Lovell | Partnerships

THE BIRCHAM

GROUND FLOOR

ACCOMMODATION

1 BEDROOM X 2 PERSON BUNGALOW
45.04sq.m TOTAL FLOOR AREA

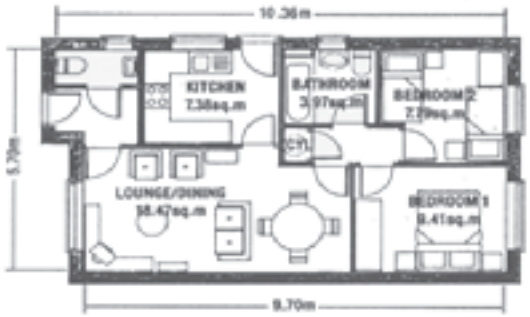
Maximum Room Dimensions in Metres

Living/Dining	4.700 x 3.000
Kitchen	2.800 x 2.500
Bedroom	2.807 x 4.745
Bathroom	2.207 x 1.900

Lovell Partnerships

Lovell Partnerships

THE BRATTON



GROUND FLOOR

ACCOMMODATION

2 BEDROOM X 4 PERSON BUNGALOW
56.69sq.m TOTAL FLOOR AREA

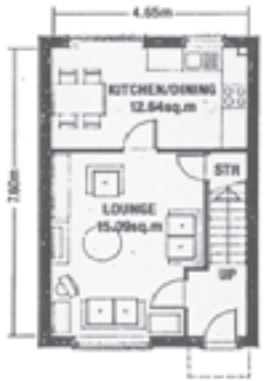
Maximum Room Dimensions in Metres

Lounge/Dining	3.160 x 6.080
Kitchen	2.400 x 3.075
Cloaks	0.878 x 1.940
Bathroom	1.880 x 2.100
Bedroom 1	2.704 x 3.480
Bedroom 2	2.856 x 2.910

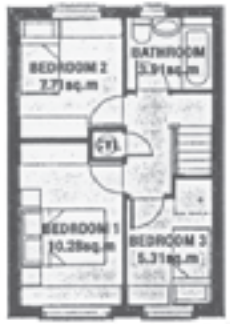
Lovell Partnerships

Lovell Partnerships

THE HAZELWOOD



GROUND FLOOR



FIRST FLOOR

ACCOMMODATION

3 BEDROOM X 4 PERSON HOUSE
70.68sq.m TOTAL FLOOR AREA

Maximum Room Dimensions in Metres

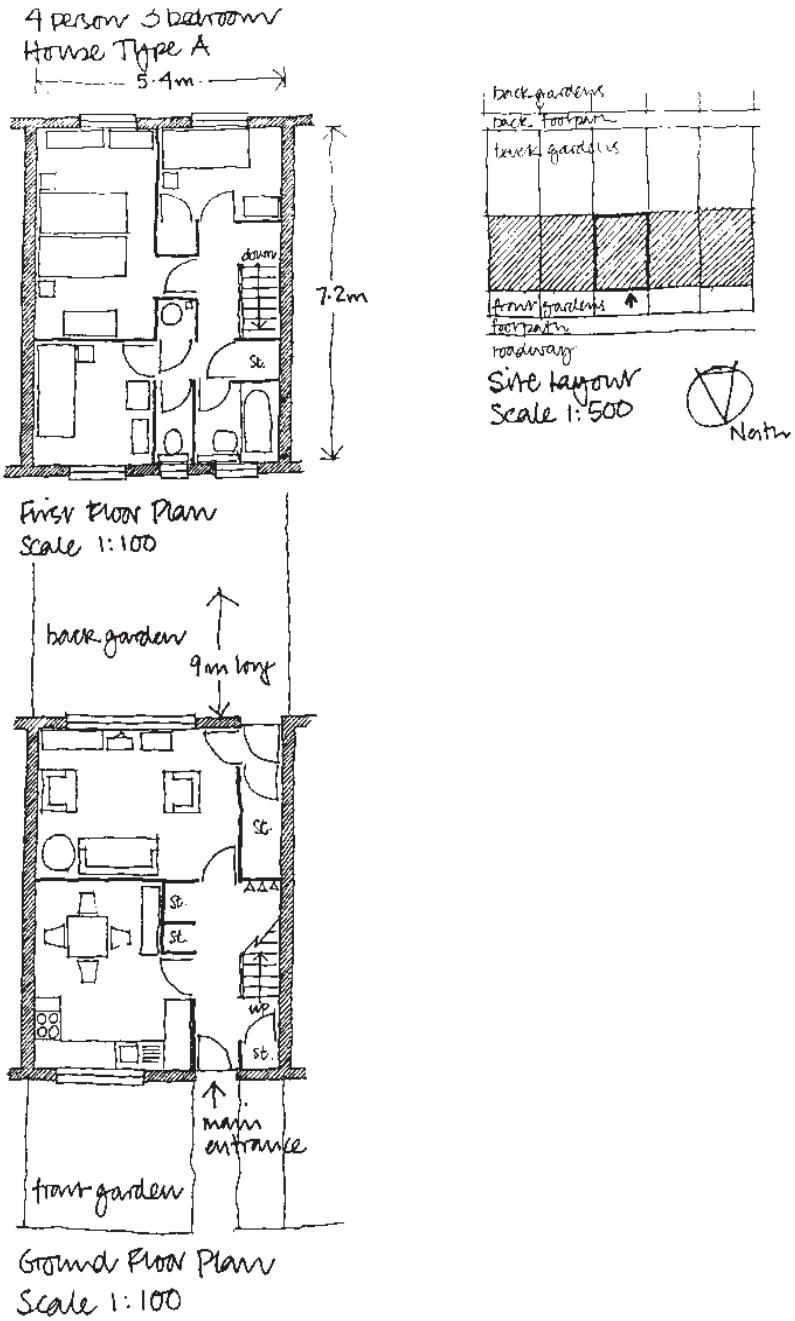
Lounge	3.630 x 4.811
Kitchen/Dining	4.610 x 2.665
Bedroom 1	2.480 x 4.296
Bedroom 2	2.480 x 3.184
Bedroom 3	2.030 x 3.296
Bathroom	2.030 x 1.929

Lovell Partnerships

7. Analysing House Designs

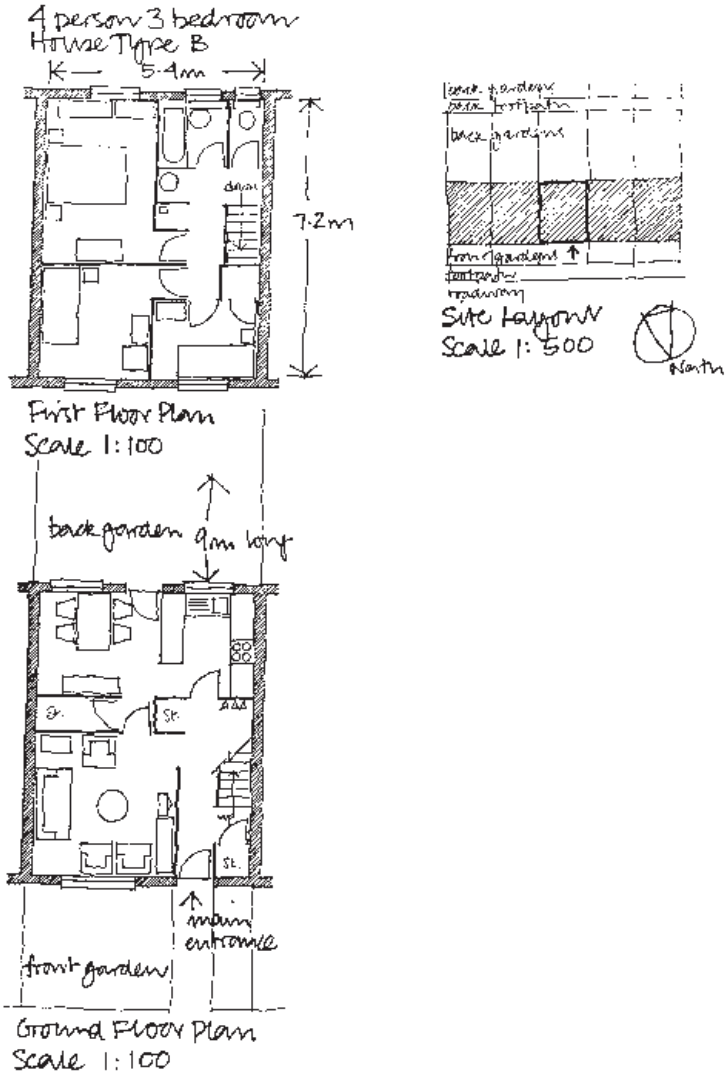
This section consists of three linked learning activities, based upon your study of the Parker Morris standards for house design, and these three house designs.

House type A



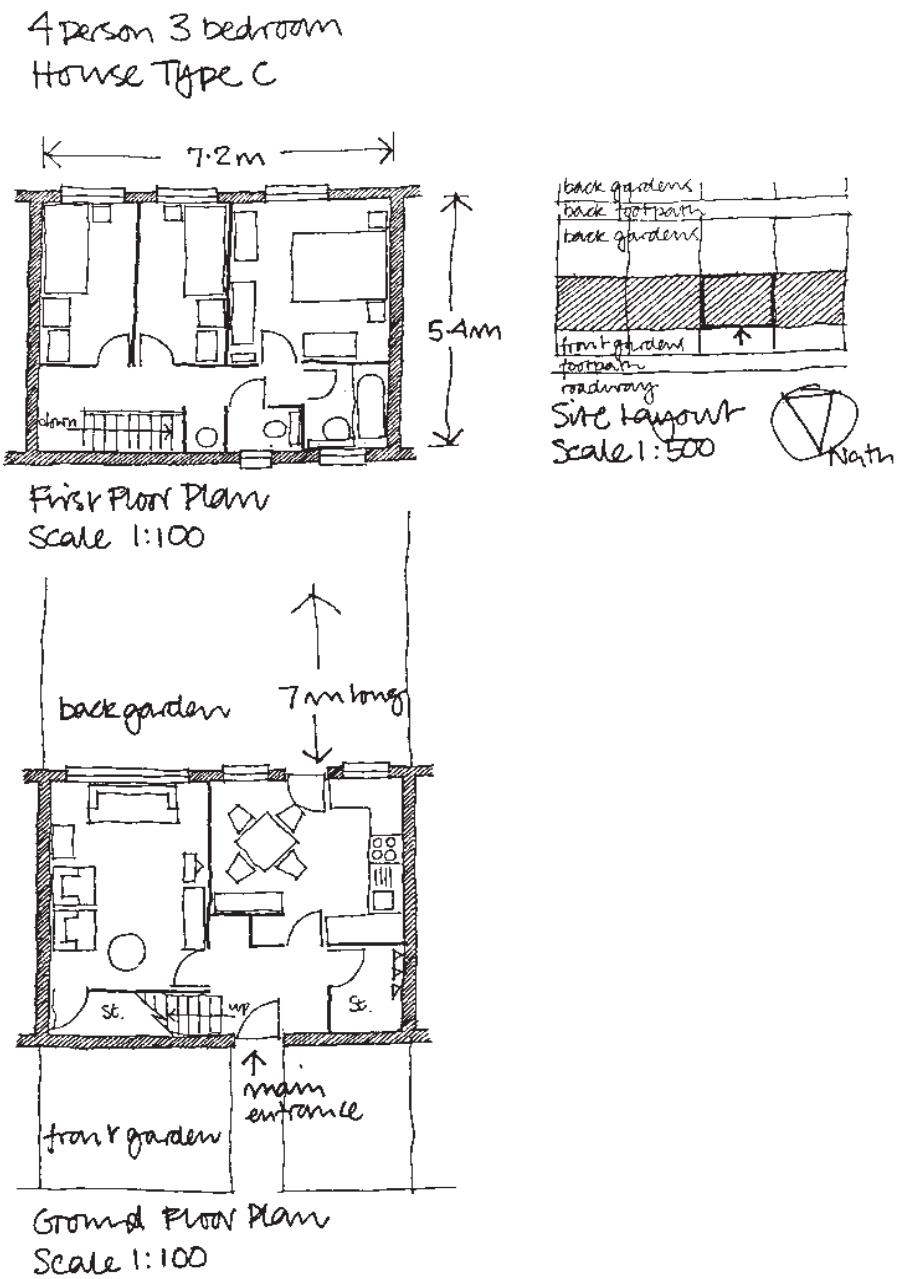
Ground Floor Plan

House type B



Ground Floor Plan

House type C



Ground Floor Plan

Activity 11

House types A, B and C are two-storey terrace houses, designed to accommodate 4 people in three bedrooms. Using the Parker Morris Standards, evaluate each design for:

1. *overall space standards*
2. *plan arrangement*
3. *fittings*
4. *furniture*

You can write your evaluation in the spaces provided

HOUSE TYPE A

1. *space standards*

2. *plan arrangement*

3. *fittings*

4. *furniture*

HOUSE TYPE B

1. *Space standards*

2. *plan arrangement*

3. *fittings*

4. *furniture*

HOUSE TYPE C

1. *Space standards*

2. *plan arrangement*

3. *fittings*

4. *furniture*

Time allocation 30 minutes

Activity 12

Having evaluated the three designs using the Parker Morris Standards, can you think of any other important factors that should be considered, but are not included in Parker Morris?

It might be helpful to imagine that you are living in each of the houses. What would your feelings be about your home if you are about to open the front door to receive a visitor?

You may like to list some points here

Time allocation 10 minutes

Did you think of cultural as well as technical factors? Parker Morris is strong on functional or technical issues, but tends to ignore cultural factors which may be just as important.

By cultural factors, I mean the customs and taboos through which we act in the social world.

Activity 13

How do our house types compare now, applying the new criteria developed in Activity 12?

HOUSE TYPE A

HOUSE TYPE B

HOUSE TYPE C

Time allocation 10 minutes

These are some of the comparisons you might have made.

All the houses are the same size, but Type C is a different shape to A and B. They all meet the main Parker Morris Standards, but they do it in different ways.

House Type A has the kitchen at the front of the house, which might offend many people's ideas of what is appropriate to the public side of the dwelling, an example of a cultural preference. It does have the benefit of the living room next to the garden on the sunny south side of the house.

House Type B is more traditional in layout, but loses the connection between the living room and the garden.

House Type C has both living room and kitchen at the back of the house next to the garden. The possible drawback in this case is an almost blank public side of the house with only two small windows (WC and bathroom) and the front door to create interest.

Which house type would you most prefer?

7.2 Comparison of floor areas

Floor Areas Housing in m²	Parker Morris Minimum inc Storage	Housing for Wales Standard House Types	Lovell Partnership Ltd Standard House Types	Phoenix Association
Houses				
1 bed 2 person	-	-	44.01 48.17	-
2 bed 3 person	-	63.4		-
2 bed 4 person	-	69.7	60.88 61.77	-
3 bed 4 person	79.0 76.5	77.5 78.5	70.68	-
3 bed 5 person	89.5 86.5	84.9 84.8 85.0	83.64 87.52	-
4 bed 5 person	98.5 89.5	-	82.44	-
4 bed 6 person	102.5 97.0	99.4	95.81	-
4 bed 7 person	114.5 118.5	107.2	-	-

Floor Areas in Square Metres	Parker Morris Minimum inc Storage	Housing for Wales Standard House Types	Lovell Partnership Ltd Standard House Types	Phoenix Housing Association as in HCPM.102 pages 74-76
Flats				
1 bed 1 person	32.5	-	-	-
1 bed 2 person	47.5	44.8 48.4 49.0		53.29
2 bed 3 person	60.0	56.9 62.2	61.77	57.67
Bungalows				
1 bed 1 person	32.5	-	-	-
3 bed 5 person	47.5	-	45.04	-
2 bed 3 person	60.0	57.8	-	76.5
2 bed 4 person	70.5	-	56.69	-

N.B. Houses are approx 10m² larger to allow for stairs and landing areas.
Some flat types include their share of shared stairs and landing areas.

Activity 14

What interesting comparisons can you make of the floor areas shown?

Time allocation 20 minutes

You will notice many. These are some:

1. Parker Morris makes no provision for the smaller houses that are used so much now.

2. Phoenix Housing Association accessible dwellings are close or over Parker Morris.

3. Lovell Partnership 1 bed 2 person house is smaller than a parker Morris 1 bed 2 person flat although stairs would take up approx. $10m^2$.

4. Housing for Wales are generally 2-$4m^2$ below Parker Morris except in the biggest house type where it is $7.3m^2$ below.

5. Lovell Partnership houses are approx. $7m^2$ smaller than Housing for Wales' houses.

6. Parker Morris adds $10.5m^2$ to the 2 bed 3 person bungalow for the 4th person.

8. Design Standards for New Housing

8.1 The current system of control

(a) The Building Regulations

These are concerned with the constructional quality of new housing and are based on health and safety requirements. Aspects covered in the regulations include the suitability of materials; design and construction of foundations and the main structure of the dwelling; resistance of floors, walls and roof to damp; fire precautions, insulation against heat loss and sound penetration; construction of stairway; provision of open space outside the windows of habitable rooms; ventilation; height of habitable rooms; drainage; construction of chimneys and hearths, installation of heating appliances and the planning and ventilation of toilets. The regulations are administered by the building control office of the local authority. In recent years they have been used most notably to increase the standards of thermal insulation in dwellings.

(b) Town Planning permission

Planning permission is given by the local authority. The authority's planning policies are communicated through published plans and planning guidelines, which though 'non-statutory' have force in that all planning applications are expected to conform to them. They are particularly used to control maximum and minimum densities and estate layouts which in turn have a crucial effect on house design. Though, officially they have no power over the internal space and layout within

dwellings, some authorities put in requirements about minimum space standards for housing production by the private sector (Karn 1992). Although such requirements may not stand up on appeal, developers may conform rather than suffer the delays involved in appeals.

(c) Funder's requirements

(i) Private Sector and Private Finance

Private sector builders and developers may finance schemes during construction before sale, from bank loans. The banks will want information on the company; its cashflow, assets, track record etc., and they will want to know about the value of contracts currently being constructed and senior staffs competence. The bank will assess the performance and profitability of the company and the scheme requiring finance. They may also require that the scheme meets National House Builders Council (NHBC) requirements so that they qualify for a 10 year guarantee.

(ii) Public Sector & Private Finance

Local/unitary authorities, housing associations and local housing companies all borrow money from banks and building societies to fund development; and they too must satisfy lenders of the competence and financial strength of their organisation and of the specific schemes' rental income and viability. Lenders may add conditions specific to schemes, e.g., they can be concerned about high rents that Housing Benefits or low wages may not always be able to meet.

(iii) Public Sector and Public Subsidy

Housing Associations and local housing companies are eligible for social housing grant; and in England the Housing Corporation has a Procedure Guide and Good Practice Guide that gives mainly guidance and some requirements, but no longer space requirements.

In Wales, Housing for Wales/Tai Cymru has similar guidelines with additional requirements known as Development Quality Standards. There are standard contract documents which include a specification that can be amended. Standard house types have to be used unless individual designs have been approved. Architects' drawings have to be forwarded to the Police to ensure they meet their "Secured by Design" standards.

Social housing grant in England and Wales is paid only when detailed applications are made and approved before site purchase and, in Wales again, before tender acceptance.

(d) Space standards

There are no longer any mandatory space standards for housing; except in Wales, where housing associations and local housing companies must build either Housing for Wales/Tai Cymru standard house types or design alternatives that have to be approved, to ensure they allow certain furniture of certain dimensions into the rooms. The Housing Corporation ended their floor space requirements in 1982.

9. Declining standards since Parker Morris

There is growing debate about the quality of some of the housing now being built. The very low space standards of some of the starter homes produced by the private sector is causing concern. In the public sector there is evidence of falling space and storage standards in local authority and housing association housing. There is widespread fear that this lowering of standards could be producing hard-to-let problems for the future.

In "Homes for Today and Tomorrow" published by the Ministry of Housing and Local Government in 1961 the Parker Morris Committee wrote that:

> *"the war is 16 years and 3.5 million houses away. Our work has been to take stock of accumulated experience; to evaluate the social and economic trends which are re-shaping our lives; and to formulate recommendations which will ensure sound and well designed homes...."*

It is perhaps a measure of the optimism of those times that they assert *"Good homes are worth paying for...."* and muse that if standards of living continue to rise that their recommendations could be made more generous.

Sadly, the trends in social housing have been downwards not upwards.

Declining Space Standards in Homes

In their research "New Houses in the 1990s: A Study of Design, Space and Amenities in Housing Association and Private Sector Housing" Valerie Karn and Linda Sheridan said that:

> *"The most important conclusion of this study is that there is a continuing decline in the standards of homes built by housing associations. In terms of overall floor space, in 1989-90, 53% of new housing association general needs housing was 5% or more below Parker Morris standards (Walentowicz 1991), by 1991 1992 this figure had risen to 68% The decline in floorspace standards has been accompanied by other design changes which are closely associated."*

And they found that the private sector,

> *"presented a wider range of floorspace standards…. with a greater proportion, 15% or more below Parker Morris but also a greater proportion substantially above…."*

Presumably this reflects the generous size of top of the market luxury homes. They also found that the *"worst floorspace standards in the private sector were substantially lower than the worst in the housing association sector…."*

Obviously the decline in space standards in the private sector is not due to grant changes, but primarily, land cost.

Karn & Sheridan state that,

> *"it appears very likely that [since 1991-92] this downward spiral has escalated since then, as grant rates have fallen and value for money competition has had its impact on.... effective grant rates [falling] even further."*

Increasing Site Density

Site density is another factor influenced by cost and decreasing grant levels. We have already seen that there are no mandatory controls on numbers of units per hectare.

Karn & Sheridan found that:

> *"There was a very strong relationship between location and density in the private sector, linked to the greater prevalence of flats and terraced housing in the Greater London Region.... the relationship was far weaker in the housing association sector, which reflects the higher grants in higher cost areas and the need to provide for families rather than just flats...."*

Density-Units per Hectare	Housing Associations Sample: 100	Private Sector Sample: 100
Below 30	22.4%	42.1%
30-44	35.3	26.3
45-59	19.0	8.8
60-74	11.2	7.6
75+	21.1	15.2

Source: New Homes in 1990s: A study of Design, space and amenities in Housing Association and Private Sector Housing. Valerie Karn and Linda Sheridan, published in 1994 by Joseph Rowntree Foundation.

Future Trends

Decreasing land availability and increasing costs affect all developers and are a pressure to decrease dwelling size and increase site density.

In the private sector this is altered at the expensive end of the market where customers will pay for the luxury of space. In the public sector this trend could be altered by regulation, as it has been in Wales by Housing for Wales/Tai Cymru, or by an increasing social housing grant.

Housing has to compete with other publicly subsidised services, such as health and education, and at present it is not a priority. But politics are not static. Priorities do change. We have seen how previous policies have shaped housing and communities, the current trends are shaping future communities. In urban regeneration the role of housing is acknowledged as part of the process of making change.

The problems of residualised housing estates and marginalised people without employment look as if they will remain with us. Read the newspapers and housing press and follow the debate as it continues, you may see that lack of political will change again.

Summary

1. Standard house types and design guides have been used to set standards and help eliminate bad design and/or decreasing space standards.
2. Housing for Wales/Tai Cymru require housing associations in Wales to use their standard house types or to design alternatives that must meet the same criteria.
3. Some housing associations use their own house types and many have their own design guides that set standards. Habinteg Housing Association and Lifetime Homes and Housing for Wales/Tai Cymru have wheelchair standards throughout some dwellings and on the ground floor of all dwellings.
4. It should be noted that definitions of wheelchair standards vary widely but the minimum must include wide doorways, a turning circle in every room and in circulation space, e.g., halls and an absence of different levels including entrances. The height of fittings, e.g., electric lights, door handles, taps etc., must also be suitable.
5. The Parker Morris Committee published their recommendations in 1961 which set a high standard; they were withdrawn by the Government in 1981. And a year later in 1982, the Housing Corporation withdrew their space standards.
6. Research by Karn & Sheridan records that space standards in housing association dwellings and site densities have deteriorated since the introduction of private finance in 1989.
7. The mandatory requirements on standards in housing are those of planning permission and building control both administered by local/unitary authorities.
8. Funders in the private and public sector also make general and specific conditions to protect their investment.

Self Test 2

1. *High-rise housing is usually thought to entail high density housing. Is that necessarily the case?*

2. *Where would you look for guidance on design of space?*

3. *Briefly explain what the Parker Morris Standards are, and what they cover.*

4. *Where would you look for guidance on control of standards for housing associations?*

5. *What statutory controls remain in force for housing standards?*

6. *What features would you expect of a home designed to 'Lifetime Homes' criteria?*

7. *What is unusual about the homes built by Habinteg Housing Association?*

Now turn to the Answers at the end of the Block.

Answers

Self Test 1

1. Use value relates to functional qualities of a house - a sound roof, good insulation - you can expand the list. These, though they may count to a buyer, are not the "selling points". People look for things that suggest a certain kind of lifestyle, or certain values. Such things might include a neat, leafy street - suggesting tranquillity, order, some hint of the countryside; or a "traditional" fireplace, symbolising cosiness, security, traditional family life.

2. Determinism is the theory that the behaviour of people is governed by laws which, like the laws of physics, can be discovered by observation and experiment; and that in given situations, their behaviour is then predictable. Architectural determinism suggests that certain kinds of built environment will make people behave in certain predictable ways.

3. Those who do not subscribe to determinism maintain that people react and interact with their surroundings in conscious and complex ways; with special conditions, and factors such as class, age, gender, etc being more powerful than the physical environment.

4. By defensible space, architects mean areas which are clearly either private or public, for which someone has responsibility, which is clearly visible to the person to whom it "belongs". This means that those places are less vulnerable to crime.

5. The phrase "utopian housing", is used, usually critically, to describe modernist housing characterised by tower blocks, deck access, large areas of public space. The suggestion is that they were created in a misguided attempt to create ideal communities or "brave new worlds".

6. Coleman demonstrated a statistical link between signs of social problems, or "social malaise indicators":

   - litter
   - graffiti
   - vandalism
   - children in care
   - urine pollution
   - faeces pollution

   in ascending order of seriousness, with design variables

- size
- circulation (walkways etc)
- entrance characteristics
- grounds features.

7. Newman talked about design creating places that were vulnerable to crime - that is, where crime was likely to be committed, not necessarily by the residents. With her introduction of "children in care" as an indicator, Coleman introduces the idea of design creating "problem people", likely to be anti-social or criminal.

8. One approach for housing managers to social problems is the design approach: to incorporate what is useful in the theories into new design, or altering existing housing; and to avoid features clearly seen as a source of problems.

   The other approach is the management approach: the creation of decentralised and responsive management and maintenance services, and involving tenants in the management processes. This has included the provision of jobs and training.

9. Residualisation is the increasing concentration of poor unemployed people and social problems such as vandalism, crime, empty properties, apathy and disrepair in large, often peripheral, housing estates.

10. David Page recommends that:

    - building contracts are for a maximum of 40 homes on any one site
    - scattered properties in existing communities are developed, e.g., rehabilitation
    - housing management staff are included in development decisions
    - that estates are a mix of housing for rent, for sale and shared ownership
    - that estates have a mix of unit types and that on one type dominates.

Self Test 2

1. Research has demonstrated that widely-spaced blocks of high-rise flats can have lower density than, or similar density to low-rise developments.

2. In the DoE Design Bulletin No. 6 Space in the Home.

3. The Parker Morris Standards were, until 1981, the mandatory minimum standards for local authority housing. They covered:

   - plan arrangement
   - space standards
   - fittings and equipment
   - space heating
   - furniture.

4. To the advisory documents produced by the Housing Corporation: Procedure Guide and "Good Practice Guide" or to similar guidance offered by Scottish Housing and Housing for Wales.

5. Remaining statutory controls are:

   - building regulations; and
   - local authority planning controls and local authority planning guidelines, not statutory, but generally complied with.

6. In general terms, the home will be designed to ensure that all ages, from the very young to the frail elderly, can access necessary parts of the house. There will be level access and space for a wheelchair to move around. All fittings should be accessible - not too high or too low. A disabled person should be able to use all facilities, including the bathroom.

7. Habinteg Housing Association aim to help the integration of people with disabilities. One quarter of all homes built by Habinteg Housing Association are bungalows for wheelchair users. The surrounding houses are built to allow wheelchair mobility on the ground floor, so that people with disabilities can visit their neighbours. The bungalows are built using their standard wheelchair standard layouts but the details of kitchen, bathroom, and other fittings are all discussed and designed to suit the individual future occupant and their family.