BLOCK PDH.102

HOUSING DEVELOPMENT: OVERVIEW AND CONSTRAINTS

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Preface

This second block in the unit on housing development is intended to give you an overview of development opportunities and the constraints which govern housing developments.

The first section covers housing design types, placing housing design and construction in their historical and social contexts. It also looks at some of the key economic and political factors which have affected housing development in Britain from the pre-1919 period through to the present day.

The second section focuses on new build development and sets out the pros and cons of undertaking new build as opposed to other forms of development, as well as what sways developers towards new build schemes. There is a discussion of the relative costs, timescales and value for money of new build schemes as a way of understanding what is entailed. The section finishes off with a discussion of the opportunities for involving future residents in the design and development of new build schemes.

The third section turns to the redevelopment of housing through rehabilitation, conversion and subdivison schemes. Following a similar format to the previous section, we look at the relative costs, timescales and value for money of new build schemes as a way of understanding what is entailed in these schemes. There is a brief section on tenant involvement, building on the discussion in the previous section on new build.

The fourth section covers developing for groups with specific needs and begins with a general discussion of equal opportunities and development. The role of the community architecture movement in helping people to influence the design and development of housing to better meet their needs is then explored through case study examples. The housing design needs of people who receive care in the community are considered next, as are those for older people, people with disabilities and people with multiple needs.

The fifth and final section concentrates on what designs are realistically possible, and describes the controls, constraints, standards and the received wisdom of social sciences and psychology which all contribute to the eventual outcome of housing design within the current political, social and economic climate.

Outcomes

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

- recognise the features of modern housing development in the context of the four main time periods pre-1919, 1919-1939, 1945-1979 and 1979 to the present new century;
- understand how the social and economic trends of each of these time periods influenced the shape of housing development in Britain;
- list the advantages and disadvantages of new build development;
- explain the costs, timescales, value for money and involvement of residents in new build projects;
- understand the different types of rehabilitation schemes and their costs, timescales, value for money and how they involve existing and future residents;
- identify the contribution made by conversion and subdivision of existing housing;
- review the main issues stemming from equal opportunities and housing design;
- discuss the role of the community architecture movement in helping to ensure that the needs of people who have been unable to influence housing design in the past are met;
- identify the main design considerations when housing people who need care in the community;
- understand the main design issues for older people, people with physical disabilities and people with multiple needs;
- list the various constraints on what type of housing is developed;
- explain how functional and aesthetic design matters are controlled;
- discuss current design issues such as flexibility and low energy designs; and
- understand the impact of technological change on design and development.

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A. Housing Design Types

1. Introduction

To understand what types of housing have been developed, it is useful to place housing design and construction in their historical and social context and examine some of the economic and political factors which have affected housing development in Britain. This section sets out to describe these factors in four defined time periods: Pre-1919; 1919-1945; 1945-1979 and 1979 to the present.

Each time period has three main sections:

- historical and social context;
- economics and politics; and
- design and construction

In each of these we shall consider a number of significant features, attempt to set the scene and outline the main changes in each period.

One activity you might like to try when travelling around your local area is to identify local housing. You could carry a small notebook and when you pass some housing, try to identify it and place it in its historical and tenure context. Note the street and your guess in your notebook and check it against local history books, old Ordinance Survey maps in the local library, etc. (It's more interesting than train spotting - apologies to any train spotters!)

Activity 1

Why do you think it might be useful to place housing design and construction in a contextual framework ?

Make a list of your ideas.

Time allocation: 5 minutes

We would say there are probably three main reasons for setting housing in a contextual framework:

Firstly, housing is used by everyone at all stages of life. Along with food it is the most basic of human needs. Adequately meeting this need at any given time is directly affected by a number of interrelated demographic, economic, historical and political factors. In Britain, all of these have had a great effect on both the demand and supply of housing as well as design and construction throughout history and will continue to do so.

Secondly, housing development operates in a dynamic world. To make sense of it at different periods of time it is important to understand the effect that these different factors have had on housing policy makers and practitioners.

Thirdly, history is important in housing because:

- houses have a long life, as we have seen before. Roughly a third of the 23 million dwellings now in use in Britain are over 60 years old and most remain in use today. Furthermore, housing built before 1919 forms 25% of the total stock;

- contemporary housing policy is influenced by the past, for example, dwellings inherited from earlier periods represent both:
  - a resource to be used
  - a problem to be dealt with;
- the policy mechanisms and institutional traditions we have for dealing with housing problems have been inherited from the past.

Whilst total population size and structure is fundamental in shaping the basic demand for housing and judgements about the adequacy of housing supply, it is the number and size of households and families which relate directly to housing provision. As we shall see in this unit, over the last century the number, size and types of households seeking housing accommodation has dramatically altered these requirements.

Housing development also affects and is affected by economic change. As we shall see, the demand for housing and the availability of public and private resources for housing are fundamentally affected by the pattern of growth in the economy. Also, the capacity of individual households to negotiate access to satisfactory housing relates to whether they are in employment and to the security and remuneration associated with the employment.

The way in which the economy changes not only has an impact on individual household budgets but it also affects decision making in the wider community in such matters as taxation, benefits and the amounts and proportions of public expenditure to be allocated to housing and other social spending priorities.

In turn, these priorities are affected by political considerations at both a central and local government level because housing policy and practice are direct expressions of political processes. Policy aims and mechanisms and the way in which policy emerges are constantly affected by the wider political system. This is not static and, as we shall see, the balance of power and influence shifts over time. Different local political traditions and differences in the relationship between central and local government can also have a fundamental effect on housing provision.

2. Housing before 1919 (1815-1918)

2.1 Historical and Social Context

Demographic trends

Britain witnessed major demographic change during the nineteenth century. There was massive growth in the overall population and by the end of the century Britain had changed from a rural to a predominantly urban society. The population in England and Wales grew from nine million in 1801 to eighteen million by 1851 and by 1901 had risen to thirty two million.

The early part of the nineteenth century saw the growth of the industrial revolution with Britain becoming *'The Workshop of the World'*. A major effect of the industrial revolution was to create an ever growing demand for labour within newly industrialised areas. This led to more and more people being attracted away from villages and land into the rapidly growing towns and cities, such as Birmingham, Glasgow, Leeds, Manchester and Sheffield.

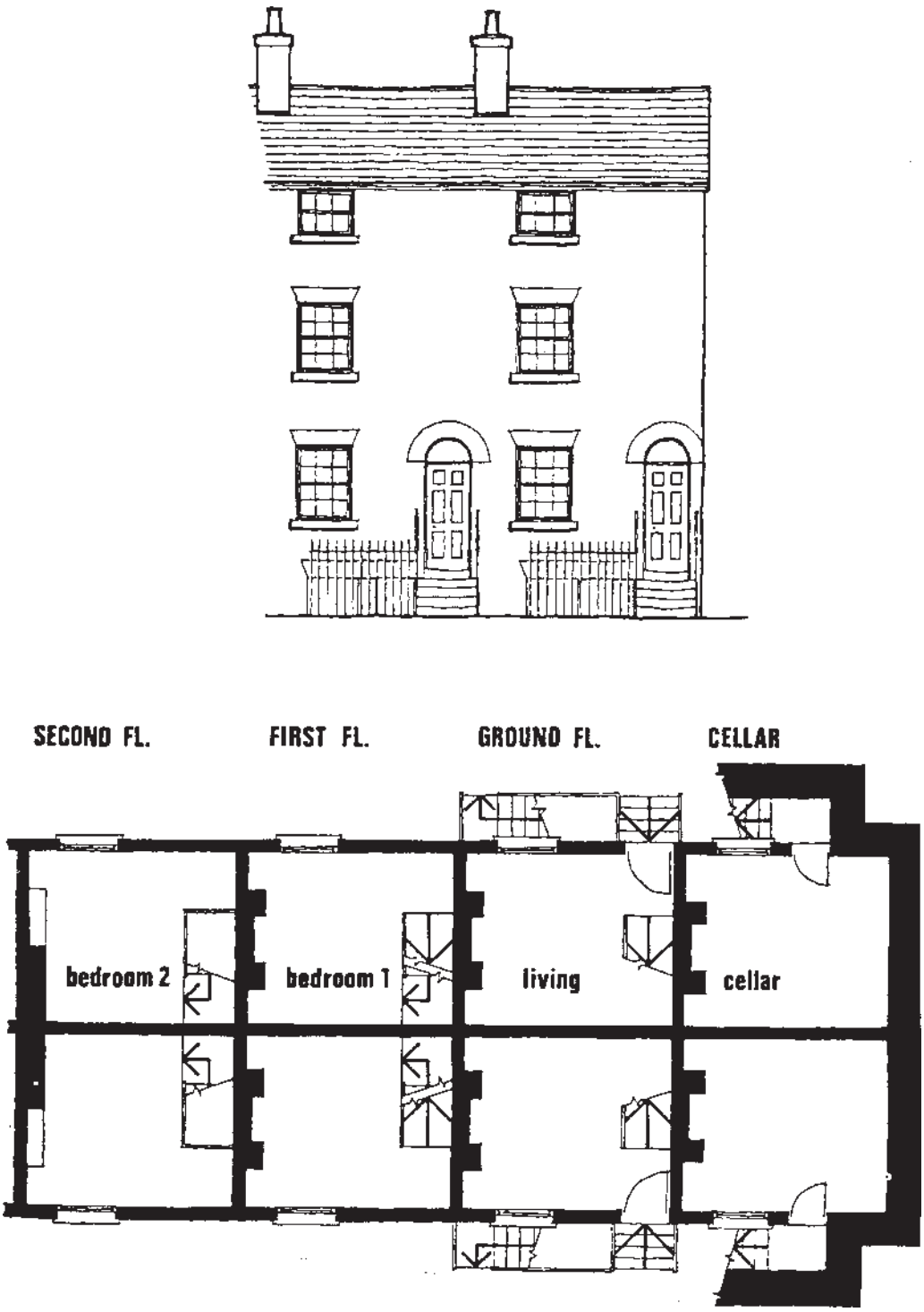
Housing problems

Some form of shelter was clearly required to house the workers in these areas. In most places, emphasis was placed on the need to create dwellings rapidly, and little attention was paid to quality, standards or amenities.

As a result, housing production, as with most things in British society in this period, was marked by huge variety along lines of class and geography. Conditions for many people in the cities, especially up to the 1870s, were appalling, with many thousands of dwellings being insanitary and frequently overcrowded.

For example, in Liverpool in the 1840s over 40,000 people lived in cellar dwellings below terraced housing (as illustrated in Figure A1 over the page):

Figure A1



(Source: D. Sim (1993), *British Housing Design*, Chartered Institute of Housing.)

Activity 2

In thinking about historical and social developments in the period up to 1918, apart from the Industrial Revolution, what other events do you think are significant? Make a list of any events you can think of between 1900 and 1918.

Time allocation: 10 minutes

Other significant events

This unit is not a history exercise, but it's interesting comparing your perception of what was important with others. Here are some events between 1900 and 1918 that a different group of housing students thought were significant. (What does this make you think about their perception of importance?)

> *"**1900-1910***
> *1901 saw the death of Queen Victoria, the longest reigning British monarch. This decade saw the births of actors Spencer Tracy, Gary Grant and Sir John Gielgud and musicians Glenn Miller and Louis Armstrong, and a number of social movements including the Boy Scouts and the Labour Party.*

It also saw the completion of the Aswan Dam, the first radio signals being sent across the Atlantic by Marconi, and Marie Curie became the first woman to win a Nobel Prize.

1910-1918
This decade saw the death of Edward VII and the birth of the Girl Guides, John F Kennedy and Frank Sinatra. The "Titanic" sank on her maiden voyage with the loss of 1500 lives and Scott set out to conquer the South Pole. Einstein unveiled his "Theory of Relativity", which was questioned by all other scientists. Coke was introduced into the UK.

Above all, were World War I, the Great War, (1914-18), and the Russian Revolution (1917)."

How does your list match? What else, if anything, did you include? Others from the period might be the end of the Boer War in 1902; the Wright Brothers' flight in 1903; the reforming Liberal Administration of 1906 to 1914 with the introduction of Old Age Pensions in 1908 and National Health Insurance in 1911.

2.2 Economics and Politics

General Political Trends

Growth in the population and the urbanisation and increasing inequalities of society started to lead to a break down of the old long established social order. A new order was beginning to emerge with a different set of classes slowly forming: upper, middle and lower classes.

The traditional political boundaries had been changing over the latter part of the 19th century. The demands, needs and problems of poorer people were beginning to be addressed and, as a result, Trade Unionism and Socialism had been growing as social forces. This eventually led to the creation of the modern Labour Party in 1906.

Housing Policy development

Prior to the middle of the 19th century, there was no national or local *"housing policy"*, at least not as we understand it today.

Activity 3

What factors do you think contributed to the development of a "Housing Policy" in Britain in the pre first World War period?

List your four most significant factors.

Time allocation: 10 minutes

The group of students above, felt the origins of a coherent Housing Policy could be found in the 19th century because of things like:

- dissatisfaction with "laissez-faire" political attitudes;
- the problems of the industrial revolution;
- public health problems; and
- the development of the 'local state'.

One view could be that having policy at local and national levels was specifically geared towards improving the lot of working people. However, some commentators suggest that it was the need to maintain social order (by avoiding political upheaval) and to keep the upper and middle classes disease free (by ensuring the development and maintenance of a clean and healthy environment and a modest and sober workforce) which were the principal driving forces behind early attempts to create better housing conditions.

Legislation

Despite a general 'laissez-faire' approach to state intervention in issues such as housing during the 19th century, not all improvements were left to industrialists and philanthropists. As the list below shows, parliamentarians did play a part in laying the ground rules and foundations for subsequent legislative actions to solve housing problems. Much of this early legislation primarily concentrated on public health issues such as sanitation rather than emphasising housing matters.

John Burnett, in his book *"A Social History of Housing 1815-1985"*, suggests that amongst the most significant of this legislation, in respect to this Unit, were the following:

The **Public Health Act 1848** is generally regarded as the first step in reforming sanitary legislation. It provided for the establishment of local Boards of Health in individual towns and provided a national framework for local legislation bye laws - which could follow a national model.

The **Public Health Act 1875** brought major improvements to the construction of housing. This Act gave all local authorities powers to introduce minimum street widths and the general adoption of some controls over buildings and their sanitation. It was an attempt for the first time to give most local authorities an opportunity to ensure that new housing was well ventilated and adequately constructed.

The **Housing of the Working Classes Act 1890** was the first comprehensive 'housing' legislation and was an important landmark in improving housing for working people. This gave the London County Council and other local administrations the opportunity to build houses for rent on land displaced by demolition and also gave them a role in meeting general needs.

The **Housing and Town Planning Act 1909** made the systematic survey of rural housing obligatory, simplified the procedures for dealing with unfit housing and, amongst others, gave local authorities powers to prepare town planning schemes.

You might also refer to the **1868 (Torrens) Act** or the **1875 (Cross) Act**, both of which were important in relation to the demolition of unfit dwellings.

Tenure

The private rented sector dominated this period. This was mainly because in terms of wealth, 87% of the population had capital of less than one hundred pounds per head and could only afford to rent.

2.3 Design and Construction

Construction

Activity 4

What type of houses do you think working class people lived in the period prior to 1919? Make a list of your ideas.

Time allocation: 10 minutes

Your response might well have been influenced by where you live. As mentioned previously, there were huge variations in house styles throughout Britain in this period. The growth of the main cities in Britain is reflected in the layout and design of many of its properties. Generally, housing quality deteriorated the further away from London that you went.

House styles for working class people ranged from cellar dwellings and single storey cottages to *"back-to-backs"* and from terraces to four storey tenements. Within middle class housing, there were similar variations from 'Nash model' Georgian terraces

through suburban villas to the 'grid-iron' villa tenement estates found in Glasgow. Another example of housing from this period is given in Figure B3 overpage.

Working Class Housing

Up to the 1880s, in parts of the North West of England *cellar* dwellings were common under large terraces, with a floor area of 12 square feet and a ceiling height of 6 feet. In other parts of the North and London, *court dwellings*, often 3 storeys high, 6-15 feet wide and accessed through archways and narrow passages, were in vogue. In Yorkshire, especially in the West Riding, back-to-back housing was the most common. In the North East, around Newcastle and Gateshead, the *Tyneside flat* was the familiar sight, whereas in Sunderland and whole tracts of rural England and Scotland, *single storey cottages* abounded. In urban Scotland, *tenements* were the favoured type.

Figure A2

Figure A2 above shows back-to-back housing in a northern English town (since demolished). Building new back-to back housing was eventually banned on health grounds by local authorities in most cities. The first such ban was in Manchester in 1844. However, in most parts of Yorkshire, especially in places such as Leeds, developers found ways to continue building back-to-backs until 1937.

"Back-to-back" house types and estate layout

Construction details included flued chimney and slate roofs, with walls only a half brick thick. Windows and ventilation were only front facing. Internally, there were living room, scullery, cellar and attic chamber, and outside, a toilet, often shared between each row of houses.

One two storey house backed onto another in rows containing about twenty houses. In Leeds they were 15 ft square, but in Sheffield only 12 feet.

Many houses were densely crowded together in narrow courts and confined streets, often about 70/80 dwellings per acre.

Figure A3

(Source: D. Sim (1993), *British Housing Design*, Chartered Institute of Housing.)

Figure A3 shows Glasgow tenements as described above.

"Bye law" house types and Estate layout

Manchester also started the process of replacing back-to-backs with *'bye-law housing'* in 1867. Most of the pre-1918 working class properties which exist today date from around 1880 when these local bye laws introduced the first real building controls by laying

down minimum standards for size of rooms, windows and open spaces around dwellings. Bye law housing shown in Figure A4 (below) can be found within two or three miles of most city centres. In Sheffield, as in other cities, it often followed the routes of the old tramways.

'Bye law' housing tended to be built to a higher standard than back-to-backs, with improved quality materials. It was set along parallel, treeless streets, with the front door usually opening directly onto the pavement. The outstanding characteristic was that of a through terrace house with a tunnel-back" replacing the 'back-to-back.'

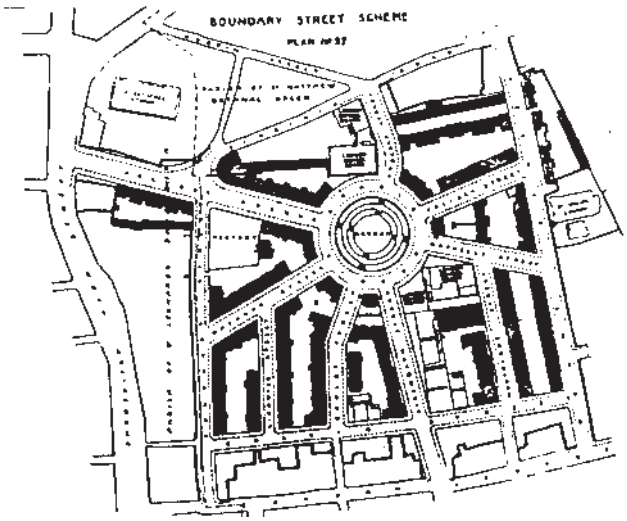
Improved brickwork and front and back doors were a common feature. Many had a tiny front garden and a bay window. Internally, there were front and back rooms, a scullery and two bedrooms. There was piped water supply to each house and individual external toilets and sheds. Layout was in working class areas with wider streets - 15 to 20 feet wide, with terraces of four, eight or more two-storey housing, intersected by passages or tunnels.

Figure A4

To minimise costs, the **Housing of the Working Classes Act 1890** was used by the London County Council (LCC) as an opportunity to move away from the 'tenement barracks' to *'radial'* suburban schemes with improved space and amenity. Boundary Street Bethnal Green, Totterdown Fields Tooting, and White Hart Lane are examples of these first LCC suburban estates. An example of early council housing is shown in Figure A5 overpage.

Figure A5

Figure A6



(Source: D. Sim (1993), *British Housing Design*, Chartered Institute of Housing.)

Middle class housing

Prior to 1840, the most common middle class housing was the *Georgian 'Nash model'* terrace as shown in Figure A7 below. These were usually built around terraces and squares fairly close to town centres. Excellent examples are still to be found in places like Bath, Brighton and London in England, and Edinburgh and West End Glasgow in Scotland. Most were three or four storey with a basement, 20-30 feet wide with a staircase to one side and a minimum of two rooms on each floor. An example is shown in Figure A7 below:

Figure A7

(Source: D. Sim (1993), *British Housing Design*, Chartered Institute of Housing.)

With the increasing industrialisation of the city centres, the middle of the 19th century saw the emergence of suburbs and middle class villas in places such as Regents Park in London, Mossley Hill in Liverpool, and Edgbaston in Birmingham. Most of these were brick built with bay windows and ornamental finishing such as chimney stacks, finials and turrets. Large gardens with half an acre or more were also common in English cities. An example is shown in Figure A8 over the page:

Figure A8

In Scotland, where materials costs and local *"feu-charters"* made building more expensive, stone built 7/8 roomed tenements with oriel or bay windows and tiled entrance doorways were more common. Built along *'grid-iron'* lines, they usually had no separate access or gardens.

With the increasing use of transport, and in ever greater efforts to escape the urban smoke and squalor, the later part of the century saw the rise of middle class surburbia some distance away from the cities. The Waterloo area of London and the Wirral towns serving Liverpool are good examples.

Ideas/Improvements in Housing

Company Housing

Many companies built housing to attract workers to their new sites. Across the north of England and South Wales there were numerous examples of cottages for millworkers and miners. Much of this was of fairly poor quality and with few amenities.

However, many of the earliest attempts to create sanitary housing for working people were also instigated by factory owners such as Edward Akroyd in Copley, Halifax and Titus Salt in Saltaire. They both created *'model villages'* in which to house their workers and managers. Both villages included a variety of mainly terraced back-to-back dwellings along with communal facilities such as baths, churches, gardens, shops and schools.

The railway companies in Crewe, Wolverton and Swindon were also amongst the more *'enlightened'* employers. In Crewe, they created a hierarchical structure of housing ranging from villa-style houses for senior managers to small cottages for labourers. All were of good quality and design, with almost all having gardens. The companies also provided sewerage and water, gas and roads, education, refuse collection and policemen. All this meant that in the 1840s and 1850s:

> *"Crewe represented the ideal against which Chadwick and others judged the squalor of the rest of industrial England."*

General Housing - Early Philanthropy

In the 1860s, several 'philanthropists', such as George Peabody with the Peabody Trust, Sydney Waterlow through the 'Improved Industrial Dwellings Company and George Austin's Artisans, Labourers and General Dwellings Company were interested in creating improved general housing for poor people. By 1895, between them they had contributed 16,950 new dwellings in various parts of London. An example of Peabody estate is shown in Figure A9 below:

Figure A9

Later philanthropy

In the late 19th and early 20th centuries, other philanthropists - often Quaker industrial families - built more *'model'* towns and villages. The most noted of these were George Cadbury's Bournville, William Lever's Port Sunlight and Joseph Rowntree's New Earswick.

These developments were all characterised by being early models for the *"Garden City"* movement. Most were semi-detached rather than terraced. In all, the emphasis was on the creation of light airy housing with lots of open space for gardening, sport and recreation, all of which were seen as important in the creation of a healthy workforce.

Garden Cities

As well as these developments at the turn of the century, Edward Bellamy and Joseph Paxton were developing ideas such as *'ideal communities'* and *'peoples parks'*, both of which had a great influence on Ebenezer Howard's promotion of the *Garden City Movement.* This movement wanted to tackle the problems of poor overcrowded housing within congested cities by combining the best of the city and the country within one settlement.

Although settlements were to be built as towns, they would contain enough greenery and open space to make them rural in character. They would be *'garden cities'*. Howard illustrated his ideas in a pamphlet in 1898 entitled *Tomorrow: A Peaceful Path to Real Reform*. In this, he proposed towns of 30,000 people, each being self sufficient with housing, industry, commerce and community buildings. Each settlement was to be circular with grand green boulevards to create garden cities.

Howard's ideas have had an enormous effect on British housing development and town planning right up to the present. They were first put into practice by architect Raymond Unwin in Letchworth Garden City. They went on to influence most inter-war and much post-war public and private housing development in Britain.

3. Inter-war Period – 1919-1945

3.1 Historical and Social Context

At the start of the 1st World War (in 1914), Britain was a predominantly urban society characterised by rigid class and gender divisions and huge inequalities between rich and poor in income, wealth and housing.

The war weakened resistance to change and helped to undermine the established class and gender divisions. It helped to hasten the end of *'domestic service'* and to secure votes for women. These and other demographic, economic and political events helped to transform British society by 1945. We shall now look at some of these changes.

Demographic trends

The 1921 census put the population of the UK at 42 million, but there were several major demographic changes occurring which would have a dramatic effect on the demand for housing. For example, population growth was on the decline, with the birth rate slowing down from 28 per 1000 between 1901-5 to 15 per 1000 in 1931-5. Family size was also decreasing, with average number of children per household falling from 3.5 in 1901 to 2.2 in 1931. At the same time, the numbers of people getting married increased from 34.8% to 42.8%. At the other end of the life cycle, the number of older people was growing from 7.6% of the population in 1906 to 12.9% in 1936.

The inter-war period also saw a substantial growth in the middle classes, with people classified as *'professional'* rising from three quarters of a million in 1911 to one and a half million in 1951 and in the same period from 20.3% of the population to 30.4%.

Increased mobility for many people was brought about during this period through huge technical advances in transportation. Public transport was transformed through the expansion of flexible bus services and the electrification of the railways, especially within suburban areas. Personal travel was revolutionised through increased car ownership. This soared from 32,000 in 1907 through 109,000 in 1919 to two million by 1939.

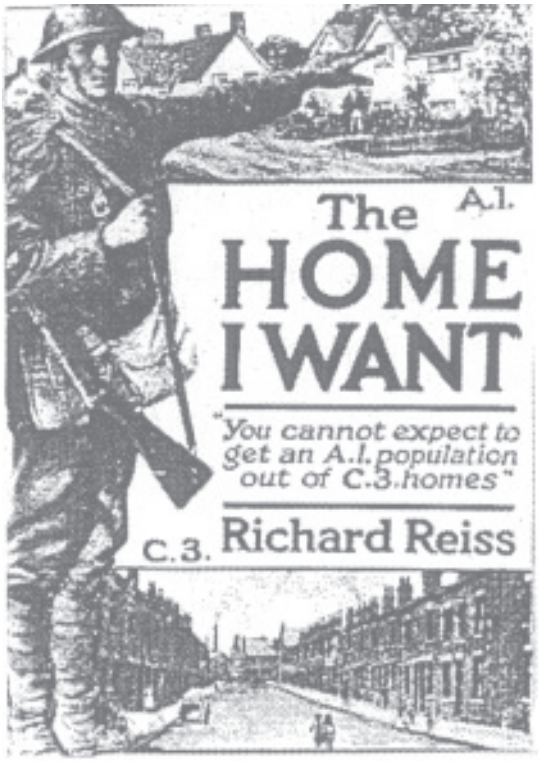
Housing problems

By the end of World War 1, Britain had a formidable range of housing related problems. Chief among were:

- lack of fitness and poor health of many people;
- a shortage of houses, 600,000 in 1918;
- unfit condition of many houses; and
- the inability of the private sector to deliver sufficient housing to meet needs.

These combined problems led David Lloyd George, the Prime Minister, to declare that central government had to intervene and adopt a *"Homes Fit For Heroes"* programme of action. (See Figure A10 below).

Figure A10



This programme was to be largely based on the recommendations of the **'Tudor Walters Report'** and was to include state action to create a national administrative and financial framework which would stimulate housing production and co-ordinate the work of local authorities in relation to design and construction issues. It would ultimately also lead to a lessening of the regional variations in house types and standards which, as we saw, had been common in the previous period.

The *'Homes Fit for Heroes'* programme and subsequent developments over the next 20 years produced great advances in mass housing for many people, especially those within the local authority rented sector. These increased from 1% in 1914 to 10% by 1939.

Overall, Britain's housing stock expanded by 44%, and 3,998,000 new homes were built - 2,886,000 private and 1,112,000 public. In total, 1.5 million were subsidised by the state. By 1939, a third of all dwellings were new, thus creating a major change in the age composition and standards of amenity within the stock.

In human terms, this meant that a third were housed in new healthy housing, a third in *'bye law'* homes, sanitary but lacking in modern amenities and comforts, and a third were still living in substandard accommodation.

Activity 5

In thinking about historical and social developments in the period between 1919 and 1939, what events do you think are significant?

Make a list of any such events.

Time allocation: 10 minutes

Other events

A number of other events happened in the 1920s and 1930s in Britain and abroad which might be of interest. The students consulted about the above activity included the following points:

> ***"1919-1929***
> *Prohibition was introduced into the USA. The treasures of the Egyptian boy King Tutankamen were unearthed by Lord Caernarfon. The hottest property at the box office was Rudolf Valentino in his film "The Sheikh". The first birth control clinic was opened in London. The Flying Scotsman set a new record for the London to Edinburgh run. Queen Elizabeth II was born, as was Judy Garland, Peter Sellers and Margaret Thatcher. The General Strike took place in 1926.*
>
> ***1930-1939***
> *In 1936 Edward VIII abdicated to marry American divorcee Wallis Simpson. Jesse Owens broke five world records in 45 minutes at the Berlin Olympics but because he was black, Hitler, the German leader, would not applaud. The decade also saw the creation of nylon, Al Capone being arrested for tax evasion and the opening of the Empire State Building in New York. The BBC added sound to pictures. The Second World War began in 1939."*

3.2 Economics and Politics

General Trends

This was a period of great international and national financial instability, with the *'depression'*, the *'Wall Street crash'* and the abandonment of the *"Gold Standard"* all being significant events. As a part of this picture, in Britain, unemployment rates averaged about 14% between 1921-1938. In the depression years, 1931-33, unemployment levels exceeded 20%. People employed in the *'primary'* industries of Northern England, Scotland and South Wales were particularly badly affected. For a substantial minority of people in these areas ill health and poverty were rife and often accentuated by poor housing.

In stark contrast, many people, especially those working in the car, engineering and building trades in the Midlands and South, improved their housing and material status substantially during these decades. This economic well being is reflected by the fact that, despite the depression during these years, the British economy actually grew substantially, particularly in the 1930s when a major programme of re-armament was undertaken.

The inter-war years were also a period of great political instability throughout the world. It was the era of the rise of fascism in Europe and the consolidation of communism in the Soviet Union under Stalin. In British cities there were street fights between *'red'* and *'black'* shirts.

In Britain's parliamentary arena, 1924 saw the first Labour government elected with Ramsay MacDonald as Prime Minister. A year later, the Conservatives were back in office under Stanley Baldwin. This election see-sawing ended in 1931 in political stalemate with the introduction of a *'National Coalition'* government which lasted in office until the start of the Second World War.

Housing Policy development

The First World War also represented a historic turning point in the development of housing policy in Britain which led to far more state intervention within the housing market than had seemed possible before 1914.

Activity 6

In thinking about housing problems in 1918, what do you think were the central features of housing development in the inter-war years ?

List your ideas.

Time allocation: 10 minutes

The end of the First World War saw a dramatic shift in government housing policy. As we noted earlier, the poor state of health of many working class men during the war coupled with a shortage of housing after the war helped to promote government action through the *'Homes Fit for Heroes'* programme.

Aside from the national administrative and financial framework which this created to guide and stimulate housing production and standards, many commentators have suggested that three of the most central features of housing within the inter-war period were:

- rent control in the private rented sector, which led to a substantial decline in this area;
- rapid substantial growth in public renting; and
- a massive boom in private sector building, primarily for owner occupation.

All three were affected by the legislation enacted during this period and, as we shall see, despite considerably altered political and economic circumstances in the years up 1939, it proved impossible for state intervention in housing to be completely withdrawn. The growth in the construction of all housing was interrupted by the Second World War.

Legislation

Major acts in relation to design and construction in this period were primarily concerned with introducing financial measures to stimulate and control the supply of housing in the public and private sectors.

The Housing and Town Planning Act 1919 (Addison Act) introduced subsidies for local authority houses and gave them powers to survey general need and to stimulate building to meet it. It was a major vehicle in implementing the Tudor Walters Report recommendations on house type and layout, etc.

The Housing Act 1923 (Chamberlain Act) introduced a new subsidy primarily aimed at stimulating private developers. It also reduced state subsidy on public housing, thus encouraging houses to be built with lower space standards than Addison homes.

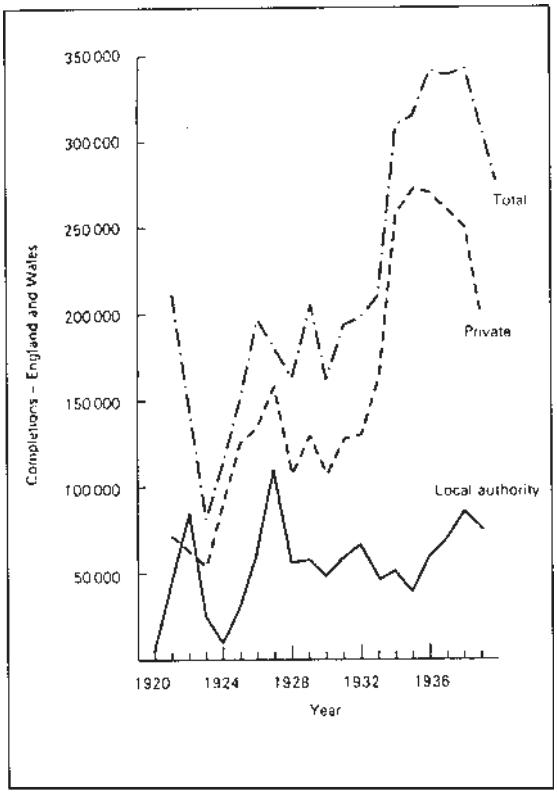
The Housing (Financial Regulations) Act 1924 (Wheatley Act) was the first housing Act of the new Labour government. It introduced a new higher subsidy to local authorities and restored them as the main provider of rented housing but with similar space standards to Chamberlain homes.

The Housing Act (Greenwood Act) 1930 signalled a major shift in policy with state subsidy being directed at promoting slum clearance rather than meeting general needs. It also gave a direct incentive to local authorities to build flats rather than houses within inner city areas.

The Housing (Financial Provisions) Act 1933 brought an end to subsidies for new housing except when replacing slums. It also required local authorities to concentrate on slum clearance and produce five year programmes.

Figure A11 below shows the effect of these various legislative measures on the dwellings constructed in England and Wales between 1920 and 1939 in public and private sectors.

Figure A11



Tenure

During this period, there was a significant switch in the tenure pattern, especially in England and Wales. The private rented sector started its long decline, local authority housing stock began to rapidly expand, and there was a substantial rise in owner occupation.

3.3 Design and Construction

Construction

Working Class Housing

Council houses built under the Addison Act to Tudor Walters standards were some of the best public housing ever to be built. Emphasis was placed on light, air, wide frontage and space. Density was to be 12 per acre with a minimum of 70 feet between houses. Internally, the three bed parlour type were 1055 sq.ft. (99 sq.m.), and non-parlour 855 sq.ft. (81 sq.m.). External features were front and rear gardens. They introduced the cul-de-sac layout on a wide scale. These earliest properties compared favourably with corresponding private sector housing. Figure A12 below is an example.

Figure A12

House types and Estate layout

These had wider frontages, which provided more air, light and garden space. External design was rooted in a vernacular, rural idiom of traditional appearance and houses were mainly semi-detached cottages or houses. This type of housing was set in cottage estates in garden suburbs, dotted around a landscape of winding lanes, trees and gardens.

Although houses built under the Chamberlain and Wheatley Acts were of a slightly inferior quality, with less internal space (e.g. 830 square feet), they were of a similar design and were located in similar estates. The most common provided a living room, kitchen or scullery larder, three bedrooms and bathroom, external coal-store and WC. The parlour version usually had the bathroom upstairs. These houses had a secondary means of access to the rear. The smaller terraces dispensed with the rear access but still had front and back gardens. (Compare the proportions of the houses shown in Figures A12 and A13).

Figure A13

The Greenwood Act gave a subsidy to councils to build flats like the ones featured below. They were to provide housing for those needing to be rehoused through slum clearance. Flats created a lot of hostility as to many they signalled a return to Victorian squalor. See Figure A14.

Figure A14

Indeed, in many instances flats caused immediate overcrowding for many families as space standards internally and externally were generally much lower than in cottage houses. Many were two bedrooms with balcony access. Built in pre-cast concrete blocks 3 to 8 storeys high, often around crescents as in Quarry Hill, Leeds, or tenements as in Glasgow.

Private sector housing

Between the two world wars, there was an enormous growth in middle class mass housing. This was primarily brought about by the breakdown in class structures, with the traditional middle class becoming smaller and poorer and a growth in the new middle classes which we referred to earlier. These two factors converged to produce a demand for small detached and semidetached suburban housing. Figure A15 shows one of the more imaginative period styles *"Art deco"*.

No particular style of private housing dominated this period. Builders were free to adopt and adapt whatever best fitted the constraints of cost, land and materials. Most houses avoided architectural extremes. Housing was often quite small.

Figure A15

The growth in the semi-detached house with front and rear garden was the most common and worth noting. A characteristic about such properties is the attempt by designers to recreate an old world atmosphere. Often there were attempts to recreate a small part of the Elizabethan era through the use of wooden beams. See Figure A16 overpage. Properties of this period also used a lot of local materials in an attempt to distinguish themselves from the emerging council housing being built on nearby estates.

Figure A16

House types and Estate layout

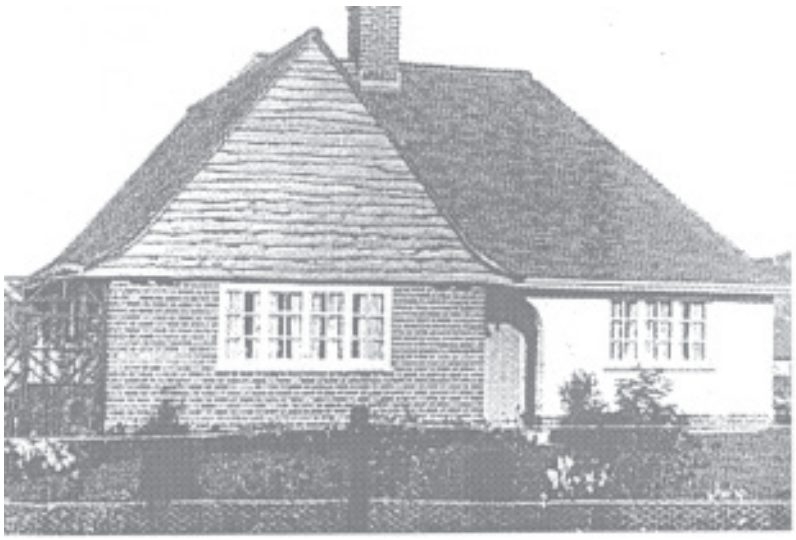
Externally built with hand made bricks and tiles, stone and hardwoods, internally there were extras such as a study, dining room, hall and porch. Detached and semi-detached two storey houses with front and back gardens were common.

These were built in suburbs along arterial roads or in coastal resorts and villages using traditional methods.

Bungalows

Most bungalows were detached with a garden on all sides, with three/four rooms and a kitchen and bathroom. The bungalow and its derivatives, the semi and chalet bungalows, was popular, especially in the outer suburbs, semi rural and coastal resort areas. They were also very popular in Scotland where they fitted in with the single storey tradition 'a flat with a garden'. For many people they were seen as labour saving, cheap to furnish and easy to run. Figure A17 shows an example from the period:

Figure A17



(Source: D. Sim (1993) *British Housing Design*, Chartered Institute of Housing.)

Mansion Block Flat

Internally, most flats in mansion blocks had five rooms with two living rooms and a kitchen. Bedrooms and kitchens tended to have built-in furniture. They were not popular with many people and as a consequence few were built outside central London and Glasgow. One of the largest is shown in Figure A18 below.

Figure A18

Ideas/Improvements in Housing

The *'Homes Fit for Heroes'* programme was guided by the **Tudor Walters** report. Many of the first council houses were built to the standards recommended by the Tudor Walters report and detailed in the *'Manual on the Preparation of State Aided Housing Schemes'* (1919). This concentrated on internal and external aspect, design and layout. It stressed the need to produce a variety of house types to meet different needs. Emphasis was placed on careful planning of services such as water, drainage, chimney flues and using durable materials for low maintenance.

In the 1920s, government policy changed with the Chamberlain and Wheatley Acts. Although these reduced the size and quality of the estates and properties built, these were still being built on a large scale and to a relatively high standard. Two-thirds of all inter-war housing had three bedrooms and there were fewer than 100,000 flats built.

Although they did not have much influence in overall terms, **Modernist Movement** ideas were beginning to have an effect, especially within middle class housing in this era, especially in the internal design of kitchens and bathrooms.

4. Post-war – 1945-1979

4.1 Historical and Social Context

The Second World War acted as a stimulus to widespread social and economic reform. Internationally, Britain's place in the world order changed dramatically from being an Imperial power with a large empire to being a small member state of the European Union. In Britain, it gave a chance to plan afresh and to create new forms of public provision in all areas of social life to meet Beveridge's five great evils of *"Disease, Ignorance, Poverty, Squalor and Want"* which were still prevalent amongst many working class people.

The **Beveridge Report** and a series of other government committees' reports published in the mid 1940s laid down the foundations for the modern Welfare State. The **Dudley Committee Report** was the major one concerned with housing. This, and the others in such fields as education, health and social security, also set down a range of political objectives and priorities which largely retained all-party consensus throughout the next 30 years.

The period up to the mid-1970s was, for most people in Britain, a period of economic prosperity. Real incomes per capita had increased approximately three times over the last century with particularly rapid increases occurring in the 1870s, 1930s and 1950s. In this latter period, the general population was able to

achieve higher standards of living in relation to housing, diet, and clothing. Many had more leisure and material goods than they had previously enjoyed.

Demographic trends

In the post-war period, significant demographic changes continued to have a profound effect on the housing market in Britain. The population continued to increase despite considerable loss of life in the Second World War, reaching 55 million by 1981. The immediate post-war birth rate was high and continued upwards for most of this period. For example, in the 20 years between 1931 and 1951 three million people were added to the population, whereas in the 20 years following 1951 there were an additional five million.

The changes in household formation which we noted in the inter-war years continued, and in many cases started to accelerate. For example, more people were getting married and earlier; family size was still decreasing; average household size continued to fall. There was a great rise in one and two person households - from 21% of households in 1911, to 55% in 1983. Finally, life expectancy increased, especially at birth and for the over 60s. Whilst the population between 1961 and 1981 grew by 7%, the number of households rose by 20%.

These factors have led England and Wales to have a far greater number of separate, smaller households than previously - from 8.7 million in 1921 to 17.9 million in 1981.

The growth in the middle classes and in car ownership noted in the inter-war period both continued upwards and aided the growth of suburbia throughout post-war Britain.

Housing problems

There was a wide range of housing problems by the end of the Second World War in 1945. Although, as we saw earlier, there had been a crude balance between households and dwellings in 1939, the war had meant that:

- there was no new building for six years;
- there was no slum clearance for six years;
- 450,000 homes were destroyed and three million more were substantially damaged by war (see Figure A19 overpage); and
- an extra 1,000,000 people needed homes.

Thus, although there were 40% more houses than there had been at the end of the First World War, there were still massive problems of housing shortages and poor conditions to be tackled.

With the support of all administrations, and substantial amounts of public money, public bodies like local authorities and New Town Development Corporations played a large part in attempts to overcome these problems over the next 25 years. With housing design and standards being guided by the Dudley Report, Housing Manuals, and, subsequently, the Parker Morris Report, over 6 million new dwellings were built in this period. These new homes also helped to radically alter the tenure structure.

Figure A19

Activity 7

In thinking about historical and social developments in the period between 1945 and 1979, what events do you think are significant?

Make a list of any such events.

Time allocation: 10 minutes

Other significant events

Our students consulted above listed some of the other events which happened in this period as follows.

"1945-1949
Although World War II ended in 1945, food and other rationing continued into the 1950s.

The film of this decade was "Gone with the Wind", staring Vivien Leigh for which she won an Oscar. George Orwell wrote "Animal Farm" in which he made the quote "all animals are equal, but some are more equal than others". The "Jitterbug's a new type of dance, took Britain by storm, as did the big freeze in 1947, the worst winter on record. Princess Elizabeth married Prince Philip. In 1948 Aneurin Bevan set up the NHS and London hosted the Olympics.

1950-1959
Harold Macmillan, as Prime Minister, said the British people had "never had it so good". 1953 saw the coronation of Queen Elizabeth II and Sir Edmund Hillary and Sherpa Ten Sing conquered Everest for the first time. Tony Hancock and the Goons became comedy favourites. Roger Bannister became the first man to run a sub 4 minute mile. Bill Haley 'Rocked Around The Clock,' whilst Elvis Presley was rising in popularity and Henry Cooper became British boxing heavyweight champion. The Mini Car was introduced and could drive along Britain's first motorway - the Ml.

1960-1969
This was the "Swinging Sixties'. A number of striking events took place. Internationally, the Cuban Bay of Pigs invasion by the USA nearly started a third World War. There were assassinations of President John F Kennedy, Martin Luther King and Bobby Kennedy in the USA. Nelson Mandela was jailed, the Vietnam War was in progress and Chairman Mao led the Cultural Revolution in China. The first man landed on the Moon, in 1969 Britain had The Beatles, the "POLARIS" missile, Profumo and Keeler, the Great Train Robbery, Mods and Rockers. 1964 saw a Labour government elected, promising to bring about a 'white hot technological revolution'. Enoch Powell made his 'rivers of blood' speech against immigration. "Lady Chatterley's Lover" was published. The Mini Skirt was introduced and in 1966 England won the Soccer World Cup.

1970-1979 - Dismal Depression

The Middle East Oil Crisis in the early 1970s dominated the news and subsequent decades as it led to a world wide economic crisis and depression. On the world scene it was also the era of the Vietnamese Boat people, the "Amoco Cadiz" tanker disaster, the first Test Tube Baby and Pol Pot's regime in Cambodia. In Britain the oil crisis led to high levels of inflation and the intervention of the International Monetary Fund (IMF) in 1976. This year also saw Britain have the hottest summer to date and Sex and Race discrimination were made illegal. This decade also saw the end of "Dixon of Dock Green", the showing of the film "Star Wars" and the Silver Jubilee. Oh yes, Margaret Thatcher was elected Prime Minister in 1979."

4.2 Economics and Politics

General Trends

As we noted earlier, this was an era of improved living standards for most people in Britain. These were most marked within the skilled working class. Throughout the country, in contrast to the inter-war years, many had full employment with wages which were moving ahead of the relatively low rates of inflation. In periods of sickness or unemployment, there was a developing system of social security. The gap between professional and skilled manual workers also appeared to be narrowing.

Increased prosperity had a marked effect on the housing market, especially up to the early 1970s, and was reflected in Britain by the desire of many to become home owners. Owner occupation had come within reach of a much broader section of the general population and was now becoming widespread amongst manual workers. By 1979, 55% of homes in England and Wales had become owner occupied.

Housing Policy

Housing policy development in this era was marked by a large degree of political consensus amongst all major parties. The desire to tackle the shortage and condition problems left by Second World War and to meet people's rising expectations of housing standards were high on the agenda for most of this period.

The need to build new public and private homes throughout the country was given high priority. Up to the 1970s, this led all governments to create incentives through legislation to stimulate both housing construction and higher standards. It also led to the creation of a number of new central government agencies, such as **New Town Development Corporations** and later the **Housing Corporation**, to concentrate on achieving specific policy aims.

The period is also marked by the development of non-traditional housing, especially within the public sector. Encouragement was given to developers to experiment with housing design and construction methods. These factors combined to give record levels of construction and many new styles of dwelling. As we shall see later these included pre-cast concrete Airey houses, bungalows, and high rise and deck access dwellings.

Legislation

The main Acts to note are:

- **The Housing Act 1949** which made council housing available to all;
- **The Housing Repairs and Rents Act 1954** which restarted the slum clearance programme;
- **The Housing Act 1964** which established the Housing Corporation;
- **The Housing Act 1969** which introduced *"general improvement areas"*;
- **The Housing Act 1974** which allowed the Housing Corporation to fund housing associations and established *"housing action areas"*;
- **The Housing (Homeless Persons) Act 1977** which for the first time placed a duty on local authorities to provide accommodation for homeless people;
- **The Housing Act 1988** which removed rent control and security of tenure for private and housing association renters; and
- **The Local Government and Housing Act 1989** which introduced the new funding regime for local authorities.

Tenure

This era saw a major restructuring of tenure patterns in Britain. Owner occupation increased from 26% in 1945 to 55% in 1979. In the same period, private renting continued to decline from 62% to 13% and rented local authority housing rose from 12% to 32%.

The rise in owner occupation up to 1979 was primarily due to favourable government policies, the expansion of specialist financial institutions and an investment climate generally favourable to property development. The possibility of local authority sitting tenants buying their properties also developed in some areas during the 1960s and 1970s. This had an important effect in extending the concept of home ownership in lower income groups. Between 1970 and 1979, over 42,500 tenants bought their council houses.

4.3 Design and Construction

Construction

Unlike previous periods, there were few clear distinctions in terms of design, construction or external and internal layout between post-war working class and middle class housing, except for the building of high-rise and deck access local authority housing. Therefore, we shall examine them together.

Housing development in all sectors was a major feature of this era and in particular:

- up to the early 1970s there were high levels of housing construction to eliminate shortages, to remove slums and to meet the growing demands of population;
- throughout the period, the issue of rising standards in housing was important. In the 1940s and 1950s these were guided by the Dudley Report and in the 1960s and 1970s by the Parker Morris report;
- in the late 1960s, there was a major switch from demolition and new build to improvements to existing stock;
- from 1972 onwards, finance issues were to the fore and dominated all other issues.

Figure A20 shows the level of development in this period.

Housing Types

Traditional

Most traditional housing continued to follow the five person three bedroom semi-detached family houses on spacious estates mode set in the inter-war years. There were some variations in space standards following the 1944 Dudley Report. An example of 1950s low rise terrace houses is shown in Figure A21.

Figure A20

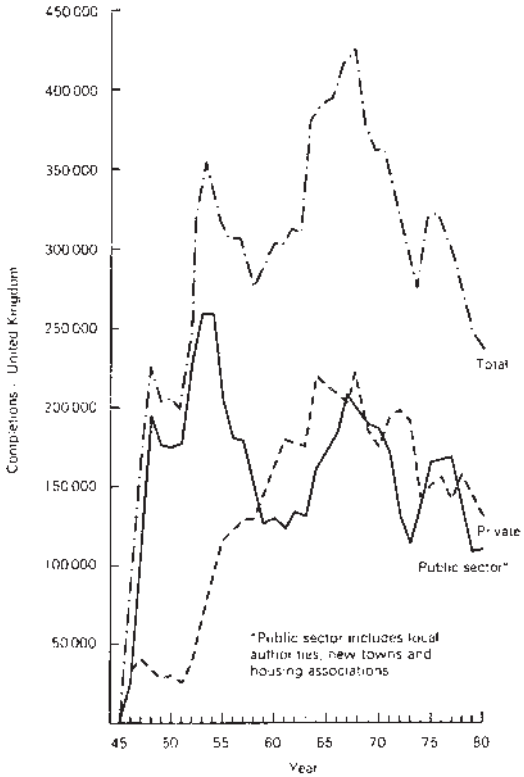


Figure A21

Figure A22

Non-Traditional

The urgent need to tackle housing shortage and the shortages in building materials encouraged Aneurin Bevan, the Health Minister, to instigate a development programme to introduce new non-traditional building forms such as *"pre-fabricated"* bungalows, *'Airey'* pre-cast concrete houses, and *'British Steel framed'* houses.

Later in the programme, a further 10 designs were agreed for use in England. By the end of programme in the mid-1950s, 180,000 units had been built in England. Between 1945 and 1954, in Scotland almost half of the 204,000 houses built were non-traditional types. An example is shown overpage in Figure A22.

High-rise flats were another major non-traditional building form to be built, especially in the period following the Housing Subsidies Act 1956. Although the cost of building upwards was almost double that of houses, the subsidies attached to high rise developments were treble those of houses. These remained in force until 1967. The effects of these subsidies for high rise development are seen in Table A1 overpage.

Table A1

Local authority flats and houses built 1951-1980				
Year	**Houses**		**Flats and maisonettes**	
	No. (000s)	%	No. (000s)	%
1951-55	680	78	190	22
1956-60	385	65	205	35
1961-65	285	52	260	48
1966-70	360	49	370	51
1971-75	260	51	250	49
1976-80	275	55	222	45

(Source: Housing and Construction Statistics.)

As the above table also shows, throughout most of the late 1950s, 1960s and 1970s, high rise dwellings made up a large part of local authority new housing. By the end of the 1960s, around 10% of council stock was in the form of high rise development, with the majority being in inner London and the big metropolitan areas, with 11 authorities having more than 100 high rise blocks. Glasgow had the largest number of very high blocks and Birmingham had the most - 6/7 story blocks. Figure A23 below illustrates high rise housing being built in the 1960s, and the housing it replaced.

Figure A23

The subsidy regime from the mid-1950s made high rise attractive to hard pressed local authorities. Whilst the maximum density for two storey houses was 14 houses (45 persons) per acre, flats could be built at 40 flats (133 persons) per acre. Thus more people could be housed on the available land. It is worth noting, however, that the vast majority of individual high rise dwellings contained similar amounts of floor space to traditional houses (700-800 sq.ft. two bedroom units and 900 sq.ft. three bedroom units).

Deck-Access housing

Some authorities decided to build Le Corbusier style *'Streets in the Air'* with entry to the flats through decks or walkways which could also double up as social activity areas. Byker in Newcastle and Park Hill and Hyde Park in Sheffield are the most famous of these developments. Figure A24 below illustrates this.

Figure A24

Both high rise and deck access dwellings had a number of design and construction faults which led to them becoming problematic for both tenants and managers. The real turning point in their popularity came in 1968 with the collapse of Ronan Point. After this, structural faults were found to be present in many blocks around the country. As a result, they became very unpopular with most people. Local authorities started to refuse to build more and instead took steps to demolish them.

Improvements/ideas

The housing problems caused by the Second World War were addressed by the Dudley and Westwood Committees whose recommendations and the subsequent Housing Manuals for Local Authorities were to influence most post-war traditional housing development and created major improvements in space standards and amenities such as heating and domestic equipment.

New Towns were seen by many planners and politicians to be an acceptable solution to overcrowding in many of Britain's inner city areas. The **New Towns Act 1946** helped to create 14 *'Phase 1. New Towns'*: eight around London; three others in England, one in Wales and two in Scotland, between 1946 and 1950. They were all intended to be self contained balanced communities. Most towns were heavily influenced by Garden City movement ideas. They also experimented with *'neighbourhood'* ideas borrowed from America. One of these was the Radburn Layout discussed earlier.

The 1961 Parker Morris Report was significant because it tried to address the changing space needs and uses by all family members.

5. Post-war – 1979-Present

5.1 Historical and Social Context

Significant events

The period since 1979 has witnessed major changes both internationally and in Britain.

Colossal change has taken place in the established world order. Two dramatic events dominated: the collapse of the East European Communist regimes and the subsequent break up of the Soviet Union, and the ending of apartheid and the election of Nelson Mandela as the first black President of South Africa. Both these events and the rising industrialisation of many Asian countries has affected both the global and Britain's economy. It seems fair to suggest that they make change in Britain within this period pale into insignificance.

With the election of Margaret Thatcher's Conservative government in 1979, came the end of *'consensus'* politics in Britain. Her avowed aim - to *"roll back the State"* in all areas of life - led to fundamental change in most arms of the Welfare State. The local and national patterns of administration and delivery of education, health, housing, personal social services and social security were all subject to radical reform.

At the same time, there was a major restructuring of the economy. Whilst average incomes rose by 30%, Britain also saw a widening of income inequality with '*the rich getting richer and the poor getting poorer*'. Those with incomes below half the average rose from 8% in 1979 to 19% in 1989. The election of the 'New Labour' government in 1996 ushered in a new era again. The focus was, from the start, strongly based on social and economic inclusion and a desire to create 'joined-up' social and economic policies

which would complement each other and work together to bring about positive changes in Britain's most disadvantaged communities.

Demographic trends

The changes in household size and composition noted in previous sections continued throughout this period. The trends in decreases in household size saw the average household reach 2.5 and one in four households contained only one person in 1989.

The traditional family with dependent children has now become a minority within the population - less than a quarter of the population by the end of the 20th century. There are more people living alone, with a significant rise in divorce and one parent families, and the number of childless cohabiting couples has steadily increased. It is these groups, along with the elderly, rather than families with children which now dominate housing need and demand.

The continuing rise in the number of older people in Britain to nearly a fifth of the total population and the dramatic increase in lone women over 75 is worth noting, as this has had a major effect on housing demand, especially in the need for the provision of accommodation for older people.

Housing problems

The supply of decent affordable homes in the right location has been a major problem for many throughout this period. Homelessness came to the fore, with the number of households officially accepted as homeless rising from 70,000 in 1979 to over 170,000 by 1991. At the same time, those in temporary accommodation rose from 5,000 to 62,000, with those in *'Bed and Breakfast'* rising from 1,000 to over 11,000 in 1989 and dropping back to over 7,000 by 1992 following the promotion of schemes to encourage private leasing.

The problems of hidden and single homelessness are gaining some momentum in policy terms, but remain largely unquantified and unresolved still as they fall outside the scope of present legislation and large scale state action. Although the rising numbers of *'rough sleepers'* and the creation of *'cardboard cities'* in many larger cities was highly visible throughout the 1980s and early 1990s, to date the *'rough sleepers initiative'* has been the main action to try to resolve it.

The traditional high priority in housing policy and practice given to resolving the problems and meeting the needs of either the homeless or those living in inadequate accommodation altered

radically between 1979 and the 1990s. The economic restructuring referred to earlier had a direct effect both on demand and supply and on policy priorities. For much of this period it is fair to suggest that changes in the national economy overwhelmed housing policy and generated a new agenda, with problems associated with home ownership such as mortgage arrears, repossessions and negative equity coming to the fore at the expense of those with more traditional needs.

5.2 Economics and Politics

General Trends

As noted previously, Britain's economy underwent major restructuring from 1979. This produced similar peaks and troughs and regional variations to the ones we noted in the inter-war years. The early 1980s was a time of deep depression with unemployment rising to four million - its effects were experienced in most parts of Britain.

Between 1986 and 1989, England had an economic boom and most places experienced rapid house price inflation. In some parts of the country, such as the South East and East Anglia, new commerce and industry were developing, whilst in the older industrial areas many of the primary industries such as mining and ship building were dying.

For a period in the mid-1980s, the **Public Sector Borrowing Requirement** became negative, and aggregate demand went up as a response to the increase in the **Gross Domestic Product**. However, equity withdrawal in housing subsequently increased consumption and reduced savings. This, in turn, pushed inflation up, with a resulting increase in unemployment throughout the country.

1990-95 was a period of recession, excess debt and negative equity amongst many households and businesses. This led to a crisis in the housing market, with relatively few new houses being built in either the private or public sectors, resales coming to a virtual standstill, and about 70,000 homes a year being repossessed by building societies.

Housing Policy development

There have been many important policy changes at central and local levels affecting housing expenditure and legislation since 1979. As we have seen, the election of Margaret Thatcher and her *'radical'* Conservative government in 1979 ushered in a massive change in the climate and debate surrounding housing development. This administration and successive Governments sought to create their ideal *'property owning democracy'*.

Since 1996, these problems have persisted, but at a lower level. Perhaps the most notable issue has been the so-called 'North-South' divide which has been characterised by social and economic depression in more northern parts of Britain, contrasted with an overheated economy in the south (and especially the south east of Britain). Although not all commentators agree that there is such a divide, those who do, see its manifestation as a lack of jobs and a collapse in land and property prices in the north, with a consequent increase in employment, incomes and house prices in the south.

As we noted, in reality this meant that the traditional justification of housing policy in terms of housing need, conditions or shortage was largely disregarded. Instead, policy was consistently led by a concern to extend the role of the private sector at the expense of the public and by considerations of taxation and public expenditure.

This then led to a changed and much reduced role for public sector agencies, especially local authorities. Since 1979, local authority new build programmes declined to their lowest level since 1920. Over 2 million council houses have been sold, with over 1.5 million going to sitting tenants. The level of central subsidy to local authorities fell dramatically.

There was also an end to all the New Towns' development programmes, with their housing and other assets transferred to other areas.

With these public agency changes came a significant change in the role of housing associations. They became central government's main provider of new rented homes with a consequent rise in the share of the rented market.

But whereas newbuild housing for rent and low cost ownership were strongly promoted through the mid-1990s, following the election of the New Labour government the focus began to shift gradually to rehabilitation and regeneration schemes. The current government's focus is now very clearly on regenerating existing, disadvantaged neighbourhoods and areas, and, therefore, over 65% of the Housing Corporation's Approved Development Programme (its budget for housing association development) is now devoted to regeneration schemes.

There has also been a significant shift away from local authorities as direct providers, with an active stock transfer programme to enable local authorities to transfer their housing stock to LSVT (Large Scale Voluntary Transfer) housing associations, set up for the purpose, or to local housing companies.

This transfer of ownership has changed the nature andprofile of some housing associations and the term "registered social landlord" is now used to refer to all housing associations (whether traditional or stock transfer organisations). As shown in Block HFFS.104, RSLs can access resources not available to local authority housing departments.

Legislation

Since 1979, there has been a massive legislative programme related to housing carried out by successive governments.

Most commentators have suggested that the following Housing Acts and their equivalents in Scotland were the most significant of this period.

The Housing Act 1980 gave a statutory *Right to Buy* to sitting tenants of local authorities in Britain. Local authority mortgages and mandatory discounts were made available. The Act also gave public sector tenants a **Tenants Charter** which, as well as guaranteeing security of tenure, gave greater freedom to take lodgers and decorate to individual taste. The Right to Buy policy was a major tool in pursuing the creation of *'a property owning democracy'* for the newly elected Conservative government.

The Social Security and Housing Benefits Act 1982 introduced Housing Benefits.

The Housing Act 1988 gave public sector tenants a right to choose their landlord through **'Tenants Choice'**. It also introduced Housing Action Trusts (HATS). HATs were intended to tackle the problems of run down housing by taking over the responsibility for local authority housing. This Act also introduced new financial arrangements and forms .of tenancy for housing associations and their tenants.

The Housing Act 1996 introduced new legislation on homelessness, which placed severe restrictions on who could be considered homeless and allowed only their temporary rehousing, repealing the earlier legislation which allowed for permanent rehousing. This Act also introduced legislation on who should be prioritised for housing and who could be excluded.

Tenure

As intended, all of these policy and legislative changes have had a dramatic affect on tenure patterns since 1979. Largely as a result of Right To Buy, between 1979 and 1991, home-ownership has increased from 55% to over 68% and public renting fell to around 20%.

5.3 Design and Construction

Construction

Despite capital receipts of almost £31 billion between 1979 and 1993 from the housing programme since 1979, both public and private house construction fell. Because the Thatcher administrations were keen to reduce the share of public expenditure devoted to housing, there was a quite dramatic fall in the 1980s. For example, in 1979 total housing expenditure was running at £5.5 billion. The following year this was cut by 6% and by 1984-85 was down to £3.7 billion. Local authorities bore the brunt of these cuts. Although local authority new build and clearance programmes - have now virtually stopped, there have been successive regeneration issues such as the Single Regeneration Budget and New Deal for Communities which directly involve local authorities with other partners.

Since the mid-1980s, housing associations have become virtually the only agencies building new dwellings for rent as they have become the government's preferred provider of rented housing. Housing associations have built a variety of housing including special needs and traditional new building. Figures A25 and A26 illustrate some examples.

Figure A25

The two units at the left hand end are houses for tenants with special needs - people with learning disabilities in this case.

Figure A26

Another mixed scheme, including people with learning disabilities.

With the economic and policy changes and the rapid decline in new building which have occurred during this period, there have been relatively few improvements in housing design or standards implemented within the public domain. If anything, the reverse has happened. In 1981, Parker Morris standards and Housing Cost Yardsticks (local authority cost limits) were abandoned.

Since then, there have been no uniform officially sanctioned space standard requirements, with the exception of the pattern book in Wales. Within this period, many new ideas for improving design and construction standards and layout have concentrated on issues outside the dwelling rather than on the home itself. An exception to this is the development of new design concepts such as Life Time Homes. The development of environmentally friendly homes and estates is another improvement and design concept to note in this period.

Summary

1. **In this second section, we looked at the historical context of housing development.**
2. **The introduction reviewed the reasons for looking at development in this way and suggested four periods this century for making this study.**
3. **In part two, we then went on to examine the housing development context prior and up to the end of the First World War (1815-1919).**
4. **We then looked at the context of housing development between the wars (1919-1939).**
5. **The next section went on to examine the housing development context prior from the end of the Second World War up to 1979 (1945-1979).**
6. **We then looked at we looked at the context of housing development since 1979.**
7. **Finally, in this section we considered the particular issue of green architecture and how it impacts on housing development.**

Self Test 1

1. *From approximately what date does most "bye-law" housing date and how would you describe its estate appearance (i.e. how was it set out on the streets?).*

2 *What was the site density and internal floor area of "Addison" council housing (built after the First World War)? How did a three bed room five person house compare with "Parker Morris" floor space standards?*

3. *After the Second World War, various types of non-traditional housing were built. Can you name three and say about how many were built in England and Scotland up to the end of the programme in the mid 1950s?*

4. *What were the relative national proportions of houses and flats built by local authorities in the early 1950s and the early 1970s?*

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

B. Newbuild

1. Introduction

This section focuses on new build developments which involve the acquisition of development sites (which may need to be cleared) and the building of housing schemes on them. From the 1970s through to the introduction of the 1988 Housing Act, the main development focus of housing associations was rehabilitation rather than new build. However, the 1988 Act and its regime of development grant funding meant that by the 1990s new build schemes dominated the development programmes of housing associations.

New build developments differ from rehabilitation schemes and other schemes which make use of existing land and buildings, and we will explore these differences through the following defining features:

- the pros and cons of new build;
- costs;
- timescales;
- value for money;
- the involvement of future occupiers.

We now look at each of these issues in turn.

2. The Pros and Cons of New Build

There are a number of reasons why a developer would choose new build over rehabilitation or other schemes which re-use existing land or buildings. Whether the developer is building homes for the private sector sale market or is a social landlord building to rent, cost will be a major consideration. Developers often perceive that greenfield sites are cheaper to develop, especially those which do not have 'abnormal' features, such as steeply sloping ground or under ground mining, for example. In a way, a greenfield site can be perceived as presenting the possibility of a blank slate, on which the developer can impose a design and undertake construction with limited complications. The fact that this is economical of time will complement its financial economy.

There may also be a perception that people want 'new' homes and the easiest way to do this is to build them from scratch where they have not already been. For the upper end of the market, there may also be the desirability of living in or near the countryside,

although for residents without their own transport or who are reliant on patchy public transport, this can be problematic.

Finally, new build schemes are seen as inherently less risky than rehabilitation schemes, as costs can be fixed and it is possible to design out many potential maintenance problems, thereby keeping term maintenance costs lower.

In contrast, there are several arguments which show the potential down-side of new build developments.

Firstly, there are real concerns about the use of more and more green-belt land in a densely populated island with a limited land supply. New build developments can therefore be seen as wasteful of scarce land resources.

Secondly, building on 'green' (i.e. previously undeveloped) land inevitably means developing further away from existing retail centres and transport networks, thereby increasing traffic congestion and pollution. For those without transport or who are reliant on public transportation, new build developments on the edges of existing settlements can mean a very isolating situation in which they have limited mobility.

Thirdly, there is some evidence that the rehabilitation of existing properties does not actually represent less value for money than new build schemes, an issue we will explore a little later.

3. Costs

The cost elements of new build usually include:

- acquisition (either buying land or buildings, expressed as cost per acre or hectare of land for new building);
- building works (expressed as cost per square metre of building and associated VAT);
- on-costs (such as purchase stamp duty, legal fees, professional fees and expenses, planning and building regulations fees, development borrowing and miscellaneous administration costs).

The table below shows a typical cost profile for a new build house and the following text explores the cost issues further.

Acquisition

Acquisition costs show the most regional variation. Land costs can be well over £1 million per acre in London and the South East of England, down to less than £150,000 per acre for poorer quality provincial sites.

Works costs

Works costs vary depending on the part of the country and the type of housing. A typical build cost of a new building family house on an average site might be in the region of £450-£500 per sq.m. New building works do not incur VAT, unlike Rehab.

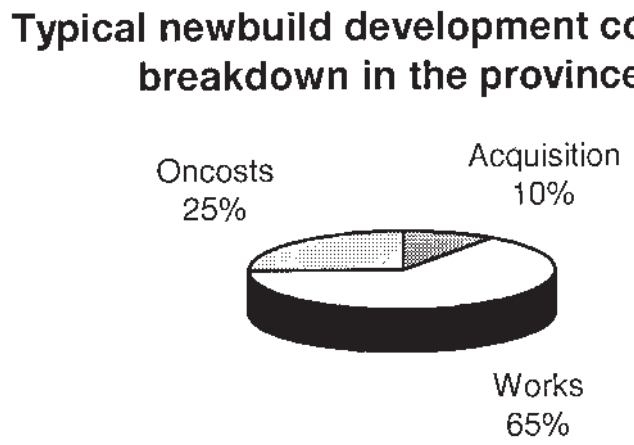
Low rise flats are more expensive to build for the same floor area than houses, because the costs of the extra kitchen and sanitary services outweigh the savings on roofs. Two and three storey flats might add 10% per sq.m. (Flats have a smaller floor area per unit than houses, but more services per floor area.)

Additional storeys involve more complicated cost calculations, because of extra services like lifts, common parts, fire safety and refuse collection, and more complicated foundations.

Specially designed "*Special Needs*", supported housing with fire alarm systems and disabled persons' facilities, etc. could be up to £750 per sq.m.

Developments in London and inner cities are more expensive because of transport and access problems, security, vandalism, etc. This is illustrated in the Figures overpage.

Figure B1

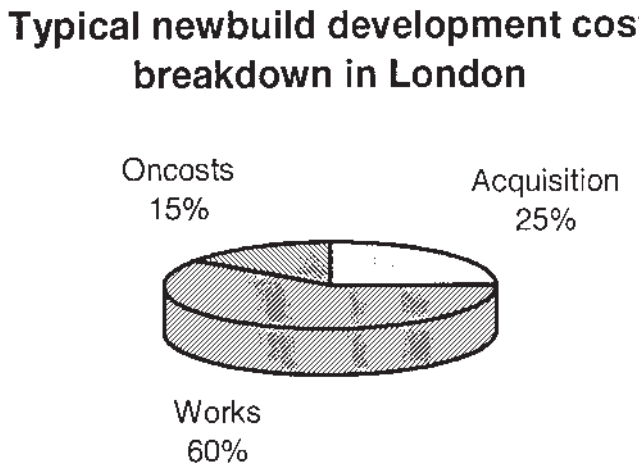


Developments on difficult sites are obviously also more expensive, e.g. contaminated land, coal deposits, local noise or other pollution, slopes, awkward site shapes, abnormal foundation requirements, drainage problems, lack of services, etc.

Finally, big sites involve expensive additional infrastructure: roads, services and possible community facilities. Developments on very small sites can suffer from very high overheads. These factors could add between 5-20% extra costs.

On-costs usually vary from around 10%-15% of total costs.

Figure B2



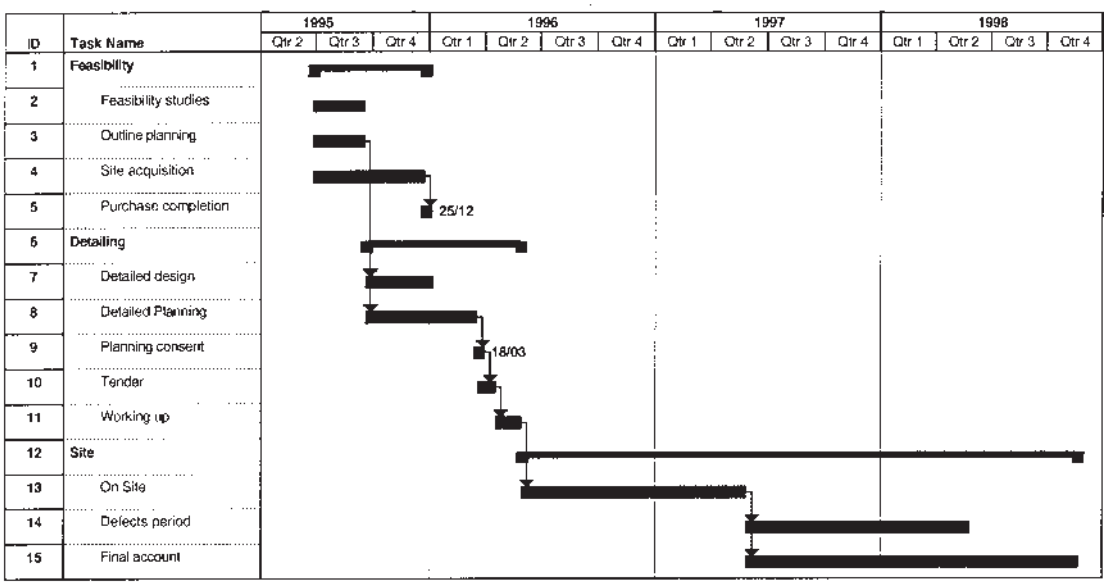
4. Timescales

Overall time scales are very variable, depending on availability of funding, problems of labour, materials and even the weather. Although in the house building booms of the early 1970s and mid-1980s, there were shortages of labour and materials. Actual building time for a particular unit type on a comparably sized site is similar for all sites.

Inception and feasibility through to site start could take six months to a year. Delays in obtaining planning permission are often the crucial factor.

A single house could be built in three to nine months. For shorter schemes, the weather may be critical. Sites of 5-20 houses or very complicated single buildings might take one year. 20-100 houses might take 18 months, and large developments of over 100 units could take up to two or three years on site.

When building is completed, the final account still has to be agreed between client and builder, and this could take another 3 to 18 months, partly depending on the length of the defects period - normally one year. The total timescale is represented in the Gantt chart in Figure B3.



Key

- Task sectional headings are shown with a thick line, arrowed at each end.
- Tasks are shown with a filled bar.
- Milestones are shown with a square and a date. Notice the two key ones - Acquisition (purchase completion) and Planning Consent.

The Gantt chart, invented by Mr. Gantt (!) is a way of showing the timescale of a project and the different elements. Most project management computer software can generate charts like this, and most are a lot more complicated.

5. Value for Money

The Audit Commission's view is that value for money in housing developments is determined by two factors:

- the scheme itself;
- the performance of the developer.

(Audit Commission, *Within Site Assessing Value for Money in Housing Association's New Build Programmes*, May 1996).

In terms of new build developments completed by housing associations, the Audit Commission found that the site-related costs were the most variable and were determined more by the location of the site than by who the developer was (i.e. sites in expensive areas will be more expensive to develop because of higher acquisition costs). Interestingly, they also found that schemes on brownfield sites *do not* appear to cost more than those on greenfield sites.

They also found that there were differences in the costs of the superstructure (i.e. the houses themselves) in different housing association schemes. This has been attributed to the different choices which housing associations may make about quality and standards of the different components in a house or flat. For instance, although all schemes which receive social housing grant (SHG) must comply with the Housing Corporation's Scheme Development Standards (this is covered fully in the next Block PDH.103), some housing associations will choose to add additional quality features which tenants have identified as desirable. This might include features such as overbath showers, turfed rather than seeded gardens or a higher specification of front door or fencing. Of the potential extra features, extra floor space is the most expensive of all!

6. The Involvement of Future Occupiers

In the past, many schemes have been developed without the involvement of tenants and this was not seen as unusual. In fact, it may still be unusual for some housing organisation, although there are others who have grasped the importance of involving tenants and the benefits which derive from this joint working.

There are a number of issues which can influence whether tenants/ prospective tenants may be involved in new build schemes, which are as follows:

- **the nature of the development itself (i.e. whether it is for existing tenants or for tenants who have not yet been identified)**

  Interestingly, research by the National Housing Federation in 1994 (NFHA *Building Homes People Want: A Guide to Tenant Involvement in the Design and Development of Housing Association Homes*) showed that although it would seem unfeasible from a common sense point of view to involve future tenants in the construction of new homes on greenfield sites, it actually works in practice! Clearly, it is easier to involve tenants who are already *in situ*, but it is still possible to involve successfully even groups with little experience of joint working, such as frail elderly people or homeless people.

- **how organised tenants already are (i.e. whether tenants are already experienced at participating or do they need help to get organised)**

  The presence of a pre-existing tenants group is helpful but is not always an indicator of success, particularly if the group is dysfunctional and/or excludes (whether deliberately or not) certain groups in the community such as minority ethnic groups or young people. Unless a new build scheme is aimed at existing tenants, it is likely that the developer would need to work with prospective tenants to help them to organise themselves, as they are likely to be a disparate group with no or minimal connections to begin with. It is important not to forget, too, that there are costs associated with helping tenants to get organised and it is not always easy to find the necessary revenue funding to do this.

- **how keen is the developer to involve tenants (i.e. are they committed or reluctant? Are they clear about their own motives for involving tenants?)**

  The attitude of the developer will always be key in any attempt to consult with and involve tenants in development schemes. If their own motives are clouded or uncertain or if they are reluctantly involving tenants against their better professional judgement, the process will be less beneficial. It is also important that the technical professionals have the right skills to work with tenants, including strong inter-personal and listening skills.

- **the constraints of funding and timetabling (i.e. is there pressure to get on with the development to spend money within a certain period of time?)**

  The constraints presented by funding and timetabling can sometimes be - or seem to be - insurmountable, especially if the developer can only take advantage of funding if it is spent quickly. Funding arrangements such as competitive bidding can also lead to problems, as developers may be unwilling to involve tenants early on in a process which might significantly raise and then dash their expectations. At the other end of the spectrum, you could have a phased new build scheme (particularly new build within a wider regeneration programme) which is delivered over a long period of time. The difficulties here would be more around how to maintain tenants' interest over the long haul.

There are many different methods of involving tenants in developing new build homes which might include design days, group visits to other schemes to see what has worked and was hasn't, questionnaires, newsletters, planning for real exercises and tenant involvement in selecting architects, contractors and in managing the development process. Ultimately, what is potentially gained by involving tenants/prospective tenants are:

- higher quality schemes
- schemes which meet tenants actual needs
- a head start to community development
- more cost effective management and maintenance
- higher job satisfaction and better tenant-staff relations

Summary

1. **New build developments involve the acquisition of development sites (which may need to be cleared) and the building of housing schemes, most usually on greenfield sites.**
2. **There are a number of arguments in favour of new build developments, including the perception that they are cheaper and easier to build and that new build is what many people desire.**
3. **Ranged against these arguments are those which point out the downside of new build schemes, including the over-use of greenfield land, concerns about additional traffic congestion and pollution and isolation of less mobile residents.**
4. **The cost elements of new build usually include acquisition (either buying land or buildings, expressed as cost per acre or hectare of land), building works (expressed as cost per square metre of building and associated VAT) and on-costs (such as purchase stamp duty, legal fees, professional fees and expenses, planning and building regulations fees, development borrowing and miscellaneous administration costs).**
5. **New build timescales are variable, depending on factors such as the availability of labour and materials and even the weather.**
6. **The value for money of new build schemes is influenced by factors such as site location, the choices made about additional quality features of the homes themselves and the performance of the developer. Interestingly, despite a common belief to the contrary, greenfield development *do not* provide better value for money than brown field ones.**
7. **Involving tenants or prospective tenants in new build developments is possible and has proved successful, even in cases where the tenants were a disparate group with no previous connection. Tenant involvement may depend, however, on factors such as funding, timescales and the skills and commitment of the professionals involved.**

C. Use of Existing Buildings

1. Introduction

The use of existing buildings is increasingly used as a way of developing new housing, despite a focus on new build throughout the 1990s, as a result of the 1988 Housing Act. As we saw in the previous block PDH.101, the government has shown concern about the need to re-use existing sites and buildings to conserve green belts and prevent urban sprawl in what is a very densely populated country. Accordingly, in 1999/2000 65% of the Housing Corporation's Approved Development Programme was allocated to rehabilitation or regeneration schemes. As well as traditional rehabilitation schemes, there are other types of activities which can be used to create additional housing, including changes of use and subdivision. But first, we will look at rehabilitation in the same terms as we did for new build, i.e.

- the pros and cons of rehabilitation;
- costs;
- timescales;
- value for money;
- the involvement of future occupiers.

2. The Pros and Cons of Rehabilitation

Rehabilitation covers a variety of schemes, including those which refurbish older terraces or blocks of housing and those which involve the purchase of private housing on the open market (so-called existing satisfactory properties) to let out. It can also cover the regeneration of whole areas, as discussed in the previous Block PDH.101.

Overleaf is a photo of three properties in a larger terrace, on which was bought and developed by a housing association. Can you guess which one is now owned by the housing association?

Figure C1

Mark, the housing association's architectural technician, identified which one it was:

> *"The answer is the one in the middle. I went to great trouble (and expense) to mimic the original Edwardian sliding sash windows. They have been replaced with top-hung double-glazed sealed units made to look like the originals.*
>
> *However, the owner occupiers on each side have had Improvement Grants and have ripped out the original adequate double hung sliding sash windows and replaced them with poor quality insert windows. These will be rotten within 10 years allow water to penetrate because of differential movement between the old and new wooden frames, and they have opening lights that did not comply with the Building Regulations of the time in respect of openable window area.*
>
> *What is even more ironic is that although we tried to develop in keeping with the original appearance of the area, our new tenants complained that their windows looked old fashioned! So much for fashion."*

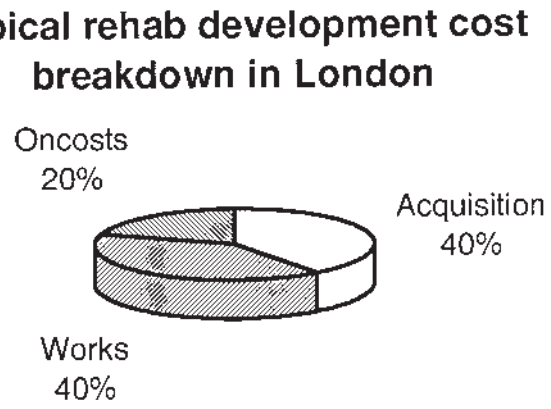
This example helps perhaps to illustrate one advantage of rehabilitation schemes, which is that the property blends in with others, thereby avoiding the stigma that often comes with large, identifiable social housing estates. The rehabilitation of scattered properties (also known as street properties) also helps to disperse people within communities so that there are not large concentrations of people who are disadvantaged socially or economically or both, as is very often the case with the tenants of social landlords at the turn of the century. Such properties are often also located in established urban areas where there is good access to local shops and public transportation networks, thereby reducing the concern about isolation for those whose mobility is limited (i.e. parents with young children, older people, people who are ill, etc.).

However, there are downsides to rehabilitation schemes, although these may mostly be apparent to the developer rather than the tenant. Rehabilitation is an expensive option for the developer and there can be unforeseen costs. It is also often the case that design compromises must be made, as the existing building will set limitations on design. And finally, despite the fact that the location of street properties is often seen as positive, being in established urban areas, this can also be a negative point if the area is run down and its improvement is an unclear or long term proposal.

3. Costs

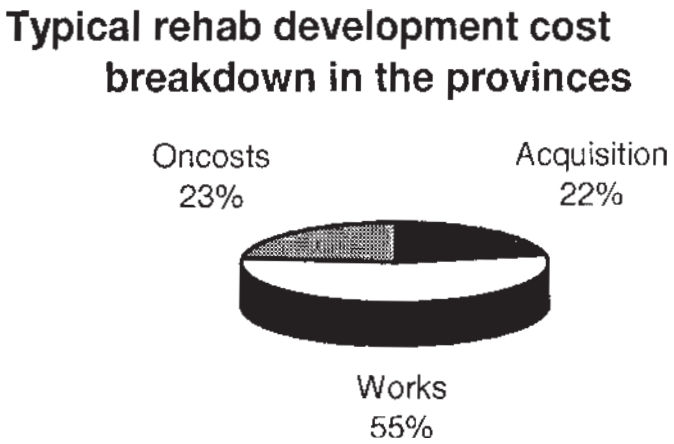
Redevelopment property acquisition costs obviously depend on size, locality and condition, varying from, say, £500,000 for large multi-storey London housing to as low as £20,000 for a two storey terraced property in the provinces. This is illustrated in Figures C2 below and C3 overpage.

Figure C2



The works costs of a 30 year life social housing refurbishment can be as much as new build, depending on the extent of the work. Cost prediction is more difficult because of the possibility of discovering unforeseen problems after work has commenced (especially damp, wood rot and subsidence). However, typical costs might be £300-£400 per sq.m.

Figure C3



Mean on-costs tend to be higher pro-rata for Rehab. than new building, say 20% of total costs, largely due to two factors:

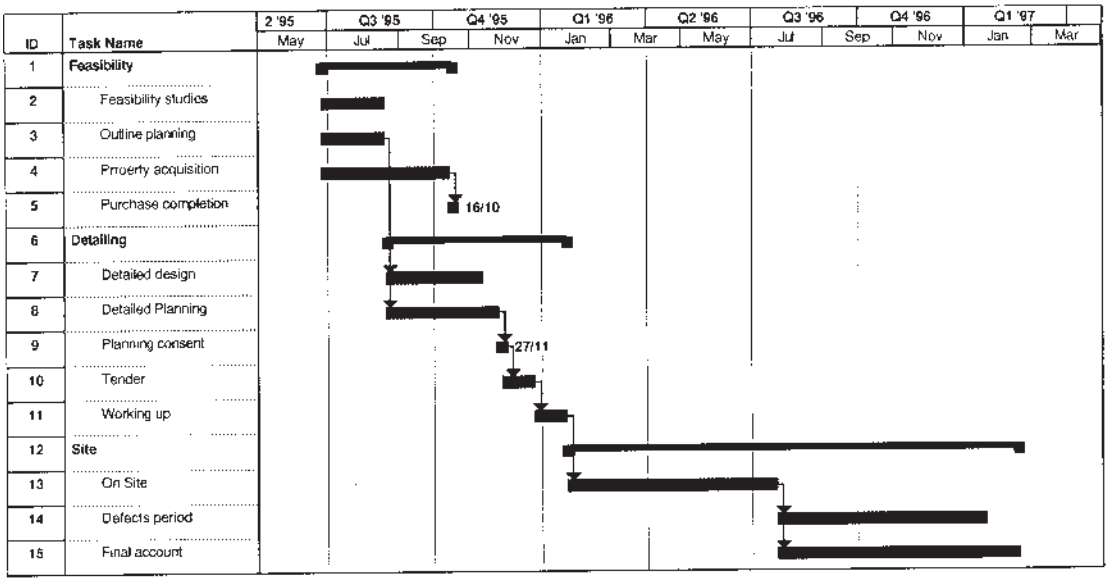
- higher consultants' professional fee scales (because Rehab. is much more time-consuming to design since each house or flat is different and there is not the repetition of new build);
- the higher number of abortive schemes and consequent staff costs (in other words, schemes where the development staff still have to undertake feasibility work, but the development does not proceed).

4. Time Scales

Inception to site start can be around six months, although if planning permission is required, e.g. for "change of use", this can delay progress. A scheme might be on site for between three and twelve months, depending on the scale and complexity of the work.

As with new building, final account has to be agreed with the builder, but defects periods are usually shorter, often six months. This is illustrated in Figure C4.

Figure C4: Typical 5 unit Acquisition and Rehab scheme. Project timetable.



Key

- Task sectional headings are shown with a thick line, arrowed at each end.
- Tasks are shown with a filled bar.
- Milestones are shown with a square and a date.

Activity 8

Looking back at the pie charts and information comparing cost profiles of new building and Rehab (involving acquisition), what can you say about the advantages to the public purse of investing public housing money in London versus the provinces?

Time allocation: 10 minutes

The answer to this question is very controversial in the debate over allocating resources.

Obviously, the same money buys more housing in the provinces than it does in London and the South East. For the same reasons, the same money creates more jobs in the provinces. Given government policy on efficiency of public resources and the higher unemployment in parts of the provinces, there is obviously a case for increasing housing investment in the provinces at the expense of the other areas.

However, most indicators of housing need suggest that this is greatest in London, and of course the problems are more visible to the government since it is based in London where, as one Conservative Housing Minister put it:

> *"The homeless are the people one trips over when leaving the Opera."*

There is obviously an argument over equity. Why should people in housing need in London and the South East receive less support, in terms of units provided, simply because land and housing are more expensive there?

5. Value for Money

Rehabilitation schemes have a reputation as providing less value for money than new build schemes and are often considered expensive on a strictly financial basis. The fact that they may provide additional benefits in terms of keeping communities together or revitalising neighbourhoods is hard to quantify and measure in comparison. As with housing association new build schemes, the Audit Commission has looked into the value for money issues with regard to rehabilitation and has identified the following key issues:

- The rehabilitation of 'street' properties is the most expensive option and therefore housing associations tend to try and avoid it;
- In comparison with new build schemes, the VAT costs are significantly higher for rehabilitation schemes, making them less cost-effective;
- The costs of acquiring and rehabilitating properties in some inner urban areas far outweighs their market value once they have been improved, and this presents a significant risk to the association.

6. The Involvement of Future Occupiers

The issues are broadly the same as those raised under the previous section on new build. However, where development schemes involve rehabilitating properties where existing tenants are housed and will return, their involvement becomes truly critical in order to ensure that the development scheme progresses as smoothly as possible. It is often the case that the developing association will take on or second staff to the role of Tenant Liaison Officer to work with tenants on all aspects of the scheme. This liaison involves a range of matters, from its design and the appointment/management of architects and contractors, to scheduling works and any temporary or permanent moves to the final 'snagging' (checking of defects) and completion of the scheme. In such cases, it is usual for development staff to meet regularly with tenants and to communicate through newsletters and public meetings, as well as one-to-one.

7. Changes of Use and Subdivision

Changes of Use

Changes of use can contribute to new housing at both the higher and lower ends of the housing market and schemes can vary a lot in what they provide. Research undertaken by the DETR (DETR Housing Research Summary No.107, 2000) shows that change of use can be incremental, as a building gradually shifts in use from a guest house to a more permanent hostel arrangement, eventually functioning as a House in Multiple Occupation. Alternatively, change of use can be brought about by planned process of redevelopment, such as converting space over shops into flats or converting former office blocks into residential accommodation.

The English House Condition Survey shows that something like 3,000 additional dwellings were created between 1985 and 1996 through change of use, with ODPM (formerly the DETR) estimates that change of use is creating an additional 6,000 units a year at the turn of the century.

Subdivision

The DETR estimated that private sector subdivision of housing (that is, creating several smaller units out of one or more larger ones) currently creates around 1,400 additional dwellings a year, but it is hard to know for sure because there are variable methods of recording new subdivisions across different local authorities. Like changes of use, subdivision is present in the higher and lower end of the housing market. It also tends to be small scale.

8. What Factors Drive Redevelopment and Conversion Schemes?

There are both strategic and local factors at play in helping to drive forward redevelopment and conversion schemes as a favoured method of developing additional homes. The important strategic factors are as follows:

- The supply of greenfield sites for new development. If there is a large number of suitable and available greenfield sites on offer, then the demand for redevelopment drops. Conversely, when greenfield sites are in short supply, developers begin to consider redevelopment proposals more enthusiastically.
- Demographic changes mean that there has been a significant rise in the numbers of single people and this is projected to continue increasing. This, then, has an effect on demand for different property types and, particularly, is likely to increase demand for city centre /edge of centre converted properties with one or more bedrooms.
- Economic changes mean that there is less demand for some industrial and commercial buildings because of a decline in Britain's manufacturing industry and because of changes in the market for office accommodation because of increased home working, so less need for offices. This then frees up such buildings for potential conversion.

The significant local factors include:

- Changes in the local population which bring new types of household into an area or neighbourhood, for instance, students. Students demand small, low cost housing which is near the university and this, in turn, creates a market for subdivided houses.
- Changes in the way an area is perceived. For example, encouraging people to see city centres as having a life outside the typical 9-5 work routine can lead to a market for city centre living.
- Local amenities and public transportation. Converted and redeveloped properties tend to be successful where they are located in urban centres or on urban edges where there is good quality public transportation.
- Inward investment in an area. For instance, the expenditure of regeneration money through the Single Regeneration Budget can bring enough improvement to boost confidence in an area, even if it has not been totally improved. This, then, can help to create a new market for the area.

Summary

1. **The use of existing buildings is increasingly used as a way of developing new housing due to concerns about conserving green belt land and preventing urban sprawl in a densely populated country.**
2. **There are various ways in which existing buildings can be used, including rehabilitation schemes, change of use and subdivision.**
3. **Rehabilitation schemes can be as or more expensive than new build schemes and costs can be unpredictable due to unforeseen problems with the building such as dry rot or subsidence.**
4. **Timescales for rehabilitation can also vary depending on the scale and complexity of the work.**
5. **Change of use of existing buildings can be incremental or planned and creates several thousand additional dwellings a year, as does subdividing existing housing.**
6. **Finally, there are both strategic and local factors at play in determining how popular redevelopment schemes are with developers. Strategic factors include demographic and economic changes, as well as the supply of green field sites, while local factors include influxes of particular groups to an area (like students) and the way (favourable or unfavourable) an area is perceived.**

D. Developing for Specific Need Groups

1. Introduction

The Housing Corporation assesses all new developments funded by Social Housing Grant (SHG) against its scheme development standards, one of which is how easily adaptable the dwelling is for other needs. It is important that properties which are designed for general use should be adaptable to meet a range of needs, and this is the basis of the lifetime homes concept. The idea is that one property design can cater for the needs of people throughout their lives and in spite of changes in their personal circumstances through, for instance, the presence of young children, ageing, illness or disability.

The community architecture and co-operative movements provided the initial springboard for local people to become involved in the design and development of their housing, and provided a way for them to help to ensure that the housing which was developed met their specific needs. We will look at these two movements, including some practical examples, before moving on to consider some of the main design issues facing different groups of people. But first, we will look at the broad issue of equal opportunities in a development context.

2. Equal Opportunities and Design

There has been an increasing demand by people who have had little power and voice in our society to have more influence over the design and form of our buildings, where their needs have in the past been ignored.

The community architecture movement (see later) gave rise to a co-operative of women architects called 'MATRIX', and a **Society of Black Architects.** They have each made a priority of working with organisations and groups of women, black people and minority ethnic groups to enable them to express their needs in the design and form of their own housing and built environment.

Of great importance has been the self organisation of people with disabilities, and the various campaigning groups which have brought their needs to the fore front of the design and planning process.

Activity 9

1. *Try listing at least five particular sets of needs in housing and environmental design which you consider have traditionally not been met by the designers for the following groups:*

1. *Women*

2. *Black and ethnic minority people*

3. *People with disabilities*

Time allocation: 20 minutes

We asked Claire, an architect who has worked with these groups, to identify common problems:

"The sort of issues I have come across are outlined below:

Women

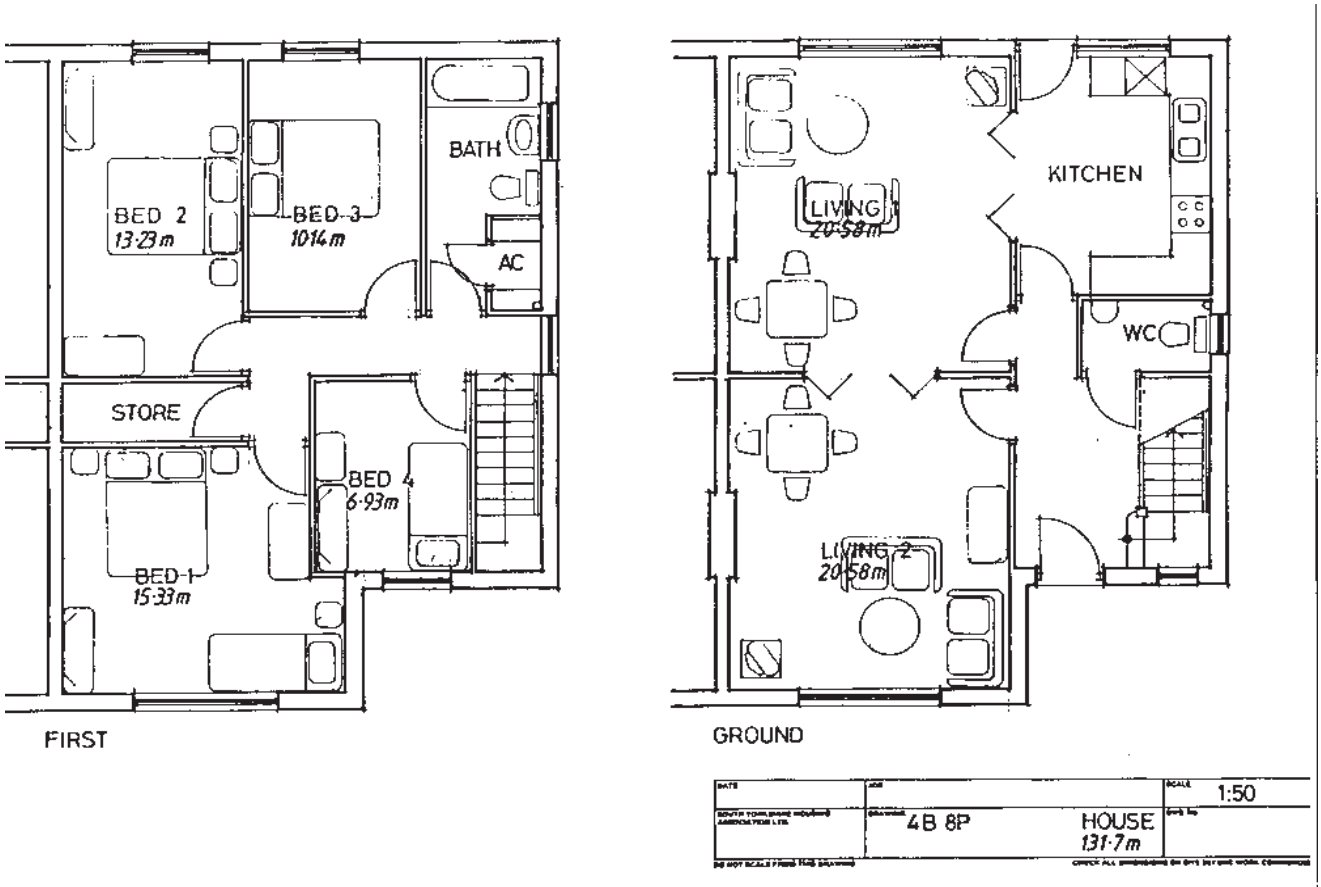
- *safety/security: open spaces which are easily surveyed by public - no hidden corners, subways, high bushes;*
- *suitable play areas for different ages of children, easy to supervise;*
- *greater range of house plans: assumption that everyone wants to live in a privatised nuclear family unit rather than collectively or extended family;*
- *large, well-planned kitchens;*
- *easy to clean e.g. windows;*
- *bedrooms of equal sizes for flexibility;*
- *good clothes washing/drying facilities;*
- *closeness to the community.*

Black/ethnic minorities

- *representation of culture in the appearance of the house;*
- *space/flexibility for extended families;*
- *communal areas;*
- *combined housing/workshops;*
- *security and safety;*
- *recognition of different cooking and preparation and hygiene practices of different culture;*
- *recognition of segregation between men and women in different cultures;*
- *learning from design and building techniques of other countries;*
- *learning not to be 'euro-centric' i.e.: the assumption that the European, white, middle-class culture is the only one."*

An example of the type of design that can be involved to address ethnic minority decisions is shown in the 4 bedroom 8 person house for an Asian housing association shown in Figure D1 over the page.

Figure D1



Note the ground floor arrangement allows the partition doors between dining room and kitchen to be opened for large group meetings, but shut on other occasions. The bedroom configuration allows a baby to sleep with parents.

Claire continued:

> ***'People with disabilities***
>
> - *access **into** buildings : ramps; lifts; width of doorways;*
> - *access **around** buildings: width of passages; turning points for wheelchairs; chair lifts; hoists; disabled toilets;*
> - *visibility: clearly marked entrances; clearly marked level differences; clearly marked pathways / barriers; low windows for views out;*
> - *flexibility: provision for future disability in the design;*
> - *kitchens: adjustable work-heights; accessible cupboards and storage; space for manoeuvre."*

A typical problem of access around a newly modernised estate is shown in Figure D2 below.

Figure D2

3. The Community Architecture Movement

3.1 Introduction

Where does *'community architecture'* come from? The ideas and practice of community architecture have been developed from an approach originally developed by small groups of architects in the 1970s in response to the increasing criticism against architects and their failure to provide a living environment that met peoples' real needs.

The fundamental philosophy is that of the right of every citizen to have some influence over the design and decision-making process that produces our built environment and that we have to 'live with' - in every sense of the word.

It is important to see that this philosophy and practice is something that has developed as part of a movement to make living more democratic, aesthetically satisfying and stimulating in a

number of areas. It developed along with rent strikes, and the development of tenants' organisations across the country. If not understood in this way, 'community architecture' can be dismissed as 'flavour of the month', a passing style, that can be easily dispensed with. As well as the demand for rent control, tenants also voiced their criticism of the inadequacy of the forms of housing which architects were designing for them during these decades.

As we saw earlier, many architects had taken their theories about design from the Modern Movement, whose alliance of design ideas with the new technologies of steel, concrete and glass, together with theories about communal space, helped to produce the tower-blocks and streets in the sky.

How does community architecture work in practice?

There are many interpretations, both in philosophy and practice, of community architecture. In the arena of housing, two distinct approaches can be seen, revolving around the interpretation of how far tenants should be able to control their own situation. One is tenants' participation and consultation, the other is tenants' control. A starting point in understanding the two approaches is to take the practices of two British pioneers of community architecture - Rod Hackney and Tom Woolley.

Rod Hackney

Rod Hackney developed a practice which firmly believed in tenants' participation but drew the line at tenants' control. His ideas and campaigning won him the Presidency of the Royal Institute of British Architects (RIBA) in 1986.

The basic principle of his practice is to provide a *'Total Environmental Service'*. Architects should not restrict their role to designing buildings for isolated clients wealthy enough to pay the fees, but should set out to solve any and all the environmental problems facing everyone. This should be done by using such means as are available, which will vary in each case.

Most of Hackney's early work came from appeals for help from residents' groups facing demolition threats from local authorities. As he explained:

> *"The exact nature of the job may not have been identified before the architect is invited in but the architect helps identify the solution ... it can be rehabilitation or stabilisation, it can be repair, new-build or self-build. Or it can be a combination of these. There is no formula. It may also involve campaigning, political lobbying and obtaining finance as well as designing - indeed a complete package of urban development."*

Hackney recognised that it is often impossible for community groups to provide payment for providing such a service and campaigned through the RIBA for a government community aid fund. During his Presidency, such a fund was established as a unit of the RIBA called the *'Community Architecture Unit'*. Community groups were able to apply for funding of half the costs of feasibility studies, provided they were able to meet the other half of the cost.

The stages of a *'community architecture scheme'* are, in fact, similar to any housing development project except that all of the stages involve the future users of the buildings. Traditionally, one client representative will be involved. However, 'community architecture' sets out to involve all the future and potential users as fully as possible and give them control over the decision-making at every stage.

One of community architecture's most important principles is that the architect must *'live on the job'*, be established in an office in the street or community where the scheme is taking place. Rod Hackney explained:

> *"What makes the community architect different from the traditional architect is that he/she is there, 7 days a week if necessary, to feel the vibration and pulse of the community ... Being constantly on site is also the way to enable the users to control the building process.*
>
> *For example:*
> *Elderly residents in a Leicester housing improvement scheme were very worried about the backyard doors being replaced without a cat flap door. Those cats were very important to them. They will come back the day you have a new door and if there's no hole they may well run away. How can you control things like that if you are not on site? The small things are very important, they determine whether a scheme works."*

Community architects see themselves as enablers and organisers as well as designers. They aim to use their professional skills to help the users achieve their ambitions rather than imposing solutions on them. Wherever possible, they address themselves to the users and treat them as clients, even if they are not actually paying the bills.

Rod Hackney is the most high-profile of the 'community architects but there are many others, and their practice takes many shapes and forms. Rod Hackney's practice, for example, was hierarchical in structure. He had total ownership of his offices, as well as his building and development companies.

In contrast, the community architecture movement was essentially co-operative in beliefs and structure. During the 1980s, many community architecture co-operatives and **Technical Aid Centres** were established, with a national coordinating body of the**Association of Technical Aid Centres. (ACTAC)** These centres dealt with every kind of building project, though mainly housing schemes. The difference between the approach of these groups and that of Rod Hackney could be summed up as the difference between user participation and user control.

Tom Woolley

One of the first community architecture co-operatives, 'SUPPORT', was established in London in the mid-1970s by Tom Woolley, a pioneer of the community architecture movement. Tom Woolley was an advocate of user control, and was critical of the vagueness of the term 'user participation'. Tom Woolley explained:

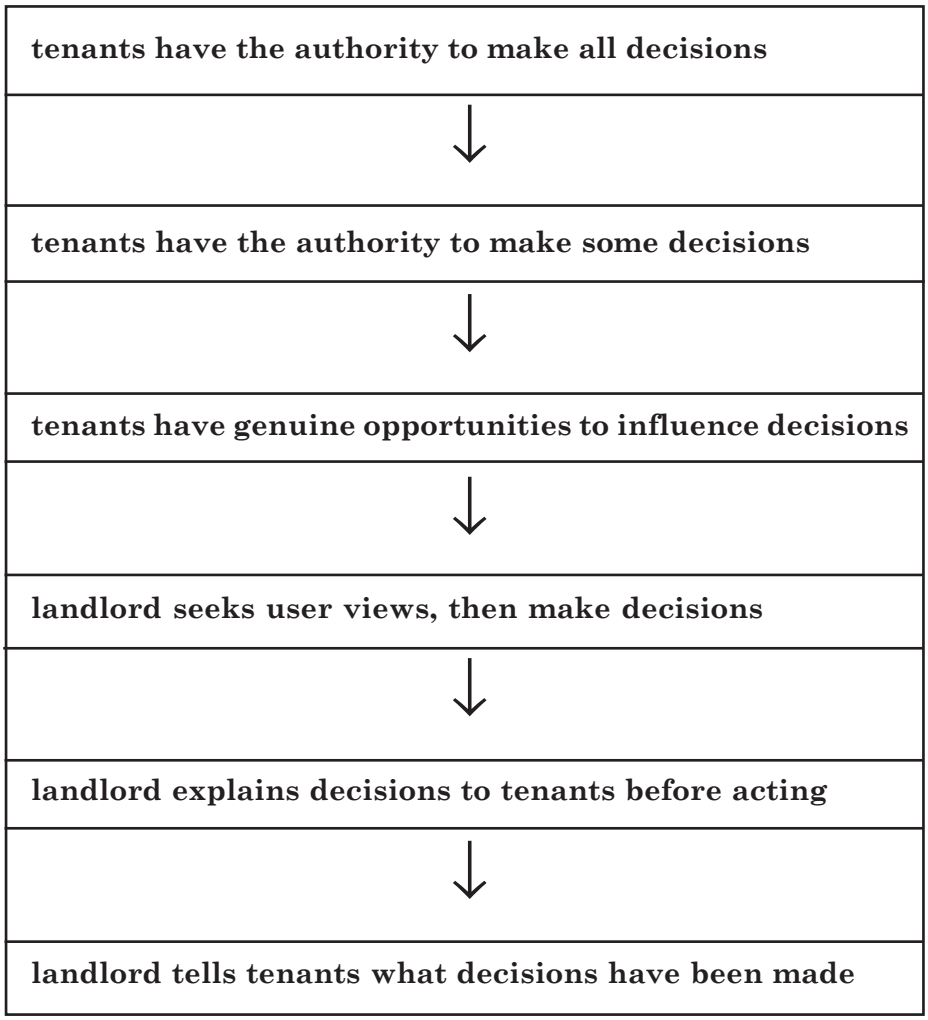
> *"Advocates of user participation in design imply that participation can prevent design failures and is therefore beneficial. This has led to an assumption that in successful schemes where some degree of user participation took place, the reason for the success was that participation, but it is never proven."*

The greatest problem for architects is to work out how to structure the design process and the relationships between the different parties involved, so that the users were clear enough about the process to take some control in the decision making.

Ladder of Citizen Participation

The American Institute of Planners has developed a 'Ladder of Citizen Participation' shown in Figure D3 below, showing the different levels of tenant control and participation in housing development which can be aimed for. The top of the ladder shows the greatest level of tenant control, and this decreases as one descends:

Figure D3



Now let us look at some of the implications of these different approaches to participation and control.

Activity 10

1. *Try listing the benefits of user **participation** in design and development.*

2. *Try listing the benefits of user **control** in design and development.*

3. *Try listing the different kinds of housing developments most appropriate to 1- or 2- user participation and user control.*

Time allocation: 20 minutes

We asked Claire, the same architect, working for a local authority which practises user participation and (to some extent) control, to list what she thought were the advantages of the two ends of the spectrum:

"For me, these are the advantages and some of the things I have gained from my experiences:

User participation
This means that users can:

- *rectify design faults;*
- *express their preferences;*
- *state the problems from their point of view;*
- *learn the processes involved in designing and building housing;*
- *feel they have a say in their environment and it can help the development of a more stable community;*
- *learn about the necessary constraints on development, e.g. cost limits;*
- *expose architect design methodology to general scrutiny;*
- *break down the mystique and elitism of 'professionalism'. (This is not always popular with professionals!);*
- *establish new housing design standards and encourage future greater consideration of peoples' housing needs by the 'experts'; and*
- *act as a generator for more widespread home pride.*

Also, Architects learn more about peoples' real needs and the process can help in the promotion of equal opportunities.

User Control
This means tenants can:

- *appoint the architects and 'experts' of their choice;*
- *take part in fund raising;*
- *individualise their house designs;*
- *develop more imaginative forms of housing;*
- *learn the expertise during the development process to run the scheme once it's built;*

- *control the finance and decide on the cost of housing in relation to future rent levels;*
- *have the final say in decisions;*
- *form their own organisational structure; and*
- *formulate and implement their own equal opportunities policies.*

Housing developments suited to tenant participation

I would say any project involving housing improvements would be suitable, such as Housing Improvement Programmes, Area Renewal, Housing Action Trust, Estate Action, City Challenge, and the Single Regeneration Budget. In general, these are schemes where the housing is owned by and under local authority control, where management structures are already in place. Similarly, it should be possible to include housing association new build. (I know that many housing association staff consider this to be virtually impossible!)

Housing developments suited to tenant control

I personally would say any project involving user ownership, such as Community Controlled Development and Self-Build is suitable."

Disadvantages of user participation in design and development

There are also some disadvantages to these processes as perceived by the housing associations and local authorities that own this housing. For one thing it is, as you might expect slower and more expensive to set up all the necessary consultation meetings and arrangements. This can be a problem with tight budgets and deadlines.

The process also raises expectations in the participants that can be unfulfilled if it turns out that decisions made cannot be implemented because of later funding or other constraints.

Finally, there is a risk that if there is a strong cultural bias in the participants, then certain groups who are cultural minorities can be excluded.

Having stated these drawbacks, it must be reiterated that these drawbacks can (and regularly do) occur in traditional, employer led development.

Essential to the success of tenant participation/control is the establishment of a clear structure of roles and responsibilities between all the parties involved. Some examples of schemes and the type of structure developed are outlined in the case studies below.

3.2. Case study 1: Hulme Regeneration Ltd.

This is an Urban Regeneration Partnership between Manchester City Council and various housing associations and private developers.

Hulme is an inner-city area in Manchester, the centre of the industrial revolution, and home of the industrial work force which expanded at an exponential rate during that period. By the 1930s, Hulme was an area of slum housing with a population of 130,000. In the 1960s, the area was completely cleared and deck-access crescent shaped concrete blocks (known locally as 'the Crescents') and 13 tower blocks were built to house 12,000 people.

This area was typical of the failure of the *'architectural determinism'* of the 1960s, with structural and design defects which led to high tenant dissatisfaction and the estate becoming a typical 'problem' estate. It was not until Manchester City Council won a bid in the City Challenge programme that it became possible to attack the problems of Hulme. (City Challenge was a government initiative which replaced the Urban Development Programme with a 'competition' between cities to win funding for urban regeneration initiatives).

The approach of the city council was to set up a partnership between the local authority, housing associations funded by the Housing Corporation and private developers under the title *'Hulme Regeneration Ltd'*. A condition of the funding from the Department of the Environment was a high level of tenant consultation.

Based on the standards of tenant involvement in the Housing Corporation's Performance Audit Manual, Hulme Regeneration Ltd developed a *'Tenant Involvement Code'* in 1994 and set up a Hulme Tenant Participation Project with ten paid workers and a centre in the middle of Hulme.

The principles of the Hulme Tenant Participation Project were the following:

- every tenant has the right to participate in formulating the proposals for the design, development and improvement of their homes;
- estate agreements are produced between local tenants and Manchester council housing department in order to provide a more efficient, responsive and local service;
- information of landlords' performance should be published and publicly discussed in respect of:
    - rent charged for different sizes of property
    - breakdown of service charges
    - success in collecting rent
    - number of empty properties
    - repairs
    - tenant participation
- consultation and feedback should be organised via:
    - personal visits
    - public meetings
    - newsletters
    - questionnaires.
- a *'tenant satisfaction survey'* should be completed nine months after practical competition of each scheme; and
- tenants should be able to exercise the 'right to manage with Department of the Environment funding to help them develop the expertise necessary to become a tenant management organisation.

A structure was clearly laid out to show the involvement and responsibilities of the different parties at the different stages of development. The overall structure is shown in Figure D4 over the page.

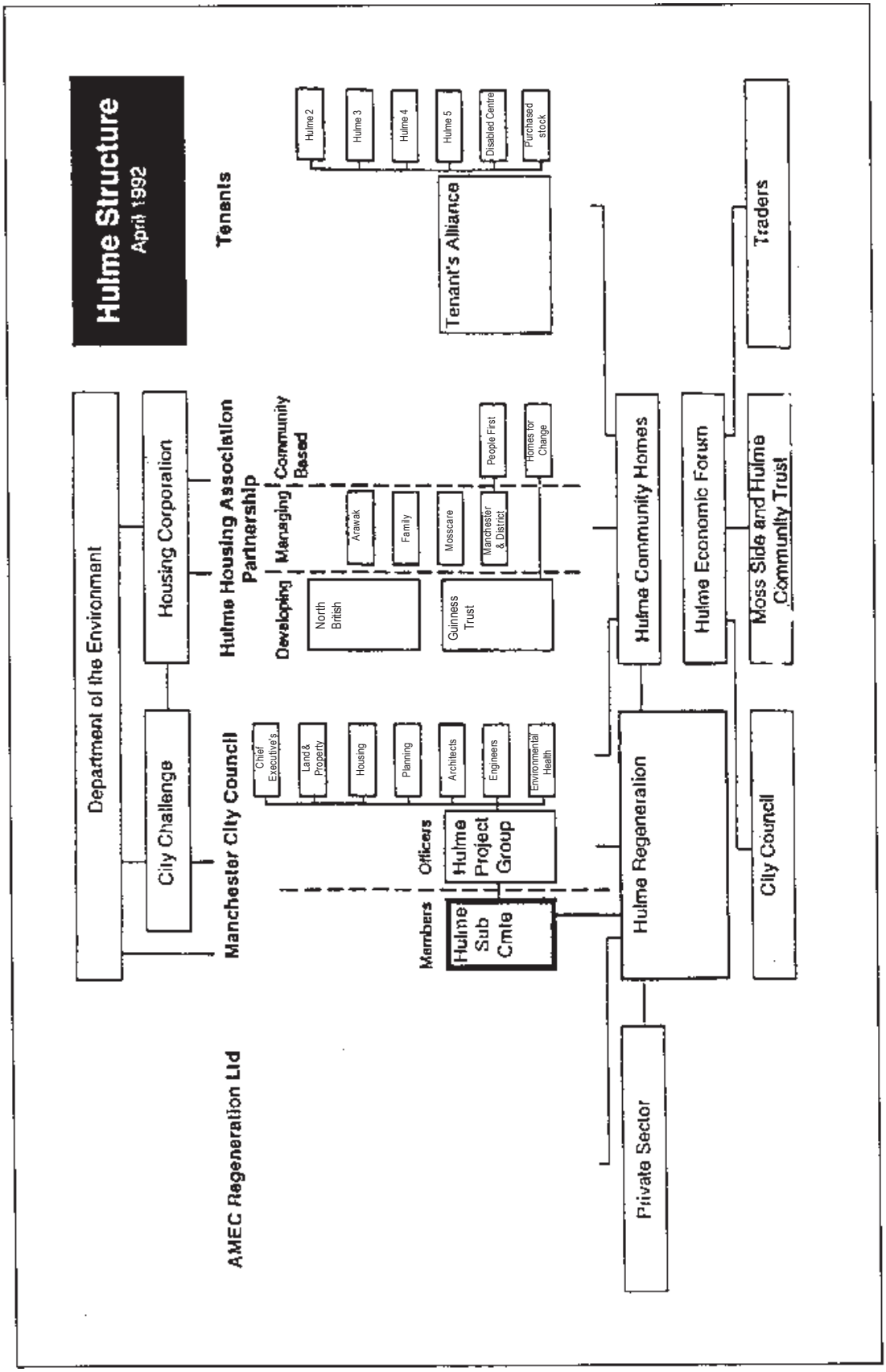


Figure D4

(Source: *Hulme Regeneration Ltd.)*

A design code was developed by the City Council via tenant participation activities at weekends involving models, plans, cut-outs and pictures for tenants to explore the various options. This code laid down design principals for the master-planning of the whole area, such as street patterns, transport, scale, individuality in design and was published as a design guide.

Some of the housing developed by this partnership is shown in Figures D5, D6 and D7 over the page.

Figure D5

This figure shows housing developed by the Guinness Trust. Note the 'hard' landscaping, block paving and high density.

Figure D6

This figure shows housing developed by North British Housing Association. The same comments apply.

Figure D7

This figure shows housing association new build in the foreground, with a renovated local authority block behind.

3.3 Case Study 2. 'Homes for Change' - tenants' control

'Homes for Change' is the name of a tenants co-operative within the Hulme Regeneration Partnership, which is developing its own mixed schemes of 75 flats and workplaces as a six-storey, deck-access concrete block!

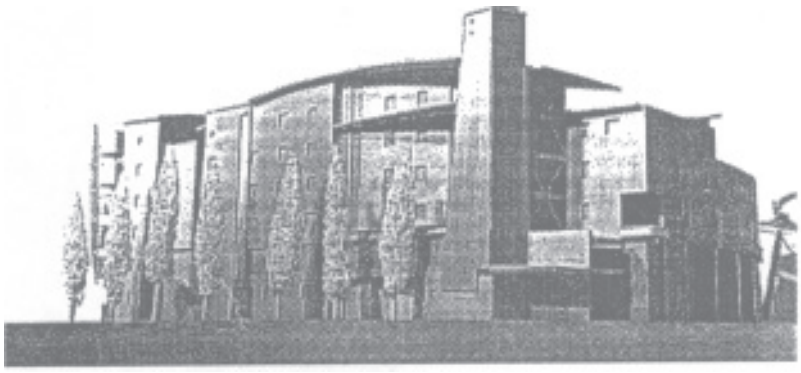
The co-operative has taken 6 years to establish to register as a co-operative to develop their design and programme and to structure themselves. They have 100% control over design, cost, location, quality and ownership and management of their future housing.

This co-op is unlike some others in having a high proportion of younger single people. Hulme itself had such a population at the time the City Challenge bid was successful, as a result of a squatting movement and the local authority's allocation policies at the time.

It is an interesting feature of tenants' control, as opposed to tenants participation, that they have rejected vernacular, semi-detached and terraced house styles as 'conservative' and have chosen a building form that is similar to the concrete crescent blocks that are being demolished and also that they include workspace in the housing.

The proposed scheme is shown in Figure D8 below:

Figure D8



The aims of the co-operative are:

- to create **a** supportive mixed community where Hulme people can live and work in affordable accommodation on the basis of communal benefit rather than individual profit;
- to create exciting urban buildings (not traditional suburbia) designed by tenants and able to evolve to meet the needs of future generations;
- to create a development that incorporates the best in green design and building technology to minimise heating costs and harm to the environment;
- to practise self-development to empower members by maximising control of design, development and construction (through self-build), ownership and management; and
- to pursue all these aims to the benefit of all local people irrespective of race, religion, class, creed, sex, sexuality, age or disability.

The co-op structure is organised non hierarchically, i.e. there is no pyramid structure, but ten working groups in which members are expected to carry out the work of the co-operative. These groups include: *'Training and Events'; 'Legal Eagles'; 'Finance'; 'Design and Development'* and so on.

The co-operative is financed by the Housing Corporation and is answerable to them for submitting accounts. The co-operative is an experiment in the development of tenants' ownership and control, and if successful could be a model for the future.

3.4 Case Study 3: Coin Street tenants' co-operative

Coin Street is a prime site in Central London on the South Bank of the Thames. The site was the subject of a struggle between local tenants and private development companies for the right to develop. After a prolonged campaign and a Public Enquiry, tenants were awarded control of the site to develop for housing.

The aims and structure of the co-operative are similar to *'Homes for Change'*, the difference being that the scale of Coin Street is far larger, and the community group is composed of different tenants' organisations who appointed their own development workers and architects to produce development proposals for the site.

The first stage of the development was traditional rows of terraced brick houses which were generally found to be disappointing.

The second stage was more adventurous, with tenants thinking through in more detail what their needs were. The result was an interesting development in that it comprised mixed 3 and 4 storey housing and a tower block and 10 storeys. Floor plans of some of these units are shown in Figures D9-11. (The source of these Figures is the Coin Street Co-op).

The lay-out of the houses shows how they can be used for many different combinations of families and groups, an example of life-time homes that can be adapted through the changing needs of a family through the generations.

It is significant that a project controlled by tenants developed such a different design approach.

Figure D9

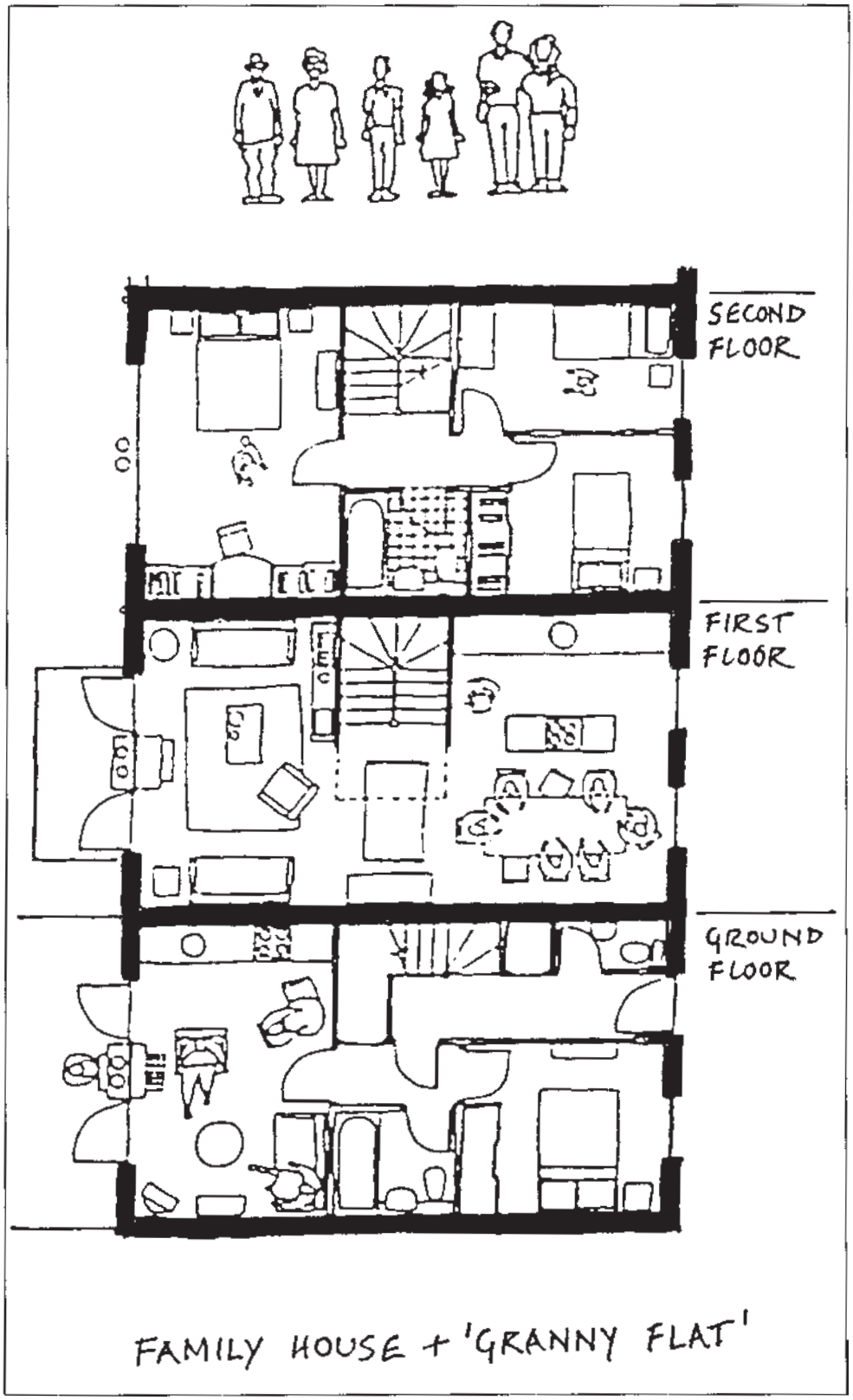

SECOND FLOOR
FIRST FLOOR
GROUND FLOOR
FAMILY HOUSE + 'GRANNY FLAT'

Figure D10

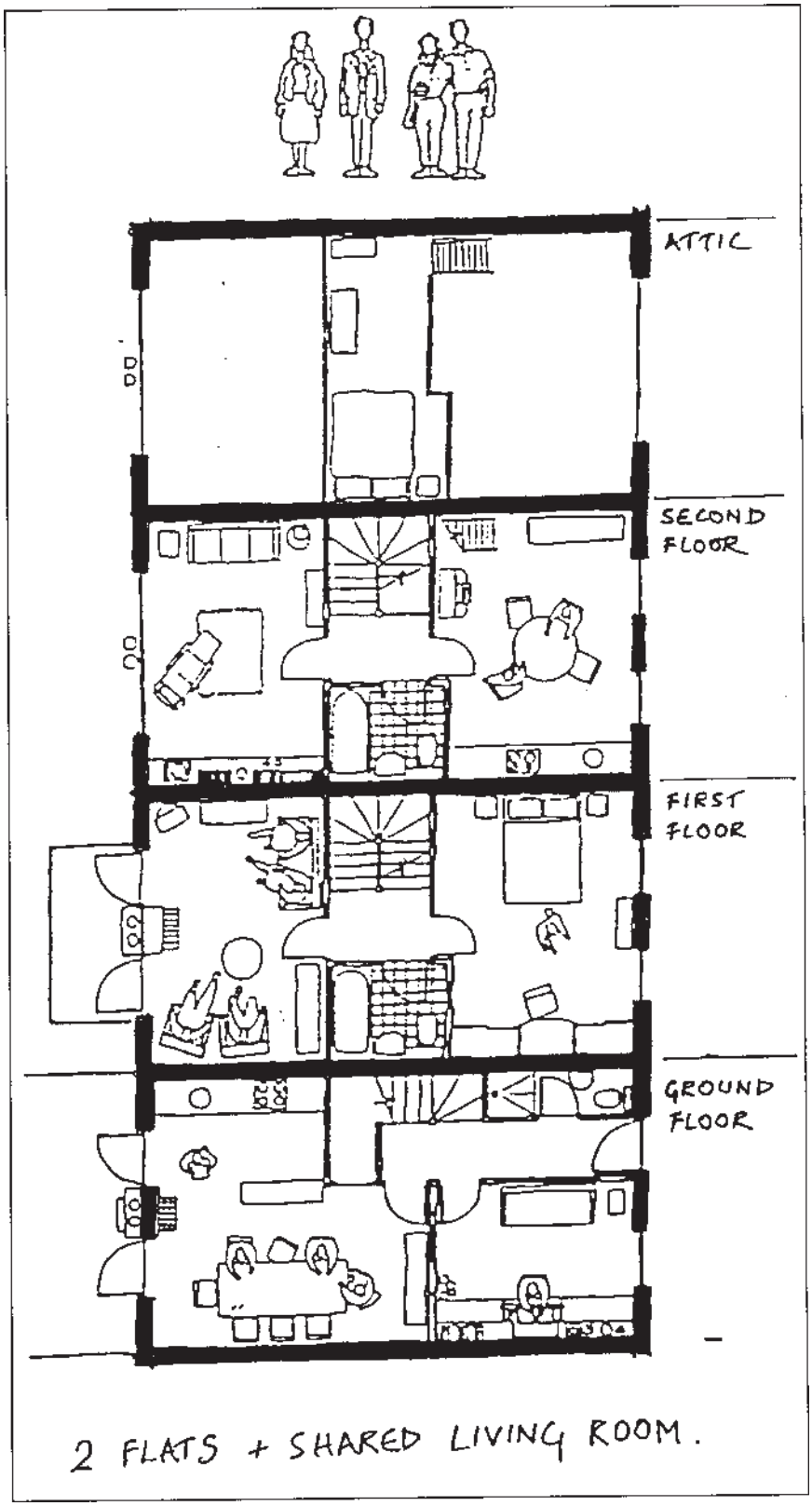
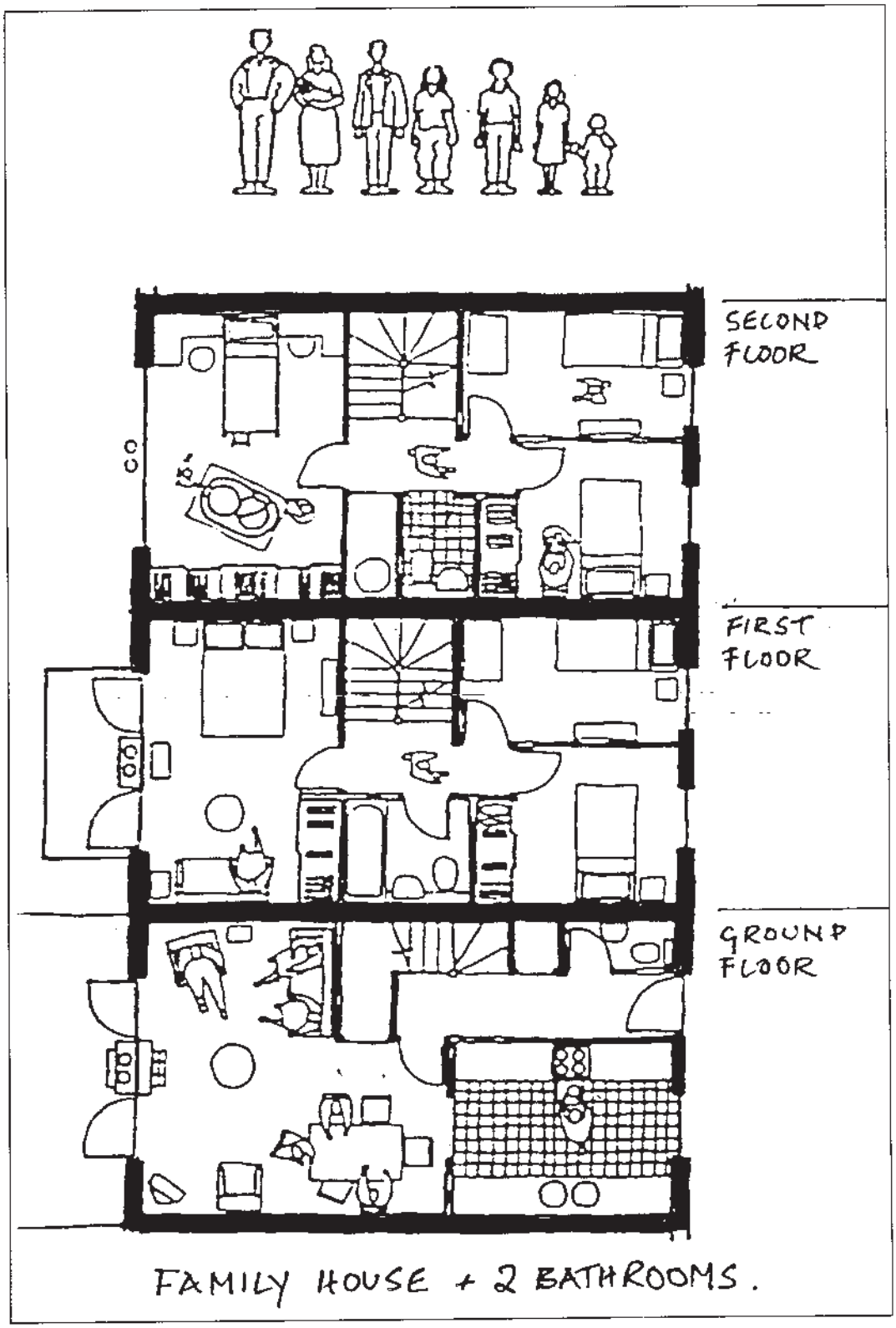

ATTIC
SECOND FLOOR
FIRST FLOOR
GROUND FLOOR
2 FLATS + SHARED LIVING ROOM.

Figure D11


SECOND FLOOR
FIRST FLOOR
GROUND FLOOR
FAMILY HOUSE + 2 BATHROOMS.

3.5 Case Study 4: Women's collective flats

This is a small housing scheme in Sheffield comprising 4 flats and a communal area. The scheme was initiated by single-parents who needed a housing situation which offered both a supportive environment and a completely individual life style. They commissioned their own architect to draw up a design to their requirements and then approached local housing associations to find out whether it was possible to develop the scheme. A local housing association found the proposal relevant and viable and took over development of the scheme, with the future tenants participating in it.

The fact that a design and build contract was used caused problems, in that control of the design was taken out of the hands of the tenants and put into those of the builder. However, the fact that the basic lay-out of the design had been controlled by the tenants ensured a satisfactory outcome. Floor plans of parts of the scheme are shown in Figures D12-14, over the page. (The source of these Figures is the co-op).

Notice the communal area on the ground floor and the way it allows the occupants to come together communally when they want, but also allows them to be separate when they want.

Figure D12

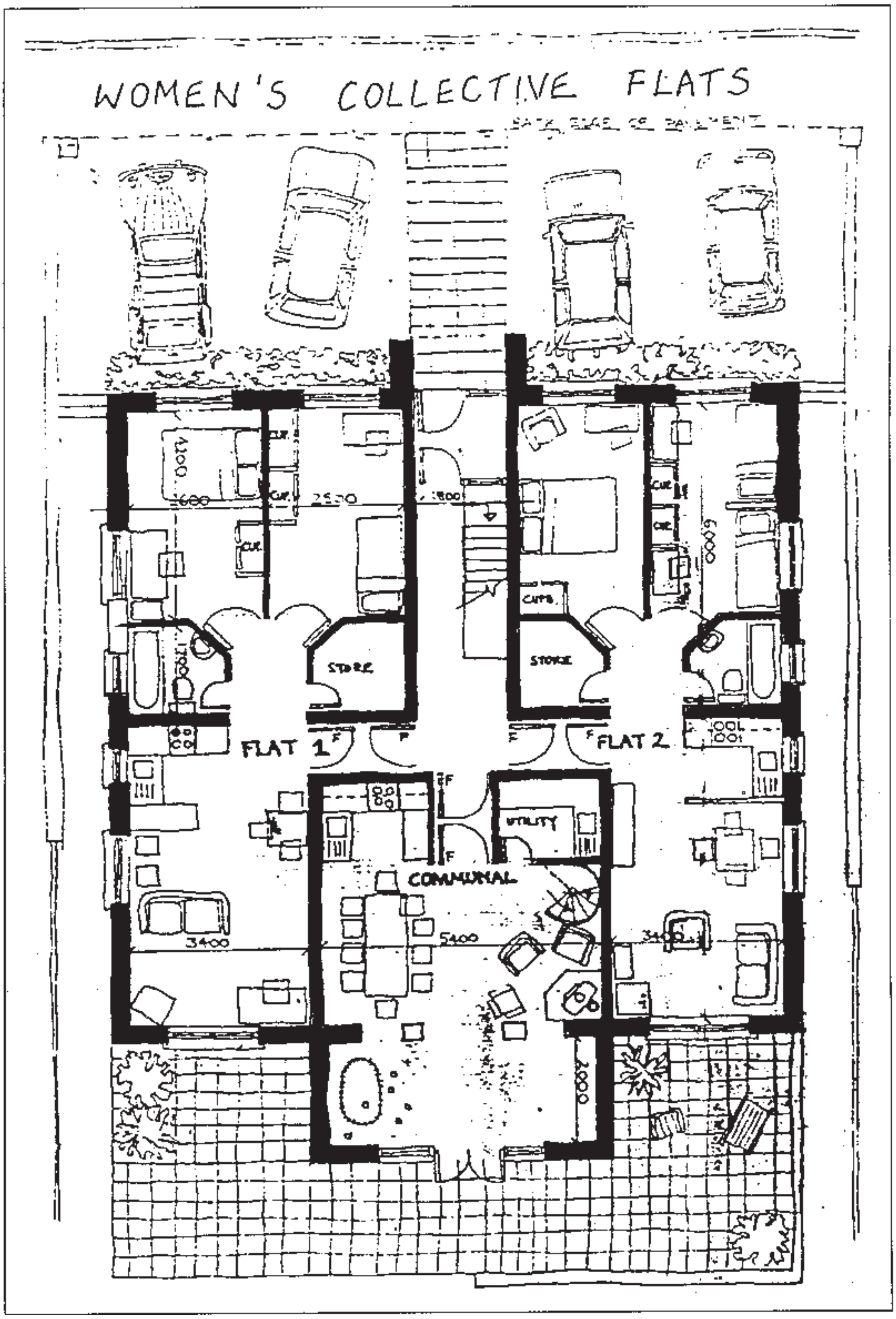

WOMEN'S COLLECTIVE FLATS
FLAT 1
FLAT 2
STORE
STORE
UTILITY
COMMUNAL
3400
5400
3400

Figure D13

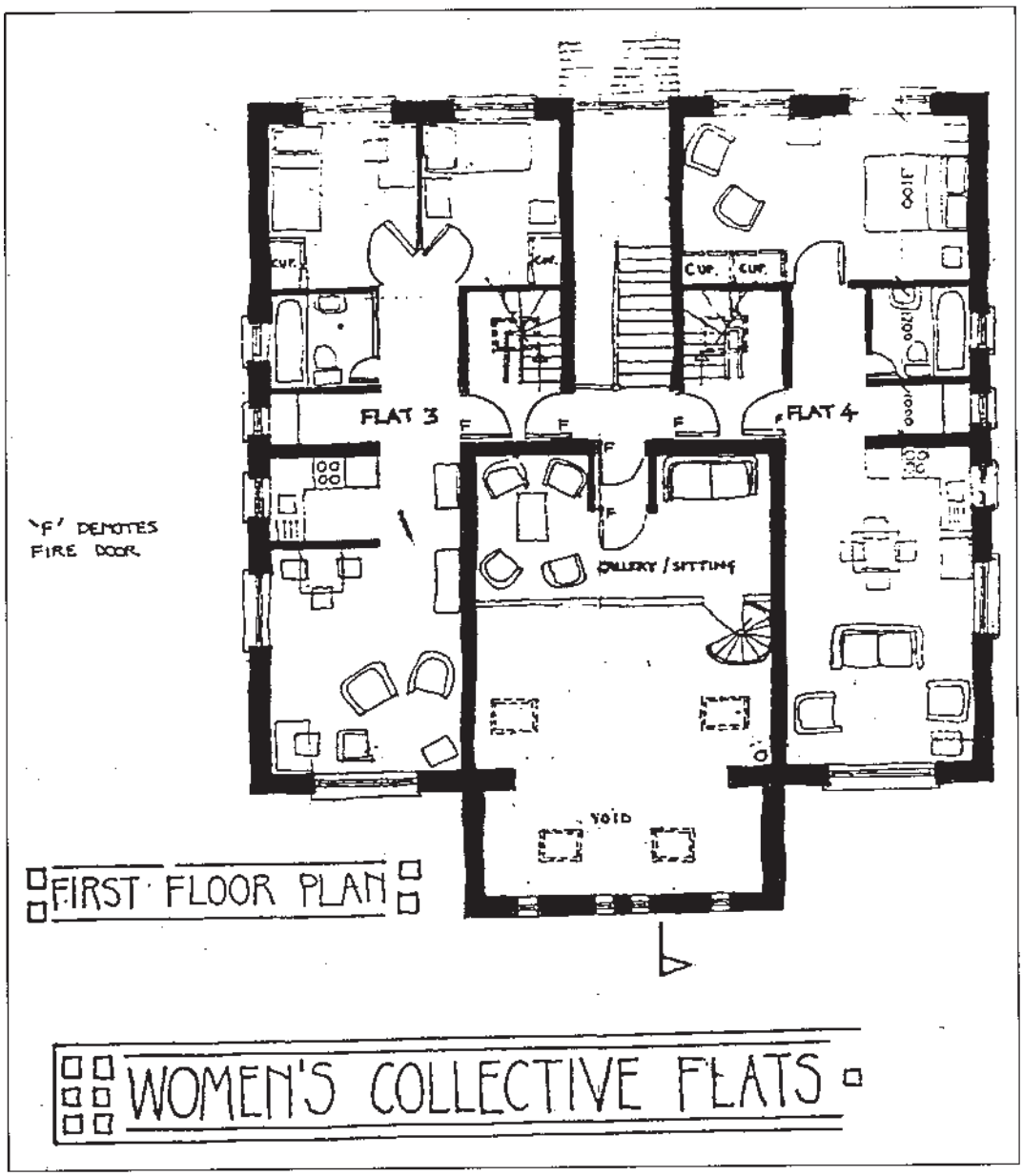
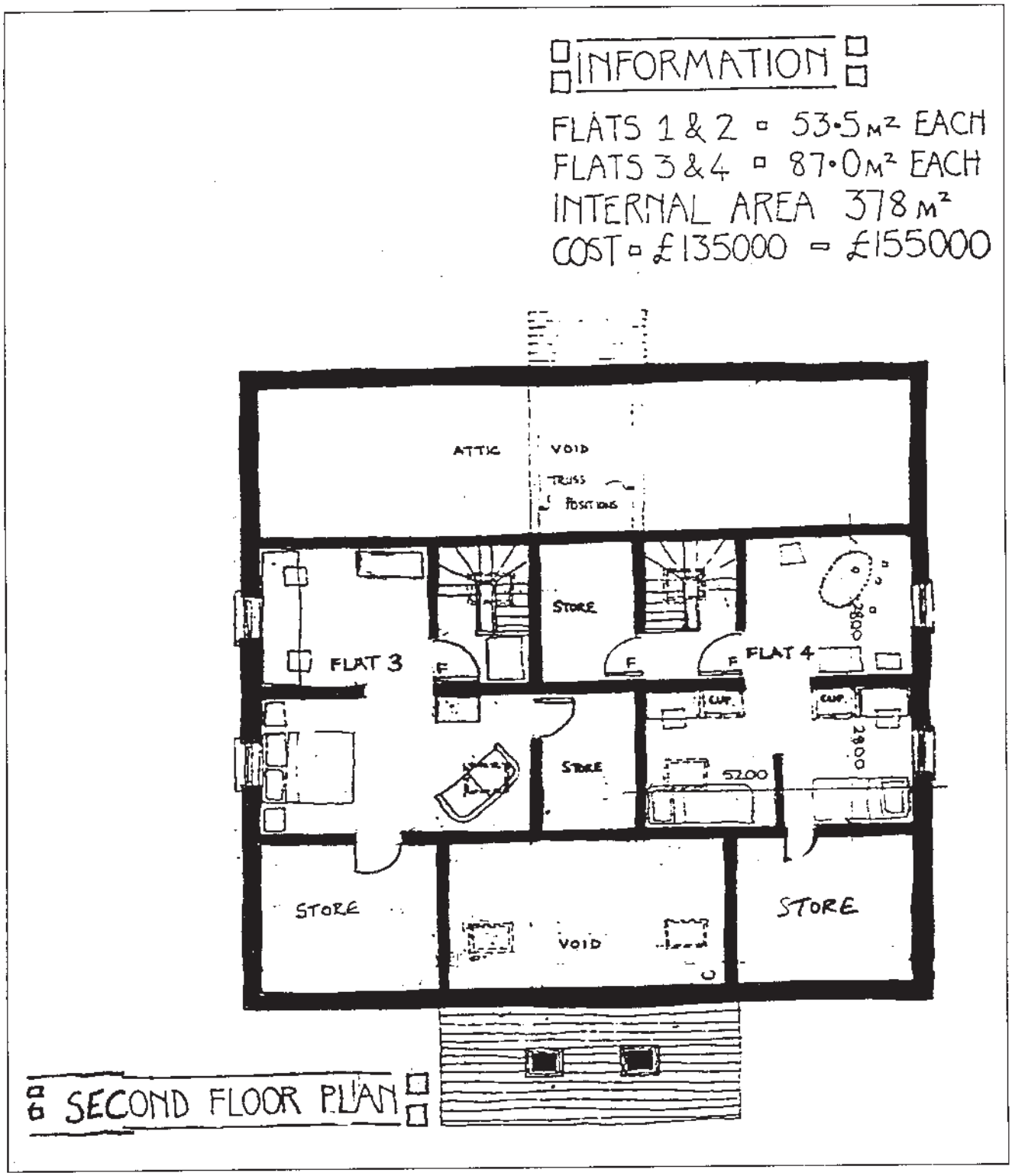

'F' DENOTES
FIRE DOOR
FLAT 3
FLAT 4
F
F
F
F
F
GALLERY / SITTING
VOID
FIRST FLOOR PLAN
WOMEN'S COLLECTIVE FLATS

Figure D14


INFORMATION
FLATS 1 & 2 ▫ 53·5 M² EACH
FLATS 3 & 4 ▫ 87·0 M² EACH
INTERNAL AREA 378 M²
COST ▫ £135000 – £155000
ATTIC
VOID
TRUSS POSITIONS
STORE
FLAT 3
FLAT 4
F
CUP.
2800
5200
STORE
VOID
STORE
STORE
SECOND FLOOR PLAN

3.6 Case Study 5: Upper Manor re-development

A partnership between Sheffield City Council and a housing association specifically brought in for this project - United Kingdom Housing Trust, (UKHT), which built 4,000 new dwellings between 1987 and 1992.

The Upper Manor area in Sheffield is part of one of the largest council housing estate areas in Europe. Extensive redevelopment has been taking place since the beginning of the 1980s, both in the form of improvement of existing dwellings and new build. Much of the reason for the redevelopment was the failure of the wall-ties built into the original houses.

Because of the duration of the re-development, the housing organisations involved have been able to develop a detailed and sophisticated form of tenant participation and consultation, shown in Figure D16 over the page. (The source of the following Figures is the Sheffield/UKHT Partnership).

The diagram shows the various methods and techniques of consultation used on the periphery, and the various groups and agencies forming the decision-making Project Group at the centre.

Some of the housing built by the partnership and some plans are shown in Figures D15 to D19 over the next few pages.

Figure D15

This picture shows a general view of part of the estate.

Figure D16

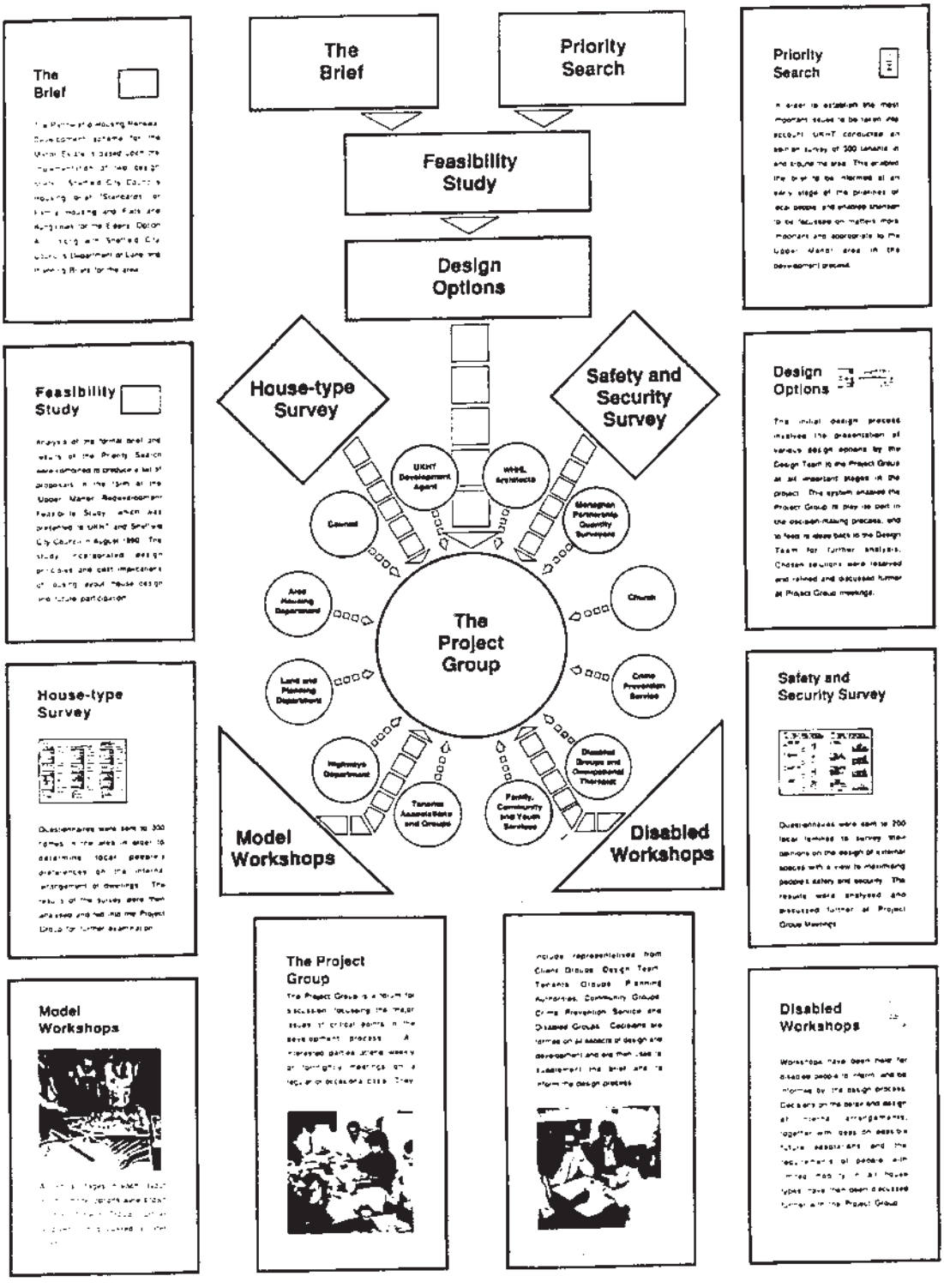

The Brief
Priority Search
Feasibility Study
Design Options
House-type Survey
Safety and Security Survey
The Project Group
Model Workshops
Disabled Workshops
UKHT Development Agent
WHL Architects
Council
Management Partnership Quantity Surveyors
Area Housing Department
Church
Land and Planning Department
Crime Prevention Service
Highways Department
Tenants Associations and Groups
Disabled Groups and Occupational Therapist
Family, Community and Youth Services
The Brief
Priority Search
Feasibility Study
Design Options
House-type Survey
Safety and Security Survey
Model Workshops
The Project Group
Disabled Workshops

Figure D17

This picture shows an example of the high standard of construction and external works possible because of the high level of capital funding - higher than most housing association schemes. This was possible because of a revenue guarantee given by Sheffield Council. Such guarantees are now illegal.

An important tool of consultation was the **Priority Search** method. This was a computer-based method, run by a unit of the council, which enabled the Project Group to reach an extremely wide and representative cross-section of the community, and can be used to establish the priorities of the community in forming the brief for the re-development of an area. The technique involves several stages, as outlined in Table D1 below.

Table D1

Stage 1	A small forum of representatives from community groups in the area has a 'brainstorming' session which throws up ideas for the main priorities for re-development of the area. The sub-groups could include: men/women; Caucasian/black; elderly/young; single/ with children.
Stage 2	These ideas are then ranked into a series of 'choices' which a cross-section of about 300 people in the community are then asked to rate on a scale of about 1-30.
Stage 3	The responses are analysed and ranked in order of priorities. Using computerised techniques, it is also able to analyse the results in terms of the different priorities of different interest groups.

Some results of the priority search survey and the way in which they were interpreted into a design scheme are shown in the Figures on the following pages. For example, the survey found that a high priority was given to the needs of the elderly and disabled, as shown below.

Needs of the Elderly and Disabled

A number or issues which reflect an appreciation of the needs of the elderly and disabled rate highly for many groupings, though not in the overall consensus top ten. Examples were:

- elderly/disabled accommodation near bus stops;
- gates, kerbs, paths and doors accessible to disabled; and
- help for those who can't look after their garden.

A number of other issues are related to this theme though less exclusively:

- bus shelters; and
- clipper bus connecting all Manor with Prince of Wales Road.

Women generally, the over-40s, couples without children, those on their own, those in full time work, registered disabled, people in poor health, those who own a dog and those who own a car all give a high priority to the needs of the elderly and disabled. Understandably, it is the over-50s, the disabled and those in poor health who place these issues before all else.

These needs were graphically translated into a series of design details for the tenants to decide whether they wanted them incorporated into the design of their new estate. The process was repeated for all the priorities expressed by priority search and interpreted into ideas for the whole estate.

An example of the results is shown by Figure D18. Figure D19 over the page shows how it was translated into a design requirement.

Figure D18

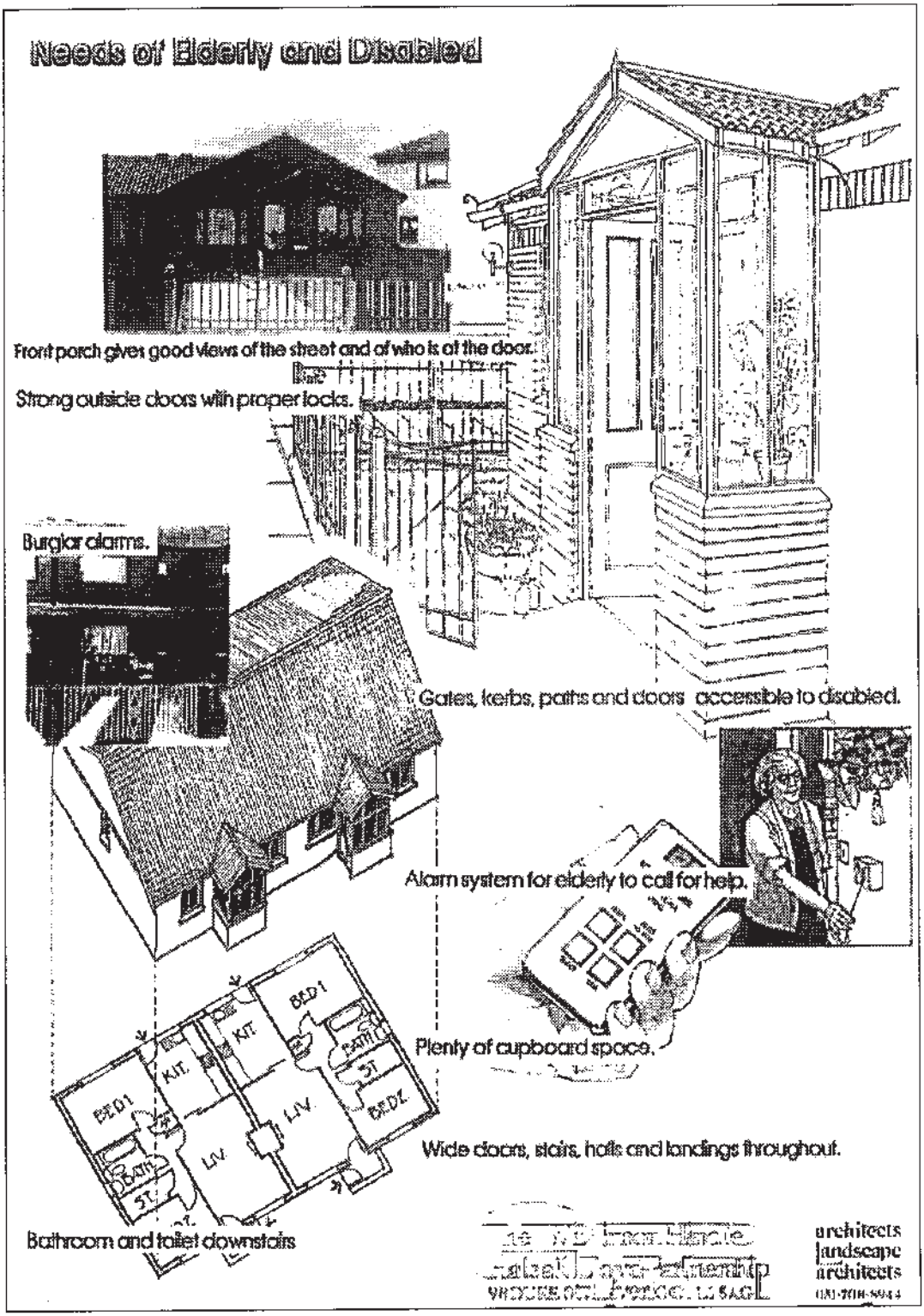
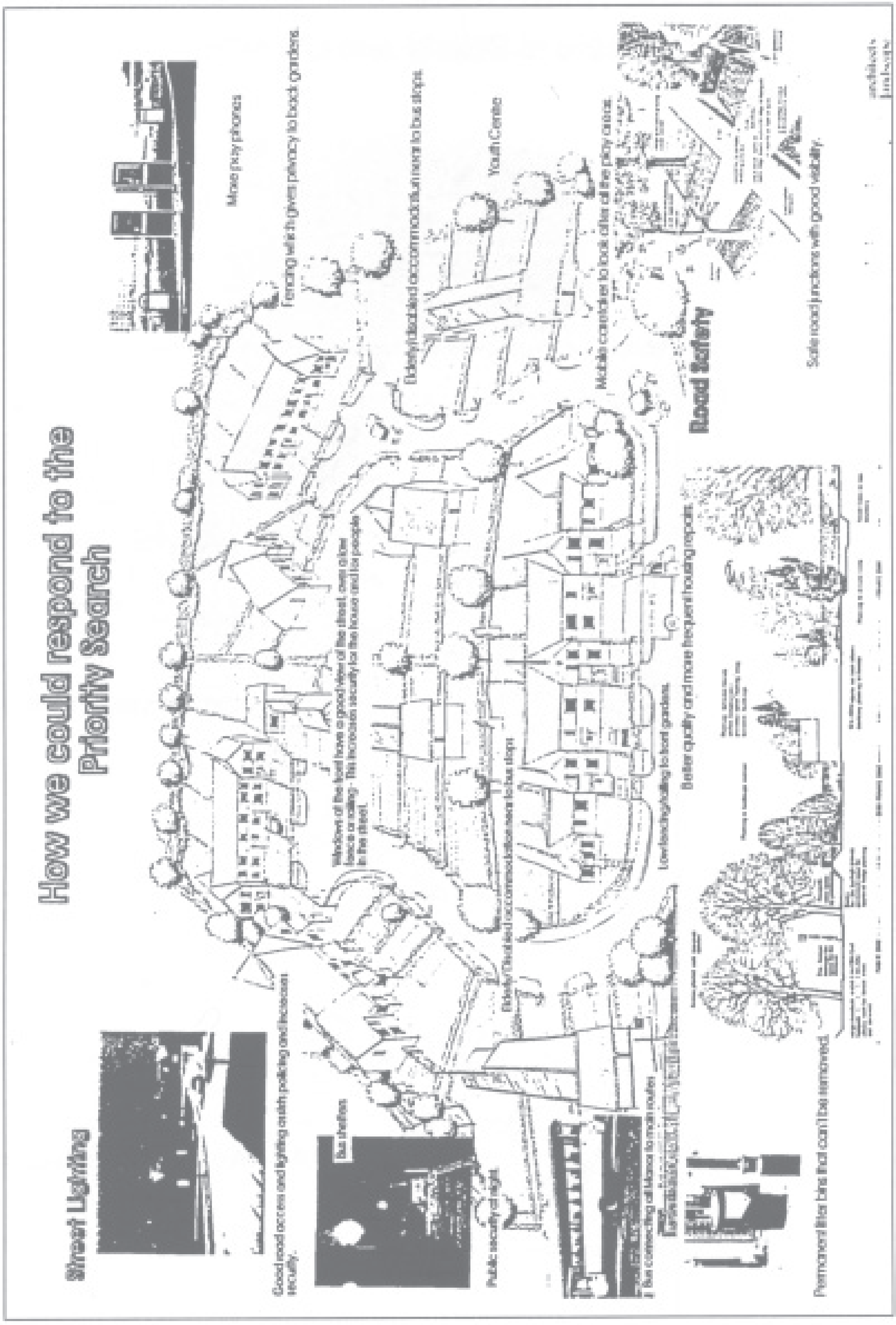

Needs of Elderly and Disabled
Front porch gives good views of the street and of who is at the door.
Strong outside doors with proper locks.
Burglar alarms.
Gates, kerbs, paths and doors accessible to disabled.
Alarm system for elderly to call for help.
Plenty of cupboard space.
Wide doors, stairs, halls and landings throughout.
Bathroom and toilet downstairs
BED 1
KIT.
LIV.
BED 2
BATH
ST.
architects
landscape
architects

Figure D19


How we could respond to the Priority Search
Street Lighting
Road Safety

4. Developing for People Who Need Care in the Community

4.1 The NHS and Community Care Act 1990

In 1990, the National Health Service and Community Care Act became law, with the overall aim being to promote choice and independence for people who required care. Amongst the basic principles stated in the Act was the following:

- that people should be able to live as normal a life as possible *in their own homes or in a homely environment in the community*.

This had clear and obvious implications for developing housing, as some people's needs would require a specific approach to design. In fact, the government directly urged Social Services Departments to 'work closely with housing authorities, housing associations and other providers of housing of all types in developing plans for a full and flexible range of housing' (para 3.5.4).

4.2 Providing choice

Probably the most important aspect of developing to meet specific needs is the issue of providing people with real choices. Some basic choices that people may wish to make concern issues such as whether they wish to live in shared housing or self-contained housing or in some in-between version such as self-contained flats around a communal core. For people with profound learning disabilities who were formerly long stay patients in hospital or other institutions, it may be hard to know their actual preference. However, the presumption is for housing which is as mainstream as possible, on the basis that that is what people normally choose.

People may also wish to exercise choice about location and this may become particularly important if they need to be near family, amenities, shops, day centres, etc.

In development terms, the ability to offer choices will depend partly on the availability of land or, in the case of existing buildings, their adaptability. Schemes which are funded through Social Housing Grant usually receive 100% grant funding for the extra costs of adapting schemes for people who require specific designs because of their disabilities (whether learning disabilities or physical disabilities). Therefore, choice should not be overly dependent on costs.

4.3 Additional features

The aim nowadays tends to be to develop homes which blend in as much as possible and which are no less homely for being shared or highly adapted. This can mean taking the normal 'footprint' of a house or bungalow (i.e. its outline shape) and then designing the interior in a bespoke manner to accommodate living space for both residents and carers. Some types of additional features may need to be designed in for people who receive care in the community, for example people who have profound learning disabilities. These include:

- extra specification sound insulation for people with challenging behaviour who are noisy;
- anti-scald valves on taps to avoid injury from overly hot water;
- close-o-mat toilets which wash and flush for people who are incontinent;
- extra specification joists to accommodate hoists and lifting gear for people who have little mobility;
- door security to prevent residents from wandering out on their own.

5. Designing Housing for Older People

In the past, sheltered housing was the predominant model of housing for older people. It typically consists of small, self-contained flats grouped around a common room where social activities can take place. There is either a warden on site or available. In some cases, flats were not self-contained and had shared kitchen and bathroom facilities. Needless to say, this type of accommodation was not popular!

Local authorities and housing associations have increasingly found that their sheltered housing has become hard to let and there has been virtually no new development of public sheltered housing. Some of the reasons for this include an over supply of this type of housing in some areas and the increased expectations of older people, many of whom prefer to remain in their own homes and who may find the standard of sheltered housing lower than that they are used to in terms of space and amenities. Often, extra sheltered housing for frail, older people has continued to work perhaps because of its specialised nature and specific client group.

There have been some attempts to try and re-use some sheltered housing for other groups of people, such as people with mental health problems or young vulnerable people, and in some cases this has been successful. However, it has often been the difficulties in organising and financing the care packages rather than adapting the housing which has made such conversions difficult.

6. Designing for People with Physical Disabilities

In Britain, there have tended to be two approaches to housing people with physical disabilities. They are:

- **wheelchair housing**, which is designed for people who are totally dependent on a wheelchair and who therefore require a design which allows them to access all parts of their accommodation (and not just rooms, but the levels at which things like plugs and kitchen cabinets are); and
- **mobility housing**, which is mainstream housing designed with additional flexibility to accommodate people with a range of disabilities (e.g. ground floor bathroom and the potential for using a ground floor room as a bedroom, for people with limited or decreasing mobility).

Some of the basic design considerations which need to be taken into account in designing homes for people with physical disabilities include:

- **entrance**, avoidance of steps/stairs; low thresholds, sufficient hallway space for the door to swing full in, placement of door handle.
- **kitchen**, accessible counter space, plugs and cabinets; lever type taps (easy to manipulate with minimal strength); insulated hot water pipes (to prevent burns).
- **bathroom/toilet**, sliding door (to gain easy access); sufficient clear floor space to access each fixture; grab bars; lever type taps, as for the kitchen.
- **living, dining and bedrooms**, the general layout should easily accommodate someone in a wheelchair or who has limited mobility; non slip floor surfaces, low level sills in frequently used rooms allow a chair bound person to see out the window.
- **circulation areas**, stairs should be avoided and where they exist should be equipped with hand rails; well marked changes in level; sufficiently wide corridors to manoeuvre in.
- **exterior**, non-slip ramps of reasonable gradient; hand rails; wide, non-slip footpaths; car parking located close to the dwelling; adequate width of drive way to allow transfer from vehicle to house on a hard surface.

There are further design considerations for people with sensory impairments such as visually or hearing impaired people. In these cases, things such as extra sound insulation for those hard of hearing and strong visual marking of steps and other potentially dangerous features or tactile warnings on hand rails for those with poor vision can assist quality of life.

7. Designing for People with Multiple Needs

Finally, there are design considerations to take into account for people who have multiple needs. For instance, someone might have physical disabilities and learning disabilities and/or mental health problems. An older person might face housing difficulties which are compounded by cultural or social isolation if they are from a minority ethnic group. Developing housing to meet multiple needs does not need to be an overly complicated process. It really rests on being able to identify what the needs are (e.g. whether for shared or self-contained housing; what sort of adaptations; what cultural needs there are for cooking, washing, separation of family members, etc.) and then designing to meet these specific needs.

Summary

1. **There has been an increasing demand from people who have traditionally had little power and voice in our society to influence the design and form of buildings, especially where their needs have been ignored in the past.**
2. **The community architecture and co-operative movements provided the initial springboard for local people to become involved in the design and development of their housing and provided a way for them to help ensure that the housing which was developed met their specific needs.**
3. **The introduction of the NHS and Community Care Act in 1990 meant that people with even very high support needs could expect to be housed in the community in their own home or as 'homely' an environment as possible. This has had clear implications for the development of new housing.**
4. **Often, the solution is to take the normal 'footprint' of a house or bungalow (i.e. its outline shape) and then design the interior in a bespoke manner to accommodate living space for both residents and carers. Additional features such as hoists, sound proofing, anti-scale valves, etc. can be added with the support of Social Housing Grant.**
5. **Local authorities and housing associations have increasingly found that their sheltered housing has become hard to let and there has been virtually no new development of public sheltered housing. Reasons for this include an over supply in some areas and the increased expectations of older people, many of whom prefer to remain in their own homes.**
6. **In Britain, there have tended to be two approaches to housing people with physical disabilities - wheelchair housing and mobility housing. In both, there are a number of design considerations which can add quality of life including making fittings and fixtures accessible, designing in enough space to move about easily, level access and using non-slip surfaces.**
7. **Designing for people with multiple needs rests on identifying what the needs are (e.g. whether for shared or self-contained housing; what sort of adaptations; what cultural needs there are for cooking, washing, separation of family members, etc.) and then designing to meet these specific needs.**

E. Development Constraints

1. Introduction

In the previous Block, PDH.101, we looked at the planning constraints that affected housing development and directed developers towards or away from particular sites. Now we will look at what designs are realistically possible and describe the controls, constraints, standards and the received wisdom of social sciences and psychology that all determine the eventual outcome of housing design within the current political, social and economic climate.

2. Reasons for Control

The primary reason for control in housing design, as in many other areas, is to safeguard the interests of the end users.

Activity 11

If you were about to move into a house, what do you think would be the main design factors that would influence the type of dwelling unit and setting that you would prefer?

Can you construct a list of positive factors? Don't include financial considerations like price and re-sale value.

An example is given below. Try adding some more:

Positive

1. *The house should have a south facing garden.*
2. *...*

Time allocation: 10 minutes

2.1 Controlling factors

The sort of design features that you may have come up with can be completely subjective and fairly intangible. The sort of features that people commonly require are listed below. You probably have several more:

- safe, comfortable neighbourhood;
- garden;
- garage or car-parking;
- roomy inside;
- good internal storage space;
- well maintained;
- good location - shops, schools, pubs;
- good kitchen equipment; and
- well insulated, cheap to heat.

From this list, we can start to consider what external factors might help to create such housing, or might prevent negative features being developed.

2.2 Derivation of the controlling factors

Many controlling factors are rooted in an understanding of what works and what does not work for humans in terms of shelter, safety, physical health, mental health, social identity, social cohesion and cultural identity.

Other controlling factors are rooted in an empirical and scientific understanding of what is practicable and/or cost effective in terms of physical environment, climate, construction materials, construction methods, and use of the earth's resources.

Before proceeding to analyse the mechanism within the above model, it is important to reiterate the fundamental difference between public sector housing and private sector housing:

- the major controlling influence within public sector housing is the *"perceived social needs"* of end users and the efficient meeting of these needs with public funds within cost yardsticks or other constraints; whereas
- the major controlling influence within private sector housing is the *"perceived social aspirations"* of end users and the efficient meeting of these aspirations with private funds, driven by profit.

As the model above indicates, there are controlling agencies that are common to both private and public sector housing and there are controlling agencies that are peculiar to each.

3. Legislation on Functional and Aesthetic Matters

3.1 Aesthetic matters

As with development control, the control of aesthetic matters is brought to bear on housing development through central government Planning Acts executed through local authority Planning Departments.

The planning control process has two elements involving:

- first, as we have seen in earlier sections, the formulation of development plans that have a strategic overview of desired development for an area; and
- second, development control which comprises an application system through which undesired development is refused planning permission with reference to stated material planning considerations.

Planning Departments have *'linked powers'* with highways authorities to the effect that applications for planning consent must address road highway design issues.

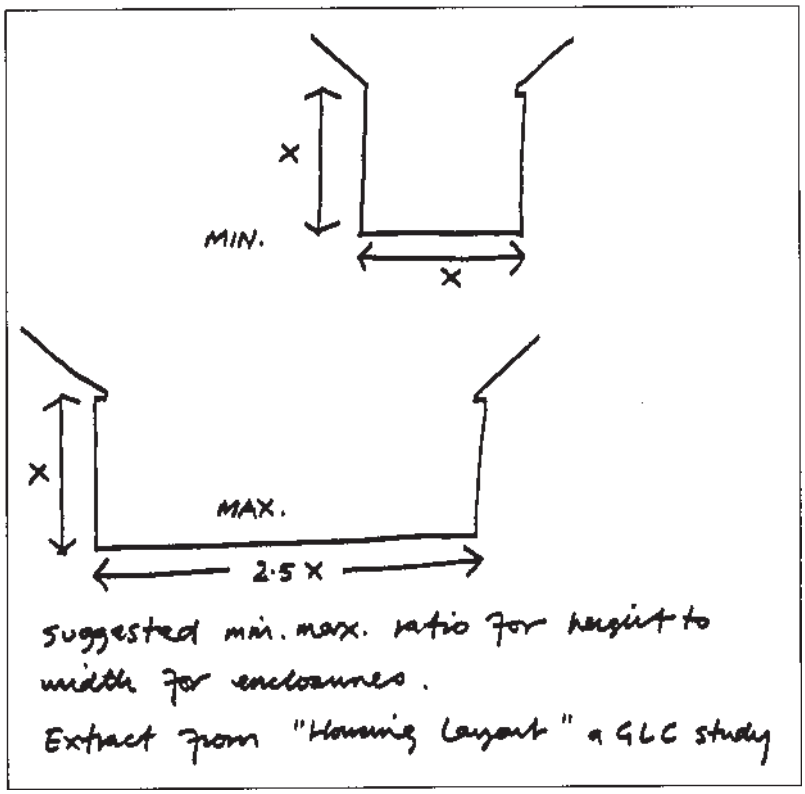
Design Guides

Local authorities produce highway design guidance which give detailed information relating to the size and plan shape of a road appropriate to its position in the housing layout.

Following the publication of the *"Essex Design Guide"* in 1973, many local authorities have developed their own design guides for housing developers' reference which give detailed design guidance in the form of preferred unit designs and layouts.

The over-arching aim of the design guides is to stem the growth of housing sprawl and to encourage the development of housing that is appropriate to its context in terms of architectural character and type of housing provision. A typical design guide drawing is shown in Figure El below:

Figure E1



To some extent the powers of planning departments to exercise control over aesthetic matters such as scale, size, composition, colour, and texture employed in developments have been curtailed by the Department of the Environment Circular 22/80 which diminished planners' powers to control the external appearance of building on the grounds of 'taste' unless compelling reasons prevail (such as protecting the character of a conservation area).

3.2 Functional matters

England and Wales

Control of functional matters is brought to bear on housing development through central government **Building Control Acts** executed through local authority building control sections.

The building control system was radically revised in 1985. Following the **Building Act 1984**, building regulations may be made for the following broad purposes:

- securing health and safety, welfare and convenience of people connected with buildings;
- furthering the conservation of fuel, and power; and
- preventing waste, undue consumption misuse or contamination of water.

Building control enjoys "linked powers" with the fire service and the local authority environmental health departments. All draw on the received wisdom built up over many years and embodied in British standards and codes of practice documentation. There is an application system, through which substandard proposals are refused building regulations approval.

Scotland

Building regulations are different in Scotland. The enabling legislation is the **Building (Scotland) Act 1959** and the **Building (Scotland) Act 1970.** The current regulations are the **Building Standards (Scotland) Regulations 1990**. There have been a couple of small further amendments since 1990. However building control is administered in the same way as in England.

Summary

In this way, the controlling agencies act as a vehicle through which current theories can influence housing development. The corollary of this is that the social, political and economic climate of the time dictate the trends and directions in both public and private sector housing. What might be some of these key concerns?

Activity 12

What do you think might be four or five of the key issues in principle, (rather than specific design issues) in housing design and construction trends at present?

Time allocation: 10 minutes

Key trends in housing design and construction

This is a very difficult question to answer if you aren't familiar with development issues, so don't worry if your list is different from ours. We asked this question of Van, a practising architect. These are the key issues he came up with:

> *"I would say the issues of most importance to developers at the moment are:*
>
> - *the legislation on designs and standards (which you have considered above)*
> - *current design and construction standards*
> - *low energy design*
> - *flexibility of design*
> - *estate and neighbourhood design and crime*
> - *technological changes."*

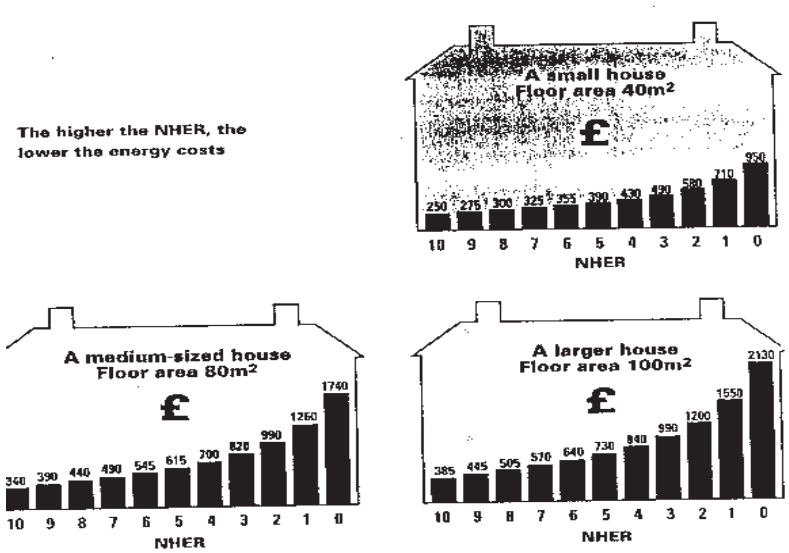
4. Current Designs and Construction Standards

4.1 Design issues in England

Since 1988 government legislation, predominantly the **Housing Act 1988,** brought about changes in the public sector housing funding regime which in turn changed the method of development and the standards related to public sector housing.

Although no longer mandatory, public housing generally conformed to Parker Morris standards up to 1988. This was supported through the Housing Corporation with the prescriptive *"Design and Contract Criteria"* document. An example of "Parker Morris" house plan is shown in Figure E2 below.

Figure E2



Concurrent with this change in funding arrangement, the standards set by the Housing Corporation were remodelled in 1993 into the *"Scheme Development Standards"*. These latter documents are far less prescriptive than the former *"Design and Contract Criteria"* in terms of design possibilities and standards.

In Scotland, the previously mandatory standards to be met in new public sector building were set out in the Scottish Housing Handbook, which was published by the former Scottish Development Department as a series in the 1970s and 1980s. As in England, such standards are no more. However the Scottish Housing Handbook retains its importance as most housing associations adopt in their design guides. There is no equivalent of the HC Scheme Development Standards in Scotland.

In this way, the fulcrum for design decision-making has moved away from issues related to the *'use value'* (housing need and cost yardstick), and towards issues related to unit numbers, rents and capital borrowing charges.

In private and public sector housing, current construction quality standards are also set by the **National House Building Council (NHBC) Rules** for builders and developers. The NHBC supplies a two stage service to its registered members:

- firstly, that of inspecting house building and controlling the quality of construction; and
- secondly, where chosen to do so, the NHBC can certify building work in lieu of the local authority building control section.

The result of changes in funding to public sector housing has resulted in housing associations forming closer links with private house builders. Private housing design standards are often used through design and build package deals to purchase standard house types as evolved by the private house builders.

Activity 13

What do you think are two of the main advantages and disadvantages of housing associations adopting private sector house types for public housing?

Time allocation: 10 minutes

Advantages

The main advantages are likely to be:

- there is less of the "stigma" formerly attached to council housing, in terms of appearance and social values; and
- the private sector is supposed to be more efficient in development practice.

Disadvantages

The main disadvantages are likely to be:

- the scheme is less likely to address the user's needs for adequate space standards for expanding or changing families; and
- there may be more maintenance problems, because private house developers assume that the owner will have a greater maintenance commitment.

4.2 Design issues in Wales

Housing association standards

In Wales, housing associations are required by the National Assembly for Wales to use a **Pattern Book of Standard House Types** unless there are particular circumstances that make this impossible or unrealistic - small infill site development, for example. The establishment of the pattern book ensures that two key objectives are met:

- that housing association developments in Wales are of a consistently high quality of internal design. External finishes are the responsibility of the association. In many parts of Wales the need for a sympathetic approach to the environment is particularly important; and
- that good value for money is ensured.

Associations are encouraged to place a greater emphasis on the running costs of social housing in terms of:

- energy efficiency;
- repairable kitchen units; and
- low maintenance materials.

Pattern book houses set a high standard of accommodation reflecting the needs of appropriate client groups. A comprehensive mechanism for feedback from users of pattern book houses is already in place.

Future flexibility of housing

The National Assembly for Wales is anxious to ensure that houses built today are still a valuable resource in 60 years' time. Wherever possible, people with special needs are accommodated in ordinary housing. Where specific adaptations or exceptional provision are required they are provided, but in ways that are as unobtrusive as possible. Two pattern book houses may be adapted to provide a small shared unit for a specific need, for example.

Pattern book flats are suitable for occupation by the elderly, and may be used in the long term for that need or a general need. Traditionally, specialised housing for the elderly has shown itself to be inflexible in use and less able to adapt to changing needs and expectations.

5. 'Green' Architecture

5.1 Introduction

'Green' architecture is a term used to describe a philosophy and method of designing buildings that use up as little of the environment's natural resources as possible (and are also cheap to run!).

The argument substantiating this is that many of the world's present forms of energy production are exhausting the supply of energy sources which are not renewable, i.e. fossil fuels which have been formed over millions of years of the earth's physical evolution and will not be formed again. These are oil, gas, coal and plutonium. At the present rates of use, various experts forecast that these resources could be exhausted within 50 years.

In the developed countries of the world, the greatest consumer of energy is domestic buildings - our homes. The greatest waster of energy is also our homes. For example, an uninsulated American house will lose at least 60% of the heating energy it consumes. The American Institute of Architects has calculated that a high priority programme in energy conservation in housing design could save 12.5 million barrels of petroleum per day, more than half of the current US petroleum consumption.

Activity 14

Think of and write down as many reasons as possible for:

1. *Using renewable resources in housing design.*

2. *Why do you think using renewable resources in housing design is not put into practice in this country?*

Time allocation: 20 minutes

The reasons for using renewable resources in housing design include:

- the present exhaustion of energy sources;
- they are cleaner and non-polluting;
- there is less damage to the environment, reducing mining, toxic waste, dumping of dangerous materials, explosions and the atmospheric build-up of emissions;
- health and safety;
- they reduces likelihood of mining/work diseases, collapse in mines, radiation and pollution form coal and owner stations;
- it is a simple technology;
- it is small scale and less vulnerable to political manipulation; and
- it can be cheaper.

The reasons why it is so difficult to implement *'green'* measures include:

- vested interests maintain profitable systems already put in place by big corporations;
- lack of research and development of alternative systems suitable for use in this country;
- lack of education of the population about the problems and the alternatives; and
- housing experts' lack of knowledge of the alternative technologies.

There are three major aspects of 'green' design of housing:

- types of energy production used to produce housing building materials and to heat and power and light houses;
- types of materials used in house construction and their energy-use in production; and
- design of the structure and form of housing and the energy-systems of the dwelling itself.

Let us look at each of these in turn.

5.2 Types of energy production

The types based on non-renewable energy sources are oil, gas, coal, plutonium and centralised power-stations to produce electricity as the main energy supply.

Those based on renewable energy sources are the sun, wind, water, wave power, plants (sugar, beet, cassava), methane gas (from animal manure), waste wood, grass, vegetables (biomass) and using small, decentralised forms of production such as windmills, solar panels and photovoltaic cells. (Cells which convert light to energy).

Low-energy forms of large scale energy production include the following two methods.

Combined heat and power

This is used for many large housing estates in Europe adjacent to power stations (and a few in Britain). The heat that is usually wasted through cooling towers is recycled into steam heating which is fed through pipe runs to the individual dwellings.

District heating

This is a similar model, but here the heat is generated by a huge central boiler o, for example in the case of Sheffield, the city incinerator.

5.3 Types of materials

The types of materials used in housing construction that use more or less energy for their production are shown in Table E1.

Table E1

High energy use	Low energy use
Steel Aluminium Plastic UPVC. Polystyrene Insulation	Wood Slates Bricks Paper/Wool Insulation Re-cycled Materials e.g. road scrapings for hard-core, paper for insulation, compressed wood fibre; re-use of: slates, stone, timber, steel railings, etc.

5.4 Types of design

The design of the structure and form, and the energy systems of the dwelling itself can make a big difference.

Structure

The type of structure of the dwelling, i.e. how it is built, will greatly influence how much energy it uses and thus how much it costs to heat. The main ingredient of energy-saving in how a house is built is the prevention of heat-loss.

This can be measured in what is called a **U value,** where the **U value** is the amount of heat that can be transmitted through the building fabric and is measured as watts/metre^2/kilogram. The lower the 'U' value, the less the heat loss. The 'U' values are used to calculate how much heating will be necessary to keep a house at a comfortable temperature all year round, from which the annual energy costs are calculated. One rating of this is the **National Home Energy Rating (NHER)** which we have seen earlier. The higher the NHER figure, the lower the energy costs.

The illustration in Figure E3 (overpage) shows the 'U' values for a typical dwelling with little insulation in it and the 'U' values for a dwelling which has insulated walls, floors and roof, to current prescribed building regulation levels, and double glazed windows and a porch. Figure E4 (over the page) shows the difference in heating costs of different levels of dwelling energy rating.

Figure E3

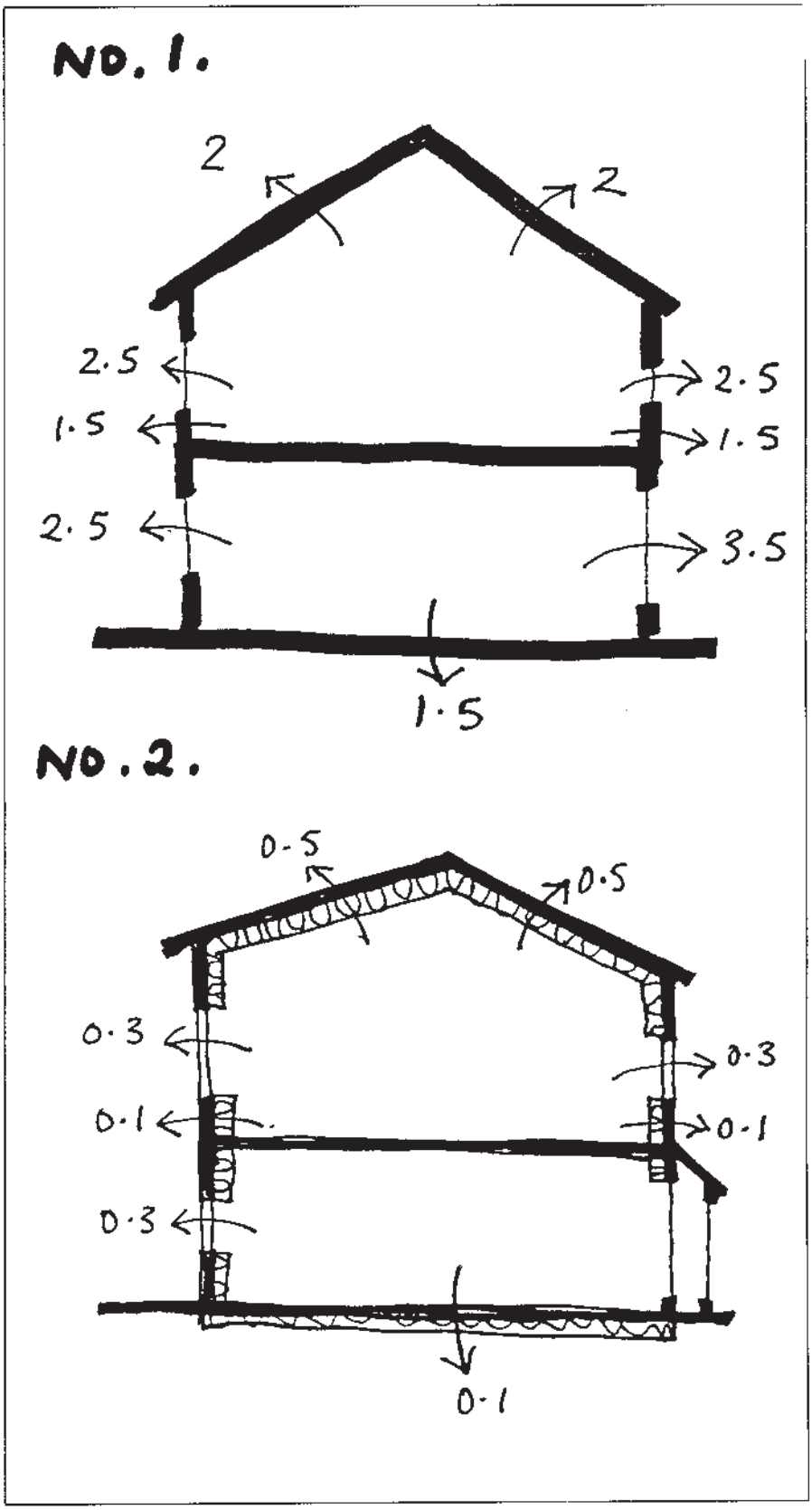
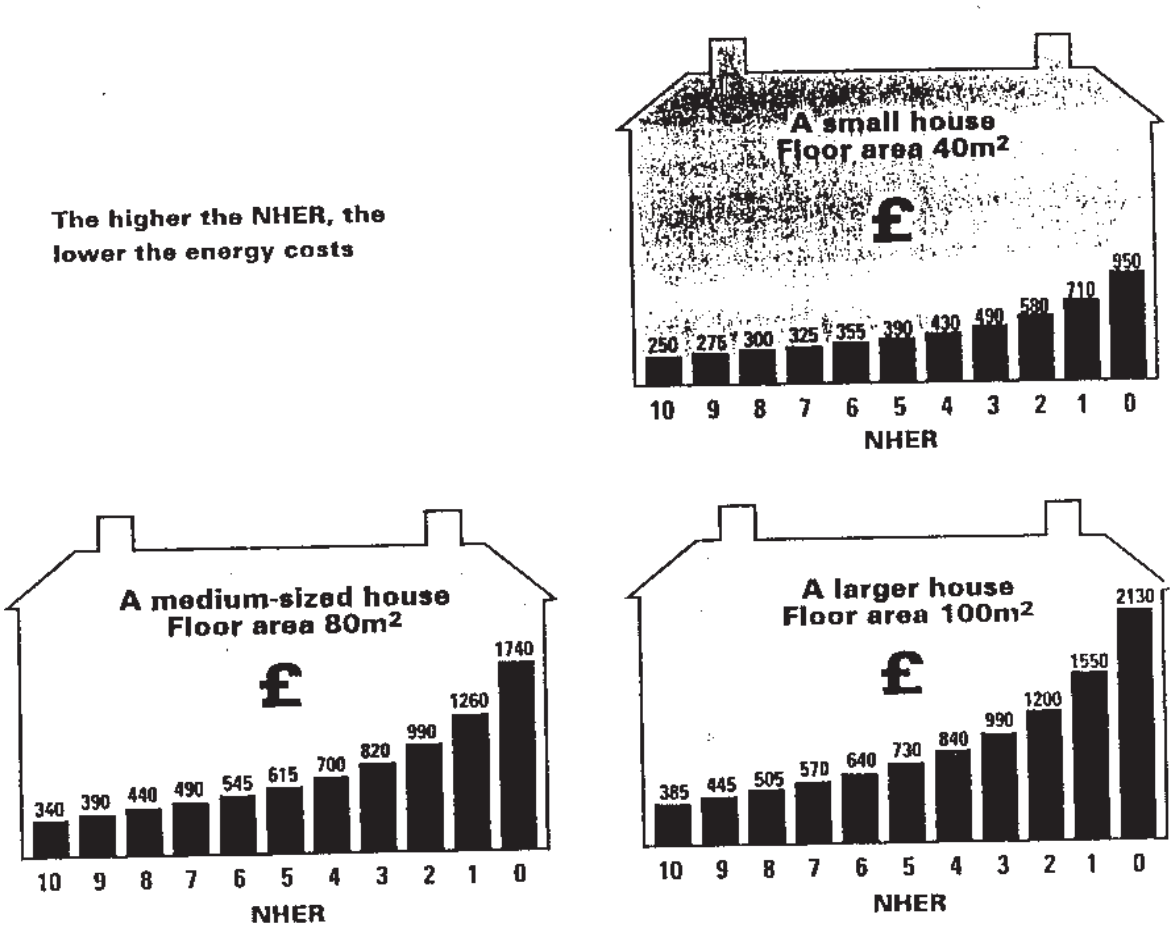


Figure E4



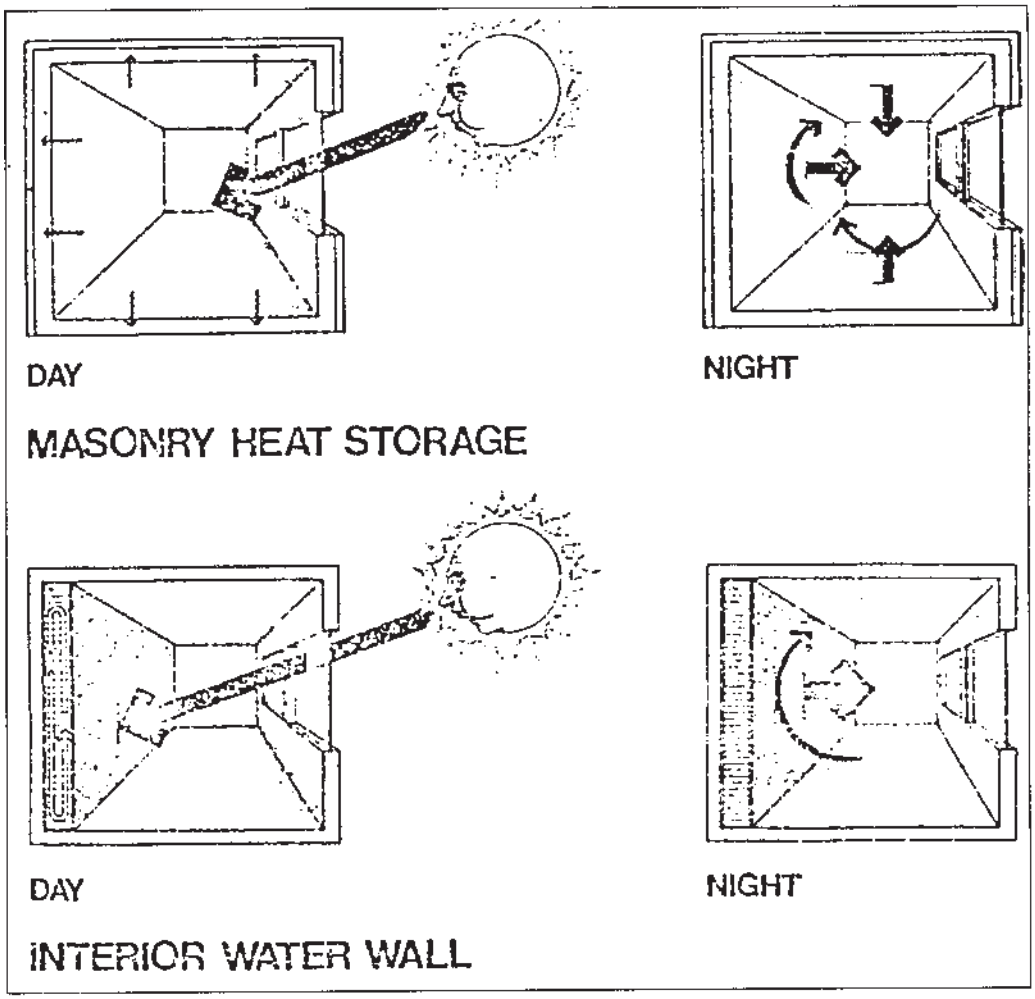
(Source: *The Joseph Rowntree Foundation.)*

Shape and Orientation

The more compact the shape of a house, the less heat it will lose. Unnecessary exposed external walls, e.g. a rear extension, will lose a lot of heat.

Orientation makes difference. Sunshine is an important source of heat and light, greatly underestimated in Britain. Main living rooms should face south. The heat coming through south facing windows is stored through the day and released at night as shown in Figure E5 over the page.

Figure E5



The structure of the house can be designed to accumulate and retain warmth from the sun, a concept known as direct solar gain. The house can be built with materials good at storing heat, like masonry walls. Alternatively, an interior water wall can be built into the house.

Energy systems

Heating systems are cheaper to run if:

- the boilers or heaters are efficient;
- there is a control system which allows you to have heat only:
- where you want it;
- at the times you want it.

The most efficient type of heating system is gas-fired central heating, the type which allows you to control hot water and heating separately:

- where you have heating via thermostatic values on each radiator which allow you to have different levels of heat in each room; and
- when you have heating via a time-switch.

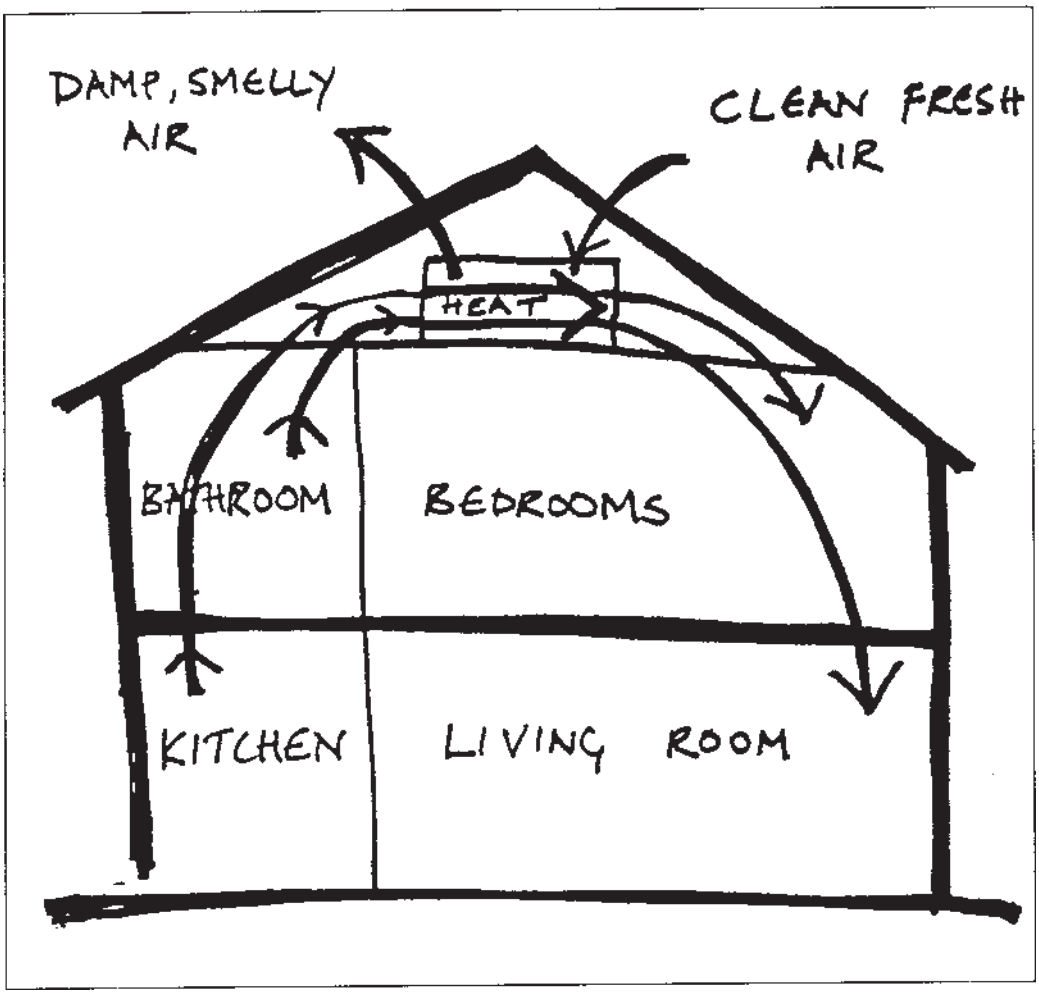
Expensive heating systems include individual electric heaters, and electric immersion heaters. The position of the radiators is important in ensuring you are heating parts of the room which are likely to be coldest, (e.g. under windows) and that you have the shortest possible pipe runs in order to minimise heat loss.

Heat exchange units

Modern houses now have mechanical ventilation to bathrooms and kitchens as a norm, to eliminate condensation and smells. However, there are many different types of systems and many are expensive to run and the source of significant heat loss. The best type of systems are those that come with their own thermostatic and humidity controls, can be switched off manually, are quiet running, have low electricity consumption and have heat exchanges.

The heat exchange system eliminates the loss of heat by the expulsion of the damp smelling air. It will retain the heat within the air being expelled and transfer it to the fresh cold air being drawn into the house. A diagram of how a typical heat exchange system works is shown in Figure E6 over the page.

Figure E6



The examples on the following few pages, taken from '*Housing Quality*' by the Joseph Rowntree Foundation, show the different levels of heating efficiency, CO^2 emissions and cost generated by different types of building elements and heating systems. See Figures E7 and E8.

Activity 15

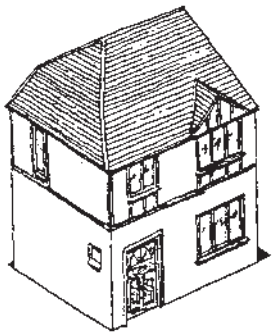
Now try to list 10 different types of energy saving features in houses.

Time allocation: 20 minutes

Specific measures could include:

- high insulation,
- double glazing,
- low emissivity gas in double glazing,
- south-facing windows,
- draught free, well built doors, porches,
- draught lobbies, compact shape,
- compact design of heating system,
- thermostatic valves on radiators,
- heat exchange ventilation units,
- insulated hot water tank, insulated pipe work, and
- thick masonry walls.

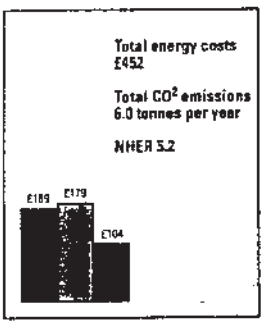
Figure E7



A new semi-detached house -
3 bedrooms, living room with
dining area, kitchen,
floor area 84m²

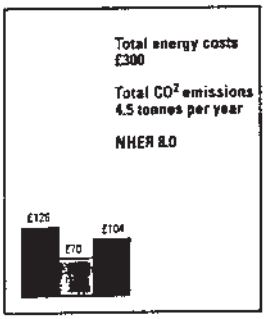
No central heating, roof and wall insulation meet minimum Building Regulation Standards

- double glazing
- gas fire in living room
- portable electric heaters in bedrooms (off-peak electricity)
- entry direct to living room, stairs in living room
- gas multipoint hot water heater
- 50mm (2") hot water cylinder jacket



Gas central heating, higher standard of roof and wall insulation

- double glazing
- central heating boiler with fan-assisted flue
- individual thermostatic radiator valves as well as room thermostat and programmer
- draught lobby, stair in hallway, draught-proofed loft hatch
- separate control of hot water heating, cylinder thermostat, 50mm (2") spray foam cylinder jacket, insulated pipework
- 150mm (6") loft insulation
- high standard of wall insulation



Very efficient central heating system, very high standard of roof and wall insulation

- double glazing with Low E glass
- condensing boiler and full zone control
- draught lobby, stair in hallway, draught-proofed loft hatch
- separate control of hot water heating, 50mm (2") spray foam cylinder jacket, insulated pipework
- 300mm (12") loft insulation
- high standard of wall insulation
- insulated ground floors

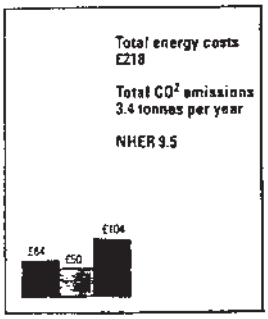
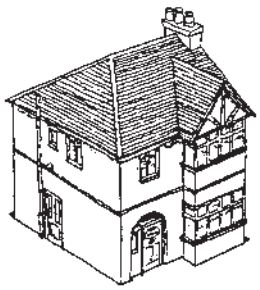


Figure E8

How much difference...?

How much difference will it make - to both your heating bills and to the environment - to choose a home with energy-saving features?

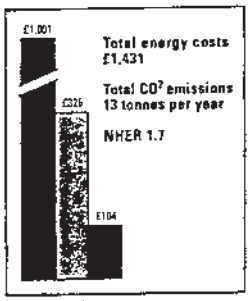


Energy costs of typical older and new homes, heated to the same standard (1993 costs excluding VAT)

An older semi-detached house - 3 bedrooms, living room, dining room, kitchen and hall, floor area 95m²

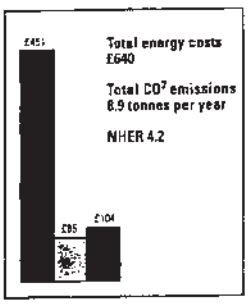
Unimproved - no added insulation or central heating

- single glazing
- gas fires in the downstairs rooms
- portable electric heaters in bedrooms
- electric immersion hot water heater



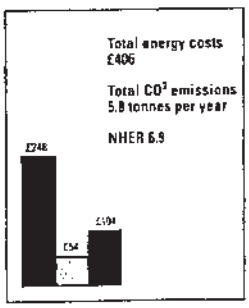
Improved - 10 year old gas central heating, basic insulation

- single glazing
- room thermostat
- programmer
- water heated by central heating boiler, 25mm (1") cylinder jacket, insulated pipework
- 50mm (2") loft insulation



Improved - modern gas central heating, higher standard of insulation

- factory-produced double glazing
- central heating boiler with fan assisted flue
- individual thermostatic radiator valves as well as room thermostat
- programmer
- water heated by central heating boiler, cylinder thermostat, 80mm (3") cylinder jacket, insulated pipework
- 150mm (6") loft insulation



The zero-energy house

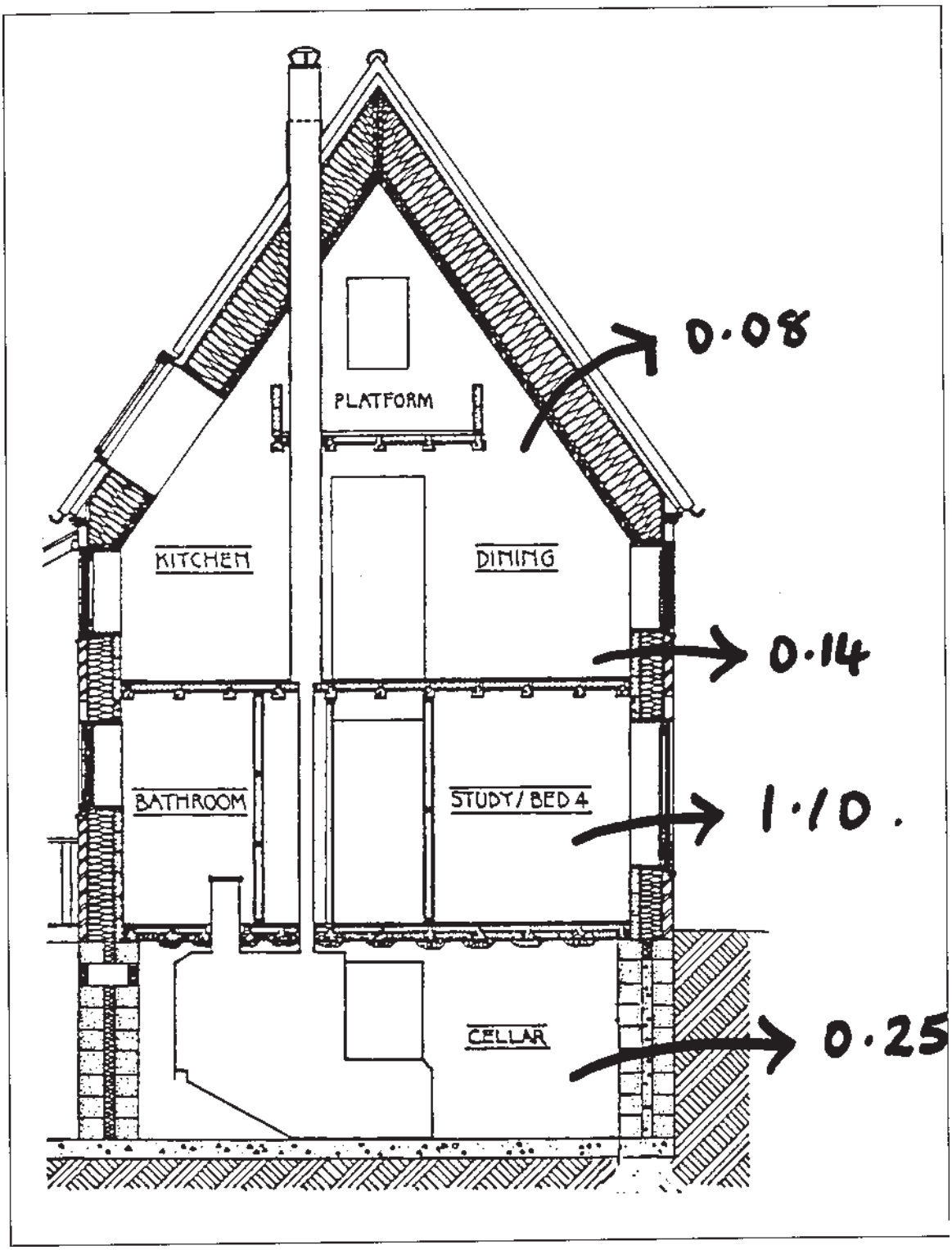
Finally, a look into the future. The illustration in Figure E9 over the page shows a recently built house which is entirely independent of any energy or waste-disposal systems.

As can be seen from its 'U' values, the heat loss is nearly zero. The only sources of heat are from bodies, cooking, lights and natural sunshine. So far, it has recorded comfortable temperatures of 19-22°C in the living rooms and 16-20°C in the bedrooms over the winter period. Any additional necessary heat can be provided by a tiny wood-burning stove.

Electricity for lighting is provided by photovoltaic panels installed on a pergola (frame) in the back garden. Domestic hot water is supplied by solar panels on the roof. Water is provided by rainwater collected from the roof and stored and purified in a tank in the cellar. Waste matter is collected, composted and recycled into the garden from the cellar.

The net result is a house with negligible running costs and zero annual carbon dioxide emission.

Figure E9


PLATFORM
KITCHEN
DINING
BATHROOM
STUDY / BED 4
CELLAR
0.08
0.14
1.10.
0.25

6. Future Flexibility

What do you understand by the term "flexibility" in housing design? We can look at possible changes over a person's lifetime.

Activity 16

If a person were to stay in one dwelling throughout his or her life, what would be the possible changes that the dwelling should undergo to suit their changing needs?

Time allocation: 10 minutes

6.1 Flexible design

One obvious issue is that people have children which require changes in lifestyles. As people get older, they naturally become less mobile and often find it difficult to use the home in the way they have done before, especially if they need to use a wheelchair. The key issue to all these changes is flexibility of use. Can the home easily be adapted? To some extent, this is a feature of space, but good design can help.

6.2 Lifetime Homes

A recent experiment in housing design has been the *"Lifetime Homes"* at the garden village of New Earswick, York by The Joseph Rowntree Housing Trust. The basic concept driving the lifetime home design is that of creating homes that will be suitable for occupants throughout their lifetime and that to achieve this these homes should be designed in such a way that they can accommodate adaptations bringing them to (full) wheelchair users' standards.

The Lifetime Homes concept has far reaching implications on development costs and at present design standards for accommodating limited mobility users fall far short of the Lifetime Homes concept.

The **Housing Corporation's Scheme Development Standards** draw a distinction between wheelchair user requirements in housing specifically for wheelchair users and providing access for users of limited mobility in general housing for rent. This compromise is forced by cost constraints alone in new build housing.

Barrier-free design

"Barrier-free design" is a term that is becoming more common. Supporting the concept of lifetime homes, barrier free design promotes the claim that differing abilities should not require special separate and different built forms and designs, but that housing generally should be designed to take account of four basic areas of limitation:

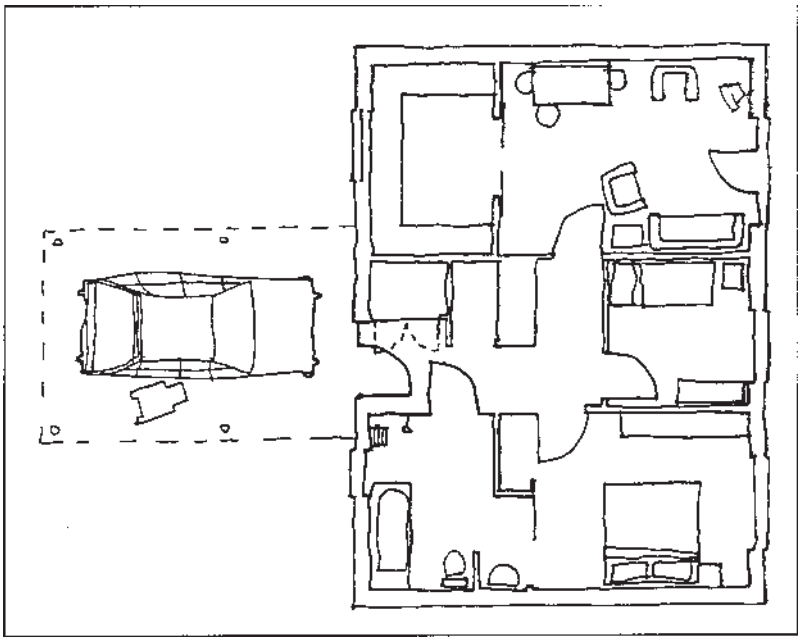
- limited mobility and/or limited reach;
- limited manipulation skills;
- limited sensory ability; and
- limited learning and/or memory.

These four areas of limitation should be met with either of three categories of barrier free design:

- *"negotiable"* - gives assisted wheelchair users' access to ground level of unit; or
- *"visitable"* - allows independent wheelchair users to visit the dwelling; or
- *"universal"* - full wheelchair users' access throughout the unit.

An example of typical barrier free house plan is shown in Figure E10 below.

Figure E10



Changes in public housing controls since the loss of prescriptive space standards within the Housing Corporation's design criteria has led to housing being up to 10-30% below Parker Morris space requirements and consequently far below the space standards necessary for the inclusion of barrier free design.

Flexibility in housing design should take into account:

- changing occupancy needs;
- changing lifestyles throughout a person's and a family's life;
- differing mobility groups; and
- the possibility of changing mobility of occupants.

Whilst the above definition of flexibility is an ideal standard, the present situation with both private and public housing having poor space standards will have far reaching implications on society by forcing movement from poor space standard housing and towards special needs housing purely on mobility criteria.

In Scotland, Scottish Homes has published a design guide about barrier free housing. It is not mandatory. The Scottish building regulations include new requirements about disabled access which are intended to achieve *'visitability'* in all new and improved houses and flats.

7. The Space Between Buildings

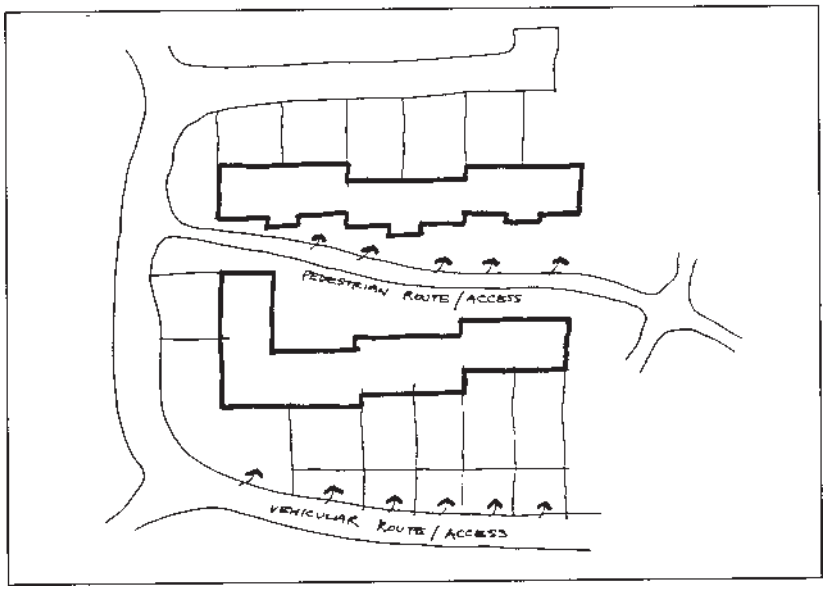
In 1960, Gordon Cullen proffered a view on urban design in *"Townscape"* which neatly represents the growing awareness of the effect of the external built environment on human perceptions. The basic constructs of the debate were that environments must provide interest and a sense of security to humans for them to *'work'* in aesthetic and sociological terms.

The book studied different towns and villages which were used to illustrate different types of space and links between space and how these spaces impact on people in them. Concepts such as *"enclosure, possession, focal point, place, and the functional tradition"* all act to explain and support what forms successful public space. A drawing from the book is shown in Figure E11. Since the disasters of mass housing in the 1960s, housing design has been cautious in its approach to meeting housing need.

Figure E11

Experimentation took place in the 1960s with different housing layouts such as the *"Radburn"* principle. The basic concept of this system was to separate car and pedestrian use with the pedestrian access to the front of the house and the vehicular access to the rear of the dwelling unit. This layout proved confusing and unsatisfactory principally because people expect and desire a public and a private side to dwellings. An example is shown in Figure E12 below.

Figure E12



Social psychologists have highlighted failures in housing environments and illustrated that the roots of these failures lie in psychological factors. Recognition of human needs as a social animal has superseded the 'Utopian' dream of high rise communal living.

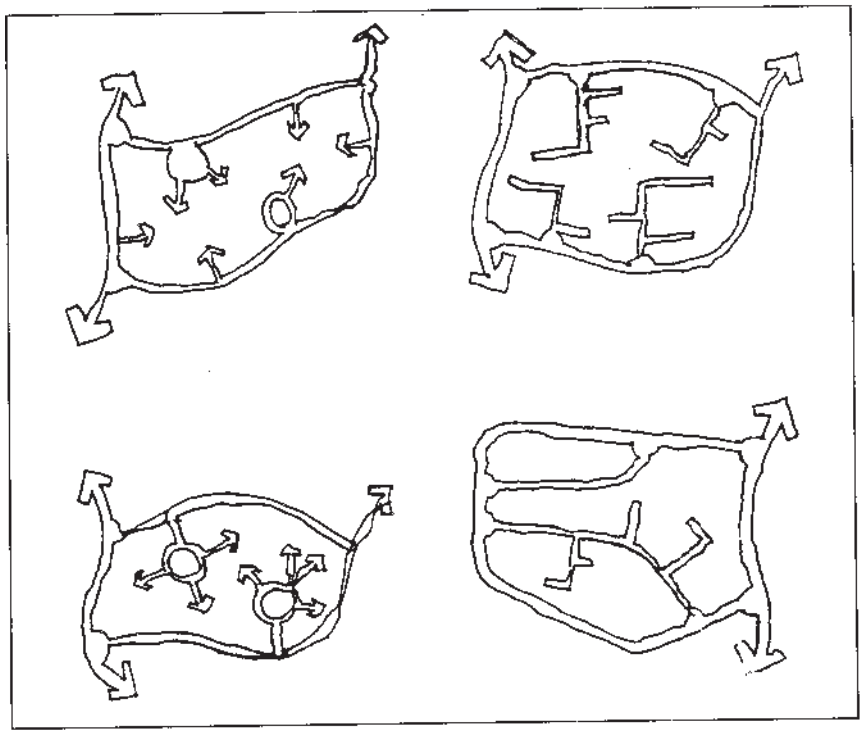
Given this background, there is a predominant need to foster a sense of place identity and community in housing if housing is to be successful in meeting human social needs. This need tends to find its solution in the creation of housing schemes that have coherent external spaces that clearly display territorial signals defining the transgression from public to private space.

Common identity

A typical expression of this aim is the *"Brookside"* development comprising a separate and identifiable cluster of dwelling units that have a common identity reinforced by common ownership (in psychological terms) of the space contained by the built form of the dwelling units.

This basic model of the *"wagon train camp"* is used throughout public and private sector housing in a variety of forms depending on the type of unit accommodation. See for example, the typical *"mews court"* design in Figure E13 below.

Figure E13



Summary

1. **In this section, we looked at why it is necessary to control development, how it is done and what it means for developers' proposals.**
2. **First of all we looked at what legislation controls and regulates the appearance and functioning of housing.**
3. **We then considered the current designs and standards in housing development and the reduction in regulation of social design and standards.**
4. **Following on, we looked at issues of low energy design and some of the ways of measuring the energy efficiency of house types.**
5. **The next section examined future flexibility and what that means. We looked at different definitions of flexibility and the likelihood of higher standards being implemented.**
6. **Having considered some general matters concerning buildings, we looked at estate layout design and re-visited some of the theories regarding what effect layout has on social behaviour and crime.**

Self Test 2

1. *The planning control process has three elements in trying to achieve regulation of development. What are they?*

2. *What are the three broad purposes for which the building regulations were made?*

3. What are the major design considerations of low energy housing?

4. What are the three levels of standard of "barrier free design"?

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

Answers

Self Test 1

1. Most "bye-law" housing dates from the 1880s. The houses were set along parallel, treeless streets with the front door usually opening directly onto pavements. The outstanding characteristic was that of a through terrace house with a *"tunnel-back"* replacing the *'back to back'*.

2. Density of "Addison" housing was to be 12 per acre with a minimum of 70 feet between houses. Internally three bedroom parlour type were 1055 sq.ft. (99 sq.m.), and non-parlour 855 sq.ft. (81 sq.m.).

   This compares with a "Parker Morris" (three bedroom) five person house of around 84 sq.m.

3. Three examples of the new non traditional building forms used after the Second World War were:

   - Pre-fabricated bungalows;
   - 'Airey' pre-cast concrete houses; and
   - 'British Steel framed' houses.

   By the end of programme in the mid 1950s, about 180,000 units had been built in England. and about 100,000 houses built in Scotland.

4. The proportion of local authority houses and flats built in the early 1950s was 78% houses and 22% flats. At the peak of flat building in the early 1970s, it was 51% houses and 49% flats.

Self Test 2

1. The three elements of the planning control process are:

   - firstly, the check that a scheme is defined as a development under planning law (see Use Classes);
   - secondly, the formulation of development plans that have a strategic overview of desired development for an area;
   - thirdly, development control which comprises an application system through which undesired development is refused planning permission with reference to stated material planning considerations.

2. The building regulations were made for the following three broad purposes: firstly, to secure the health and safety, welfare and convenience of people connected with buildings, secondly to further the conservation of fuel, and power, and thirdly to prevent waste, undue consumption, misuse or contamination of water.

3. The major design considerations of low energy design are:

   - insulation to fabric. Well insulated fabric to walls, floors and roofs and double glazing;
   - construction detailing. Installation of draught exclusion to openings creating unbroken envelope to the building;
   - building form and planning. Planning and arrangement of installation of draught lobbies;
   - controlled ventilation. Extraction of moist air at source. Exchange of heat from extract air to input air;
   - orientation and layout. Relationship to sun's path and siting of windows to capitalise on incidental heat from sun;
   - passive solar gain. Using heat gain to glazed areas such as conservatories to transfer heat into main building;
   - efficient services. Installing appropriate and technically well designed systems for space heating and lighting to buildings.

4. The three categories of barrier free design are:

   - "negotiable" - assisted wheelchair users' access to ground level of unit;
   - "visitable" - independent wheelchair users; and
   - "universal" - full wheelchair users' access throughout unit.