PUBLIC SECTOR HOUSING IN SCOTLAND

VOLUME THREE
1960 to 1979

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INTRODUCTION

Public sector housing completions in Scotland had fallen in the 1950s from the all time high of 37,155 in 1953 to 23,061 in 1959. Completions fell even further to 18,977 in 1962.

Labour, promising to harness the white heat of technology to socialist ideals, won the 1964 election with a narrow majority of 15 over the Conservatives. In 1965 the Labour Government pledged to build 500,000 houses a year (in UK) by 1970. (1)

The Labour Government encouraged the use of industrialised building systems, believing it necessary to do so to meet the pledged house building programme. The Minister of Housing (England and Wales) in the 1965 Circular 76/65 proposed to launch a concentrated drive to increase and improve the use of industrialised methods in house building for the public sector. The Scottish Office had instructed Local Authorities to combine where feasible or necessary and choose among types of industrialised building schemes for the public sector. (2) To this end the Scottish Local Authorities Special Housing Group (SLASH) was formed in 1964 to conduct research into system building and into the rationalisation and standardisation of techniques and components. (3)

The Finance Act 1966 included the Selective Employment Tax which was intended to encourage the movement of labour from traditional declining industries to new emerging industries. It was a payroll tax which all employers were required to pay but firms in particular industries or localities had the money refunded or were given additional premiums as a bonus. (4) In the building industry it discriminated against traditional builders with craft skilled tradesmen in favour of system builders with their high proportion of unskilled labour.

Reduction in Government spending followed the 1967 devaluation of the pound and the ambitious programme to build 500,000 houses a year was abandoned.

The high rise technology solution to mass housing was put in question when on the 16th March, 1968 Ronan Point flats in London suffered the collapse of the entire corner of the building when a gas explosion blew out a section of wall. Three people were killed in the collapse. The subsequent investigation into the collapse and consequent surveys of the nation's stock of prefabricated high rise buildings revealed faults with structure and construction often requiring major repair.

Earlier in the year, on the 15th January, winds gusting to over 100 mph caused serious structural damage throughout the central belt of Scotland. Glasgow was one of the areas worst affected where damage to old tenemental property revealed the poor structural condition of many properties and the need for urgent attention. That the extensive damage in Glasgow was due to the poor structural condition of the buildings in Glasgow is suggested by the fact that marginally higher gusts were recorded in Edinburgh, Prestwick and Leuchars, 104, 104 and 106 mph respectively to Glasgow's 103 mph.

All types of construction throughout the central belt were affected but it was old tenemental properties particularly in Glasgow and to a lesser extent in Stirling where damage was most extensive (5) especially to the old nailsick slate roofs. (While the slates on an old roof may be sound often the nails holding the slate would be worn through by corrosion and/or the rubbing of the slate on the nail).

Criticism of large scale demolition and redevelopment as a solution to decaying town and city centres grew throughout the 1960s both within and without the architectural and planning professions, An early example of this is Jane Jacob's the Death and Life of Great American Cities; the Failure of Town Planning, published in the USA in 1961 and in the UK in 1962.

Jane Jacobs' book was written about American Cities but much of its content was seen as being applicable to other large towns and cities. Jacobs argued that slum clearance schemes which demolished high density multi-use neighbourhoods and moved slum dwellers to new peripheral single use, single class estates were a failure, and that single use single class inner city redevelopment schemes were no better. The reason for their failure she attributed to the lack of diversity of uses and the killing off of any opportunity for self improvement of residents' dwellings or neighbourhood.

Jacobs argued that neighbourhoods were not only more interesting but safer with diversity of uses and traditional urban high density. The reason, Jacobs argued, was that with high density, diverse mixed use there was a greater degree of informal supervision from passers-by throughout the day.

Jacobs' solution was for planning policies to encourage rather than discourage mixed uses and for subsidies to be given, not for social housing but, to encourage low income households to improve their slum property or buy into new infill development. (6) Small scale infill development, replacing individual structurally defective buildings, was seen as preferable to large scale redevelopment and the former solution, which was seen as the natural way in which an area regenerates, was much less disruptive to a local community.

The mono-use repetitive housing development laid out along uniform standard width roads had come under strong attack during the 1950s from Ian Nairn and Gordon Cullen. This continued during the 1960s with articles such as the special issue on Italian Townscape by Kenneth Browne and Ivor De Wolfe in the Architectural Review in June 1962, but the major impact was the publication in 1961 of Gordon Cullen's Townscape. Cullen argues against monotony and uniformity and promotes traditional urban design of enclosure with vistas and focal points, but above all graphically promotes the attraction of variety of uses, activities and spaces with successful urban design illustrated as one where the users experience variety of life and form moving through a varying sequence of spaces.

Cullen's ideas were given further promotion from Alcan publications, A Town called Alcan 1964, 4 Circuit Linear Towns 1965, The Scanner 1966 and Notation 1967. Whereas Townscape relied mainly on traditional forms the Alcan series illustrate Cullen's ideas with building forms and materials more typical of the 1960s. Often brash and exciting were the forms but still illustrating the value of variety of form and activity with emphasis on enclosure with vistas, focal points and sequence of spaces. The booklets also advocate tight dense urban spaces contrasting with the countryside often with the imagery of an Italian hill town.

It is interesting that in 4 Circuit Linear Towns, one of the illustrated "New Towns" is on Solway on the site of the World War I New Township of Gretna. Cullen's image of the town had much in common with the original image of Cumbernauld Town Centre. (Fig 6.01).

Two Acts were passed in 1967 concerning the amenity of town and countryside.

The Countryside (Scotland) Act 1967 established a Countryside Commission for Scotland and is primarily concerned with the conservation of natural beauty.

The Civic Amenities Act in 1967, which had the support of all parties, was a Private Member's Bill sponsored by Duncan Sandys, MP, President of the Civic Trust. The preamble to this important piece of planning legalisation stated that it was "An Act to make further provision for the protection and improvement of buildings of architectural interest, and of the character of areas of such interest; for the preservation and planting of trees; and for the orderly disposal of disused vehicles and equipment and other rubbish". One of the most important features of the Civic Amenities Act was the introduction of the provision for the protection of areas of architectural interest :- Conservation Areas. This gave legislative backing to the importance of conserving buildings and the character of the area and to the importance of new buildings being designed sympathetically to their surroundings.

The effect of this late 1960s Act can be seen in the design of housing in the 1970s when there was increasing concern with renovation of existing property and with housing designs reflecting traditional local styles.

In 1968 the Government appointed a committee under the chairmanship of A. M. Skeffinton M.P. "to secure the participation of the public ..... in the making of plans for their area". The Skeffinton Report People and Planning was published in 1969.

The report recommended that people should be kept informed during the preparation of structure and local plans, comments and criticism should be considered continuously as the plans are made and above all proposals should be well publicised. The report recommended the setting up of Community forums convened by local planning authorities to give local organisations the opportunity of getting together for collective discussion of planning and other issues of importance to the area. The report also recommended the appointment of Community Development Officers to work with people and keep then informed of developments.

Formal consultation is now an established part of the planning process. However there is little evidence today of the more idealistic proposals for community forums or even of Community Development Officers with the current political priority being the control of public expenditure.

The Skeffinton Report stated "We want the paper of the plans to come to life : and to come to life in a way that people want". Of recent years, says the report, planners have gained for themselves something of a tarnished image. They have the reputation (along with architects) not of giving people what people want, but giving people what the planners think they ought to want. The two things are often very different.

Public participation in planning clearly has its parallels in tenant participation in Housing Improvement Schemes and in Housing Association plans.

Change from Imperial measures to Metric measures began in 1963 when the Imperial yard and pound (weight) were given legal definitions in terms of metric units. In 1966 the British Standards Institute set out a programme for change to the metric system in the construction industry with 1969 set as the date for production drawings and documents being metric for all new contacts. SSHA took the lead in 1968 by designing and building 18 houses to metric specification in South Queensferry, the first house being completed in 1969. In 1968 the Scottish Development Department issued The New Scottish Housing Handbook, Bulletin 1. These space standards were for the first time in metric dimensions.

HOUSING LEGISLATION

Housing (Scotland) Act 1962

This Act introduced a new principle aimed at directing subsidy to Local Authorities where the need was greatest. For those authorities where a (financial) surplus in their housing was produced the subsidy was to be £12 per annum for 60 years. Where a deficit was produced the subsidy was to be £32 per annum.

The Act set annual subsidies for 60 years of £42 for overspill housing, £32 for incoming workers housing; additional Subsidies were provided of £12 for agricultural workers houses, up to £2 for protection against subsidence and up to £5 for use of stone or other special materials to preserve the character of an area.

The subsidy for housing of six or more storeys was changed from the $^{2}/_{3}$ additional cost subsidy of 1957 to a fixed additional subsidy of £40 per annum for 60 years. In addition a subsidy of £60 per acre was provided for each site where development costs were over £4,000 per acre with an additional £34 per acre for every additional £1,000 or part of £1,000 per acre.

The Act also give the Secretary of State discretionary power to abolish or reduce subsidies.

Part 2 included provision for the Secretary of State to make loans to housing associations to be paid over 60 years at interest rates fixed by the Treasury for loans to Local Authorities.

Section 24 made new provisions for the determination of unfitness for human habitation. House condition had to be assessed in regard to the following matters.

a. general state of repair
b. structural stability
c. freedom from dampness
d. natural lighting
e. air space
f. ventilation
g. adequacy and accessibility of water supply
h. adequacy and accessibility of sanitary and other conveniences
i. drainage
j. condition of paving and drainage of courts, yards or passages

k. facilities for storage, preparation and cooking of food and for the disposal of waste water

Finally the house shall be determined to be unfit for human habitation if and only if, it is so far defective in one or more of the said matters that it is not reasonably suitable for occupation in that condition.

The purpose of this was to give a clearer definition of "unfitness".

Housing Act 1964

Part 1 of the Act established the Housing Corporation whose function was to assist housing societies and housing associations (mainly by making loans) to provide co-ownership and cost-rent housing. In Scotland the Housing Corporation was responsible to the Secretary of State. The Act permitted the SSHA to act as agents for the Corporation in Scotland. Under this Act Housing Associations borrowed one third of the money from the Housing Corporation and the remainder from a building society.

Parts 2 and 3 were aimed at achieving more rapid progress with the improvement of substandard dwellings. It included provision for the compulsory improvement of dwellings to provide standard amenities with local authorities given power to serve immediate improvement notices in respect of dwellings in tenements in improvement areas in Scotland. Local authorities were required to designate improvement areas where there were dwellings lacking one or more of the standard amenities and where at least half of the dwellings were so constructed that it was practicable to improve them to the full standard for a minimum life of fifteen years.

The standard amenities were defined as:-

a fixed bath or shower with hot and cold water supply;
a wash hand basin with hot and cold water supply;
hot and cold water supply at a sink;
a water closet and satisfactory facilities for storing food.

Grants were available for the provision of these facilities. Local Authorities could serve improvement notices on owners and Local Authorities were given power of enforcement. Local Authorities administered and paid out the grants but ¾ of the annual loan charges ($^7/_8$ in Highlands and Islands) over 20 years was paid by the Exchequer.

Housing (Scotland) Act 1966

This was mainly a consolidating Act.

Housing Subsidies Act 1967

Part 1 which referred to housing subsidies did not extend to Scotland. Part 2 gave the option of subsidies to reduce loan payments to assist in house purchase and improvement in return for foregoing mortgage interest tax relief entitlements.

Housing (Financial Provisions, etc.)(Scotland) Act 1967

This Act provided a new subsidy to Local Authorities whereby the Exchequer paid any interest over a level of 4% paid over 60 years. It was based on an authority's aggregate cost of its approved housing stock but with the exception of that provision it was an open ended subsidy with the Exchequer giving the Local Authorities a stable base rate of 4% where Exchequer contributions would rise as interest rates rose.

This gave Local Authorities the considerable advantage of known interest costs on which to plan housing programmes. It did however mean that not only would the Exchequer pay for increased costs if interest rates rose they would also pay their percentage of increased costs if more expensive houses were built.

It was therefore considered necessary for Government to have some control over costs per housing unit. It was to achieve the desired cost control over provision that Indicative Costs were introduced in Scotland (Cost Yardstick in England). Indicative Costs, introduced in 1968, set, for new public sector housing, maximum costs that the Scottish Office would approve for subsidy. These allowable costs rose with increase in site density but were calculated on the minimum use of high rise housing, which was known to be more expensive than walk up flats or cottage housing. The 1967 Act also immediately reduced the 1962 Act additional subsidy of £40 for flats of six or more storeys to £30.

The Act also made provision, as previous Acts had, for the Secretary of State to abolish or reduce the rate of Exchequer contributions.

Housing (Financial Provisions) (Scotland) Act 1968

This was purely an Act to consolidate enactments relating to financial assistance towards the provision of housing.

New Towns (Scotland) Act 1968

This was mainly a consolidation act relating to the five New Towns in Scotland namely East Kilbride designated 1947, Glenrothes designated 1948, Cumbernauld designed 1955, Livingston designated 1962 and Irvine designated in 1966.

Housing (Scotland) Act 1969

The vague definition of fit for human habitation was replaced with tolerable standard. A house met the "tolerable standard" if the house;

a. was structurally stable;
b. was substantially free from rising or penetrating damp;
c. had satisfactory provision for natural and artificial lighting, for ventilation and for heating;
d. had an adequate piped supply of wholesale water available within the house;
e. had a water closet;
f. had drainage and disposal of foul and surface water;
g. had facilities for cooking;

h. had satisfactory access to all external doors and outbuildings.

The Act made it the duty of the Local Authority to secure that all houses which did not meet the tolerable standard were closed, demolished or brought up to the tolerable standard within a reasonable period. The Local Authority could declare an area a "Housing Treatment Area" where the houses or the greater part of the houses did not meet the tolerable standard.

Improvement grants for structural or fabric improvements were increased from £500 to £1200 and the standard grant for fitting standard amenities (bath/shower, whb, wc, sink, hot and cold water) raised from £350 maximum to £450. Provision was made for Local Authorities to set a time limit for completion.

The Act not only empowered and made financial provision for Local Authorities to administer the grants but also gave grants to Local Authorities to improve amenities of residential areas. The grant available for environmental improvements was 50% of the cost up to a total of £100 per house.

BUILDING STANDARDS (SCOTLAND) REGULATIONS

Memorandum on Draft Building Standards (Scotland) Regulations (1961)

The memorandum states of the draft Building Standards Regulations that "the departures from the bylaws are relatively minor". One of the main areas of departure was dealing with fire regulations where the classification of storage buildings was looked at most closely, as a result of a disastrous fire in a bonded warehouse at Cheapside Street, Glasgow the previous summer.

A number of changes were recommended for housing standards.

Sound insulation for floors between flats was to be improved and impact sounds were to be controlled.

Thermal insulation of roofs was to be raised from 0.35 to 0.20 Btu/ft² h deg F (2 to 1.14 W/m² deg C).

However the memorandum argued that the Model Building Bylaw standard for walls of 0.30 Btu/ft² h deg F (1.7 W/m² deg C) which could be achieved with an unventilated 11 inch (275mm) cavity brick wall had proved reasonably satisfactory and economic both in initial cost and running costs. The existing standard was therefore not upgraded on the grounds of expense. The one exception to this was that if the proportion of window opening exceeded 17% then increased insulation standards would be required to compensate.

A 60 ft (18m) privacy distance was required between habitable rooms (livingrooms or bedrooms) when houses were built parallel to one another.

Permissible height indicators were to be introduced for ensuring adequate daylight in relation to other buildings and to the boundary.

For flats it recommended one lift for flats where the entrance door is 5 to 8 storeys up and two lifts if more than 8 storeys.

Room areas and ceiling height were as Appendix A of Part 3 of the Scottish Housing Handbook 1956.

New requirements for houses included the recommended prescription of a wash basin in a room containing a bath or a w.c., and anti scald valves for shower baths. Kitchens were to contain a larder, a dry goods cupboard and a work-table top. Another new provision was for a heating appliance capable of providing 6,000 Btu per hour for the livingroom. (This standard could be met with a 2 kilowatt built in electric fire). It was not necessary to provide this appliance if central heating was installed in a house.

New provisions were also recommended for power points, ducts for services to achieve frost protection and provision for windows above ground floor to be capable of being safety cleaned from inside the house.

The Building Standards (Scotland) Regulations 1963

The regulations followed the Model Building Bylaws for Burghs 1954 and the Memorandum of 1961.

Standards were set out for:-

1. General classification;
2. Materials and Durability;
3. Structural Strength;
4. Fire Precautions;
5. Escape from Fire;
6. Chimney Hearths and Appliances;
7. Resistance to Moisture;
8. Sound insulation;
9. Thermal insulation;
10. Ventilation;
11. Daylight and space about Houses;
12. Drainage;
13. Electrical Installation;
14. Prevention of danger and obstruction;
15. Housing standards;
16. Ashpits and dungsteads

Sound insulation standards were set for walls and floors along with standards for impact noise for floors.

Thermal insulation was as recommended raised to 0.2 Btu/ft² h deg F (1.14 W/m² deg C) for roofs and left at 0.3 Btu/ft² h deg F (1.7 W/m² deg C) for walls. No insulation was required for floors other than those exposed to the open air, as in the case of a floor over a pend. This was set at the same standard as that for a roof.

Ventilation standards required that a house had two external walls on opposite sides of the house or that the walls when adjacent be not less than one third the floor area of the house or

storey. There was however the provision that the ventilation could be met by mechanical means.

Daylighting was covered by permissible height indicators and the minimum window size was set out in a table which related apartment type to room area, width of room and height of window. The theory was that livingrooms, kitchens and other apartments required different daylight standards and that, while deeper rooms required more window area to achieve that standard, increasing the window height increased daylight penetration.

A lift was required in every block of flats where the entrance to a house was not less than 4 storey or 31 feet (9.5m) above the entrance to the block with two lifts required at 8 storeys or 62 feet (19m). This meant that the maximum height of flats which could be built without a lift was 4 storey for flats or 5 storey if the top house was a maisonette and the maximum floor to floor height in these circumstances would be 10' 4" (3.2m) if a lift was not to be used. In order to cover the deck access type of flats there was a minimum standard of one lift to 70 houses or one lift to 160 occupants.

Minimum room areas were set out in a table (Fig 6.02) with minimum areas for living, dining and kitchen ranging from 170 ft^2 (15.8m^2) for a single person, two apartment house to 305 ft^2 (28.3 ft^2) for a six or more apartment house. Minimum kitchen areas for the same houses ranged from 30 ft^2 (2.8m^2) to 75 ft^2 (7.0m^2). Minimum areas for double bedrooms were set at 120 ft^2 (11.2m^2) and for single bedrooms 75 ft^2 (7.0 m^2).

Privacy distance between windows was set as recommended at 60 ft (18m) between windows of different houses set parallel to each other, but the distances reduced for windows set at an angle to each other reducing to 6 ft (1.8m) for windows at right angles to each other.

Daylighting and privacy regulations were significant restrictions on how close houses could be positioned in relation to each other.

HOUSING REPORTS

Homes for Today and Tomorrow, The Parker Morris Report 1961

This report had enormous impact on the design of houses. It recommended greater space standards, more flexibility of use, whole house heating, better insulation and a better environment for mass housing. It argued if, for economic reasons, a choice has to be made between high standards and numbers of houses built, it should not be the standards that are sacrificed. In future quality should take precedence over quantity.

The Report stated that social and family life in Britain was undergoing revolutionary changes. People in all income groups had more possessions. Children stayed longer at school. There were greater opportunities for further education. The car was making its impact in every level of society. Many changes were beginning to mean a more varied and more enjoyable home life for greater numbers of people. Both inside and outside the home, the individual members of a family had a growing desire to be free to engage in many different activities.

To cope with the new patterns of home life more space is needed and this space must be adequately heated and usable all year round. There must be greater flexibility and less specific

labelling of rooms. A bedroom can be more than a bedroom for example, a study, a play-room, a second living room. The report mentions the advantage of a downstairs bedroom for a sick child or an elderly relative or for use as a dining-room. Homes for four or more people should have at least one room in the living area where privacy and freedom from disturbance can be found. Kitchens should be capable of accommodating the many electrical appliances and should always include some eating space even when a separate dining room is provided.

Parker Morris warns that there is no substitute for skilled design. In framing recommendations the objective has been to leave architects free to plan. It does not recommend specific minimum room sizes but argues for flexibility and for designers to accommodate the activities and associated furniture and possessions. It emphasises however that all house plans should have furniture marked on. The report recommends adequate internal and external storage provision, good sound insulation and argues the financial return of good thermal insulation.

The layout and landscaping must be designed by professionals and adequate provision should be made for children's and teenager's play areas. Play areas, it recommended, should not only be conveniently located but also located to avoid disturbance. For terraced housing it stated that it should be possible to gain access to the rear without going through the hall, livingroom or kitchen. The report argued that there must be adequate parking provision to meet the increasing car ownership. It also argued that for safety cars and pedestrians should be segregated and recommended the Radburn system of layout. It noted that, the necessity for car storage on a large scale, could easily lead to a drastic loss of amenity space and accepted that it will not always be possible to park the family car close to the home.

The report includes in its conclusion the statement "Good homes are worth paying for, even at the sacrifice of some other things".

The report greatly influenced house designers particularly those being trained following its publication. It proposed excellent goals for house design. Unfortunately, while many of its recommendations were included in the 1968 Scottish Development Department's Bulletin 1 Metric Space Standards, its minimum space standards effectively became also maximum space standards as a result of the tight financial restrictions of the level of Indicative Costs set by the Department. As will be seen later, these same space standards became a requirement of The Building Standards (Scotland) (Consolidation) Regulations 1971 until minimum space standards were dropped together with room heights from the Regulations in the 1986 revision to the 1981 Regulations. In the 1986 revision and in the current 1990 regulations, controls relating to housing have been much reduced with room areas determined by the requirement to accommodate a reduced amount of furniture and equipment.

Space in the Home (MHLG Design Bulletin 6 England and Wales)

This bulletin was produced in 1963 for England and Wales but was available from HMSO in Edinburgh and widely used throughout Scotland. The bulletin followed on from Homes for Today and Tomorrow" and set out to do three things; "1. To illustrate some of the main family and personal activities for which the design of the house has to cater; 2. To set out, in quickly accessible form, suggested space and furniture requirements related to activities and; 3. To provide a specimen analysis of a house plan to illustrate the approach and the standards recommended in Homes for Today and Tomorrow". (7)

The bulletin discusses the various needs of families as they expand and then contract as children are born, grow up and leave home. (Fig 6.03) It discusses the needs of a home to have noisy areas and quiet areas, tidy areas and untidy areas. It also illustrates the different activities through the day for a young family with teenagers and notes the needs of teenagers to have separate rooms. It also discussed social and economic trends noting interestingly "Full employment has ensured a steady and secure income to almost all families and over a third of married women now work and add to the family income". (8) It discusses the need to allow for increased car ownership and notes that the increasing ownership of electrical goods will continue with future years seeing the arrival of dish washing machines, deep freezes and waste-disposal units.

Spatial requirements are illustrated for food preparation, eating, lounging, watching TV etc., sleeping, washing and circulating. Furniture and equipment from brooms to beds, to chairs to chest of drawers and cars are all illustrated with typical dimensions.

Part 3 deals with analysis of plans and sets out criteria for analysing plans such as, how far does the plan meet changing needs?, are there quiet and private areas?, or are the right spaces near to each other?

In the Appendix minimum space standards are set out for single storey houses, 3 storey houses, maisonettes and flats (1 to 6 people). Storage fitments and socket outlet provision is set out as are heating requirements of 55°F (13°C) for circulation areas and 65°F (18°C) for dining and living areas.

The New Scottish Housing Handbook Bulletin 1 1968
Metric Space standards

This bulletin was produced as a result of co-operation between the Scottish Development Department, SDD and the Scottish Local Authorities Special Housing Group, SLASH. It replaced the 1956 SSH3 and applied to development designed in metric dimensions after 1 January, 1969.

The bulletin was part of the metrication of the Scottish Building industry but its philosophy is similar to that expressed in Homes for Today and Tomorrow. The new 1968 bulletin emphasised the need for the house to adapt to every stage of the life of a family, the need for flexibility and attempts to give the designer greater freedom to design. It aims to give this freedom by giving minimum overall house areas but instead of specifying room areas it specifies the furniture to be accommodated in the rooms.

In order to obtain approval from SDD after 1 January, 1969 housing was required to comply with the minimum overall net space standards and accommodate the following furniture.

Living space :- 2 or 3 easy chairs, settee, TV, small tables, and a reasonable quantity of other possessions such as radio and bookcase.

Meals space :- dining table and chairs.

Kitchen :- fitment and storage as specified in the bulletin plus a small table.

Double bedroom :- double bed or 2 single beds, bedside tables, chest of drawers, double wardrobe and dressing table.

Single bedroom :- single bed, bedside table, chest of drawers, a wardrobe and if a study bedroom, desk, chair and bookcase.

A second WC (conveniently placed for guests and children coming in from the garden) was required for 5 or more person, 2 or 3 storey houses and 6 or more person single storey houses.

Furniture and equipment dimensions are all illustrated. It is important however when comparing the more generous net house space standards of 1968 Bulletin 1 over 1956 SHH3 to note that whereas the 1968 standards count the area of a stair on all floors the 1956 standard only counts the area of a stair on one floor. This can make the difference of almost 2.5m² on a two storey house and 5m² on a three storey house. On the other hand the 1956 overall house areas were maximum areas whereas the 1968 standards were minimum (except when a planning grid was used in the design when a maximum/minus tolerance of 1½% was permitted). (Fig 6.04)

Comparing the two standards for two storey cottages with the 1968 storage requirement added.

No. of persons	1956 maximum		1968 minimum semi	1968 minimum terrace
	ft²	(m²)	m²	m²
4	760	(71)	76.5	79.0
5	890	(83)	86.5	89.5
6	960	(89)	97.0	97.0

If however the 2.5m² is added for the 1st floor stair to the 1956 standards and the 1½% tolerance is subtracted from the 1968 standards the comparison is as follows (in metric only).

No. of persons	1956 maximum	1968 minimum semi	1968 minimum terrace
	m²	m²	m²
4	73.5	75.4	77.8
5	85.5	85.2	88.2
6	91.5	95.5	95.5

The main difference in the 1968 standards apart from specifying furniture to be accommodated rather than room areas is in the greater areas for the mid terrace house and that these areas were minimum not maximum for 1968 Standards.

Bulletin 1 was closely based on the philosophy of Homes for Today and Tomorrow and is close to the overall space standards set out in the 1963 MHLG Space in the Home where a four person semi-detached house was to have a minimum floor area of 770 ft² plus 50 ft² (71.6 + 4.65m²). Bulletin 1 requires a minimum area of 72m² + 4.5m² for a four person two storey semi-detached house.

The Scottish Housing Programme 1965 to 1970

This white paper was presented to Parliament by the Secretary of State for Scotland in November 1965.

The National Plan of 1964 announced the Government's intention to give housing a greater priority, increasing housing production in the UK to 500,000 houses per year. Scotland's share of this was to be 50,000 houses per year. (In fact housing completions in the public sector totalled 29,509 in 1964 and rose to 34,906 in 1970 only to fall back to 29,169 in 1971).

The paper notes the problem of Scotland's high proportion of unfit houses with a high proportion in stone tenements of only one or two rooms and states that nothing short of replacement is practicable in most cases. It also notes the need arising from the increase in the number of families wanting a home of their own, reflecting a trend towards earlier marriage. The demand would have been greater but for the net migration from Scotland of 40,000 persons per year.

The requirement for new homes was set out as follows:

> (1) up to 500,000 to replace houses already identified as slums or to replace old house not capable of improvement;
> (2) at least 30,000 to meet present shortages arising annually;
> (3) 3,000 a year to replace other losses;
> (4) 17,000 a year to keep up with the formation of new households;
> (5) 5,000 a year to meet additional industrial requirements and reduce emigration.
>
> A programme of 50,000 houses a year can only be a first step towards meeting all these requirements. (9)

The plan was to be achieved by increased efficiency in the construction industry and better use of the industry's resources. At the same time a proper share of building resources was to be devoted to the maintenance, repair and improvement of older homes.

The increased efficiency was to be achieved by rapidly increasing use of the newer methods of house building by systems involving the carefully planned assembly on site of factory-made components. The programme was to be met by public authorities erecting a considerably higher proportion of system built houses.

The paper as well as advocating the wider adoption of system building required a new outlook on the part of all the public authorities concerned. It points out that:

> In most instances the initial costs of providing this (house building) capacity are heavy, and prices which are competitive with the costs of the more traditional forms of building can be offered only if the manufacturers can be assured of sizeable orders, and a steady run of work. It is therefore of the utmost importance that public authorities should be prepared to join together in the arrangement of group programmes which will make full use on a planned basis of the systems

> which are available. *The Scottish Development Department, in collaboration with the National Building Agency, will seek to identify with the authorities the projects which might be included in such group programmes; to assist them in the programming of projects; and to help them choose the systems best suited to their needs.* (10)

This statement reveals the Government belief that the solution to housing production lay not only with adoption of system building but providing continuity of work through sizeable orders. It is certainly true that system building with its high capital investment required quantity and continuity of work to be competitive and be economic. What is clearly missing is the obvious fact that traditional builders with their need to train and retain skilled labour would also benefit from continuity of work both in building up a skilled labour force and in giving competitive prices.

The fact that the case for giving continuity to the traditional builder is not stated reveals a bias in Government thinking towards system building.

The paper also makes the case for Local Authorities and private owners making use of existing legislation to improve older property which was not up to modern standards and points out that repair and maintenance must not be neglected.

The paper details improved subsidy arrangements to apply to all house tenders which were submitted for the Secretary of State's approval after the publication of the paper.

The new basic subsidy was that whereby the Exchequer paid interest over 4%. This meant that Local Authorities had a stable 4% interest rate whereas the Exchequer paid the varying rate of interest.

Supplementary subsidies were paid for expensive sites, high flats, building in special materials, precautions against subsidence, overspill, remote areas, incoming workers and authorities with exceptional financial burdens.

The new provisions for financial assistance were introduced in the Housing (Financial Provisions etc.)(Scotland) Act 1967.

The white paper was followed by an SDD Circular No. 68/1965 which asked Local Authorities to plan their housing programme for about five years ahead. Local Authorities with programmes of 100 houses or more per year were asked to submit to the Department details of their programme, types of building, density of development and phasing. Discussions were then to take place between SDD and the Local Authority to avoid difficulties and delays. The circular then states "the Department will assess with the authority the share of the programme which must be undertaken by industrialised building methods". (Note the use of the word must, not may or even should).

The circular states that "the use of industrialised, including system building will be essential". It also comments on the importance of training teams for work in an organised fashion on long runs of repetitive work. It also advised that the adoption of standardised house designs, whether using industrialised systems or not will release scarce professional time to concentrate on raising the quality of layouts for industrialised and traditional building.

The circular advises Local Authorities of the availability (for a fee of one guinea) of the NBA appraisal certificate for building systems. The certificate showed that the building system had been examined by the Agency and was suitable for Local Authority use and 60 year loan sanction. It also confirmed that the system complied with the necessary technical and space standards. For two storey houses and flats or maisonettes up to four storeys the certificates covered all performance standards including structural standards. For higher building it was for all technical standards except structural standards. Local Authorities wishing to use a system for which no certificate had been issued by the NBA were advised that they should consult the Department at an early stage.

A later circular No. 11/1967 listed eleven low rise systems and seven high rise systems which had NBA appraised certificates. Low rise systems approved were Belfry, Jespersen 12M, Kincarth Mk III, Miller, Multicons, Multi grid, Reema, SASB, Sisicon, Skarne, Wimpey W6M. High rise systems approved were Bison Wall Frame, Cairns-Mitchell, Jespersen 12M, Laidlaw-Thornton, Reema, Skarne, Wimpey 100IS.

The circular warned Local Authorities of unnecessary variations which may cause delay when proposals are submitted and which lose the advantages of industrialised methods and may increase price levels. The circular also stated that the Secretary of State was anxious to encourage rationalised methods of traditional building as well as fully industrialised building.

The need to rationalise to increase productivity in traditional methods of building was covered in circular 57/1966.

This circular advocated Local Authorities to make use of the Scottish Local Authorities Special Housing Group research unit which was preparing standard specifications for all materials, workmanship and components for housing with standard details based on the principles of dimensional and modular co-ordination.

The SLASH group was to go on to produce handbooks containing standard SLASH plans and standard details together with plumbing and electrical drawings.

Scotland's Older Houses 1967

This report was prepared by a sub-committee of the Scottish Housing Advisory Committee with J. B. Cullingworth as chairman. It was appointed by the Secretary of State on 14 October, 1965 nine months after the setting up of the English sub-committee under the chairmanship of Mrs. Denington.

The two sub-committees maintained a close relationship and although their recommendations were similar, the Scottish report notes that there were very real differences in existing conditions. Housing conditions which had been historically poorer in Scotland were still poorer, particularly in Glasgow, although proportionally the crofting areas were even worse. Scotland also had its tenement building tradition of flats in towns and cities whereas England's towns were mainly built of terraced houses.

It noted that the Scottish Housing Survey of that year indicated that in the whole of Scotland at least 273,000 dwellings needed to be demolished quickly and that a further 193,000 houses

had only a short life of 15 - 29 years. It stated that new building and demolition of existing slums must go hand in hand to build houses to replace slums but also to ensure that the slums were in fact demolished. It also noted that in addition there was the need to replace good housing demolished when major redevelopment schemes were carried out. For example 249 fit houses were demolished in Glasgow for the Clyde Tunnel approach roads alone.

In Scotland up to the end of 1965 only 52,083 houses had been improved or converted with the aid of improvement grants and the annual rate had never exceeded 7,000. By contrast England and Wales had improved nearly a million houses with the annual rate in 1967 of around 120,000, proportionally twice the rate of improvement in Scotland. (11) One of the reasons for this poor performance in Scotland was the inherent difficulty of improving the typical Scottish tenement with small flats and often multi ownership. The report recommends acquisition of whole tenements to allow improvements such as bathrooms to be installed which would require soil stacks rising through the tenement and often making two flats out of three or two flats out of four.

The report notes that pre-war house improvement grants were up to two thirds of the cost with a maximum of £100 per dwelling. These grants ended in 1945 and the SHAC committee of 1947 in Modernising our Homes, 1947 recommended grants of 75%. However when the legislation was introduced in 1949 the Government of the day rejected 75% as excessive and set the grant at 50% of approved cost of improvement work. The report argued that the poor achievement in improvement of housing stock suggested that the level of improvement grant was insufficient. (12)

The report argued that the upper limit of the grant, then at £1,000 was unrealistically low as the average tenements improvement by Local Authorities cost 1½ to 2½ times that limit. It also showed the greatest level of take up of grants was by owner occupiers, 62%, whereas private landlords only accounted for 21% of improvements, the remainder being by Local Authorities and SSHA. This the report considered was because private landlords would obtain a poor financial return after improvement of their property.

The report draws attention to the fact that only one authority in Scotland, Dumfries Burgh, had begun action to set up an improvement area under the 1964 Act. Most authorities were concentrating solely on new building. This the report considered a mistake, particularly in Glasgow which had, on a conservative estimate, over 85,000 of its 326,000 dwellings as either unfit or substandard and unimproveable at reasonable cost. The report draws attention to the 50,000 which Birmingham had reconditioned either wholly or in part. The report considered that a similar drive to improve houses was required in Scotland particularly in Glasgow and that the solution lay in both building new houses and improving old houses.

The report made several recommendations which included.

There was considerably more scope for improvement to tenements than was suggested by the then current progress.

The percentage improvement grant should be increased to 75% if no provisions were to be made to enable the private landlord to charge a reasonable rent. (It should remain at 50% if such a system was operated). In either case the maximum cost on which the grant is paid should be significantly increased.

To be eligible for an improvement grant a house should after improvement have to comply with the Tolerable Standard and have a life of not less than 10 years. For houses with a life longer than this minimum, the objective should be to obtain a standard preferably at or above the standard for a Satisfactory House, though flexibility should be the keynote.

It pointed out that while a house below Tolerable Standard may be improved rather than demolished, a house which is above Tolerable Standard but below Satisfactory Standard may have to be demolished rather than improved because, for example, of its surroundings.

A comparison of its proposed standards are as follows

Satisfactory. The house should be located in a satisfactory environment and should:

(i) be in a good state of repair, in a stable condition, and substantially free from rising or penetrating dampness;
(ii) have adequate provisions for natural and artificial lighting and ventilation, and for heating;
(iii) have an adequate supply of wholesome water laid on inside the dwelling for domestic purposes;
(iv) have a sink, wash-hand basin and fixed bath or shower, all provided with both cold and hot water;
(v) have a suitably located, ventilated internal water closet for the exclusive use of the occupants;
(vi) have an effective system for the drainage and disposal of foul and surface water;
(vii) have adequate space for the storing, preparation and cooking of food;
(viii) have adequate provision for the storage of fuel (where required);
(ix) have satisfactory access to all external doors and out-buildings;
(x) have adequate provision for the storage of refuse.

Tolerable. The house should:

(i) be in a satisfactory state of repair, in a stable condition and substantially free from rising or penetrating dampness;
(ii) have adequate provisions for natural and artificial lighting and ventilation, and for heating
(iii) have an adequate supply of wholesome water laid on inside the dwelling for domestic purposes;
(iv) (a) have a sink provided with both cold and hot water, or
(b) IF THE SECRETARY OF STATE SO DIRECTS, have a sink and a fixed bath or shower, all provided with both cold and hot water
(v) have a suitably located, ventilated, internal water closet for the exclusive use of the occupants;
(vi) have an effective system for the drainage and disposal of foul and surface water;
(vii) have adequate space for the storing, preparation and cooking of food;
(viii have satisfactory access to all external doors and out-buildings;
(ix) have adequate provision for the storage of refuse.

As can be seen above there was very little difference in the standards. Satisfactory standard must be in a satisfactory environment and be in a good state of repair whereas Tolerable standard had no requirement on environment but must be in a satisfactory state of repair. Tolerable only required the provision of a wash hand basin and bath or shower if the Secretary of State so directs.

Satisfactory also required fuel storage where required but otherwise the standards are the same as for Tolerable.

The report stated that improvement area procedures required to be simplified to make them more efficient.

Local Authorities should be required to use their powers for the acquisition and patching of property which falls below the Tolerable Standard and which cannot be cleared within five years.

If houses are to provide an adequate standard of comfort and are to be prevented from falling into premature decay, they must be maintained properly. An aid to this would be strengthening of Local Authority powers to enforce repair.

Nationally the impact of the policy must be in channelling of resources to the areas with the biggest problems - above all to Glasgow. Targets should be set. The aim should be to get rid of or improve all houses falling below the Tolerable Standard within 5 years although Glasgow would have to be considered a special case due to the scale of the problem.

Targets for improvement should also be set. All houses with an expected life of 25 years ought to be brought up to the Satisfactory Standard and for those with an expected life of 15 years to a standard above the minimum and as near as possible to the Satisfactory Standard. (13)

Architecturally the report left much to be desired, in illustrating tenement improvement by a Local Authority, replacement windows are shown as hopper type with no regard for the style or proportion of the original sash and case windows. In the case of rural areas simple well-proportioned slate roofed cottages with chimneys, skews and sash and case windows are illustrated as requiring improvement while the illustration of a house "reconstructed with the aid of an improvement grant" is unrecognisable as a traditional Scottish rural cottage. The reconstructed house had tiled roof, wide proportion hopper type windows, barge board overhanging verge and eaves and a single brick chimney half way up the roof. The traditional cottage is shown transformed into the speculative bungalow of no local identity. It is difficult to assess how much damage a government publication such as this does but clearly it does not encourage sympathetic renovation. Ironically the report was published the same year as the Civic Amenities Act and the Countryside (Scotland) Act was passed.

The Older Houses in Scotland, A Plan for Action

This was the 1968 white paper which followed Scotland's Older Houses. It broadly accepted the SHAC report and set out the Government's main proposals as

a. There should be emphasis on the need to plan the treatment of whole areas of houses.

b. Compensation payable to owner occupiers whose homes were required to be cleared and the well-maintained payments in respect of other houses, should be increased (both to facilitate improvement in the annual rate of slum clearance).

c. Improvement grants should be increased (to increase the rate of improvement by both public and private agencies/individuals).

d. Rents of houses improved with a grant should go over to the fair rents system (Rent Act 1965).

e. Discretionary improvement grants were to be raised from a maximum of £500 to £1,200. Grants were to continue to be restricted to half the actual cost. The maximum standard grant was to be increased from £155 to £200 for basic amenities with grants fixed as before for each item bath, WC, sink, etc.

f. Local Authorities would be able to designate improvement areas with revised powers to allow Local Authorities to help and persuade owners to improve their property. Compulsory purchase powers are to be used as a last resort. The voluntary principle was to be the guiding one.

g. A new grant of 50% of approved expenditure up to a maximum grant of £100 per house was to be made available to Local Authorities for works and land acquisition for environmental improvement.

The white paper, while it has a section dealing with the problems of tenements as described in the SHAC report, closely follows the recommendations of Older Houses into New Homes; Re-thinking on Housing Improvement the equivalent white paper for England and Wales. The White Paper proposals were the basis for the Housing (Scotland) Act 1969.

The New Scottish Housing Handbook Bulletin 2, 1969
Slum Clearance and Improvements

The 1969 Act laid a duty on local authorities to deal as quickly as possible with all the houses in their district which did not meet the tolerable standard defined by the Act. Bulletin 2 gave advice to Local Authorities on the use of their powers to deal with below tolerable standard houses.

The Local Authorities had been given powers to define housing treatment areas where the majority of houses did not meet the tolerable standard. Surveys were required in order to define the treatment areas and the Bulletin gives advice on how this should be carried out, recommending a two stage survey. The first survey was gathering basic information on the dwellings and on the environment. This, it was suggested, could be done by sampling houses in areas identified as homogeneous. The second stage was more detailed and more technical surveys house by house were required.

Having defined a treatment area the Local Authorities could then (a) have all the buildings in the area demolished, (b) have all the houses brought up to at least tolerable standard, (c) have certain buildings demolished and certain buildings improved. The powers were designed to enable local authorities to have a flexible approach. However, in making compulsory purchase orders separate forms were required for (a) land in a treatment area on which buildings were to be demolished, (b) land surrounded by or adjoining a treatment area, (c) tenements to be brought up to tolerable standard and (d) houses other than tenement houses to be brought up to tolerable standard. This meant that having declared that the compulsory purchase was for, say, demolition, the Local Authority could not change its mind to improve the property without starting the compulsory purchase procedure over again.

The Bulletin emphasised that wherever possible improvements should be carried out voluntarily by the owners themselves. For this reason compulsory purchase orders on houses not in tenements could not be made until one year after the service of notice to allow owners, with the encouragement of the improvement grants, to bring their own houses up to tolerable standard. This delay was not required for tenements if the authority was satisfied it was unlikely they would be improved otherwise.

The Bulletin states that there should be no question of trying to restore the building to an "as new" condition. Full improvement should not be carried out where eventual demolition was envisaged. However, the property should be made tolerable with limited improvement. The Bulletin carries this logic through by pointing out that for authorities where there was no "back log" of slum clearance, limited improvement was not the appropriate action, the choice being between full improvement and demolition.

The Bulletin gave advice on survey techniques, information on financial assistance for improvements, advice on improvement techniques and environmental improvement. It also gives examples of improvement of various types of houses which had been carried out listing the improvements and giving costs per completed dwelling. The plans of the improvements were illustrated with comments on effectiveness and value for money of the improvements illustrated. Improvements ranged from a single storey house in a small burgh to city tenemental property including the improvement of the Glasgow Improvement Trust 1906 tenements at Cumbernauld Road and typical Glasgow and Edinburgh 19th century tenements as well as tenements in Aberdeen, Dundee, Arbroath and Dumbarton.

Generic Plans : Scotland, One and two storey houses 1966

These were produced in booklet form by the National Building Agency in Edinburgh. The aim of the book was to identify for architects, system builders and component manufacturers basic plan diagrams of 1 and 2 storey houses selected from those in common use, and to provide a dimensional framework for the development of interchangeable components in housing. 14)

The London office of the NBA had already published generic plans for England and Wales designed to Parker Morris standards. The plans for Scotland were the same generic plans modified to comply with the Scottish building regulations which laid down minimum room areas and Scottish Housing Handbook Part 3 1956 which recommended minimum areas for all rooms, minimum aggregate living areas and maximum overall areas. (Bulletin 1 which applied Parker Morris standards expressed in metric sizes was not published until 1968). However it is curious that the Generic Plans booklet was published with imperial dimensions, using a one foot planning grid, the same year the British Standards Institute set out a programme for change to metric for the construction industry.

House plans are illustrated which meet a variety of site and layout conditions.

a. Single entry where houses have only one main entry side for pedestrians and vehicles but also have a rear access path.

b. Single entry with no rear access path where access to the garden is through the house. House types are shown with no access required through the livingroom and types shown

with no access required through kitchen or livingroom. Here the NBA proposes access through hall and kitchen or hall only as the sole means of access to the garden whereas the MHLG Homes 1952 had proposed shared pends or through stores as the method of obtaining access to the garden through the house.

c. Dual entry plans where the house has two main entry doors suitable for visitors and delivery/collection from either side. (This requirement, in practice, was often ignored or set aside for houses in vehicle and pedestrian segregated layouts where the pedestrian access was on the opposite side of the house to the vehicles.)

d. Plans giving privacy from noise, with all habitable rooms facing away from the noise.

e. Privacy from overlooking where the layout requires houses closer than 60'0" (18m). House types are shown with habitable rooms restricted to one side of the house to allow habitable rooms to face onto non habitable rooms of houses sited at less than sixty feet distance (livingrooms and bedrooms facing onto kitchen, bathrooms, stores and halls).

f. For steep sites, narrow frontage house types for housing built across contours and narrow depth house types for houses built along the contours.

g. For north facing slopes "up side down house" plans are shown with livingrooms on the first floor to catch the available sunlight.

h. Plan modification and extension is illustrated with examples of plans which can be modified to rotate 90° and access from different sides and plans which can be extended by adding a garage, pend, porch or store.

i. Housing grouping is illustrated to show plans can be grouped and modified to take advantage of site conditions.

The generic plan forms are illustrated showing how they expand to give 2 to 6 person dwellings. (Fig 6.05)

Scottish Local Authorities Special Housing Group SLASH

SLASH was formed in 1964 to conduct research into system building and into the rationalisation of techniques and components. It was funded by contributions from Local Authority, New Town and SSHA members. Study groups were set up with representatives from member authorities on various study teams. Study team 1 produced booklets containing standard plans for housing for general needs and it is perhaps for SLASH plans and the accompanying standard details that the research group is best known.

The aim of the SLASH study team 1 was similar to that of the NBA but, producing its plans through the late 1960s and publishing its Selection of House Plans in 1974 with a three person supplement in 1976 and single storey plans in 1977, the plans were based on Bulletin 1 and used the metric 300mm planning grid. The 300mm planning grid (the metric foot) was the preferred housing planning grid for dimensional co-ordination. In accordance with the Bulletin 1 recommendation plans were shown with furniture layouts.

In the 1960s Local Authorities, New Towns and SSHA were all designing and building their own house types. No two authorities were using exactly the same plans. Many of the plans of different authorities were in fact the same "generic" plan with only minor dimensional or plan variations. It was obviously wasteful of a designer's time to design a house which may already have been designed in a member authority. The variety of minor variations clearly did not help standardisation in the building industry and obviously created difficulties for a system builder wishing to build for different authorities. SLASH aimed to rationalise this situation.

House plans were obtained from member organisations and standard SLASH plans drawn up and published in SLASH handbooks for houses and flats. Periodic reviews of members needs were carried out and in 1973 Study Team 1 on "Housing for General Needs" undertook to review and consolidate the plan ranges. These were published as described above in a Selection of House Plans and covered 2 to 8 persons, 1 and 2 storey houses. (Fig. 6.06)

The plans were grouped as follows:-

1 and 2	Constant Frontage Dual Aspect, Living on access, kitchen on access.
3 to 7	Constant Depth Dual Aspect, Living on access, kitchen on access through hall, alternative access.
8 and 9	Constant Depth, Single aspect.
10 and 11	Constant Depth, Controlled aspect.

Dual aspect plans are those with livingroom, bedroom or kitchen windows on both sides of the dwelling. Single aspect plans have those windows on one side of the dwelling only, the other side having only bathroom, store or hall windows on the other side. Controlled aspect plans have livingroom and bedroom windows on one side with kitchen windows on the other.

A survey of SLASH members in 1979 by Strathclyde University students into SLASH plan usage revealed that only Cumbernauld Development Corporation was using unmodified SLASH house types. 29% reported not using SLASH plans and 35% using modified plans, although the latter represented larger authorities accounting for 50% of the total housing stock of the SLASH group. 36% of SLASH members did not reply. (15)

The survey also revealed that among the reasons for modifying the plans were, to accommodate external gas and electricity meters and to redistribute storage and bedroom space. One of the features of the SLASH plans was the space allowed for the installation of a gas fired warm air system. The reason for this system being incorporated was that it was considered to be, with its ducts and flue, the most onerous system to incorporate into a plan. Consequently with this constraint the plan forms would be likely to be capable of accommodating any heating system. It was however tempting for members not using gas warm air to alter the plan to take advantage of this restriction being removed, although obviously retaining its space allocation and space for a flue better allowed for flexibility in changing heating systems in the future.

It is important to remember however that the forming of SLASH and the research to produce the SLASH plans was carried out in the late 1960s in response to the Government's The Scottish Housing Programme 1965 to 1970 in which the Government was advocating the forming of Local Authority Consortia to provide system builders with large and continuous housing programmes. No extra subsidies were given for using system builders and, with the

reduction in the rental housing programme in the 1970s the perceived need to use system builders, who would benefit from standard plans disappeared. Traditional construction did not need or give any price advantage to standard SLASH plans as opposed to modified SLASH or non SLASH plans, nor did the no-fines or timber frame contractors who could easily modify to suit variations.

The end of the 1960s saw the end of the drive to increase rental housing production and with it the demise of system building. Consequently the need for standardisation of house plans disappeared. It was therefore inevitable that the SLASH plans when used would be modified to suit individual authorities' needs and preferences.

Roads in Urban Areas 1966

Produced by the Department of the Environment, Scottish Development Department and the Welsh Office it followed Traffic in Towns a study of the long term problems of traffic in urban areas for the Minister of Transport (England and Wales). Traffic in Towns is often referred to as the Buchanan Report after Colin Buchanan the leader of the study group for the report.

The Buchanan Report had shown how rising car ownership was far out-stripping road investment and how this was leading to congested roads and towns. The report made a number of recommendations which included transportation plans with policies for road permits and road pricing, parking policy and subsidised public transport. It also recommended that some towns would require comprehensive redevelopment to accommodate traffic movement while other towns, historic towns, would require to restrict traffic penetration particularly of the private car. The report demonstrated on various sizes of existing towns the effects of fully accommodating unrestricted traffic, driving multi-level interchanges, dual carriageways, primary distributors through existing areas, which required large scale demolition and often complete redevelopment of areas. It also demonstrated piecemeal redevelopment which was less destructive of the urban fabric but did not fully accommodate the private car and would require public transport systems to compensate for the necessary restriction of vehicles. The report also discusses the New Towns commenting that there was doubt as to whether the first generation New Towns (East Kilbride and Glenrothes in Scotland) would be capable of coping with the rise in car ownership. It illustrates in comparison, Cumbernauld, a second generation New Town, expressly designed "to master the motor car". It described how the centre is built over the primary road with cars, buses and service vehicles arriving under the town centre. It also describes how the town is laid out with a Radburn layout with its network of pedestrian routes having direct access to the town centre while approach by car is circuitous. (Fig 6.07)

While Roads in Urban Areas follows many of the recommendations of the Buchanan Report it is less of a planning study as described above and concentrates rather on engineering roads in urban areas. It gives little reference to public transport other than describing the road engineering requirements of bus stops and stating that public transport should be designed as an attractive alternative as possible to the use of the private car.

Roads in Urban Areas favours traffic segregation stating that "traffic segregation should be the keynote of modern road design and should be arranged to reduce conflict between one vehicle and another and between motor vehicles and slower moving and more vulnerable road users such as pedestrians and pedal cyclists". (16) It advocates the need for by-passes, urban motorways, separating primary and distributory traffic networks, grade separate junctions,

cycle tracks and pedestrian ways. Primary distributor roads are illustrated, dual carriageways grade separated, as at Cumbernauld. New Towns and areas of extensive redevelopment, local distributor and access roads, the report recommends, should be designed to separate vehicular and pedestrian movement either vertically or horizontally. In particular it recommends Radburn type layouts for housing areas.

The basic thrust of this report is to design for free movement of vehicles with vertically segregated routes for pedestrians crossing roads. The impact of this approach is illustrated at Cumbernauld where despite the aim of providing high density close to the town centre, with the desired image of a compact hill town, the land usage of the road network resulted in an overall gross density of population similar to its low density first generation neighbour East Kilbride (both are 22 to 23 persons per hectare).

Another illustration of this approach is Glasgow where an urban motorway has been carved through the urban fabric separating areas of the city as did and still do the railway lines.

Indicative Costs 1968

An insight into Government thinking on density and costs was given by J. R. Jones, chief planner of the Department of the Environment (England and Wales) in an address to the Town and Country Planning Association's Housing and Planning Conference and published in the 1967 December issue of Town and Country Planning. James argued that, while it was important to conserve land, it was more cost effective to achieve this by increasing the density of low density development than by increasing density of medium or high density development. The reason for this being that, road and service costs were high for low density development while house construction costs increased with density above that which could be achieved with medium density terraced housing. James also argued that it was more difficult to achieve a satisfactory environment for family housing at high density. Costs, land conservation and providing a satisfactory environment for family housing was best achieved with medium density housing development.

All rental housing whether built by the Local Authority, SSHA or New Town Development Corporation, as it attracted Exchequer subsidy, required Scottish Office approval to the project's estimated cost and to its tender price before contracts could be accepted. Housing had been the responsibility of the Department of Health for Scotland but came under the Scottish Development Department (SDD) when it was formed in 1962. These departments monitored costs of construction and used this information to determine whether the costs of a submitted scheme were acceptable or whether cost savings would have to be made. The disadvantage of this system was that while various Housing Acts and Housing Handbooks had laid down the accommodation standards required for approval, designers had no similar set of published cost limits within which their schemes must be built. They therefore did not know whether their schemes were within the cost limits for approval until they submitted their schemes with estimated costs. Should their scheme be judged to be over expensive then clearly delay and abortive work would result.

The introduction of indicative costs with Circulars 19/1968 and 20/1968 provided architects and quantity surveyors with cost tables by which they could calculate the cost limits for SDD approval.

The SDD memorandum No. 20/1968 states that:

> the costs are based on the standards set out in the Scottish Housing Handbook (3 1956) and in the Building Standards (Scotland) Regulations and also take account of recent experience of development at different densities. The costs are also based on the use of the most economical methods of achieving different densities; two storey houses are in general the least costly form of building and the maximum possible use of these has been assumed as well as the minimum possible use of expensive multi storey blocks.

Initially the Indicative Cost tables for house erection were costs per person based on average persons per house. Costs were given for densities from under 30 to 120 and over per acre for an average of 1 person per house to under 60 to 200 and over per acre for an average of 6 persons per house. Costs were given for superstructure which increased in cost allowances with rise in density and also given for substructure and external works which decreased in cost allowances with a rise in density. The reasoning behind this was that the footprint of the building and the amount of external works would decrease per person as density increased, whereas with increase in density superstructure costs would increase with the necessity to increase the proportion of flats albeit that the costs were designed for the "minimum possible use of expensive multi storey blocks".

Not only did the costs aim to restrict the use of multi storeys blocks to the minimum required to achieve the desired density they also, in 1968, made no allowance for the use of more expensive single storey and semi-detached houses at the lowest end of the density bands. The total price of superstructure, substructure and external works increased from the lowest density band to the highest. The use at low density of single storey houses with their large foundations and semi-detached houses with gable walls would in practice be more expensive than using terraced houses, but no allowance was made in 1968 to increase the allowance at the lower density to allow for their use. The 1968 Indicative Costs were, as stated above, based on the most economical methods of achieving different densities and therefore not only discouraged the "over" use of multi storey flats but also made it difficult to use single storey houses and semi-detached houses where they might be more appropriate than two storey houses in rural areas.

Cost allowances were varied by a locality percentage. If an area such as Ayrshire was known to achieve lower tender prices than the Scottish Average and a Highland area known to achieve higher tender prices then the Indicative Costs were adjusted by a factor to compensate. Additional cost allowances could be claimed for slope allowance and car provision exceeding 30 per acre (12/Ha). Additional costs referred to as 'Ad Hocs' could be claimed for a variety of reasons such as planning requirements for slate roofs or additional foundation costs due to poor ground.

Costs were monitored by SDD and adjusted from time to time to reflect varying building costs.

In theory Indicative Costs allowed adequate costs for the housing mix and density required for the area, therefore at first sight ought not to have influenced the form of development other than the cost allowance encouraging architects to maximise the use of two storey housing and minimise the use of expensive multi storey development. In practice however architects and quantity surveyors found it possible and sometimes necessary to design to a favourable density

band. (This could be done by increasing or decreasing the number of houses on the site, varying the housing mix or simply, on sites where the SDD rules defining the boundary of the site were open to interpretation, by varying the site area, for example between a housing area and a park, and thereby moving into a more favourable density band).

It is impossible however to assess how much manipulating of costs was done. In any event the more manipulation by designers to bring schemes within cost the less noticeable cost problems in meeting indicative costs were to SDD monitors. Conversely the more designers pushed up standards of construction and therefore tender prices the more likely monitoring was to show a need to raise indicative costs.

It is also difficult to assess how much Indicative Costs led to the demise of high rise construction as it had replaced the high rise subsidy with density band costs. It could be said that Indicative Costs favoured building lower cost two or three storey terraced housing at a higher density band than the low allowance mid density or building walk up flats at even higher density or a mixed development of both attracting higher Indicative Costs. Looked at in this way the Indicative Cost system favoured compact layouts achieving high density with terraced housing or walk up flats. On the other hand the same Indicative Costs would also favour increasing the height of a high rise block to its maximum economic height to take full advantage of lifts, services and structure while maximising the indicative cost allowances at the higher density bands. Circular 20/1968 had stated that Indicative Costs had been based on the minimum use of multi storey and it is a fact that the use of multi storey for housing construction subsequently declined.

The advantage of the Indicative Cost system, from a Treasury point of view, was that it provided a discipline of cost planning. It also had the advantage that the cost limits to approval were known and could be calculated by those submitting schemes for approval whereas previously they were known only within the Government department. The main disadvantage was the delay in updating costs particularly in times of inflation when the costs became unrealistically low and schemes were delayed unable to meet the cost limits until costs were reviewed and revised.

HOUSING PROVISION

"Multis"

In Glasgow from 1961 to 1968 multi storey flats accounted for 75% of all new public housing. The proportion in blocks over 20 storeys was three times that of London and 18 times that of Birmingham. (17)

Planning our new Homes reported in 1945 an overwhelming preference, given a free choice, of families with young children for low rise housing. Glasgow was unable to accommodate its population (1,024,993 in the 1961 census) within its green belt constrained boundaries in low rise housing. The two storey developments typical of the 1920s were obviously low density but even the three and four storey walk-up flats built in the 1930s and 1950s and which had been the form of development on most of Glasgow's peripheral land was, in meeting sunlight and daylight requirements, lower in density than the slum housing they were replacing. Even tenement improvement resulted in a reduction in density when small substandard flats were combined to provide kitchen and bathroom space for improved flats. Even greater density

reduction occurred with backland clearance to give daylight to the retained tenements. In an effort to house as much of its existing population as possible within its boundary, Glasgow, with a shortage of developable land and taking advantage of Government high rise subsidies, concentrated on building high rise housing in the 1960s. This necessitated housing families including those with young children in high rise flats. In building such a high proportion of high rise flats the council was also acting contrary to the recommendations of the 1958 Scottish Housing Handbook 1 which identified that 48.1% of housing was required for families with young children and those houses should be 1 and 2 storey, 2 and 3 storey flats or 4 storey maisonettes. In other words SHH1 recommended that no children should be more than two storey height of stairs from ground level.

This recommendation was not altered by the Labour Government's advocacy in the mid 1960s of a greater use of industrialised building as industrialised building included both low and high rise systems. Unfortunately there was no restriction on the high rise subsidy to prevent it being used to provide high rise housing for families with young children. Consequently there was no government incentive to follow the SHH1 recommendations on housing suitable for families with young children.

Glendinning and Muthesius attribute the drive behind the multi storey and particularly "package deal" multi storey programme to "Crusading" councillors and particularly in Glasgow to David Gibson, its housing committee convenor from 1961 until his death in 1964.

Glasgow Corporation had been opposed to the overspill programme and, although it had eventually agreed, it still attempted to house as much of its population within its boundaries as it could. Following the construction of Drumchapel, Castlemilk and Easterhouse in the 1950s. Glasgow had no major greenfield sites, development being contained within its greenbelt. High rise development was carried out in the CDA's during the late 1950s and the 1960s. These developments although important in providing replacement housing in the centre of the city were slow to realise. There was also the problem of density limits placed on the CDA's by the corporation's planners. The CDAs, despite including high rise housing, rehoused between a third and a half of the original population. Gibson saw an opportunity in Glasgow's suburban areas to develop smaller areas of land. These could be at the edges of golf courses or railways, or former prefab sites often in areas of suburban two storey housing. There was fierce opposition to these proposals from the corporation's own planners and from architects and planners in the DHS. Both groups considered that high rise was totally inappropriate for suburban sites. Gibson was aided by Lewis Cross, an engineer promoted to Housing Progress Officer in 1961. Together they persuaded DHS administrators to support their multi storey programme against the advice of Glasgow Corporation planners and DHS architects and planners. (18)

Gibson's preference for package deal contracts was based on their fixed price, speed and reliability in meeting the programme. Wimpey's three 20 storey blocks at Royston A, commenced at the same time as Spence's Hutchesontown, and which contained roughly the same number of flats, were finished and let before the Hutchesontown foundations were complete. (19)

Glendinning and Muthesius described Cross as representing the apotheosis of "Anti-Design", claiming that Cross "saw blocks of dwellings whether in the form of tenements or point blocks as no more complicated than his own field of technical knowledge, "drains and roads". (20)

Cross, while getting the best deal for Glasgow through competition between UK package deal contractors, left design to the package deal firms. This became the pattern through much of Scotland with the result that throughout the UK Scotland had the lowest proportion of local contractors (18%). (21)

Gibson was however under pressure from Glasgow's Direct Labour Organisation for a share of the capital works. The DLO had built 63% of Glasgow's post war dwellings by the end of 1962, mostly in tenements. Its share of the multi storey was considerably less (23%). It did however get the opportunity to build the 26 and 31 storey Red Road Flats designed by Bunton and completed in 1966.

Gibson died in 1964. He is quoted as saying "My idea of fulfilment is to draw up my car and see the lights of Knightswood or some other scheme shining out and think of all the families translated from gloom to happiness". (22) Initially Gibson's idea had been that small households in cottage houses would vacate them to rent a high rise flat and the cottage house could then be let to a family from the slums. This simply did not happen and families were moved straight from the slums into the high rise flats. Gibson was later to defend families in high rise flats to the DHS critics by saying that in Glasgow there was no problem with children in high flats. (23)

In 1962 the open ended $^{2}/_{3}$ cost plus subsidy was replaced with a flat rate subsidy. There was some concern about the wisdom of building so many high flats but government ministers were anxious about housing figures. There was also the problem of a general building boom in the early 1960s and concern that if package deal contractors were not providing housing traditional builders would not have the labour or materials to provide the required house numbers.

Glasgow's suburban high rise had given enough breathing space to return to the CDA's by the late 1960s when the proportion of high flat approvals was over 80% in CDA's compared to under 50% earlier in the decade. (24) Glasgow's multi storey building was the most dramatic but other cities and towns were also building multi storey blocks in the 1960s.

Aberdeen's high flats, often in the form of mixed development as at Hazelhead or along the coastal edge as at Seaton, were almost all designed by the city architect's department. Aberdeen's housing programme was to solve the waiting list problems rather than replace the slums. Aberdeen's flats were therefore not as Glasgow's often were, tenanted by the poorer sections of the community. In the case of Hazelhead the tenants of the mixed development initially paid, in addition to their rent, a maintenance charge for looking after the estate landscaping. This was later dropped and the maintenance costs covered by the rates but it gives an indication of the income level of the original tenants.

Dundee, despite having fewer restrictions on available land than Glasgow, also embarked on a large multi storey programme, a large proportion of which was built by Crudens.

Edinburgh built high flats throughout the 1960s with the Leith Fort project approved in 1960 and the Wester Hailes flats approved in 1969/70. Edinburgh's high flats are mainly on the periphery of the city. High buildings of any type were often strongly opposed by civic groups when they were proposed for central or historic area locations.

Large and small towns also built multi storey flats. Motherwell, Paisley, Clydebank, Coatbridge, Kirkcaldy, Falkirk and Greenock all built large numbers of high flats.

Some small towns built multi storey blocks which seriously damaged their character and skyline. Irvine Burgh built five 14 storey flats along the river obscuring the three church spires for which the town was known. Kincardine, a historic Fife village on the Forth, has three 16 storey tower blocks built on high ground above the two storey pantiled roofs.

Of the new towns Cumbernauld and East Kilbride both built multi storey flats. Glenrothes has one block, Raeburn Heights, a 16 storey block near the town centre which was built with associated garaging for high rent paying small households. Livingston and Irvine, the last two towns designated have built no multi storey flats.

It was common practice in the 1960s for package deal firms to approach Local Authorities offering to build multi storey blocks to solve their housing needs. Not all authorities took up the offer, only just over 30 towns and cities in Scotland built multi storeys.

One package deal contractor offering to build high rise flats above Newburgh was turned away being told by the provost "Newburgh is a lang toon". Newburgh later built one and two storey pantiled terraced housing in the backlands and up closes and wynds off the main street and preserved its character. Newburgh was not a tourist stop but a linoleum town in the 1960s.

The proportion of public housing built in multi storey blocks increased throughout the 1960s until 1968 when there was a significant reduction. Approved tenders for Scottish Local Authority, SSHA and New Towns for flats 6 storeys and above rose from 10.7% in 1960 to 25.8% in 1965, continued with over 23% in 1966 and 1967 but fell sharply to 11.4% in 1968 and 10.1% in 1969. (25) (Fig. 6.08) How much this reduction was due to doubts raised by the Ronan Point collapse in March that year or by the end of high rise subsidies and the introduction of Indicative Costs in 1968 is difficult to say but it is likely that both factors influenced the move away from the provision of flats in multi storey blocks.

Systems

The Labour Government's 1965 promise of a commitment to a large housing programme and its emphasis in its white paper and subsequent circulars on industrialised building systems led to a growth in the number of systems available.

Systems were offered as design and build package deals, sometimes described as closed systems, where in theory the contractor's standard house type and building form was used although it was not uncommon for Local Authorities to request and obtain variations to the standard "closed" system. Alternatively systems were marketed as open systems which allowed architects to design their own house types using the system's kit of parts.

The systems ranged from high rise, usually heavy concrete panel systems to low rise lightweight systems using a variety of materials. The low rise systems were often, as with the 1940s/50s non traditional houses, partially traditional construction as for example the Wilson system used in Pennyburn, Irvine New Town's first housing scheme. The Wilson system used in Irvine was brick party/cross wall construction with ground and first floor joists and timber infill panels spanning between crosswalls with dry internal finishes.

A major difficulty with systems was that the heavy concrete panel system was economical and could compete with traditional construction for high rise, but for low rise a lightweight system was more competitive with traditional construction. This gave system contractors problems with mixed development schemes which might contain two storey housing with some walk up flats and some multi storey flats. Unless the scheme was packaged with the high and low rise as separate contacts, system contractors had problems in being competitive.

One system which attempted to overcome this problem was Jespersen whose 12M system was appraised and certified for low and high rise by the NBA.

Jespersen set up a factory at Livingston and their 12M system was used by the New Town Corporation to build Craigshill. The system used a 4 foot (1.219m) module concrete panel crosswall with a timber frame infill panel clad externally at Craigshill with redwood boarding. This combination of the heavy structural concrete panel and the lightweight infill panel was used at Livingston to build both walk up flats and two storey housing.

The 12M system was an open system and the house types as well as the layout were designed by the Development Corporation Architects Department. Glenrothes, who had set up an industrialised housing group, had designed the housing area, Pitteuchar East, using the 12M system, the intention being to follow on after the Craigshill development at Livingston. The industrialised design which had high rise point blocks, walk up flats/maisonettes and two storey housing was abandoned later for cost reasons and a low rise traditional design was built to the new indicative costs. (26)

One system which did compete and continued to compete with traditional construction was no-fines construction. No fines construction has had a long history in Scotland, the first houses probably being the Corolite No-Fines houses built in Edinburgh in 1923 followed by the 1940 SSHA Cellular Concrete Commissioners houses in Tannochside, Carluke and Holytown. These were followed by Wimpey No-Fines two storey housing from 1946 onwards and in 1954 Wimpey built five storey no-fines flats for Hamilton District and eight storey flats for Kirkcaldy Burgh the same year. By the 1960s Wimpey was building no fines two storey and high rise housing throughout Scotland. Glenrothes Development Corporation's only tower block, Raeburn Heights, was a 16 storey no fines block built by Wimpey in 1967.

Traditional Construction

While the 1960s was the high point of industrialised housing production and while, as has been described, package deal systems dominated Glasgow's 1960s housing programme it is important not to over emphasise the role of industrialised building. The percentage of dwellings built by Local Authorities and New Town Corporation's in Britain using industrialised building techniques was 21% in 1964 rising to 42% by 1967 and falling to 15% by 1970. (27) Assuming that the figures for Scotland were not greatly different to the rest of Britain, even allowing for the greater use of no fines construction for low rise housing, the majority of housing built throughout Scotland was of traditional construction.

The type of housing built varied depending on whether it was rural, village infill, suburban or urban but there was, typified by Cumbernauld housing development, a move towards low rise high density housing. Edinburgh University Research Unit had built experimental dense single

storey courtyard housing at Prestonpans and with the introduction of indicative costs, which had based costs on a maximum use of two storey housing and minimum use of high rise, the use of two storey housing increased towards the end of the 1960s and in the 1970s. With the exception of no-fines construction, industrialised building found it difficult to compete in cost terms on two storey housing consequently traditional construction together with no-fines dominated the low rise housing.

Improvement

The 1968 White paper The Older Houses In Scotland stated that not enough improvement work had been done in Scotland. The total number of grants, discretionary and standard, to private individuals had remained around 4,000 per year from 1962 to 1967 and most of these had been to owner occupiers rather than to private landlords whose property was often in the poorest condition.

By contrast the number of exchequer grants paid to Local Authorities in respect of improvement to houses they owned had increased from a very low level of 427 in 1962 to 3,679 in 1967. (Fig. 6.08) However much of this work was of a limited kind designed to provide facilities in particular electric power circuits which were lacking in the older subsidised housing. (28)

The 1968 gales dramatically revealed the need for major repairs particulaly to nail sick tenement roofs as well as the need to carry out improvement of basic sanitary and cooking facilities. The 1969 Act gave powers to the Local Authorities to ensure that all houses were brought up to tolerable standard and to declare areas "Housing Treatment Areas". It also raised the level of the improvement grants.

Completions of new public sector houses reached their maximum, since 1953, of 34,906 in 1970, completions falling to 29,169 in 1971 as a result of a reduction in contract starts in the late 1960s. The 1969 Act was therefore the beginning of a shift of emphasis from new build to improvement work.

Co-ownership Housing

The 1964 Act established the Housing Corporation, responsible to the Secretary of State, to assist housing societies and housing associations to provide Co-ownership and Cost-rent housing. In fact housing associations produced very few houses throughout the 1960s. housing association completions had only accounted for 2,647 houses from 1947 to 1969, an average of only 115 houses per year and while completions improved after the 1964 Act it was only a marginal improvement of 118 in 1966 to 288 in 1968 and back to 183 in 1969. In theory this type of housing ought to have appealed to those in well paid occupations whose mobility made rental rather than purchase more suitable. The reason for the low performance is speculative but the competition from the private market with its financial attraction of income tax relief on mortgages and from the low rents in the public sector, where additional subsidies were available for incoming workers, is likely to have been a major factor.

In fact the best known Co-ownership housing scheme in Scotland, 110 houses at Barnton, Edinburgh for Southfield Housing Society was financed under the 1962 Act. The Architect's Journal, describing the scheme two years after its completion in 1968, comments that the

finance (a loan of 7½% over 60 years) under section 11 of the 1962 Housing (Scotland) Act had proved more generous than the subsequent Housing Acts. (29)

Housing Completions

While there was a continued decline in public sector house completions to 1962 the remainder of the 1960s saw a general increase in public sector completions. This is particularly true after the Labour Government's pledge to build 50,000 houses per year in Scotland but completions had been increasing from 1962. Private housing annual completions continued their rise with the result that, although public sector completions in 1970 were less than in 1953, total housing completions were greater. Local Authorities were still the major providers of housing. SSHA completions had fallen to 967 in 1962 but increased to 2,779 in 1969 while the contribution of the new towns increased to 3,656 by 1969. Housing association contributions as seen above remained small.

	1960	1962	1964	1966	1968	1970
Private Sector	6,529	7,784	7,662	7,780	8,720	8,220
Public Sector	22,063	18,977	29,509	28,159	33,269	34,906

(Refer also to Fig 11.01 to 11.03 for more detailed statistics)

HOUSING DESIGN

Multis

Hutchesontown/Gorbals, Glasgow

The development of Hutchiesontown/Gorbals CDA which began in the 1950s continued throughout the 1960s. The Robert Matthew's area B and Spence's area C, Queen Elizabeth Square described in the previous chapter and approved in 1958 and 1960 respectively were not completed until 1964 when each won a Saltire Award for good design.

SSHA built 552 flats in four 24 storey blocks at Caledonian Road, Gorbals CDA area D. The project was approved in 1963 and is situated on the eastern edge of the CDA and adjacent to the earlier four storey walk up flats and maisonettes. The development was, like Queen Elizabeth Square, purely high rise flats but sited close to the earlier four storey flats gave the CDA as a whole a mixed development of four storey and multi storey flats. The original SSHA development accommodated car parking under a first floor level raised deck. This deck and the associated covered car parking was removed in 1994 as part of a scheme to improve security. The 1994 security measures include providing open landscaped areas with improved lighting, controlled door entry and warden call facilities. (30) The provision of car parking below general ground level under multi storey blocks was advocated in the Scottish Housing Handbook 1, 1958, for high density development in order to avoid covering all available open space with car parking. It also stated that as the cost of such provision was high the demand for car parking, would at the current levels of car ownership, rarely justify this type of solution. (31)

The under deck car parking solution was in consequence rarely provided in Scottish housing projects. However SSHA anticipating the growth of car ownership had provided this experimental form of accommodation for residents' cars. The design aim to provide a car free environment by concealing parked cars under a deck proved to be unsuccessful as the cars parked in uninviting poorly lit spaces without the protection of visual supervision became vulnerable to vandalism and theft, hence the eventual decision to remove this expensive provision. (Fig. 6.09)

Anderston Cross, Glasgow

The Anderston Cross CDA replaced tenements where 56% of the houses had one or two rooms and 31% were back to back. Only 11% had baths.

The brief for the development was to provide a mix of house sizes, 11% 1 apartment, 16% 2 apartment, 50% 3 apartment, 20% 4 apartment and 3% 5 apartment. The density was 150 habitable rooms per acre. Calculated at 1.1 persons per habitable room (i.e. livingrooms and bedrooms), this gave a density of 165 persons per acre or 413 persons per hectare. Density in terms of persons is obviously an estimate of likely occupancy and is determined by housing allocations and family development (children being born and young people leaving home). Calculated on bedspaces Glasgow's CDAs density was above 180 bedspaces per acre or 445 bedspaces per hectare as Glasgow corporation's preference was for house types to comprise of mainly double bedrooms. The brief required vehicular and pedestrian traffic to be segregated. The brief also required that as many as possible of the houses should be located in walk up flats. The development was designed and built by SSHA using a system of construction called Bison Wallframe. This system used precast concrete external and internal wall and floor panels to form a box frame structure. The ownership of the development was split 307 houses to SSHA and, the majority, 758 houses to Glasgow Corporation. (32)

The first phases on the south side of the CDA were approved in 1967 and accommodated approximately half the houses in walk up flats and the remainder in 8, 10 and 12 storey slab blocks with two 18 storey tower blocks.

The third phase, approved in 1978 and on the northern edge of the site along St. Vincent Street is a continuous wall of 9 to 13 storey slab blocks positioned to cast their shadow over the arterial road rather than over the residential development. (Fig. 6.10)

External landscaping was designed with semi mature trees in protected areas with hard robust surfaces used throughout to stand up to the wear and tear of the high density of population.

Car parking is provided as open parking or as lock ups under the housing blocks or lock ups under a deck. The roof of the latter lock ups or "garage centres" is used for open space. The lock ups or garages provided at Anderston Cross clearly give greater security than the covered parking under the deck at Hutchesontown D and therefore has been a more satisfactory provision.

Density loss with redevelopment

It is worth noting that, at Anderston Cross CDA in order to achieve the requirements of the brief namely: a density of 165 persons per acre (4.13p/ha), vehicular and pedestrian segregation, meet daylight and other building regulations and Scottish Office sunlight requirements, it was necessary to build 50% of its housing in multi-storey blocks. In the 1966 publication Glasgow's Housing Centenary (p. 75) the existing conditions are compared with the CDA proposals for Anderston Cross. The loss of dwellings and population is considerable : reduced from 3,376 to 1,217 dwellings, 11430 to 3,650 people and a reduction in density of 343 to 165 persons per acre (859 to 413 p/ha). The existing building form would have been mainly four storey tenements built in close proximity to each other. The loss in population from the tenement areas redeveloped with high rise housing is not unique to Anderston Cross, similar population loss occurred elsewhere in Glasgow at Hutchesontown, Townhead and Cowcaddens CDAs.

It is likely that there would have been less of a reduction in population had the structurally sound tenements been renovated and the poorer tenements replaced with new tenemental infill development, but it is important to remember that there would still have been some reduction in population. The reason being that with the incorporation of bathrooms and kitchens into the existing flats and the amalgamation of smaller flats to provide larger flats the tenements would have, if renovated, accommodated fewer residents than the often overcrowded substandard tenements.

The incorporation of multi storey flats into the design of the CDAs was to provide the desired density with the required standards of daylight, sunlight and traffic segregation but this was only possible as a result of the additional subsidy for high rise flats.

Package Deals, Glasgow

The preference in Glasgow for package deals in the 1960s has been already discussed. In order for package deal contractors to keep costs down and be competitive, it was essential to have repetition to gain economies of scale. While modifications often had to be carried out to meet a particular authority's brief the system contractors would wish to repeat their basic designs to be competitive on cost.

Wimpey, builders, used the same basic design they used at Royston A in 1959 for Kirton Avenue, Knightswood in 1965 although the first is 20 storey and the latter is 24 storey. Both these sites are adjacent to earlier low rise housing and built on land bordering a railway. (Fig. 6.11).

Wimpey used a different design at Lincoln Avenue where six 20 storey blocks accommodate 684 houses along the park edge. Sited in the park and viewed over the pond they are given an attractive setting. Viewed from over the roofs of the two storey semi detached houses they dwarf the scale of the original houses as can be seen with a repeat use of the design at Scotstonhill Kingsway (Fig. 6.12). It has already been stated that there was strong objection to the building of tower blocks in the low density suburbs. An interesting point to note, however, is that, while they were not designed as mixed development, by being sited in existing two storey housing areas they provided a mix of flats and houses in the overall area. Architecturally, flats could have been provided in the area to meet any local demand without

destroying the scale of the area by building flatted houses or walk up flats. The purpose of building the flats was however not to meet local demand but to maximise the development potential of any available piece of land in the city to rehouse residents from slum housing.

Sighthill in Glasgow is a mixed development of walk up flats and multi storey blocks by Crudens, builders. Despite the area being surrounded by open space, the cemetery to the north and the Sighthill Park to the south, the 20 storey blocks have none of the elegance of towers in the park. Instead the ten 20 storey blocks give the impression of a heavy concentration of development illustrating the desire to develop the site to its maximum potential, Crudens used a similar built form at Norfolk Court in the Lauriston Gorbals CDA with a similar result. (Fig. 6.12).

Red Road Flats

These flats designed by Sam Bunton and Associates were the prototype for what was intended to be Glasgow direct labour's own "package deal" flats to be repeated in other parts of the city.

Earlier designs for 20 storey crosswall blocks were abandoned in favour of considerably higher steel frame blocks with lightweight asbestos cladding. The final designs provided 1,350 dwellings at 212 persons per acre (530 persons per hectare) in two 31 storey tower blocks, three 31 storey point blocks and two 26 - 28 storey slab blocks. The project was estimated to cost £5,340,020 and piling commenced in November 1963.

For greater speed, prior scheduling of trades was replaced with measurement of work while in progress. Bunton had predicted steel frame blocks could be completed in 15 month whereas the project took 31 months and the costs escalated to £8,932,2269. The new steel framed structure proved unsuitable for direct labour and 60% of the work was contracted out. The expensive prototype was therefore not repeated.

Despite a survey in 1967 which claimed 88.5% of Red Road tenants were satisfied with their estate, by 1977 10% of the 240 flats were vacant. Horsey suggests that a major cause of dissatisfaction was the high number of families in the flats. (33) Miles Horsey writing in Town and Country Planning in 1982 refers to complaints from the initial tenants about lack of shopping and communal facilities and about the inadequacy of the number and speed of the lifts.

The point blocks have a 50/50 mix of 1 and 2 bedroom flats but the tower block flats all have 3 bedrooms and would have been occupied by families many of whom would be families with young children.

The death of a 12 year old boy in a fire in Red Road flats in 1977 led to the tenants' association's pressure for demolition. However a housing department report favoured conversions to flats for student accommodation and in the early 1980s flats were converted for use by the YMCA and into multi tenure for students and executive accommodation. This belated allocation of the flats to adults brings the flats into the use for which they were recommended in the 1958 SHH1. (SHH1 had recommended that families with young children should be housed in cottages, three storey flats or four storey maisonettes but not in high rise flats).

It is not only the allocation policy which has changed, the asbestos cladding has been replaced with brightly coloured corrugated sheeting and more importantly the entrance areas have controlled entry foyers giving tenants the privacy and security provided for the middle class residents of the 1930s Mansion flats. The 1930s Mansion flats provided high quality high rise flats for the wealthy. Set in their own grounds they had concierge controlled access to attractive foyers with lift access to large spacious flats. The grounds of the Red Road flats, unlike those of the Mansion flats, are wide open grass areas of no functional, recreational or aesthetic value and only serve to emphasise the starkness and isolation of the blocks from the surrounding area. (Fig. 6.12 - 6.14).

Wyndford Estate, Glasgow

This estate built by SSHA throughout the 1960s comprises 1,898 dwellings in four storey walk up flats and tower blocks of 8 to 26 storeys. The estate won a Saltire Award for good design in 1968.

In contrast with Red Road this is mixed development with the capacity to house families with young children in four storey maisonette blocks in which 50% of the houses are at ground floor level. The estate is well maintained with well established landscaping softening the external spaces. The building fabric is also well maintained and the external finish is as originally built. (Fig. 6.15).

Fortrose Street, Partick, Glasgow

This was a joint project set up in 1959 by the Scottish Development Department (then the Department of Health for Scotland) and SSHA with the primary function of carrying out research in multi storey housing. The building regulations of 1963 under the 1959 Act were being prepared when the scheme was being designed and the scheme was required to illustrate compliance with the new regulations.

Specific regulations which have a bearing on the design are those of fire escape, thermal and sound insulation and daylight regulations. The Scottish Office recommendations on sunlight, not part of the building regulations, were also compiled with.

The project architect was John Fullarton, later to be Technical Director of SSHA. The project received a Saltire Award Commendation in 1964.

The design is a single 9 storey block of maisonettes built along the existing street frontage but set back 26 metres from the buildings opposite instead of the existing 12 metres in order to comply with the sunlight recommendations. Even with this set back the ground floor at the south end failed to receive the recommended sunlight and therefore was used for garaging set under the *pilotis*. At the northern end of the block which faces onto open space 5 single person flats were provided at ground floor level.

The remaining 8 floors are occupied by maisonettes with a "warm" glazed access corridor at living room/kitchen level and a secondary fire escape corridor at bedroom level. The fire escape corridor doubles as a drying balcony for hanging out washing. The regulations for flats under 80 feet (24.4m) in height allow one means of escape (one stair) per floor with secondary

escape for each flat which could be from an escape window. The Fortrose Street flats have balcony escape at each floor to a single stair access. The flats, with the entrance to the top maisonette being just under 62 feet from ground access, have access to the balconies from a single stair and lift.

The maisonette plans have livingroom and kitchen at the lower level with living room access onto the private balcony. The upper floor has two double bedrooms, bathroom and drying balcony. (Fig. 6.16).

The maximum density allowed by planning was, as at Anderson Cross, 150 habitable rooms per acre. The site was 1.1 acres (0.44 Ha) and the accommodation provided was 48 four person 751 ft² (69.8m²) maisonettes, 5 single elderly person 394 ft² (36.6m²) flats. Garages and parking spaces together provide for 27 cars. This gave a built density of 140 habitable rooms per acre and 179 persons or bedspaces per acre (448 bedspaces per hectare).

A toddlers play area was provided in a sunken area at the north end of the site. The size of the flats being only two bedrooms meant that only small families with a maximum of one child or two children of the same sex would be allocated a flat. The elderly single persons flats were all provided at ground level.

Edinburgh

While Glasgow built high flats in its central CDA's and on any available land often on peripheral areas of the city, Edinburgh with its High Building Policy restricting height of buildings in the centre and on the city road approaches, built its high flats almost exclusively on the edges of the city. The main areas of high flats in Edinburgh are at Leith and Muirhouse/Pilton on the Northern edge, Sighthill and Wester Hailes on the western edge and to a lesser extent at Inch, Niddrie in the south eastern edge. The closest high flats to the historic core of the city is at Dumbiedykes lying low down on the edge of Holyrood Park.

As in Glasgow there are both package deal systems and one off designs.

Sighthill

With the exception of one Bison development, all the multi storey flats in the Sighthill, Wester Hailes area were built by Crudens.

The Sighthill centre area is a mixed development of four storey walk up flats and 17 storey flats. The three 17 storey flats are sited on the northern edge adjacent to the park, avoiding overshadowing of the lower flats. The blocks are linked with a first floor concrete deck providing covered parking and car parking on the roof. In addition to the roof car parking there are paved areas with concrete benches. Windswept and overlooked by the flats these areas are neglected and serve no useful purpose. (Fig. 6.17) As with the covered car parking at Hutchesontown D, this expensive provision has not proved a successful form of car parking as most cars are parked in the open where there is greater supervision.

Leith

The redevelopment of Central Leith, begun with the 1957 Leith Fort competition, continued with projects such as Couper Street, Cables Wynd and Tolbooth Wynd which were approved in 1961, 1963 and 1964 respectively.

Couper Street was built with phase one incorporating two twenty storey tower blocks and a cranked three storey block providing 8 bedsits, 18 one bedroom flats, 144 two bedroom maisonettes and 13 three bedroom maisonettes. The three storey block has single bedroom flats at ground floor level with three bedroom maisonettes above, a drying area being provided at roof level at the "hinge" of the cranked block. The twenty storey towers accommodate the two bedroom flats with drying areas and bedsits at roof level. The ground floor level accommodates caretaker's flat, bins, tank room etc., and curiously also the laundry, divorced from the roof drying area. Presumably it was thought that the lifts overcame this problem.

Density for the first phase was 266 persons per acre but would reduce to 159 when the second phase was built, (there were to be no tower blocks in the second phase). Only the first phase was built resulting in a very awkward siting against the remaining tenements.

The original external finish was quartz aggregate precast concrete panels whose crisp white finish enhanced the modular aesthetic of the blocks. These have dulled down as can be seen from those that remain on the three storey block but the towers have been overclad with corrugated metal coloured sheet which not only destroys the original character but makes them shabby and extremely obtrusive. Cleaning the concrete panels would have been a simpler and more effective visual solution. (Fig. 6.18 - 6.20).

In contrast the blocks at Cables Wynds and Tolbooth Wynd still have their original precast concrete panels and while they would be none the worse of a good clean they are far more successful architecturally in blending with the adjacent stone tenements than their coloured metal clad neighbours at Couper Street.

The elevational treatment of Cables Wynd and Tolbooth Wynd is unmistakably Corbusian, influenced by the Unité flats at Marseilles and perhaps the north tip of Cables Wynd by the convent of La Tourette. The sections and plans however reveal a more conventional plan form. Cables Wynd, whose boomerang plan shape earned it the nickname the "banana block", has a single sided corridor access with each corridor serving two bedroom flats at balcony level and three bedroom flats on the floor above and on the floor below balcony level. (The Unité blocks have a centre corridor which gives access to double height livingroom maisonettes accommodating two maisonettes for every three floors per corridor with each maisonette having rooms on both sides of the block).

The Cables Wynd entrance area and corridors are in common with almost all of those built during this period extremely spartan. The long corridors are bare and uninviting and the flat entrance doors hard onto the corridors have no buffer zone between public corridor and flat.

The Cables Wynd ten storey block has like Couper Street suffered from a halt in the demolition of the original tenements as its flats look south east and east directly into the rear of a retained tenement rather than the open space envisaged. (Fig. 6.21, 6.22). Whereas Cables Wynd is

one single ten storey block, Tolbooth Wynd is a mixed development of one 11 storey tower block surrounded by walk up flats.

Dundee

Dundee like Glasgow made extensive use of 'package deal' contracts for its high rise suburban developments, Crudens being the most frequently employed firm.

At Ardler an earlier scheme, by Baxter Clark and Paul for multi storey blocks snaking along the northern edge of the park, was replaced by a scheme by Crudens for six 17 storey slab blocks which are aligned north south and laid out at regular intervals along the park. Whereas the earlier scheme had the majority of the flats facing southerly with little if any overshadowing, the Crudens slab blocks cast a shadow in morning and evening over the forecourts of the blocks, most of which are occupied by car parking spaces. (Fig. 6.23) The blocks were built in 1967/68. In 1995 the Local Authority, with costs shared with Scottish Homes and Scottish Enterprise Tayside, commenced demolition. The demolition was phased, the first block was demolished in 1995, the second block was demolished and the third block vacated in February 1996. It is proposed that the site will be redeveloped with private housing and by Housing Associations.

Crudens using the Skarne industrialised building system also built Whitfield. This was a mixed development including two 16 storey slab blocks with the majority of the scheme built as 5 storey walk-up maisonettes. Whitfield was a large project with 2,459 deck access dwellings accommodated in 130 blocks laid out in a honeycomb pattern of courtyards with the decks linking the blocks together at the intersections and bridges built over the main access road to link the hexagon courtyards on both sides of the road. It was possible therefore to travel across the scheme at high level using the linked deck. Access stairways and decks were hard uninviting spaces mainly finished with bare concrete. Whatever the convenience advantage of linking the high level walkways, that was outweighed by a lack of privacy and security.

Whitfield was commenced in the late 1960s and completed in the early 1970s. Large areas of Whitfield were demolished in 1990 and the remaining blocks were refurbished, cutting the high level links and in some areas forming new access stairways and changing the image of the scheme with bright coloured render, adding pitched roofs and coloured balconies. Many of the flats however are still accessed along the original uninviting corridors where an open view of the refuse chute "welcomes" visitors.

Aberdeen

In contrast to Glasgow's Red Road or Hutchesontown/Gorbals, or Edinburgh's Wester Hailes/Sighthill and Dundee's Whitfield, Aberdeen's high rise housing is generally attractive, often sitting in well maintained landscape. As has already been mentioned however Aberdeen's building programme was not driven by slum clearance but by the housing shortage. The consequence of this is that Aberdeen's high rise tenants were likely to be from a higher income group than those moving out of condemned tenements in the Central Belt of Scotland.

Hazlehead, Provost Graham Avenue, started on site in 1962, is a mixed development with four thirteen storey tower blocks accommodating 184 two bedroom flats. Three storey blocks provide one and two bedroom flats and the remaining development is two storey housing and

flats with some single storey elderly persons dwellings. The whole estate, built on the edge of Hazlehead Park, is open plan landscaping with no front or rear gardens. In areas with high vandalism this scheme may well have had problems. Here it has succeeded partly due to the high level of landscape maintenance typical in Aberdeen but it must also be due to the tenants who stay there. Although no longer the case the original tenants at Hazlehead paid, over and above their rent, a landscape maintenance charge. These tenants therefore had a financial interest in seeing that the landscaping was respected and well maintained. (Fig. 6.24).

At Seaton on the northern coastal edge of Aberdeen, high rise flats were erected along the side of the wide coastal park beyond which are the dunes and the sea. The first phase of Seaton commenced on site in 1969 and the later phases followed in 1971 and 1972. Seaton A with four, seventeen storey blocks used the Bison system. Seaton B, C and D are three, ten storey blocks and in the second and last phase the seven, nineteen storey blocks were also built using Bison.

1,247 dwellings were built at Seaton, all in high rise blocks, using a small area of land on the edge of the existing development at a density made tolerable by the existence of a large expanse of coastal park. It would have been impossible to provide 1, 247 low rise dwellings on this site without building over the coastal park. The density as defined by the site boundary on which the towers sit is extremely high and therefore would qualify for high cost allowances under the indicative cost system. The close proximity of the coastal park gives living conditions which are however anything but overcrowded. (Fig 6.25)

This is perhaps the explanation of why Aberdeen was able to and continued to build high rise flats at Seaton at a time when the building of high flats in Scotland as a whole was considerably reduced. (In 1970 approval for flats and maisonettes over 6 storeys numbered 1,800 whereas in 1965 it had been 8,573 not including the 5,029 maisonettes some of which were built high rise).

Fife

In contrast with Newburgh on the Tay, on the Forth another Lang Toon, Kirkcaldy, built high flats in the 1950s and 1960s all of which were package deals by Wimpey. The flats built in the 1960s were at Pathhead and started on site in 1964. Residents have fine views over the Forth but the three 15 storey blocks dramatically alter the character of what was once a long stretched out low rise town in which the highest buildings were churches and Linoleum factories.

Wimpey also built a 12 storey tower at Dunfermline and a 16 storey tower at Glenrothes.

The only other high rise flats built in Fife were at Kincardine. The three 16 storey tower blocks were built using the Bison system. The justification for using tower blocks in a small two storey pantiled historic town was that the area was undermined with old coal workings and, as the site for housing required to be grouted, high rise flats would limit the area to be grouted and would take advantage of the increased bearing capacity of the grouted site. Started in 1969 this, like Seaton in Aberdeen, was a project built when the use of high rise flats was declining but built for specific local site conditions.

The structural engineering justification for building high rise at Kincardine should have been overruled by townscape considerations by the planning authority as the impact on the skyline is devastating. (Fig 6.26)

Irvine

A close contender for causing the most damage to the skyline is the effect on the local townscape of the five 14 storey Wimpey towers at Fullarton Street in Irvine. Irvine was instantly recognisable previously by the spires of Old Parish, Fullarton and Trinity Churches.

A redevelopment along the river by the Irvine Burgh Council, the towers completely overpower the townscape value of the church spires. The wide grass area left over around the base of the towers is of no amenity value, and as the river is at a lower level, the scheme does not even allow views of the river from the road. (Fig 6.27) The 275 dwellings could have been accommodated on the same site area using terraced housing and walk up flats similar in scale to those on the other side of Fullarton Street. Indeed a low rise scheme was proposed for the area by Hay Steel and Partners. (34) The project which was accepted by the Burgh was however a package deal by Wimpey and was approved in 1966. Irvine New Town was designated on 9 November the same year and was ironically to build only low rise housing and walk up flats.

Greenock

Rankin Court in Greenock has the distinction of being the only system built multi storey block to win a Saltire Award. The block is a fairly typical cuboid Bison tower block. Sited high on the top of a steep slope the scheme is mainly distinguished by the attractive use of granite setts to form the stepped ramp and embankment to the base of the tower. (Fig 6.27)

New Town Towers

Of the five Scottish New Towns only the first three designated built high rise flats.

Cumbernauld aiming to build a high density compact town used tower blocks throughout the town in the 1960s to increase the density of its residential areas. These consequently were built in close proximity to low rise accommodation and walk up flats giving each area a mixed development in which family accommodation was mainly provided in two storey housing. The high rise blocks were system built and in Cumbernauld were mainly by Bison.

East Kilbride whose housing in the 1950s had been low rise two storey with walk up flats close to the town centre, approved four high rise projects between 1965 and 1968. As at Cumbernauld, following Government recommendations to make greater use of industrialised building and give continuity of construction, East Kilbride used one system for the three first projects but whereas Cumbernauld used mainly Bison, East Kilbride used a Wimpey system for the three projects.

Glenrothes built only one residential tower block, Raeburn Height, also using Wimpey. These 16 storey flats were built close to the town centre and provide 60 small flats plus, at ground floor level, one caretaker's flat and a tenants' room. The flats are provided with lock up garaging to the rear and although the landscaping is open on the road edge, changes of level

and hedging clearly define the private nature of the grounds. These flats were specifically designed for occupancy by one or two persons and not as family housing. Architecturally the block is not particularly noteworthy but contributing to its success is the absence of children and the private nature of the grounds, a feature it has in common with the 1930s Mansion flats. (Fig. 6.28)

Cumbernauld

Cumbernauld, a Mark 2 new town was planned, not on the neighbourhood Mark 1 principle but with one major town centre around which compact residential development was grouped, all within walking distance of the town centre. The town was also built with a high degree of traffic separation with traffic free pedestrian areas. The land usage of the highly engineered roads with main junctions designed with grade separation was high. Consequently the overall density of the town was no greater than that of a Mark 1 New Town. As stated earlier East Kilbride and Cumbernauld both have a gross overall density of twenty-two to twenty-three persons per hectare.

The way in which this high degree of traffic separation and compact development was achieved in residential areas was to restrict cars to the access roads and periphery of the scheme. Building regulations required houses to be within 150 feet (46m) of a public road for access and refuse collection. Houses were therefore designed such that residents parked their cars in grouped car parking or garages and walked in traffic free areas up to 150 feet to the front door of their house. This gave large traffic free areas around the houses providing safe areas for children to walk and play. It also forced car owners to park their cars away from their houses. This restriction was later to become a problem in many such areas with the rise in car theft.

Seafar Phase 2 is the town's best known scheme, winning a Saltire Award in 1963. Built on a north facing slope of 1 in 7 it provides 143 houses at a density of 166 bedspaces per hectare. 9 of the 2 bedroom houses are built over garages but the remainder are two storey split level houses: 127 two bedrooms with a further 7 similar split level houses with an additional pend bedroom.

The houses are built along the slope and are narrow depth wide frontage built into the slope with bedrooms at ground floor and livingroom, kitchen at first floor. Access is from the south at the half landing level. The houses have shallow monopitch felt roofs to decrease overshadowing and, with the livingrooms at first floor level, the design of the houses allows views over the roofs of the houses lower down the slope. Sunlight penetrates the livingrooms through a south wall window positioned at high level to avoid privacy problems from the pedestrian access on the south side. The large "viewing" north facing windows were double glazed to avoid heat loss. The houses have no gardens, the small side entrance porches project to enclose a small private entrance court. This entrance area also accommodates the rotary drier which, being on the south side of the dwelling, while practical for drying purposes, has the unfortunate consequence that residents' washing is on public display. (Fig. 6.29 - 6.30)

Pedestrian access from the houses to the town centre is along the contours to the north/south routes which run up the slope through the terraces under the pends.

Muirhead 3 uses the split level house types described above on the steeper northern part of the site and three storey 4 bedroom houses with garages on the ground floor at the southern edge of the site. The centre of the site is built with 42, 1½ storey 3 bedroom houses. These houses are laid out on the gentler sloped area and are set out in parallel terraces lying NW to SE. Parking is restricted to the periphery of the site and pedestrian movement towards the centre is on the north eastern side of the terraces. All houses have gardens and overshadowing of gardens and houses is avoided by the single storey side of the house facing NE with the SW two storey side facing the garden trapping the sun. Livingroom, kitchen and one bedroom are on ground floor level. The ground floor bedroom which can be study, dining area, parlour or convenient bedroom for a sick or disabled person provides the flexibility of use advocated by Homes for Today and Tomorrow. (Fig 6.29 - 6.30)

Both Seafar and Muirhead 3 had a small shop or office incorporated into the layout.

Park 3 West was designed by the Architectural Research Unit of Edinburgh University and gained a Saltire Award in 1969.

There are 108 flats in 3 storey blocks with car ports under and 90 two storey courtyard houses. 100% garaging and 20% non committed (visitor) parking spaces were provided. As at Seafar and Muirhead car parking is restricted to the periphery of the scheme to provide traffic free pedestrian routes and public open spaces.

The flats are sited on the edge of the scheme and take advantage of changes in level to provide car ports in a semi basement. The flats have a stepped section with balconies facing south west. The ground floor 5 and 6 person flats have a private garden while the first floor 2 and 4 person flats and the second floor 2 and 3 person flats have a south west facing balcony each.

The two storey courtyard houses are located in the centre of the site and are wide frontage single aspect with all rooms facing into the courtyard or garden. The houses are grouped in pairs linked with a pend bedroom under which passes the pedestrian access. The pend houses each have 2 double bedrooms with 1 single bedroom while the neighbouring houses each have 1 double and 2 single bedrooms. Access to the houses is under cover of the pend. This gives weather protection to the front door but there is no threshold space between front door and public footpath.

The density is 64 persons to the acre (160 person/Hectare) slightly lower than two storey Seafar. This is surprising in that Park 3 West has larger house types, uses flats and is on a south facing slope. Part of the reason for this is that a large proportion of the houses have walled gardens and generous provision of public open space but the other reason is that Park 3 West has a high car parking and garaging provision. (Fig 6.31 - 6.32)

Park 3 West was designed for the middle income group in Cumbernauld and was classified in the highest rental group. There was, when completed, general tenant satisfaction with the scheme but flat occupants criticised the balconies as inadequate for drying clothes and criticised the utilitarian finishes in the common access stairways. (35)

Criticism of utilitarian finishes in common passages and stairs is not unique to this scheme, but was largely ignored by designers and providers of housing on grounds of cost. Failure to give a feeling of quality in the common stairwells is more pertinent on this scheme as it was a higher

cost, higher rental scheme. Residents obviously would have wished some of the higher costs spent on the common stairwell finishes.

Livingston

Livingston, designated in 1962, was to accommodate Glasgow overspill and was to be built as a regional centre to revitalise West Lothian. The average density in the residential areas was to be 46 persons/acre (114p/Ha) with higher densities towards the centre and lower towards the periphery. The Corporation policy was to build no more than 10% of flats overall, the main emphasis being on family houses with small gardens. The Livingston master plan was a grid pattern of roads with pedestrian segregation. The River Almond flows through the centre of the town providing a river park close to the town centre on its south bank. Livingston town plan returned to the provision of neighbourhood centres necessary for a town less compact than Cumbernauld. (36)

Deans South, the first residential area to be completed is on the NW edge of the town. It is a pedestrian segregated scheme with vehicular access off the periphery road onto branch roads terminating in culs de sac which bring grouped car parking close to the dwellings. This is a change of emphasis from the Cumbernauld schemes which kept the cars at bay on the edge of the housing areas. Greater road penetration gives greater road costs and more road land usage but allows for greater supervision of cars. The houses are sited mainly but not exclusively in pedestrian areas and are predominately low rise. Approximately a quarter of the houses are single storey patio houses, two thirds, two storey terrace housing and the remainder in five storey walk up flats/maisonette blocks. (Fig. 6.33 - 6.34)

Craigshill is closer to the centre of the town and was therefore built to a higher density 65 to 70 persons to the acre (162 to 175 p/Ha). It is a mixed development incorporating both 2 storey terraced housing and 4 storey walk up flats. As at Deans South there is a high degree of car penetration, grouped car parking and garaging provided close to dwellings with cul de sac access off periphery roads. Craigshill district has neighbourhood facilities of churches, secondary schools, primary schools and shopping centre.

The most interesting feature of Craigshill is however that it uses an industrialised building system. The reasons for using an industrialised building system was to meet the intensive building programme in the designation order and the interest of the Scottish Development Department in promoting the use of industrialised building in Scotland. Livingston Development Corporation collaborated with SDD in the choice of the system. The 12M Jespersen (Laings) system was chosen by tender in competition with one other firm on the basis of a hypothetical layout and brief specification. Laings in collaboration with the Development Corporation then developed the scheme. Laings built a factory in an industrial area of Livingston and a start on site was made in December 1964. (37) The interesting point about this is that this is prior to the white paper The Scottish Housing Programme 1965 to 1970, showing that the Scottish Office had been actively investigating system building using Livingston Development Corporation as its agent in this early experiment.

Completions were made from 1965 to 1968 and provided 131 single storey houses in 33 terraces, 273 two storey houses in 45 terraces and 522 flats and maisonettes in 20 four storey blocks.

All houses and flats were built using the same system of concrete crosswalls, flat concrete roof and timber frame, timber clad infill panels on front and rear elevation. The gables were finished with an exposed Creetown aggregate concrete panel. The crosswall floor and roof slabs were four foot wide panels and planning of the housing types was required to comply with this module. All terraces are straight to simplify crane runs.

The terraced houses which provide 94 six person, 273 five person, 8 four person and 29 two person houses are laid out in parallel rows 60 feet apart (18m) to comply with the privacy regulations for dual aspect houses.

The flats provide 174 four person flats, 174 three person flats and 174 four person maisonettes. There are two flats per stair landing and the maisonettes are only two storeys from ground level. The stepped section which provides private balconies and the reduction in height at each stairwell gave a very broken up massing. It also resulted in a considerable amount of weather flashing. (Fig. 6.35 to 6.37)

The timber cladding used to keep down initial costs was a high maintenance cost. The blocks suffered from water penetration and condensation. The water ingress gave rise to concern over damage to structural connections. The difficulties in keeping costs down had resulted in single bedrooms which were cramped. The result of these problems was that the terraced housing was re-roofed and reclad and the flat blocks completely remodelled in the late 1980s and early 1990s.

Glenrothes

Glenrothes Development Corporation had designed Pitteuchar East using the 12M system, the intention being to take advantage of the Livingston factory and give Laings continuity of production as advocated by the Government. The roads were constructed for the industrialised design which, as at Livingston, incorporated terraced housing and walk up flats. Heavy panel systems could be competitive with traditional construction for high rise building but it was lightweight timber frame which was most likely to be competitive for low rise. The Livingston use of timber frame infill panels with concrete crosswall construction aimed to overcome this problem. Glenrothes however found the system still expensive and, with difficulties in meeting indicative costs, abandoned the 12M system design and redesigned Pitteuchar East to be built low rise using traditional construction utilising the already constructed roads.

Irvine

Irvine New Town was designated in 1966 with an existing population of 29,000 within its boundaries of which 19,000 was in the Burgh of Irvine and 8,000 in Kilwinning. The original plan prepared by Wilson and Womersley prior to designation was a linear plan "a string of beads" open at each end to allow for additional beads to be added if demand required. The beads were neighbourhoods, some formed around existing communities, and lay to the east of Irvine Burgh. More detailed survey information on mining subsidence necessitated the plan being revised. This was done after studying the wider context of Central Ayrshire. The sub-regional plan proposed that Irvine should expand east with Kilmarnock expanding west to form a joint urban unit of 200,000 people. The plan included a university for this large expanded town.

Kilmarnock did not expand west; its only expansion filled the vacant land between the town and its by-pass to the east. Irvine expanded east but, with its proposed early closure in 1996 and its land on its eastern boundary reduced due to the discovery of further mining problems, the towns have remained separate and considerably smaller than proposed in the ambitious sub-regional plan.

The revised plan proposed the new town centre in the heart of the old Burgh and proposed a series of neighbourhoods some of which were formed round existing communities. The road network formed a grid with a neighbourhood or expanded village within each road box.

A new concept was that of the community routes. These were bus only routes using the existing small roads and lanes to link the small local centres and town centre. These ran inside the road boxes and provided more direct links between centres.

Pennyburn, the first corporation housing development, was built in Kilwinning. Kilwinning, although one of the "beads" of the original plan and still part of the designated area, did not form part of the eastern expansion towards Kilmarnock. It lies to the north and although the revised plan envisaged its expansion, it also proposed that it remain a separate physical entity. For this reason it was possible to develop Kilwinning while the New Town plan was being prepared in detail.

The New Town Plan stated that "the bulk of the new housing will be in low rise development in net densities ranging from 30 - 160 persons per hectare. As long as the present indicative cost system remains unchanged it will be necessary to design to a net density of up to 235 persons per hectare for rental houses". (38) (Indicative costs in the late 1960s increased with density with low, less attractive cost levels at the lower density level). The statement reflects the fact that there was a cost advantage in building two storey housing at the highest density possible. In fact Irvine built to densities generally under the 160 persons per hectare with densities as low as 100 persons per hectare built in the town's later years. (Indicative costs changed in the early 1970s to give higher cost levels at the lower density bands).

Pennyburn 1 and 2 were also built at a low density providing 240 houses in 12 Hectares. House types range from 2 bedroom to 4 bedroom with one of the 3 bedroom house types providing one of its bedrooms over a pend. The layout is a grid pattern split into two equal phases with eight pedestrian courtyards each. The houses front onto the courtyards. The main pedestrian routes link the courtyards through pends. Secondary paths service rear gardens. Car parking and garaging is concentrated on one central service road per phase although service access for mobile shops, bin lorries, furniture vans etc., penetrates into the courtyards. Car parking and garaging is grouped at the entrance to each courtyard.

Speed of construction was essential and to achieve this the Corporation put each phase out to tender to system builders in line with Government encouragement to use system contractors. Phase 1 was won by Wimpey using no-fines concrete. Phase 2 was won by Wilson using brick/block crosswalls and timber frame infill panels which could be described as a low technology variation of the Livingston Jespersen system. The same house types and layout plan were built by each contractor.

Timber joists were used for first floor and timber trusses for roofs.

Elevationally the phases are different, the no-fines houses have all walls harled while the timber frame houses have harled brick cross walls and gables but have timber clad infill panels to front and rear. Both have monopitch roofs. In phase 1 the low side is to the courtyard whereas in phase 2 the high side is to the courtyard. Phase 2 is more successful visually as the greater height on the public side gives greater enclosure and a more comfortable scale to the courtyards while minimising overshadowing of the gardens. (Fig. 6.38)

The design proposals were approved in June 1968, construction commenced in December 1968 and the 240 houses were complete in December 1969.

Neither the no-fines nor the timber infill systems were breaking new ground in technology. The houses, since being built, have had additional roof insulation, replacement boilers, replacement windows, porches reclad and new garden fencing but no major upgrading commonly required for the heavy concrete panel systems.

Linlithgow CDA

Comprehensive Development Areas were not confined to cities, Linlithgow embarked on an ambitious scheme to redevelop between its main shopping street and the loch. Only the central area and the western end was carried out. In between the redeveloped areas existing stone buildings have been retained with some infill development of more traditional style.

The CDA is mainly five storey maisonettes of which the more architecturally successful is the western end with its timber infill panels and balconies provided in its stepped section. Car parking is restricted to the periphery of the scheme and the flats are grouped around pedestrian traffic free courts.

The centre area provides pedestrian movement from the town centre to the loch under one of the blocks raised to allow access. Built after Craigshill, Livingston and designed by the office of Rowand Anderson it received a Saltire Award in 1969. The western end in particular has visual similarities to Craigshill but with its stone base, harled walls and less repetitive form it is visually more interesting. It is also built traditionally and while, 25 years after completion, certain items such as the windows and cladding will require replacement the basic structure appears sound. (Fig. 6.39)

Church Square, Galashiels

An earlier redevelopment scheme at Church Square in Galashiels by Peter Womersley received a Saltire Award in 1963. This development on an existing street corner keeps car parking to the edge of the scheme. The inner and outer courtyards are traffic free pedestrian areas. The three storey blocks accommodate a wide range of flats and maisonettes; bed sits, 2 person flats and maisonettes for 5 and 6 persons. There is a total of 35 dwellings with a communal laundry and drying room. The crosswall construction is infilled with white frame, clear and opaque glass panels. Ground floor level walls and gables are however constructed of whin stone as are external landscaping walls. (Fig. 6.40 - 6.41)

Chessel's Court, Cannongate, Edinburgh

In contrast to the "modern" design for Church Square, the redevelopment of part of the Cannongate by the office of Robert Hurd received a Saltire Award in 1967 for restoration and infill development with 4 storey flats of a traditional style. The scheme has stone columns to arches and stone at ground floor level. Walls are rendered and pitched roofs covered with slates or pantiles. (Fig. 6.42).

Dysart

The redevelopment of the centre of the historic trading port of Dysart was designed by Wheeler and Sproson from the late 1950s through the 1960s. Saltire Awards for good housing design were given in 1960 for phase 1 and in 1965 for phase 2 with commendations for restoration given for the Towers and the Anchorage in 1967.

Phase one which sits on the small cliff top is by far the more successful architecturally. The three and four storey walk up flats, subtly curving along the cliff top, with their saw toothed roof line and buff render, appear to grow naturally out of the rock. Both flats and fully glazed stairwells have magnificent views across the Forth. These flats have the same views as the 15 storey flats in neighbouring Kirkcaldy but without the intrusion on the skyline.

Phase two, while admittedly also a Saltire Award winner, is less successful. It uses a wide variety of house types and building form, 5 storey maisonettes and 3 storey flats with flat roofs. Some flats/maisonettes have balcony access and some have stair access. There are also 4 storey maisonette towers which simply stack one two storey detached house on top of another. The main problem with the phase 2 development is its lack of street frontage continuity in a town which gave protection from cold winds off the Forth by its street enclosure. The four storey maisonette towers and round stair towers are intended to relate to traditional Scottish architectural form. The restoration of the Towers and the retained buildings at the cross have a richness of detail and a solidity that phase two does not. (Fig. 6.43 - 6.44)

Courtyard Houses, Inchview, Prestonpans

Designed by James A. Gray of the Edinburgh University Architecture Research Unit the 45 houses were completed in 1962. 45 houses are provided on 4.2 acres. There are 3 two person, 26 four person and 16 five person houses. Car parking and future garaging spaces are provided on the north and south edges of the scheme. The courtyard houses are laid out on a grid with vehicular access from the roads which bound the site on the north and south. Footpath vennels run from the main road on the north edge up the slope to the south with courtyards facing south and with the step in level allowing clearstorey north light into the kitchen. Access to the houses is directly off the vennel into the hall way or into the patio gardens. Houses therefore either have the patio as a buffer between the vennel and the house with less patio seclusion or they have their front door opening directly onto the vennel. The vennels were covered giving protection to pedestrians and giving porch cover over the front doors on the vennel. (Fig. 6.45) This cover over the front door was also provided by the A.R.U. at Park 3 West, Cumbernauld in their two storey courtyard houses where the pend bedroom provides the cover.

Prestonpans courtyard houses had difficulty in getting the covered lanes adopted and cleaned by the Local Authority cleansing department as that department regarded them as private spaces due to the fact that they were covered.

The houses were flat roofed with white painted fairfaced brick walls. They had been given pitched roofs and rendered when visited in 1994.

Courtyard Houses, Ardler, Dundee

A similar project at Ardler, designed just after the Prestonpans houses were completed, provided 47 houses on 4 acres; 16 five person, 24 four person, 2 three person and 5 two person at a density of 48p/acre (120p/Ha). The scheme is similar to Prestonpans in that the car parking is on the periphery of the site but there are no covered walkways. The scheme was part of a larger development with five storey walk up flats and to the north the six 17 storey Crudens Ardler slab blocks.

The main difference from Prestonpans is that the Dundee houses have smaller private courts but have a small service or entrance court giving the houses a buffer zone between house and public space. The kitchen is not clearstorey lit as at Prestonpans but overlooks and has access onto the service court. The Dundee houses also have flat roofs but external walls have a harled finish. (Fig. 6.46) Heating was by warm air in Dundee whereas Prestonpans was electric underfloor heating.

The architects, Baxter, Clark and Paul built courtyard houses of a similar design at Blairgowrie, Peterhead and Keith. The Blairgowrie development received a Saltire Commendation in 1967 and the Keith development a Saltire Award in 1968.

Elderly Persons Housing

Two elderly persons housing schemes both incorporating individual houses and a residential home received Civic Trust Awards, Crookfur by the office of Basil Spence in 1968 and Willox Park by the office of Gillespie Kidd and Coia in 1969.

The scheme at Crookfur, Newton Mearns, Glasgow was built in the grounds of a former burned down mansion. In addition to the home the site is laid out with a series of single storey terraces. The splayed walls and eaves give interest to what is otherwise a very traditional built form with harled walls, chimneys and slate roofs. Access to the houses is traffic free, pedestrian paths giving sole access to the houses. This is not ideal for elderly persons housing as those with difficulty in walking would benefit from closer car access. (Fig. 6.47)

By contrast the scheme at Willox Park at Dumbarton has the home, residential accommodation, in the centre of the scheme surrounded by the long low single storey terraced elderly persons houses which are laid out round the perimeter of the site. The site is accessed by a narrow road which winds round the site following the enclosing single storey houses. This narrow road is both vehicular and pedestrian access. Its narrow width and twisting line helps to slow traffic speed. The houses are single aspect with bedroom, livingroom, hall and kitchen all facing onto the road and central space. Only the bathroom and stores are positioned on the rear wall. The rear wall is splayed in and out to give the house a varied

depth to suit room provision. Roofs are shallow monopitch with the ridge rising and falling as the plan depth varies. (Fig. 6.48)

Co-Ownership Housing, Southfield, Barnton, Edinburgh

This scheme by the Adam Housing Association was financed by money borrowed from the SDD under section 11 of the Housing Scotland Act 1962. The scheme, which won a Saltire Award in 1967, was designed by Roland Wedgewood architects.

There are 110 houses and 112 garages at a density of 56 bedspaces/acre (140/Ha) on a site of 9 acres (3.6 Ha). There are 98 one, two and three storey houses of 3 to 6 apartments and 12 four storey 2 and 3 apartment flats. 71 of the dwellings have integral garages and the rest share 41 lock ups. (39)

The houses are designed using 10'6" (3.2m) plan squares which are grouped and stacked to form the various house types. A double square provides a garage, a pend or livingroom. A single square provides a bedroom, dining kitchen or stair and toilet. Steps in floor level across the site are at half storey height to allow houses to have changes in level accessed off stair half landings.

The plan form is one long continuous terrace which snakes around the perimeter of the site and encloses two large private squares. For most residents entry to the park is from their house by way of a small, hedge enclosed, garden. The squares can only be entered through locked gates or pends and are therefore private and exclusive to the Southfield residents. Car access is restricted to short stub roads with looped ends to avoid reversing. Group heating was provided, the boiler house being built adjacent to the flats. (Fig. 6.49 - 6.50)

A survey of initial residents found that most residents, (two thirds), tended to be professional with pre-school children and over a quarter of the initial residents were architects or planners. (The members who set up the Adam Housing Association were mainly from Edinburgh University especially its Architectural Research Unit). Residents were generally satisfied with the scheme the main complaint being the amount of stairs and the high ceilings in some stairs. (40)

Newburgh, Fife

Having rejected a system builder's offer to built multi storey flats above the town, the Burgh commissioned L. A. Rolland and partners to design infill housing for gap sites in the Main Street and for the backlands above the Main Street. Designed in traditional style with painted harled walls, slate or pan tiles roofs the houses are mainly two storey with occasional two or three storey flats.

The developments fit snuggly into the fabric of the town, St. Katherine's Court receiving a Saltire Commendation for good design in housing in 1970. (Fig. 6.51)

This picturesque traditional architectural style became common in the 1970s and can be seen as a response to the 1967 Civic Amenities Act, the legislative backing to conservation and the importance of new buildings being designed sympathetically to their surroundings.

SUMMARY 1960-1969

Housing (Scotland) Act 1962

This Act gave greater general needs subsidy to Local Authorities in greatest need. It also revised subsidies to give annual subsidies of £42 for overspill housing, £32 for incoming workers' houses with additional subsidies for agricultural workers' houses, protection against subsidence and use of traditional materials. The high rise subsidy was changed from the two thirds additional cost subsidy of 1957 to a fixed additional subsidy of £40 per annum for sixty years.

This more restrictive subsidy for high rise would appear to have had an effect on the high rise building programme in that the annual increase in the number of high flats started on site which had begun with the 1957 two thirds subsidy levelled off in the mid 1960s. There was also a greater use of system built high rise flats especially with the issue SDD circular 68/1965 which required Local Authorities to build a percentage of their housing using industrialised systems if they had a building programme of one hundred or more houses per year.

The 1962 Act also gave a clearer definition of housing fitness for human habitation.

In Part 2 provision was made for the Secretary of State to make loans to housing associations at the rates which applied to Local Authorities. The co-ownership housing scheme at Southfield Barnton, Edinburgh was financed under the 1962 Act.

Housing Act 1964

This Act established the Housing Corporation to assist housing societies and associations. This led to a small increase in the number of co-ownership houses built , two hundred and eighty-eight in 1968 and one hundred and eighty-three in 1969 whereas the average post war achievement had been around one hundred houses per year.

Scottish Housing Programme 1965 - 1970 (White Paper) 1965

This proposed to achieve a programme of fifty thousand houses per year with increased efficiency in the building industry by rationalising traditional construction and by the use of a higher proportion of system built houses. This White Paper was followed by Circular 68/1965 which, as stated above, required Local Authorities to build a percentage of their housing using industrialised systems.

Circular 57/1966 referred to rationalisation of traditional methods of building and led to SLASH producing standard specifications, details and standard plans. The production of the standard SLASH plans came at the end of the 1960s and the use of the plans, often modified, was consequently in the 1970s.

Circular 11/1967 listed low rise and high rise building systems which had National Building Agency appraised certificates. One of the first collaborations between the Scottish Office and a housing authority in choosing a system builder was at Livingston with the Development

Corporation resulting in the choice of the Jespersen system for Craigshill. This was a mixed development of low rise and walk-up flats.

There was therefore strong Government pressure on housing authorities to use industrialised building systems. High rise construction of tower blocks or slabs was now almost entirely built by system builders such as Wimpey, Bison and Crudens.

The requirement to build a proportion of the housing programme using industrialised systems also applied to low rise housing. An example of this is Irvine New Town which used both Wimpey no-fines and Wilson timber frame systems in their first development at Pennyburn.

Housing (Financial Provisions, Etc.) (Scotland) Act 1967

With this Act the Exchequer paid, as proposed in the 1965 White Paper, all interest over 4% of an authority's aggregate cost of its approved housing stock. This gave Local Authorities fixed rates of interest but Exchequer costs varied with inflation.

In order to control costs per house Indicative Cost tables (Cost Yardstick in England and Wales) were introduced by Circulars 19/1968 and 20/1968. These set out cost allowances for different density bands which increased cost allowances with increased density and were based on the maximum use of two storey housing and the minimal use of high rise flats (for reasons of economy).

The consequence of this was that the percentage of approved tenders for six storeys and above fell from 23.4% of all public housing approvals in 1967 to 1.2% in 1974.

Irvine New Town, which had its first houses approved in 1968 and therefore built all of its housing to indicative costs, built almost all of its housing as low rise terraced housing with some walk-up flats close to local centres but it built no high rise housing.

The New Scottish Housing Housing Handbook Bulletin 1, 1968

This introduced metric space standards based on the recommendations of Homes for Today and Tomorrow 1961, better known as the Parker Morris report. New housing proposals submitted for approval were required to comply with these standards. There were no set room areas; rather the house plans were required to accommodate prescribed furniture. House shell sizes were slightly larger than those set out in the 1956 Handbook, and whereas the 1956 house areas were maximum areas, the 1968 standards were minimum areas. In practice, however, with indicative cost controls, the minimum areas could not be exceeded to any significant extent.

The Parker Morris report had recommended flexibility of rooms and commented on the advantage of a downstairs bedroom as a second living space or disabled person's bedroom. This provision was made at Muirfield 3 at Cumbernauld in its storey and a half house types.

The Parker Morris report had also commented on the environmental problems associated with increased car parking provisions and had accepted that car parking could not always be provided close to the dwellings. Roads in Urban Areas 1966 advocated traffic segregation with pedestrian routes giving access to houses. Seafar 2 in Cumbernauld illustrates this type of

provision. Cumbernauld New Town was designed with traffic segregation and pedestrian routes linking housing areas with the town centre. Seafar achieves medium density housing on a north facing slope with attractive vehicle free pedestrian spaces linking the houses to the main pedestrian routes. It achieves this by keeping the car parking mainly to the periphery of the scheme. The distance of the road to the house was constrained by the building regulation requirement for public road access to be within 150 feet (46m) of the house entrance.

Housing (Scotland) Act 1969

The 1967 SHAC report Scotland's Older Houses had recommended increasing improvement grants from 50% to 75%. It had noted that inter war grants had been two thirds and that Modernising our Homes 1947 had recommended increasing the grant to 75% and that the then Government had rejected the 75% grant as excessive and set the grant at 50%. The report was of the opinion that the level of improvement grant was insufficient and that it was one of the reasons for, what it considered to be, insufficient achievement in improvement of housing stock (the other reason being low rent levels in private rented housing).

The gales of over 100 mph on the 15th January, 1968 caused extensive damage to older property especially in Glasgow. This raised awareness of the need for improvement especially of tenement property in Glasgow. However, the White Paper of 1968 and the 1969 Act again rejected the 75% grant and although the maximum limits of grants were raised (in the case of improvement grants from £500 to £1,200) the percentage grant remained at 50% (it was raised to 75% by the 1971 Housing Act).

In the 1960s there had been a gradual increase in the number of properties being improved.

Applications for all improvement grants increased from 4,117 in 1960 to 14,951 in 1969. This, as seen above, was still considered to be inadequate by SHAC to solve the problem of substandard property. Following the 1969 Act applications for improvement grants rose to 23,400 in 1970 and were to rise even further when the recommended 75% grant was introduced by the 1971 Housing Act. In 1970 completions of new public sector housing reached maximum numbers since 1953. The 1969 Act and the 1971 Act with its 75% grant can be seen as change of Government priorities from new build housing to improvement and modernisation.

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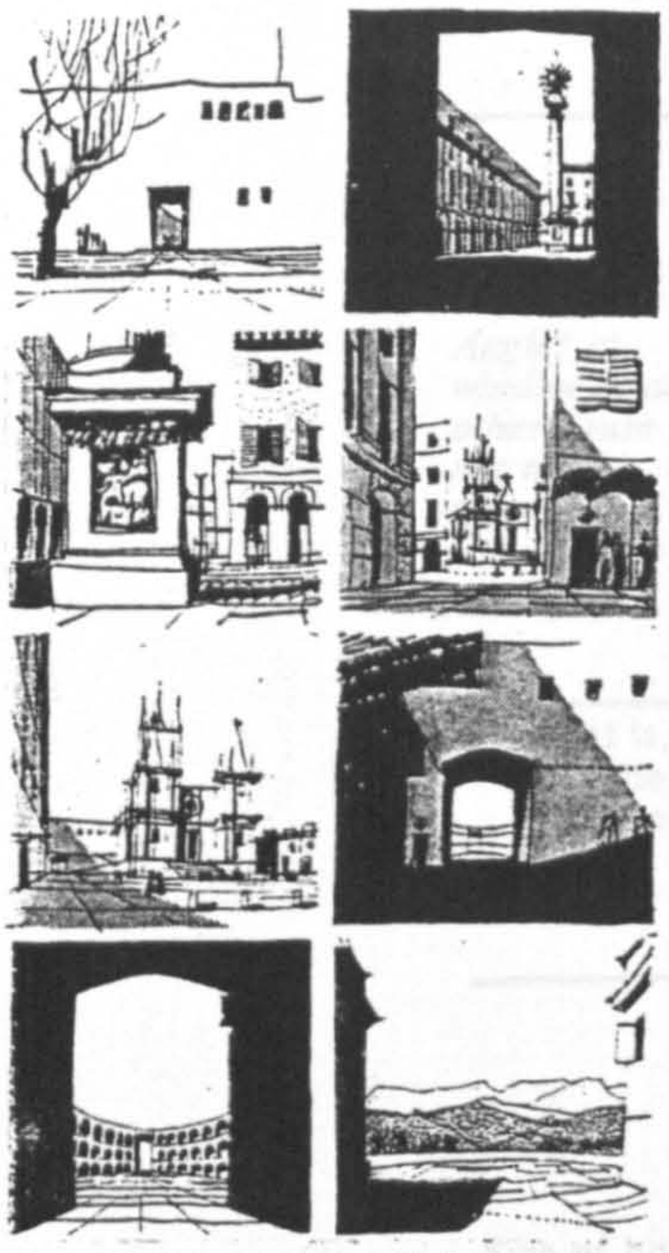
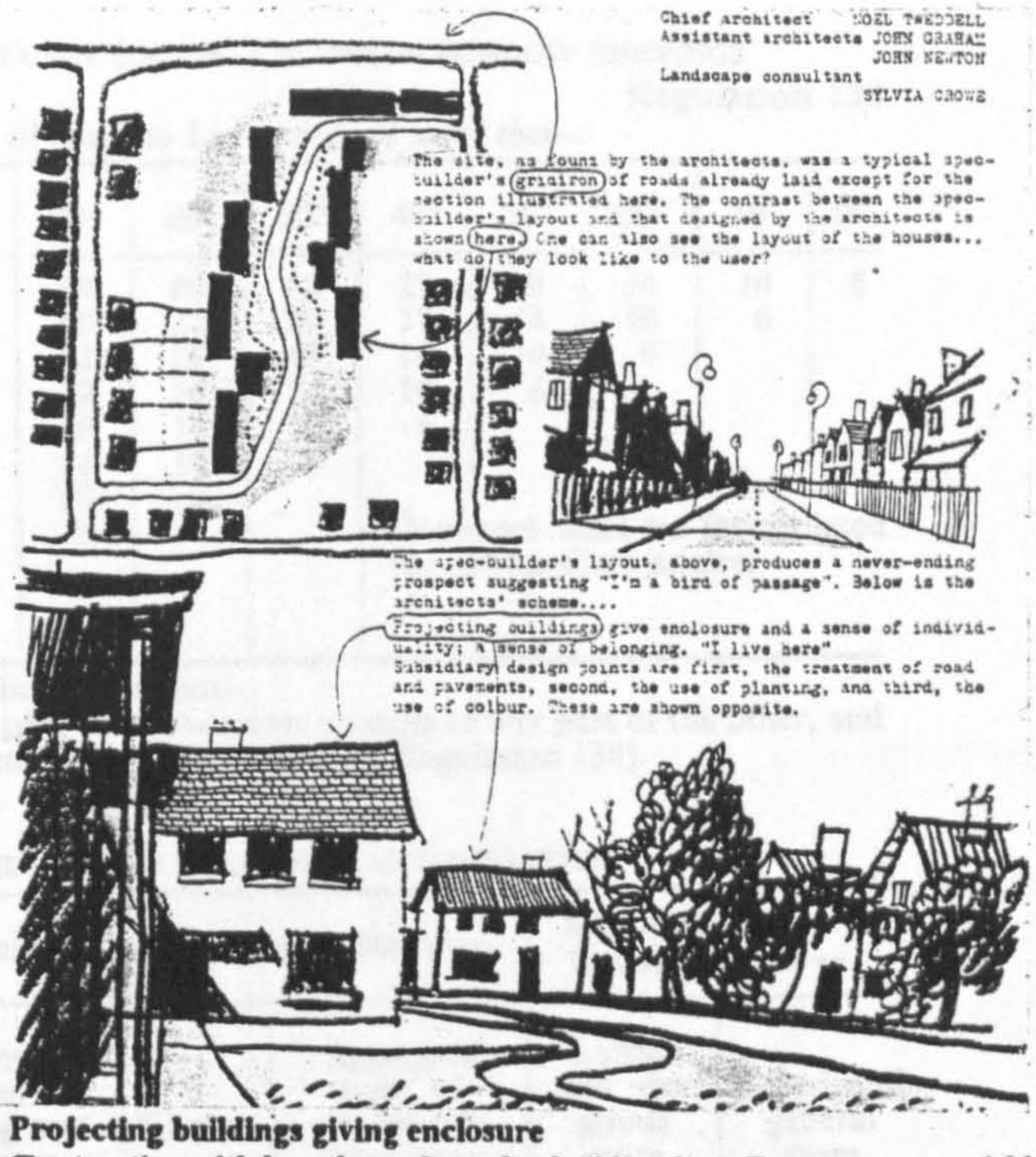
Gordon Cullen



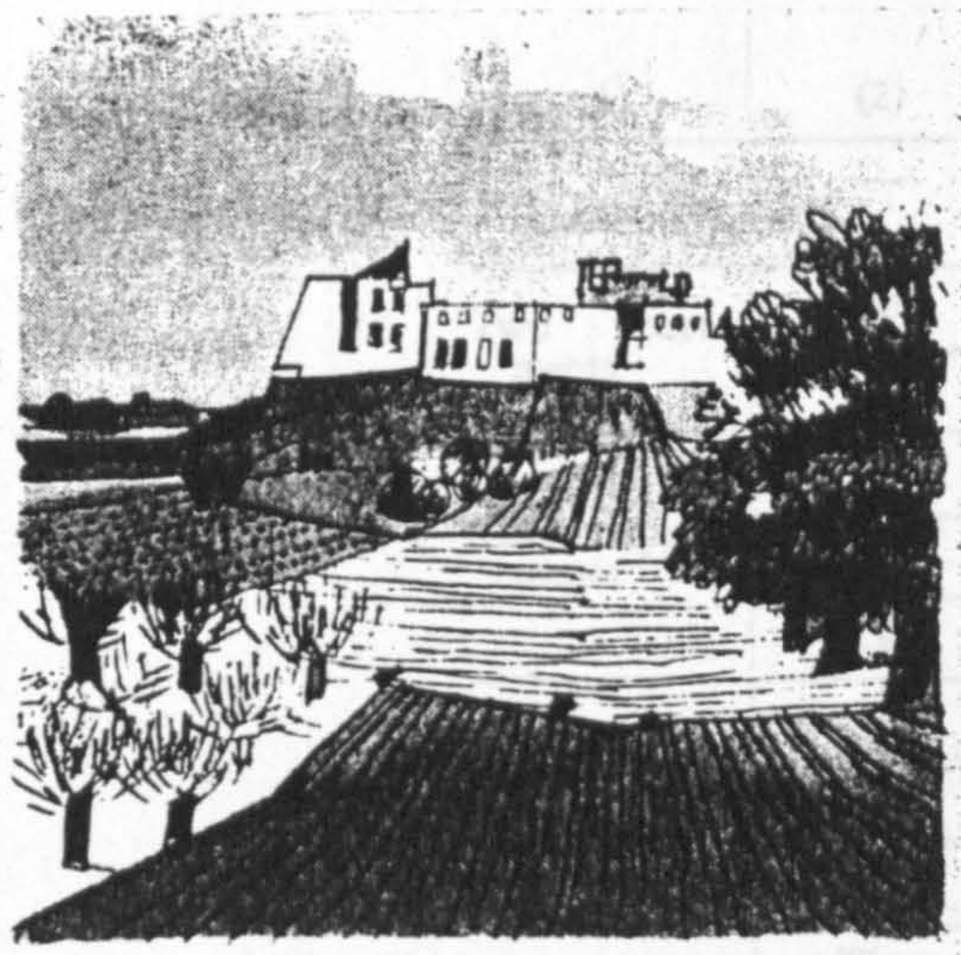
CASEBOOK: SERIAL VISION

To walk from one end of the plan to another, at a uniform pace, will provide a sequence of revelations which are suggested in the serial drawings opposite, reading from left to right. Each arrow on the plan represents a drawing. The even progress of travel is illuminated by a series of sudden contrasts and so an impact is made on the eye, bringing the plan to life (like nudging a man who is going to sleep in church). My drawings bear no relation to the place itself; I chose it because it seemed an evocative plan. Note that the slightest deviation in alignment and quite small variations in projections or setbacks on plan have a disproportionally powerful effect in the third dimension.

Spacial sequence of walled town, Townscape p.17

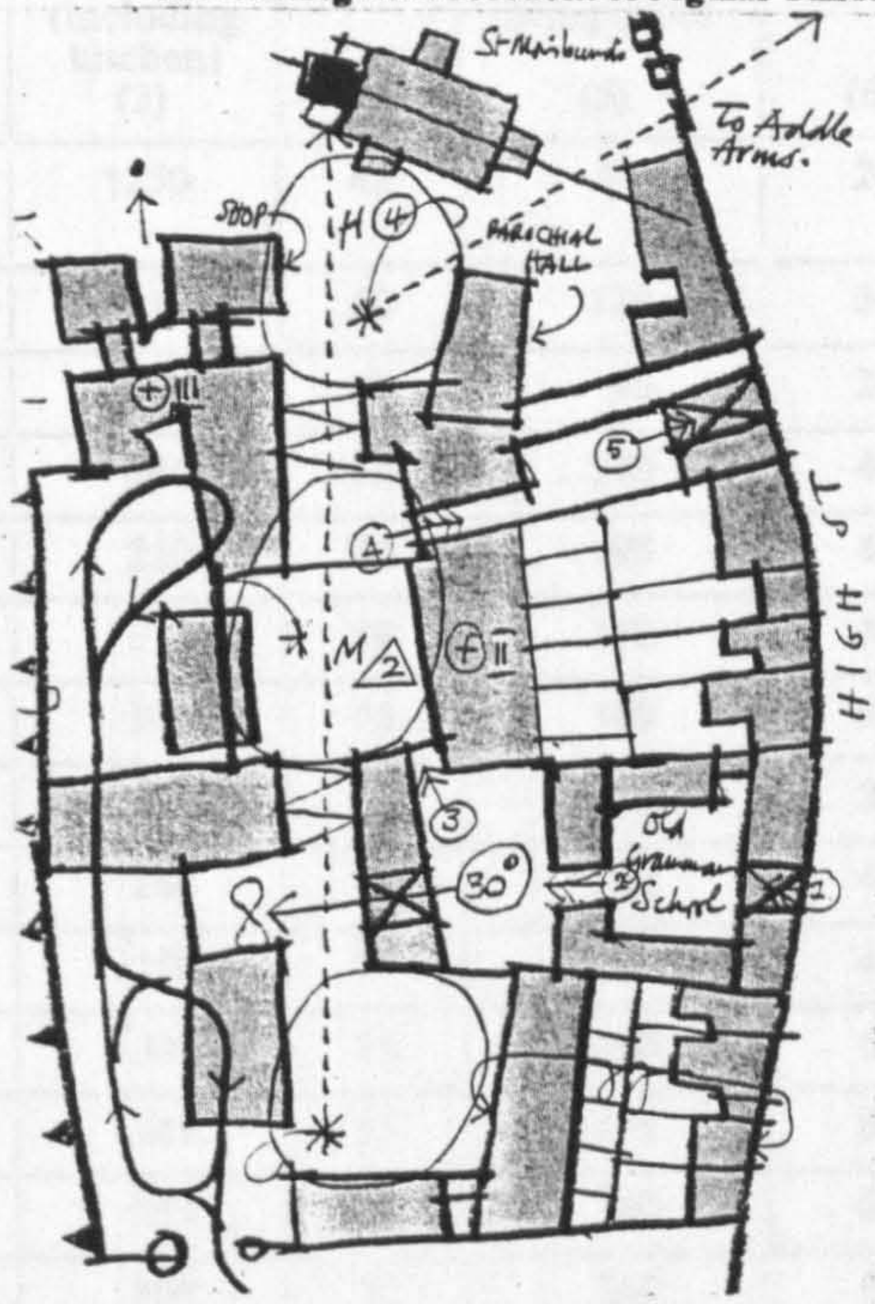


Projecting buildings giving enclosure Contrasting with boredom of regular building line, Townscape p. 166

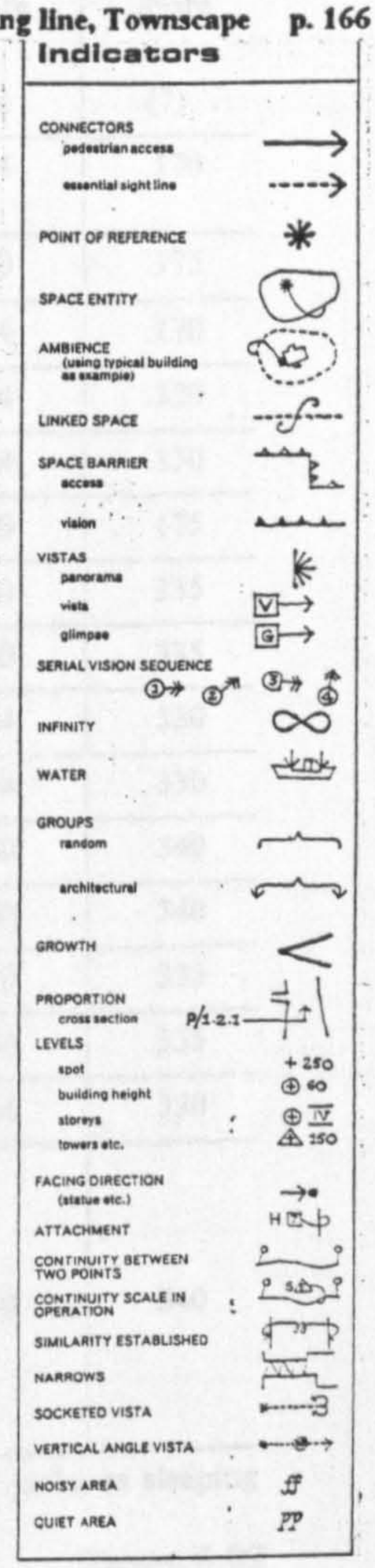


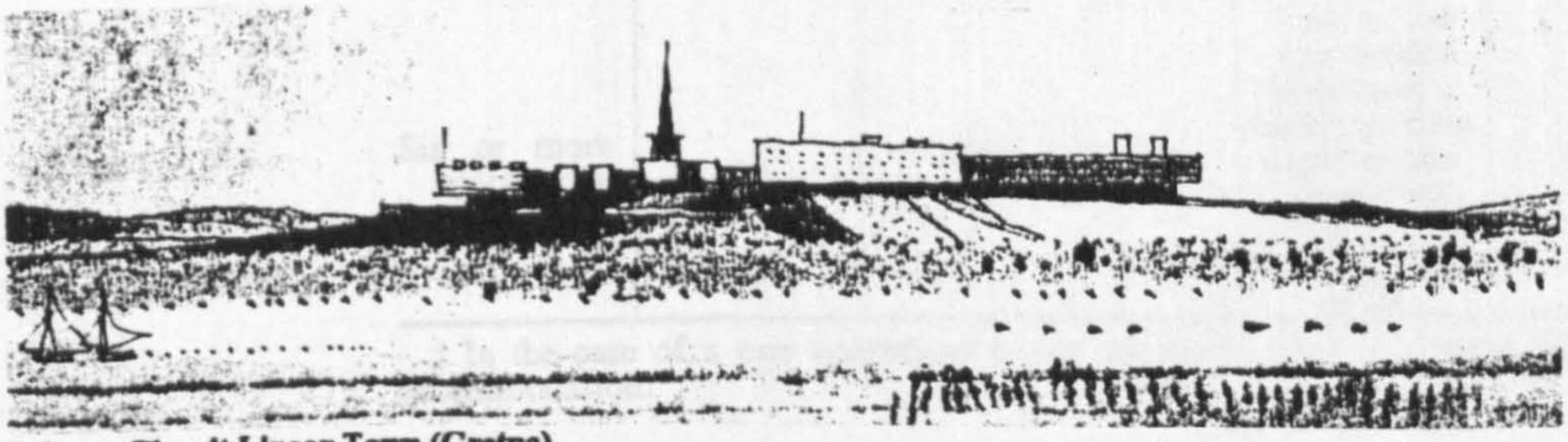
Looking back to the village one can see it as a living entity, not an indeterminate sprawl but compact as a castle.

The Urban Village strong contrast between town and country, The Scanner, p 14



Spacial Analysis using Notation Indicators, Notation p. 18, 30





Solway, Circuit Linear Town (Gretna)

Figure 6.01

The Building Standard (Scotland) Regulations 1963

TABLE 15—MINIMUM DISTANCE (IN FEET) BETWEEN WINDOW OPENINGS

Regulation 138

	Angle† at window of house to be erected not more than—										
		90°	80°	70°	60°	50°	40°	30°	20°	10°	0°
Angle† at window of any other house not more than—	90°	60	60	60	60	42	29	19	14	10	6
	80°	60	60	60	42	29	19	14	10	6	
	70°	60	60	42	29	19	14	10	6		
	60°	60	42	29	19	14	10	6			
	50°	42	29	19	14	10	6				
	40°	29	19	14	10	6					
	30°	19	14	10	6						
	20°	14	10	6			Distances shall be interpolated for intermediate angles.				
	10°	10	6								
	0°	6									

† That is, the horizontal angle included between—
(i) the shortest line joining any part of one window opening to any part of the other, and
(ii) the vertical plane of the opening of the window (see Regulation 138).

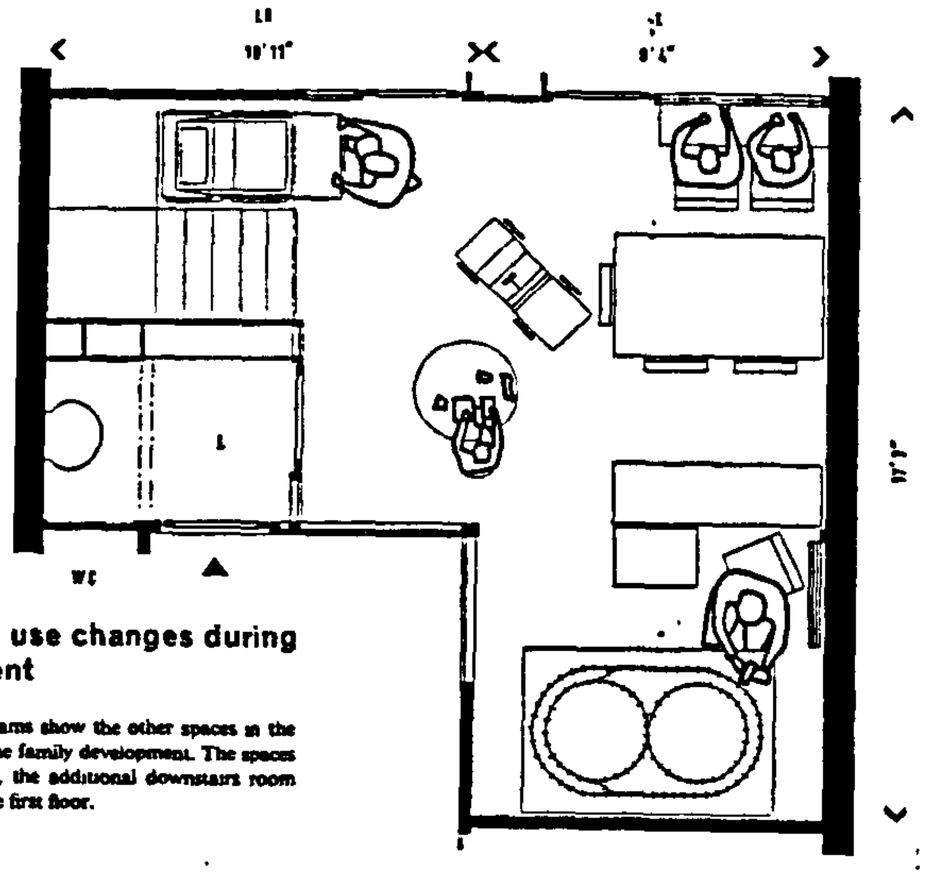
TABLE 18—STANDARDS OF HOUSING ACCOMMODATION

Size of house	Number of apartments (other than living room) less than 110 sq. ft.	Minimum area in square feet of—			Minimum capacity in cubic feet of—	
		Accommodation for living and eating (including kitchen)	Kitchen	Aggregate area of apartments other than living room	Larder and dry goods store	Linen and general store
(1)	(2)	(3)	(4)	(5)	(6)	(7)
One apartment	—	†250	45	†	24	170
Two apartments	Nil	210	50	120	30	175
	One	170	30	95	24	170
Three apartments	Nil	265	75	240	44	330
	One	250	70	195	44	330
	Two	210	50	170	30	175
Four apartments	Nil	305	75	360	60	335
	One	305	75	315	50	335
	Two	265	75	270	44	330
	Three	250	70	225	44	330
Five apartments	Nil	305	75	480	60	340
	One	305	75	435	60	340
	Two	305	75	390	60	335
	Three	305	75	345	50	335
	Four	265	75	300	44	330
Six or more apartments	—	305	75	Four of the apartments shall have a minimum area equal to the appropriate area for a five apartment house	60	340

† In the case of a one apartment house the figure given in column (3) includes sleeping accommodation.

Figure 6.02

Space in the Home 1963, flexible space



Spaces where the use changes during family development

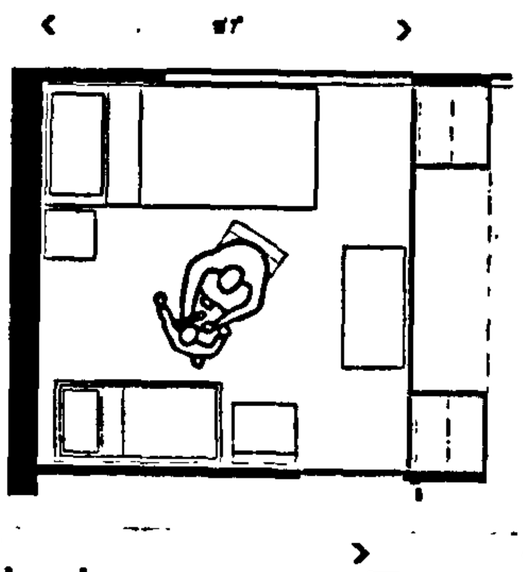
The next two groups of diagrams show the other spaces in the house at particular stages in the family development. The spaces concerned are the dining-hall, the additional downstairs room and the second bedroom on the first floor.

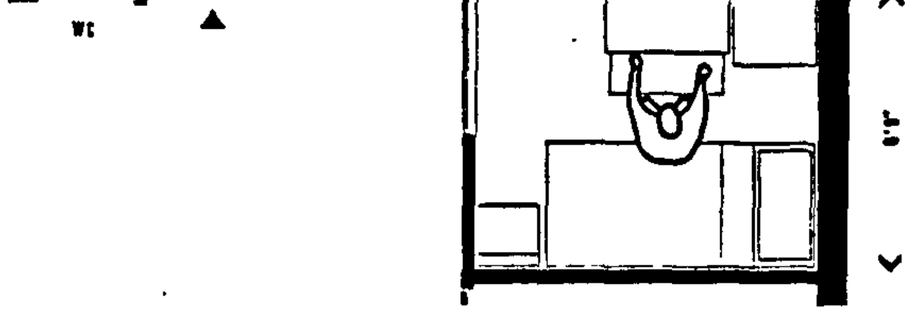
A WHEN THE CHILDREN ARE YOUNG

Fig. 112 shows the dining-hall and the additional ground floor room. The arrangement shown assumes that the two younger children sleep in the second bedroom. Here the combined space is shown in use as a dayroom with the additional room used as a play area. Alternatively this space could be separated off by a folding partition and used for play, study or hobbies or sewing, and it might also be used for a visitor sleeping overnight. The pram is shown in its place under the stairs.

This arrangement provides for a high degree of flexibility in the use of space as it can be quickly sub-divided to change its use: the partition can close off the additional room and a curtain could be used to screen the meals table from the rest of the hall.

Fig. 113 shows the second bedroom in use for two young children. A single bed and a cot are shown with a minimum of additional furniture. The use of bunk beds would of course free more floor space and make room for additional pieces of furniture.

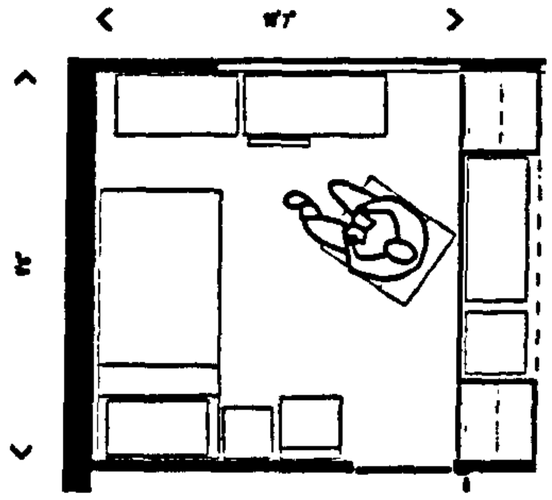


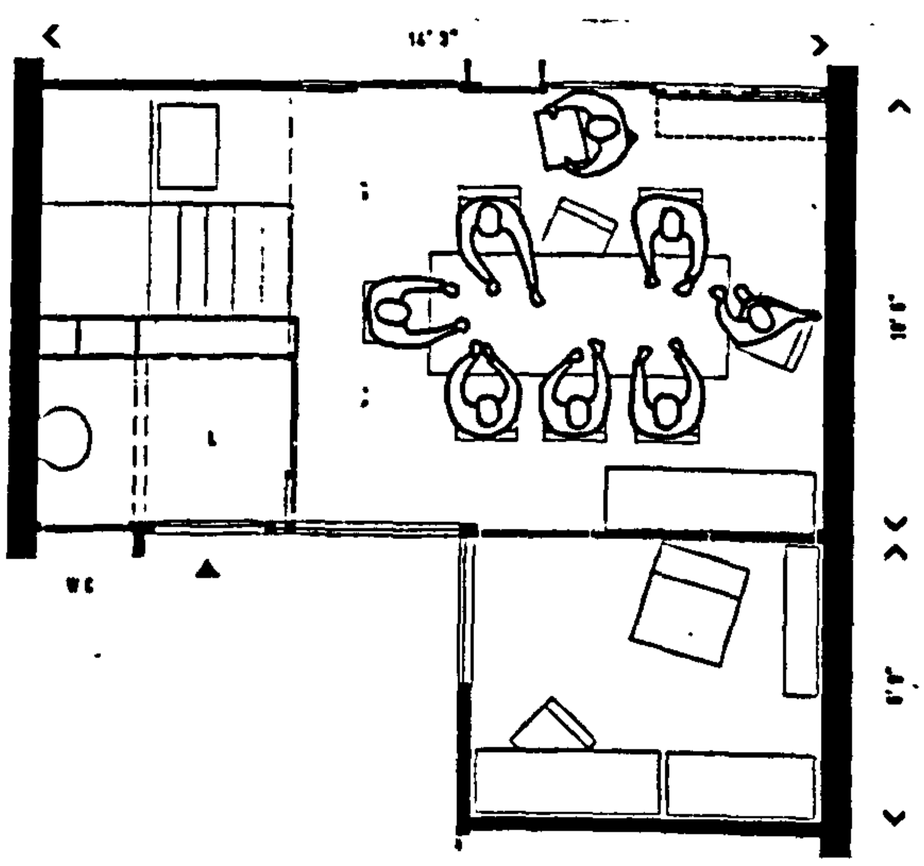


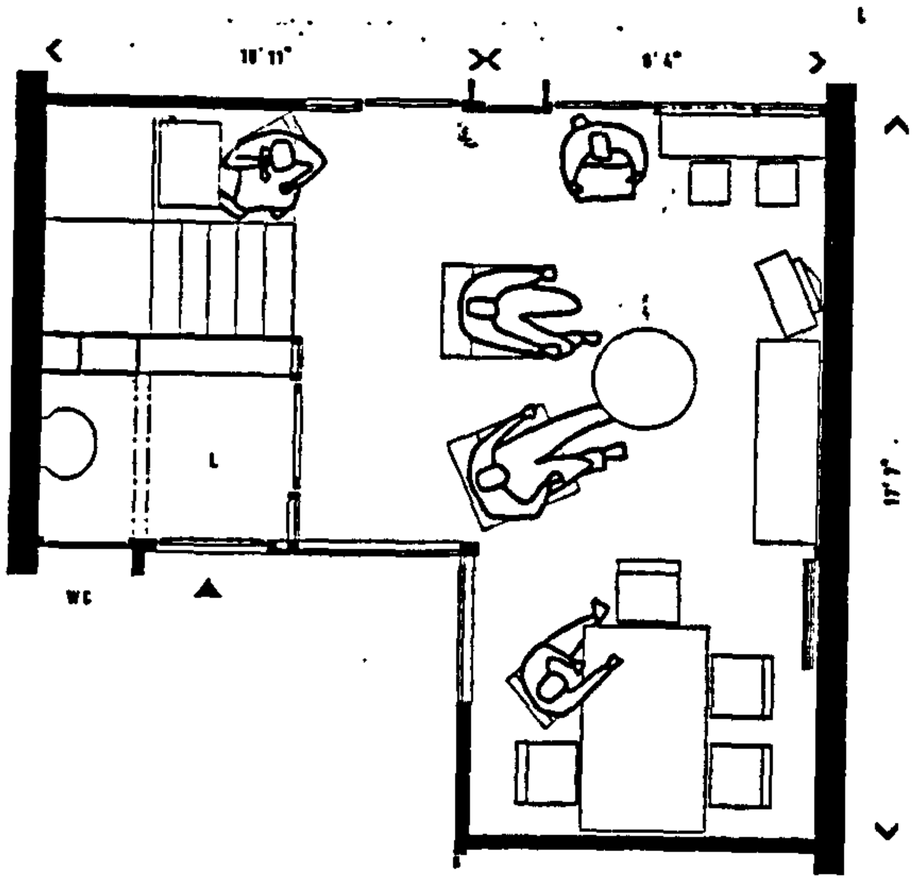
B WHEN THE CHILDREN ARE OLDER

Fig. 114 shows the dining-hall with the additional ground floor room in use as a child's bedroom. At this stage of family development each child has his own bedroom. If a visitor is accommodated overnight this can be provided for by the child temporarily vacating the ground floor room and doubling up in the second bedroom upstairs.

Fig. 115 shows the second bedroom in use as a single study bedroom for one of the children.

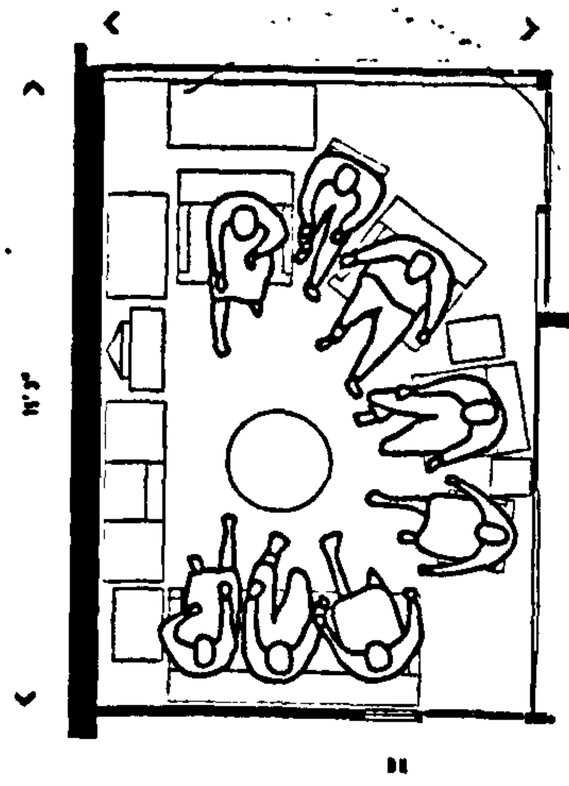






C ENTERTAINING VISITORS

When visitors are entertained to meals, or for a party the living and dining spaces have to accommodate them as well as the family and these spaces are temporarily subjected to stress. Figs. 116 and 117 show these spaces on the assumption that the family are entertaining three visitors. The dining-hall is large enough to seat eight people at a meal, and the living room seats eight people by bringing in additional chairs.



D WHEN ONE OR MORE OF THE CHILDREN HAVE LEFT HOME

If the family stays in the house when one or more of the children have grown up, and left home, the remaining children can have a bedroom of their own on the first floor. The downstairs room on the road side can then become part of the living area, as when the children were young. It could be still kept separate from the dining-hall and used as a study, or it could be combined with th dining-hall into a family living room with T.V., while the livin room on the garden side is kept for separate activities such a courting, reading and record playing. The latter arrangemer is shown in Fig. 118.

When some of the children have left home the room on th road side could also be used when required for an aged relativ

I Dwelling space (Table following para. 158)

A home to be built in the future for occupation by:

6 people	5 people	4 people	3 people	2 people	1 person

should be designed with a net floor area of at least:

	sq.ft.					
3 storey house*	1050	1010	—	—	—	—
2 storey centre terrace	990	910	800	—	—	—
2 storey semi or end		880	770	—	—	—
Maisonette				—	—	—
Flat	930	850	750†	610	480	320
Single storey house	900	810	720	610	480	320

*These figures will require modification if a garage is built in
† 720 if balcony access

II General storage space (Table following para. 158)

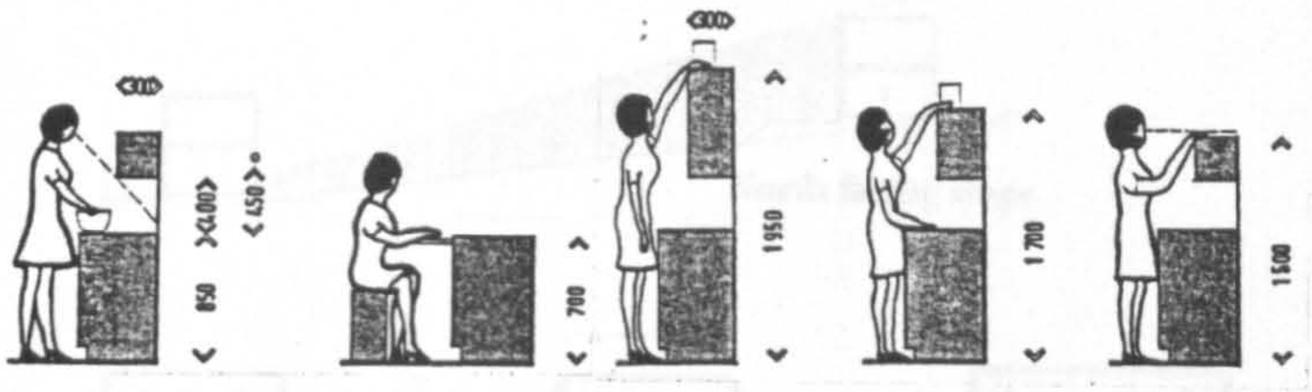
6 people	5 people	4 people	3 people	2 people	1 person

	sq.ft.					
Houses *	50	50	50	45	40	30
Flats and maisonettes						
Inside the dwelling	15	15	15	12	10	8
Outside the dwelling	20	20	20	20	20	20

*Some of this may be on an upper floor; but at least 25sq. ft. shoul be at ground level.

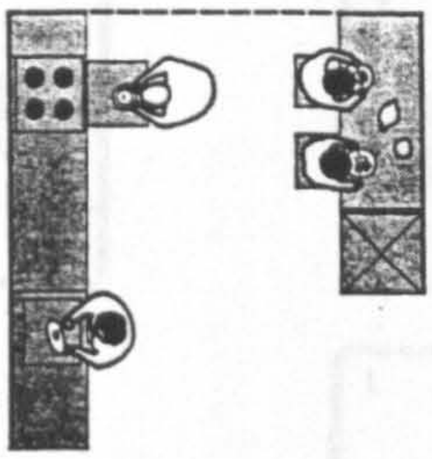
Figure 6.03

Bulletin 1 Metric Space Standards 1968

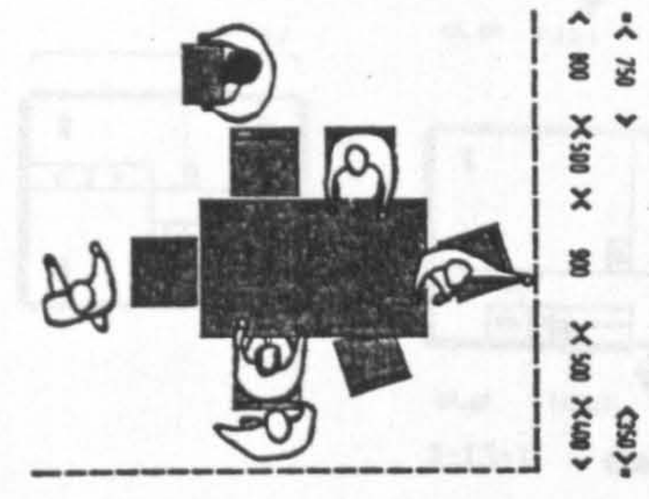


SPACES

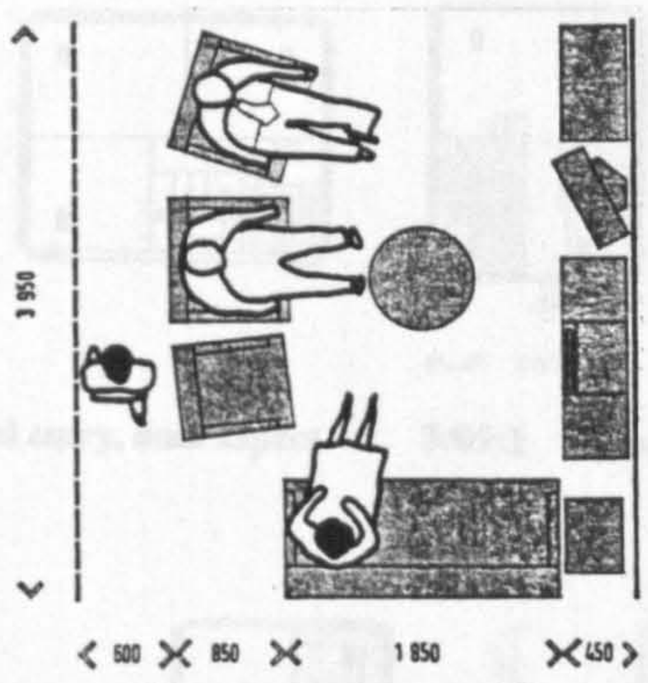
space in kitchen for casual meals.



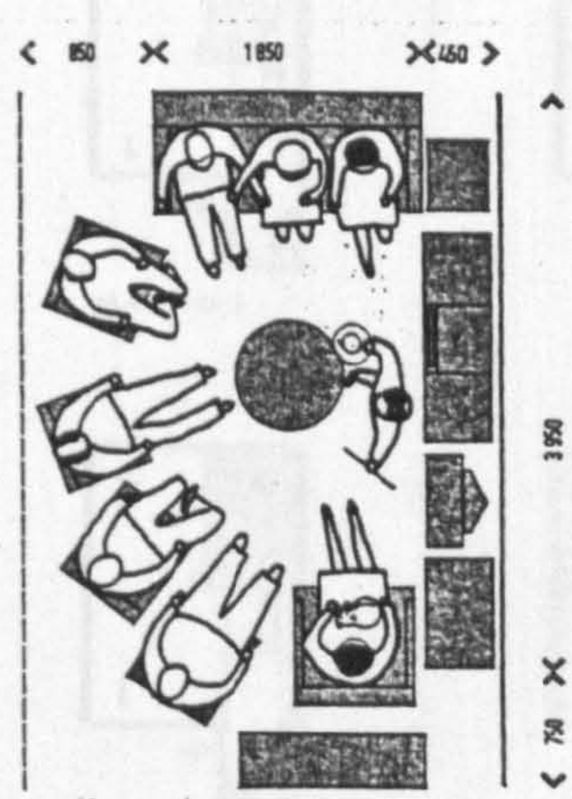
sitting at table and moving around.



looking at television.



entertaining visitors.

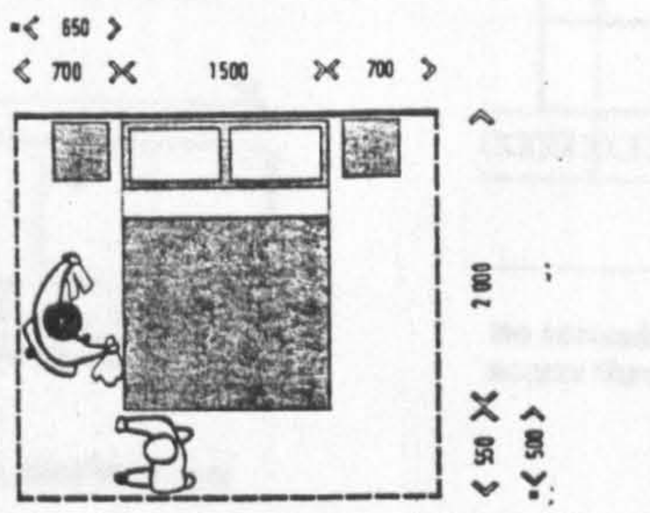


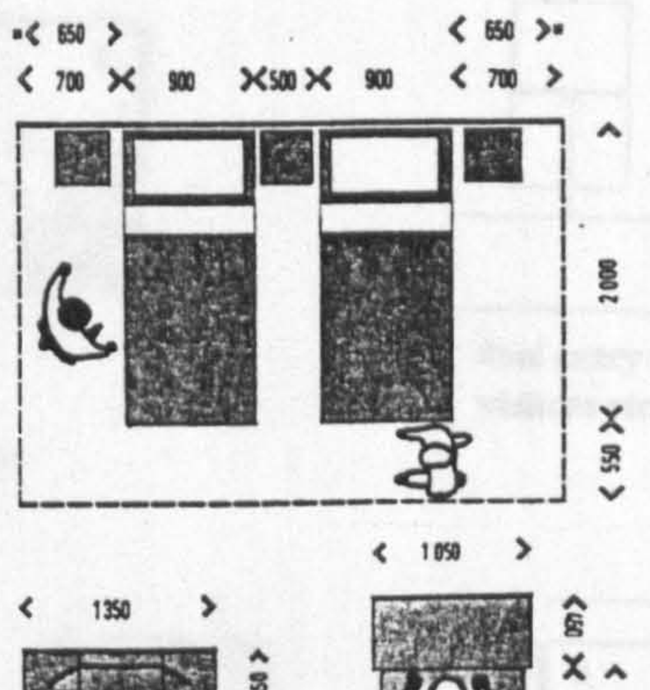
A dwelling for occupation by the number of people shown in the table below must be designed to provide areas of net space and general storage space not less than those set out in the table and fulfilling the conditions in Section 4.2.

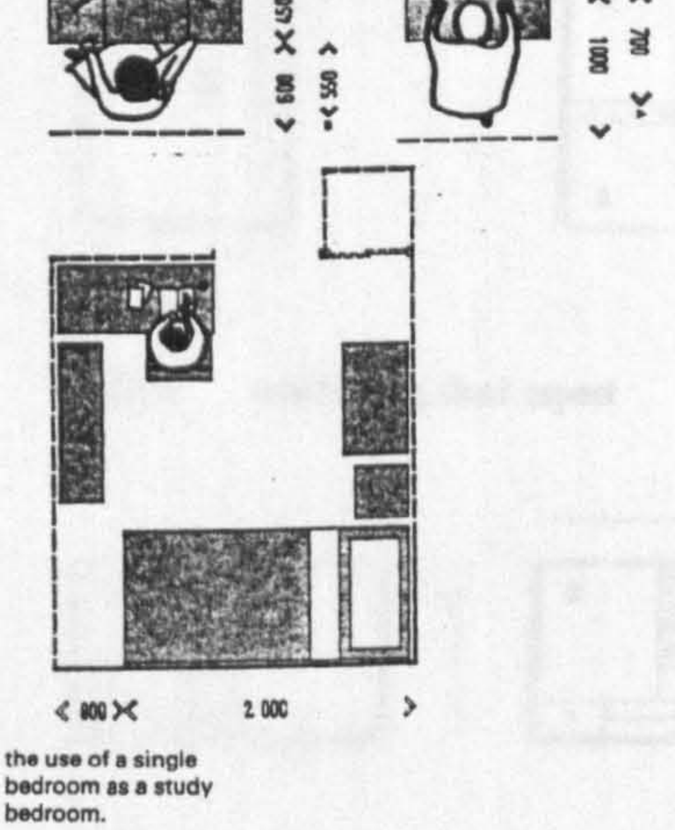
N = net space (see 4.2.1) / *S = general storage space (see 4.2.2)*		*Number of people (i.e. bed-spaces) per dwelling*						
		1	*2*	*3*	*4*	*5*	*6*	*7*
		m²	*m²*	*m²*	*m²*	*m²*	*m²*	*m²*
Houses								
1 storey	*N*	*30*	*44·5*	*57*	*67*	*75·5*	*84*	
	S	*3*	*4*	*4*	*4·5*	*4·5*	*4·5*	
2 storey (semi or end)	*N*				*72*	*82*	*92·5*	*108*
	S				*4·5*	*4·5*	*4·5*	*6·5*
(intermediate terrace)	*N*				*74·5*	*85*	*92·5*	*108*
	S				*4·5*	*4·5*	*4·5*	*6·5*
3 storey	*N*					*94*	*98*	*112*
	S					*4·5*	*4·5*	*6·5*
Flats	*N*	*30*	*44·5*	*57*	*70**	*79*	*86·5*	
	S	*2·5*	*3*	*3*	*3·5*	*3·5*	*3·5*	
Maisonettes	*N*				*72*	*82*	*92·5*	*108*
	S				*3·5*	*3·5*	*3·5*	*3·5*

**(67 if balcony access)*

Tolerance: Where dwellings are designed on a planning grid and not otherwise, a maximum minus tolerance of 1½% will be permitted on the Net Space.



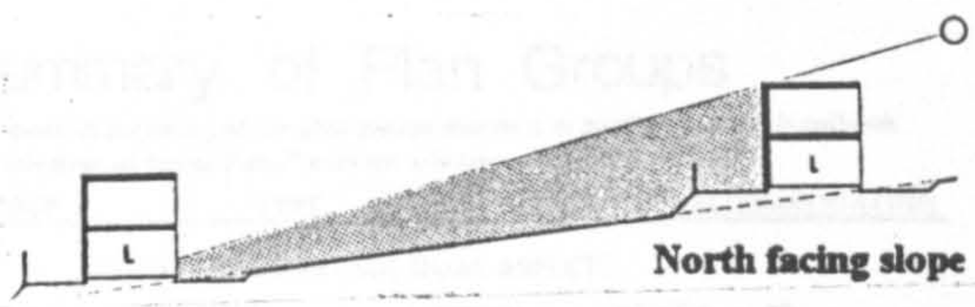




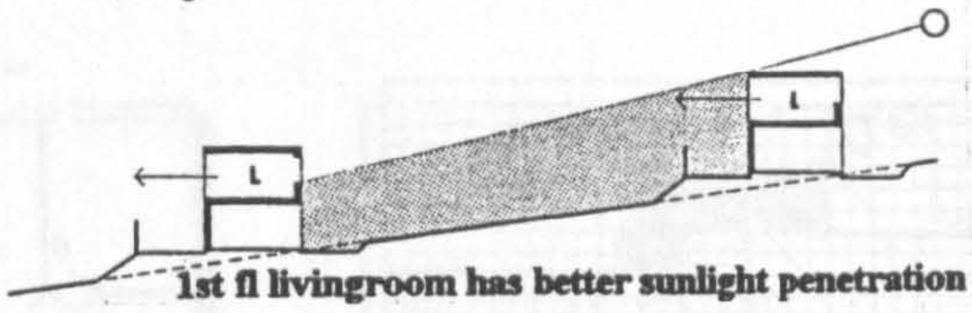
28. the use of a single bedroom as a study bedroom.

Figure 6.04

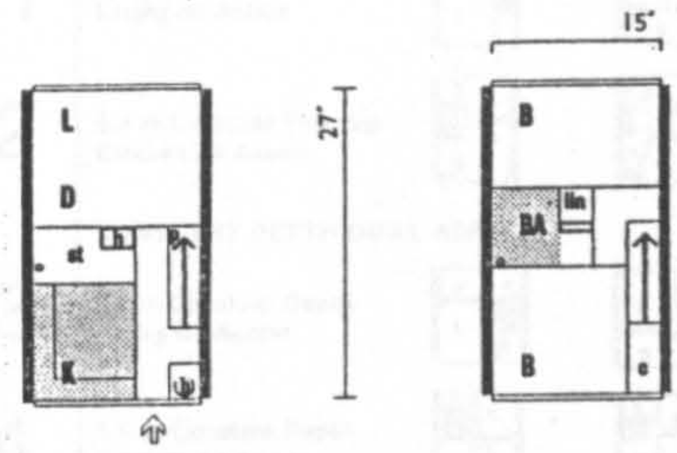
Generic Plans, Scotland, 1 and 2 Storey houses 1966



North facing slope



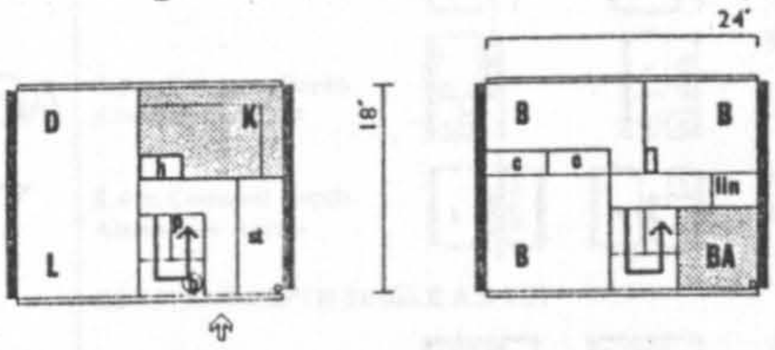
1st fl livingroom has better sunlight penetration



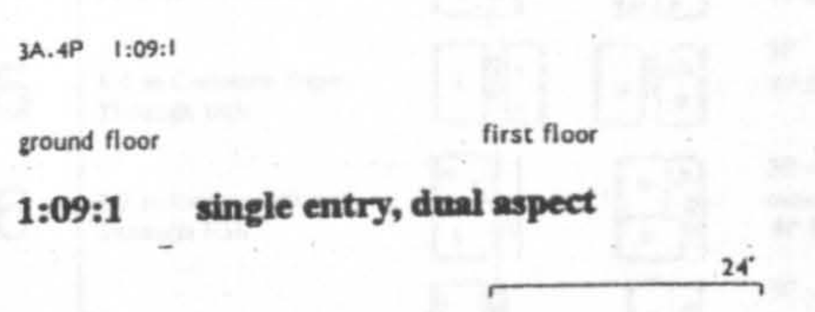
3A.4P 1:09:1

ground floor first floor

1:09:1 single entry, dual aspect

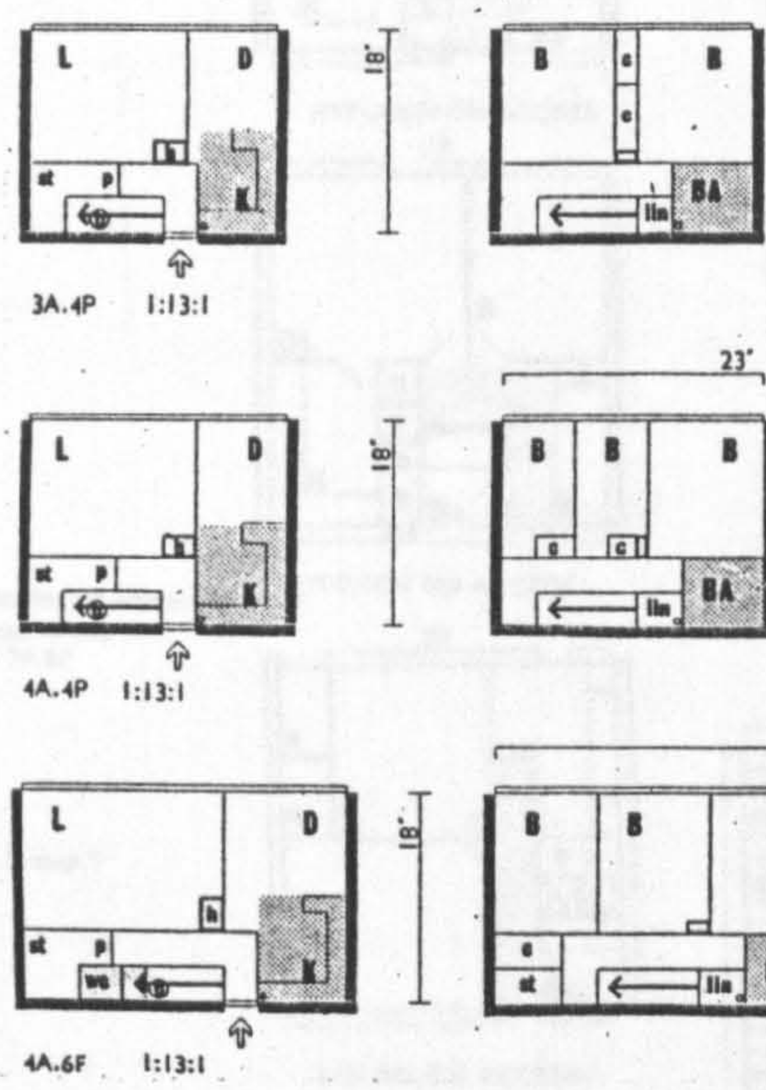


4A.4P 3:09:2

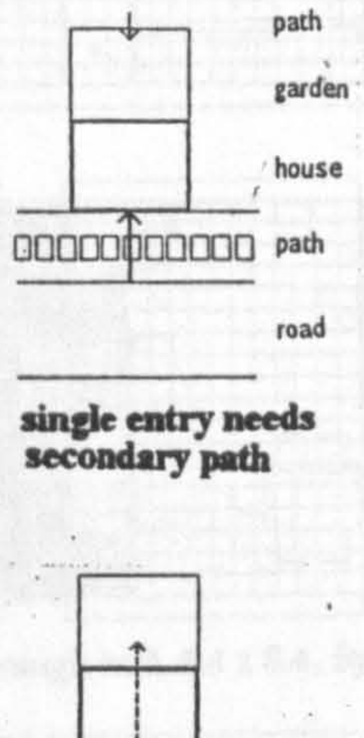


4A.6P 3:09:2

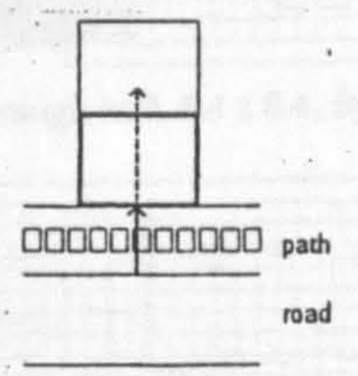
3:09:2 single or 1½ level entry, dual aspect



1:13:1 single and 1st fl entry, single aspect

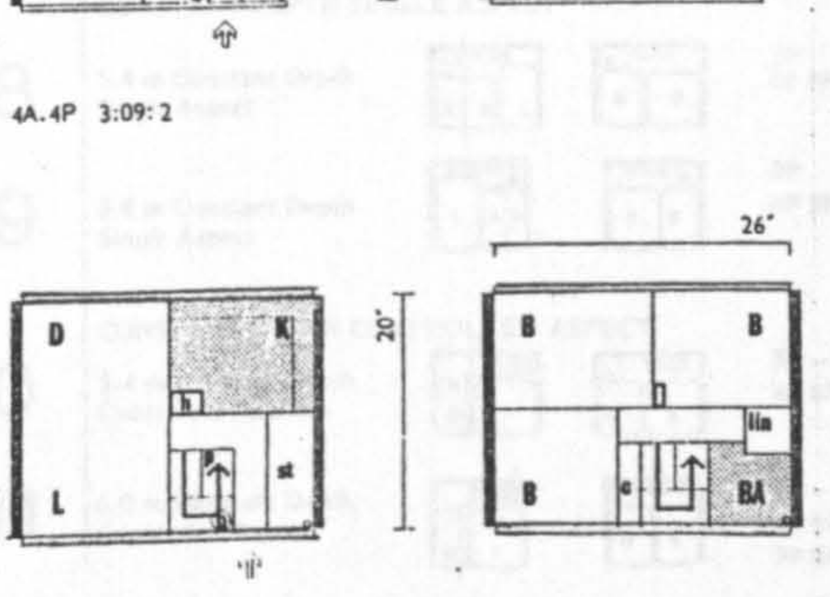


single entry needs secondary path



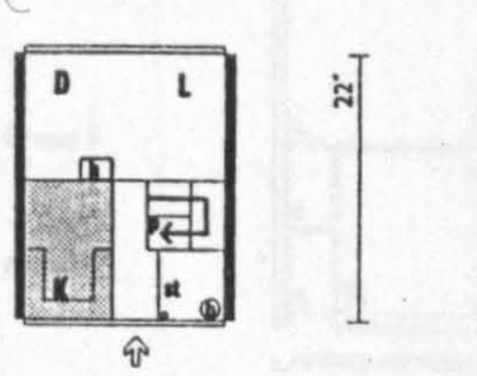
no secondary path, access thro. house

dual entry for visitors etc.



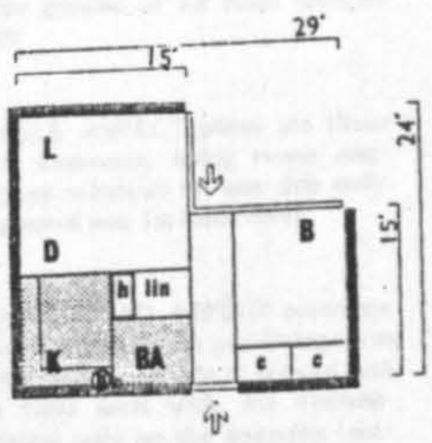
4A.6P 3:09:2

3:09:2 single or 1½ level entry, dual aspect



4A.4P 3:09:1

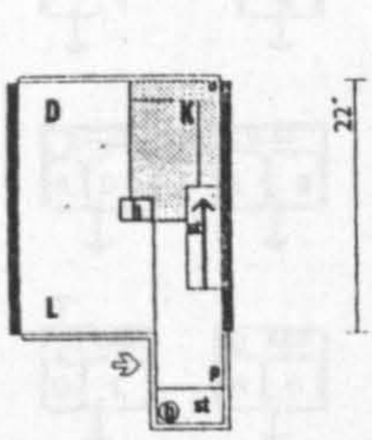
3:09:1 single entry, dual aspect



2A.2P 0:02:1

3A.3P 0:02:1

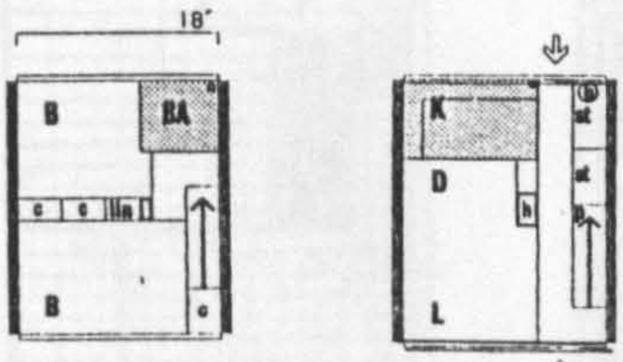
0:02:1 dual entry, single aspect



3A.4P 1:01:1

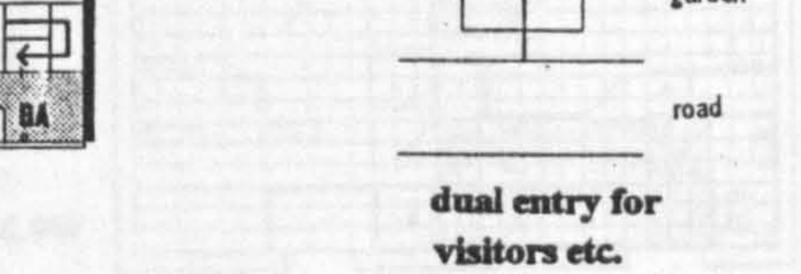
4A.4P 1:01:1

1:01:1 single entry, dual aspect



3A.4P 1:05:1

1:05:1 dual entry, dual aspect



3A.4P 1:07:4

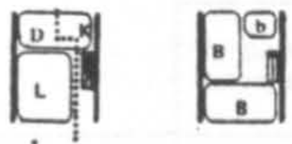
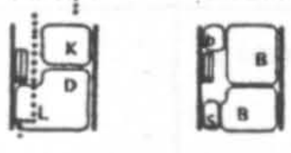
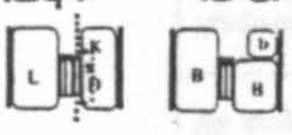
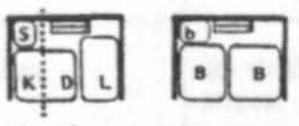
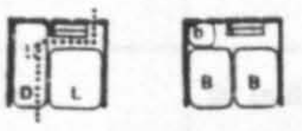
1:07:4 single and 1st fl entry, single aspect

Figure 6.05

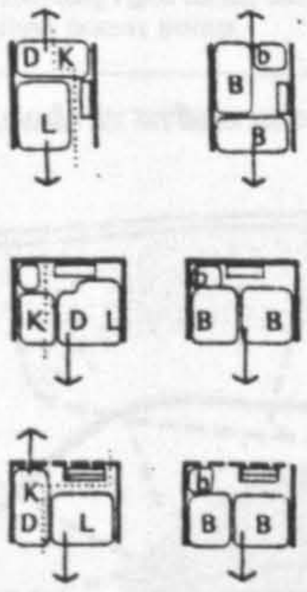
S.L.A.S.H. Plans, housing for general needs

Summary of Plan Groups

The basic arrangement of the plan groups shown is as published in the Handbook "A Selection of House Plans" with the addition of the new group 6A.

GROUP	TYPE	DIAGRAM	ACCOMMODATION
	CONSTANT FRONTAGE DUAL ASPECT		
1	5.4 m Constant Frontage Living on Access		3P 4P 5P 6P
2	5.4 m Constant Frontage Kitchen on Access		3P 4P 5P 6P
	CONSTANT DEPTH DUAL ASPECT		
3	6.6 m Constant Depth Living on Access		3P 4P 5P 6P 7P 8P
4	6.6 m Constant Depth Kitchen on Access		3P 4P 5P 6P 7P 8P
5	5.4 m Constant Depth Through Hall		3P 4P 5P 6P
6	7.2 m Constant Depth Through Hall		3P — if kitchen on access is required use Group 6A 4P 5P 6P 7P 8P
6A	7.2 m Constant Depth Kitchen on Access		3P
7	5.4 m Constant Depth Alternative Access		3P — Use Group 5 4P 5P 6P
	CONSTANT DEPTH SINGLE ASPECT		
8	5.4 m Constant Depth Single Aspect		3P 4P 5P 6P
9	6.0 m Constant Depth Single Aspect		3P 4P 5P 6P
	CONSTANT DEPTH CONTROLLED ASPECT		
10	5.4 m Constant Depth Controlled Aspect		3P — Use Group 8 4P 5P 6P
11	6.0 m Constant Depth Controlled Aspect		3P — Use Group 9 4P 5P 6P 7P 8P

DUAL ASPECT plans are those with bedroom, living room or kitchen windows on both sides at either ground or 1st floor level or both.

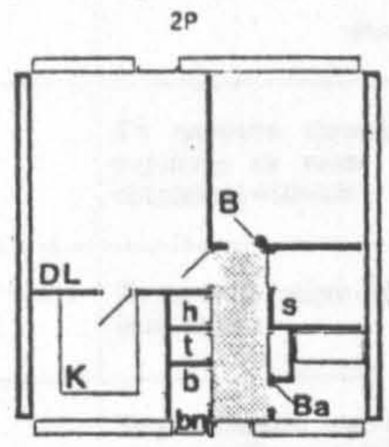


SINGLE ASPECT plans are those with bedroom, living room and kitchen windows on one side only at ground and 1st floor level.

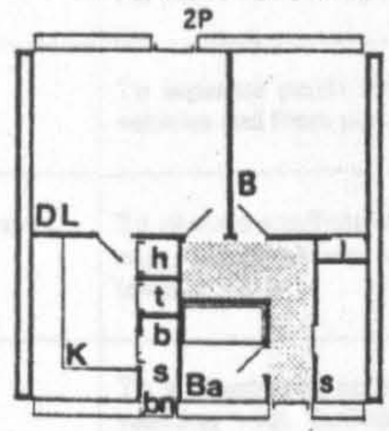
CONTROLLED ASPECT plans are those with bedroom and living room windows on one side at ground and 1st floor level with the kitchen window only on the opposite (access) side.

The following abbreviations are used on the drawings:

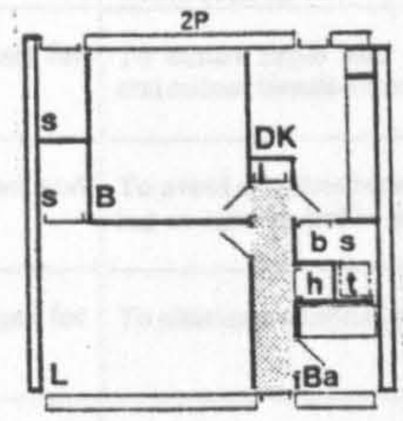
B	Broom Store
BN	Bin Store
S	General Store
H	Heater Compartment
W	Washing Machine
R	Refrigerator
T	Tank and Cylinder Location
L	Linen Storage



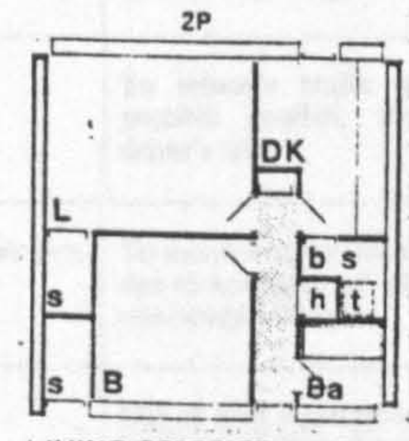
KITCHEN ON ACCESS



KITCHEN ON ACCESS

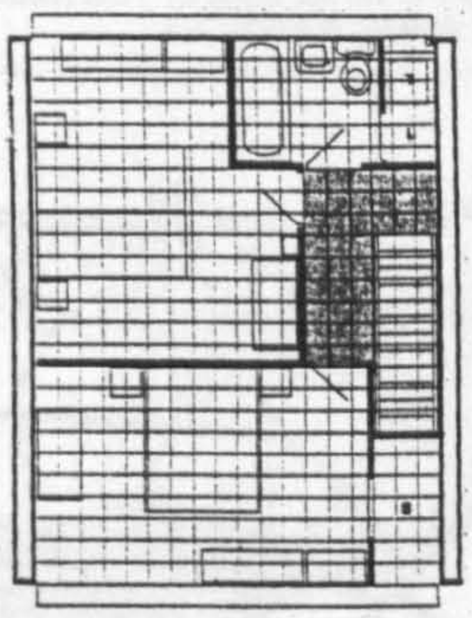


LIVING ON ACCESS

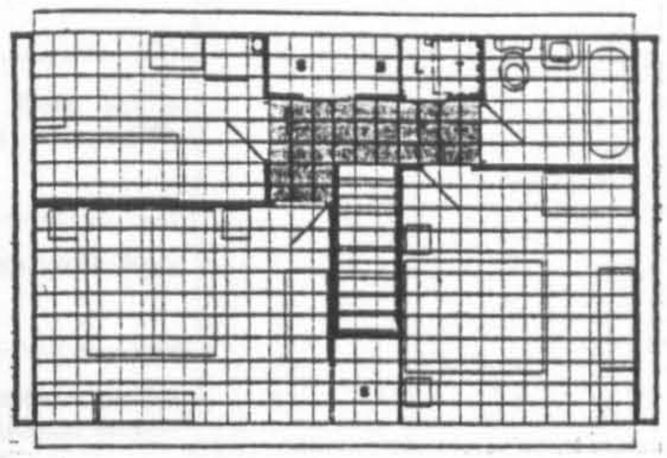


LIVING OPPOSITE ACCESS

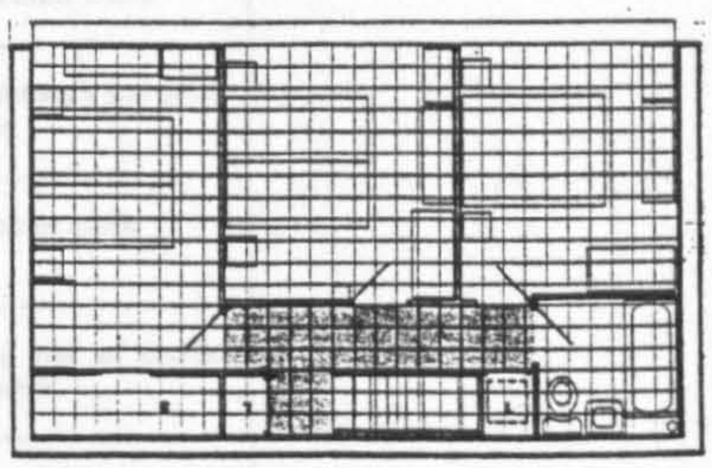
2p variations 7.2D 6.9W

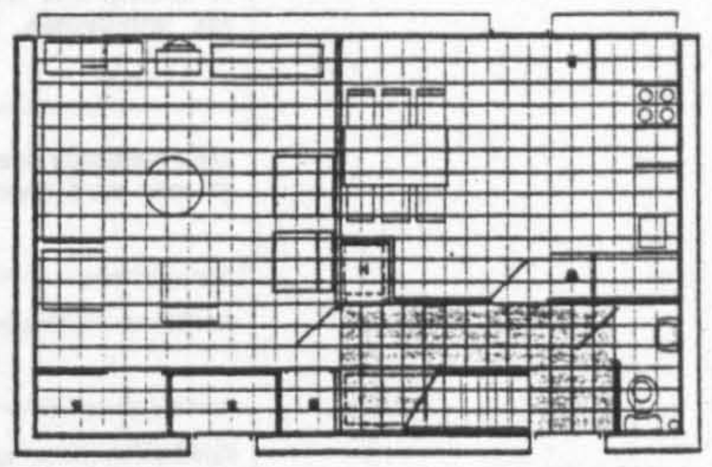


Group 1 Living on access, 5.4 x 7.5, 4p

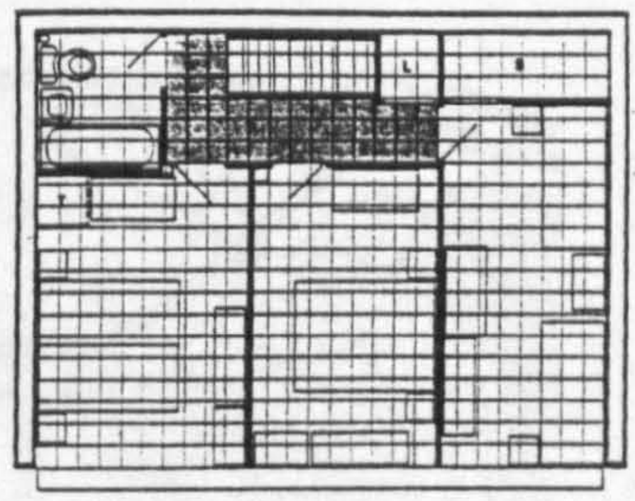


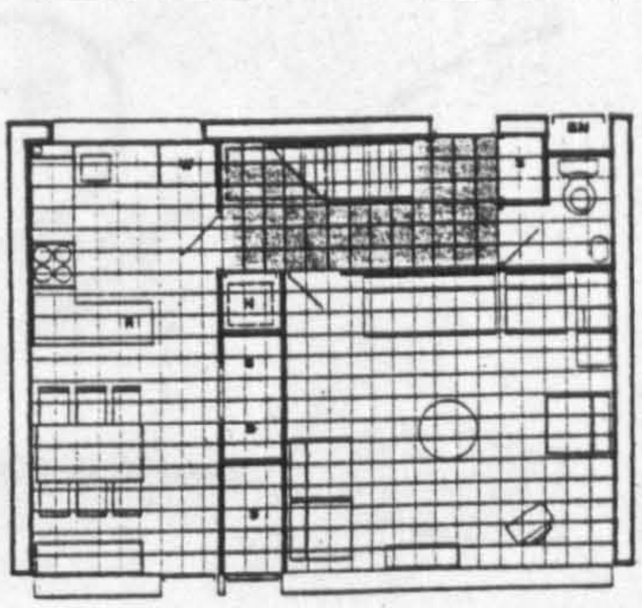
Group 5 Through hall, 5.4 x 8.4, 5p





Group 8 Single aspect, 5.4 x 9.0, 6p





Group 11 Controlled aspect, 6.0 x 8.1, 6p

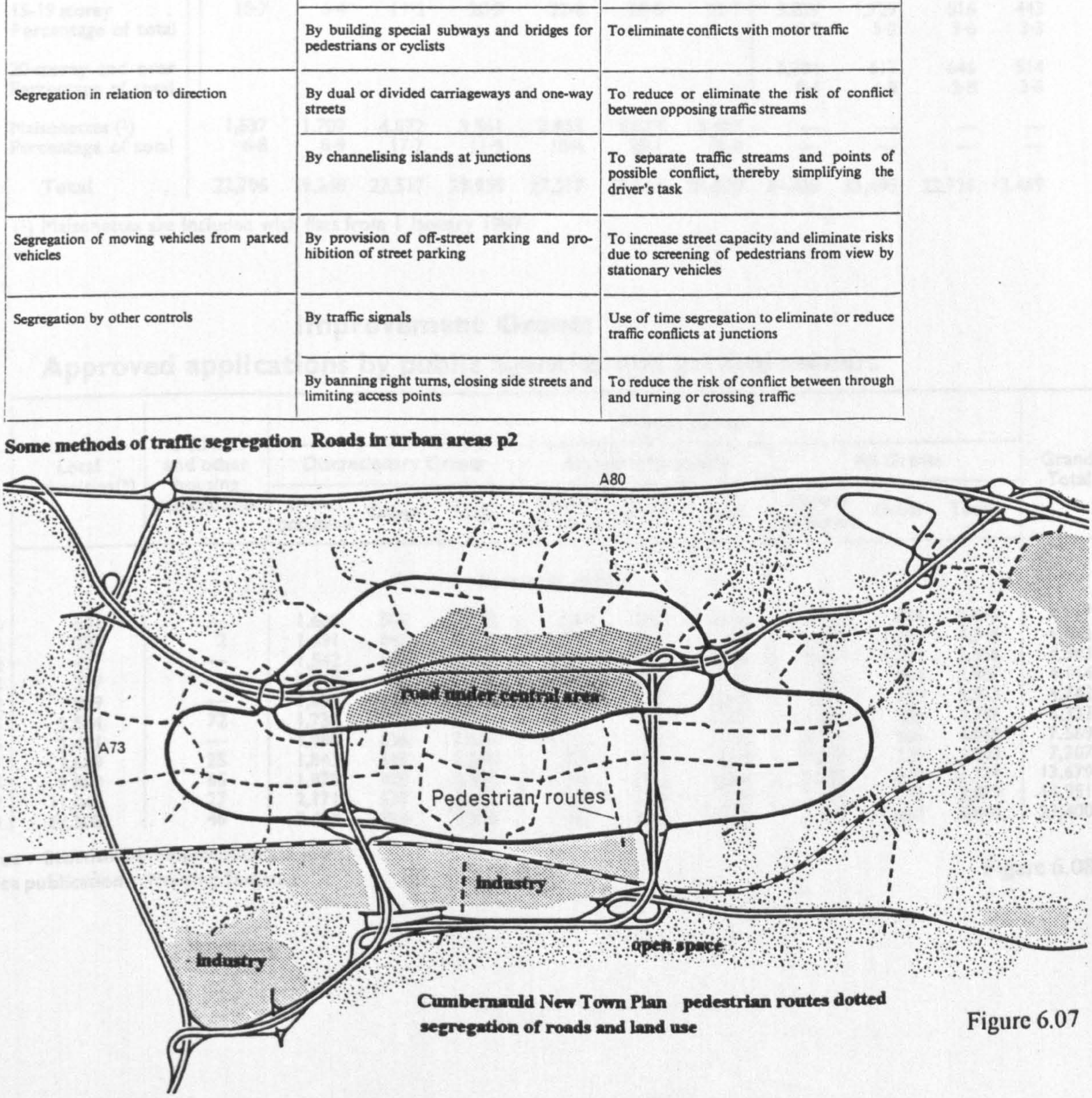
Source SLASH A Selection of House Plans 1974/77

Figure 6.06

Roads in Urban Areas, Segregation

Type of segregation	Method	Purpose
Segregation in relation to destination	By construction of by-passes	To separate through traffic from traffic requiring to enter the town and traffic circulating within it
	By provision of separate primary and distributory traffic networks	To separate longer-distance urban traffic from local traffic
Segregation of types of traffic	By construction of urban motorways	To provide fast, high-capacity routes solely for motor traffic and eliminate accidents involving pedestrians and pedal cyclists
	By cycle tracks and cycle ways	To separate pedal cyclists from faster motor vehicles and from pedestrians
	By pedestrian ways and elevated footways	To obviate conflicts with faster traffic and give easy, direct access to various parts of the town
	By construction of back streets	To give separate access for goods and service vehicles, with facilities for loading and off-loading
	By reserving some roads or traffic lanes for buses	To ensure rapid and direct public transport and reduce interference from other traffic
Segregation of traffic by grade separation	By construction of flyovers, underpasses and grade-separated junctions	To avoid conflicts between through and crossing or turning traffic streams
	By building special subways and bridges for pedestrians or cyclists	To eliminate conflicts with motor traffic
Segregation in relation to direction	By dual or divided carriageways and one-way streets	To reduce or eliminate the risk of conflict between opposing traffic streams
	By channelising islands at junctions	To separate traffic streams and points of possible conflict, thereby simplifying the driver's task
Segregation of moving vehicles from parked vehicles	By provision of off-street parking and prohibition of street parking	To increase street capacity and eliminate risks due to screening of pedestrians from view by stationary vehicles
Segregation by other controls	By traffic signals	Use of time segregation to eliminate or reduce traffic conflicts at junctions
	By banning right turns, closing side streets and limiting access points	To reduce the risk of conflict between through and turning or crossing traffic

Some methods of traffic segregation Roads in urban areas p2



Cumbernauld New Town Plan pedestrian routes dotted segregation of roads and land use

Figure 6.07

Scottish Housing Provision 1960 to 1970

Storey heights

Approved tenders for Local Authorities, SSHA and New Towns

		1960	1961	1962	1963	1964	1965	1966	1967	1968	1969	1970
								Number				
Houses :	1 storey	1,189	1,503	1,248	1,642	1,558	1,812	2,136	2,667	2,767	1,594	870
	Percentage of total	5·2	7·8	4·6	5·5	5·6	5·5	6·8	6·8	8·2	7·0	6·4
	2 & 3 storey	9,413	8,595	9,277	10,620	9,050	9,883	11,107	15,720	17,036	12,861	6,459
	Percentage of total	41·5	44·6	33·7	35·4	32·9	29·7	35·1	39·8	50·9	56·6	47·9
Flats :	2-storey	1,729	1,474	2,161	2,675	1,844	2,800	2,658	1,789	1,992	1,264	567
	Percentage of total	7·6	7·6	7·9	8·9	6·7	8·4	8·4	4·6	6·0	5·5	4·2
	3-storey	4,543	2,902	3,865	2,979	2,137	2,332	2,205	3,840	3,047	1,650	970
	Percentage of total	20·0	15·1	14·0	10·0	7·8	7·0	7·0	9·7	9·1	7·3	7·2
	4 & 5 storey	1,868	1,836	3,019	2,394	3,802	2,831	3,542	6,189	4,827	3,065	2,823
	Percentage of total	8·2	9·6	10·9	8·0	13·8	8·5	11·1	15·6	14·4	13·5	21·0
	6-11 storey								1,282	268	560	843
	Percentage of total								3·3	0·8	2·5	6·2
	12-14 storey								1,018	1,212	270	—
	Percentage of total	2,427	1,229	3,075	6,087	6,271	8,573	7,495	2·6	3·6	1·2	—
	15-19 storey								3,629	1,729	816	443
	Percentage of total	10·7	6·4	11·2	20·3	22·8	25·8	23·7	9·2	5·2	3·6	3·3
	20-storey and over								3,304	617	646	514
	Percentage of total								8·4	1·8	2·8	3·8
	Maisonettes (1)	1,537	1,709	4,872	3,561	2,855	5,029	2,487	—	—	—	—
	Percentage of total	6·8	8·9	17·7	11·9	10·4	15·1	7·9	—	—	—	—
	Total	22,706	19,248	27,517	29,958	27,517	33,260	31,630	39,438	33,495	22,726	13,489

(1) Maisonettes are included with flats from 1 January 1967.

Improvement Grants

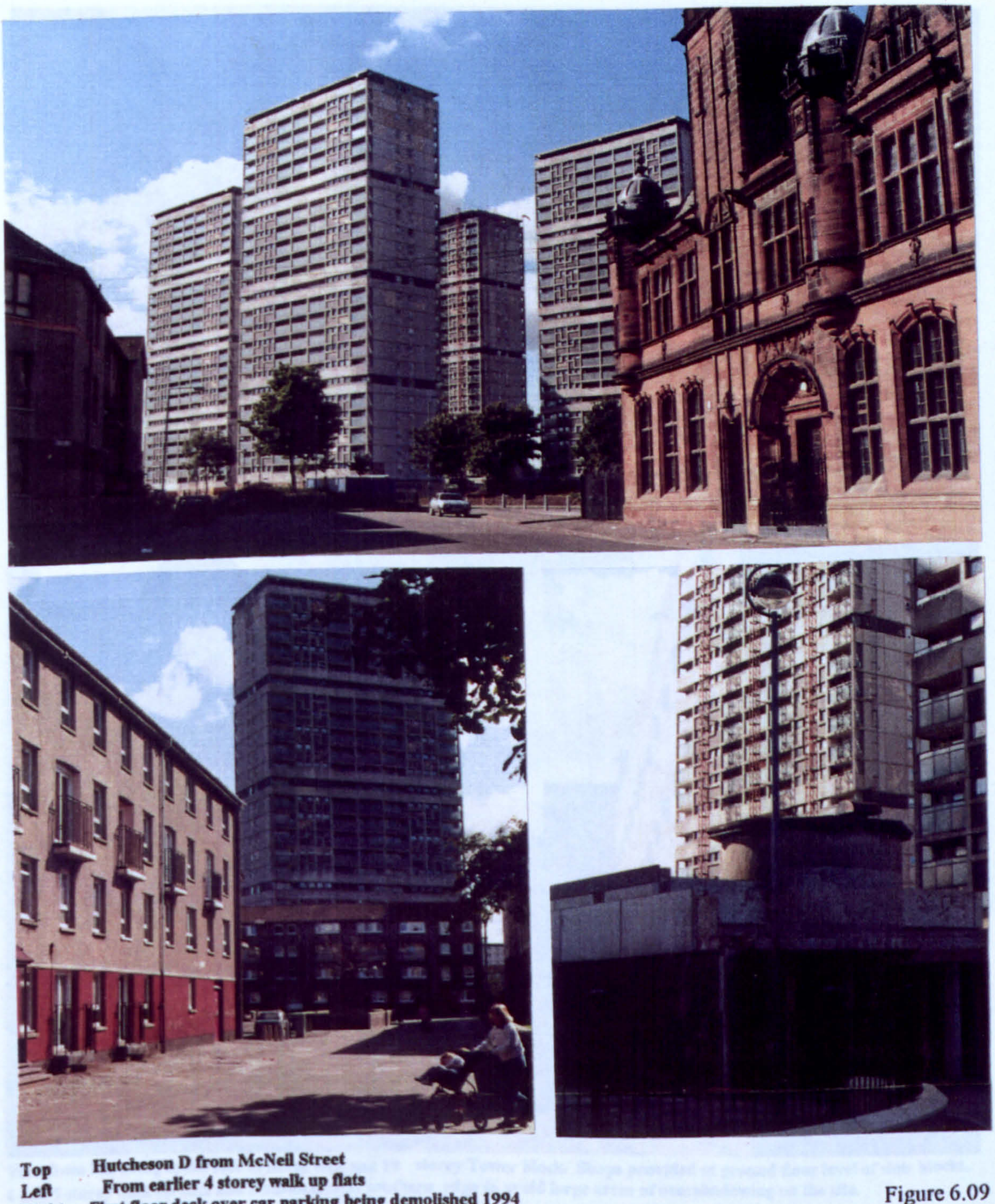
Approved applications by public agencies and private owners

Local authorities(2)	S.S.H.A. and other housing associations	Private owners									Grand Total
		Discretionary Grants			Standard Grants(3)			All Grants			
		Owner occupied	Other	Total	Owner occupied	Other	Total	Owner occupied	Other	Totals	
		Number of houses									
1960	501	—	1,668	504	2,172	1,264	180	1,444	2,932	684	3,616	4,117
1961	287	2	1,691	842	2,533	1,394	417	1,811	3,085	1,259	4,344	4,633
1962	427	—	1,542	848	2,390	1,151	415	1,566	2,693	1,263	3,956	4,383
1963	207	—	1,818	668	2,486	1,145	276	1,421	2,963	944	3,907	4,114
1964	819	—	1,884	631	2,515	1,089	319	1,408	2,973	950	3,923	4,742
1965	2,504	72	1,736	630	2,366	1,091	300	1,391	2,827	930	3,757	6,333
1966	3,481	—	1,988	636	2,624	1,132	332	1,464	3,120	968	4,088	7,569
1967	3,679	25	1,843	547	2,390	1,035	178	1,213	2,878	725	3,603	7,307
1968	9,880	65	1,878	490	2,368	1,186	180	1,366	3,064	670	3,734	13,679
1969	11,045	27	2,171	527	2,698	1,003	178	1,181	3,174	705	3,879	14,951
1970	17,508	46	3,424	904	4,328	1,335	183	1,518	4,759	1,087	5,846	23,400

Source : Scottish Development Department
Source publication : Housing Statistics

Figure 6.08

SSHA Hutchesontown "D" Glasgow



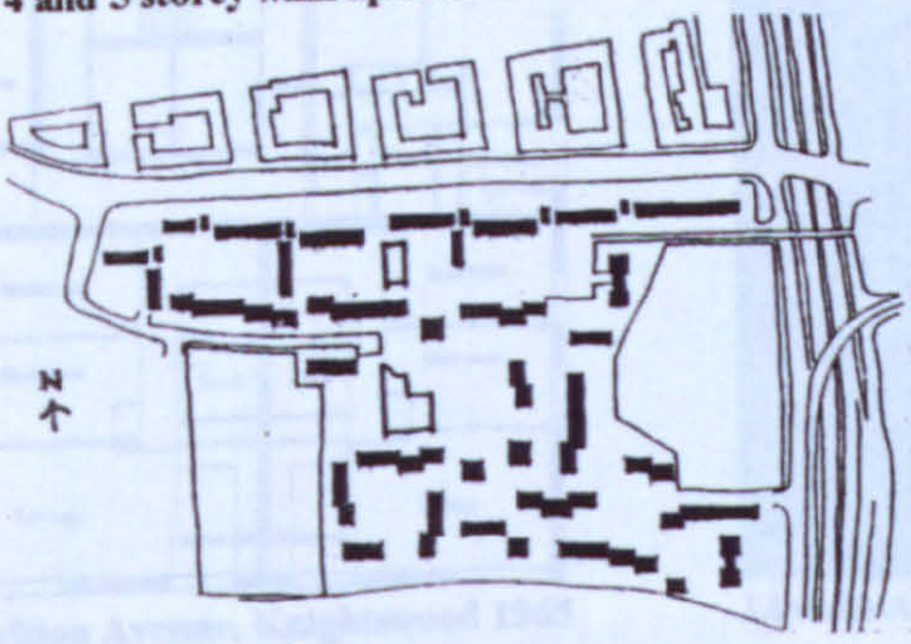
Top Hutcheson D from McNeil Street
Left From earlier 4 storey walk up flats
Right First floor deck over car parking being demolished 1994

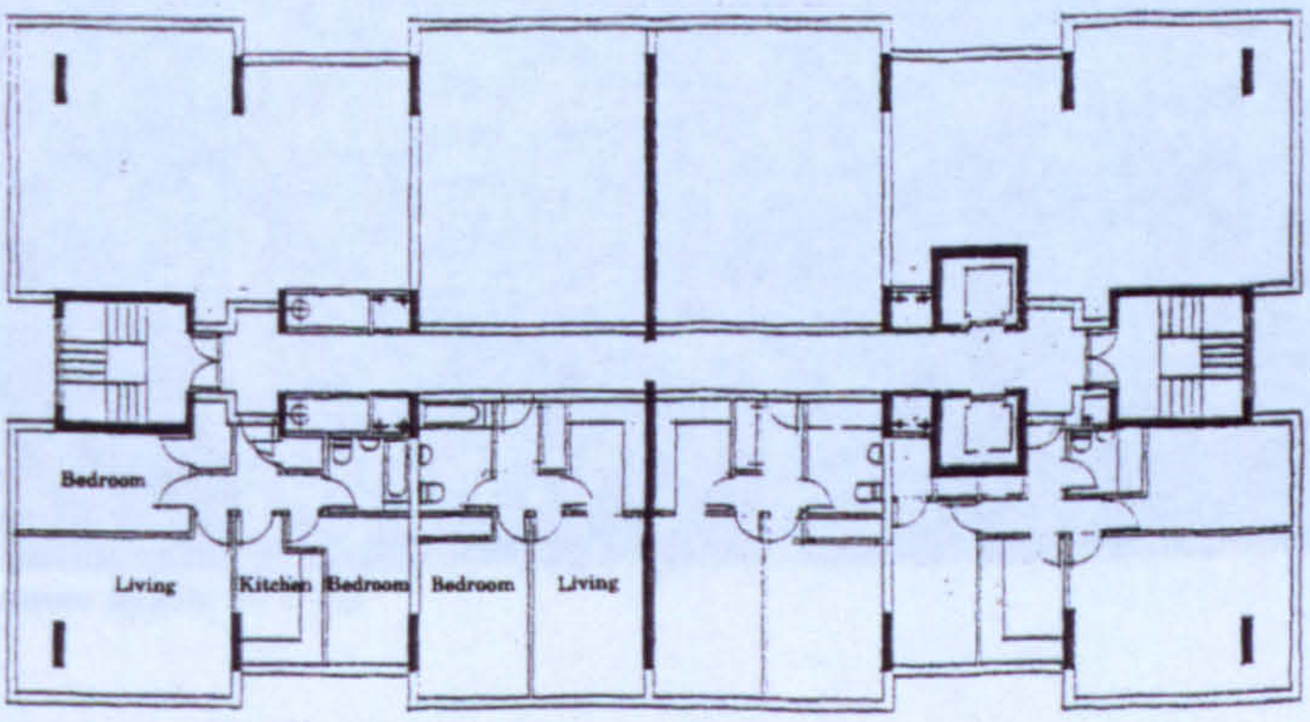
Figure 6.09

Anderston Cross CDA, Glasgow

Central boiler house flue in front of 9, 11 and 13 storey north wall

View from M8 along south face of north wall and 18 storey Tower block. Shops provided at ground floor level of slab blocks, 4 and 5 storey walk up flats and maisonettes on southern edge to avoid large areas of overshadowing on the site.





Dalriada and Davaar Towers Structural frame
Typical Floor plan 4 No 3 apt/3p, 4 No 2 apt/2p flats

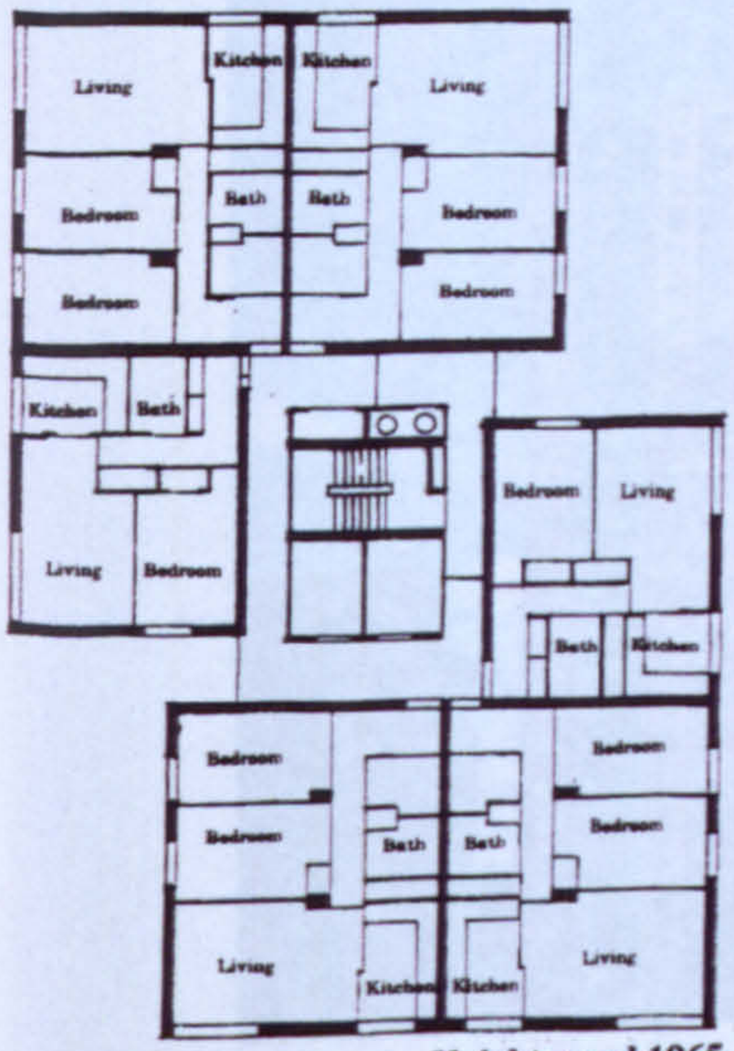
Figure 6.10

Wimpey Tower Blocks in Glasgow

Kirkton Avenue, Knightswood 1965

Royston A approved 1959, C approved 1969

Scotstonhill, Kingsway approved 1962

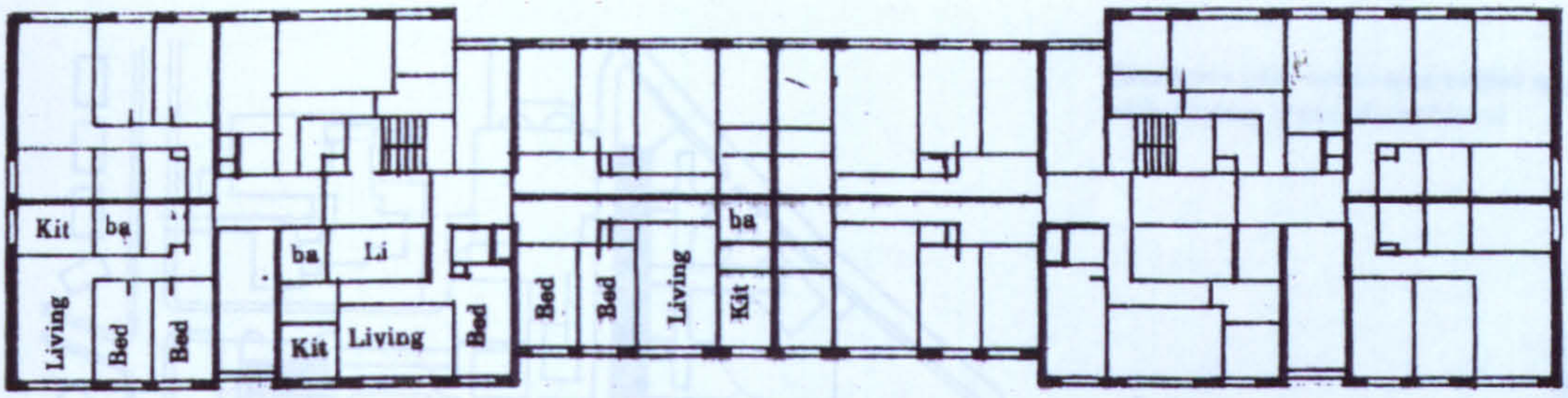


Kirkton Avenue, Knightswood 1965

Lincoln Avenue approved 1962

Figure 6.11

Crudens Slab Blocks, Glasgow



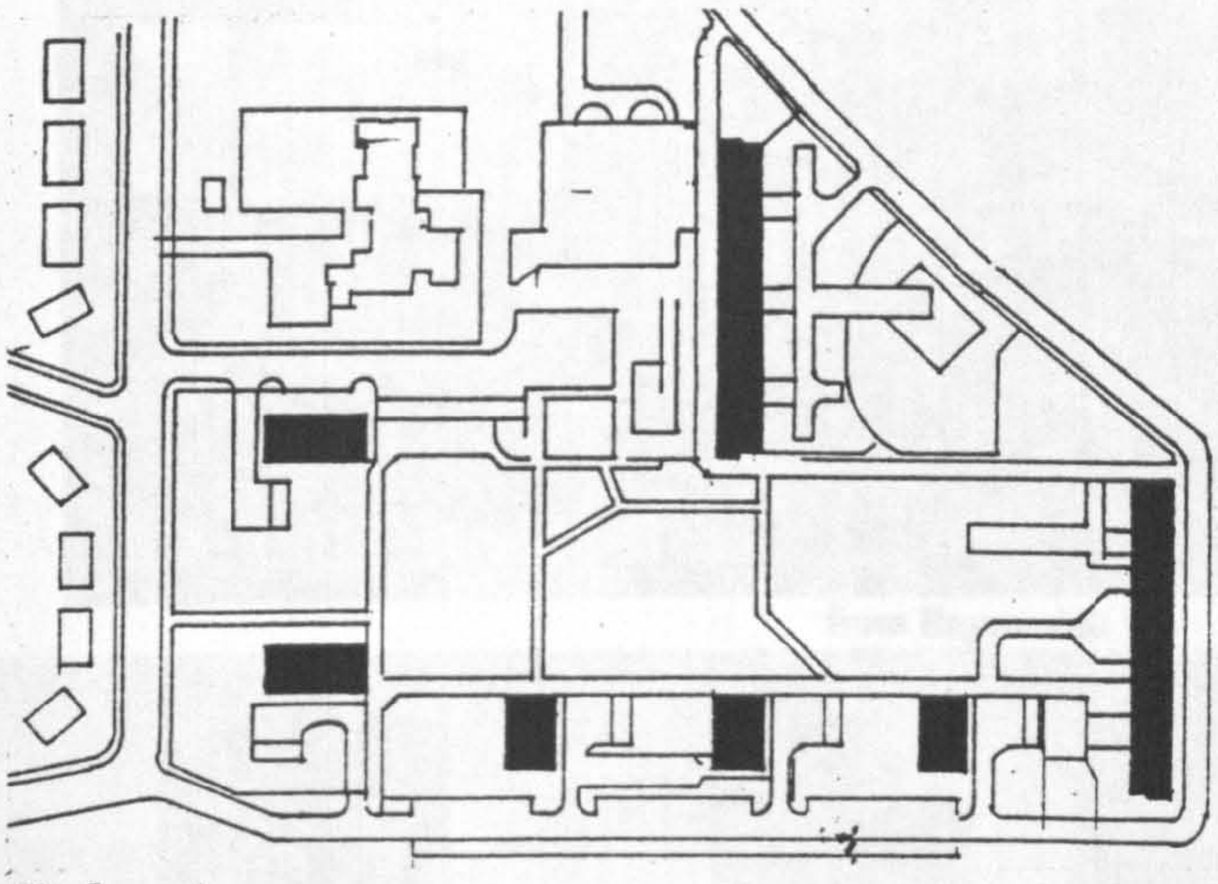
Sighthill from east, Royston

South Sighthill from Sighthill Park

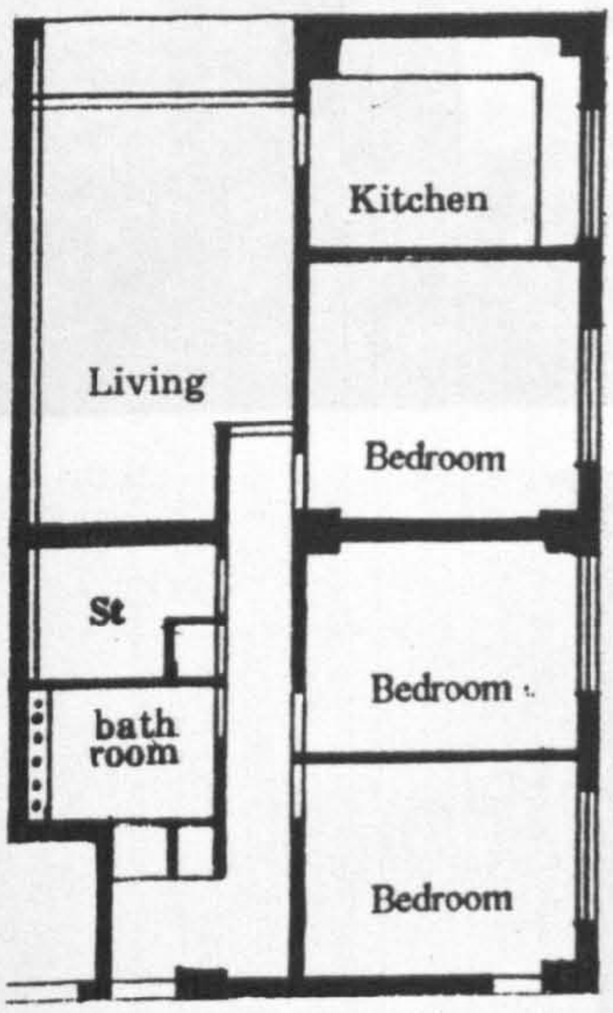
Norfolk Court, Lauriston Gorbals CDA

Figure 6.12

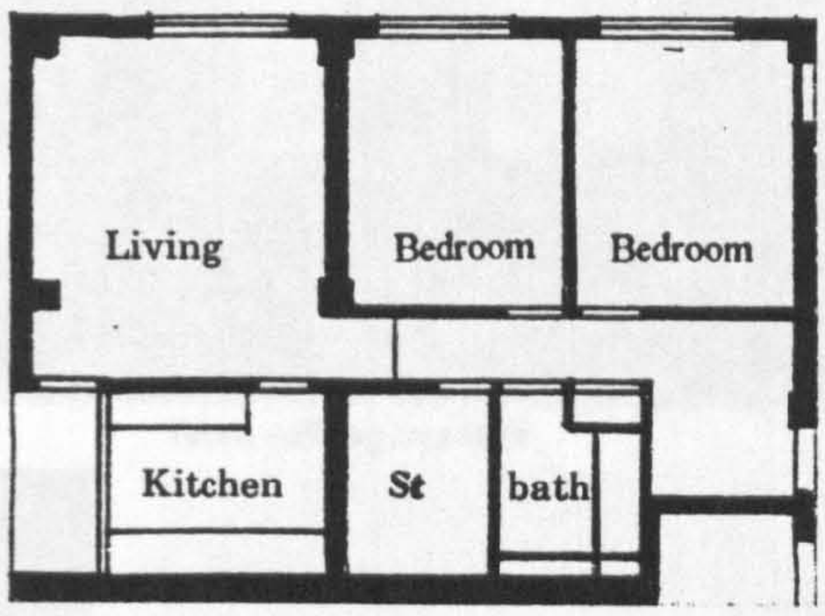
Red Road Flats, Glasgow



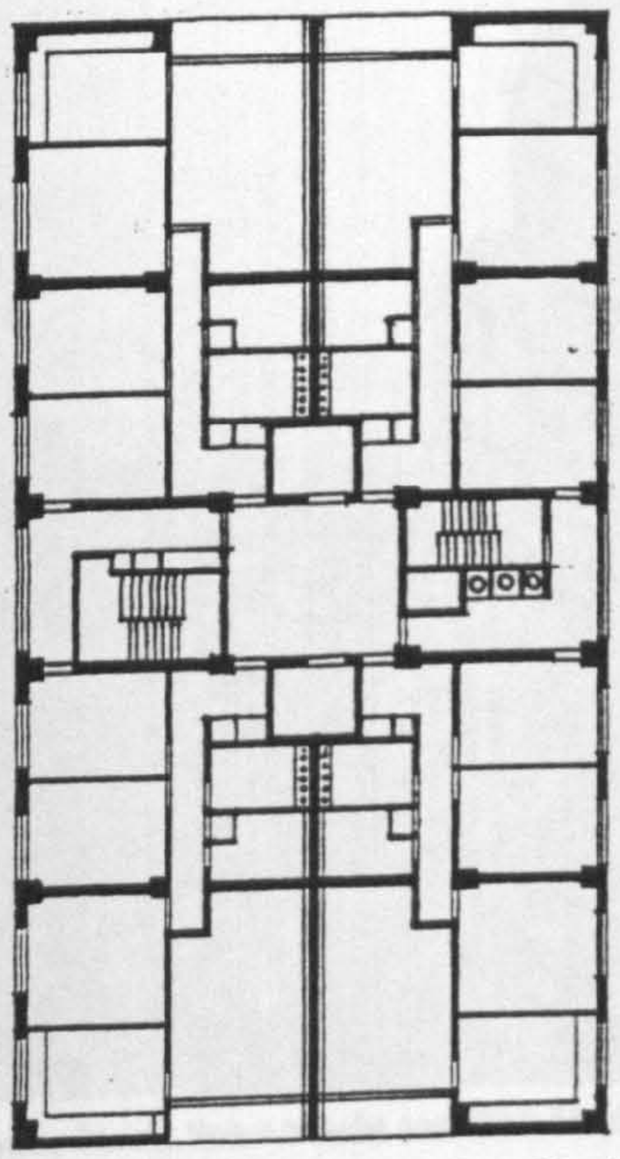
Site Layout



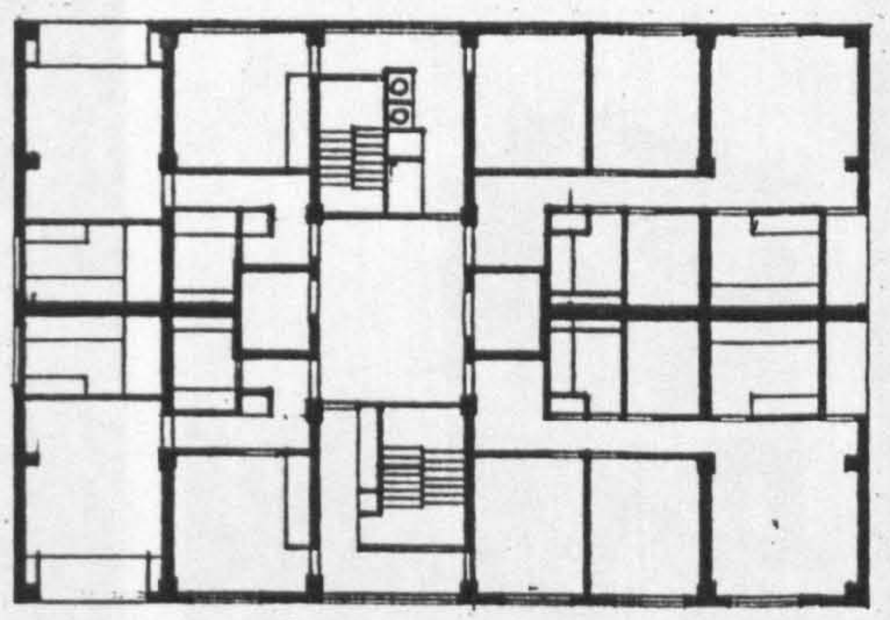
Tower block flat plan



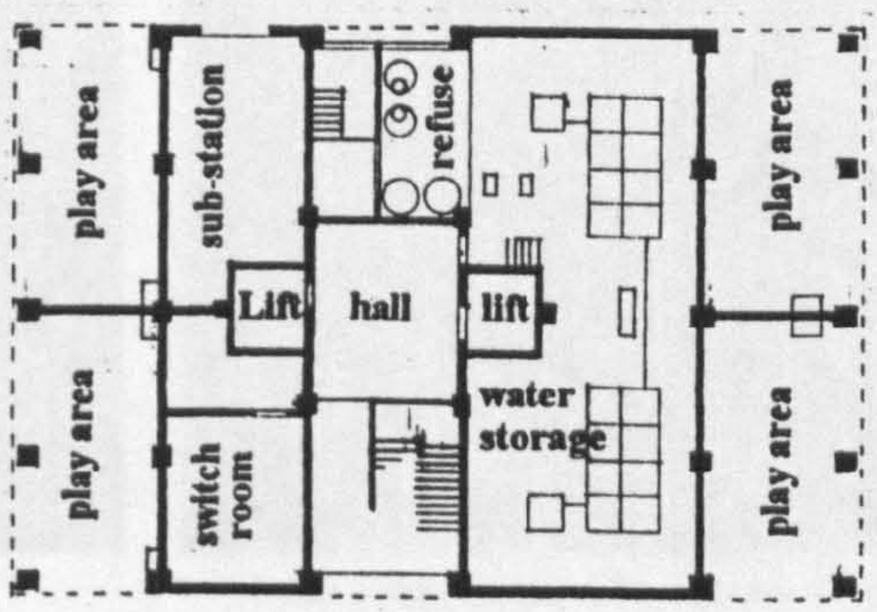
Point block flat plan



Tower block typical floor plan 30 x 15.5m

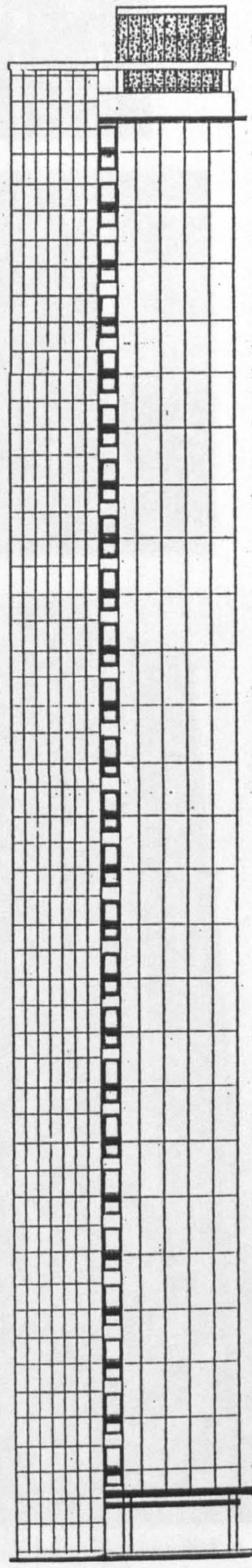


Point block typical floor plan 22.5 x 15.5m



Point block ground floor

flats have play areas and refuse at ground level with drying areas at roof level

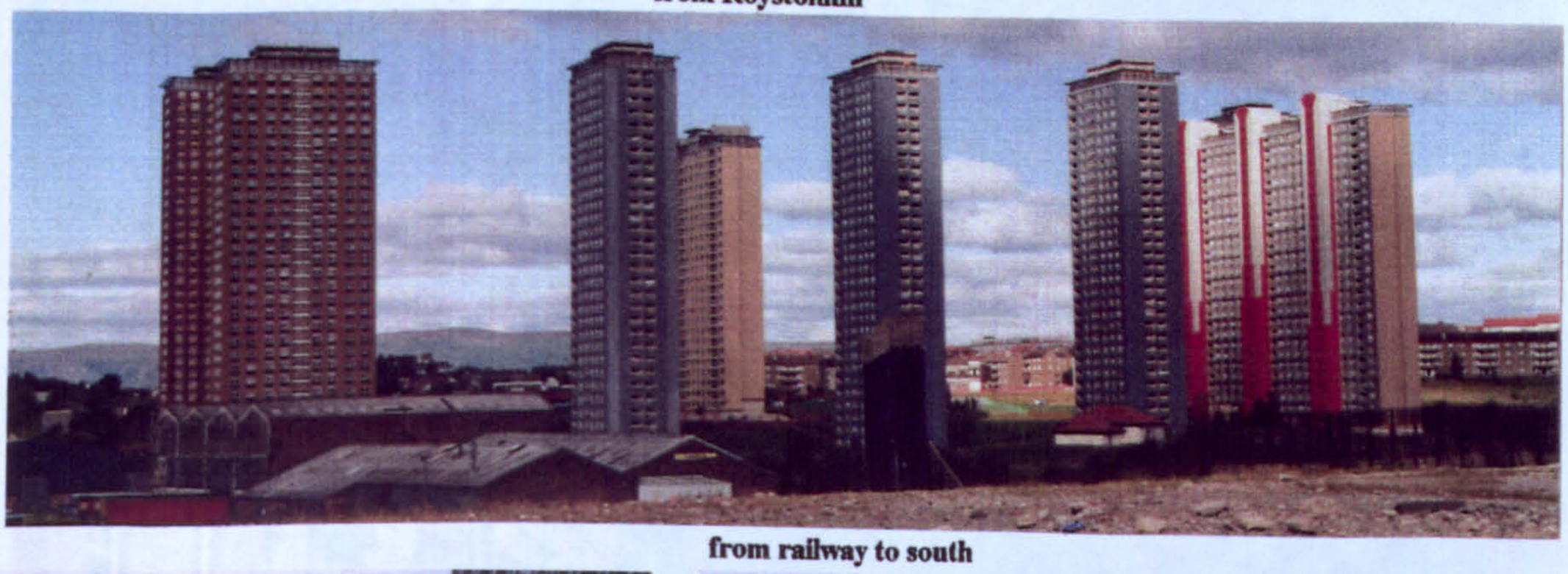


Side elevation slab block

Figure 6.13

Red Road Flats, Glasgow

from Roystonhill



from railway to south

Tower block, Point blocks and Slab blocks

Point blocks reclad with conservatory ground floor entrance added

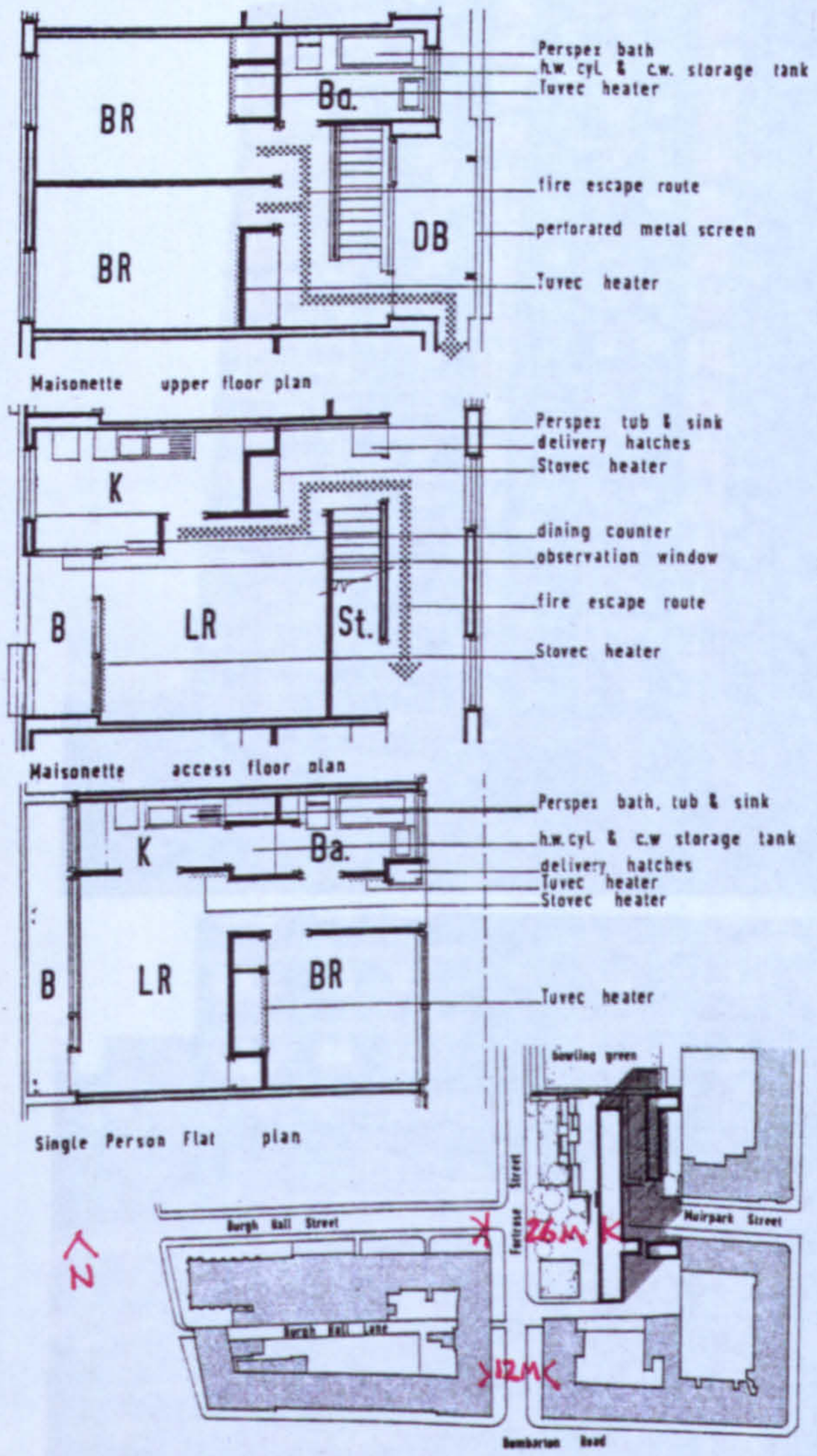
Figure 6.14

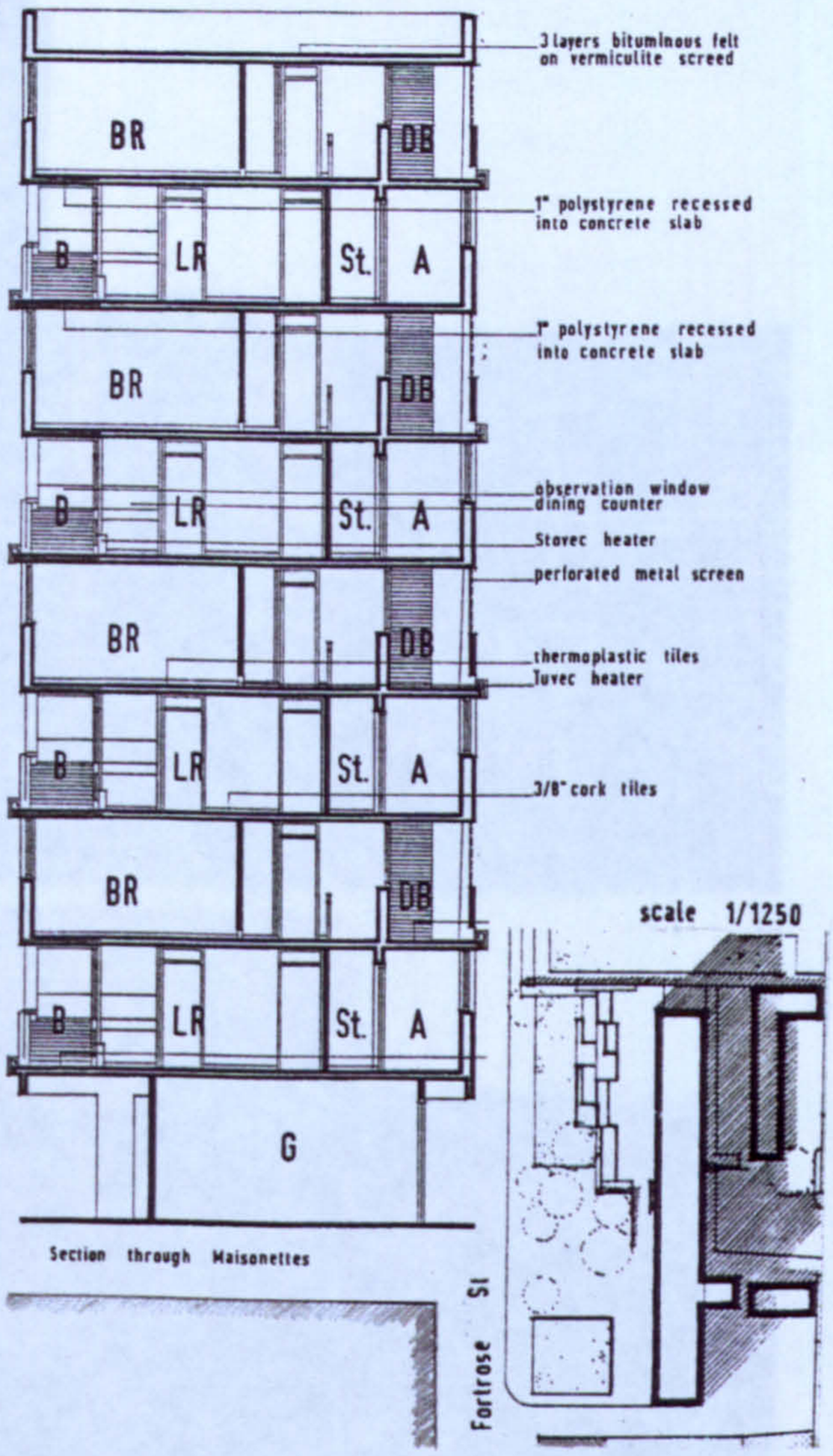
SSHA Wyndford, Glasgow

Developed throughout the 1960's it is a mixed development of 4 storey walk up flats with 8, 9, 15 and 26 storey Tower blocks

Figure 6.15

SSHA Fortrose Street, Glasgow





New block set back for daylight and sunlight penetration

Figure 6.16

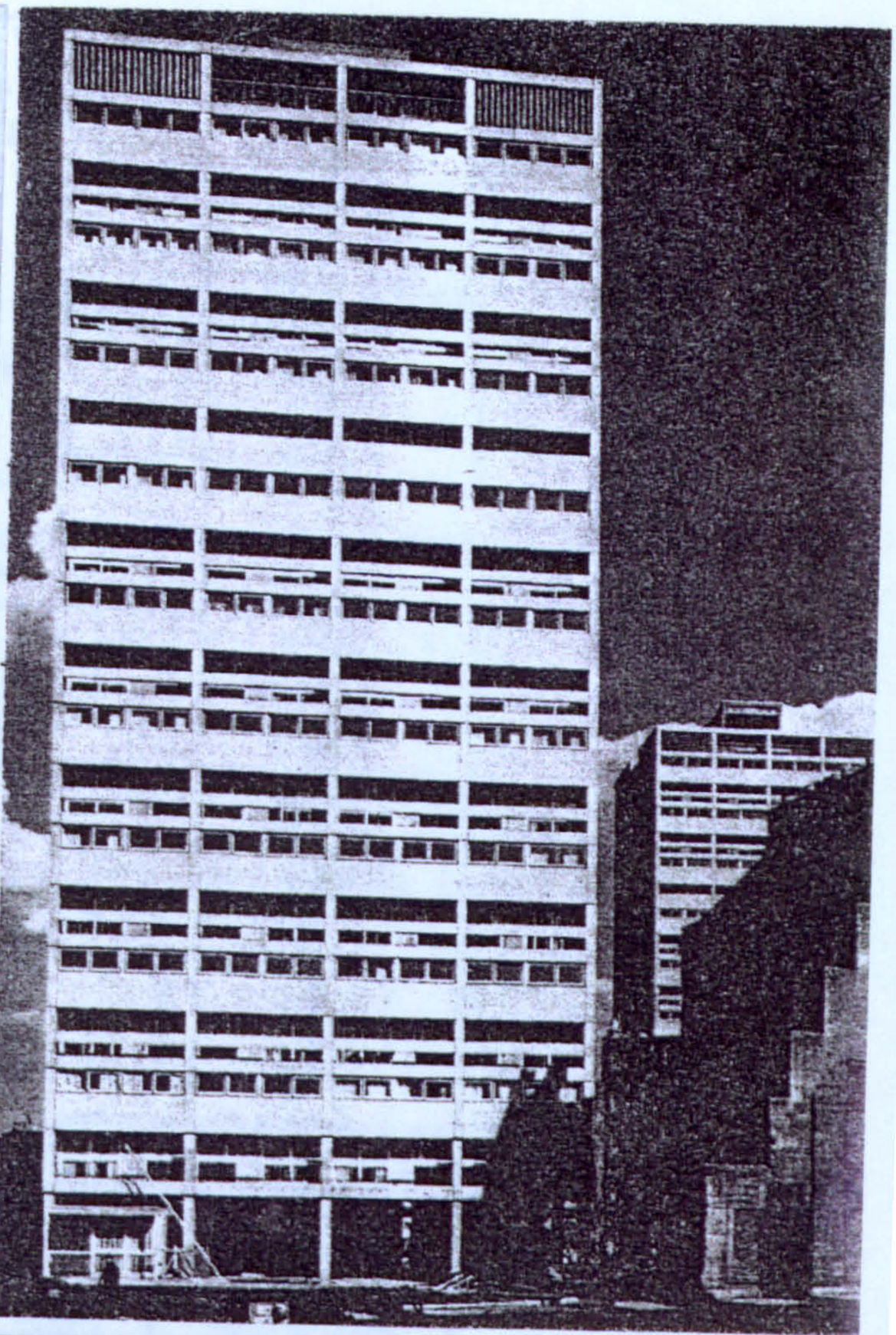
Crudens Sighthill Centre, Edinburgh

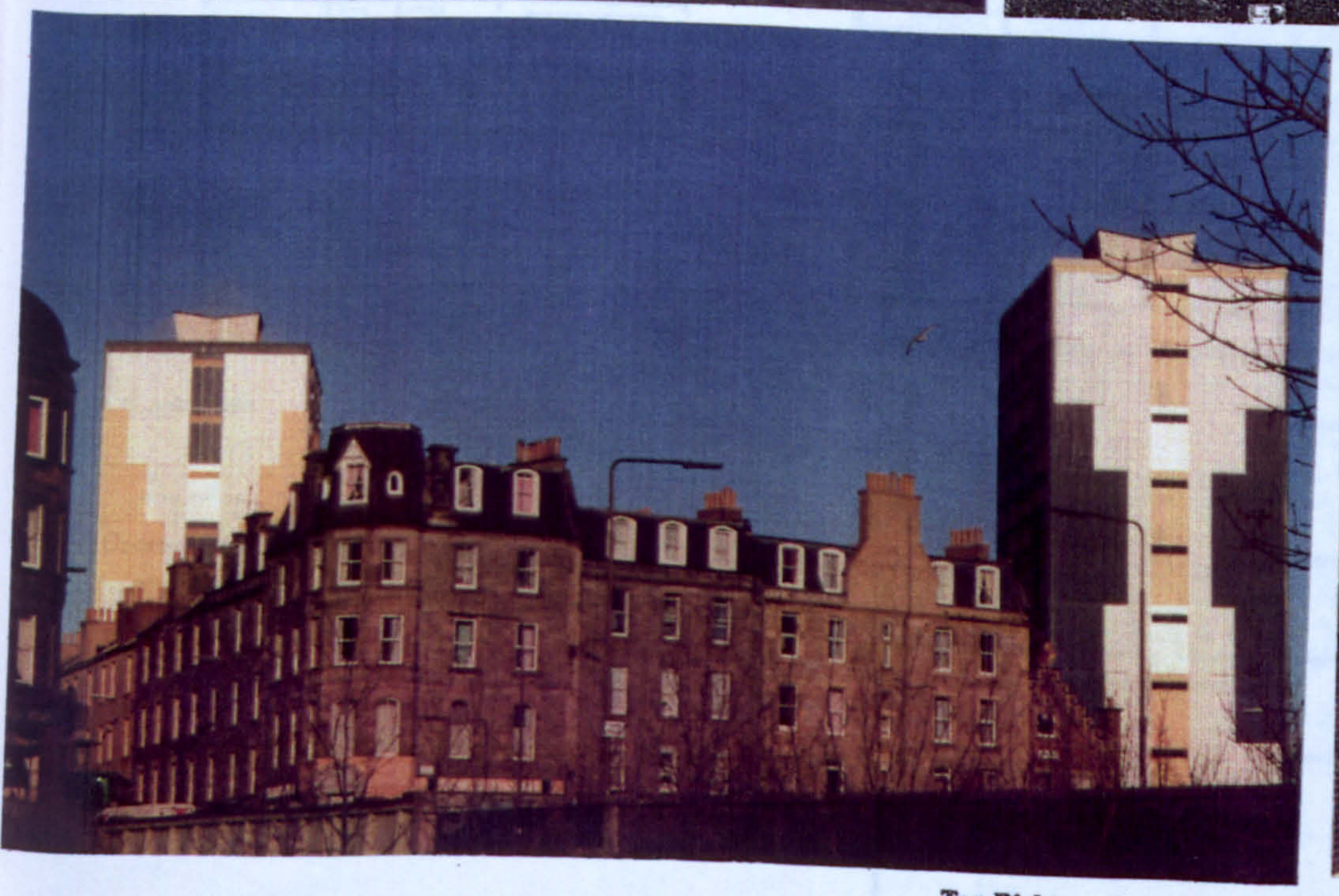
3, 17 storey tower blocks built with 1st floor car park deck along edge of Sighthill park mixed development with four storey walk-up flats

Figure 6.17

Couper Street, Leith

Couper Street, Leith

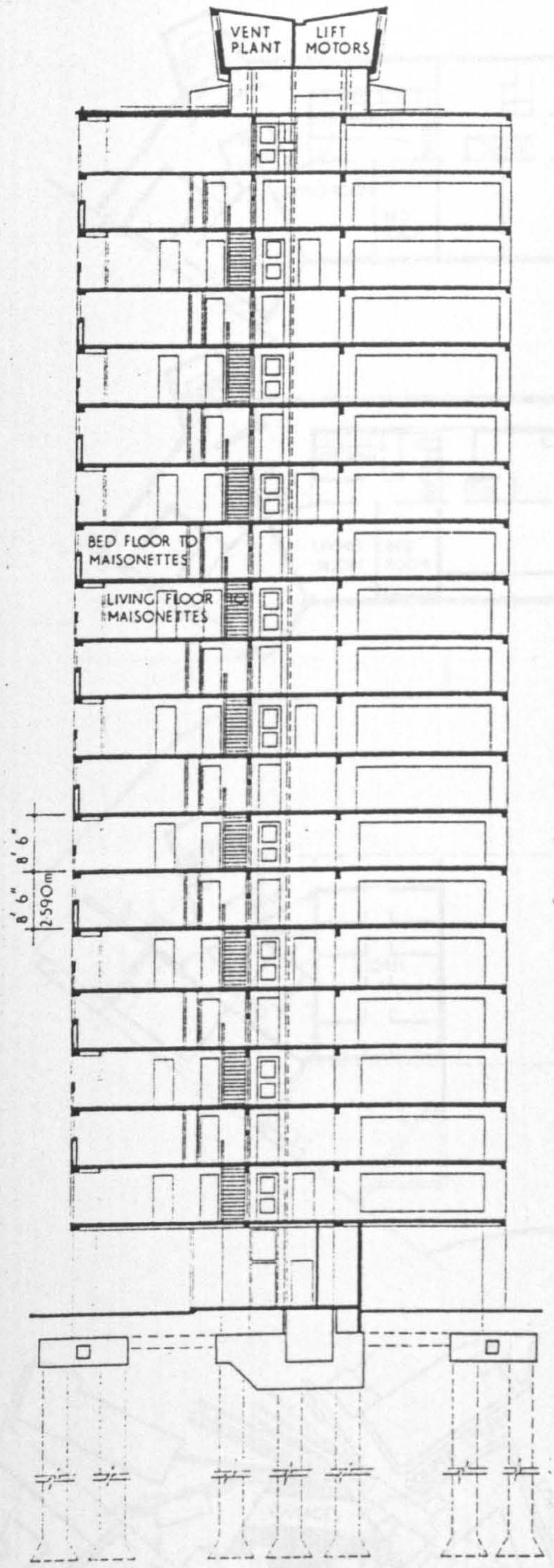




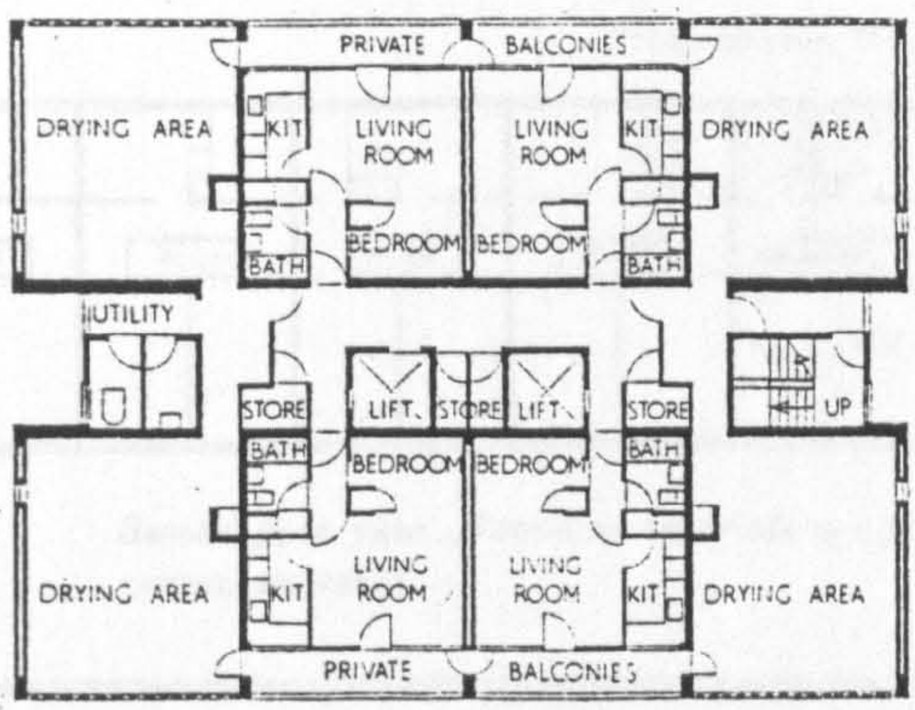
Top Right As designed by Alison & Hutchison and Partners
Top Left Overclad with corrugated metal sheet photographed Dec. 94
Foot Right Impact of overclad towers on Leith
Foot Left Three storey blocks left as originally built

Figure 6.18

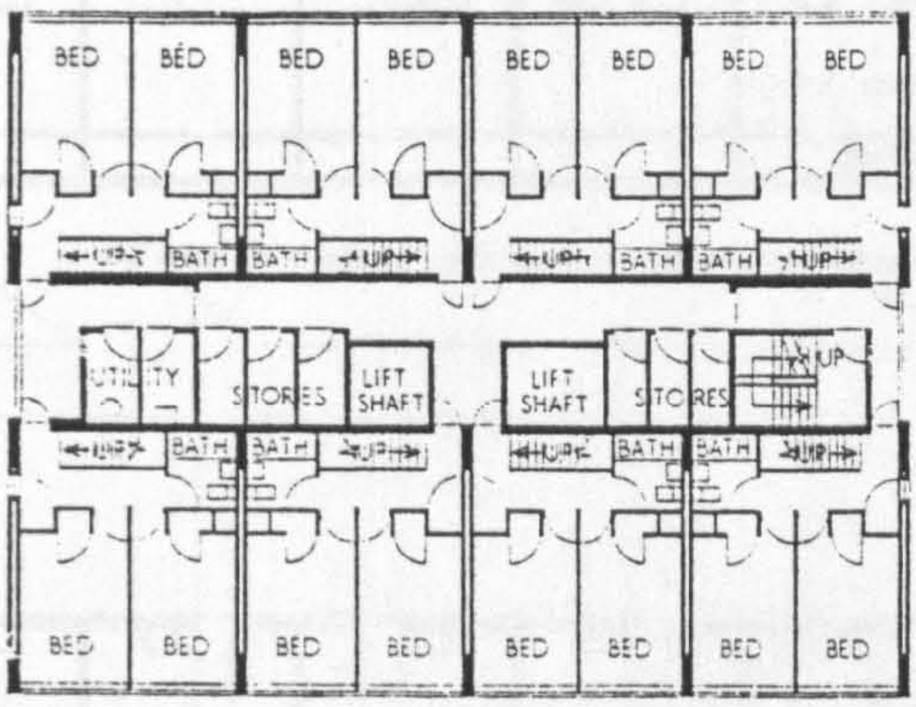
Couper Street, Leith



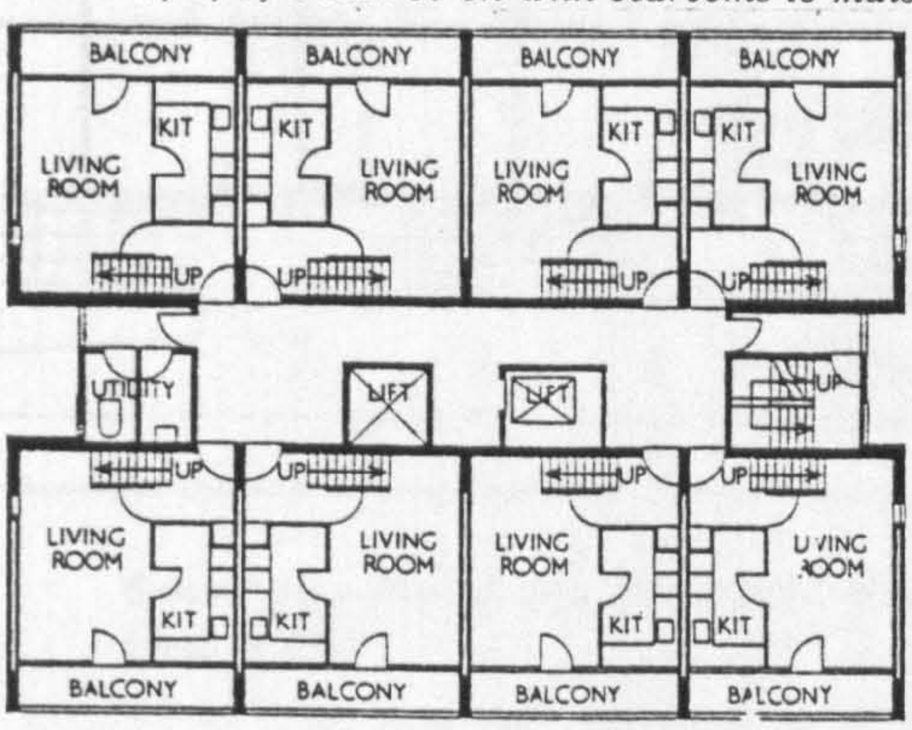
Cross-section through tower block ($\frac{1}{32}$in = 1ft)



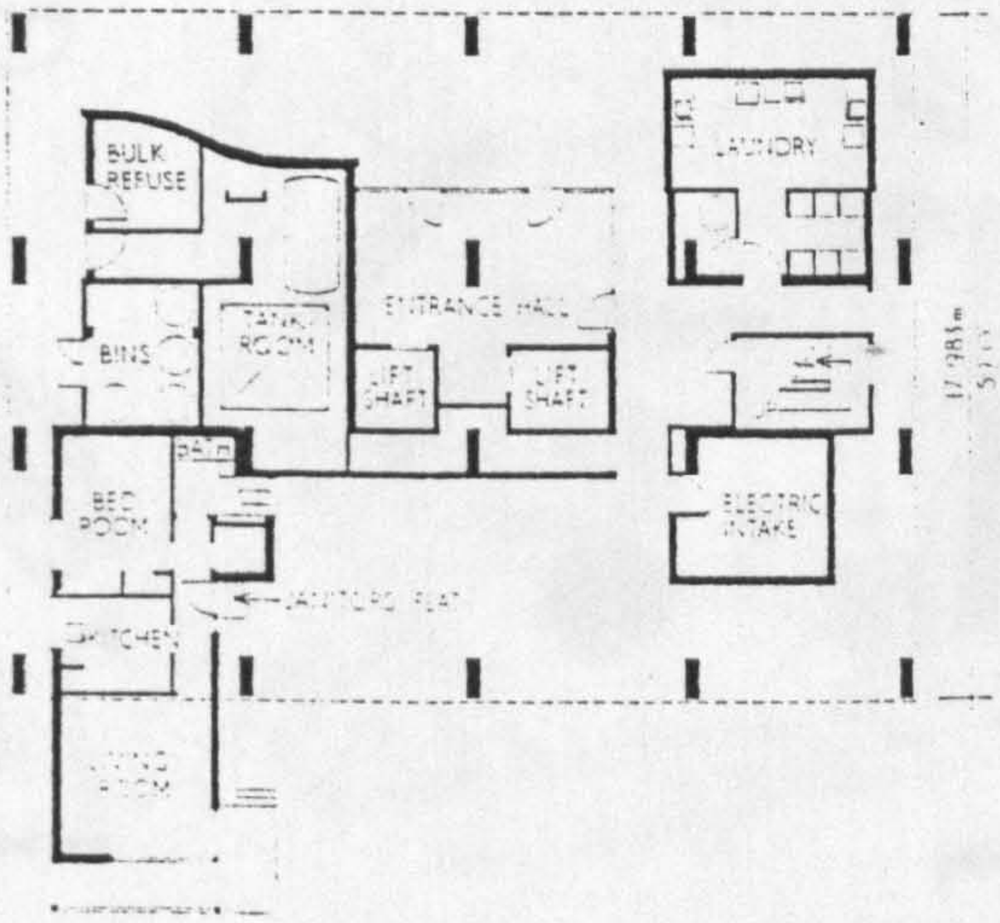
Nineteenth-floor plan which includes four flats and communcl drying areas



Floors 2, 4, 6, 8 and so on with bedrooms to maisonettes



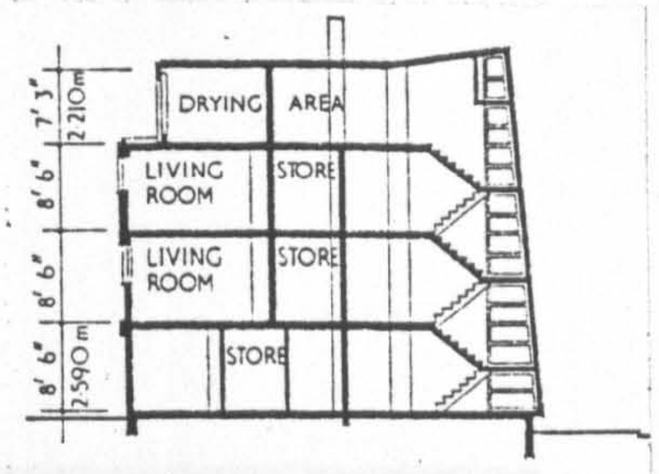
Floors 1, 3, 5, 7, and so on with living areas of maisonettes



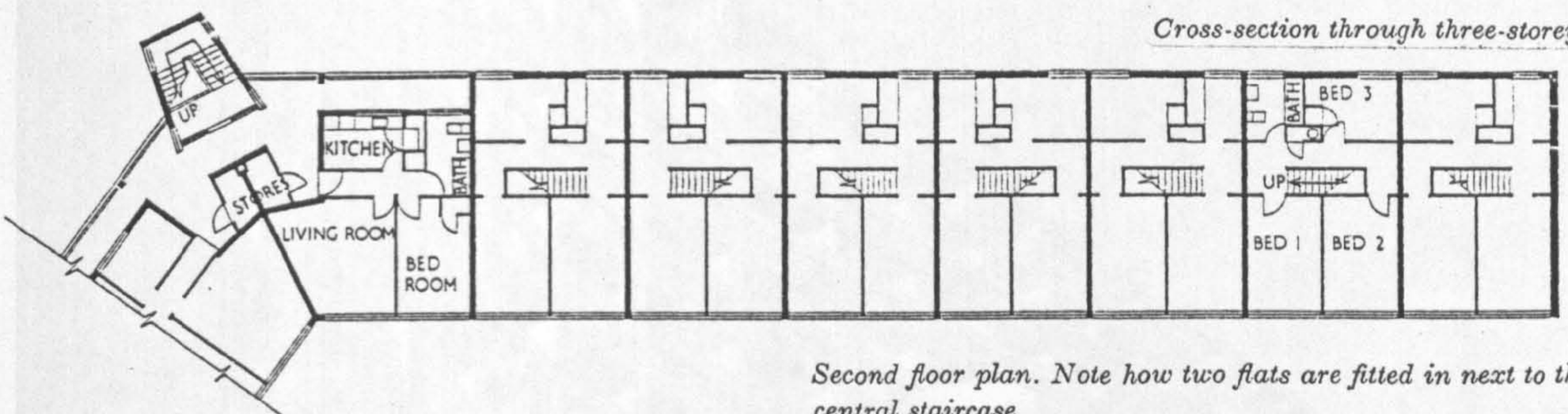
Ground floor plan of twenty-storey block of flats and maisonettes

Figure 6.19

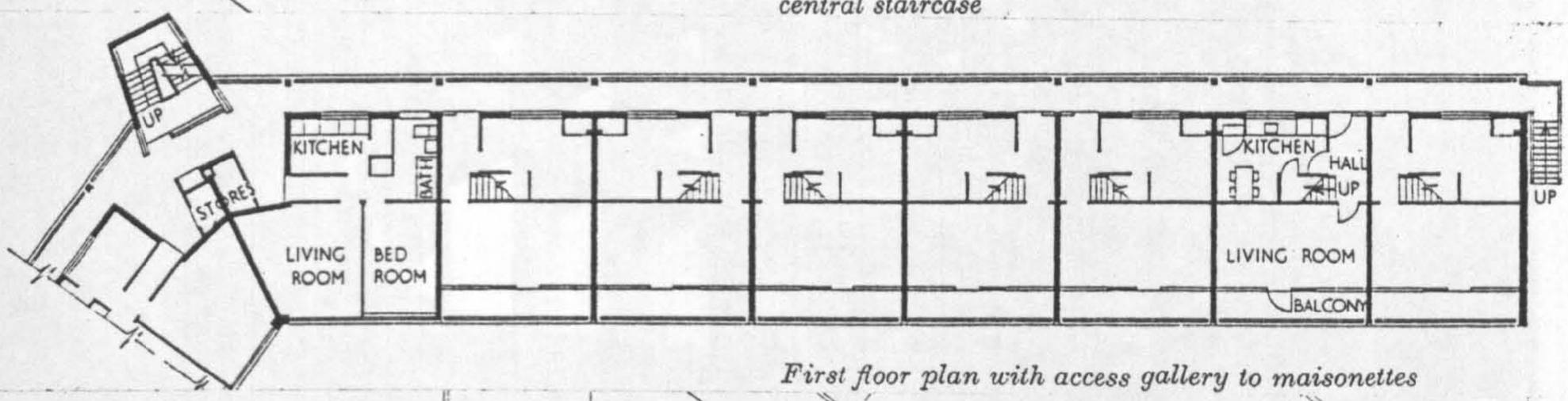
Couper Street, Leith



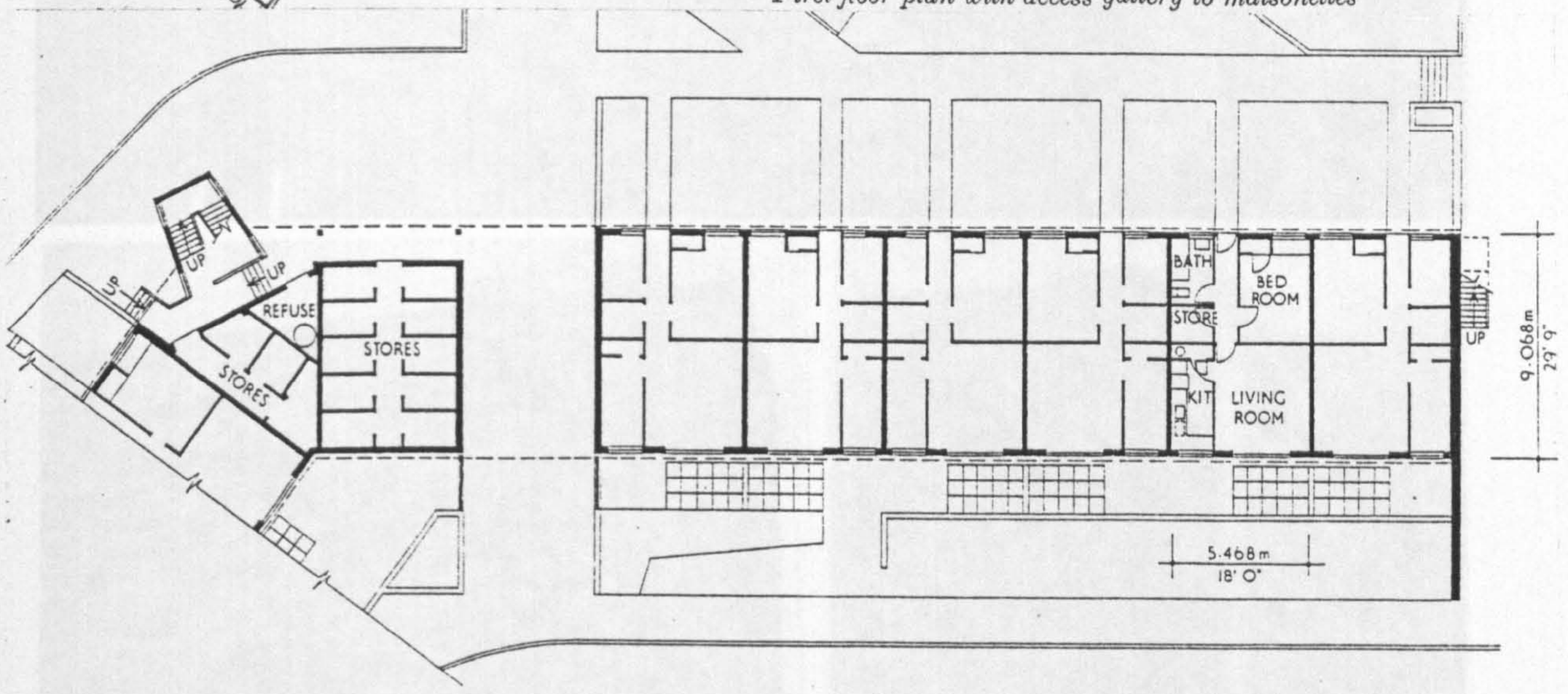
Cross-section through three-storey block



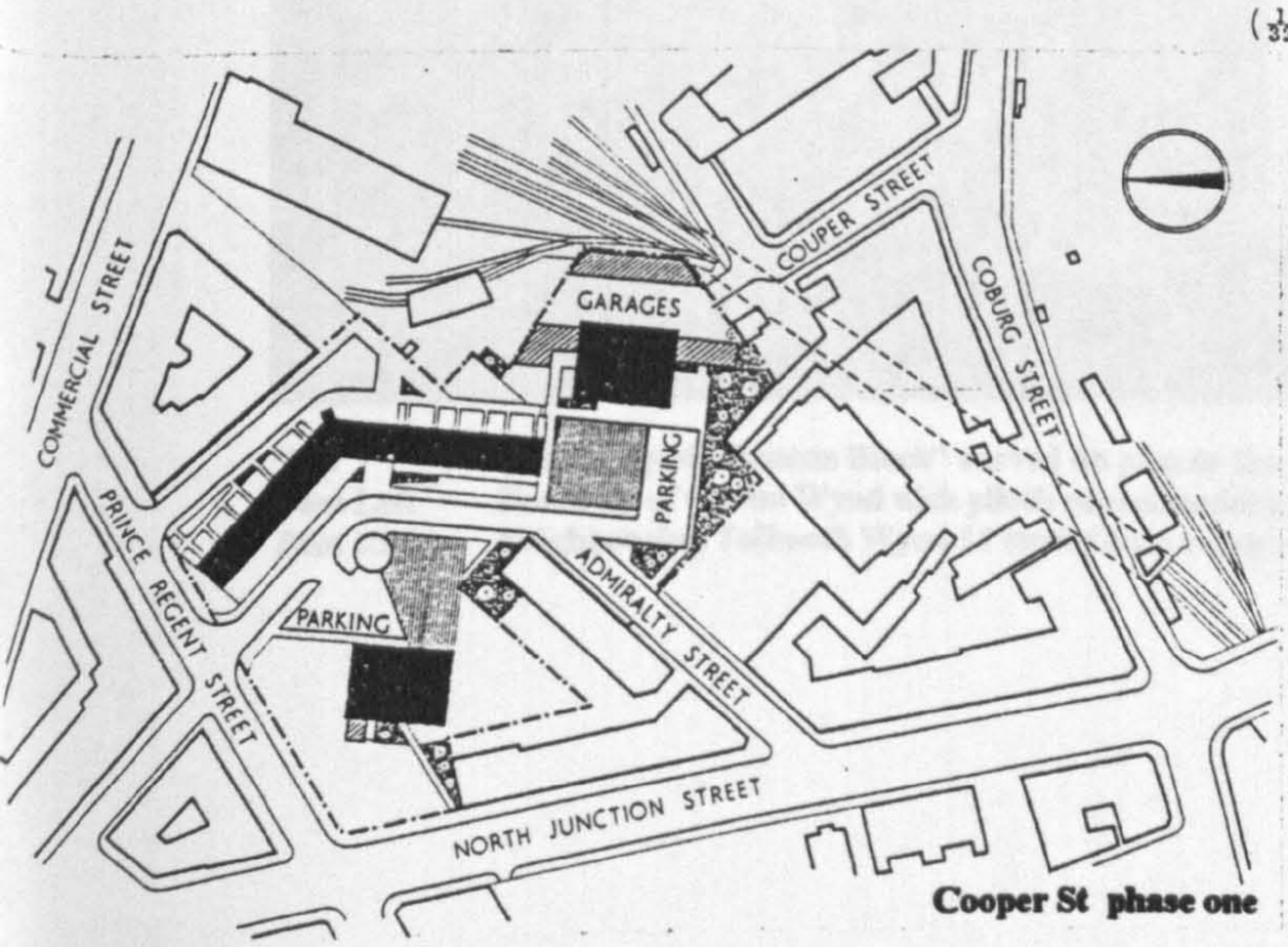
Second floor plan. Note how two flats are fitted in next to the central staircase



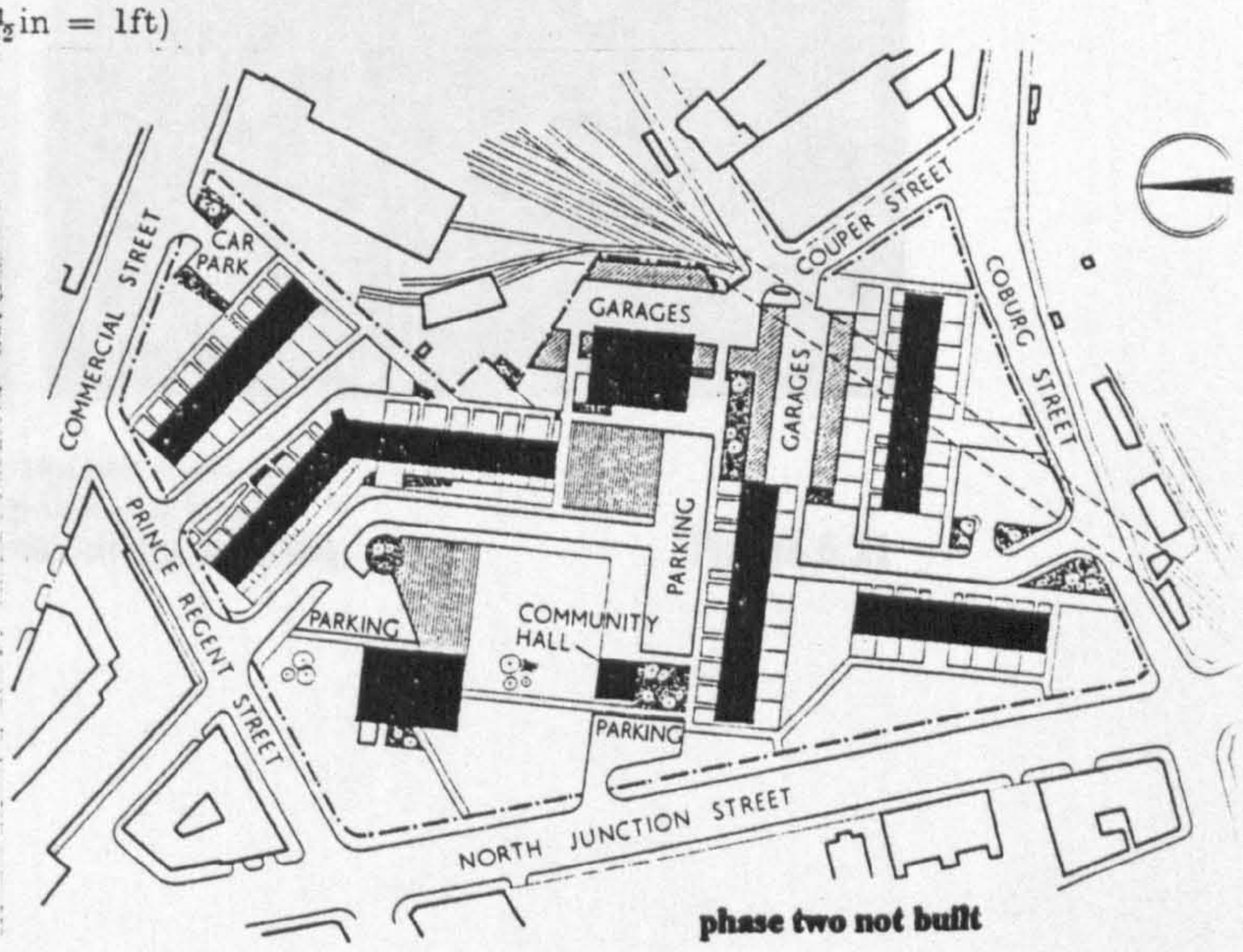
First floor plan with access gallery to maisonettes



Ground floor plan of three-storey block of flats and maisonettes ($\frac{1}{32}$in = 1ft)



Cooper St phase one



phase two not built

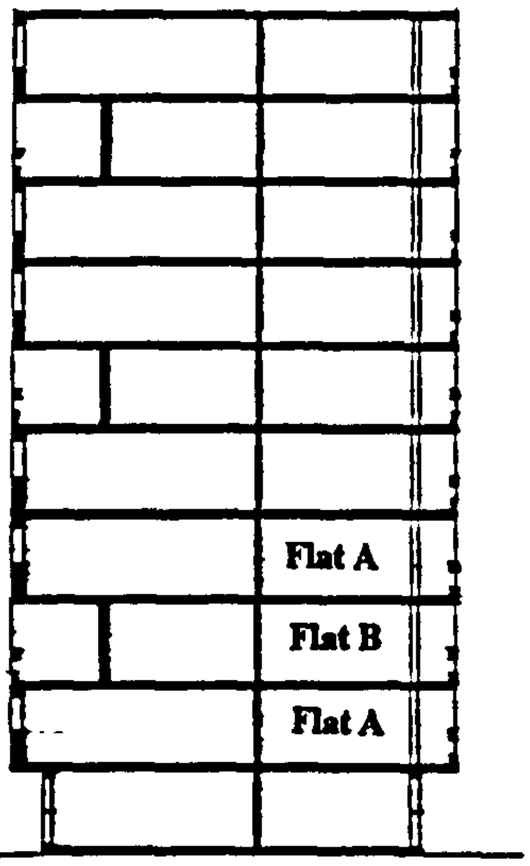
Figure 6.20

Corbusian aesthetic Leith

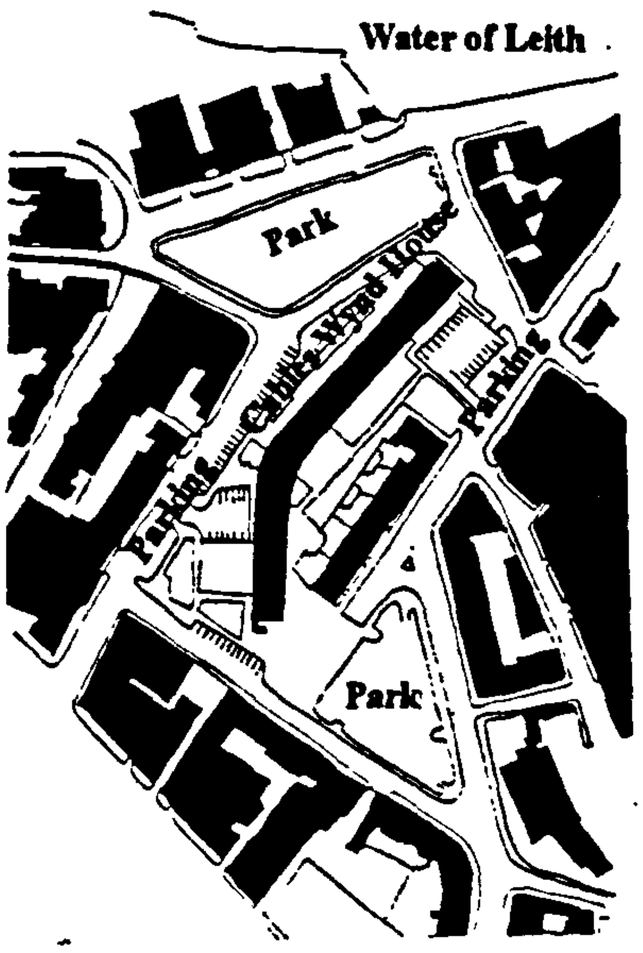
Top Cables Wynd "Banana Black" curved on plan to face east and south east
Foot Left North tip of Cables Wynd with pilotis accommodating change in level
Foot Right Neighbouring Tolbooth Wynd 11 storey flats rising over brick walk up flats

Figure 6.21

Corbusian aesthetic Leith

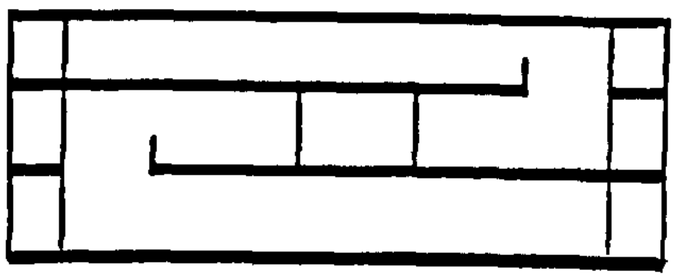


Section 1:400

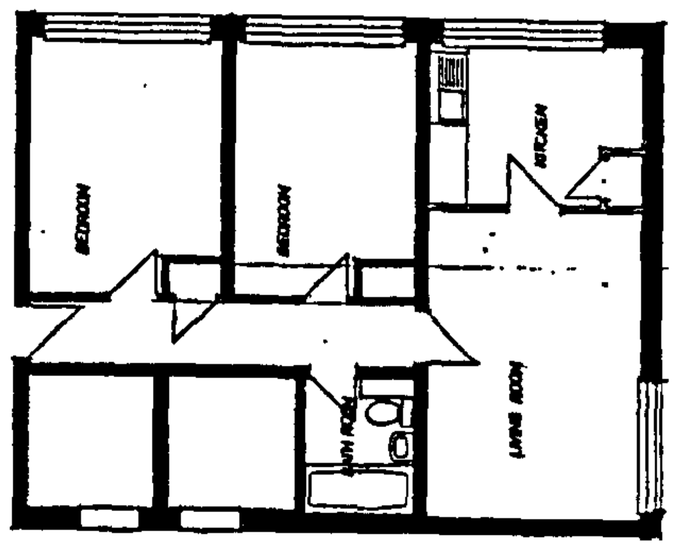


Cables Wynd house "looks" into rear of tenement block

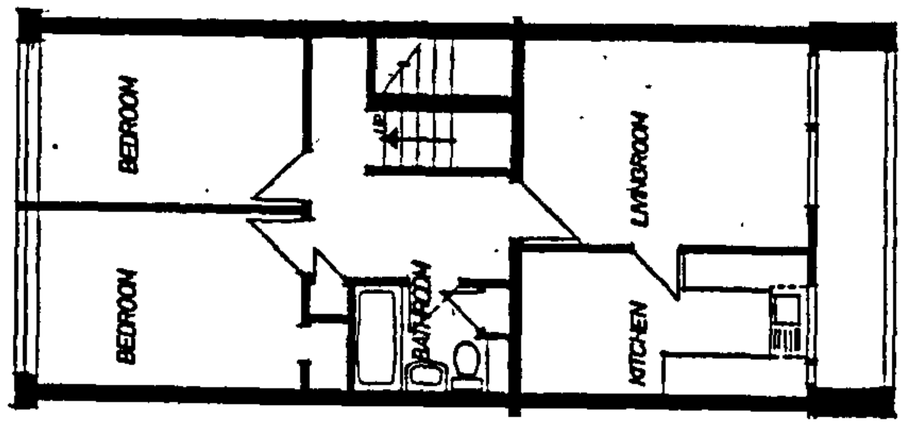
Site Plan 1:5000



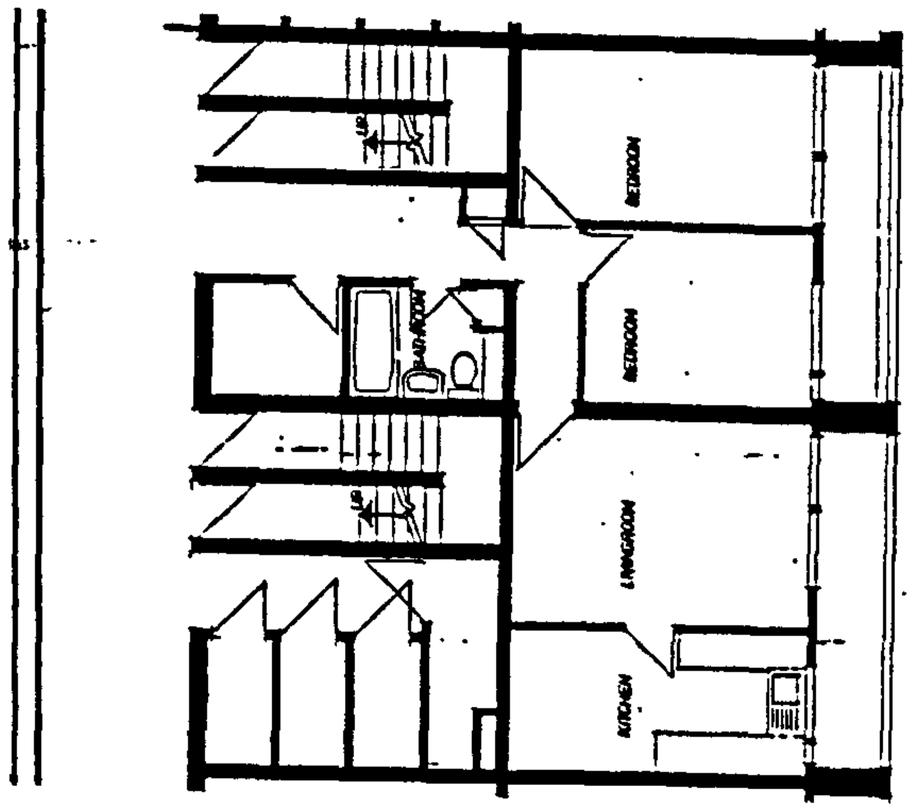
Unité diagrammatic section



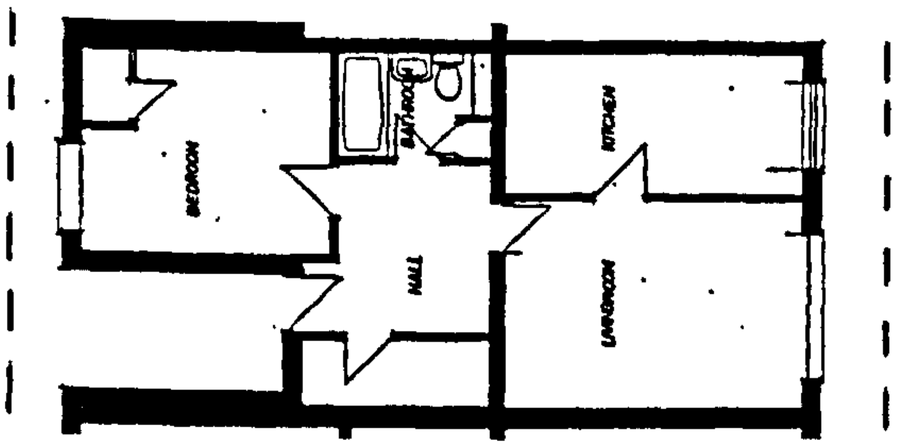
Flat C North Gable



Flat A "through flat"



Flat B Access balcony level

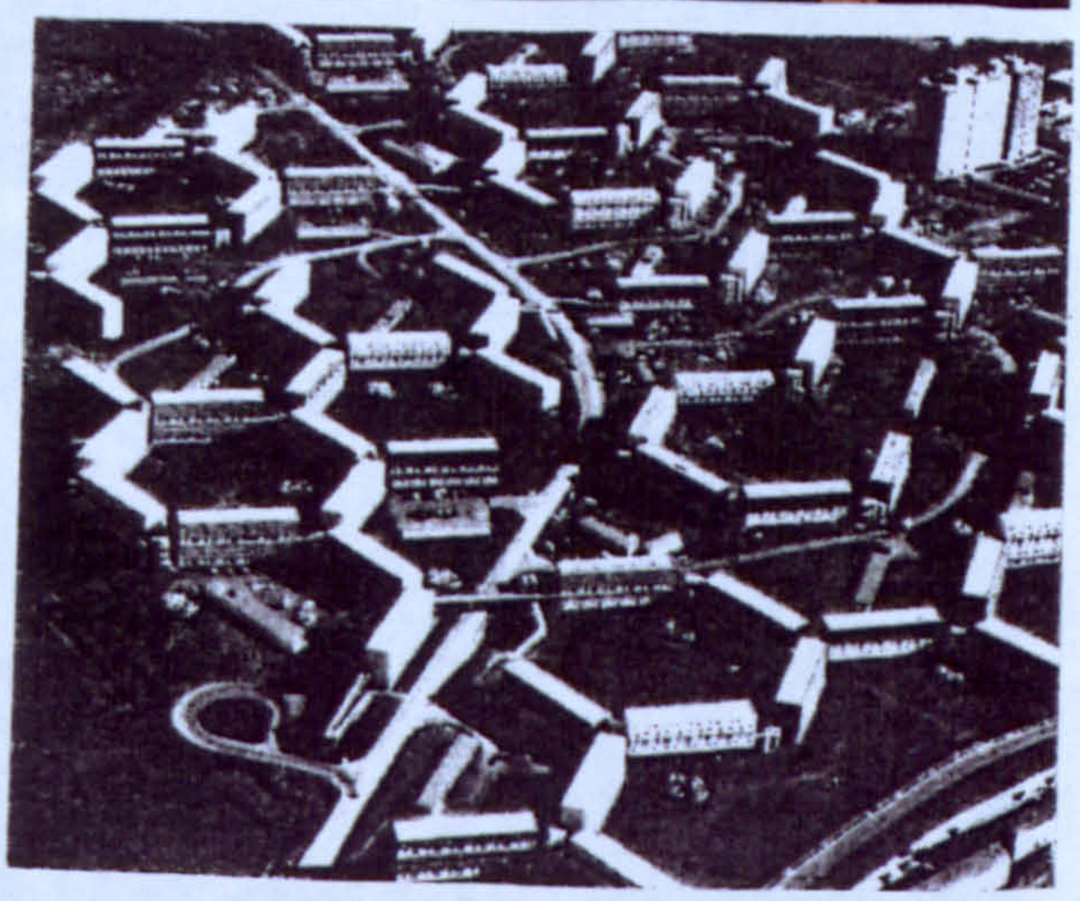


Typical ground floor flat

1:200

Figure 6.22

Crudens, Dundee



Top Whitfield deck access 5 storey walk-up maisonettes

Mid Ardler 17 storey slab blocks, view from park to south

Foot left Ardler 6, 17 storey blocks 298 dwellings The first of these blocks was demolished in June 1995

Foot right Whitfield hexagon courtyards, 16 storey block in background

Figure 6.23

Hazlehead, Aberdeen

Mixed development 1 and 2 storey houses, 3 and 12 storey flats Open landscape rolls into Hazlehead Park

Figure 6.24

Seaton, Aberdeen

Top 4, 17 storey Seaton A

Mid 3, 10 storey Seaton B, C and D

Foot 7, 19 Storey Seaton Phase 2

All sited on the edge of a wide coastal park

Figure 6.25

Tower blocks in Fife

Top 3, 16 storey flats, tower above historic Kincardine, view from bridge

Mid Kincardine flats with power station beyond

Foot 3, 15 storey Wimpey flats in Pathhead, Kirkcaldy (the lang toon)

Figure 6.26

West Coast Burgh Towers

Top Rankin Court, Greenock, 15 storey Bison block, Saltire Award 1967

Foot 5, 14 storey Wimpey blocks, Fullarton Street, Irvine

Sited along the river they overpower Trinity Church Spire

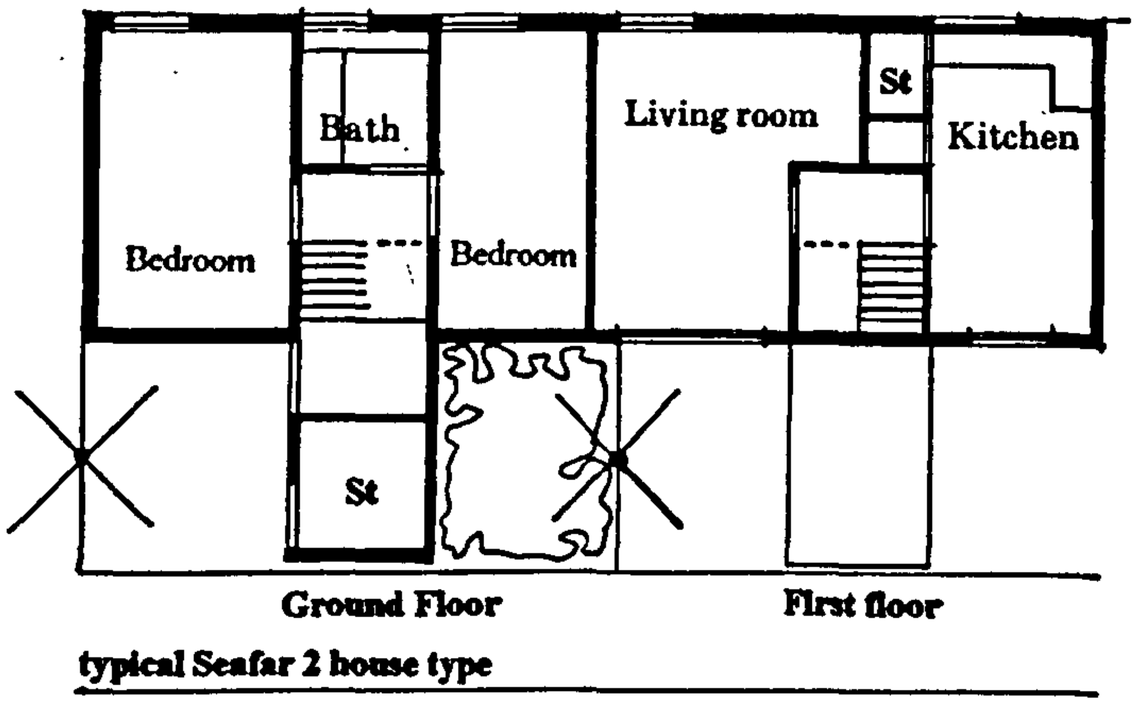
Figure 6.27

New Town Towers

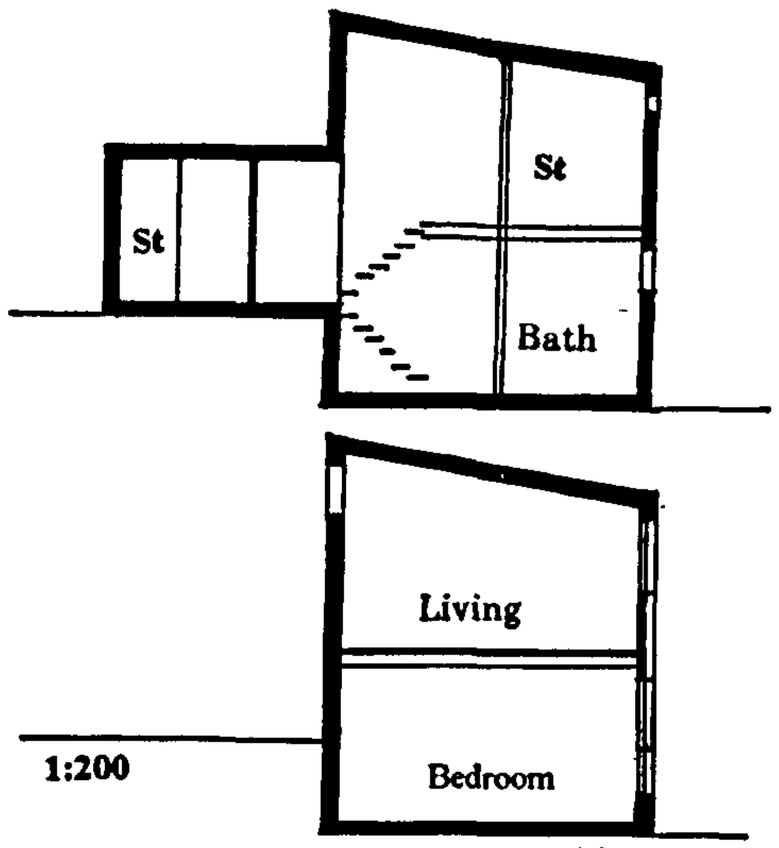
Top left 15 storey Wimpey flats 1966 Calderwood, East Kilbride
Top right 16 storey Wimpey flats 1967 Raeburn Heights, Glenrothes
Foot 12 storey Bison flats 1964 Allanfauld Road, Cumbernauld

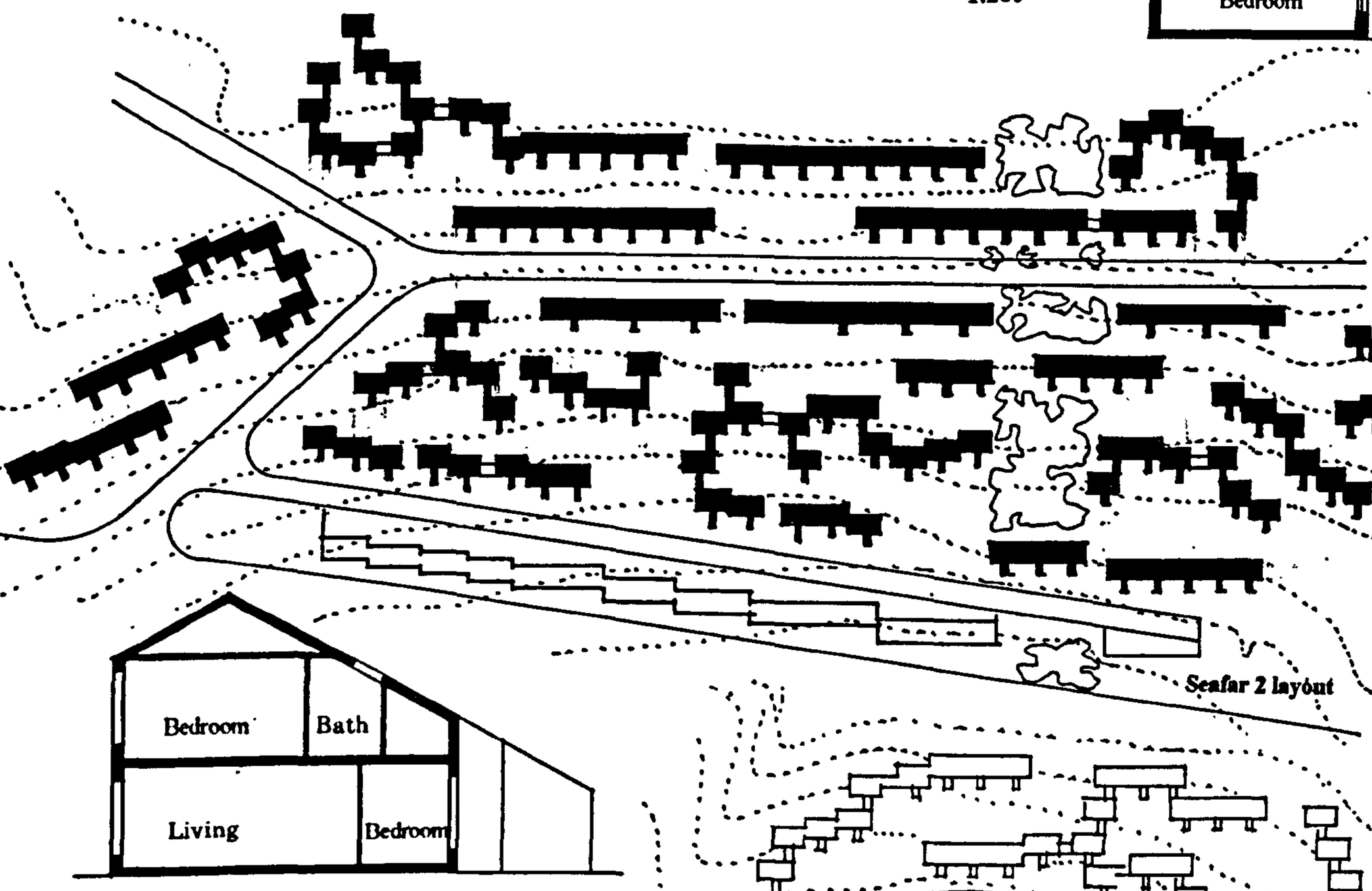
Figure 6.28

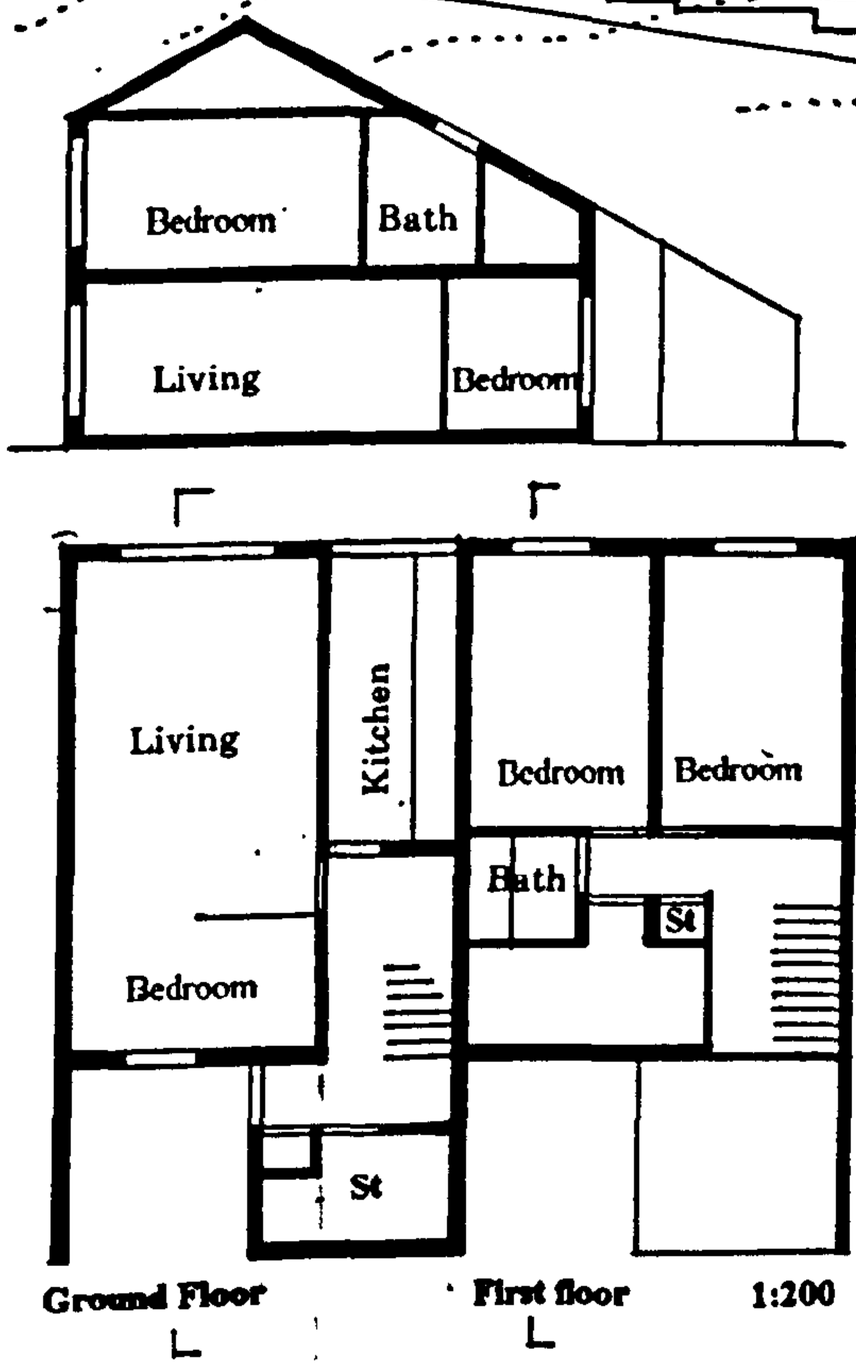
Seafar 2, Muirhead 3 Cumbernauld



typical Seafar 2 house type







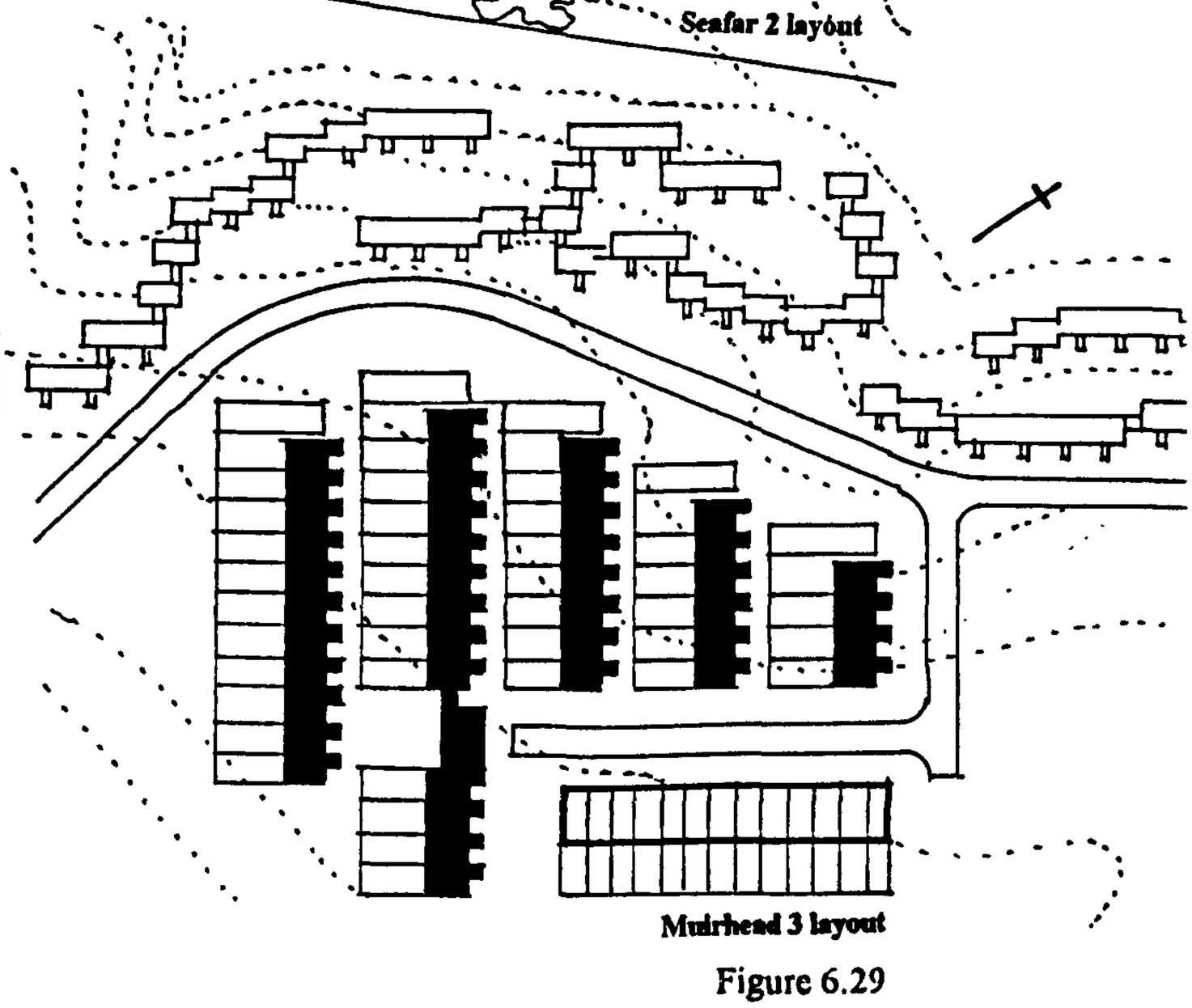
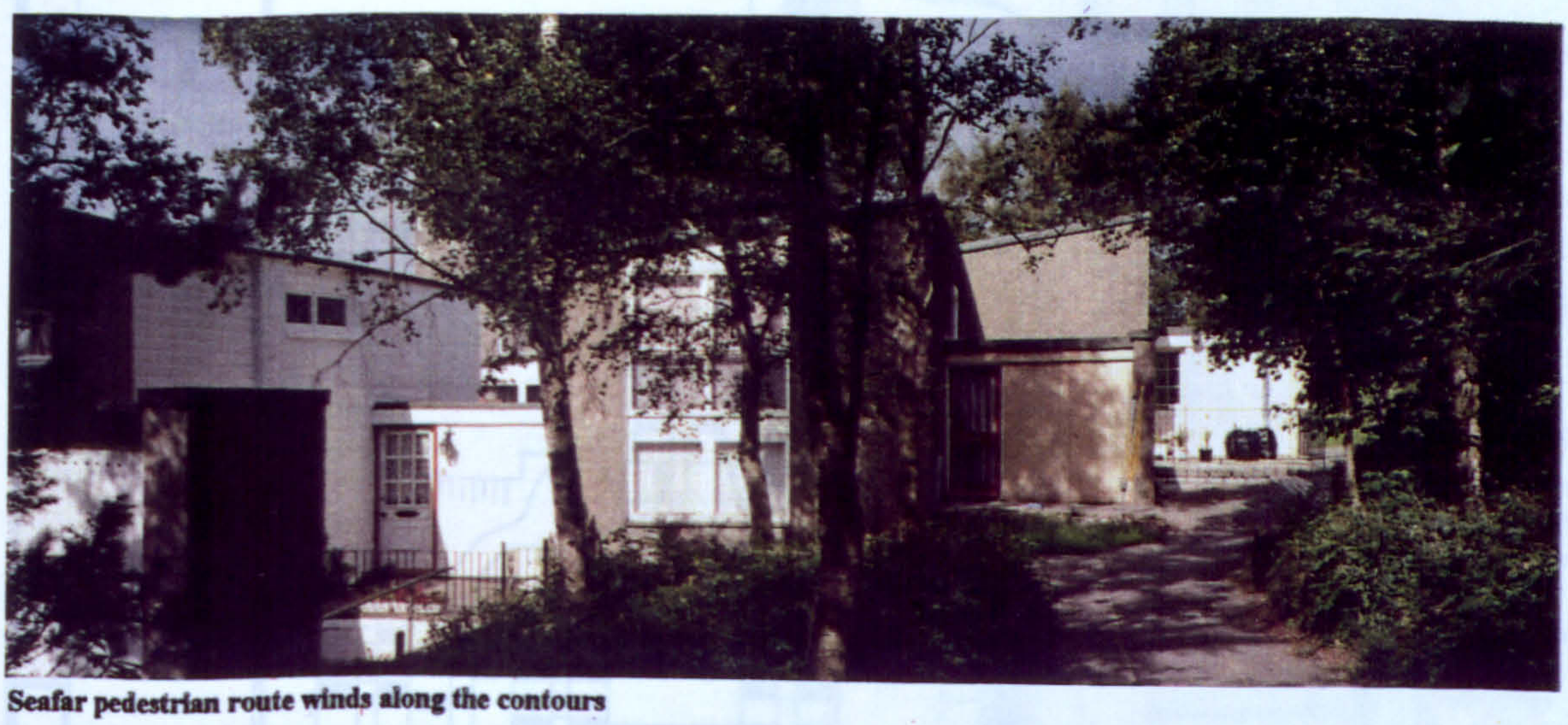


Figure 6.29

Seafar 2, Muirhead 3 Cumbernauld



Seafar pedestrian route winds along the contours

Seafar north facing windows

Muirhead 3 carparking and garaging on periphery

Figure 6.30

Park 3, Cumbernauld

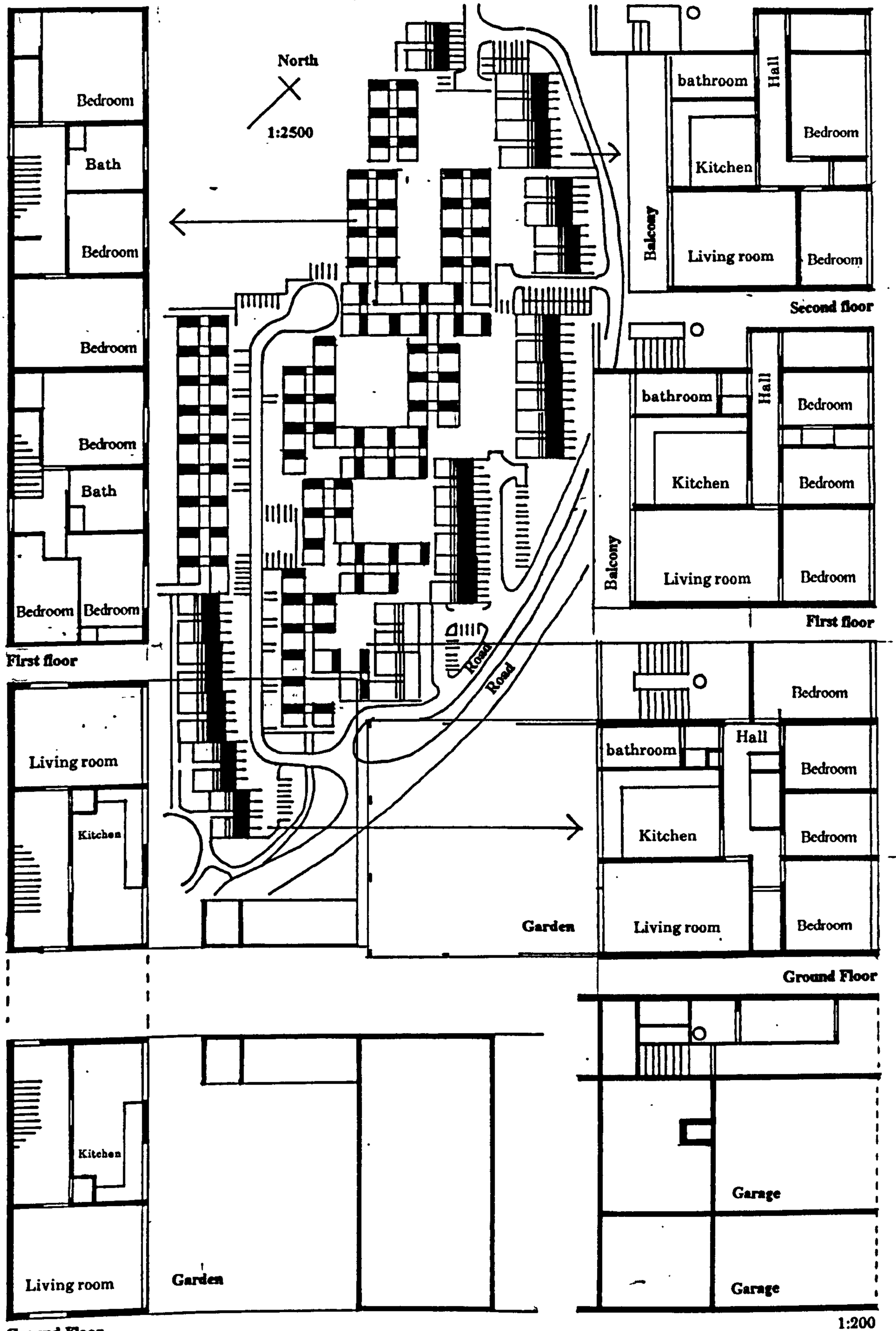


Figure 6.31

Park 3, Cumbernauld

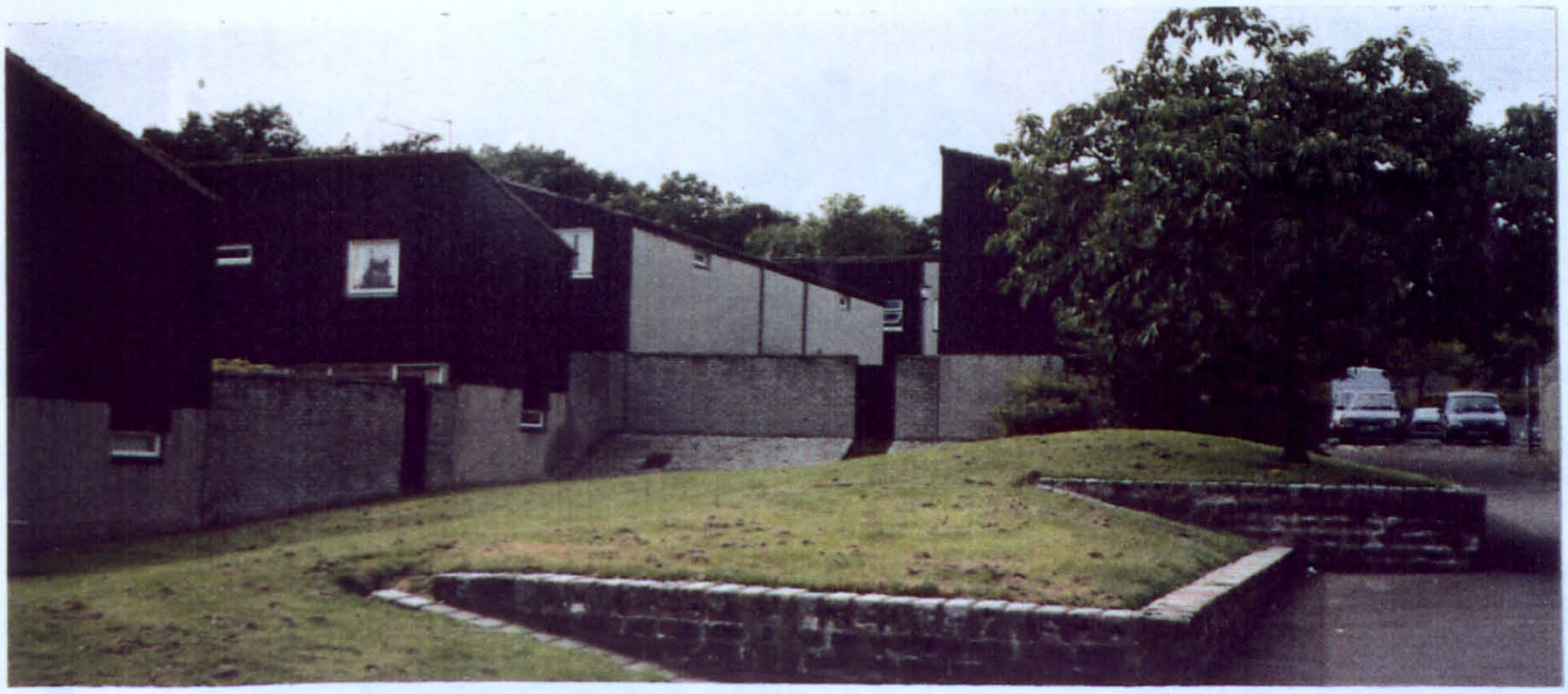


Figure 6.32

Deans South, Livingston

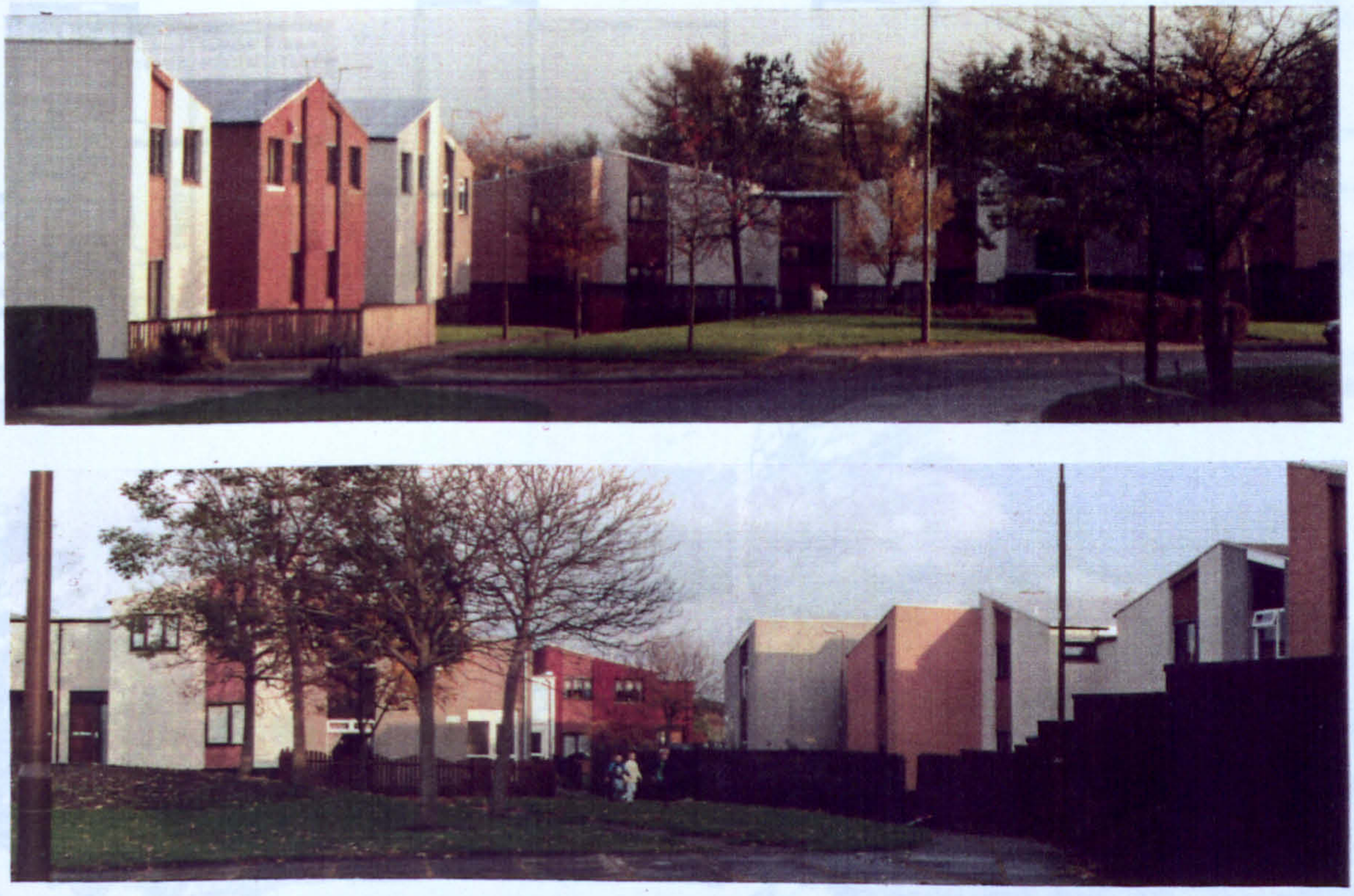
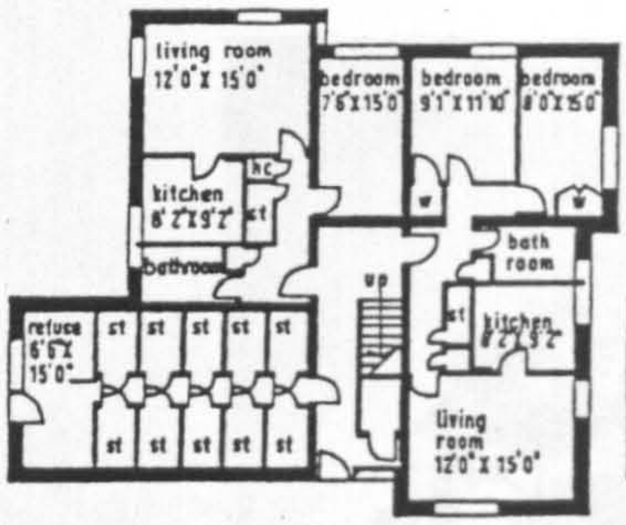
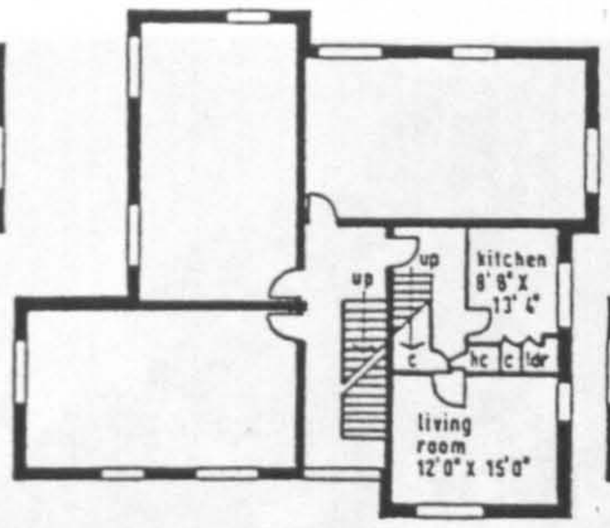


Figure 6.33

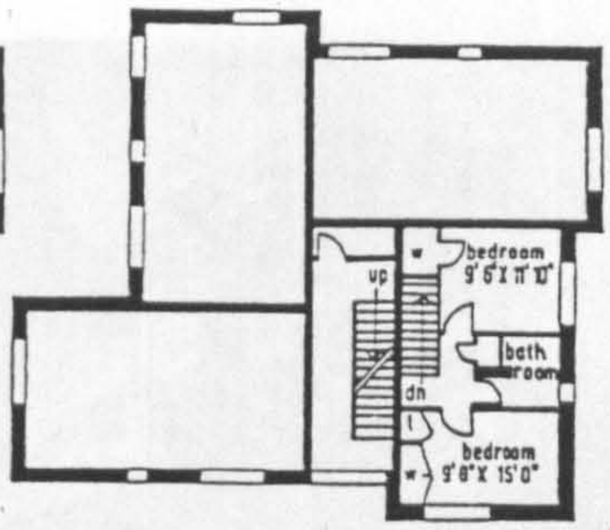
Deans South, Livingston



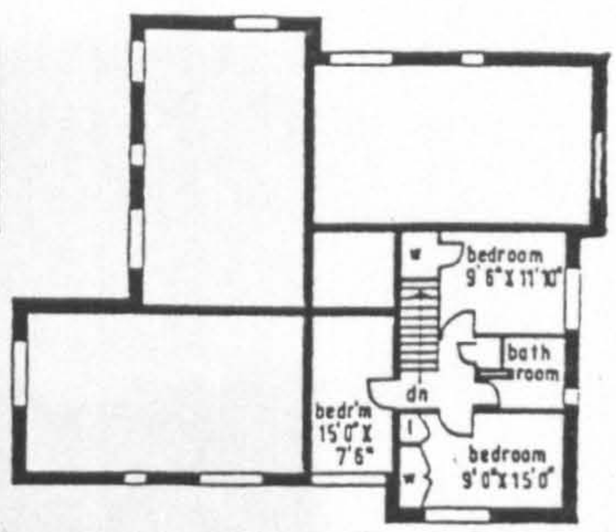
plan of 2 and 3 apartment ground floor flats.



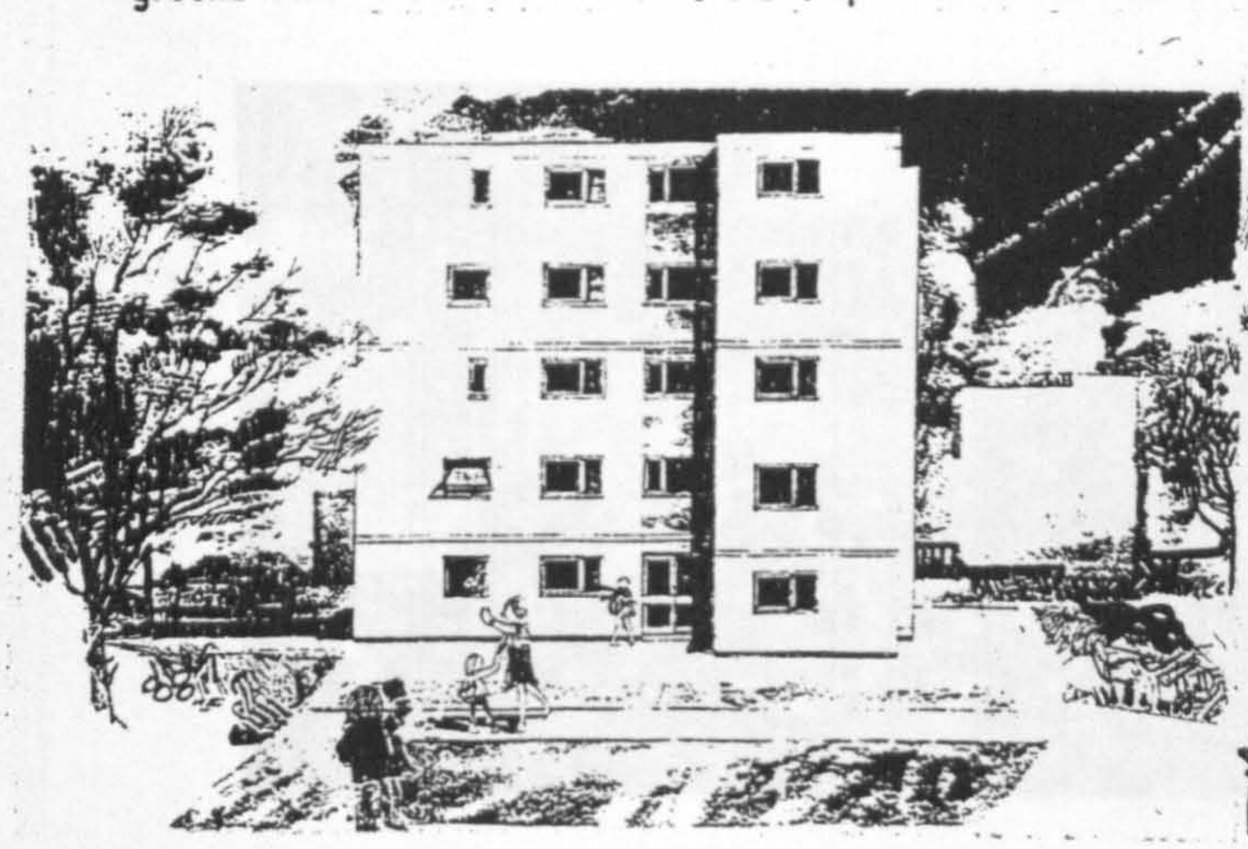
Living room plan of 3 and 4 apartment maisonettes.

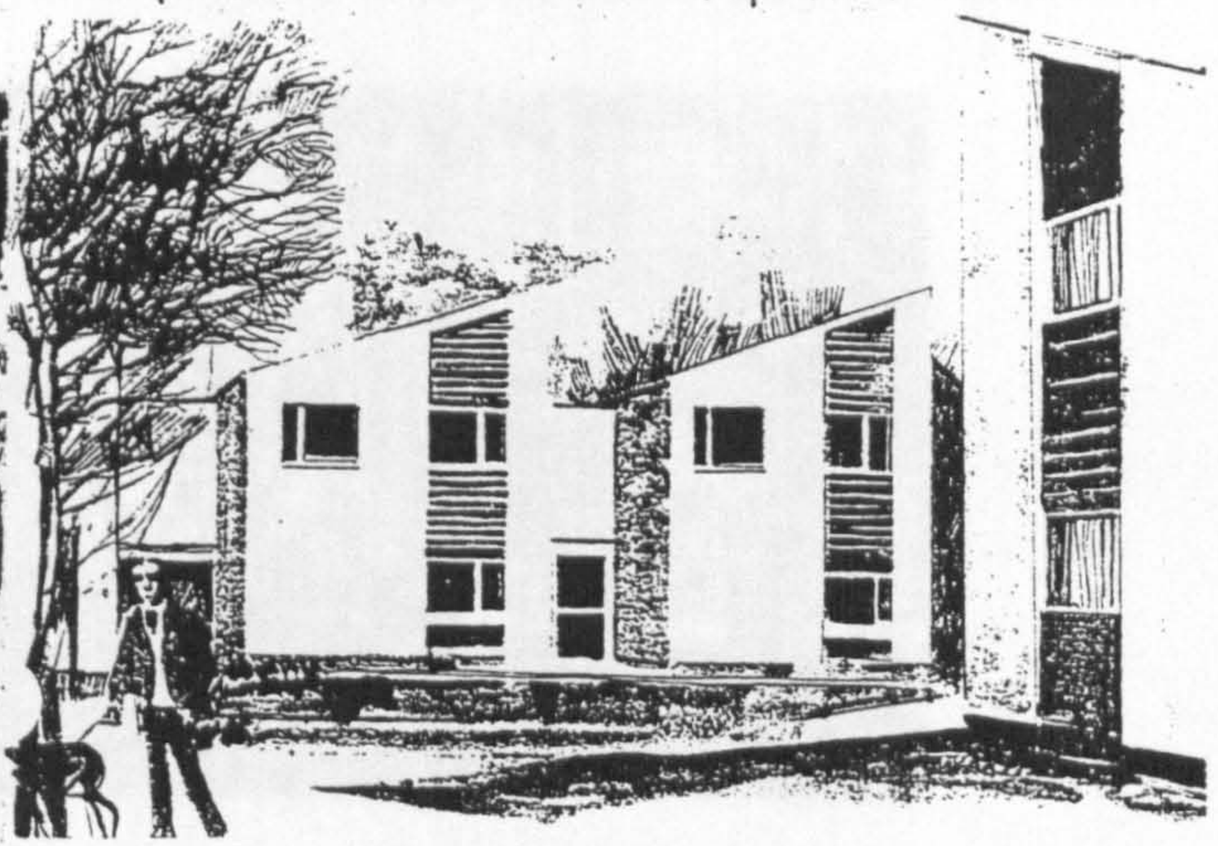


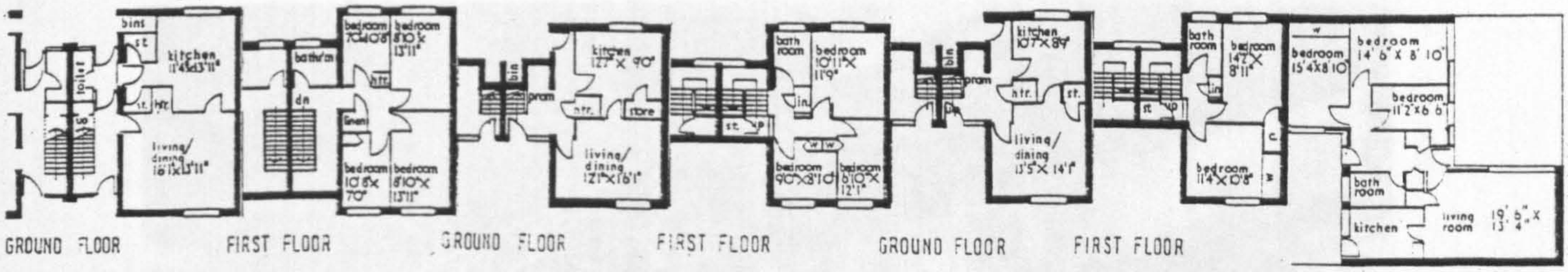
Bedroom plan of 3 apartment maisonette.



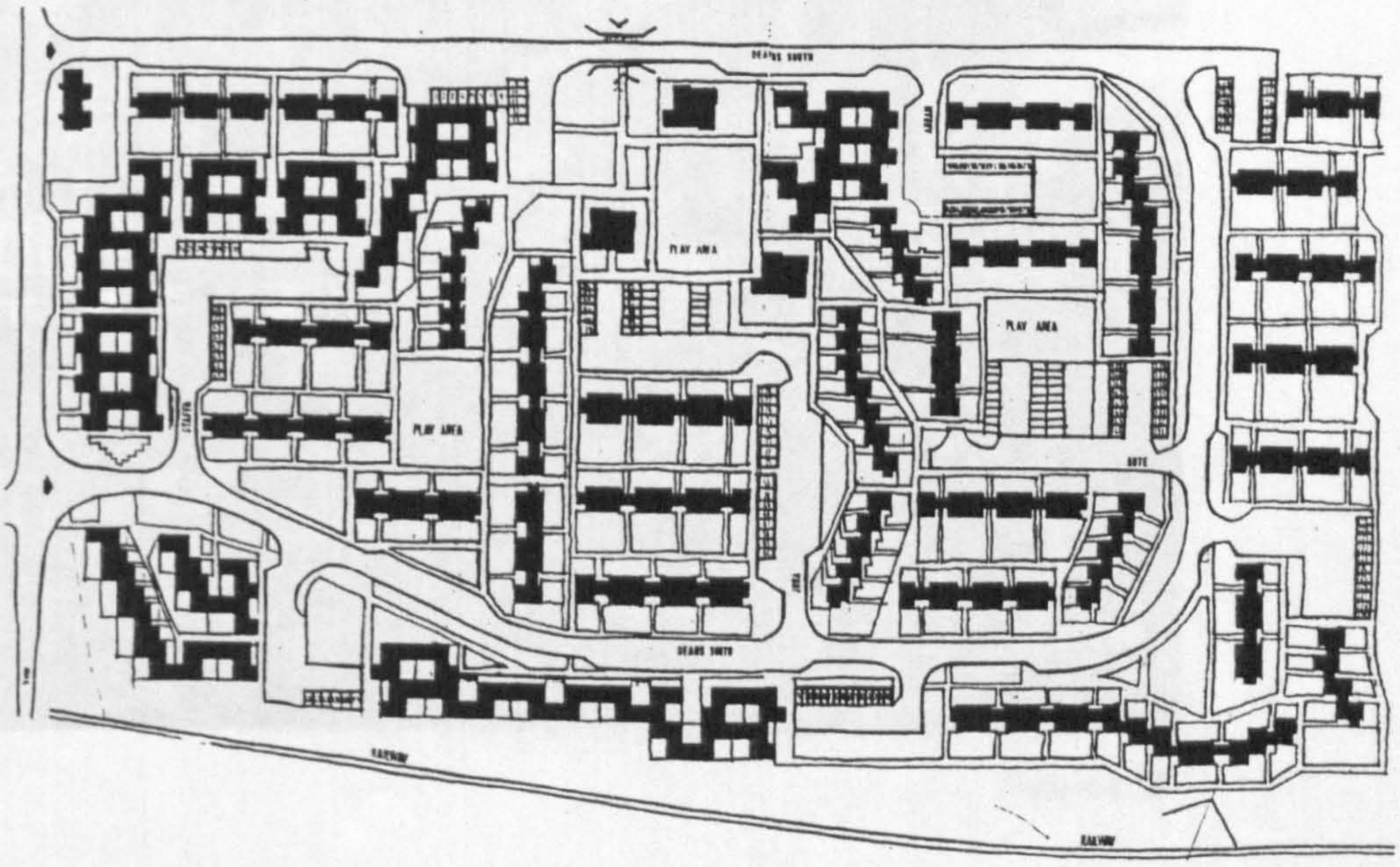
Bedroom plan of 4 apartment maisonette.







GROUND FLOOR FIRST FLOOR GROUND FLOOR FIRST FLOOR GROUND FLOOR FIRST FLOOR



4 APT. 5 PERSON BUNGALOW (PATIO).
3 do. 4 do. TERRACE HOUSE.
4 do. 4 do. do. do.
5 do. 6 do. do. do.
2 do. 1 do. GD. FL. FLAT. STUB BLOCK.
3 do. 3 do. GD. FL. FLAT. do. do.
3 do. 4 do. MAISONETTE. do. do.
4 do. 5 do. do. do. do.
4 do. 5 do. TERRACE HOUSE.

Figure 6.34

Craigshill, Livingston

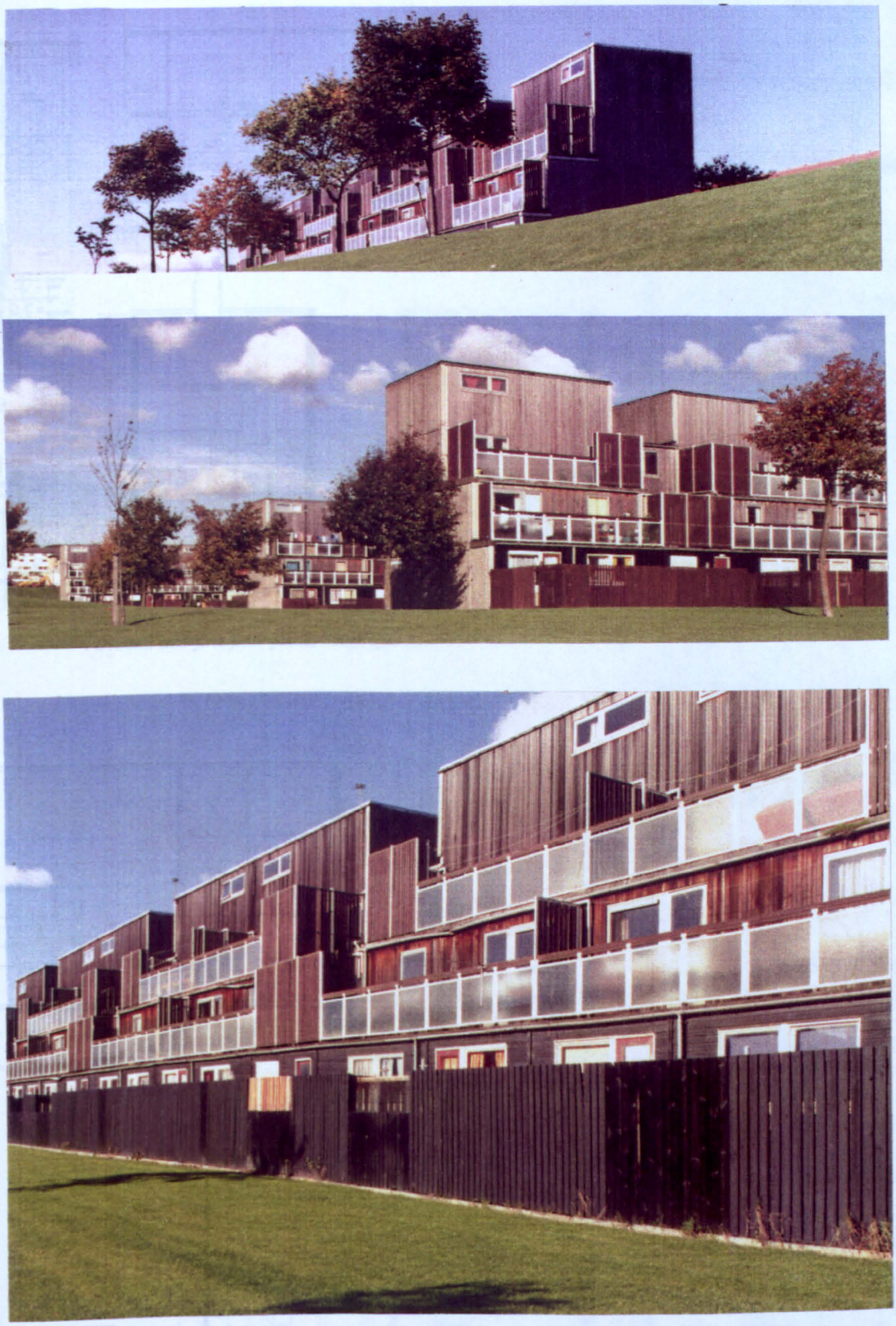
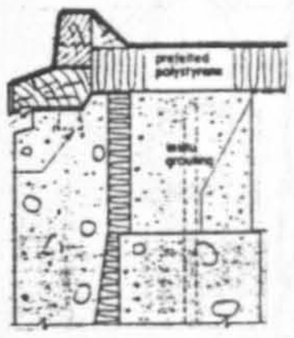
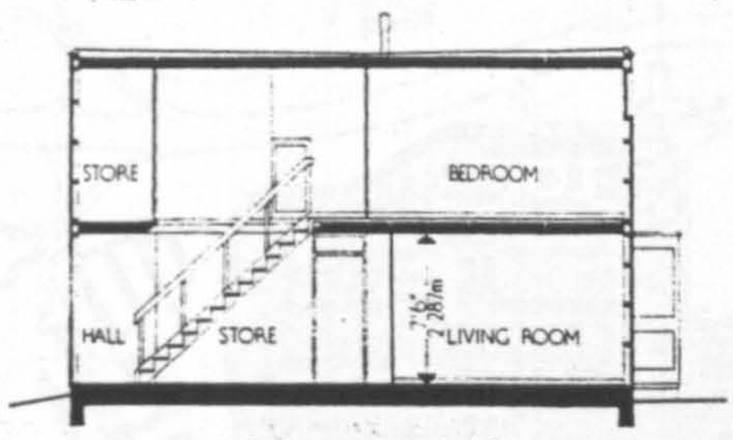


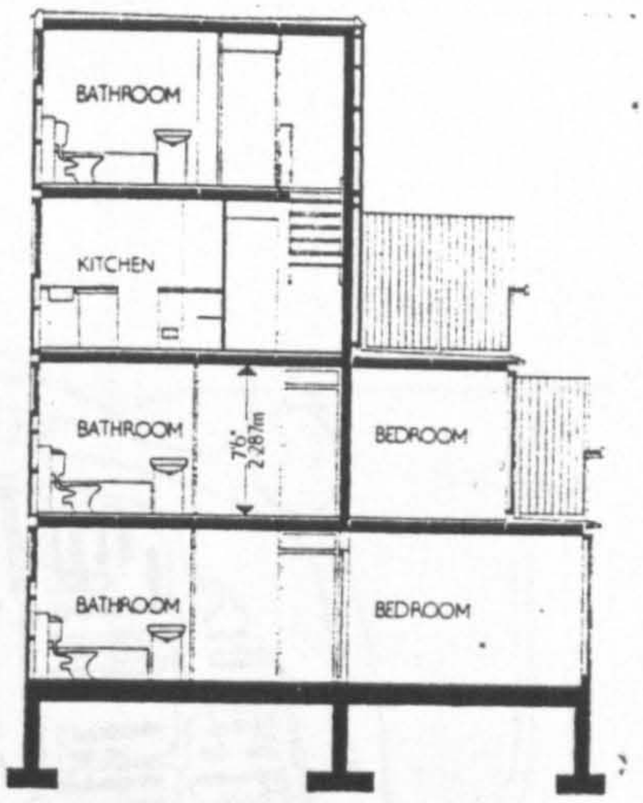
Figure 6.35

Craigshill, Livingston

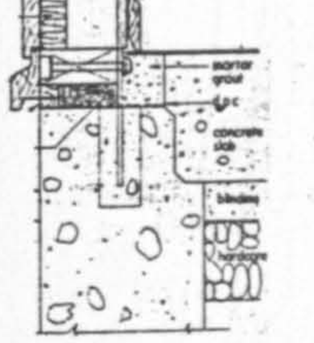


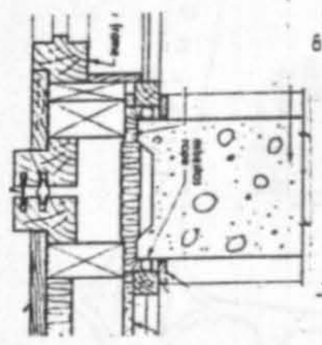


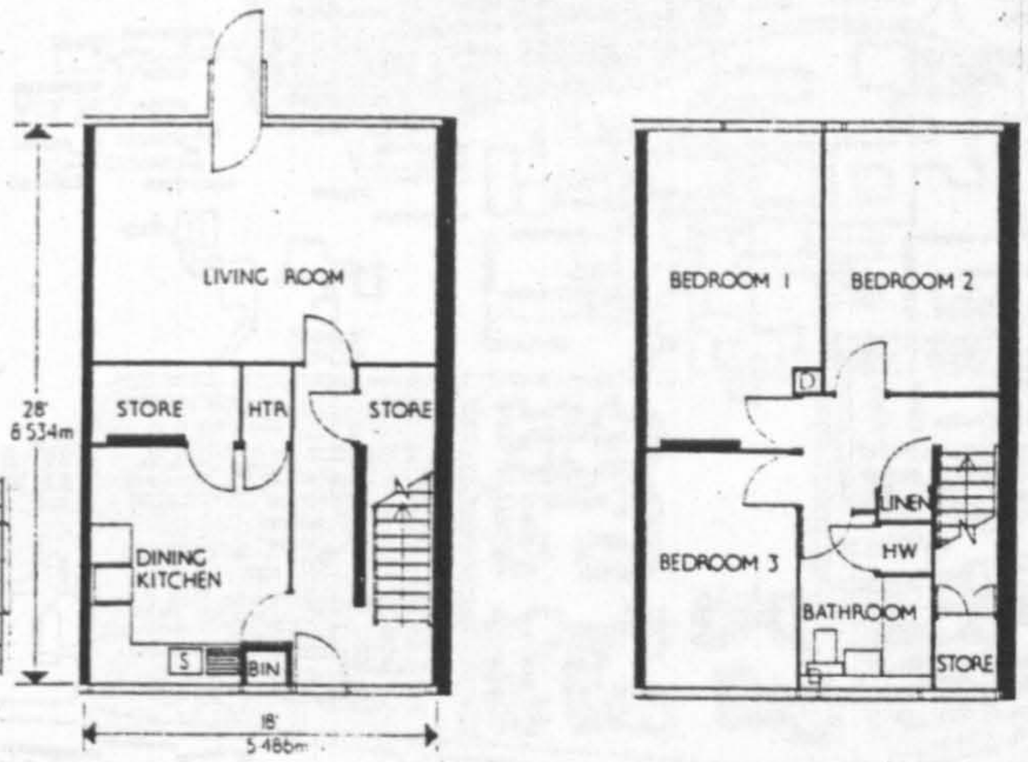
Section through house type T1 ($\frac{1}{48}$in = 1ft)



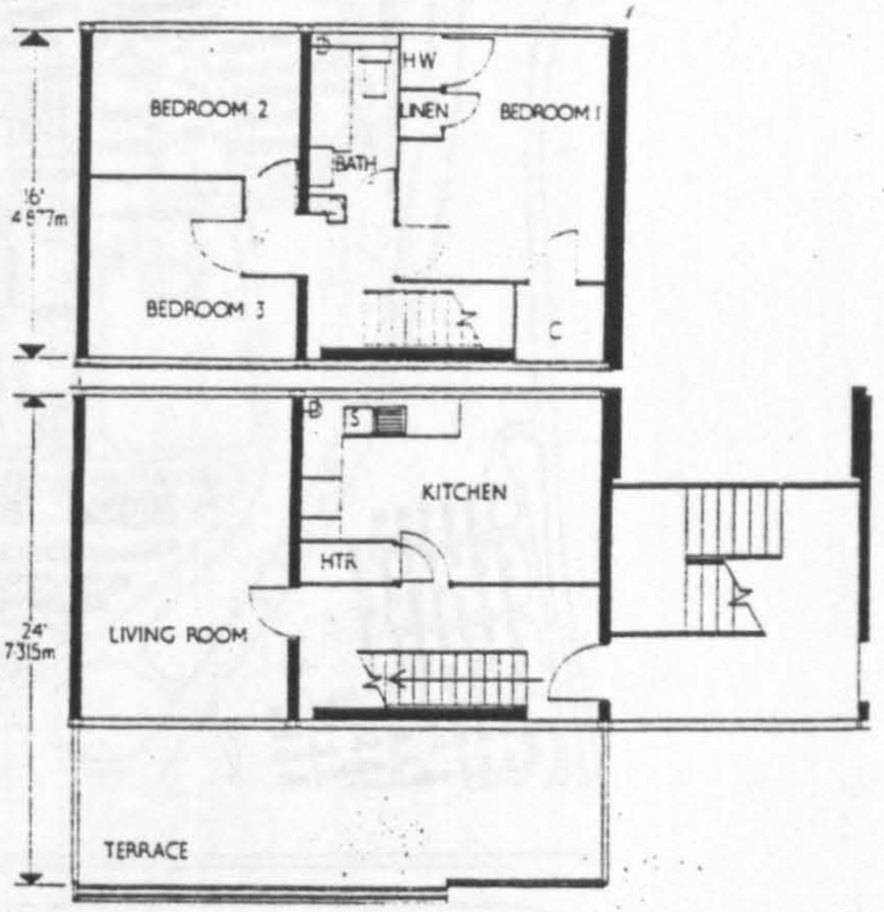
Section through four-storey block ($\frac{1}{48}$in = 1ft)



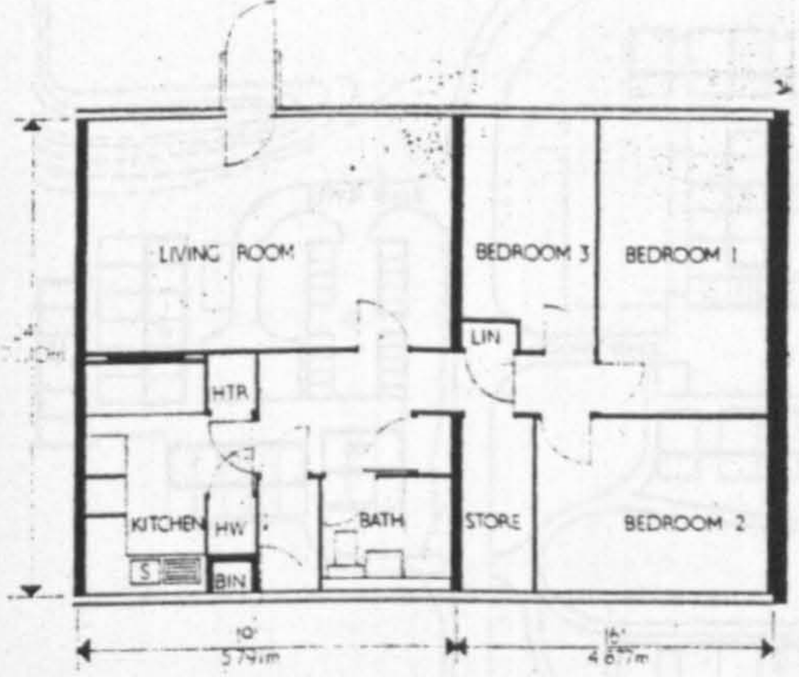




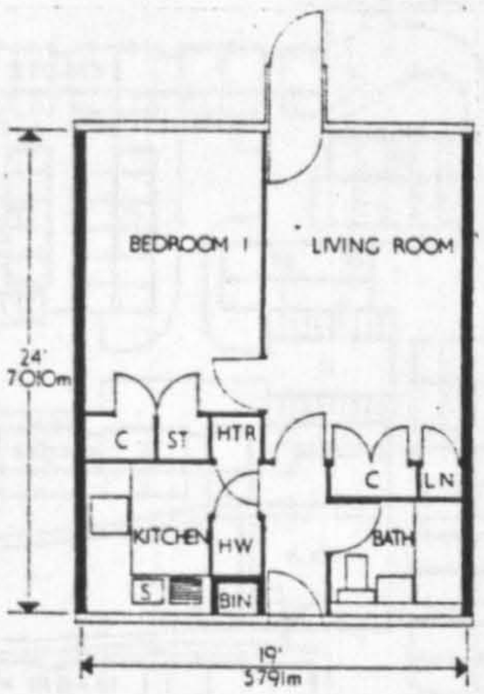
Ground and first floor plans, house type T1



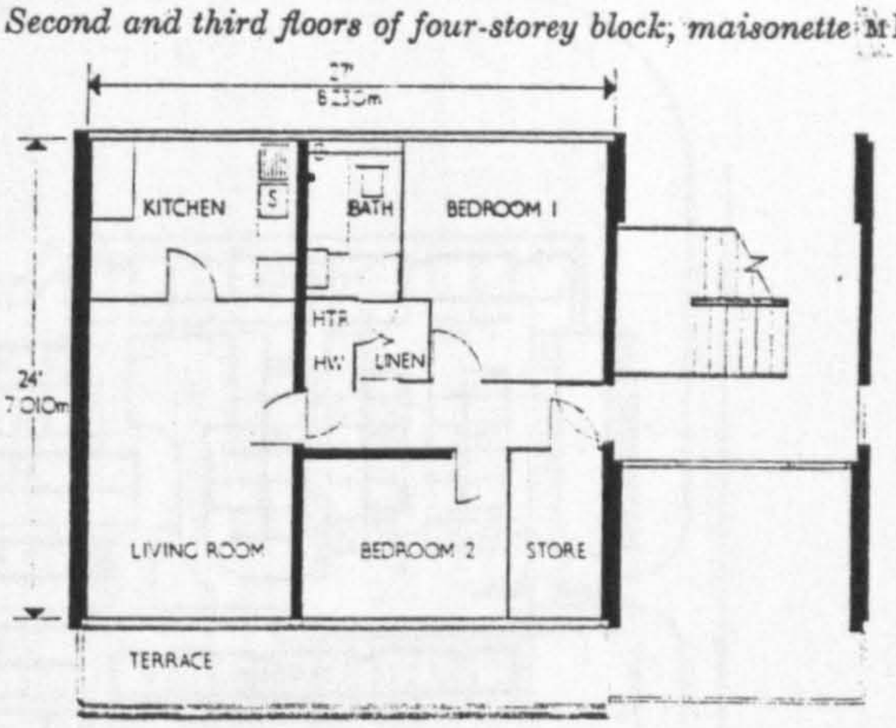
Second and third floors of four-storey block, maisonette M1



Single-storey dwelling type T4



Single-storey dwelling type T5



First floor, flat type F2

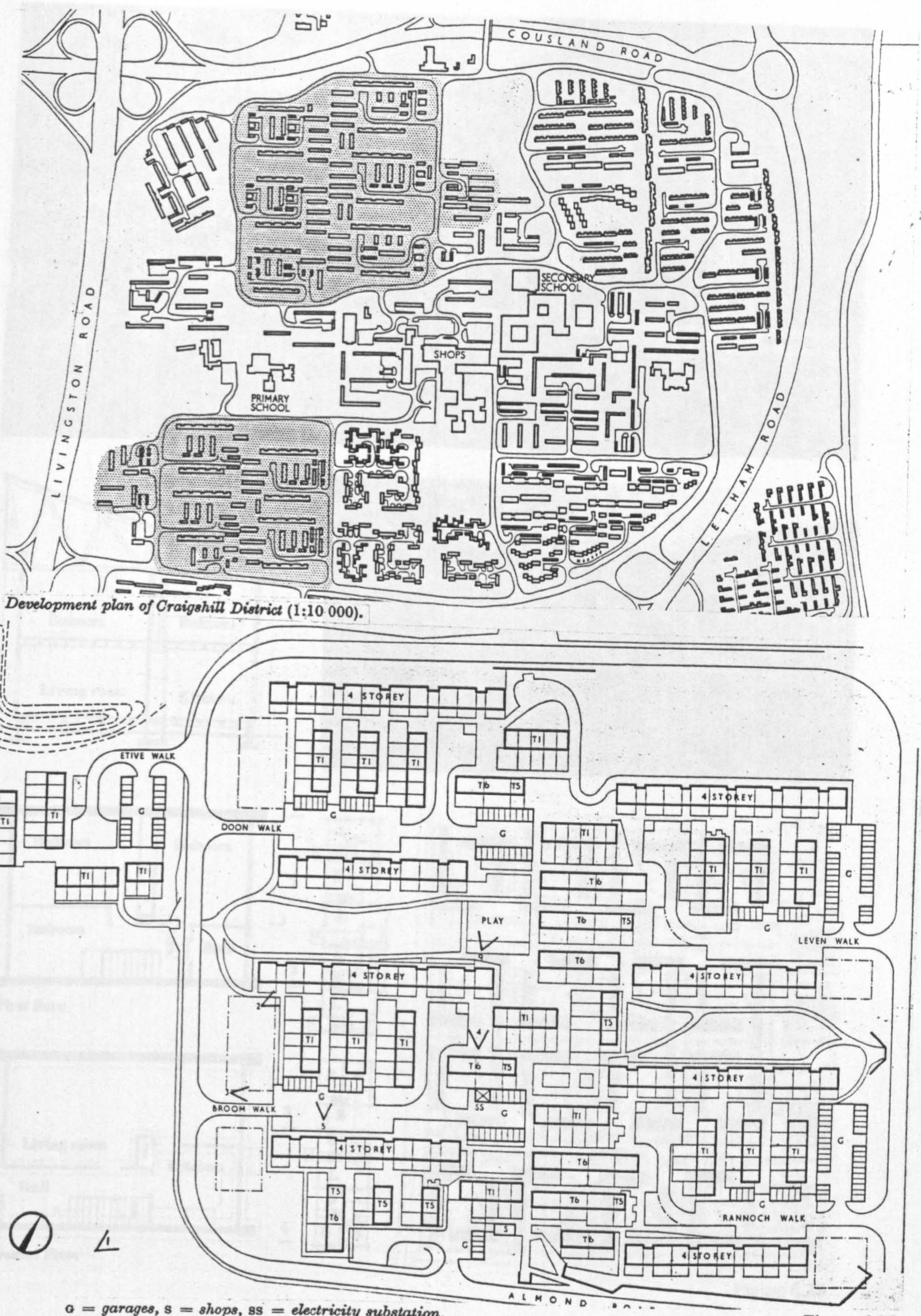
Section through dwelling types T4 *and* T6

Single-storey dwelling type T6

Ground floor of four-storey block, flat type F1

Figure 6.36

Craigshill, Livingston

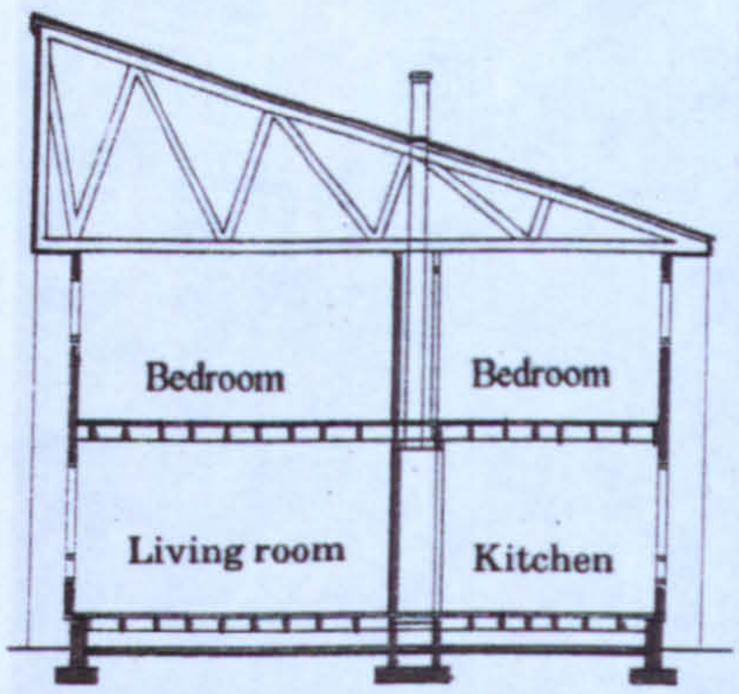


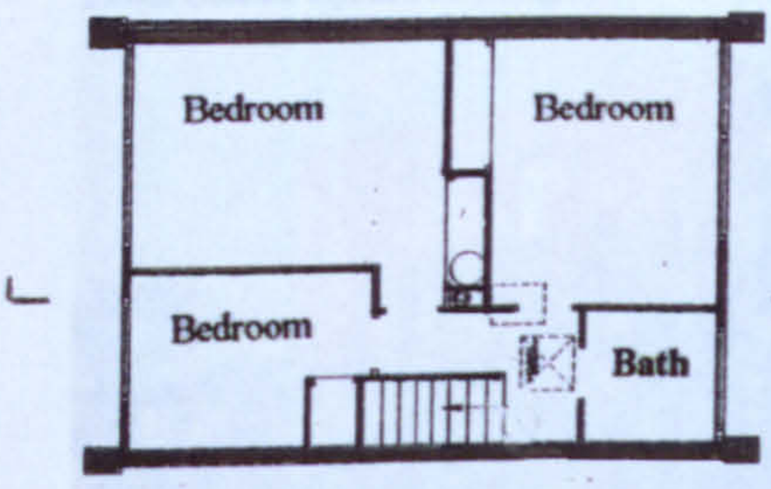
Development plan of Craigshill District (1:10 000).

G = *garages*, S = *shops*, SS = *electricity substation*.

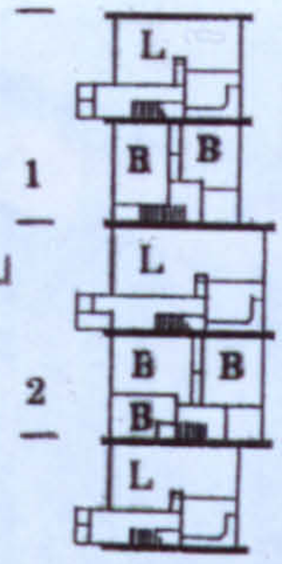
Figure 6.37

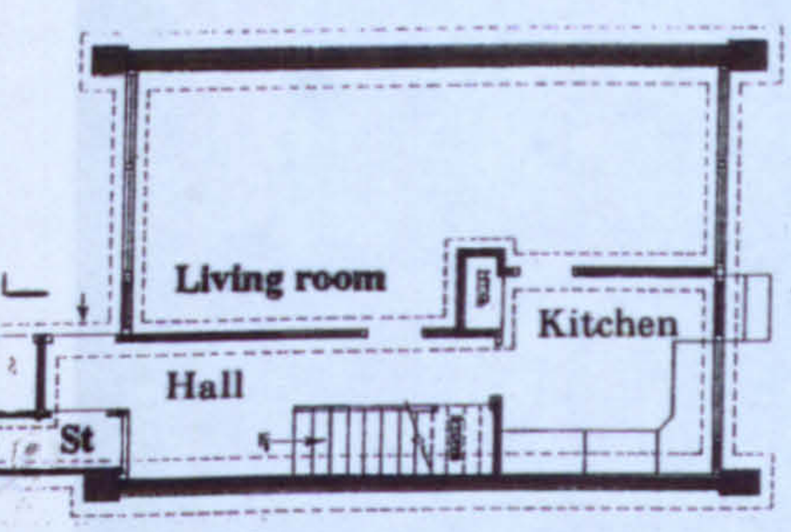
Pennyburn, Irvine



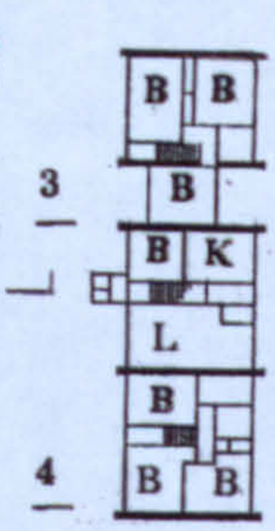


First floor





Ground Floor



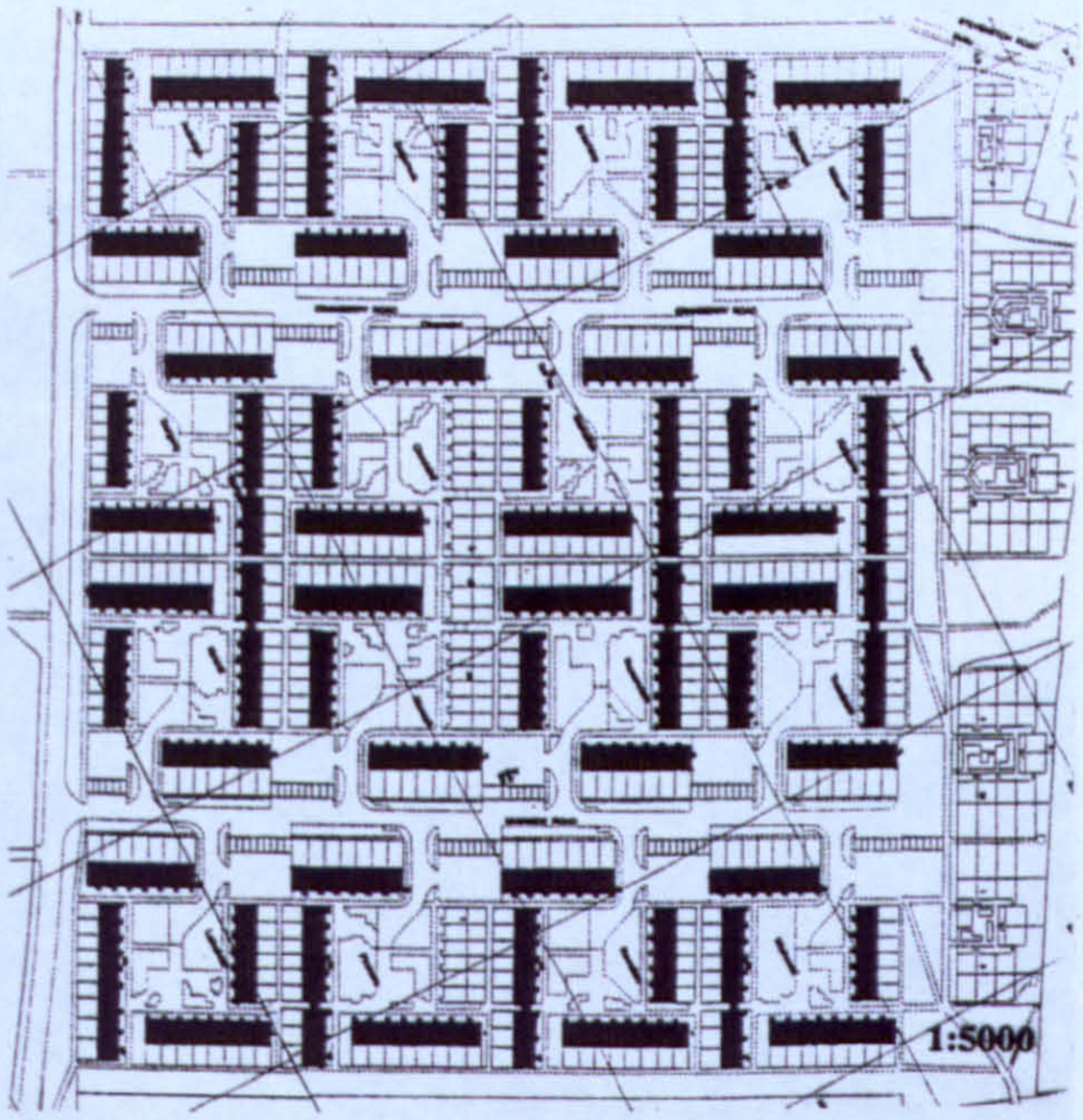


Figure 6.38

Linlithgow CDA

Linlithgow Loch with Lochside housing

Town Centre square housing raised to allow access to loch

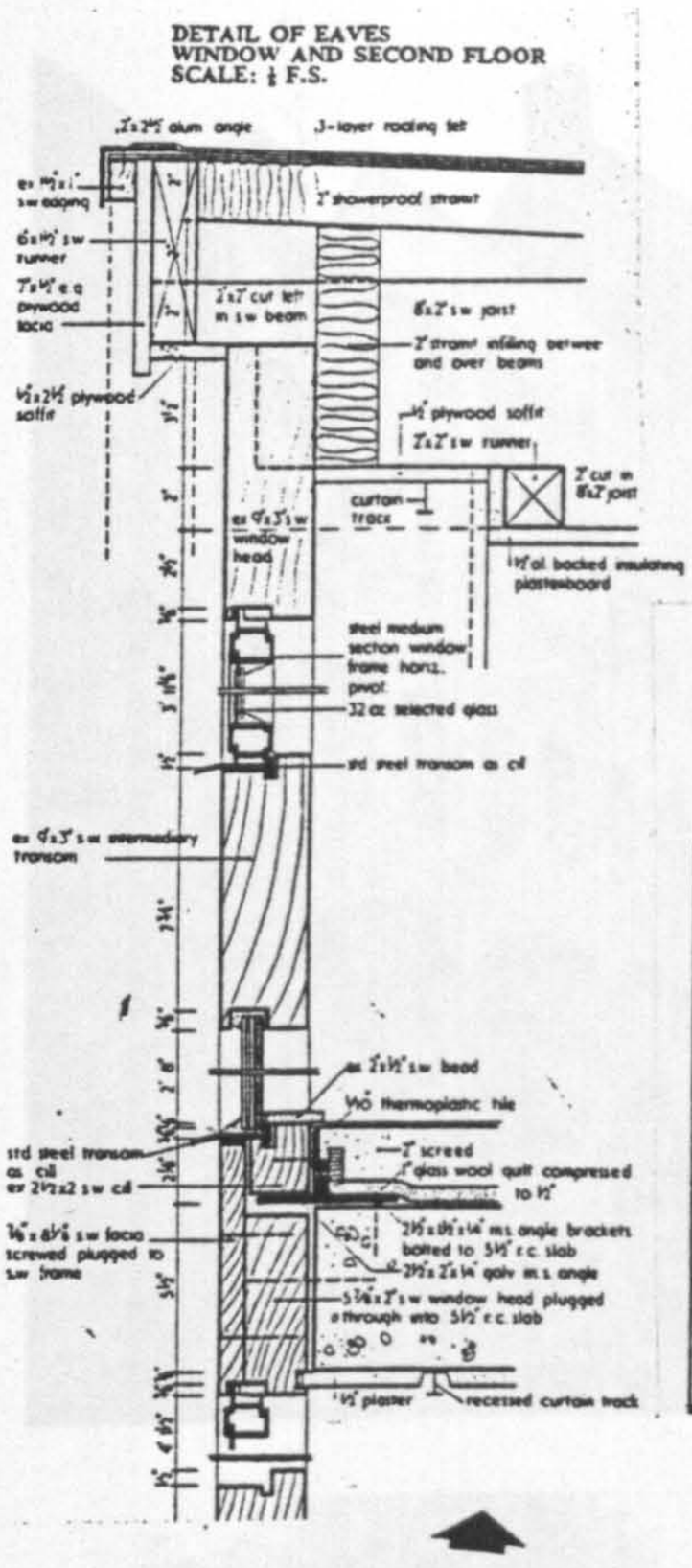
First phase at Western end of development

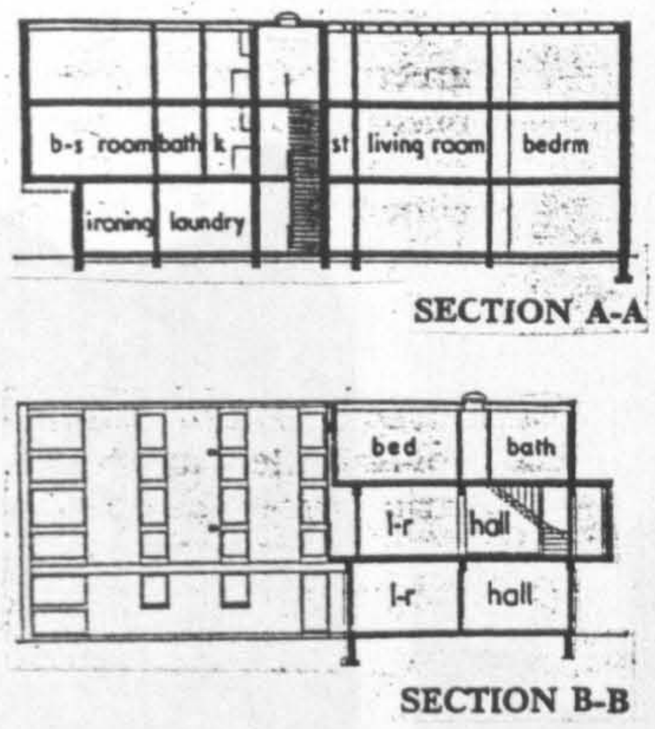
Figure 6.39

Church Square, Galashiels

Figure 6.40

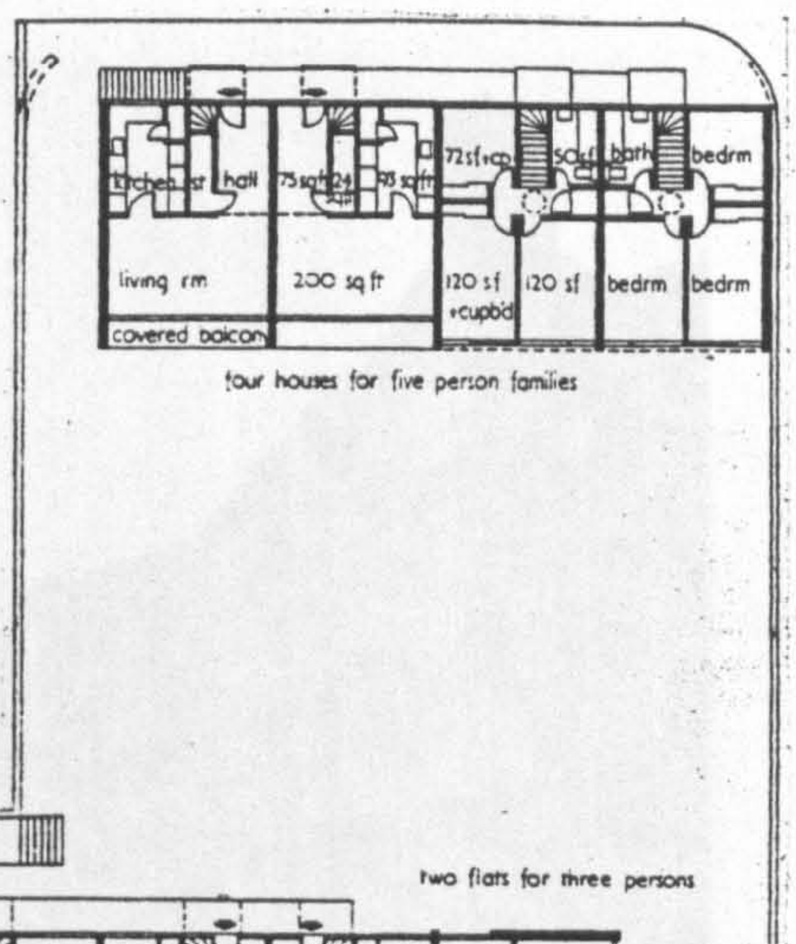
Church Square, Galashiels





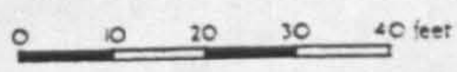
SECTION A-A

SECTION B-B



four houses for five person families

FIRST FLOOR PLAN



GROUND FLOOR PLAN

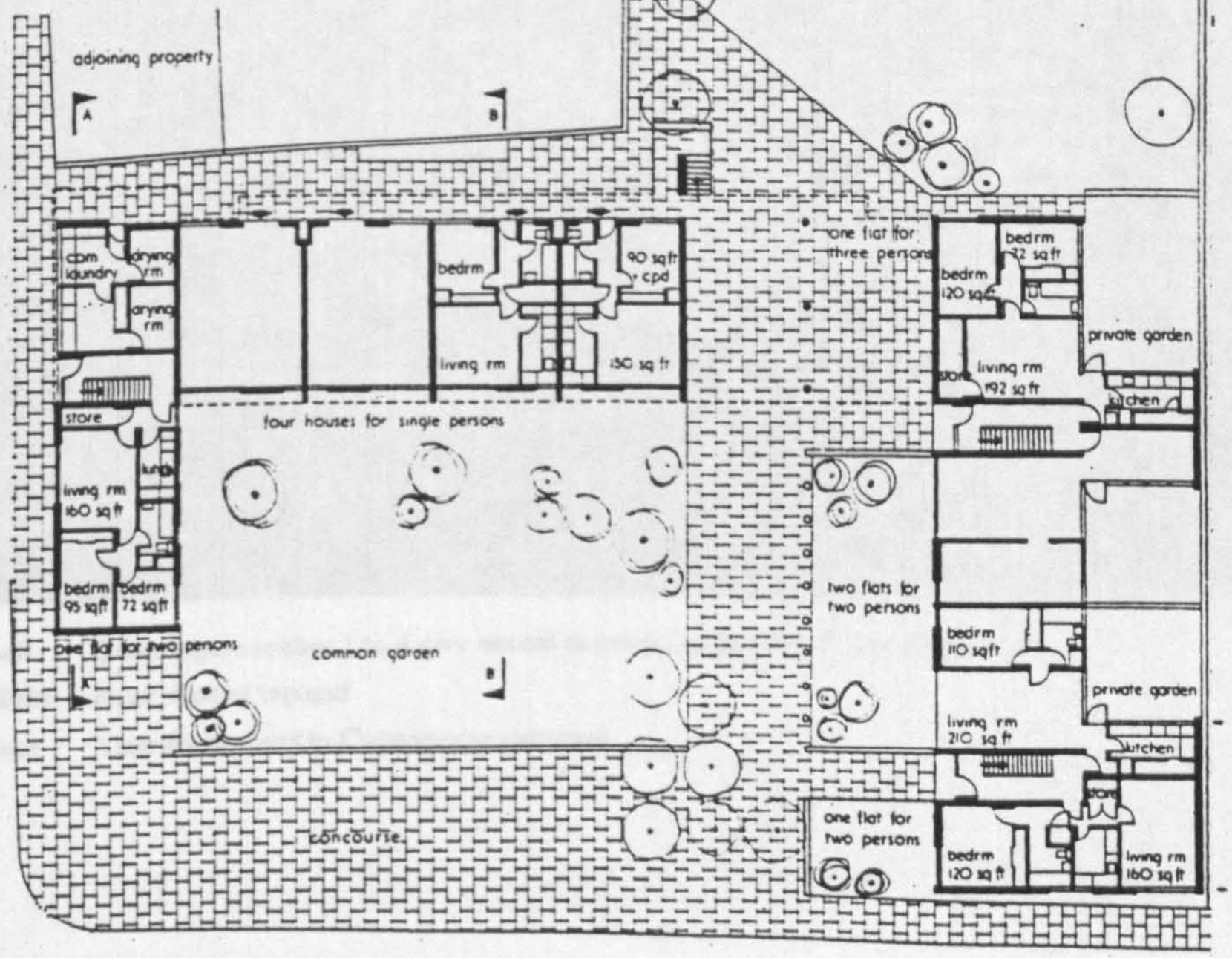
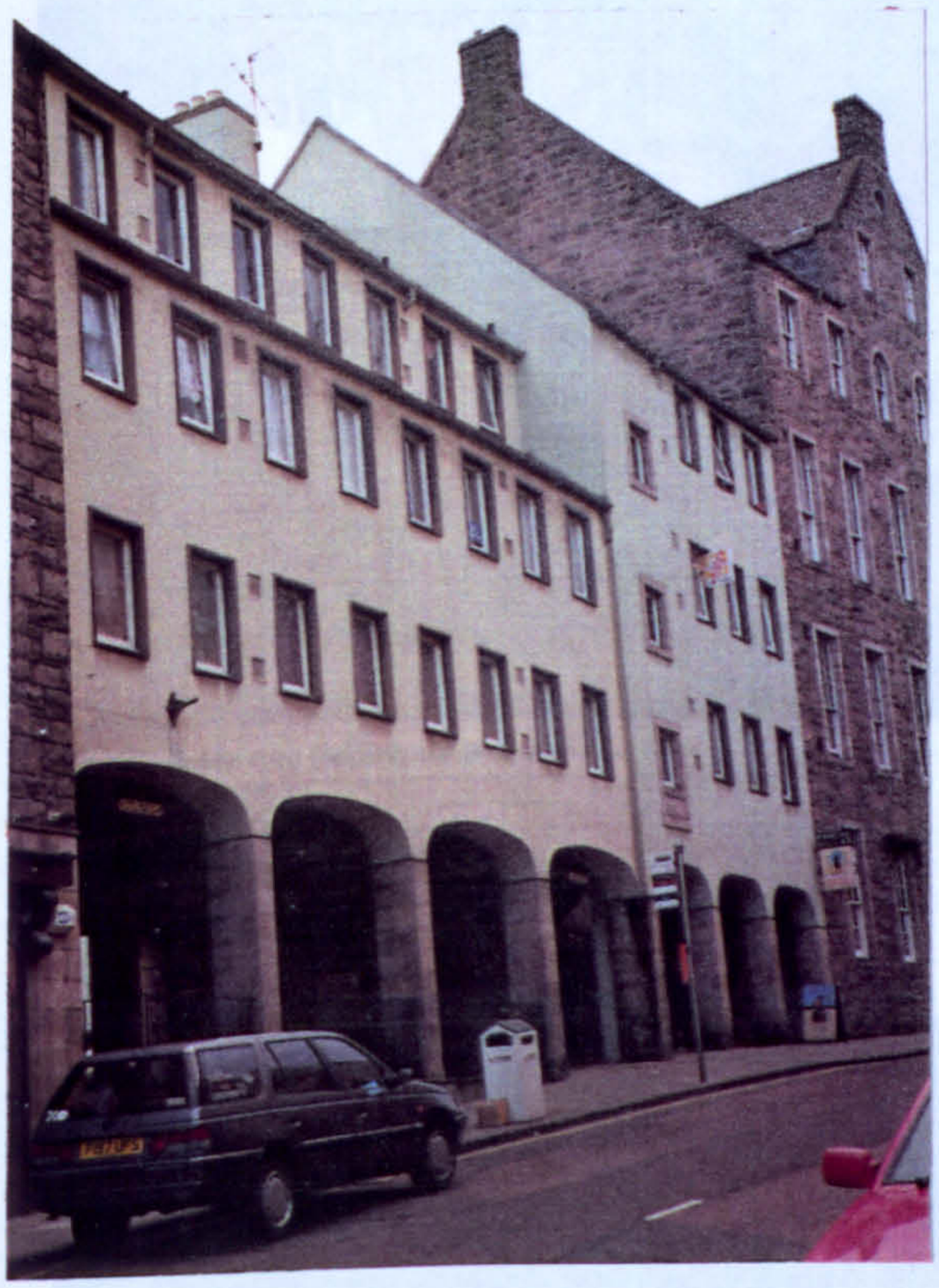


Figure 6.41

Chessel's Court, Canongate, Edinburgh



Left Cannongate arches 1 to 4 give access to court, arches 5 to 7 form shop front

Right Rear view of top end

Foot View from court to Cannongate entrance

Figure 6.42

Dysart, Fife

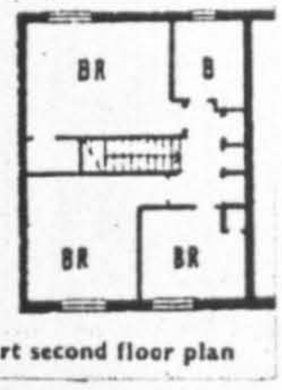
Dysart phase one Saltire Award 1960

The Towers Dysart

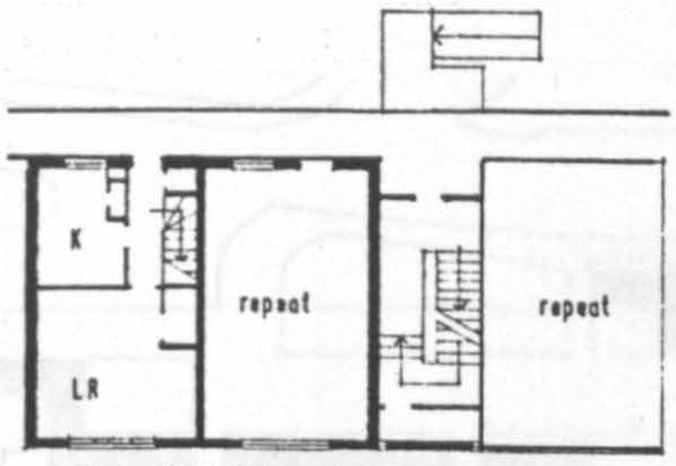
Dysart phase two Saltire Award 1965

Figure 6.43

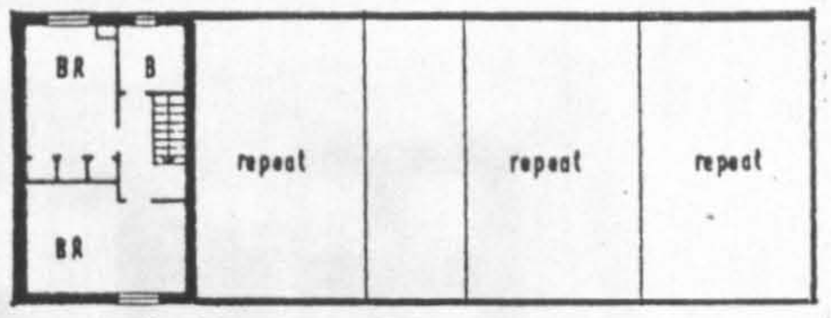
Dysart, Fife



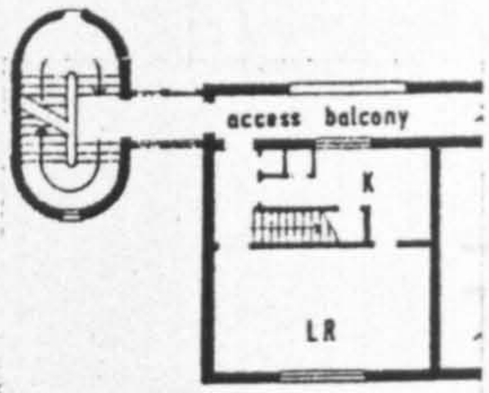
part second floor plan



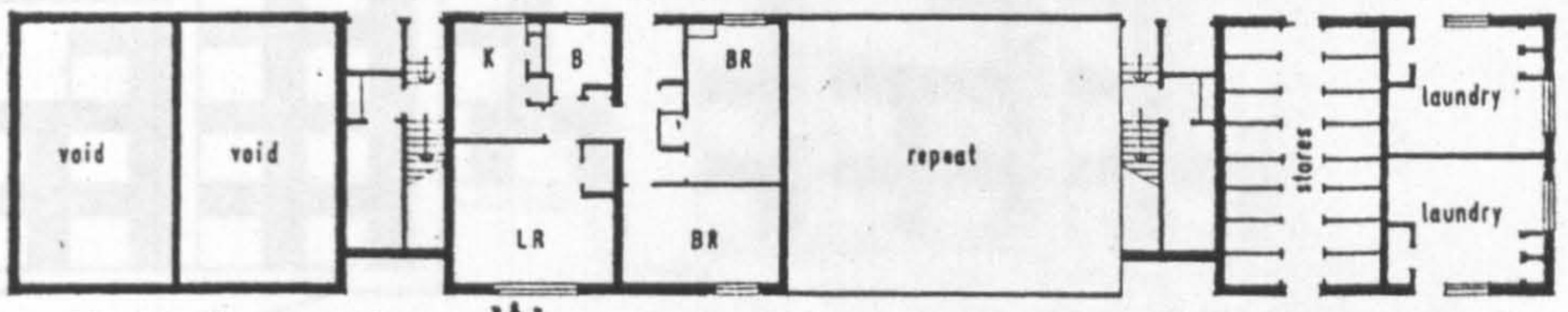
part first and third floor plan



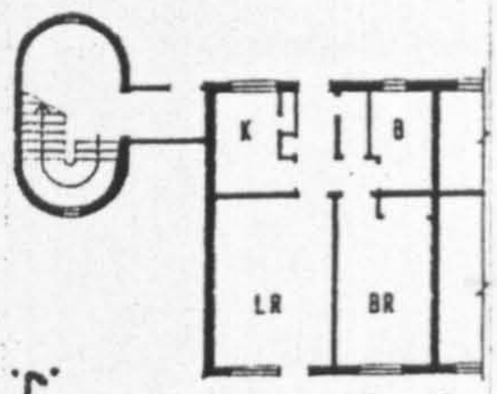
part second and fourth floor plan



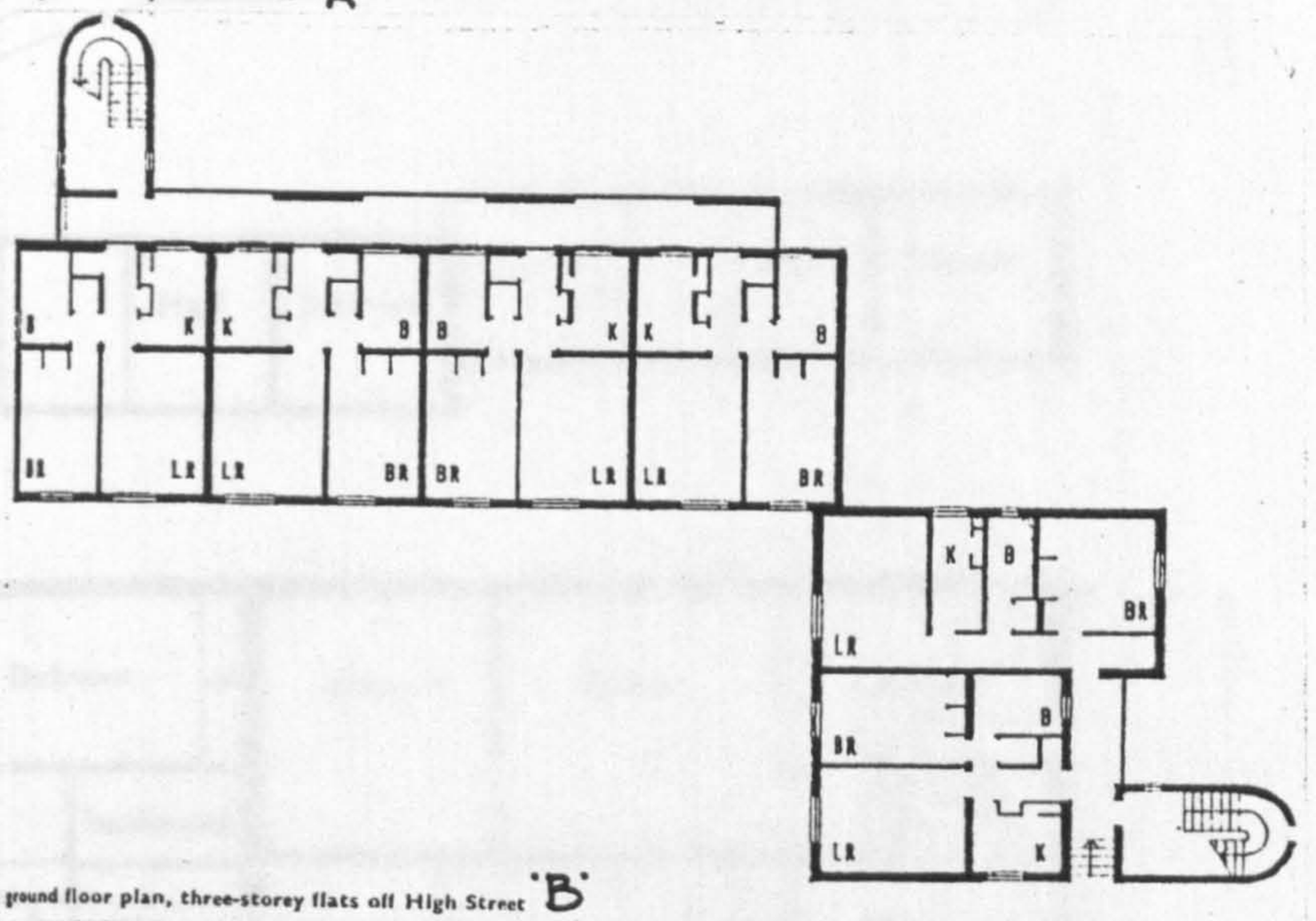
part first floor plan



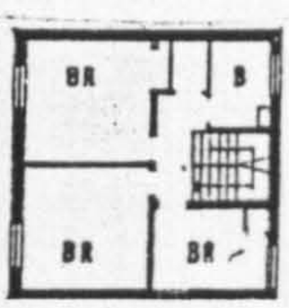
ground floor plan, five-storey maisonettes 'A'



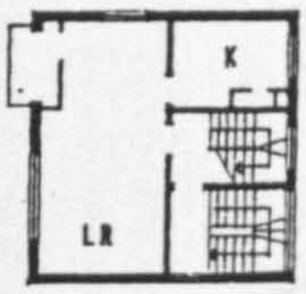
part ground floor plan,
three-storey maisonettes off Quality Street 'C'



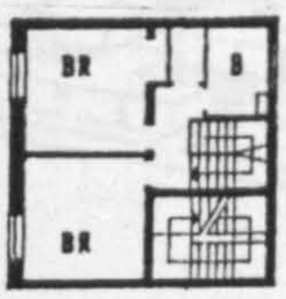
ground floor plan, three-storey flats off High Street 'B'



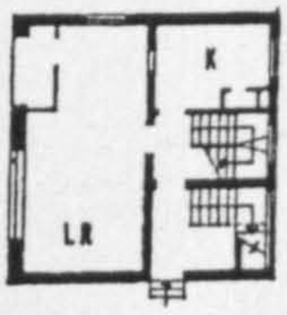
fourth floor plan



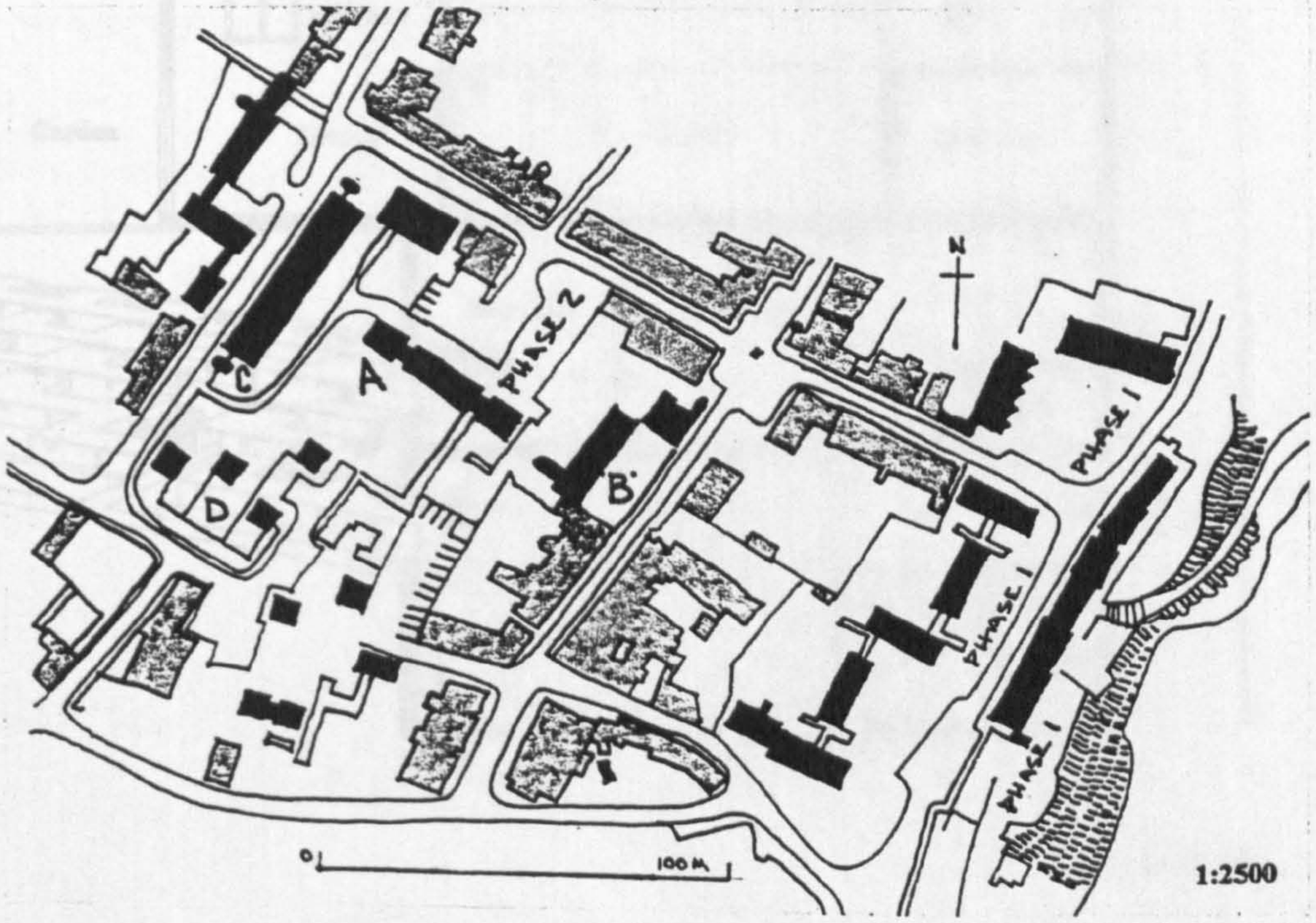
second floor plan



first floor plan



ground floor plan,
four-storey maisonettes 'D'



1:2500

Figure 6.44

Courtyard Houses, Inchview, Prestonpans, West Lothian

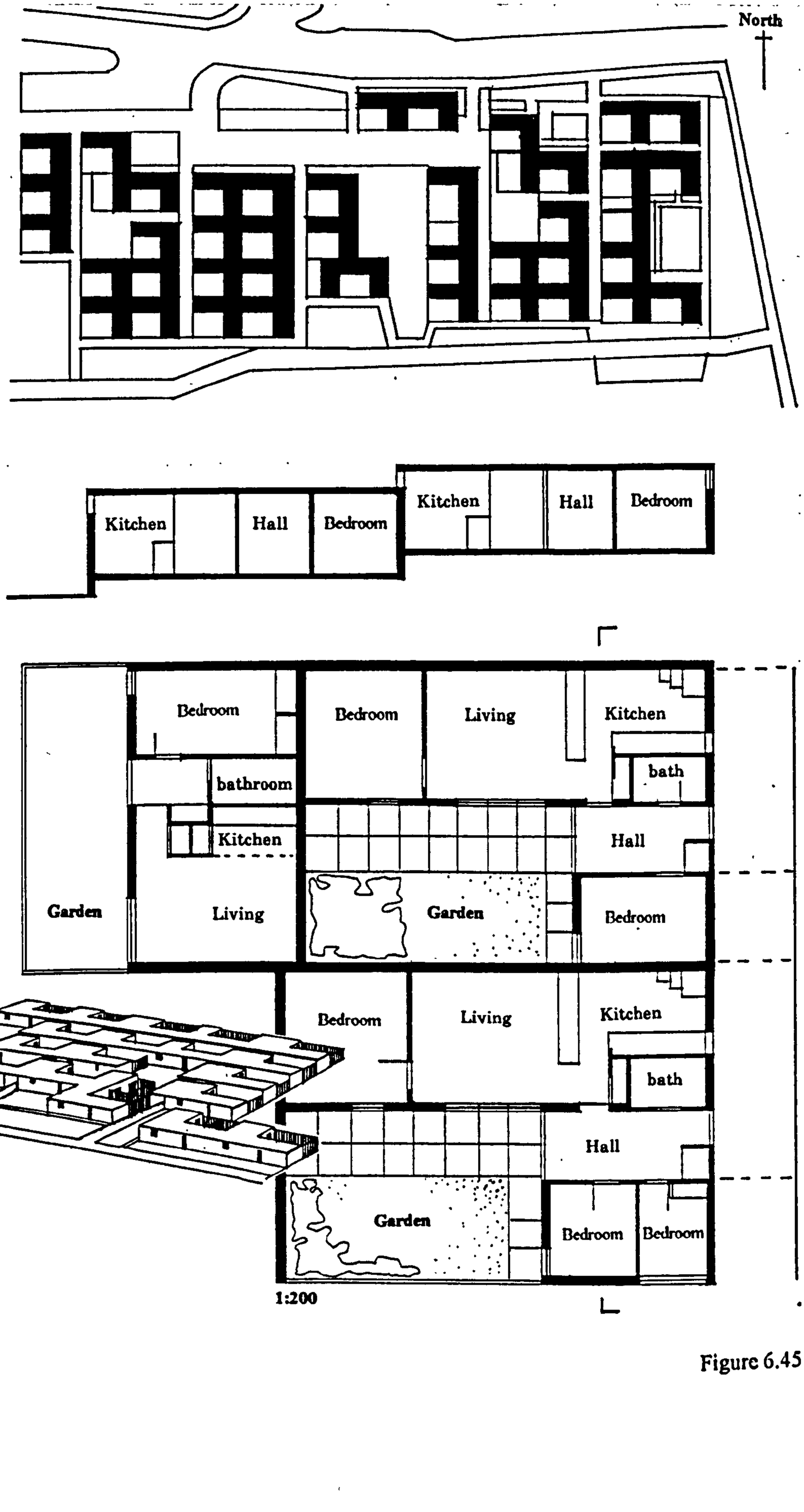
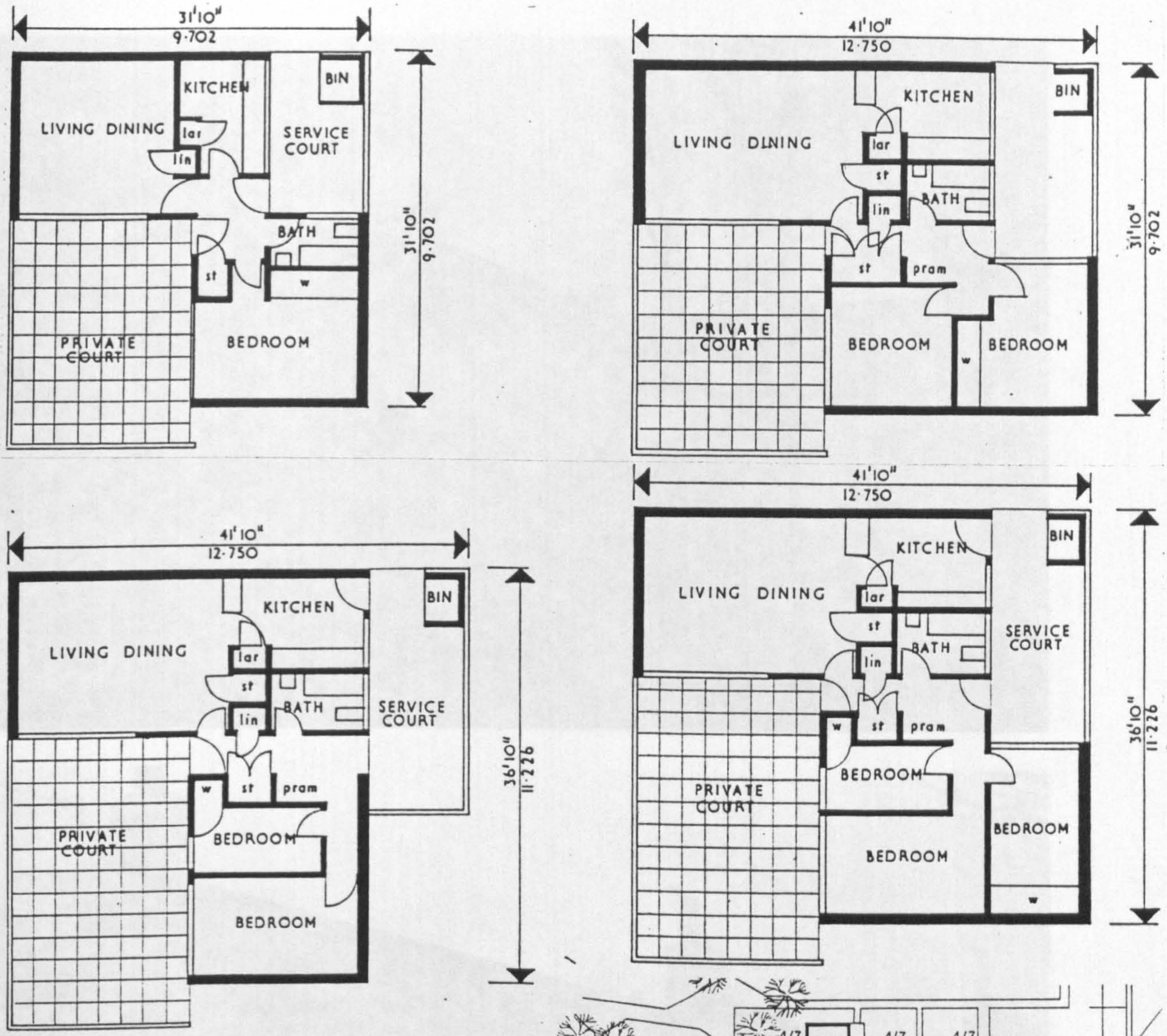
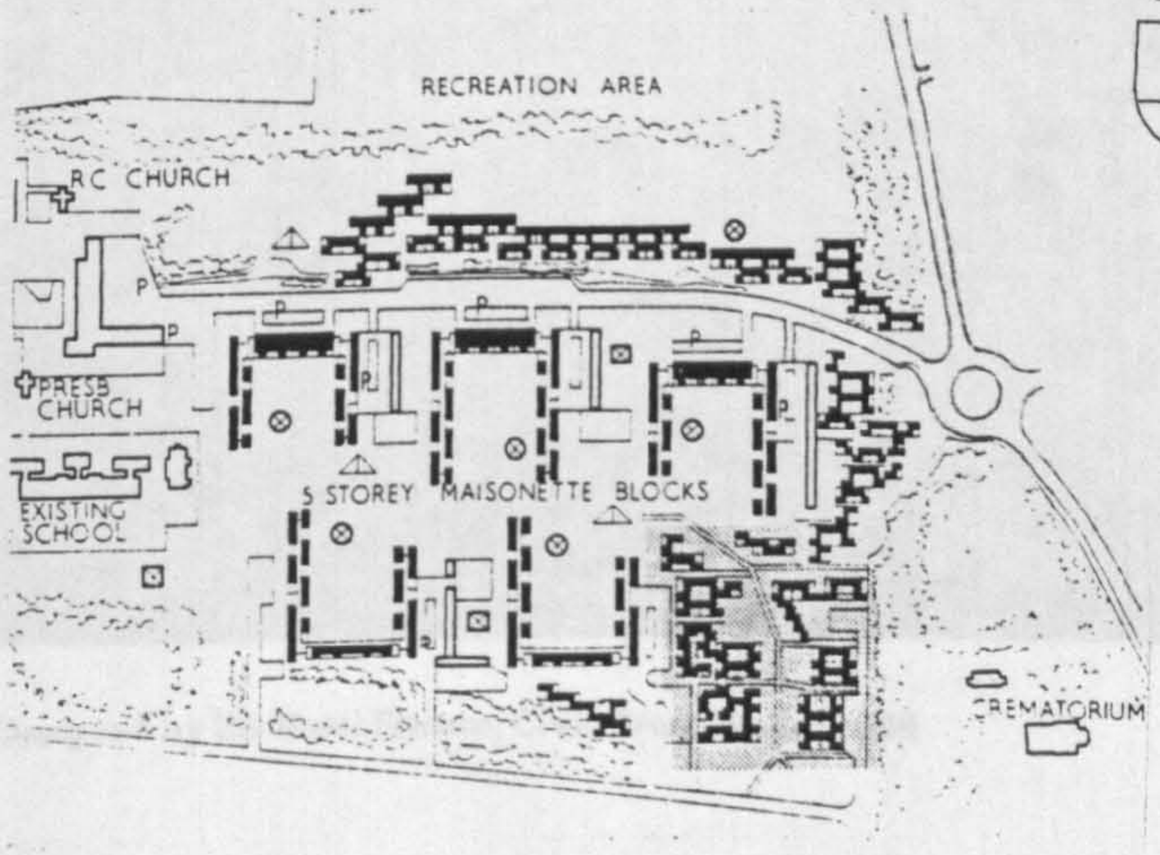


Figure 6.45

Courtyard Houses, Ardler, Dundee



Plans of courtyard houses. From top: two-person two-room, three-person three-room, (right) four-person three-room, five-person four-room. ($\frac{1}{16}$in = 1ft)



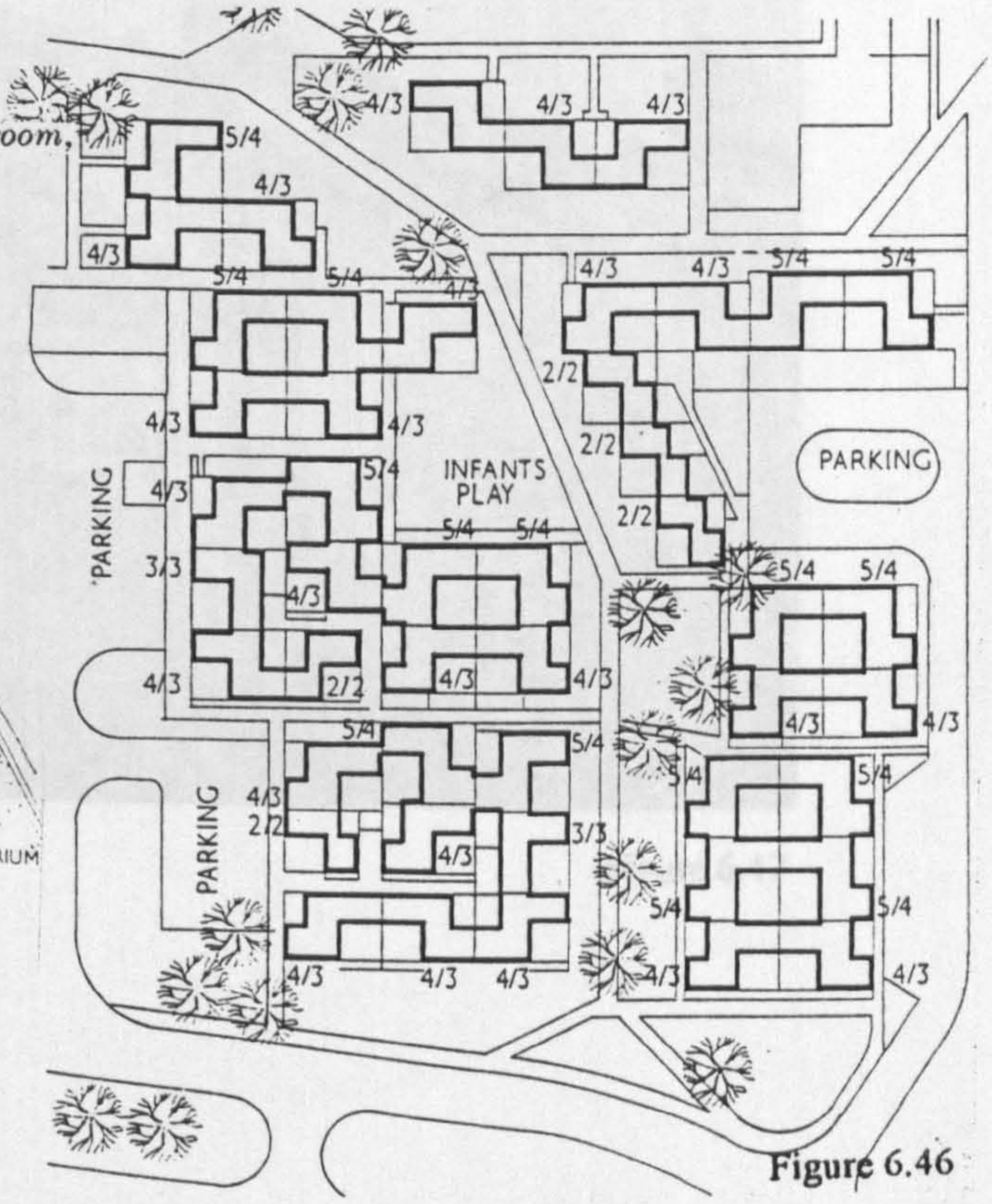


Figure 6.46

Linen and Woollen Drapers' Homes, Crookfur, Glasgow

Designed by Sir Basil Spence, Civic Trust Award 1968

Figure 6.47

Willox Park Housing and Home for Old People, Dumbarton

Top View of home with housing flanking each side of northern court

Mid View of home with housing flanking each wide of southern court

Foot Home and centre

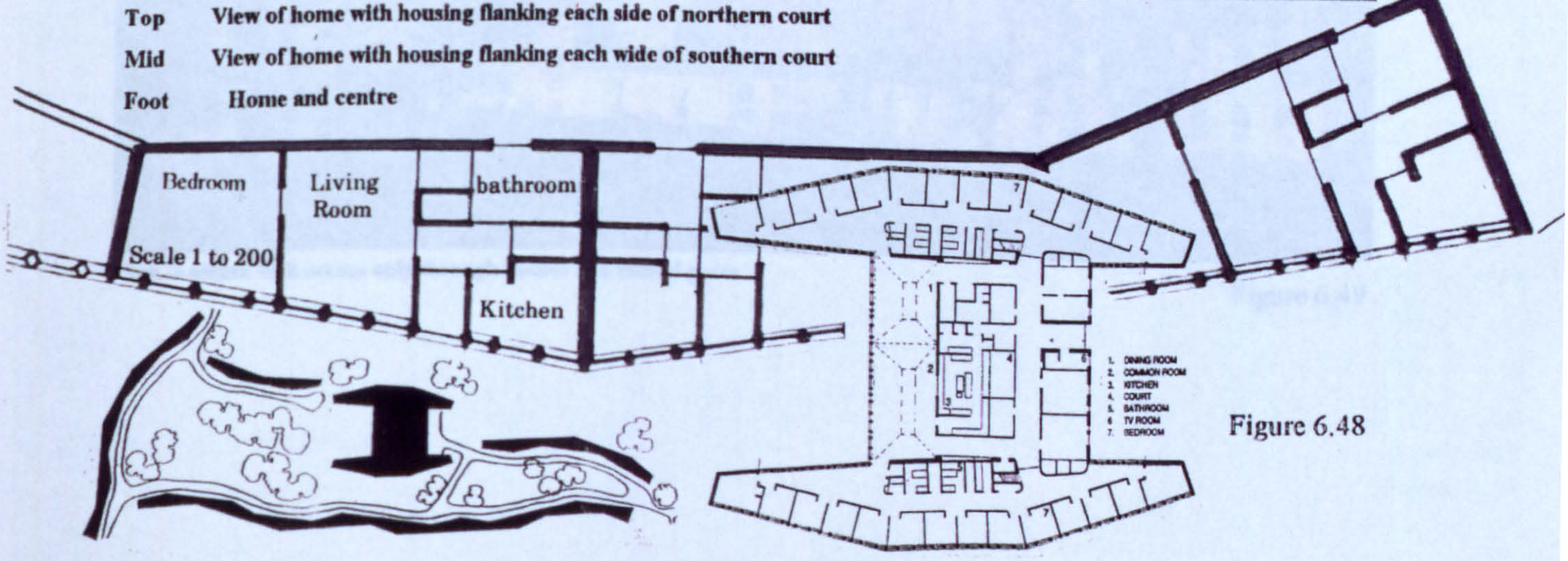


Figure 6.48

Southfield Barnton, Edinburgh

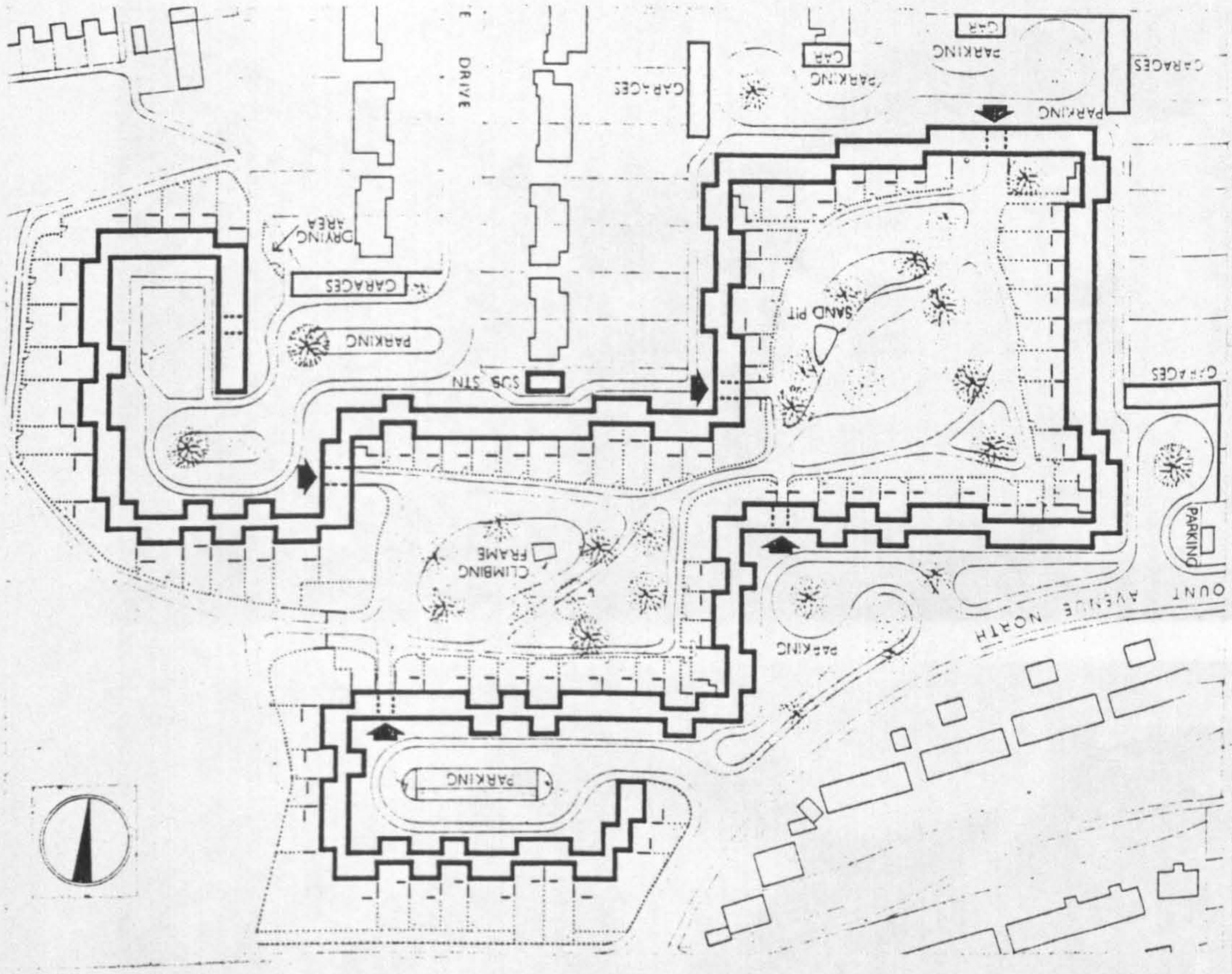
Public side of dwellings with integral garages

Private side of dwellings with small gardens onto park

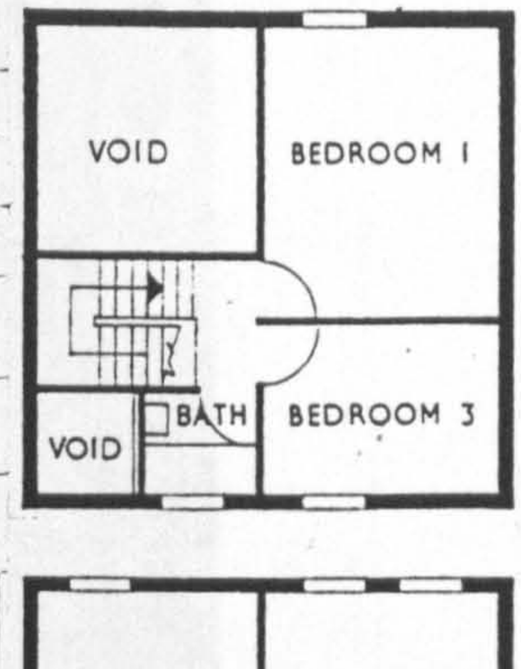
Park is secure with access only through houses and locked gates

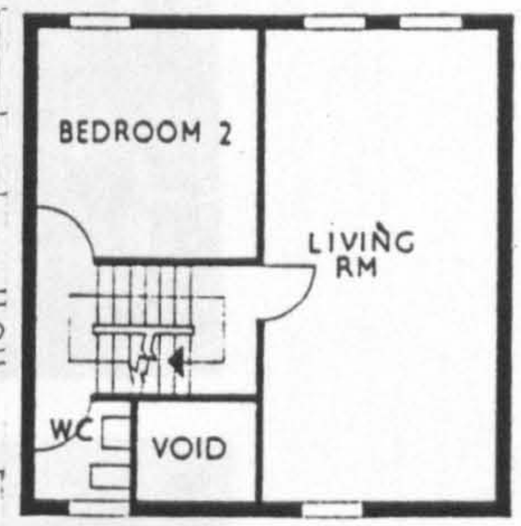
Figure 6.49

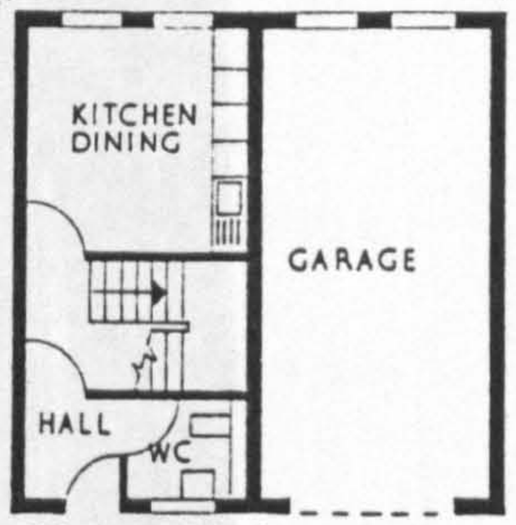
Southfield Barnton, Edinburgh



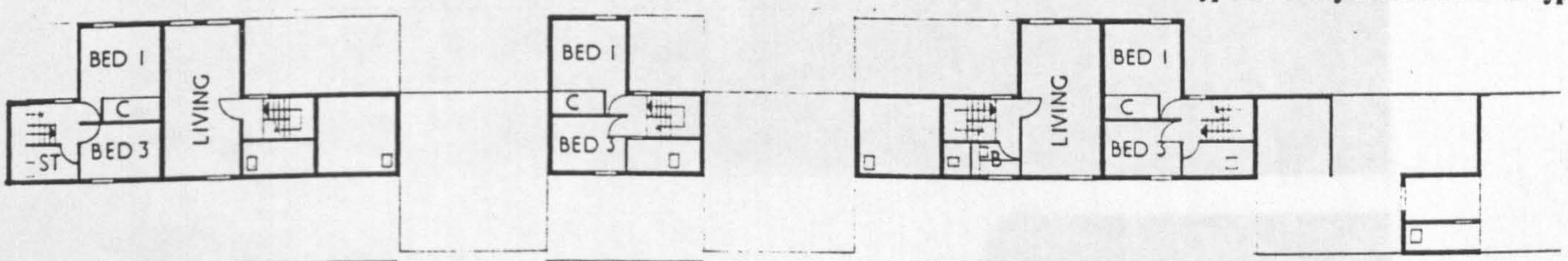
1:2000 layout



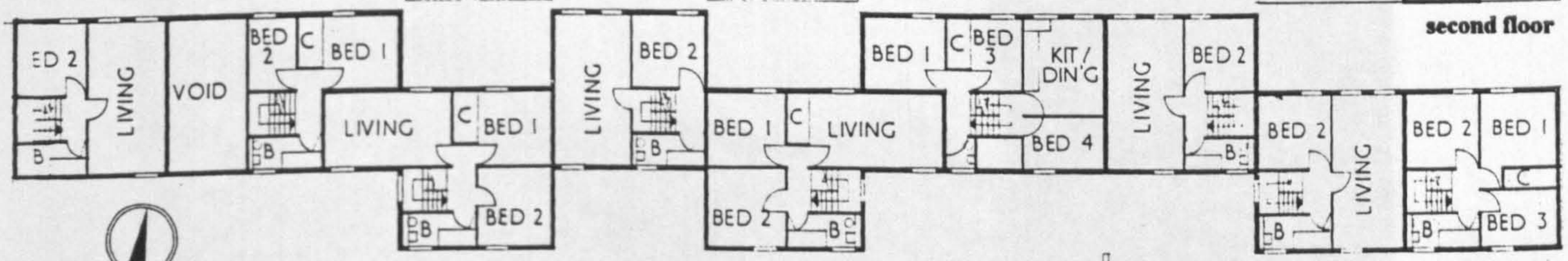




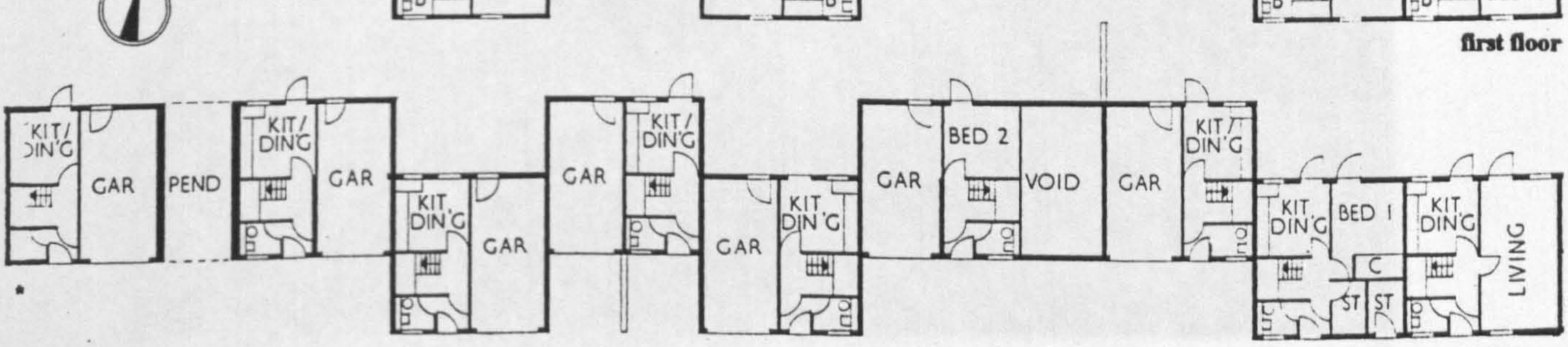
typical 3 storey 3 bedroom house type *



second floor



first floor



ground floor

A selection of 2 and 3 storey house types

Figure 6.50

Newburgh, Fife

St. Katherine's Court, North side of Main Street

South side of Main Street

"Top of the Garden", behind Main Street

Figure 6.51

1970 - 1979

INTRODUCTION

The Conservatives won the 1970 election with a majority of 31, with the Prime Minister Edward Heath taking the UK into the EEC in 1971, which year also saw the introduction of decimal coinage.

In 1973 OPEC (Organisation of Petroleum Exporting Countries) decided to double its share of the receipts from oil exported. The resultant rise in the price of oil greatly increased the viability of North Sea oil where extraction was relatively expensive, but during the 1970s while the UK was a net importer of oil this increase had consequences for the UK balance of payments. The Department of Energy, realising the wastage of energy through heat loss through domestic uninsulated roofs, introduced grants for the addition of roof insulation. The grants were however not available for those wishing to upgrade minimal existing roof insulation. (1)

Building Regulation requirements for insulation remained at 'U' values of 1.1 for roofs and 1.7 for walls until 1975 when they were improved to 0.6 for roofs and 1.0 for walls. The reason for this cautious improvement was concern over the increasing cost of new building. (2)

The first major UK oil find was in 1970 off Aberdeen and, with other major finds of oil and gas following, the UK became self sufficient in oil in 1980. By 1981 North Sea oil and gas was contributing over £6 billion a year to Government revenues. This wealth of energy may be the reason why little or no action was taken by Government to promote renewable energy production.

There was however greater action taken to conserve the built environment with conservation areas being designated and European Architectural Heritage Year in 1975 contributing to greater public awareness.

The 1971 census revealed that 50% of households were of 1 and 2 persons. That this increase in small households was due to a fall in the birth rate, increase in life expectancy and a trend of the young leaving home earlier, suggested that the proportion of small households would increase. The consequence of this was that, even with stable population numbers, there would be an increasing demand for houses suitable for small households.

An analysis of the 1971 census figures on overcrowding, use of basic amenities and male unemployment in Urban Deprivation Working Note 6, Great Britain revealed that Scotland with just over 11% of the British population had 77.4% of the worst 5% of the nations most deprived areas and Clydeside had 95% of the worst 1%. (3)

Erskine, a new township by SSHA, was commenced in 1972 to take Glasgow's overspill population and to cater for the needs of economic expansion. The original plan envisaged a township of 30,000 people however when building ceased in 1983 with the termination of the overspill programme only 3,391 houses had been built. (4)

ASSIST, a unit of the Department of Architecture and Building Science, University of Strathclyde, was formed in 1972 as an action-research project to examine the feasibility of the voluntary improvement of Glasgow's tenement housing. This it proved with its rehabilitation of 200 houses in Govan. (5)

Misuse of improvement grants was claimed by Shelter in a publication Home Improvement - People or Profit. Shelter claimed that tenants in privated rented accommodation had, by fair or foul means, been put out of their accommodation in order that the property be improved and that "gentrification" (middle class income groups replacing working class) was increasing. (6) Shelter's report was not specifically referring to Scotland but McCrone and Elliot describing the decline of landlordism in Scotland, also refer to the loss of the low cost private rental accommodation when a tenement was bought up, improved and/or split up and sold in individual flats. "A number of the new landlords became specialists in this 'break up' process as it was not uncommon for someone to acquire a tenement of a dozen flats for a few thousand pounds and realise the total purchase price through the sale of only one or two apartments" (flats). (7)

The Conservative Government gave authorities permission to sell public rental housing, The terms of the sales were to be full market value or with a 20% discount if a 5 year pre-emption clause was involved (the right of the authority to buy back). There was political resistance to this in some areas and SSHA, while it sold 204 houses in 1973 and 161 in 1974, avoided selling in areas where there was local political resistance. (8) In fact the Labour Government's 1977 Green Paper "Scottish Housing" also advocated selling public rental housing.

An oil embargo followed an oil price rise of 70% in October 1973 and a three day working week was introduced to save energy. The miners, after a slowdown in the pits, went on strike in February 1974 and Prime Minister Heath called a General Election.

No party won an overall majority and Labour with 301 MPs to 297 Conservatives, but with less percentage votes, formed a minority Government. The February election was followed by another in October when Prime Minister Wilson went to the country to obtain a working majority. Labour increased its number of MPs to 319 but still had no overall majority and relied on Liberal, SNP and other support to remain in office.

The West Central Scotland Plan was published in June 1974. It catalogued the problems of the region, high unemployment, industrial dereliction and bad housing. In 1970 106,800 houses in the region were below "Tolerable Standard" and a further 22,400 lacked some of the basic amenities.

The solution proposed was the formation of economic policies to attract more jobs and encourage growth of local industry and to improve the environment with area by area programmes for improving housing, industry and transport. The main task for the housing authorities was to improve the region's 129,000 unsatisfactory houses. Private housing was to be encouraged particularly in the areas where there were exceptionally high proportions of council housing.

The report recommended a reduction in house building for rent by SSHA and the New Towns advocating that the New Towns should increase the proportion of housing built for owner

occupation. The redevelopment and environmental improvement programmes were to take place mainly in the areas where people tended to be poor and deprived.

These proposals were broadly accepted and incorporated into the structure plan of Strathclyde Regional Council which itself was formed in 1974/75.

The Glasgow Eastern Area Renewal (GEAR) project was initiated by the Secretary of State in 1976. This was a combined project by the Scottish Development Agency (SDA), SSHA, Strathclyde Regional Council, Glasgow District Council and the Housing Corporation for the comprehensive modernisation of a major area of Glasgow comprising Bridgeton, Dalmarnock and Shettleston. Private sector expenditure was also involved and private house building was encouraged into the area. (9)

The resources for the GEAR project came from cutting back expenditure in other areas of Scotland. Stonehouse which had been designated a New Town in 1973 was dedesignated in 1977. Even including the GEAR project, total public sector housing completions fell during the 1970s and in 1978 private exceeded public sector completions for the first time since 1925.

Harold Wilson resigned in 1976 as Prime Minister and was succeeded by James Callaghan. The winter of 1978/79 saw a return of industrial disputes with road haulage strikes causing a shortage of building materials.

Inflation which had been 10% annually in 1970 rose to 25% in 1975 and although it briefly was brought down to 10% again it rose to 18% in the late 1970s.

The issue which brought the Government down was however devolution. The referendum on the Government's proposals failed to achieve a majority in Wales and while a majority of those voting in Scotland voted in favour, the majority did not reach the minimum 40% of the electorate threshold set by Parliament. The Labour Government with its own party divided on devolution was unable to deliver its devolution proposals. The SNP in retaliation supported a Conservative motion of no confidence in the Government and the Government fell.

Both Labour and the SNP lost seats in the 1979 election and the Conservatives returned to power on 3rd May with Margaret Thatcher as Britain's first female Prime Minister. The Government saw its main task as curbing inflation and bringing public expenditure under control.

This included cutting expenditure on public housing but in truth public expenditure on new housing had reduced from almost 35,000 houses in 1970 to 8, 607 in 1979. The Thatcher Government only continued the trend.

Unemployment in Scotland which had been as low as 2.5% in the first half of 1966 was at 4% in 1970 and in 1977, 1978 and 1979 hovered around 6%. But for the oil industry, which was Scotland's largest industry by 1975, unemployment would have been higher.

The Architectural Review 1973

The October issue of the A.R. ran a special issue on SLOAP (Space Left Over After Planning - a term coined by Leslie Ginsburg). It criticised the single residential use in stacking one family

on top of another in the form of tenement development or their high rise replacements surrounded by wide open spaces. It criticised the low rise solutions of semi-detached suburbia, garden cities, new towns and the straightjacket of the engineering and building regulation rule book. In their place it proposed high density medium rise compact developments of mixed use, illustrated by sketches and photomontages of what it termed "sociable housing". The image was of compact urbanity and in its urban design was a continuation by Kenneth Browne and Ivor de Wolfe of their 1962 AR article on Italian Townscape and Gordon Cullen's 1961 Townscape.

The AR 1973 issue praised, as a breakthrough, the Essex design guide to be published in December that year. The guide was intended for all housing developments but its illustrations for detached and semi detached housing had particular relevance for private development. The emphasis of the guide was on townscape, grouping houses to create enclosure and conceal parked cars. Its illustrations on road layout showed how roads suitable for large vehicles such as refuse and removal vehicles need not penetrate fully into a scheme but only to within the building regulation carry distance with smaller scale private roads giving direct access to houses. Many of the concepts had been put forward earlier by Unwin in the Tudor Walters report of 1918 and by Sharp and Gibberd in Design in Town and Village in 1953. But coming at a time when there was a return to low rise development of traditional construction, the Essex Guide together with Cullen, Browne and de Wolfe made a notable contribution towards a return to traditional townscape in housing development. (Fig 7.01) (Note the 1962 A R credits authorship of Italian Townscape to Ivor de Wolfe but in 1973 authorship of sociable housing to Ivor de Wofle).

The AR 1973 issue illustrated its "Civilian densities" using Irvine New Town as an example. The Irvine master plan had its industrial land laid out to the east of the old town and its bypass and new residential development on green field sites further east originally to link with Kilmarnock which was to expand to the west forming a north Ayrshire city with university. The AR solution was to expand Irvine to the west building on the land between the old burgh and the sea. The plan was illustrated with photomontages of Thamesmead five storey walk up flats grouped around the river and the harbour with water front cafés and shops. For those with a knowledge of the area and an understanding of the consequence of the restrictions of mining subsidence, flood levels, toxic waste and blast zone restriction from the ICI Ardeer explosives factory, the AR proposals were impractical as they were either on land subject to frequent flooding, on toxic tips or in the blast zone. It was an unfortunate example which ignored site restraints to achieve a visual image. (Fig 7.02)

Defensible Space

This phase was first coined in 1972 by the American Oscar Newman in his study of crime within public housing in New York. Despite arguments as to whether design or management was the major factor in combating crime and vandalism (10) defensible space came to be seen as desirable by those involved in housing provision. Broadly the concept of defensible space is that in addition to residents having secure private space in their house and private garden, if any, there should be a buffer space between the private space and the public space. In traditional development this might be a private front garden open to view fenced or unfenced, soft or hard landscaped but whatever the solution there should be a transitional zone between the public road or footpath and the private space.

Relevant Legislation not contained in Housing Acts

Chronically Sick and Disabled Persons Act 1970

Local Authorities were required to have regard to the housing needs of chronically sick and disabled persons. The Act also required disabled access and toilets in public buildings and signs at buildings complying with this requirement.

Town and Country Planning (Scotland) Act 1972

The Act consolidated town and country planning law with amendments to include the recommendations contained in the Report of the Scottish Law Commission.

It included the 1969 legislation on development plans, which were to be in the form of Structure Plans and Local Plans. The Royal Commission on Local Government reported in 1969 but most if not all planning authorities left structure planning to the new regional authorities.

The Structure Plans were to be strategic dealing with economic development and transportation and would provide a framework for local plans. When the new two tier authorities were introduced structure planning became the responsibility of the regional planning authorities. In housing, the structure plans outlined the broad principles of where housing development, public and private, should take place.

The Local Plans applied the strategy of the structure plan in detail and provided detail plans for development control. Local plans would include Action Area plans and subject plans such as conservation area plans. In the new two tier authorities local plans were the responsibility of District Authorities. Whereas the structure plan was concerned with strategy and broad principles the local plan identified specific sites and planning policy relative to these sites.

Local Government (Scotland) Act 1973

The Royal Commission on Local Government in Scotland reported in 1969 proposing a two tier system of Local Government.

The 1973 Act divided Scotland into 9 regions, 53 districts and 3 island areas. The regions were responsible for Strategic Planning, Roads, Water, Sewerage, Police and Education while the districts were responsible for Local Planning, Development Control, Building Control, Conservation Areas, Museums, Libraries and Housing. The island councils of Orkney, Shetland and the Western Isles were all purpose authorities. The Act also introduced community councils, elected voluntary bodies, to act as a channel of communication between communities and the Local Authorities. The new division of Local Authorities was introduced in 1974 with their taking over the functions of the previous Counties and Burghs in 1975.

The Convention of Scottish Local Authorities (COSLA) was set up in 1975 to represent the interests of Local Authorities in discussions with the Secretary of State.

Health and Safety at Work Etc. Act 1974

This Act made provision for securing the health, safety and welfare of persons at work, for controlling the use of dangerous substances and controlling emissions into the atmosphere. The building industry had one of the worst safety records of any industry and the Act led to the introduction of safety officers for building sites.

The discovery that many workers using asbestos particularly those using it in confined spaces suffered from asbestosis, a lung disease caused by inhalation of asbestos fibres, brought demands that asbestos be removed from houses. Asbestos cement was a common building material used in all forms of construction but particularly in industrialised building. Housing authorities were therefore faced with removal of asbestos from their housing stock, often at considerable expense as the 1974 Act required special precautions to be taken for the removal and disposal of the asbestos.

Community Land Act 1975

The Act had two main objectives (1) to enable the community to control the development of land in accordance with its needs and priorities and (2) to restore to the community the increase in the value of land arising from its efforts.

It was to be implemented in two phases. During the first phase of 10 years the local authority or new Town had the power to acquire at current use value; in the second phase they were to have a duty to do so. Of the profits 40% was to go to the exchequer, 30% to the authority concerned and the remaining 30% to be shared amongst other authorities.

Development Land Tax Act 1976

This act imposed a new tax on the realisation of the development value of land. The tax was payable as soon as effect was given to development for which planning permission had been granted.

Both these Land Acts were intended to give the community the benefit of increased land value which occurs when planning permission is granted. This had already been attempted by the post war Labour Government in response to the 1942 Uthwatt report on Compensation and Betterment. As with the previous attempt, these Acts were repealed by the incoming Conservative Government who viewed the Acts as unworkable.

HOUSING LEGISLATION

Housing Act 1971

This Act had a separate section dealing with Scotland and, on improvement grants, generally gave a 50% increase in percentage grant and 50% increase in the maximum allowable grant to private individuals.

The exchequer contributions for dwellings provided by conversion or improvement by Local Authorities or Development Corporations were raised from 37.5% to 75% (100% increase).

The exchequer contributions towards the expense incurred by a Local Authority in making an improvement grant was raised from 75% to 90% and in the Highlands and Islands raised from 87.5% to 92.5%.

Grants to individuals were raised from 50% to 75% of the approved expenditure on standard and discretionary improvement grants. The maximum overall grant was therefore raised from £450 to £675 for a standard grant and from £1,200 to £1,800 for discretionary grants (details being issued under circulars 66 and 67/1971).

To qualify for the higher grant works were to be completed by 23 June, 1973 but this was later extended to 23 June, 1974 (circulars 67/1971 and 92/1973).

The other major change at this time was that Local Authority housing built under the Housing (Scotland) Acts could be improved under the same grant conditions as that pertaining to houses acquired by a Local Authority for improvement. This was mentioned in the Act and was covered by SDD circular 78/1971. This was necessary because for example early public sector houses were not always provided with a separate bathroom. It was not uncommon for the early post World War 1 houses to be provided with a bath in the kitchen.

Housing (Financial Provisions, etc.)(Scotland) Act 1972

The Act had five objectives.

1. To ensure that tenants whether public or private in need of assistance with the payment of rent may have assistance.

2. To ease the heavy burden falling on Scottish ratepayers who were paying 37% of the cost of local authority housing in Scotland.

3. to ensure that building programmes were assisted.

4. to create conditions in which good old houses were maintained and to accelerate slum clearance

5. to ensure that taxpayers' moneys were directed where most needed.

The Act introduced a national rent rebate scheme for the public sector. In Scotland Local Authorities were to meet a proportion of the cost of rent rebates rising from 10% in 1972-3 to 25% in 1975-6. A similar scheme was available for tenants of private rented accommodation, rent assistance, the cost of which was shared between Local Authority and Central Government on the same basis as for rent rebates. In the private sector there were two types of tenancy which could exist in identical property. "Controlled rents" were first imposed in 1915. Even with the 1954 and 1957 increases controlled rents in Scotland averaged 30p per week. These rents were far too low to allow owners to carry out repairs and improvements. Newer tenancies would be under a regulated tenancy and were at a "fair rent". Fair rents were market value rents and were much higher. The Act proposed that over three years the Controlled rents would become Fair rents. (Fair rents had been introduced in relation to the private sector by the previous Labour Government in the 1965 Rent Act).

For local authorities tenancies, Scotland was treated differently from England. The English Act introduced Fair rents for Local Authority housing. In Scotland the Act limited the average annual rent rise to 50p per week with the maximum individual rise limited to 75p per week.

The rent rises were to continue each year until the Local Authority's housing revenue account was in balance. The rents were to be based on pooled historic costs. The Government decided that the fair rent system adopted in England was wholly unsuitable to Scotland where no comparison with private fair rents was possible in half the houses in the country.

Similar arrangements applied to SSHA and the Scottish New Town Development Corporations.

The Act also provided for the separation of slum clearance expenditure from housing revenue accounts with a special subsidy for slum clearance of 75%.

A housing expenditure subsidy was introduced to cover not only loan charges on new building, as previous subsidies, but also expenditure on repairs, management and maintenance. The subsidy would operate where these became significantly heavier.

Finally there was a high cost subsidy to meet the needs of authorities with high expenditure arising from local circumstances. This was to benefit authorities operating in remote areas but again it was for all housing expenditure and not just the cost of new building.

The Act was addressing the importance of repairs and maintenance in both private and public housing.

The Act directed assistance through the rent assistance/rebate system to those who needed it whether in private or public rented accommodation. Those not qualifying for assistance/rebates paid a higher rent. Therefore, with income tax relief on mortgages, they were less likely to take up or continue in rented accommodation. It was also an encouragement for public authority tenants to buy their house, which could be discounted up to 20% and which the Conservative Government was keen to encourage. (11) There was however considerable resistance to the sale of council houses by many Local Authorities in Scotland.

While the SHAC report Planning for Housing Needs 1972 advocates Local Authorities facilitating owner occupation by, among other measures, the sale of council houses to sitting tenants there is no mention of this in the Act. Nevertheless some public sector houses were sold, 512 in 1971 rising to 717 in 1974.

Housing Associations had, until now, been dependent on loans from Local Authorities. Section 77 of the Housing Finance Act 1972 allowed the Housing Corporation to borrow and enabled Building Societies to lend money to Housing Associations.

The Act also introduced a new form of new building subsidy for the Housing Associations. This, in brief, was a subsidy to meet the deficit between income from fair rent and expenditure on meeting the loan charges from Local Authority, Housing Corporation or Building Society and expenditure on management and maintenance.

The subsidy was based on a percentage of the initial deficit. In years 1 to 3 the Housing Associations received 100%, in years 4 to 6 it reduced to 60%, to 30% in years 7 to 9 and to 10% in year 10. A similar system was applied to improvement schemes with the deficit taking account of any improvement grants paid.

Housing Act 1974

Normally Housing Acts covering Scotland are separate Acts with "(Scotland)" included in the title, those without any geographic reference apply to England and Wales. This is not always the case however and this Housing Act contained the legislation for the Housing Corporation for Scotland, England and Wales, with certain modifications to suit previous Scottish legislation.

This Act was a Conservative Bill which the incoming Labour government adopted and amended. The Act extended the function of the Housing Corporation. It empowered the Corporation to control disposition of land by housing associations and enabled the Corporation to acquire land, provide dwellings and clear, manage and develop land. The Act also made provisions for the registration of housing associations who from 1972 had been able to obtain loans from the Housing Corporation. The Act also prohibited the Corporation making loans to non registered housing associations after 1st April, 1975. Under the Act of 1964 the Corporation could only borrow from the Secretary of State. The 1974 Act allowed the Corporation with the Secretary of State's permission to borrow money from other sources. The Housing Corporation was enabled to guarantee borrowing by registered associations and self build societies to a limit of £100 million.

The Act introduced the Housing Association Grant (HAG). Previous subsidies had been annual ones as in the Local Authority sector to meet part of the running costs. Now they were once-for-all lump sum grants which met part of the capital cost immediately. The HAG grant was calculated by subtracting from the cost of providing a house the loan which could be raised from income from that house. Income being a "fair rent" less management and maintenance costs.

There could also be a second subsidy a "revenue deficit grant". In the first year especially rent income might not cover all the expenditure and this could continue if running costs turned out to be higher than allowed for in the grant application.

This was a generous Act with heavy cost to the Treasury considered necessary for the housing associations to expand.

The generosity was perhaps greater than anticipated as rents rose with inflation and a scheme which broke even at first was in profit when rents rose with inflation. As the grant was a lump sum it could not be reduced in future years. The Housing Act 1980 required associations to keep a grant redemption fund (GRF) into which surpluses on HAG aided schemes were paid.

(12)

Housing (Scotland) Act 1974

The Act placed a duty on every Local Authority to secure that all houses in their district which did not meet the tolerable standard were closed, demolished or brought up to the tolerable standard within a reasonable period.

The government had stated that, as a first priority, attention must be given to the improvement of the living standards of the many families living with no inside toilet facilities, no hot water or no bath. Houses lacking standard amenities could be included in the reckoning in addition to those failing the tolerable standard (see the 1969 Act).

The Local Authorities were given powers to declare "Housing Action Areas" for demolition and/or improvement where the houses or a greater part of the houses did not meet the tolerable standard. They were given powers to acquire land and buildings within the Action Area which might not be residential. They were also permitted to sell or lease the land purchased.

The Act retained the higher 1971 grants for improving houses in Housing Action Areas but returned to the lower 1968 grants for houses outwith the Action Areas.

The grants to private individuals were reduced to a maximum of 50% but retained at 75% if within a Housing Action Area. This percentage could be raised to 90% where the applicant would face undue hardship in financing the improvements.

The exchequer contributions to annual loan charges incurred by Local Authorities making the grants was reduced to the 1969 level of 75% but retained at the 1971 level of 90% in Housing Action Areas.

The purpose of this was to concentrate improvement in the areas of greatest need.

Housing Rents and Subsidies (Scotland) Act 1975

An Act to repeal certain provisions of the Housing (Financial Provisions) (Scotland) Act 1972.

It released Local Authorities from the duty to charge rents in accordance with the 1972 Act and required them only to charge reasonable rents which must be reviewed from time to time. It limited Local Authority rent increases to £39 in any period of 12 months and with private, regulated tenancies it limited rises to £78 in a period of 12 months.

It also provided that Housing Associations registered under the Industrial and Provident Societies Act 1965 were eligible for housing association grant and revenue deficit grant under the Housing Act 1974 notwithstanding that their rules stipulate restricted membership and limit the assignation of tenancies.

Housing (Homeless Persons) Act 1977

This Act came into force in England and Wales on 1st December, 1977 and in Scotland on 1st April, 1978.

In Britain, whereas in 1951 it was estimated that there were 13,300,000 households but only 12,500,000 dwellings, by 1976 there were 17,600,000 households and 18,100,000 dwellings.

That there was still a homeless problem was due to :-

1. Regional imbalance, some areas had jobs but no houses available, other areas with houses had no jobs.

2. There were still 2,700,000 households in Britain in overcrowded or sub-standard housing.

3. There were houses which were holiday homes but there were also houses being repaired, redecorated or vacant while tenants or buyers moved. (13)

Shelter in a 1971 report Face the Facts suggested that the number of truly homeless could be anywhere between the 18,689 officially in temporary accommodation in Britain and the 3,000,000 or so people who lived in slums, near slums or overcrowded conditions. (14)

The Government took the view that "too wide a definition of homelessness could tend to obscure the pressing needs of those who are literally without shelter or are likely to lose in the immediate future what shelter they have". (15)

This was the first Act to deal exclusively with the homeless although there had been legislation dealing with the homeless since 1948.

The Act described the homeless as those with no right or permission to occupy accommodation and those with accommodation but who could not secure entry to it or would be threatened with violence. It also included those with mobile accommodation who had no place to site it and reside in it.

Priority was to be given to those with children, those pregnant, those homeless as a result of flood, fire or other disaster or those with elderly, handicapped or disabled persons living with them.

The Act required co-operation between, Regional social work departments and District housing authorities, SSHA and New Towns.

The housing authority's responsibility ranged from, in the non priority case of a person intentionally homeless, having a duty to give advice and to make sure accommodation was available (for a period they considered reasonable for the person to find their own accommodation), to having a duty to make available accommodation by themselves or by others for those who were priority homeless.

The Act also provided that the Secretary of State, with Treasury consent, could give financial assistance to voluntary organisations concerned with the homeless.

Housing (Financial Provision) (Scotland) Act 1978

The main function of this Act was the introduction of a housing support grant to replace existing Local Authority subsidies.

The housing support grants procedure was similar to that of the rate support grant in that the Secretary of State obtained House of Common's approval to both the aggregate amount of grant payable to all authorities and the method by which the proportion payable to individual Authorities would be calculated.

To fix the aggregate amount of the housing support grants for any one year the Act required the Secretary of State to estimate:

a) the aggregate amount of eligible expenditure which it is reasonable for Local Authorities to incur for that year; and

b) the aggregate amount of relevant income which Local Authorities could reasonably be expected to receive for that year.

The aggregate amount for the Housing support grant was calculated by subtracting (b) from (a).

Similar new grants were established for SSHA and the New Towns.

In order that the Secretary of State could assess the Housing Support Grant, Local Authorities were required to prepare "Housing Plans" which contained their strategies and plans for the next 5 years. They were to incorporate; an analysis of housing provision, an assessment of needs, a statement of objectives and policies including an assessment of the contributions of SSHA, New Towns, Housing Associations and private builders and a costed programme.

This was devolved responsibility to Local Authorities who, once having submitted their housing plans with lists of projects, costs and programme and having received their block Housing Support Grant for the year, could build to their own standards (above or below Parker Morris for example). They also no longer required approval by the Secretary of State to individual projects.

The 1972 Act had made provision for the payment by Local Authorities of rent rebates and rent allowances. It also provided for a Central Government subsidy of 75%. The 1978 Act increased the subsidy to 90% as it was considered that the previous 25% contribution by Local Authorities was an unfair burden on Local Authorities with a large number of low income tenants. 10% contribution was retained in order that Local Authorities would have a material interest in the efficient operation of the scheme.

The Act allowed the Secretary of State to give financial assistance to voluntary organisations concerned with housing. This allowed him to support a new Housing Training Council to promote the training of housing managers in Scotland as recommended by *Training for Tomorrow* (1977) a report by a sub-group of the Scottish Housing Advisory Committee. (14)

The Act made further provision for the repair and improvement of older houses. It gave owners of houses outside housing action areas the benefit of housing repairs grants. The Act limited the grants to 50% of expenditure with a maximum grant of £1,500. It also provided Local Authorities with a means of securing the improvement of sub-tolerable properties with a procedure similar to that of a closing and demolition order.

Homes Insulation Act 1978

This Act provided for Local Authority grants towards thermal insulation of dwellings. The initial scheme was for the improved insulation of roof spaces and water supply and the grant available was for any dwelling 66% of the cost up to £50 maximum grant.

The Building Standards (Scotland) (Consolidation) Regulations 1971

These standards were the metrication of the 1963 standards and mostly were the same simply converted to metric measurements. For example the minimum distance between habitable room windows of houses was converted from 60 feet to 18 metres. (Fig 7.03)

This was true of the 1963 Schedule 8 Table 18 which became the 1971 Schedule 9 Table 17 "Standards of Housing Accommodation" which specified minimum room areas for various sizes of houses. The 1971 Q19 regulation "Alternative Space Standards for houses" was however a radical change. Q19 allowed designers the flexibility advocated by Parker Morris and set out in Bulletin 1 Metric Space Standards 1968". The 1971 Schedule 9 table 18 (Q19) set out the minimum areas for houses ranging from 1 to 7 persons as shown in 4.1 of Bulletin 1. A house was therefore no longer required to adhere to the minimum rooms areas providing it complied with the minimum overall area for the house and planned the accommodation to enable it to fulfil its function satisfactorily for the number of persons. This Q19 alternative was important for the design of public rented housing which was required to comply with Bulletin 1 and required to show the necessary furniture and activity spaces for each room rather than compliance with a minimum room area. (Fig 7.03)

Insulation standards were only marginally improved for roofs and exposed floors, from 0.2 Btu/ft² h deg F (1.14 W/² deg C) to 1.1 W/m² deg C. This was purely a "rounding off" of figures and the standard for walls remained the same at 1.7 W/m² deg C.

An amendment to the building regulations in 1975 however improved minimum insulation standards to 0.6 for roofs and 1.0 for walls and exposed floors.

A new requirement was introduced as a result of the Ronan Point collapse, that buildings of five or more storeys were to be designed to resist progressive collapse in the event of damage to a section of the structure.

HOUSING REPORTS

Housing in Clydeside 1970

This was a report for SDD on a household survey and a house condition survey in the central Clydeside Conurbation carried out between May and June 1970. (Fig. 7.04)

The report revealed a wide range of rents in the Clydeside Conurbation. 45% of private rented dwellings were rent controlled and 55% rent regulated. There was little difference between the dwellings in the two sectors except in relation to the rents: the average annual net rents were £29 and £38 respectively. In comparison the annual average net rents for public authority tenants was £69 for Local Authority, £73 for SSHA and £131 for New Town Development Corporation tenants. (Fig. 7.04, Table 20).

From 1965 to 1970 the proportion of households lacking a fixed bath or shower dropped from 28% to 17% in Clydeside and from 38% to 25% in Glasgow. (Fig. 7.04, Table 56).

A similar comparison on the general standard was more difficult as the 1965 "fitness" standard had been replaced in 1969 by a new (though related) standard of tolerability. The report in tables 2 and 57 classified houses in four categories.

1.	Satisfactory in all significant respects.	68%
2.	Intermediate (above the Tolerable Standard).	2%
3.	Intermediate (likely to be below the Tolerable Standard).	21%
4.	Definitely below Tolerable Standard.	9%

The condition in Glasgow was much worse than in the remainder of the conurbation with 12% in Category 4 in Glasgow and 6% outside the city. Only 56% of all dwellings in Glasgow were in Category 1 compared with 80% outside the city. The Survey also revealed that public rented accommodation was considerably better off for dwelling amenities than private rented accommodation (Fig. 7.04, Table 6).

House condition surveys had been carried out in English conurbations during 1967 to 1969 and in 1973 the House condition survey 1971 England and Wales was published. Direct comparison is difficult as the criteria used differs from the Clydeside report.

The England and Wales report reveals a greater housing problem in the North compared with the South East. In 1971 10% of all dwellings in the North of England but only 4% in the South East were classified as "Unfit" and 16% of homes in the North compared with 7% in the South East lacked an internal w.c. (17)

The Clydeside report revealed that only 1% of all wc's were located outside the "building" but 8% of all households shared their w.c. (a feature of poor tenemental property). It would be fair to say however that the standard of housing in Clydeside was closer to that of the North of England than the South East of England.

Planning for Housing Needs 1972

This report by a working party of the Scottish Housing Advisory Committee states in chapter one "The acute shortage of houses which was characteristic of the immediate post-war period has substantially been met in many areas", but it goes on to say "the problem posed by the large number of sub-tolerable standard dwellings has become more and more urgent as the pressures for increasing the total stock have lessened". (18) It stresses the importance of Authorities carrying out a comprehensive assessment of housing needs. This assessment cannot rely on housing waiting lists as, for example, single people or the elderly will not apply

for single person housing or sheltered housing if it does not exist or there is little chance of their obtaining a house.

It particularly highlights problems of size, type and distribution of houses. Often housing in an area is mainly medium size family housing of 2 or 3 bedrooms. Consequently there is no suitable housing for large families nor is there housing for the elderly who wish smaller accommodation but also wish to stay in the area. In addition to the needs of large families and the elderly it lists other special needs housing required for the handicapped, single people and students in higher education.

On tenure it states that Local Authorities have tended to concentrate on council houses and that they should also take account of the contribution of private building for owner occupation and the contribution of housing associations. On the demand for owner occupation it states that Local Authorities can facilitate owner occupation by the allocation of land which is suitable for private building and by maximising their powers to give mortgages and by the sale of council houses to sitting tenants.

In Appendix 1 there is an analysis by the Scottish Development Department of housing needs, the house building programme and slum clearance.

Nationally there were 1,790,000 dwellings in Scotland in 1970 and the estimate of the total housing requirement was in 1976 1,810,000 dwellings, 1981 1,860,000 dwellings, 1986 1,900,000 and in 1991 1,950,000 dwellings. On this basis there was a need for 70,000 additional dwellings between 1971 and 1981 and 160,000 dwellings between 1971 and 1991. In addition it was estimated that there were 230,000 below tolerable standard. On the assumption that these houses would be demolished and replaced with a new house (alternatively it could have counted an improved houses as a new unit) and that the quality of the existing stock would not deteriorate, then there would be a need for 390,000 houses by 1991. (160,000 + 230,000). This it argues could be met by 19,000 houses per annum but the 1971 figure was 40,700 (all agencies public and private). If the 1971 rate continued to 1981 then there would be a need for only 10,000 a year beyond 1978.

(In fact house completion by all agencies fell to 25,759 in 1978 and this was with 11,316 public and 14,443 private houses).

The SDD analysis however emphasised how the national figures concealed considerable regional differences. Glasgow/West Central, with 12.7% dwellings below tolerable standard, required by 1981 104,000 houses to replace those below tolerable standard and 28,000 to meet the growth in households, while neighbouring Falkirk/Stirling with only 4.2% below tolerable standard required only 4,000 replacement houses but 25,000 houses to meet growth in households. (Fig 7.05)

The report was followed by two white papers accepting the recommendations.

Homes for People, Scottish Housing Policy in the 1970s 1973 Cmnd 5272

The English/Welsh equivalent to this was titled Widening the Choice, The Next Steps in Housing and its title better describes the Government's intentions for Scotland, England and Wales.

The Scottish white paper states that income per head in Scotland was now not far below the average for the UK as a whole and that "most people in Scotland no longer need or wish to regard a low rent as the main criterion of an acceptable house". The Government's intentions were to encourage all agencies to provide new houses and to modernise the older ones wherever this was appropriate.

It stresses the need for Local Authorities to assess housing needs comprehensively, to identify the special requirements of the elderly, the handicapped, the one parent family and the single person and to assess how best they can be met, by new building, conversion, sheltered housing or as part of a general needs development.

The paper states that the Government will continue to encourage private building and that, as home ownership is increasingly desired by a widening range of people in Scotland, Local Authorities should make their own houses available to sitting tenants who wish to buy them. It also proposes that Local Authorities seek the Secretary of State permission to sell houses to persons who are not sitting tenants or exceptionally build houses for sale. The paper points out that the Scottish New Towns were giving a lead with some 3,000 sales by 1973 and there was strong tenant demand for more progress.

The paper draws attention to the 190,000 houses below the tolerable standard and states that the improvement of these houses is a priority task.

On housing associations it states that "the Government believe the time has come for a major expansion in the activities of housing associations and housing societies both in new building and in improvement". (19) (The means to achieve this expansion was the Conservative Government's Bill which the Labour Government adopted and amended to become the Housing Act 1974).

Towards Better Homes, Proposals for Dealing with Scotland's Older Housing 1973 (Cmnd. 5338)

The second white paper outlines the Government's proposals that the housing treatment areas of the 1969 Act be replaced with Housing Action Areas and that the proportion of improvement grants should be higher in Housing Action Areas. Local Authorities were to be given discretion to give grants for repairs only. In general there is increasing support for the improvement of sub-standard housing.

In particular it states "the Government will encourage housing associations and housing societies to become as fully involved as possible in action to improve older houses in all areas but particularly in Housing Action Areas". (20)

This Conservative Government's white paper was the basis for the Labour Government's Housing (Scotland) Act 1974.

Scottish Housing A Consultative Document 1977

This green paper contains the Labour Government's views on housing prior to the Housing (Financial Provisions)(Scotland) Act 1978.

It proposed the new system of Local Housing Plans in which Local Authorities would submit annually a 5 year capital expenditure programme. The Secretary of State would make expenditure allocations in the form of a Housing Support Grant for the first year and give guideline limits for subsequently years. Once the new subsidies were introduced the individual authorities no longer needed to submit details of individual projects for cost approval by the Secretary of State. Authorities would be given cost guidance but could vary standards so long as they complied with statutory minimum standards.

On this the paper states "The government are therefore considering whereby 'Parker Morris' standards would no longer be obligatory for public sector house building in Scotland". (21)

The Government proposed to increase their contribution towards the cost of rent rebates and allowance from 75% to 90%.

Authorities must meet diverse needs and build new housing or adapt existing housing for the elderly, disabled and other special groups.

Primary responsibilities for securing accommodation for the homeless lies with the housing authorities who should form joint working arrangements with social work departments.

All Local Authorities should abolish residential qualifications for admission to their housing lists and should positively cater for incoming workers.

On widening choice of housing tenure the green paper recommends exploring intermediate forms of tenure combining some features of renting and some of owning a house. Local Authorities and housing associations might consider selling rehabilitated tenement property to co-ownership societies. Equity-sharing arrangements, whereby tenants partly rent and partly buy public sector houses, was to be made available.

The paper states that it is reasonable to consider selling some public rented houses in response to the demand for home ownership. Schemes for selling council houses, it states, must be carefully worked out so as to maintain an adequate supply and range of houses for people who wish, or have no choice but, to rent. The sale of Local Authority houses should be submitted for approval as part of Housing Plans.

The report also recommended training housing management staff as there was an acute lack of qualified staff.

Finally the green paper emphasises the valuable contribution of the Housing Associations, but notes that, while there was an "revenue deficit grant" to cover unanticipated over expenditure by Housing Associations in the first years of a project, there was no method of recovering the additional income from the Association. The last proposal was not introduced until 1980 by the incoming Conservative Government.

Examining the proposals of the 1970 - 74 Conservative Government and those of the 1974 - 79 Labour Government the overwhelming impression is of similarity. The main concerns were increasing the effort in improvement of sub-standard dwellings, catering for special groups, giving greater choice of tenure, encouraging Housing Associations, owner occupation and

proposing sales of council houses. On the sale of council houses the main difference was that the Conservative Government emphasised tenant demand for ownership, whilst the Labour Government made the condition on house sales that there must be an adequate supply and range of houses for people who wish to rent.

It was the Labour Government however which announced it's intention in a green paper to make "Parker Morris" (Bulletin 1) no longer obligatory for public housing in Scotland. The 'Parker Morris' standard was abandoned by the Conservatives in 1981. (22)

Scottish Housing Handbook 1
Assessing Housing Needs A Manual of Guidance 1977

This was, as the title indicates, not a guide to the design of housing. SHH1 was a manual giving detailed guidance for officials of Local Authorities to prepare a comprehensive assessment of housing needs in their area. The most immediate use of these assessments was to be in the Local Authorities' preparation of their housing plans.

A pilot case study "Local Needs and Strategies" had been carried out in the Dundee sub-region and published in 1976 by SDD. This study had made the opening comment that Scotland no longer had national housing problems, it had local housing problems.

The assessment of housing needs was to be comprehensive and according to SHH1 should include :-

The needs of all types of households e.g. families with children, single people, young couples without children, single parent families, the elderly and the physically handicapped.

The need not only for new building but for improvement, repair and maintenance and demolition programmes for private sector as well as public sector housing.

The role of management policies (defined in the broadest sense, to extend beyond the management of public sector housing) in ensuring the most effective use of the existing stock.

Quantitive aspects of housing including the need for houses of different sizes and types and in different locations.

The possible contributions to meeting housing needs from all agencies, including housing associations and the private sector and the scope for encouraging them.

The handbook goes into considerable detail on methods of assessing housing stock, assessing needs and the contributions of management and agencies. It is important to remember that this was for all tenure types and not restricted to the provision of Local Authority housing.

It also points out that in order to establish local standards to assess local need it was necessary to make comparisons with national standards. It also suggested that it may be sensible for Local Authorities to use estimates of need already available as a rough guide to medium term planning.

These included a need assessment of 50 sheltered housing places per 1000 elderly, although reference to the Dundee study suggested this could rise to 80 places per 1000 if, in addition to those with walking and cooking difficulties, it included those with more severe incapacities.

It also referred to Goldsmith's estimate that 0.16% of the total population might need wheelchair housing and 1.2% of the population might need ambulant disabled housing.

One interesting feature is the comment in SSH1 Clause 3.48 that conventionally households living at over 1.5 persons per room could be defined as overcrowded. This contrasts with the 3 persons per room which was used as the Scottish standard of overcrowding in the 1930s and which was strongly condemned by G. W. Clark in 1935.

SSH1 however in Clause 3.49 suggests that persons per room is a crude standard and puts forward the bedroom standard as a better measure. This is that a bedroom is required for, each married couple, persons over 21 years, pairs of same sex aged 10 to 20 years, pairs under 10 years and an additional bedroom for any remaining child.

The Dundee sub-region case study revealed housing needs and desires which, while the specific numbers were only applicable to the study area, revealed a developing trend.

As a consequence of the increase in the number of small households there was a greater need for smaller house types. There was also, as a consequence of the historic concentration on the provision of family housing ,a need for special needs housing for the disabled, the elderly and single people.

Interestingly there was shown to be a desire to move to inner suburbs or central area housing. The study also revealed a desire of elderly couples for a spare bedroom and comments that given that in the study area there was a surplus of two bedroom houses this desire could often be met.

The New Scottish Housing Handbook 3
Housing for Old People with Design Standards for the Disabled 1970

The handbook looks at two types of housing. Type 1 (Special Housing) is for the more active elderly and comprises self contained dwellings for 1 or 2 people. Standards are similar to those described for general needs housing in Bulletin 1. Type 2 (Sheltered Housing) is to meet the needs of more frail elderly. Each flat forms part of an integrated group of similar dwellings dependant on communal facilities, and services are provided for the group as a whole. The handbook states that this type of housing requires supervision by a warden and that the optimum group is 30 dwellings and the maximum number desirable is 50. Despite the presence of a warden and the provision of a common room and other facilities it is important , it states, to differentiate between sheltered housing and homes for the elderly built by welfare authorities under part III of the national Assistance Act of 1948.

In low density areas single storey housing is ideal. Grouped houses or flatlets with communal and warden facilities benefit the frail and the lonely and while many elderly can manage one flight of stairs a lift is desirable. The handbook also advises on equipping some of the ground floor dwellings for ambulant disabled and wheelchair users.

Floor area standards for Type 1 and 2 houses are given for both ambulant disabled and for wheelchair users. Ambulant disabled area standards are as Bulletin 1 as, with the help of handrails and other aids, the ambulant disabled require no more space that the active members of the population. Wheelchair users however require greater space for manoeuvring and storage.

Space Standards in m^2 (Wheelchair standards in brackets)

Self contained Dwellings - Type 1

		1 person bed sitting room		2 person separate bedroom	
1 storey	Net	30.0	(32.3)	44.5	(47.25)
	Store	3.0	(3.5)	4.0	(4.50)
	Overall	33.0	(35.8)	48.5	(51.75)
Flat	Net	30.0	(32.3)	44.5	(47.25)
	Store	2.6	(3.0)	3.0	(3.50)
	Overall	32.6	(35.3)	47.5	(50.75)

Grouped Flatlets - Type 2 Sheltered Housing

		1 person bed sitting room		2 person separate bedroom	
Flatlets	Net	30.0	(32.3)	39.0	(41.75)
	Store	2.5	(3.0)	2.5	(3.0)
	Overall	32.5	(35.3)	41.5	(44.75)

Space heating for all dwellings was required to achieve, when the outside temperature is -1°C, 21°C for living, sleeping, bathroom, hall, lobby, kitchen and where applicable communal rooms. Circulation areas within grouped flatlets required only a minimum temperature of 15°C.

Space standards, furniture and equipment and heights and widths of circulation and storage etc., were illustrated in the handbook. (Fig 7.06)

Communal Facilities were optional for Type 1 dwellings but mandatory for Type 2 dwellings. This allowed authorities to provide grouped Type 1 flats with no warden where houses were grouped for company and casual neighbourly self help. It also allowed them to provide sheltered housing with warden facilities as individual, unlinked, houses with or without common room etc. For Type 2 dwellings, linked with a heated corridor or access space, intended for the more frail, the authority must provide the warden and common facilities.

Type 1 dwellings had the option of being provided with any or all of the following :- common rooms $1m^2$ per person, wardens dwellings, guest bedrooms and alarm systems.

Type 2 dwellings must be provided with enclosed and heated circulation areas, common rooms $2m^2$ per person, wardens dwellings, guest rooms, alarm systems, laundry, cleaners' cupboard, telephones and goods delivery door to door.

Separate indicative costs were issued for Type 1 and Type 2 accommodation.

Scottish Housing Handbook 3, 1977
Housing development, Layout, Roads and Services

Confusingly also called SHH3 (The New SHH3 1970 above was Housing for Old People). SHH6 Housing for the Disabled and SHH5 Housing for the Elderly were not issued until 1979 and 1980 respectively.

As its title suggests SSH3 1977 gives wide ranging advice on the design of housing layouts. Much of the information had been contained in earlier design guides on housing layout design.

The handbook recommends that large housing developments should make provision for access to public transport and provide shops, community facilities, health centres, churches, schools and police station.

It recommends these facilities should be no more than the following distances from dwellings.

30m	garden, refuse storage point, toddlers play area, drying area.
400m	equipped play area, public transport, letter box, telephone, kick about area, corner shop, nursery school.
800mm	convenience shops, sub-post office, public house, meeting room, doctor, primary school, local park, police, dentist.
1000mm	shopping centre, church/assembly hall, bank, library, senior school, major park.

It emphasises the importance of variety and designing in character with the area in infill sites. Detailed briefs are recommended but the handbook points out that they should not be rigid as more flexible briefs will achieve better design.

Potential sites are to have regard to air pollution and noise pollution, recommending that sites should preferably have external noise levels of no more than 68 dB(A). This the handbook states is not a problem unless the road adjacent to the site had a traffic flow in excess of 10,000 vehicles per 18 hour day. Nevertheless the 68 dB(A) requirement frequently necessitated housing layouts being set back from a distributor road. A distance of 30 metres set back from the road verge was not unusual where the road was level with the site. (23) If the road was in cutting then the set back would be reduced.

On services a common trench was advocated, especially for pedestrian vehicle segregated layouts. These trenches included GPO (BT), Water, Gas, Electricity, TV and Road Lighting. The inclusion of GPO and TV in the servicing of sites removed overhead wires and roof aerials from housing schemes.

On housing access roads and parking the handbook discussed a variety of solutions with varying degrees of segregation. (Fig 7.07)

a) Traditional road with footpath each side and curtilage parking :- noted as suitable where there was no through traffic and no parking on the road.

b) Radburn type with roads and footpaths on opposite sides of the dwellings :- noted as suitable where children have hard play areas and where the house allows access from both sides without reduced privacy.

c) Vehicle access stopped a short distance from the house :- noted as suitable where distance is within regulation distance (46m) and car parking and garaging is well laid out and maintained.

d) Vertical segregation of pedestrians from vehicles (pedestrians on deck above cars) :- noted as expensive but one which may be suitable for densely populated urban areas or steeply sloping sites.

e) Shared courts where pedestrians and small vehicles share the same surfaces :- noted as suitable where vehicle numbers are small and speeds kept low by appropriate road design.

The handbook notes (in 5.1.10) "with the tendency for children to play in garage courts and roadways, whether or not traffic is segregated, and the wish of the car owner to bring his car up to his house, there are strong arguments in favour of further development of the last form".

The handbook discusses the layout potential of house types :- dual aspect, controlled aspect, single aspect and reversible aspect. The last being where first floor rooms face one way to the street and ground floor windows face the garden giving privacy from overlooking in the garden and privacy in the house from the street. (Fig 7.07).

Detached houses are seen as only viable on steep sloping sections of larger sites. Semi-detached houses are seen as useful for the same reason and generally suitable only for low density sites. Terraced housing is seen as capable of achieving high density particularly with three storey narrow frontage houses, although it notes the burden on the "housewife" in climbing up and down the stairs. The advantages of Patio Houses, Cluster Houses and Extendible Houses are discussed. The handbook, while admitting that the building regulations permitted walk up access to 4 storey or 9 metres vertical travel to the entrance door of any flat, favours restricting such access to three storeys.

Multi-storey flats, while not unsuitable or unattractive for everyone, are regarded as unsuitable for families with young children. Elsewhere the handbook draws attention to the problems of increased wind speed in housing layouts with high blocks.

Advice is given on planting with distance of mature trees from buildings being given as two thirds height of tree for clay soils and one third height of tree to 3 metres minimum for other soils.

Roads in Housing Developments
SLASH Study Team Report 1977

The SLASH study team was formed in June 1976 with representatives of district, regional councils, SSHA and New Towns with Scottish Development Department in attendance. The study team was composed of both engineers and architects and was chaired by Irvine

Development Corporation's Principal Housing Engineer, Chris Walker. The study team had advance copies of the "Access and Circulation" section of SHH3 and referred to the Essex design guide and the Architectural Review No. 920 issue on SLOAP.

The report began by defining the problem. The reorganisation of Local Government had given Regional Authorities responsibility for roads while the District Authorities had responsibility for providing housing and local planning. Regional Authorities were, in general, using standards based on those of the previous authorities and required roads in residential areas to be designed for a traffic speed of 30 mph (48 km/hr) (30 mph had been laid down as the maximum speed in a built up area under the Road Traffic Act 1934). Regional Authorities maintained and lit roads but would only do so if layouts met their road standards. It was possible for a housing layout to receive planning permission or authorised development in the case of a New Town with a road layout which was unacceptable to the Regional highway authority.

The report described the current road standards of the Regions. These varied, but in general required a road width of 5.5 metres with road gradients, curves and sightlines for 30 mph vehicle speed. The report comments that with roads designed to these geometrical constraints modern motor cars could easily travel at 40 to 50 mph. The only authority to deviate from this was Strathclyde Regional Council with its 1976 Road Standards document Geometric Standards for Prospectively Maintainable Highways, Footways and Footpaths. This contained a section "Novel Layouts" which permitted road widths of 3.0 metres wide with a number of conditions including adequate off street parking, design not to encourage speeds in excess of 25km/hr (15 mph) and the provision of an independent footway system. The document was cautious however introducing the novel layout concept with the statement "In exceptional circumstances, it may be possible for consideration to be given to new road layouts intended to reduce the dominance of the car at the local residential level including the use of narrow roads 3.00m wide". (24) Other regional authorities had stated that local area engineers had discretion to vary standards. However other study team members reported that, in their experience, area engineers were reluctant to deviate from laid down standards for fear of an accident on a non standard road.

The report included a SLASH article on its 1977 Conference on Roads in which speakers from SDD, SSHA, Irvine New Town and a guest speaker from Runcorn New Town argued for design measures to reduce speed in residential areas and relax current standards on gradient, radii and road widths. At Bourtreehill, Irvine the design of short culs de sac or lanes serving 20 or 30 dwellings was described where the lanes were meandering to reduce traffic speed and allow pedestrian domination. These lanes were 5 metres wide, not a great reduction from the standard 5.5 metres, but they also served as footways. At Bourtreehill the pedestrian vehicle mix lanes, were the transition between the car dominated distributor roads and at the end of the lanes the pedestrian footways which linked to the bus only roads and parkland.

The report's conclusions were, as at the conference, that housing roads should be designed to reduce traffic speed and it commends the Cheshire County road standards as a working example of the new design philosophy in practice. Cheshire County had housing Access Ways and Mews Courts with roads 4.5m wide pedestrian vehicles mix areas and had Car Ways of 2.75 metres wide linking heads of culs de sac.

The report also listed 44 examples of Non Traditional Road Layouts built in Scotland dating from the first at Bourtreehill in 1973. Four examples were private developments. The remaining were (22) in the New Towns and (18) by SSHA.

Strathclyde Regional Council published Guidelines for Development Roads in 1978. These show considerable advance towards the aims of the SLASH report and standards were as follows:

General Access roads were, as before, 5.5 metres wide with 1.8m footpaths on each side containing development. (Parking provision in residential areas was 100% + 30% visitor spaces for general needs housing and 25% for sheltered housing).

The main change was the standard for Minor Access Roads serving up to 50 dwelling units and Short culs de sac serving up to 20 dwellings.

The Minor Access Road was to be designed to encourage speeds below 10 - 15 km/hr, using a carriageway width of 3 to 4 metres and sight distances of 20 metres. Joint use of minor access roads by pedestrians was permissible but did not preclude the adoption of separate footways.

The Short culs de sac had no formal design speed, carriageway width of 5.0 metres and was designed for joint pedestrian vehicle use. Less formal courtyard areas were permitted providing there was a core area of 5.0 metres of road and parking areas were delineated.

Strathclyde was one of the first regions to adopt what was often described as "Novel Layouts". Others such as Highland normally insisted on 5.5 metre wide roads with separate footpaths until the 1990s.

Scottish Housing Handbook 6
Housing for the Disabled 1979

SHH6 together with SHH5 Housing for the Elderly 1980 replaced NSHH Bulletin 3 Housing for Old People 1970. Although SHH5 was not published until 1980 it is clear that both were being prepared in the late 1970s as SHH5 is referred to in SHH6. Revision of NSHH Bulletin 3 was clearly necessary when in December 1975 SDD issued circular No. 120/1975 withdrawing Type 1 Special Housing and Type 2 Sheltered Housing and introduced new standards for sheltered and amenity housing.

The reason for issuing SHH6 as a separate handbook section was that, whereas traditionally accommodation provided for the disabled had concentrated on institutional care and on self contained dwellings for 1 or 2 people, there was a need for dwellings of all sizes to meet the requirements of disabled people living at home with their families as well as those on their own.

The other reason for separating it from housing for the elderly was that while 65% of the total impaired population was over 65 years of age less than 50% of the very severely handicapped population was over 65 years.

While it would be desirable to provide a proportion of housing suitable for wheelchair users in sheltered housing for the elderly, in general the handbook favoured housing for ambulant and

wheelchair disabled to be integrated with general needs housing. The handbook also pointed out, referring to the study by the SLASH group, the merits of, where practicable, adapting existing housing, as the disabled person would remain with family, friends and neighbours.

Looking at the total disabled population of Scotland and discounting those who could look after themselves in a general needs house and those who could not look after themselves the handbook stated that there was a need for 1% of the total housing stock to be to wheelchair standard and 10% to be to ambulant disabled standard. These houses should be conveniently located close to shops, church, public house etc., and should have level or ramped approach for both types.

Ambulant Disabled Housing is based on the space and amenity standards of general needs housing. However door sets should be 900mm wide (775 minimum clear door opening) and circulation should be 900mm minimum width. Two storey housing is acceptable providing there is an entrance level room capable of being used as a bedroom and an entrance level WC with WHB. The house should also have a straight flight of stairs capable of accommodating a stair lift. (These standards were to be the basis for the Barrier Free standards of the 1990s).

Wheelchair housing for one to seven persons had increased space standards and required to be either single storey or two storey with a wheelchair standard bedroom and bathroom at entrance level. Additional space for manoeuvring a wheelchair was to be provided in all main rooms, hall, livingroom, dining room, kitchen, bathroom and, if not in all bedrooms, at least in the handicapped person's bedroom. 900mm wide door sets were required with doors swung to suit wheelchair users, door and window ironmongery chosen and sited for easy manipulation and livingroom windows designed to give a seated person a view to the outside.

The handbook illustrated suitable room arrangements, shelf height, worktop arrangement, access and car parking requirements for both ambulant and wheelchair disabled. (Fig 7.08)

SDD Circular No. 120/1975
Housing for the Elderly

This circular brought to an end the proposals for Type 1 and Type 2 accommodation in Bulletin 3 of the Scottish Housing Handbook 1970. The circular promised a revised Bulletin to be published in the new year. The old joke "which new year?" was apt as it was published in 1980 as SHH5.

The reason for the change was the acknowledgement that, while the distinction between type 1 and type 2 was that type 1 was for relatively active elderly and type 2 was for frail elderly, in practice many active elderly became frail with the passage of time.

There was therefore to be a new approach namely, providing certain basic design standards were observed and a warden was employed, all specially designed housing for the elderly would be designated sheltered housing.

The minimum standard for sheltered housing would be the type 1 accommodation with a warden service. There were however optional facilities which could be provided with sheltered housing; common room, guest rooms, laundry, wardens house and enclosed corridors all of which attracted additional subsidy as did the sheltered housing units themselves. The circular

also announced that whereas previously sheltered housing was classified as Building Standard occupancy sub-group A3 (hostels) it was now to be classified as the generally less onerous occupancy sub-groups A1, A2 (houses and flats).

The housing authority was required to consult the regional social work department and was required, when submitting proposals for sheltered housing to SDD, to show that the region had agreed to provide warden service. The circular cautioned that the Rate Support Grant (Scotland) (No. 2) Order 1975 had made the point that in no Local Authority would any significant increase in staff be possible. This could mean that some regional authorities would be unable to provide warden services and therefore the sheltered housing could not go ahead.

The circular also covered Old Peoples Amenity Housing which was an intermediate stage between sheltered and general needs housing. Amenity housing was required to have whole house heating, grab rails, and special bathroom fittings but without provision of a call system and warden service. Additional subsidy was also available for amenity housing.

Despite the provision of subsidies to cover the optional facilities for sheltered housing the circular in item 7 states "The Secretary of State expects that, given this wide range of options, sheltered housing provision incorporating all of the optional facilities will in future make up only a small proportion of local authorities' proposals for housing specially designed for the elderly".

General observation would suggest that, far from a small proportion, the vast majority of sheltered housing was subsequently built with all or almost all of the optional facilities. A clear case of if Central Government makes, as it did, subsidies available which cover the cost of provisions then these provisions will be made.

The mix of the development was to be determined by a local assessment of need but the circular states in Item 15 "The Secretary of State expects, however that, as a general rule, one 2 person dwelling should be provided for every two 1 person dwellings. Space standards were to be to Q19 of the Building Standards (Bulletin 1/Parker Morris) and it was no longer permissible to build to the reduced space standards for flatlets of the former 1970 Type 2 accommodation.

Disabled Tenants and the Older Housing Stock, SLASH 1976

The report studied the needs of disabled tenants in inter-war single storey ground floor flats due for improvement. The purpose was to make recommendations to enable present or future disabled tenants to manage better within their present ground floor accommodation. The houses studied were in Glasgow, Edinburgh, Aberdeen, Stirling and the former county of Lanark. Occupancy was low with occupancy of one reported in a four bedroom flat.

The report described the accommodation, the disability and tenant suggestions for improvements. Common suggestions were :- power points raised, low bath/shower, more spacious bathroom, lever door handles, ramps, central heating, better visibility out of windows, system of obtaining help/telephone. Suggestions were also made for sliding doors to be installed but not all disabled preferred sliding doors. The survey also found that unless circulation widths were 1150mm or more there was dissatisfaction reported by wheelchair users.

The report made some general recommendations as to houses suitable for conversion for ambulant and wheelchair disabled. It also commented that this should not preclude tailored to fit solutions for the disabled.

Houses suitable for economical conversion for the ambulant disabled required to have as existing or easily obtained:-

1. hall 1000mm or over
2. pass doors equivalent of 900 door sets
3. livingroom 14m²
4. bedroom 10m²
5. kitchen 8m²
6. space to enlarge bathroom.

Houses suitable for economical conversion for the wheelchair disabled required to have as existing or easily obtained:-

1. hall 1150mm or over
2. pass doors equivalent of 900 door sets
3. livingroom 16m²
4. bedroom 15m²
5. kitchen 9m²
6. space to enlarge bathroom to wheelchair standard.

The report then illustrated conversions of the various houses and flats surveyed which meet the above criteria. These included 1 person bedsit converted to 1 person bedsit ambulant standard, 2 person flats to 1/2 person flats wheelchair/ambulant standard, 3/4 person flats to 2 person ambulant/wheelchair standard, 4/5/6 person flats to 2/3/4 person ambulant flats. All involved minimal alteration to the plan and included fitted kitchens and improved bathroom arrangements. (Fig 7.09)

Circular No. 50/1975 Housing Needs and Resources

The circular opens by welcoming the response which local authorities made to the Government's (1974 Labour Government) appeal for an expansion in the public sector housing programme. It goes on to say that the Secretary of State hopes district councils will do all they can to avoid any pause in the provision of houses which are urgently required, but then goes on to emphasise the need for economies in their house building and improvement programmes in the very difficult economic circumstances. It also advises that, while indicative cost tables would increase shortly, the Secretary of State would not approve tenders more than 15% over the cost limit even if the authority was prepared to meet the excess costs itself. Various economy measures were suggested.

1. Authorities were to examine the housing mix they were providing and while it was accepted that there would be a need for some large houses it pointed out that about half the households in Scotland were of 1 or 2 persons. Authorities were encouraged to provide smaller houses by new building or by improvement of tenement flats.

2. Authorities were urged to use house types from a common plan range. The purpose of this was to enable contractors to rationalise their building methods and authorities were encouraged, in the circular, to make the fullest use of rationalised traditional and industrialised building methods. (SLASH had continued into the 1970s to produce handbooks of common plans for 1, 2 and 3 storey housing and walk up flats together with standard details and service drawings).

3. House and environmental improvement programmes were to aim at improvements to the "largest possible number of houses rather then aiming at ideal standards for far fewer".

4. Restraint was to be exercised on expenditure on housing repairs, maintenance and management.

5. Reduced specification for built in fittings and external works including fencing, paving areas, external stairs and road specification. It also recommended the use of performance specifications of items (rather than specification of specific manufacturers' products) where these did not require particular design solutions.

6. Reduced specification was recommended for car parking with a maximum provision of 1 space per house and suggested curtilage car parking using 50mm chippings for the hardstanding.

There was however one specific saving which the Secretary of State asked authorities to make and that was the omission of garages and car ports in housing developments. The only exception to this was to be high density flatted and medium density 3 storey housing where the schemes had integral garaging designed as part of the house design.

Integral garaging in one and two storey housing was not accepted. While authorities who intended to provide garaging in garage blocks could omit these without difficulty, where garages had been designed as integral parts of the scheme their omission damaged the overall housing layouts.

For example Irvine New Town Development Corporation had a policy of providing 30% garaging with all garaging preferably linked to the dwelling. Bourtreehill developed throughout the 1970s had schemes about to start on site with garages attached to two storey housing either in front of the house as a projection of the roof or as part of the terrace frontage. It also had garaging under blocks of walk up flats and a small block of garages close to the flats. The Scottish Office required, as a result of this circular, omission of all garaging except those under the blocks of flats. In practice however the Corporation omitted all garaging under the flats replacing them with small flats or community rooms and used the approved number of garages to retain the garages most critical to the urban form of the two storey housing. Even with this creative interpretation of the circular, schemes shorn of most of their garages lost the variety of form and enclosure their garages were intended to provide. (25) Schemes designed after the issue of this circular were designed without garages. Irvine tenants who prior to 1975 had the choice of renting a new house with or without an integral garage could now only rent a new house on its own or compete for the decreasingly available repeat lets of older houses with garages.

Indicative Costs

As stated in the previous chapter, indicative costs were introduced after the 1967 Act to allow Central Government to control costs per house and consequently control subsidy.

The indicative costs set out in SDD Circular 19/1968 were raised by 6% in October 1970 with Circular 102/1970. This Circular also set out indicative costs for Type 1 and Type 2 accommodation as Bulletin 3. Further increases in indicative costs were made in April 1971, Circular 28/1971, and in October 1971, Circular 85/1971. These were 7% and 5% respectively bringing the aggregate increase to 19.09% in twelve months.

In August 1972 Circular 87/72, while noting the subsidy was no longer directly related to houses, stated that the cost of new housing would "be a major factor in determining eligibility for and the amount of housing expenditure subsidy". New indicative cost tables were introduced with this circular aimed at reducing the need for authorities to seek "ad hoc" adjustments of the published indicative costs. How this aim was to be achieved is not clear as applications for adhoc adjustments were still to be made for special conditions such as extra foundation cost and costs as a result of planning requirements, slate roofs, stonewalls etc.

The 1968 tables costed average persons per house 1.0 to 6.0 at densities from 30 to 200 and over bedspaces per acre whereas the 1972 tables gave costs for 1 person to 7 person houses at densities from under 101 to over 550 persons per hectare. The costs were, as before, given for superstructure, substructure and external works. Authorities building 8 person houses had to apply to SDD for ad hoc allowances.

The major changes from 1968 to 1972 was not the metrication of the tables but the fact that costs were not average persons per house but costs for individual house sizes 1 to 7 persons. This allowed the design team to examine individual house types against indicative costs. Where a particular house type or types were revealed as expensive the designer could take action to either resolve the excesses in that house type, reduce the use of that type or make savings elsewhere.

Increases in indicative costs continued to be announced to deal with inflationary costs.

An important feature of the indicative cost tables was that substructure costs and external works costs decreased per house as density increased whereas superstructure costs increased as density rose. This reflected the greater extent of foundation and roads, sewers, etc., on low density developments and at higher densities the higher cost of flats over terraced housing. However while in 1968 the total indicative costs rose from low density to high density, the 1972 total indicative costs were lowest at the 125 to 195 persons per hectare. The density which attracted the lowest total indicative costs varied per house but not only was there a general rise in costs beyond this mid range as density increased but there was also an increase in indicative cost allowance at the lowest densities. This change gave better allowances for developments at low densities (Fig. 7.10).

For Local Authorities the indicative cost system came to an end on the 20th June, 1979 with memorandum 32/1979 which informed Local Authorities that they were no longer required to submit details of projects to the Department (SDD) for approval prior to tender acceptance and that indicative costs would no longer be used by Local Authorities. In its place SDD

published housing cost indicators for new building, modernisation and rehabilitation. These indicators were advisory but were used by SDD in assessing authorities needs for capital expenditure allocation. Local Authorities were also no longer required to submit proof of willingness of the Social Work department to provide warden service for sheltered housing.

The agencies which were directly funded by the Scottish Office, such as SSHA and the New Town Corporations, were still required to meet indicative cost levels of expenditure. This requirement continued right up to their dissolution, although in the later years of the New Towns they were not required to submit individual schemes for Scottish Office approval. Their delegated power was to ensure that schemes met indicative cost levels.

HOUSING PROVISION

'Multi'

The decline in the volume of multi storey housing construction continued in the 1970s with few approvals to start after 1973. In 1974 there were only 246 starts and in 1977 there were no starts on site of multi storey housing.

Aberdeen was the exception to this and continued to build some multi storey housing throughout the 1970s, the last high rise block being an 11 storey block by Wimpey started at Jasmine Place in 1983. (26) Aberdeen's reputation for good landscaping extends to many of its public housing areas and as the city's housing problem was shortage rather than slum clearance tenants were less likely to be from slum housing. Aberdeen had, according to Glendinning and Muthesius, "a very strict letting policy designed to exclude problem families from high flats . . . . (and a) very buoyant demand for tenancies in the city's existing multi-storey blocks". (27) If this was so then it gives some explanation as to why Aberdeen continued building high flats after other authorities had stopped. The other fact was the arrival of the oil industry increasing demand on both public and private housing.

Edinburgh approved its last high flats at St. Leonards and at Wester Hailes in 1970.

Glasgow continued to build high rise flats in the early 1970s. One of the last, Darnley, was a massive scheme on the southern edge of the city. Commenced in 1972 with Phase 2 in 1973 it was designed with six and eight storey deck access blocks. An expensive project it was subjected to drastic surgery during its construction, some decks were only built to a height of two storeys while other blocks were deleted even after their foundations had been built. (28)

Although indicative costs had been calculated on the minimum use of high rise flats, at the top end of the indicative cost density bands the cost allowances assumed a high proportion of high rise flats. It was therefore possible, within indicative cost limits, to build high rise flats providing the site was developed at high density.

Systems

The decline in the provision of high-rise and the decline in the public house building programme generally, was probably the main reason why many system builders who required large continuous programmes were unable to compete. Those who could compete with traditional construction on cost continued to build throughout the 1970s. No-fines

construction was used especially by SSHA and the New Towns. In the North timber frame housing, which could compete especially where transportation costs were high, was used to build oil related housing.

New Towns/GEAR

The West Central Scotland Plan recommended in 1974 a review of the New Towns' long term policies and recommended a reduction in their rental house building programme and an increase in their private house building programme. It recommended that priority be given to poor and deprived areas and that the main housing task was the replacement and improvement of the region's 129,000 unsatisfactory houses.

In May 1976 the Secretary of State announced proposals for the Glasgow Eastern Area Renewal (GEAR).

A joint programme for the social, economic and environmental regeneration of the area was set up with Glasgow District Council, Strathclyde Regional Council, SSHA, Scottish Development Agency, Greater Glasgow Health Board, The Housing Corporation and the Manpower Services Agency. A report "The Future for GEAR" was published in 1978 and included its programme to 1982.

	Glasgow District	SSHA	Housing Association	Private
Modernisation and rehabilitation	4395	1411	1520	-
New housing	1052	1361	84	87

This clearly shows the priority being given to modernisation and rehabilitation with 80% of Local Authority and almost all of the housing associations' programme on renewal. SSHA's programme which was equally split between new build and modernisation/rehabilitation commenced in 1977 but continued throughout the 1980s when most of their work was carried out. (29)

In contrast SSHA's new township of Erskine, planned for 30,000 people and to blend the needs of economic expansion with housing Glasgow's overspill population, built only 3,391 houses between 1972 and 1983 when its overspill programme was terminated.

Stonehouse was designated in 1973 to be built by East Kilbride Development Corporation. The intention was that it should take Glasgow overspill, regenerate a run down mining area and take advantage of its position at the junction of the A71 and the M74 in attracting industry. Only one housing area was built prior to Stonehouse being dedesignated. The regeneration of the Stonehouse area was set aside as the Government directed resources towards the larger problem of Glasgow's East End.

Improvement

Scottish Housing Statistics show that approved applications for improvement grants by public and private agencies increased from a total of 23,400 in 1970 to 92,667 in 1973. The percentage of grant had been increased to 75% by the 1971 Housing Act. Although there had

been an increase in take-up of the grants, many of the improvements had been by owner occupiers improving individual houses.

Government concern over grants going to developers and being used to create second homes resulted in the issue of Circular 89/1973 reminding Local Authorities that the discretionary grant was just that and that they would be justified in refusing a grant for improvement which would have been carried out as a commercial venture.

The 1974 Act reduced the percentage of grant back to the previous 50% level for properties outwith Housing Action Areas. Grants for houses in Housing Action Areas remained at 75% increasing to 90% where there could be shown to be financial hardship. The intention was to direct the grants to the areas of greatest need.

The result of the 1974 Act was a reduction in the approved applications for grants from 92,667 in 1973 to 33,203 in 1975. The largest percentage reduction was with owner occupier applicants where the numbers fell from 18,058 in 1973 and 20,631 in 1974 to 6,529 in 1975, rising slightly to 7,964 in 1979. Local Authorities' figures also fell from 66,133 in 1973 to 20,890 in 1975 rising to 36,166 in 1977 but only 22,022 in 1979. SSHA and other housing associations fluctuated in numbers but from 4,146 approved applications in 1973 rose to 15,534 in 1979.

These figures reveal not only the change in emphasis from improvement of individual owner occupied houses to improvement of houses in Housing Action Areas but also a shift towards housing association involvement in improvement work.

Work carried out under improvement grants can cover fitting of a few sanitary fittings to meet tolerable standards to extensions or structural alterations. The increasing involvement of housing associations is more dramatically revealed in Housing Corporation figures for rehabilitation of dwellings in Scotland 1971 to 80 published in the Centre of Urban and Regional Research discussion paper No. 13. Of the rehabilitation carried out by Local Authorities, SSHA and Housing Associations, the Housing Associations in 1971 contributed 6.9%, 97 of the 1,411 total dwellings rehabilitated whereas in 1979 they contributed 81.4%, 2,703 of the 3,322 total.

Community Housing Associations

Under the 1974 Act housing associations came under stricter controls requiring them to register with the Housing Corporation. For example consultants working for an association such as architects or other professionals were no longer permitted to be members of the management committee. (31)

Many authorities established Housing Action Areas and trusted that the attraction of the grants would result in the housing areas being improved.

Both Edinburgh and Glasgow encouraged improvement but whereas Edinburgh permitted piecemeal improvement with various agencies over large geographic areas, Glasgow encouraged targeting of medium scale priority areas, nominating a housing association to co-ordinate improvement work on the ground. (32)

In Scotland the number of housing associations increased from 15 in 1974 to 53 by 1980. 75% of these were in Strathclyde (which had approximately 50% of Scotland's population) and 65% of the national total was in Glasgow. By 1980 Glasgow had 30 locally based housing associations, Edinburgh 16, Dundee 3 and Aberdeen 2.

Central Govan Housing Association is credited with being Glasgow's first community based housing association (33). Professional services were provided for the association by ASSIST. Both had their origins in the Govan (Taransay Street) Treatment Area. ASSIST is a unit of the Department of Architecture and Building Services at the University of Strathclyde. Pioneered by Raymond Young, a Strathclyde B. Arch. graduate, ASSIST originally promoted voluntary tenement improvement (as an alternative to Corporation's compulsory purchase) and initially provided a free technical and professional service.

The Taransay project had been given by the Corporation a six month period to prove itself with voluntary improvement. Shortly after this Upper Clyde Shipbuilders went into liquidation and the project came to a halt as the majority of the households were dependent on UCS. With the reorganisation of UCS the project recommenced and in February 1972 a showhouse was completed.

ASSIST, which originally relied on grants for funding, continues providing architectural services to community housing associations in Glasgow but now is funded by professional fees. (34)

Central Govan Housing Association was set up to purchase flats from landlords and other owners who did not wish to improve their property. This was necessary in tenement improvement schemes as flats are stacked on top of each other and bathroom improvements usually required soil stacks and often ventilation stacks to run through flats from ground to roof. It was often necessary to acquire flats where there was a need to amalgamate small flats to provide flats of adequate size to accommodate sanitary and cooking facilities and habitable rooms of adequate area. This was particularly the case in the typical Glasgow tenement with 3 flats to a floor with a single end or two roomed flat in the middle. (Fig 7.15)

Community based housing associations, on similar lines, were set up throughout Glasgow with the support of the Housing Corporation. Community based housing associations were, as at Govan, set up to provide housing in a particular community. Although they employ professional staff the management is by voluntary committees of mainly local residents.

Originally the majority of their work was in renovation but they have also been involved in new build particularly in later years.

Phased Tenement Improvements

There was a wide variety of methods of carrying out improvements. Owner occupiers or private landlords could improve individual properties taking advantage of the available grants. Local Authorities could purchase/compulsory purchase substandard property and with Government assistance improve the property which then became part of the Local Authority rental stock. Housing associations, community based or otherwise could with assistance from the Housing Corporation, buy out those residents not wishing to retain ownership, renovate the property and rent the acquired property. With the housing association options the low

income elderly owner occupier household was the most likely to sell whereas the young higher earning owner occupier was more likely to wish to participate in the rehabilitation and retain ownership. (35)

In 1979 the Scottish Development Department in co-operation with Edinburgh District Council promoted the concept of phased tenement improvement. These schemes were in Housing Action Areas and as Edinburgh had carried out a policy of improving the worst tenements first, the houses still requiring improvement were often the back to back four two roomed flats around a common stair with their own WC on an external wall. (Fig. 7.15)

Typically a development officer would co-ordinate the scheme discussing proposals with residents giving advice and acting as liaison person for residents and contractor. The phased improvement concept was that common repairs/improvements were carried on the block or stair as one contract, with residents paying their share of the cost which attracted grants of 75% to, in the case of low income households, 90%. These repairs could include for example roof, chimney, stonework repairs, introduction of structural ties or treatment for dampness or fabric infestation.

Residents were also required to improve their own property but this was not carried out as part of the "common" contact. Residents employed their own consultants to prepare plans and employed their own contractors to carry out improvement of their flats. The advantage of this was that residents had more control over the level of improvement, standard of finish and type of contract. The contracts could vary from contractors who offered temporary accommodation while work was carried out to residents improving their property wholly or partially on a self build basis.

Another advantage of this system was that it was common to find some flats had already partial improvement such as rewiring which residents would wish to, and could with phased improvement, retain.

Phased improvement involved public expenditure in grants but as all property remains in private ownership it is not public housing. Strictly speaking it is not the subject of this study but it is included to complete the description of improvement and to illustrate the wide variety of methods employed.

Early Wariness to Improvement

It would be wrong to imagine that owner occupiers and tenants of sub-standard houses and flats were universally in favour of becoming involved in improvement schemes either as individuals or as part of a co-operative or housing association. The idea had to be sold. This was particularly difficult until examples of improved similar property could be seen in the area.

A study of owner and tenant preferences to improvement of typical Glasgow tenements was carried out for Christian Action in Oatlands in 1971. This study illustrates early wariness to the idea of improving tenements on the part of those whose ambitions had been to move out of their old sub-standard property once they could get a council house.

Christian Action proposed to improve four red sandstone blocks of tenement flats, (nearly 1,500 in all). These were the typical 2:1:2 layout and the proposed improvement was to

provide a bathroom in the bed recess of the room and kitchen flats and incorporate the single end into one of the flats giving on each stair landing two flats each with bathroom and kitchen but with different number of rooms. (1 or 2 rooms plus kitchen and bathroom).

44% of residents surveyed were owner occupiers and 56% tenants. However the survey revealed that only a quarter of both groups would prefer to remain in the improved tenement if given the option of renting from the Corporation or buying elsewhere. The majority preference of both groups was for a Corporation rental house. John English who carried out the survey commented that (in 1971) "it should be borne in mind that residents had little opportunity to discover what an improved house was really like". (36)

Tolerable Standard

There was a gradual reduction in the estimated number of dwellings below tolerable standard. In 1973 the white paper "Towards Better Homes" estimated the number of dwellings below tolerable standard at 180,000 to 190,000 or 10% of the whole stock of houses in Scotland. In 1979 the estimate published in Scottish Housing Statistics was 120,000.

Sheltered Housing

Type 1, individual dwelling and Type 2, grouped flatlets with small shell size, advocated in Housing for Old People NSHH3 in 1970 was changed by Circular 120/1975 to sheltered housing (type 1 or Bulletin 1 shell size) with warden service and optional community facilities.

The number of sheltered housing units built rose from 3,821 in 1976 to 7,369 in 1979. (37)

Public Sector Dwelling Sales

Public Authorities were permitted to sell rental housing, but as tenants had not at this time the right to buy, the number of houses sold were small. (512 in 1971, 717 in 1974, 378 in 1975, 738 in 1978). Numbers rose to 1,552 in 1979, the year of the incoming Conservative Government. The reluctance of Local Authorities to sell and SSHA's reluctance to sell where Local Authorities were opposed to sales, is revealed in the fact that most sales were by the New Towns. New Towns are funded by the Scottish Office and therefore most responsive to Scottish Office policy. This could also be said of SSHA which however had housing agreements with Local Authorities and it was necessary to moderate its stance on house sales in areas where there was political opposition to sales. (38) Of the 378 public sector houses sold in 1975, 343 were in the New Towns and in 1978 New Towns sold 636 of the 745 total.

Housing Completions

There was a decline in new house building in the public sector particularly by Local Authorities in the 1970s. The decline which began with the Conservative Government of 1970-74 was reversed in the initial years of the 1974-79 Labour Government but the decline continued after 1975. By 1979 public sector completions were, excluding the war years, down to the number of houses built in the 1930/31 depression years.

New Town and SSHA completions fluctuated throughout the 1970s while housing association completions increased but these numbers were small compared to the reduction in house completions by Local Authorities.

Private housing on the other hand continued to increase production. By 1979 private housing completions were almost twice that of all public sector agencies and more than three times that of the Local Authorities. This signified a major change in the provision of housing in Scotland.

	1970	1974	1975	1979
Private Sector	8,220	11,239	10,371	15,175
Total Public Sector	34,906	17,097	23,952	8,607
Local Authority	28,045	13,016	16,086	4,755
New Towns	2,790	2,099	3,636	2,018
SSHA	3,525	1,067	3,062	1,084
Government Depts.	302	435	402	206
Housing Associations	244	480	766	544

(Refer also to Fig. 11.01 to 11.03)

Although by the end of the 1970s private house building had overtaken public house building in number of completions, public sector housing still formed the largest section of the housing stock. In the 1981 census the percentage of public housing stock in district council areas ranged from 10 - 19% in Bearsden and Eastwood to 80 - 89% in Clydebank and Monklands. The Scottish average was 54.6% with Glasgow and Dundee in the 60 - 69% range and Edinburgh, Perth and Kinross in the 30 - 39% range. (39)

HOUSING DESIGN

Darnley, Glasgow 1972

Built by direct labour, section 1 approved in 1972 and section 2 approved in 1973 was one of the last high rise housing developments in Glasgow.

In built form it is similar to Whitfield in Dundee which was mainly 5 storey walk up deck access maisonettes. Darnley while less regular in layout also uses the Whitfield 120° three point intersection joining the deck access blocks. Darnley's 6 and 8 storey blocks required lifts to supplement the stair access. Both schemes were built on the edge of the city where low rise development might have been more appropriate, giving family housing gardens, the usual suburban compensation for often longer travel distances to work place and amenities.

A typical wing of an 8 storey block with 18 bays between cross walls would have in a 6 bay section the following accommodation

ground floor	one 1 bedroom flat
ground/1st floor	three 3 bedroom maisonettes
2nd and 5th floor	three 2 bedroom flats
3rd and 6th floor	two 1 bedroom flats and deck access corridor

4th and 7th floor three 2 bedroom flats (Fig 7.11 and 7.12)

Darnley like Whitfield had long continuous access corridors which were bleak and unattractive and suffered from vandalism. Darnley E, described in Building as "five years behind schedule and at least ten years out of date" was with its cost of £2.2 million written off by Glasgow council and razed in 1977. (40) Like Whitfield, Darnley has in the 1990s had major surgery with blocks demolished and blocks remodelled to reduce the length of the deck access by providing additional stair access to reduce the numbers of flats accessed off a stairwell.

Woodside, Phase 3, Glasgow 1970

Approved in 1970 this design by Boswell, Mitchell and Johnston incorporates features of the traditional tenement into a deck access scheme. It accommodates 203 flats and maisonettes in two eight storey blocks linked by a short five storey block which accommodates communal facilities.

The height of the blocks necessitated the provision of lifts and these are provided with the main escape stairs in towers at the ends of the blocks. The blocks have 4 apartment maisonettes which, designed for family occupation, are at ground and first floor levels and have their own front door and private walled garden. Access to the remainder of the scheme is from the lift and staircase towers to the open balcony deck which gives access to one and two apartment flats/maisonettes.

The tenement tradition of stair access is provided from second floor upwards with a series of access stairs with two flats off each landing. The use of red brick and bay windows echoes the red sandstone tenements and gives a warmth to the scheme. (Fig 7.13) This warmth is not however carried through to the internal finishes in the stair towers which are cold, hard and utilitarian. A later extension to the scheme was similar in concept but restricted to five storeys with stair only access.

India Place, Stockbridge, Edinburgh 1974

An article by the architects Michael Laird and Partners in Building states that "the existing houses could never have been rehabilitated and at the same time made to comply with local sunlighting requirements". (41) The original houses were three to five storey tenements built on an east west axis along both sides of India Place. The 1974 replacement houses lie on a north west to south east axis with living areas facing south west. The reason behind positioning the terraces at right angles to the river and across the contours is to allow sunlight penetration on this north facing slope into the open spaces as well as the living areas.

The layout of the blocks across the slope and at right angles to the river is counter to the established urban pattern in this part of the New Town where terraces have been laid out along the river or generally following circulation routes, often along the contours as had the original tenement development. It is interesting that the total frontage could have been laid out along the river or along the existing street of India Place and Gloucester Street with one side of the terrace having a southerly aspect. Either of these solutions would have reflected existing patterns of development but would have cast a large shadow over the river or the open space. The chosen solution clearly places a higher priority on sunlight penetration than on continuing established urban form.

While the layout does not follow the existing pattern the built form of the blocks and choice of materials does. Roofs are pitched and slated and the walls are of cast stone. Bay windows are provided on the south west elevation and slit windows in the corner of rooms are provided to improve privacy on the north east elevation.

The house types range from 1, 2 and 3 apartment flats to 4 apartment maisonettes. The maisonettes are on ground to third floor and the fourth floor flat is accessed at the third floor central access corridor. Stairwells are provided at each end and at the change in floor level. A lift is also provided at the "change in level stair" although as the fourth floor flats are entered at third floor level a lift was not required under the building regulations. It would have been possible to build the flats accessed off stairwells as traditional tenements. However, as at Woodside, the combination of stair access with corridor access allows for the convenience of lift access without being dependent on the lift as in high rise blocks. The plan form also allows each flat a choice of stair exit in the event of fire whereas a traditional tenement has only one stair. (Figure 7.14) The decision to use lifts for the convenience of residents (when the building regulations permitted providing only walk-up access) follows the recommendation in the 1945 Westwood report "that flats should be no more than three storeys high unless lifts were provided". The later SHH3 1977, while admitting that the building regulations permitted walk-up access to four storey, favoured restricting such access to three storeys.

Glasgow Tenement Improvement

Modernising our Homes 1947 had illustrated improving the typical working class Glasgow 2:1:2 tenement (two room and kitchen flats each side of a one room flat at each floor level) by utilising the single end in the middle to provide a kitchen or a room for one of the existing two roomed flats. To provide a bathroom on an outside wall it was necessary to divide the existing kitchen, the remaining small space being left for a bedroom or kitchen.

By the 1970s mechanical ventilation of bathrooms was acceptable and this gave considerable plan advantages for conversion as bathrooms could be accommodated in the existing or former bed recesses in the centre of the plan leaving the existing rooms virtually intact. In the case of a 2:1:2 tenement this provided a 2:3 conversion with the two being kitchen bathroom plus one room and the three being kitchen, bathroom plus two rooms. Where the tenement was a 2:2:2 arrangement this gave after conversion either three kitchen, bathroom plus one room flats or two kitchen, bathroom plus two room flats per landing (Fig. 7.15)

Edinburgh Tenement Improvement

The typical working class tenement in Edinburgh, the Model Plan of 1860, was four room and kitchen flats around a common stair. Early versions were built with a WC for each flat in the centre of the flat while later versions had the WC on an outside wall. 'Modernising our Homes' in 1947 proposed that these flats which were built back to back, without through ventilation be modernised by combining the back and front flats to give two flats per landing. One of the rear rooms would be split to provide a bathroom and a kitchen leaving three rooms for livingroom and two bedrooms. This neat plan solution gave good space standards for the modernised flats but obviously, as it halved the number of flats, could only be carried out on a wide scale by compulsory purchase of the existing flats.

The use of mechanical ventilation in bathrooms and kitchens provided an alternative solution to the 2:2:2:2 tenement which allowed residents to have their own small flat improved without the necessity of combining their flat with their back to back neighbour. The solution was to provide a small kitchen in the box room or bed recess and the bathroom either in the adjacent boxroom or bedrecess or as an enlargement of the existing WC. Where the bathroom and kitchen were provided in the box room and bedrecess in the centre of the plan mechanical ventilation was used to service both. (Fig. 7.16) Without mechanical extract ventilation the phased tenement improvement discussed earlier would have been difficult and produced less satisfactory solutions. The Model Building Bylaws for Burghs 1954 permitted mechanical ventilation as an alternative to window ventilation for bathrooms but not for kitchens. The Building Standards (Scotland) Regulations from 1963 onwards permitted mechanical ventilation as an alternative for kitchens and bathrooms.

New Lanark Housing Association Limited

The Phase 2 restoration of the nursery buildings and shop to provide nine houses and museum at New Lanark won in 1971 a Civic Trust Award for New Lanark Housing Association Limited and their architects Ian Lindsay and Partners. (Fig. 7.17)

Many sub-standard houses in Scotland were of historic interest and the improvement grants aided their restoration. The late 18th century early 19th century industrial village of New Lanark had with the closure of the mills become derelict. This industrial village, historically important for its social improvements including the provision of social housing by Robert Owen and his father-in-law David Dale, has been restored by New Lanark Conservation Limited which brings together the New Lanark Housing Association, Local Authorities and Scottish Development Department. By the 1990s large sections of the mills had been restored as well as restoration of the early 19th century tenements by the Housing Association.

Local Authority Restoration with Infill Development

Architectural Heritage Year in 1975 promoted the restorations of historic properties and the Civic Trust Heritage Year Awards of 1975 included a number of restoration/improvement projects providing rental housing by Local Authorities.

Many of the restoration projects improving old dwellings involved infill or replacement with new development. In the 1970s the new infill development was generally designed using the same materials and style as the existing buildings.

In Kirkwall in Orkney for example two developments of small, slate roofed harled cottages were inserted behind street frontage restoration/improvement of existing houses. On Palace Road restoration of houses adjacent to the Bishop's Palace was supplemented by four cottages in the backlands accessed through a pend. At Spence's Square on Victoria Street new cottages were built at the top of a lane accessed through the square. Both projects used local slate and grey harled walls for restoration and infill. (Fig. 7.18)

At Newhaven in Edinburgh some of the character of the old fishing village has been recreated by infilling the 43 rehabilitated houses with 25 new houses using the same materials and style as the houses they replaced. Here the roofs have pan tiles with walls white lime harled. The houses for Edinburgh District Council are built in close proximity to each other either side of

narrow lanes leading down to the harbour. Unfortunately, the new road to the north cuts the lanes off from the harbour edge. (Fig. 7.19)

At Market Place in Jedburgh, SSHA for Roxburgh District Council, provided some 50 dwellings in renovated buildings with an additional 21 houses in new buildings. The development also included eleven shops. Here, as at Kirkwall and Newhaven, the infill development uses the same materials and style as the existing development. Roofs are slated and walls are rendered various colours. Skews, stepped and plain, are provided at wall/roof junctions. The project won a Saltire Award in 1977, a Civic Trust Award in 1978 and a Europa Nostra Medal in 1980. (Fig. 7.20)

Tweedbank Galashiels commenced 1973

Tweedbank is a new community planned for about 1,000 houses with industry, local centre, school, park and lake. It is sited midway between Galashiels and Melrose and was for a mix of private housing and SSHA rental housing.

SSHA had been developing standard house types of various sizes to suit a variety of plan situations, single aspect, dual aspect, controlled aspect for example. Standard details had also been prepared and where standard house types and details were used computerised bills of quantities could be prepared for a variety of forms of construction brickwork, blockwork, no fines or timber frame clad in brick or block. The intention was to allow contractors using different methods of construction to tender while achieving identical performance and appearance. (42)

In the case of Phase 1A and 1B the designer chose eight house types from the standard range. (Figure 7.21) 50% garaging is provided with garages on curtilage often attached to the dwelling. The road layout has short culs-de-sac to reduce traffic speed. The ends of the culs-de-sac are linked by pedestrian routes to the open spaces. This is not however a Radburn layout as houses front to the roads with cars entering the culs-de-sac from the distributor road and pedestrians entering the culs-de-sac ends from the main pedestrian routes. The culs-de-sac are therefore the areas where cars and pedestrians meet. (Fig. 7.22)

The Phase 1 contract was built using no-fines concrete.

Phase 3 which lies on a steep south facing slope to the south of Phase 1B was not considered suitable for no-fines concrete and was built traditionally. Split level house types were used together with walk up flats and new house types were designed which stacked a two person flat over a four person house. The two person flat is accessed from the higher level while the four person house is accessed and has a garden at the lower level.(Fig. 7.23)

Architecturally the style is traditional without being imitative. Roofs are pitched with concrete tile while walls are rendered with a variety of stone chip finishes. (Fig. 7.24)

Bourtreehill, Irvine New Town

Built throughout the 1970s it is similar to Tweedbank in its traditional appearance, design and method of construction (Fig. 7.25)

House types are mainly modified SLASH house types although additional house types were designed and added to the range. (Fig. 7.26) Standard details were used but whereas SSHA prepared alternative bills of quantities Irvine New Town prepared only bills for traditional construction while allowing system contractors to tender and submit revised details for approval. In practice timber frame contractors did not tender while no fines contractors won more than half the contracts, the remainder being built traditionally. Walls are rendered throughout and there is no visual difference between those of no fines concrete and those of cavity brickwork.

Road access is by culs-de-sac with roads curved to reduce traffic speed with the culs-de-sac being either totally or partially pedestrian/vehicular mix areas with footpaths linking the ends of the culs-de-sac. Secondary footpaths give access to the rear gardens but houses all front to the car access and pedestrian/car mix roads.

Irvine New Town was planned with bus only routes called "community routes" utilising the existing country roads to give fast bus access to the town centre. The first two of these were provided at Bourtreehill where wall colour intensifies as the houses approach the community routes.(Fig. 7.25 and 7.27)

Bourtreehill was designed with 30% garaging on curtilage, usually attached to houses and designed as an integral part of the composition. (See Bourtreehill 4C, Figure 7.27) Circular No. 50/1975 instructed the omission of garages and car parks in housing except where they were under flats or integral to three storey housing. This removed almost all of the garages from the later phases of Bourtreehill. The few garages built were agreed by the Scottish Office where they had been included under walk-up flats. The Scottish Office conceded to these garages being built as attached garages to houses while the spaces under the flats were converted to provide community spaces and small flats.

Stonehouse New Town

The new town was abandoned shortly after designation with the result that only one housing project was built.

The design is similar in character to Tweedbank and Bourtreehill using traditional forms for its terraced housing and walk up flats. Colour is used to give variety and articulate individual house units.

The road layout is also a series of culs-de-sac with pedestrian routes linking them and secondary footpaths giving access to back gardens. The ends of the culs-de-sac are however looped and formed with 3 metre wide paths which serve both pedestrians and vehicles. The narrow roads and tight corners slow traffic speed.(Fig. 7.28)

Gap Site Development

Development in gap sites was generally traditional in style but this could vary from the bland to the romantic.

At Shaw Place in Greenock a development of 3 storey walk up flats designed in 1973 with 12, two person flats and 12, four person flats was grouped along the enclosing roads to form a rear

landscape court which incorporated the drying areas. The house types were evolved from SLASH house types 300 and 301.(43) Construction is brick and block cavity walls with prefabricated roof trusses, walls are dry dash rendered and roofs covered with grey concrete tile. The elevations are plain with none of the interest or quality of the detailing of the adjacent existing stone buildings. It could be argued that cost may have limited the choice of materials and the quality of detailing. But while costs would prohibit the use of stone and slate it does not explain why, using a layout where almost all stair blocks are detached thereby incurring expense, no use is made of the gables for fenestration. The windowless gables not only lack interest but deprive tenants of a variety of views on a site which overlooks the River Clyde. (Fig. 7.29)

Unfortunately the failure to exploit the opportunities offered by gables at the end of terraces was all too common when standard terrace house types were used.

Watson Street CDA Dundee by the District Council Architects made good use of gable windows to create visual interest and exploit views over the River Tay. The project provides 235 dwellings at a density of 240 persons per hectare. The site slopes from 1 in 20 to 1 in 3 and faces south looking over the Tay to Fife. The design clusters houses around landscaped courtyards which accommodate sitting areas and toddlers play areas. Each house has its own entrance and drying/sitting area. Smaller houses are provided with two or three person ground floor flats over which is built a flat or house with its own separate entrance. Large family, 6 or 8 person, houses are provided as three storey houses.(44) The houses step up the slope with many of the houses having the advantage of views over lower houses to the hills of North Fife. (Fig. 7.30)

Another project which made good use of gable fenestration is Tyne Court, Haddington which provides thirty houses in flats and maisonettes for two and four persons. The site formerly occupied by a tannery and a garage is within a conservation area and the brief stipulated that the houses should reflect the local architectural style. (45)

The area is subject to flooding and house floor levels are kept some three metres above ground level. The ground floor accommodation is used for garaging and drying areas. The detailing is traditional with pan tiled roofs, harled walls and skews at the wall head. The flats are grouped round a small hard landscaped courtyard with car parking on the edge. Windows have been positioned to maximise views of the river. (Fig. 7.31)

One of the architectural practices best known for their use of traditional architectural form in housing is Baxter Clark and Paul.

Their design for Phase 1 Harbourlea, Anstruther is sheltered housing on a gap site of 0.16 hectares which provides four single person houses, fifteen two person houses and one warden's house with five bedspaces. The density is 244 bedspaces per hectare. There are six car parking spaces, common room, laundry and two guest bedrooms. While the three storey flats have stair and lift access to the common facilities, the two storey flats and the cottages are accessed across the courtyard.

Walls are harled various colours with roofs slated or red pan tiled for variety. Detailing and architectural style is romantic vernacular rather than authentic reproduction of local traditional architecture. It is an architecture of fun and surprise. (Figs. 7.32 and 7.33)

A second phase was built in similar style in 1992.

Commercial Street, Perth 1978

In 1971 only seven of the 97 dwellings in Commercial Street were of tolerable standard. Maintenance was poor and many houses were abandoned. The town council submitted compulsory purchase orders and after a public inquiry the existing houses were demolished under the Housing (Scotland) Act 1969. As outlined in Bulletin 2, 1969 Local Authorities were to deal as quickly as possible with all the houses in their area which did not meet tolerable standard. They had powers to define housing treatment areas in which the houses were to be (a) all demolished, (b) all improved or (c) a combination of demolition and improvement. In this case option (a) was the course of action pursued.

James Parr & Partners were appointed as architects. An earlier scheme for 76 houses had been criticised by the Royal Fine Art Commission for Scotland and the Council reduced its brief to forty houses : 14 two apartment , 22 of three and 4 of five apartments.

The brief asked for good materials which would do justice to the site on the banks of the River Tay. The materials chosen were secondhand slate, lead dormers and shot blasted straw coloured concrete facing block.

The house types were adapted from types chosen from the SLASH handbook and have their main living accommodation facing west over the river with the ancillary rooms of kitchen, bathroom and hall facing east to the embankment of Gowrie Street. There is a mixture of walk up flats, maisonettes and individual houses. Heights of blocks range from one and two storey houses to four storey flats. Houses and flats have either a small enclosed garden or balcony facing the river. (Fig. 7.34 & 7.35)

The architect's aim was "to emulate in a modern idiom the scale of the buildings which had existed". (46) This has been achieved. The building form with its steep pitched slated roofs, skews and curved stair towers is traditional in form but the modular blockwork does not pretend to be stone nor are the lead dormers traditional in form. The detailing does not imitate past details yet it has the robustness of traditional Scottish detailing necessary for a cold wet climate.

Braehead, Irvine

The site is on the edge of an earlier County Council housing scheme but separated from it by the A736 and a low lying area under which was a former peat bog. The low lying area was proposed as a small local park. The buildable area ran along a gravel ridge and line of a former mineral railway. At one end of the ridge are two stone gatehouses and the other end led towards the small group of shops in the existing council houses. The A736 was to become a bus-only route with a bus halt adjacent to the shops.

The layout follows the ridge with a pedestrian route from the shops' bus halt to the stone gatehouses, the arch of which frames the ruined Stanecastle Keep. Culs-de-sac access is provided along the ridge with the road narrowed to three metres to reduce car speed. (Fig. 7.36)

Family houses are laid out along the ridge with gardens on the edge. Smaller houses with walled gardens break up the street into a series of linked courtyards with car parking in each court. Family houses are two storey to the street and single storey to the garden to limit shading and avoid first floor overlooking of gardens. Ceilings follow the roof pitch and access to the first floor bedrooms is by stair off the livingroom to a first floor balcony (Fig. 7.37) This limits circulation space to the entrance lobby by including the stair circulation space in the enlarged living areas, which by virtue of the sloping ceilings and balconies are double height spaces.

All house types have at least one downstairs bedroom which can be used as a second livingroom or when used as a bedroom is useful for someone with difficulty climbing stairs. Braehead won a Commendation from the Saltire Society in 1979, the Civic Trust in 1980 and an Award from Glasgow Institute of Architects in 1981.

The construction is no-fines concrete, won in competition with traditional construction. The pouring of the external shell allowed, with the insertion of a concave fillet into the mould, the external corners to be rounded which when harled emphasises the solidity of the walls and softens shadows on edges. Roofs are timber joisted and roof covering is grey concrete tile.

Although the development is only 1 and 1½ storey in height and the gardens adjoin open space the density for indicative cost calculations was 205 bedspaces per hectare achieved by drawing the site boundary close to the houses. This pushed the density above the low cost allowances at 125 to 195 bedspaces per hectare and gave more beneficial cost allowances.

Unlike earlier housing projects in Irvine New Town, Braehead has no garage provision as it was designed after Circular 50/1975 which prohibited building garages in subsidised rental housing.

Lyndoch House, Edinburgh, Sheltered Housing

The Viewpoint Housing Association project includes in the existing house a hostel with five single person bedsits and eight two person bedsits with bathrooms or showers en suite but with no kitchens. The extension accommodates 22 two person flats and warden's flat with stair and lift access to the five floor levels of the tower. The top floor contains a residents' sun lounge with spectacular views over north Edinburgh to the Forth. The new tower is linked to the existing building by a single storey sitting area and dining room with kitchen. The reason for the separation given by the architects, Roland Wedgewood Associates, is that it allowed a slot view to residents in Drumsheugh Gardens, who had objected to their view being blocked. It also separates the new facing brick tower from the existing stone terrace. (Figs. 7.38, 7.39)

There had been an initial planning restriction on the site that the development should be in stone but the proposal to use a large 300 x 100mm modular metric brick was accepted. Given that this prominent site sits at one of the main entries to Edinburgh New Town perhaps additional government finance for stone should have been made available.

The sheltered housing is in an ideal location being close to both the city centre and public transport. Yet while close to busy Queensferry Street it is on a quiet side street away from noise and heavy traffic. As befits a city centre location there is car parking for only two cars

Lynedoch House won a Saltire Award in 1979 and in 1980 an RIBA award. This, prior to the introduction of RIBA Regional Awards, was the only rental housing project in Scotland to have won an RIBA full award.

The 22 two person sheltered flats were designed to the 1970 Bulletin 3 Housing for Old People standards .(47) The flats being grouped, not self-contained dwellings, were classified as Type 2 accommodation with space standards of 41.5m^2 for 2 person, 2 apartment flatlets (Bulletin 3 space standard for Type 1 accommodation, self-contained dwellings, was 47.5m^2 for 2 person 2 apartment flats, 48.5m^2 for 2 person 2 apartment single storey houses). This changed with circular 120 in December, 1975 which required sheltered housing flats to be built to Bulletin 1 standards as was the former Type 1 accommodation.

Lynedoch House was proposed for sheltered housing in 1974 and after a lengthy period of consideration was granted Building Warrant and Planning Permission in late 1976. It is likely therefore that it was one of the last sheltered housing projects to be built to the reduced space standards of the 1970 NSHH Bulletin 3.

SUMMARY

New Scottish Housing Handbook 3, 1970

NSHH3 set standards for old peoples' housing. Type 1 accommodation, self contained houses, was to be built to Bulletin 1 (Parker Morris) standards but Type 2 accommodation, grouped flatlets (sheltered housing), was to be built to reduced standards but had optional communal facilities such as laundry, common room, guest room(s) and enclosed circulation. All sheltered housing was required to have warden facilities. The reduced flat sizes of NSHH3 were short lived as government circular 120/1975 withdrew Type 2 accommodation standards and applied Bulletin 1 standards for all housing.

Lyndoch House in Edinburgh, delayed because of planning issues, was one of the last sheltered housing projects built to Type 2 standards.

Housing Act 1971

Grants for improvement to sub-standard property were raised from 50% to 75% for private improvers. Exchequer contributions towards the expense incurred by a Local Authority was raised from 75% to 90% (92% in Highlands and Islands) and Exchequer contributions for dwellings improved by Local Authorities or Development Corporations was raised from 37.5% to 75%.

The other major change was that older Local Authority housing built under the Housing Scotland Acts could be improved under the same conditions as acquired older property.

This led to a major increase in improvement of older property at a time when new house building in the public sector was declining in numbers.

Housing (Scotland) Act 1974

There was concern that improvement grants were benefiting private developers and those converting older property for second homes. The 1974 Act therefore reduced grants to individuals to 50% except in Housing Action Areas where the grant remained at 75% and could be raised to 90% where the applicant would face undue hardship financing improvements.

There was a reduction in overall numbers of improvements and a shift from owner occupation improvement to that by Housing Associations. (See Housing Act 1974 for increased Housing Association activities).

Indicative Costs, Circular 87/1972

This brought in a subtle change from average house size allowable costs to allocating costs for houses from one to seven persons at various density bands. Whereas the previous indicative cost tables rose with density, the 1972 tables had the lowest allowable costs at 125 to 195 persons per hectare with a small increase in allowable costs below 125 and allowable costs again rising for densities above 195 persons per hectare.

Housing Act, 1974

This Act was a major boost for Housing Associations with the introduction of a generous Housing Association Grant, HAG, which gave an Exchequer lump sum grant. This grant covered the cost of providing the house less the income from a "fair rent" after the deduction of management and maintenance costs. There was also a Revenue Deficit Grant to cover unforeseen costs in the initial years. As a consequence of this the number of housing associations in Scotland increased from fifteen in 1974 to fifty-three by 1980.

West Central Scotland Plan 1974

This report proposed focusing attention on deprived areas especially on those areas in Glasgow where the need was greatest. It also proposed a reduction in new public housing construction by SSHA and the New Towns. It proposed that the New Towns should cater for a greater proportion of private housing. The Glasgow Eastern Area Renewal (GEAR) project was announced in 1976. The GEAR programme included modernisation, rehabilitation and new housing by both public and private agencies.

Circular 50/1975 Housing Needs and Resources

This announced greater control over public expenditure on housing. In general lower standards were to be provided to keep costs down. It announced that indicative costs plus 15% would be the maximum permitted costs even if the Local Authority was prepared to fund the additional expenditure itself. There was to be an immediate omission of garages from housing contracts except where they had been designed as part of flats or three storey housing and could not easily be deleted. This had a noticeable effect on housing layouts in Bourtreehill in Irvine where earlier phases had 30% of houses built with integral garages. These had to be almost all omitted in later phases and schemes being designed, such as Braehead in Irvine, were to be designed without garages.

Scottish Housing Handbook 3, 1977
Housing Development, Layout, Roads and Services

This handbook gave wide ranging advice on layout design. It drew attention to the problems of windspeed in high rise developments. On road noise it recommended that housing sites should have noise levels of no more than 68 dB(A). This generally required housing being set back thirty metres from the edge of a distributor road.

It discussed various forms of vehicular and pedestrian access to housing areas and indicated a preference for shared surface courts for both pedestrians and vehicles. This was also the preference of the 1977 SLASH report Roads in Housing Developments. This is in marked contrast to the preference in the 1960s for vehicle segregation as typified by Cumbernauld New Town 1960s housing development. The shared surface courts and roads were used in housing developments by SSHA at Tweedbank, Irvine New Town at Bourtreehill and at Stonehouse and typify road layout design in housing development of the late 1970s and 1980s.

Scottish Housing Handbook 1, 1977
Assessing Housing Needs, a Manual of Guidance

This was a guide to assist Local Authorities assess their housing needs public and private, new build and renovation.

Local needs would vary but the handbook suggested that the need was, on the experience of the pilot study of Dundee, to be for houses for small household sizes and for special needs housing. It suggested typical standards of fifty to eighty sheltered housing places per one thousand elderly. It also suggested that 0.16% of the population might need wheelchair housing and 1.2% of the population might need ambulant disabled housing. It also commented on evidence that there was a desire to move to inner suburbs or central area housing.

Housing (Financial Provision)(Scotland) Act 1978

The Act introduced Housing Support Grants which allowed the Secretary of State for Scotland to allocate a grant to each Local Authority on the basis of their Housing Plan (Local Authorities were required to assess their needs in accordance with SHH1 in order to prepare their Housing Plans). Housing cost indices were calculated by the Scottish Office and used to determine the level of grant. As anticipated by the Dundee pilot study, the assessment of local needs and the preparation of housing plans identified a need for special needs housing.

Indicative costs were no longer to apply to Local Authority housing projects after June, 1979 (Scottish Office Memo 32/1979).

Scottish Housing Handbook 6
Housing for the Disabled, 1979

In addition to giving design guidelines for the design of housing for the disabled it set out space standards for one to seven person houses and flats. The space standards for ambulant disabled were as Bulletin 1 but increased space standards were set for wheelchair housing.

The consequence of the 1977 SHH1, the 1978 Act and the 1979 SHH6 was an increase in the provision of special needs housing in the 1980s especially the provision of sheltered housing which will be described in the next chapter.

Traditional Character

The conservation legislation of the late 1960s and the emphasis on improvement and rehabilitation in the late 1960s and early 1970s Acts would appear to have influenced 1970s housing design which was mainly traditional in style.

In Palace Road and Spence's Square in Kirkwall, Newhaven in Edinburgh and Market Place in Jedbugh infill development was designed in the same style as the adjacent renovated housing.

Typical of the wholely new build housing designs which used traditional imagery are: Bourtreehill Irvine, Stonehouse, Tweedbank, Watson Street Dundee, Tyne Court Haddington and at its most expressive Harbourlea in Anstruther.

Commercial Street, Perth and Braehead in Irvine, although they do not use traditional imagery use robust detailing to give a traditional character to the houses.

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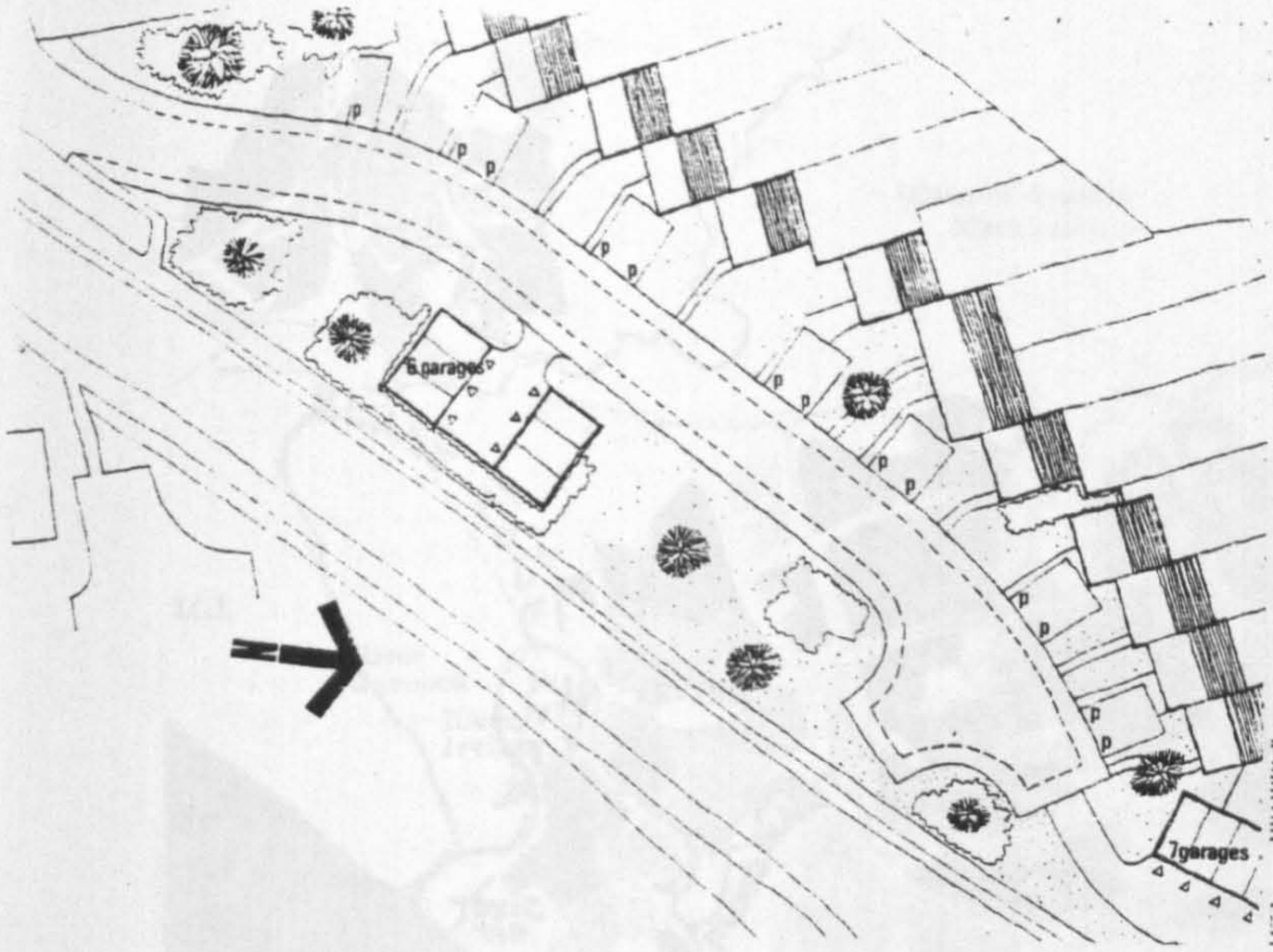
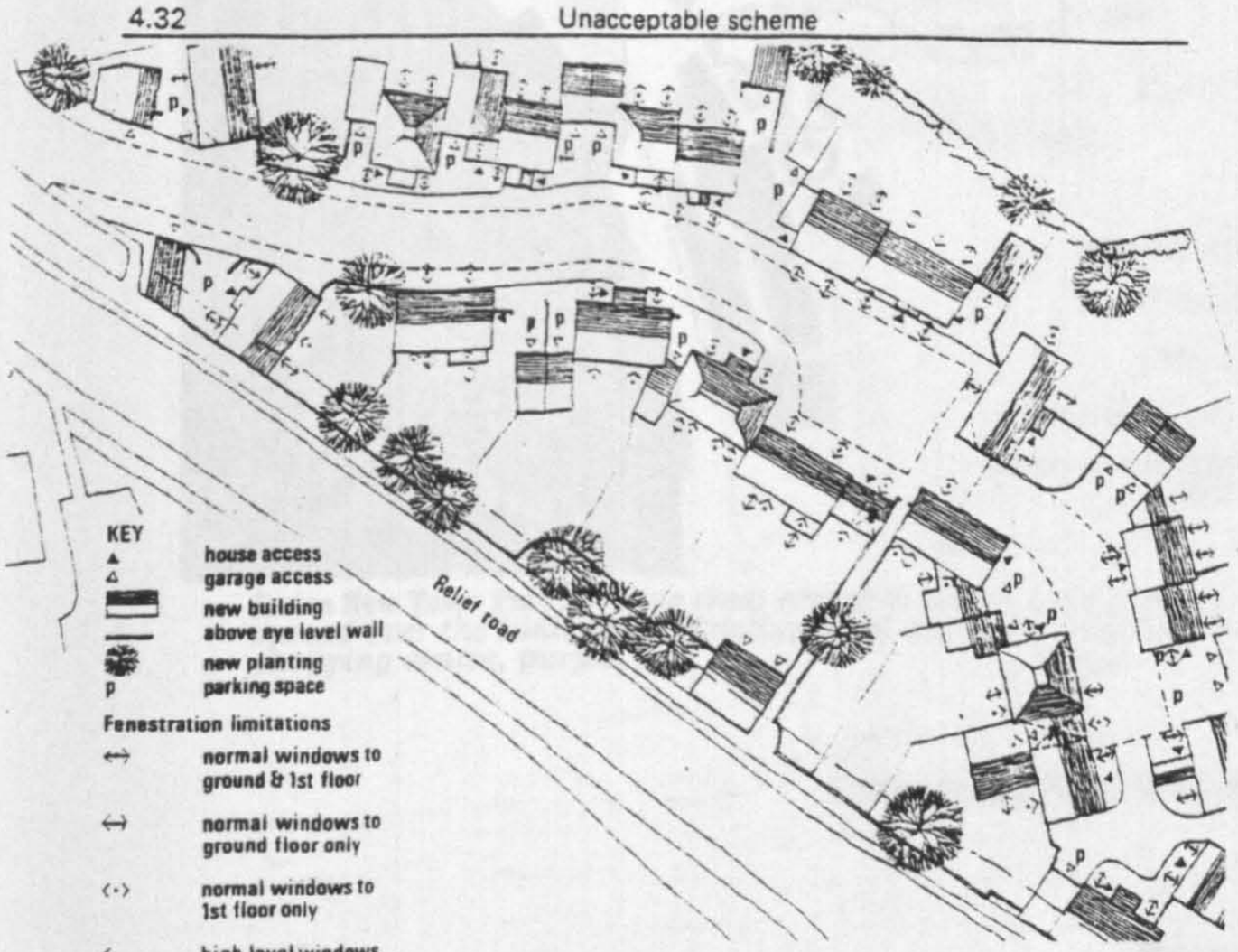
Essex Design Guide



Traditional Essex style to Mews court.

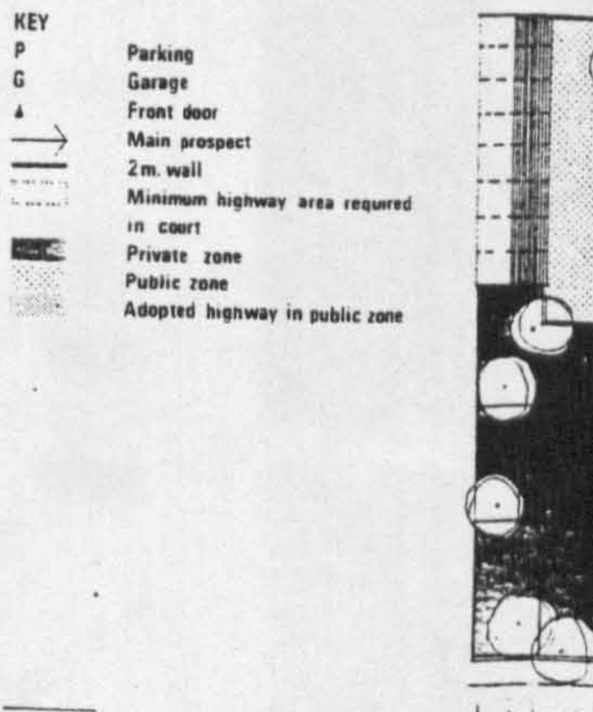
4.151 d Sketch of mews court (see Fig.4.151c)

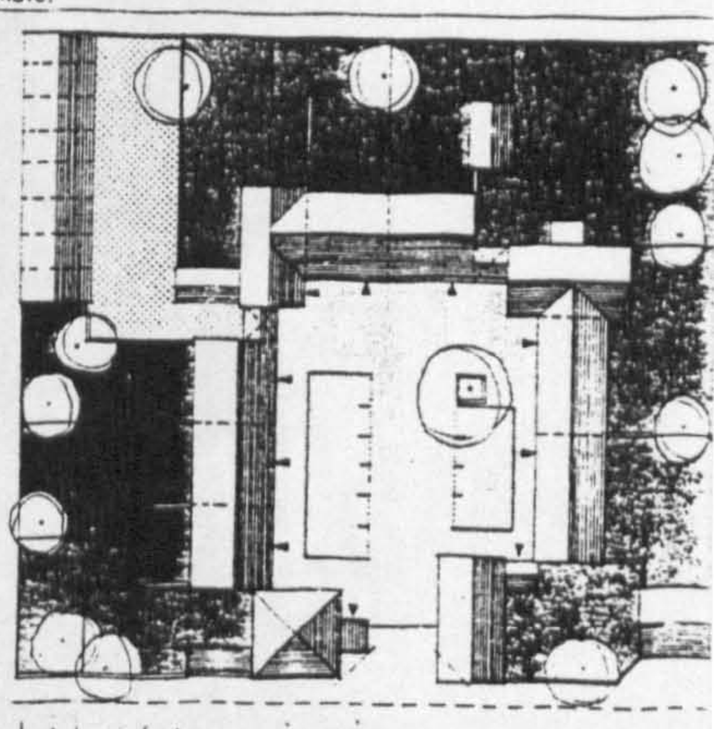
4.32 Unacceptable scheme



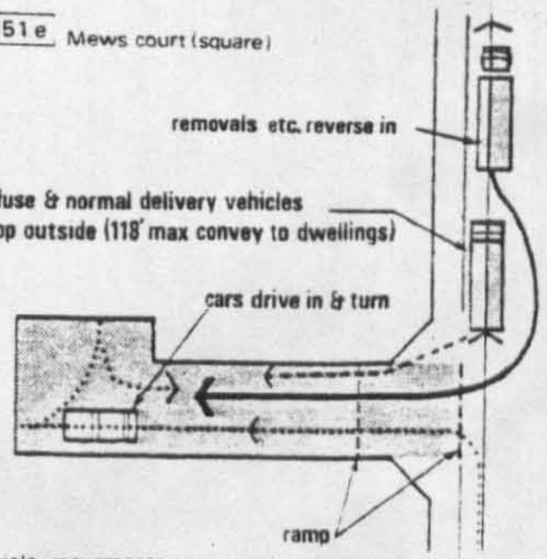
Suggested alternative layout

Small private road beyond adopted road
garages set back and houses project forward to enclose space and screen cars.





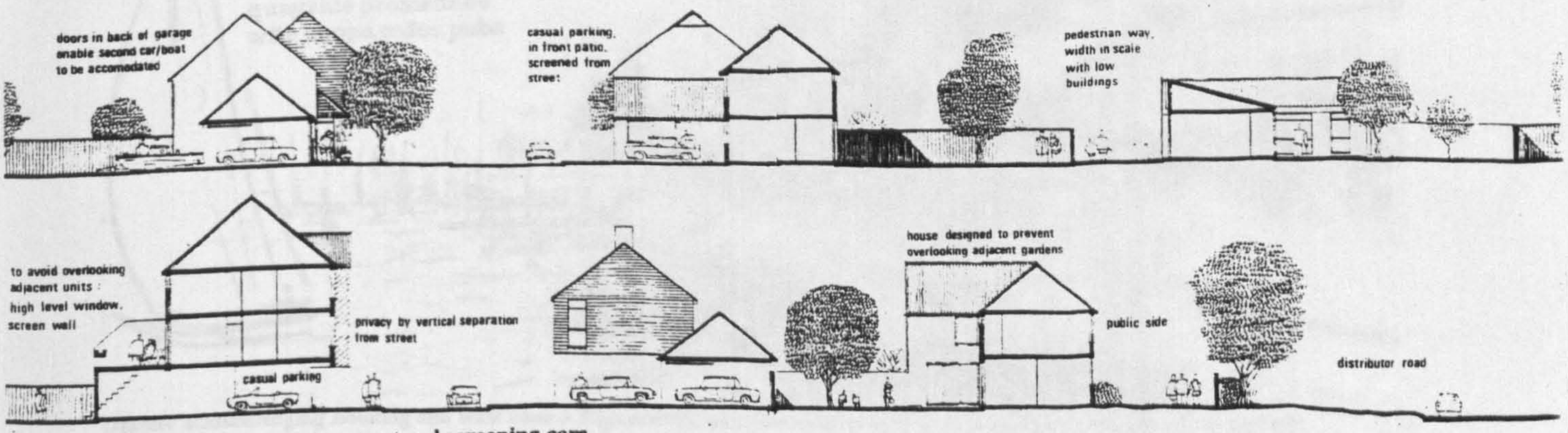
4.151 e Mews court (square)



Vehicle movements associated with the mews court

Mews court with cars and pedestrians mixing in court.

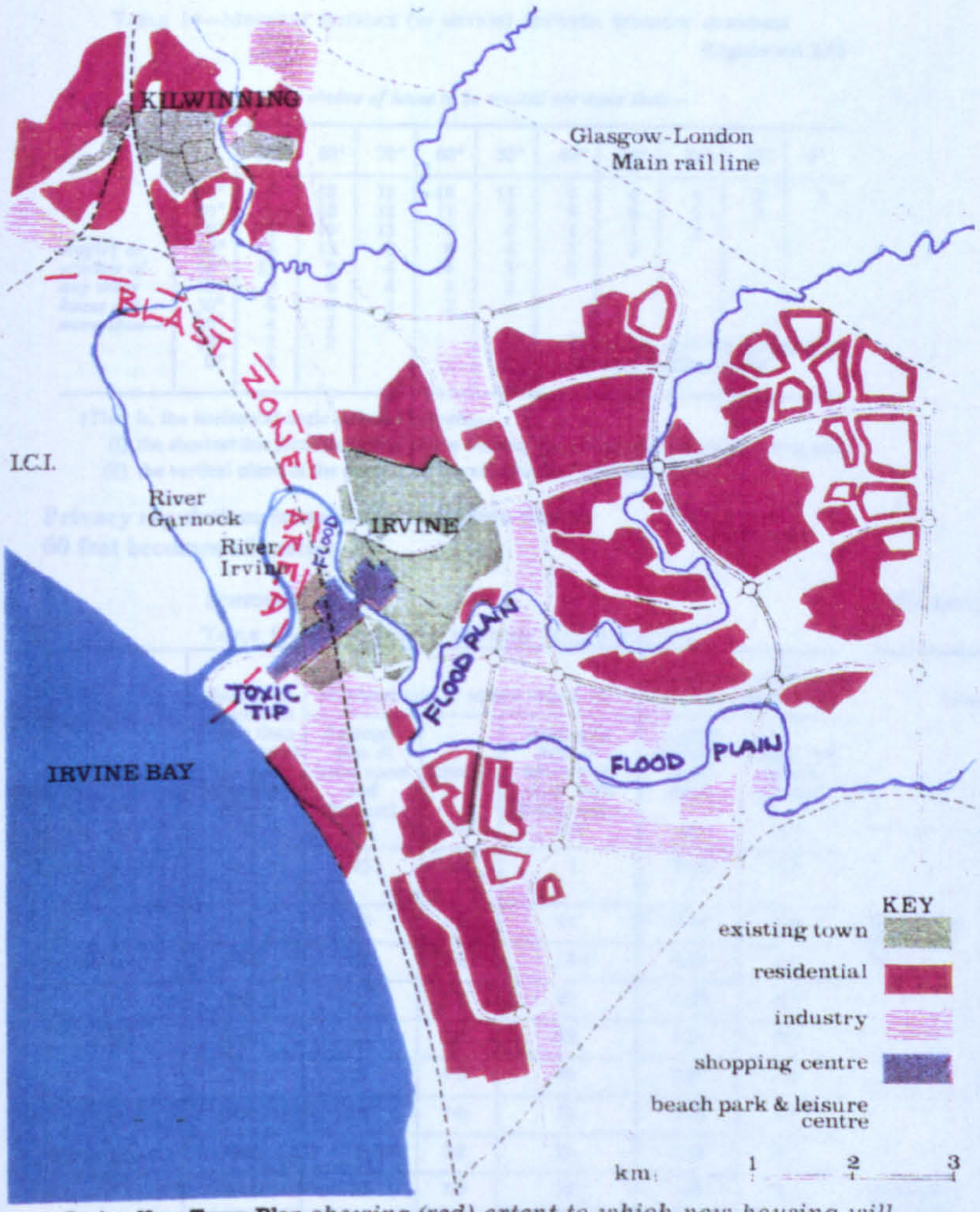
Only small vehicles to enter Mews court.



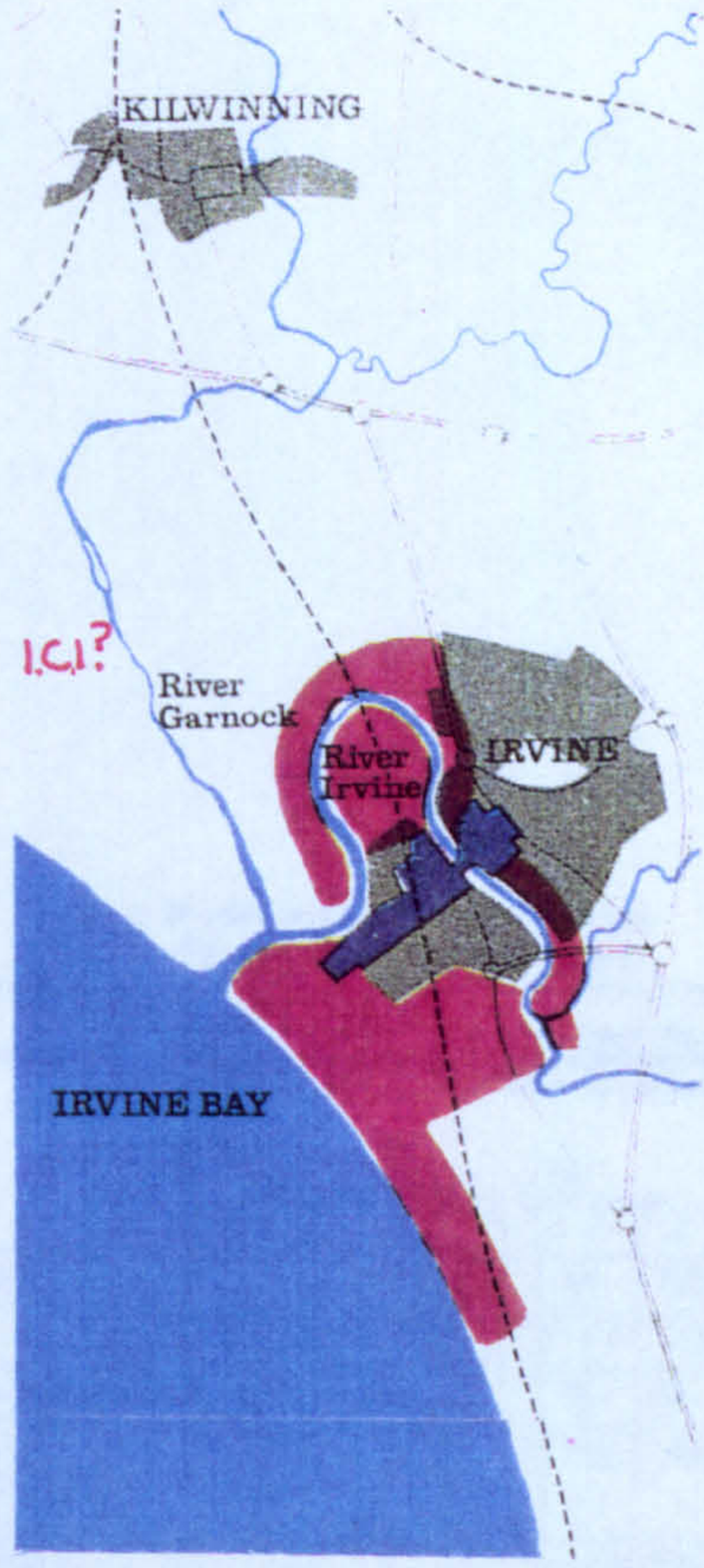
Sections show buildings enclosing street and screening cars.

Figure 7.01

A. R. Civilian density at Irvine



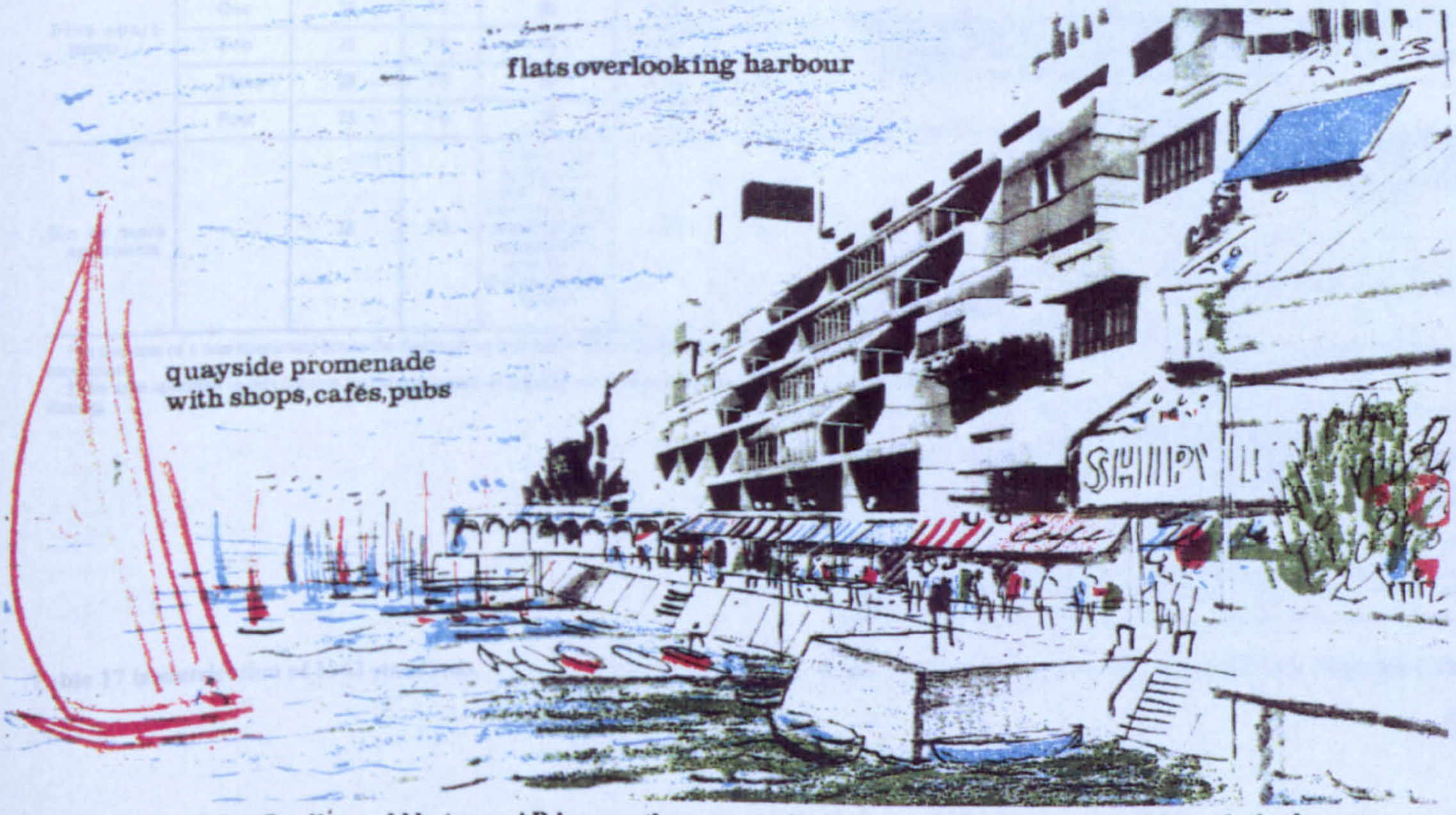
Irvine New Town Plan *showing (red) extent to which new housing will spread over the hinterland. Existing town shown in grey tint, new shopping centre, purple.*



Irvine at Civilian densities: *Plan showing by contrast the approximate area which would be occupied by housing if the increase in population to 140 000 were accommodated at Civilian instead of standard new town densities. Result: a compact town around the River Irvine and along the seafront.*

flats overlooking harbour

quayside promenade with shops, cafés, pubs



Despite acknowledging flooding and blast zone AR ignores these constraints to site its high density proposals on the harbour and river edge.

Figure 7.02

Building Regulations 1971

TABLE 14—MINIMUM DISTANCE (IN METRES) BETWEEN WINDOW OPENINGS

Regulation L10

Angle† at window of any other house not more than—	*Angle† at window of house to be erected not more than—*									
	90°	80°	70°	60°	50°	40°	30°	20°	10°	0°
90°	18	18	18	18	13	9	6	4	3	2
80°	18	18	18	13	9	6	4	3	2	
70°	18	18	13	9	6	4	3	2		
60°	18	13	9	6	4	3	2			
50°	13	9	6	4	3	2				
40°	9	6	4	3	2					
30°	6	4	3	2						
20°	4	3	2							
10°	3	2								
0°	2									

Distances shall be interpolated for intermediate angles

†That is, the horizontal angle included between—

(i) the shortest line joining any part of one window opening to any part of the other, and

(ii) the vertical plane of the opening of the window (see regulation L10).

Privacy regulations translate imperial into metric
60 feet becomes 18 metres.

SCHEDULE 9-

TABLE 17—STANDARDS OF HOUSING ACCOMMODATION

Size of house (1)	Number of apartments (other than living room) less than 10 square metres (2)	Minimum area in square metres of—			Minimum capacity in cubic metres of—	
		Aggregate area of living room and kitchen‡ (3)	Kitchen (4)	Aggregate area of apartments other than living room (5)	Larder and dry goods store (6)	Linen and general storage (7)
One apartment	—	†23	4·2	†	0·68	4·8
Two apartments	Nil	20	4·6	11	0·85	5·0
	One	16	2 8	8 8	0·68	4 8
Three apartments	Nil	25	7·0	22	1·25	9·3
	One	23	6·5	18	1·25	9·3
	Two	20	4 6	16	0·85	5 0
Four apartments	Nil	28	7·0	33	1·70	9·5
	One	28	7·0	29	1·42	9·5
	Two	25	7·0	25	1·25	9·3
	Three	23	6·5	21	1·25	9·3
Five apartments	Nil	28	7·0	45	1·70	9·6
	One	28	7·0	40	1·70	9·6
	Two	28	7·0	36	1·70	9·5
	Three	28	7·0	32	1·42	9·5
	Four	25	7·0	28	1·25	9·3
Six or more apartments	—	28	7·0	Four of the apartments shall have a minimum area equal to the appropriate area for a five apartment house	1·70	9 6

†In the case of a one apartment house the figure given in column (3) includes sleeping accommodation.

‡The area specified in this column includes any part of a living room or kitchen reserved for dining.

Table 17 is metrication of 1963 standards.

SCHEDULE 9- TABLE 18—SPACE STANDARDS FOR HOUSES

Part A—Net space and general storage space

House type (1)		Net space (N) General storage space (S) (2)	Minimum area in square metres for a house designed to accommodate the following numbers of persons— (3)						
			1	2	3	4	5	6	7
Occupancy sub-group A1	Single storey	N	30	44·5	57	67	75·5	84	—
		S	3	4	4	4·5	4·5	4·5	—
	Two storey (detached, semi-detached or end terrace)	N	—	—	—	72	82	92·5	108
		S	—	—	—	4·5	4·5	4·5	6·5
	Two storey (intermediate terrace)	N	—	—	—	74·5	85	92·5	108
		S	—	—	—	4·5	4·5	4·5	6·5
Occupancy sub-group A2	Three storey	N	—	—	—	—	94	98	112
		S	—	—	—	—	4·5	4·5	6·5
	Flat	N	30	44·5	57	70*	79	86·5	—
		S	2·5	3	3	3·5	3·5	3·5	—
	Maisonette	N	—	—	—	72	82	92·5	108
		S	—	—	—	3·5	3·5	3·5	3·5

*(67 square metres if access to the flat is by means of a balcony).

Tolerance: Where any house is designed on a planning grid a negative tolerance not exceeding 1½ per cent is permitted on the net space.

Part B—Kitchen storage space

(1)	Minimum capacity in cubic metres of the ventilated larder (2)	Total minimum capacity in cubic metres of kitchen storage space for a house designed to accommodate the following numbers of persons— (3)						
		1	2	3	4	5	6	7
Where provision is made for a refrigerator	0·17	1·7	1·7	2·3	2·3	2·3	2·3	2·3
Where no provision is made for a refrigerator	0·34	1·87	1·87	2 47	2·47	2·47	2·47	2·47

Part C—Cupboards for linen storage

(1)	Total minimum capacity in cubic metres for a house designed to accommodate the following numbers of persons— (2)						
	1	2	3	4	5	6	7
Aggregate capacity of cupboard or cupboards for linen storage	0·4	0·4	0·4	0·6	0·6	0·6	0 6

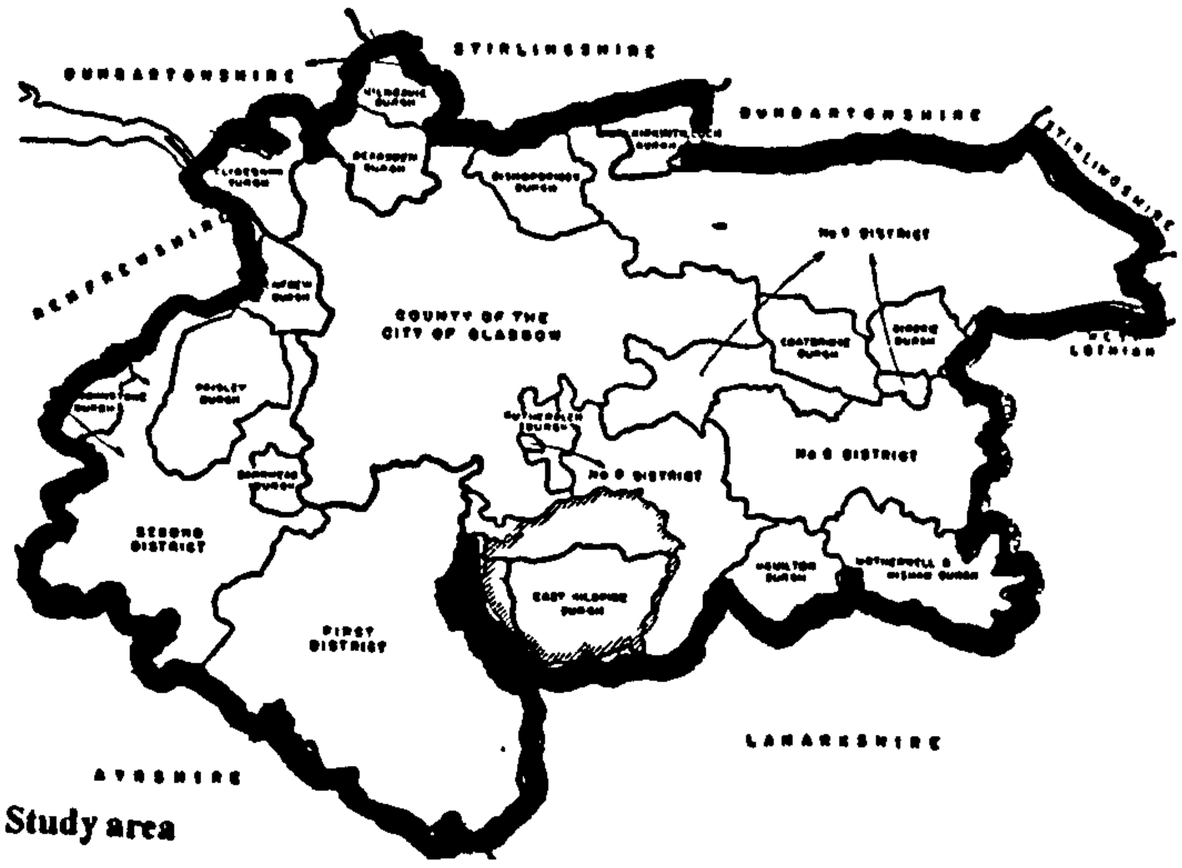
Table 18 gives the alternative space standards (Bulletin 1/Parker Morris)

Figure 7.03

Housing in Clydeside 1970

TABLE 2: Dwelling Amenities and Condition, Clydeside Conurbation, Glasgow and Remainder of Conurbation

	All Clydeside Conurbation	Glasgow	Remainder of Conurbation
Sample No.	2838	1485	1353
	%	%	%
With Exclusive use of:			
Sink with hot water	89	83	96
Bath/Shower with hot water	83	75	91
Wash basin with hot water	82	74	90
Internal WC	91	88	94
All four amenities	82	74	90
Garden	50	30	72
Garage	18	8	30
Maintenance Score			
Nil	36	25	48
1–5	46	46	46
6–10	12	18	5
11–15	4	8	1
16 and over	1	2	*
House Condition Category			
I	68	56	80
II	2	2	2
III	21	30	12
IV	9	12	6



Study area

TABLE 20: Public Authority Tenants—Net Rents by Type of Authority, Clydeside Conurbation

	All Public Authority Tenants	Local Authority Tenants	New Town DC Tenants	SSHA
Sample No.	1710	1505	96	109
	%	%	%	%
Annual Net Rent (£)				
Less than 26 00	3	3	1	1
26·00–38·99	4	5	–	1
39 00–51·99	9	10	1	–
52 00–64·99	19	20	2	21
65·00–77·99	30	31	4	37
78 00–90·99	17	16	2	35
91 00–103 99	8	8	3	6
104 00–129 99	6	5	29	–
130·00–155·99	2	*	35	–
156·00 or more	1	–	22	–
Average Net Rent	*£73*	*£69*	*£131*	*£73*
Average Rent plus Rates	*£125*	*£123*	*£156*	*£132*

TABLE 56: Amenities, Clydeside Conurbation and Glasgow, 1965 and 1970

Amenities Lacking		Clydeside Conurbation		Glasgow	
		1965	1970	1965	1970
ALL HOUSEHOLDS					
Fixed bath/shower	%	28	17	38	25
Internal WC	%	17	9	22	12
Hot water at 3 points	%	29	18	41	25
Garage	%	79	82	94	92
OWNER OCCUPIERS					
Fixed bath/shower	%		37		25
Internal WC	%		19		12
PUBLIC AUTHORITY TENANTS					
Fixed bath/shower	%		7		5
Internal WC	%		4		2
ALL OTHER TENANTS					
Fixed bath/shower	%		73		66
Internal WC	%		43		33

TABLE 6: Dwelling Amenities by Tenure, Clydeside Conurbation

	All Dwellings	Tenure: Owns/is Buying	Rents from Public Authority	Rents Privately Unfurnished	Other
Sample No.	2838	666	1727	368	77
	%	%	%	%	%
Lacking exclusive use of:					
Sink with hot water	11	10	2	49	32
Bath/shower with hot water	17	23	3	70	36
Wash basin with hot water	18	24	4	72	38
Internal WC	9	12	1	38	25
Any of Four Amenities	18	24	4	72	38
Garden	50	41	43	93	59
Garage	82	55	89	96	78

TABLE 57: Condition of Dwellings, Clydeside Conurbation and Glasgow, 1965 and 1970

1965 Survey: Estimated Fitness and Future Life of Dwellings

	Clydeside Conurbation %	Glasgow %
FIT WITH		
Life of 30 years or more	66	57
Life of 15–29 years	12	17
Life of 5–14 years	13	20
Life under 5 years	6	4
UNFIT	3	2

1970 Survey: House Condition Categories

	Clydeside Conurbation %	Glasgow %
I Satisfactory	68	56
II Intermediate (above Tolerable Standard)	2	2
III Intermediate (may be below Tolerable Standard)	21	30
IV Definitely below Tolerable Standard	9	12

[1] In 1965 'fitness' and 'future life' of housing were assessed by local authorities; in the 1970 survey, the house condition categorisation was undertaken by the Scottish Development Department.

Poor housing remained a problem in Clydeside especially in Glasgow

Figure 7.04

Planning for Housing Needs 1972

TABLE 1

Housing needs estimates

Planning Regions	1976	1981	1986	1991
Glasgow/West Central	831,000	844,000	855,000	869,000
Falkirk/Stirling	109,000	120,000	127,000	134,000
Edinburgh/East Central	376,000	394,000	411,000	428,000
Tayside	162,000	166,000	168,000	170,000
Borders	37,000	37,000	37,000	37,000
South West	52,000	53,000	54,000	54,000
North East	154,000	157,000	159,000	159,000
Highlands	92,000	92,000	93,000	94,000

TABLE 2

Housing Stock Estimates

Planning Region	(1) Total Housing Stock	(2) Total Number of Houses falling below the tolerable standard	(3) Percentage of dwellings below the tolerable standard
1. Glasgow/West Central	816,000	104,000	12·7%
2. Falkirk/Stirling	95,000	4,000	4·2%
3. Edinburgh/East Central	356,000	31,000	8·7%
4. Tayside	170,000	26,000	15·3%
5. Borders	41,000	5,000	12·2%
6. South West	52,000	4,000	7·7%
7. North East	157,000	35,000	22·3%
8. Highlands	102,000	19,000	18·6%

TABLE 3

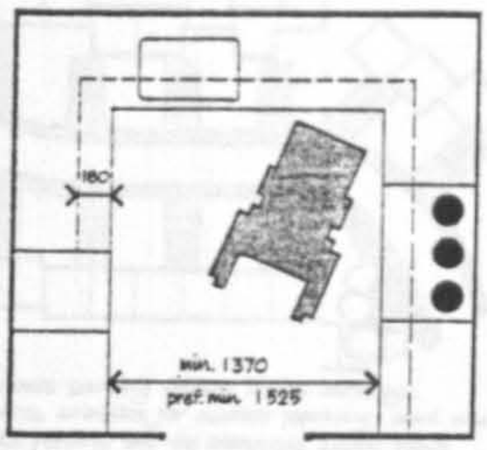
	1. Requirements to replace dwellings below the tolerable standard	2. To meet the growth in households estimated to 1981	3. Total housing requirements to 1981
1. Glasgow/West Central	104,000	28,000	132,000
2. Falkirk/Stirling	4,000	25,000	29,000
3. Edinburgh/East Central	31,000	38,000	69,000
4. Tayside	26,000	—4,000	22,000
5. Borders	5,000	—4,000	1,000
6. South West	4,000	1,000	5,000
7. North East	35,000	—	35,000
8. Highlands	19,000	—10,000	9,000

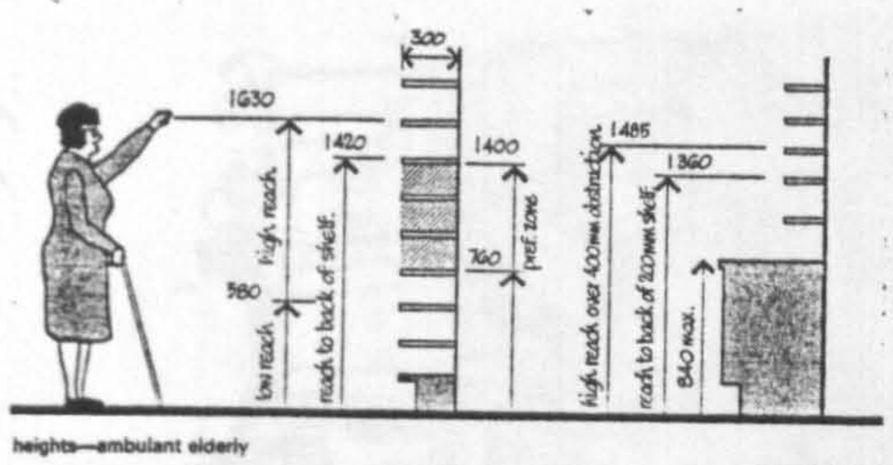
Table 1 is an estimate of total housing needs (public and private) by decade and region
Table 2 is total housing stock and total no. below tolerable standard, note the percentage variation of below tolerable standard
Table 3 using tables 1 and 2 computes housing requirements to 1981

This shows only total numbers the report requires Local Authorities to estimate needs in terms of tenure, house size, special needs etc.

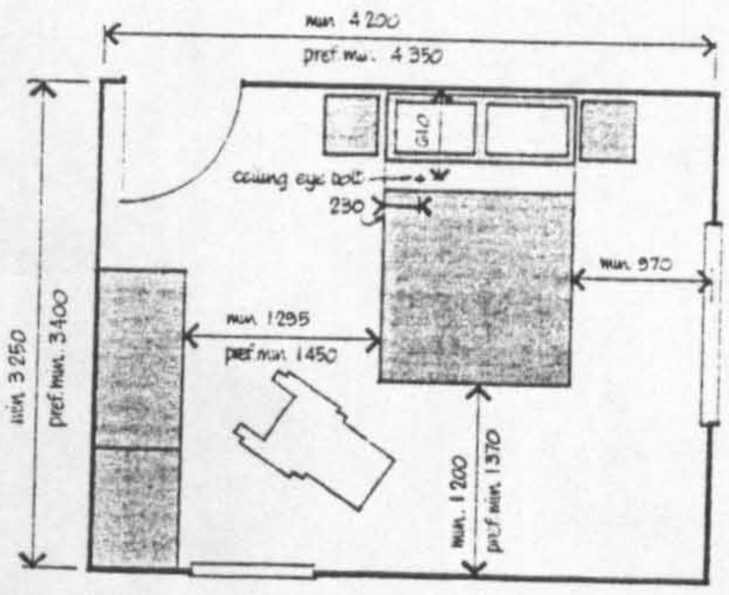
Figure 7.05

Housing for Old People, N.S.H.H.3 1970

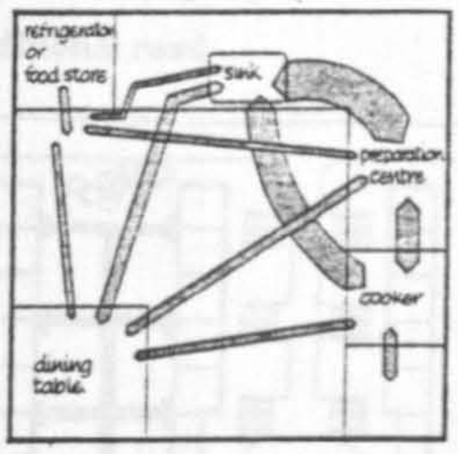


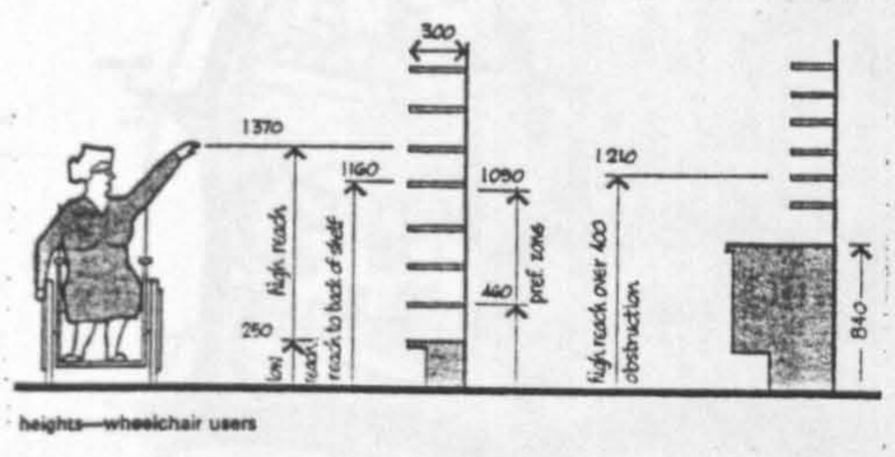


heights—ambulant elderly

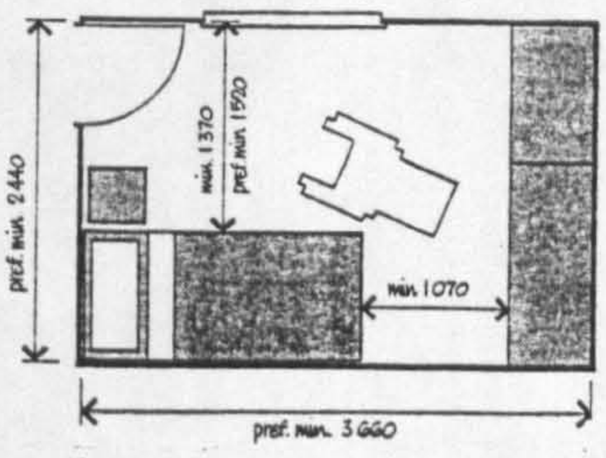


Double bedroom for wheelchair users

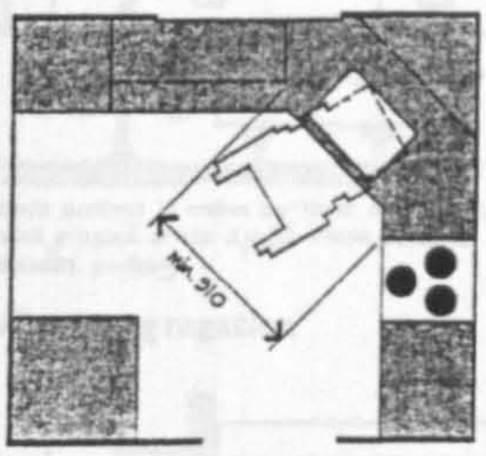


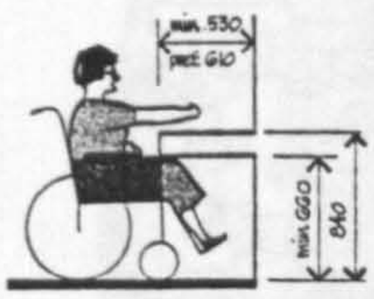


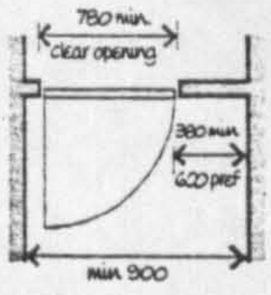
heights—wheelchair users

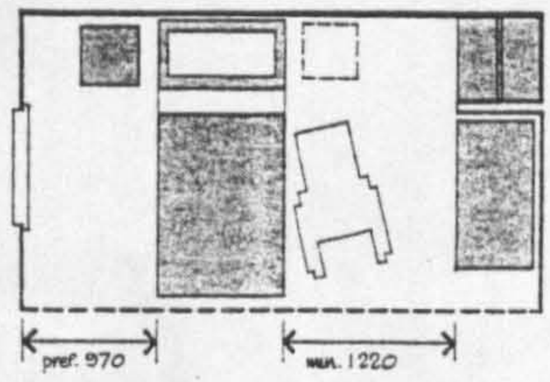


Single bedroom for wheelchair users



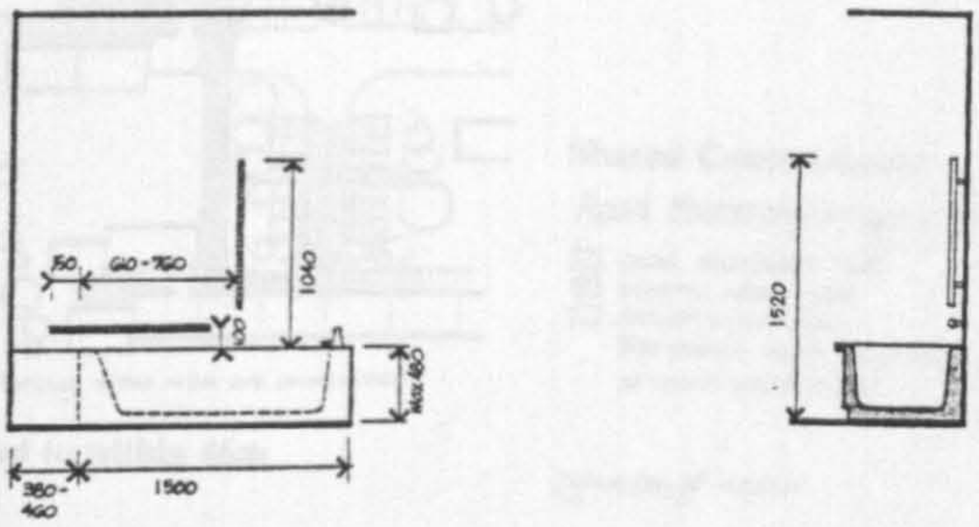




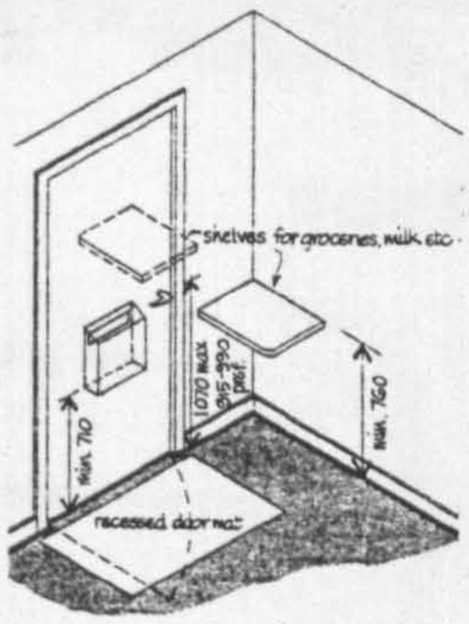


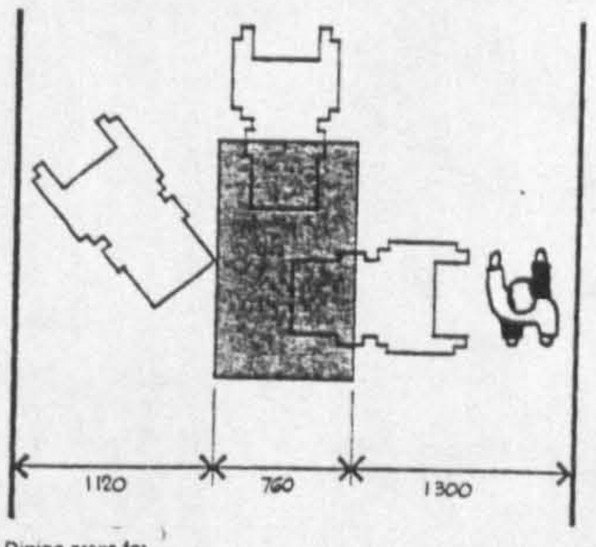
Bed recess for wheelchair users

KITCHEN PLANNING

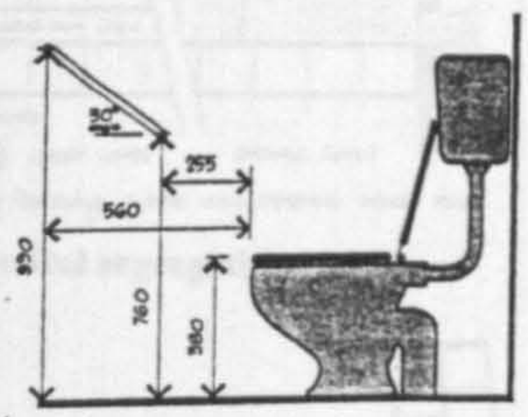


13. Bath height, horizontal and vertical supports where platform is provided at bath for wheel chair users

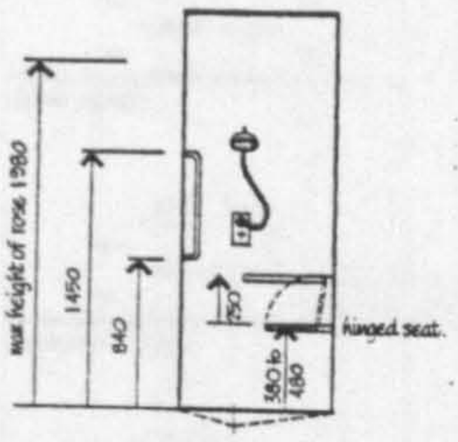




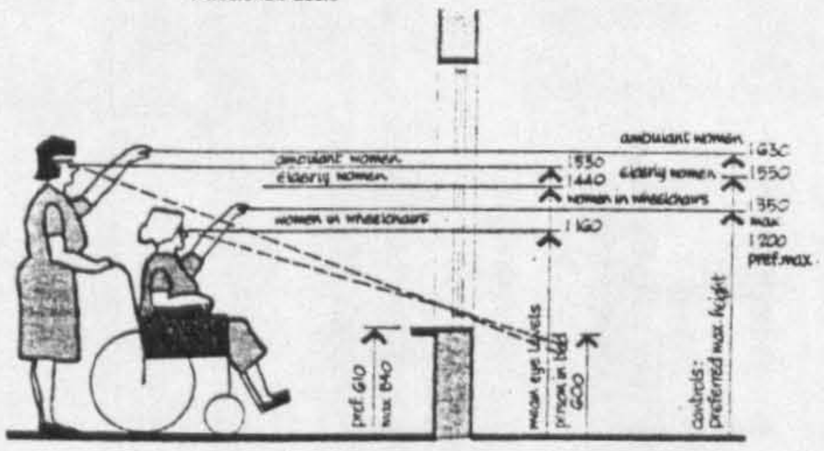
Dining areas for wheelchair users



14. Diagonal support at w.c. for active elderly



15. Small shower cubicle



SPACE REQUIREMENTS
Wheelchair Users

19. Planning of bathroom for wheelchair users

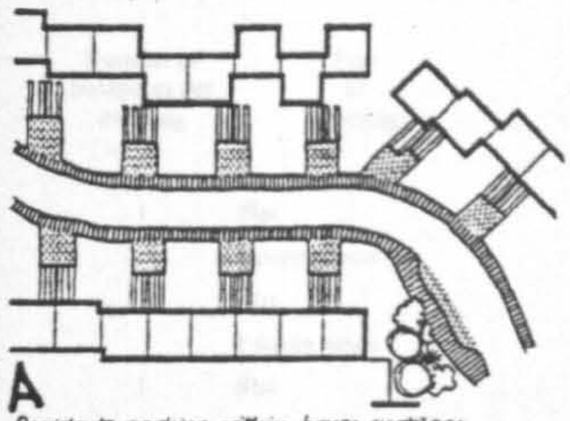
BATHROOMS and WC's

20. Small shower cubicle for wheelchair users

37. Access ramp for wheelchair users.

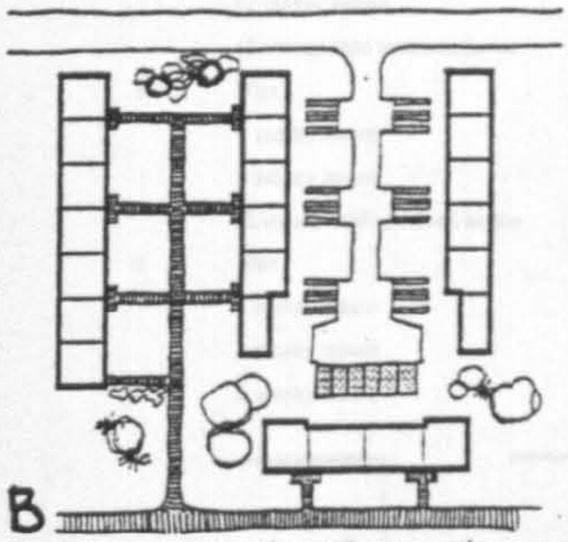
Figure 7.06

Housing development, Layout, Roads and Services, S.H.H.3 1977



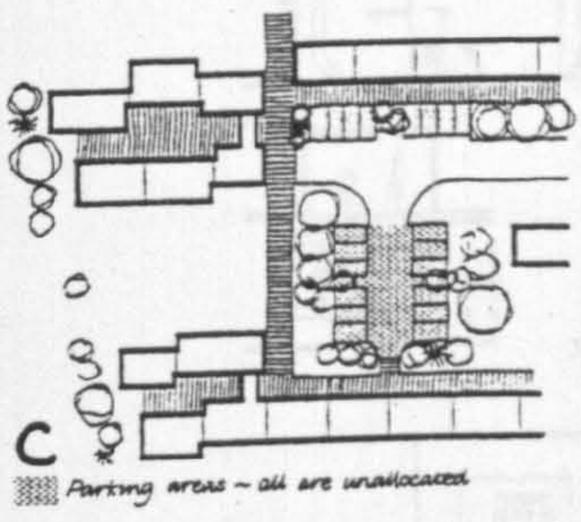
Residents parking within house curtilage
Area available for visitors parking, and also service vehicle lay-by alongside access road

Traditional road



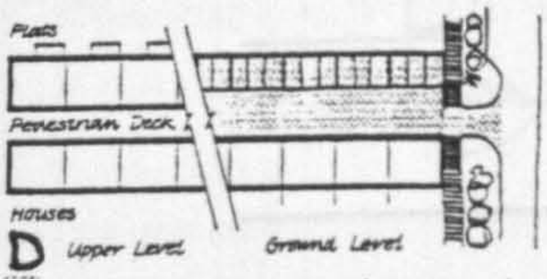
Residents parking is within the house curtilage or in small grouped areas e.g. which denotes unallocated parking

Radburn segregation



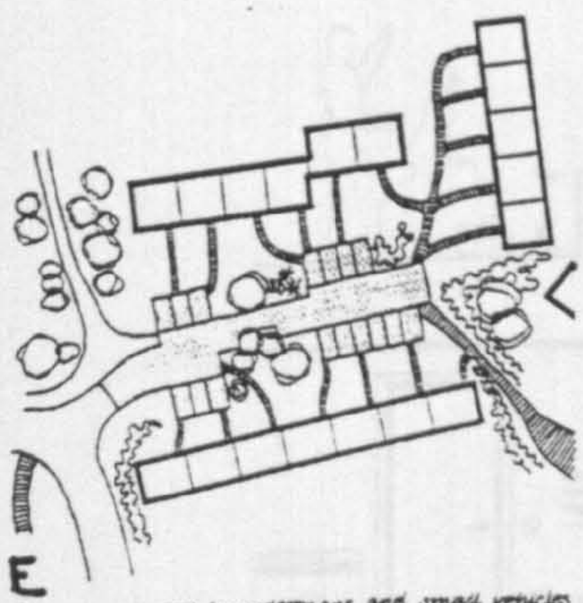
Parking areas – all are unallocated

Road to within 46m



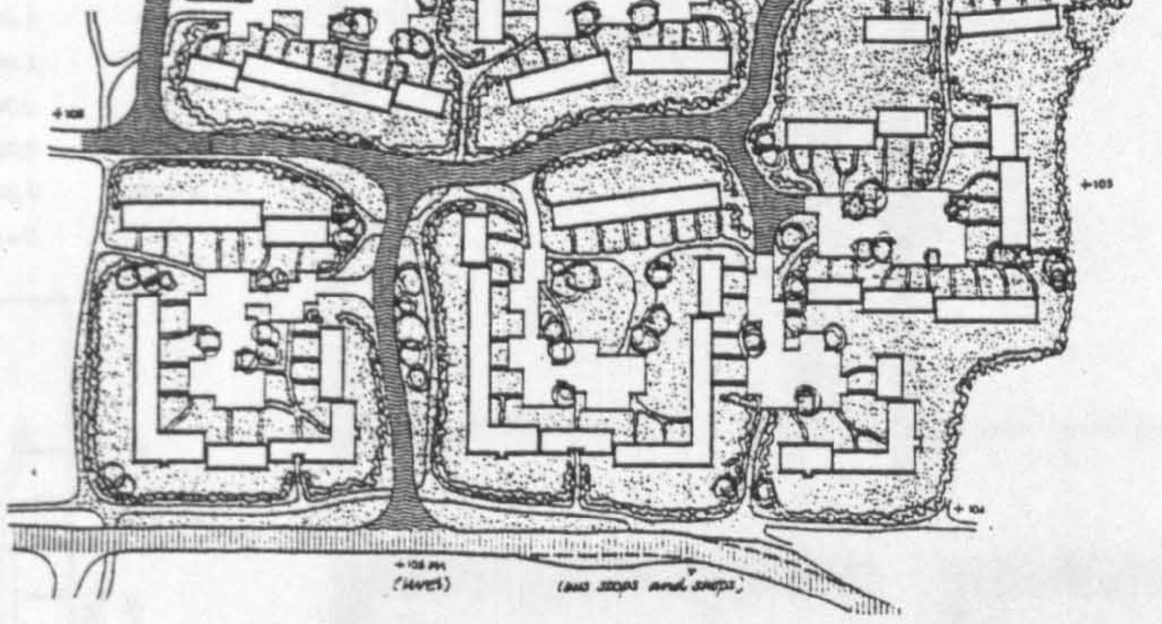
Parking areas and covered access road

Vertical segregation



Area shared by pedestrians and small vehicles

Shared Courts



Shared Court Layout

Road Hierarchy within a housing area.

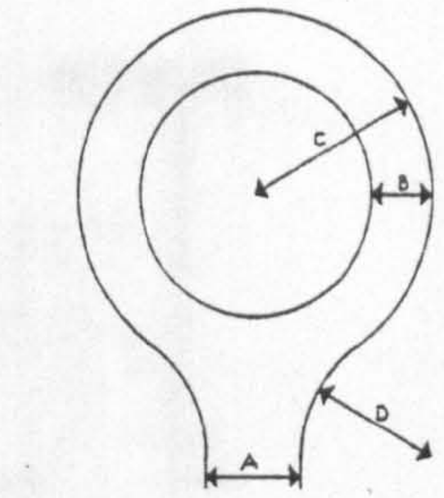
- Local distributor road
- General access road
- Minor access road

This example makes use of shared pedestrian/vehicle courts as minor access roads

Definition of Aspect

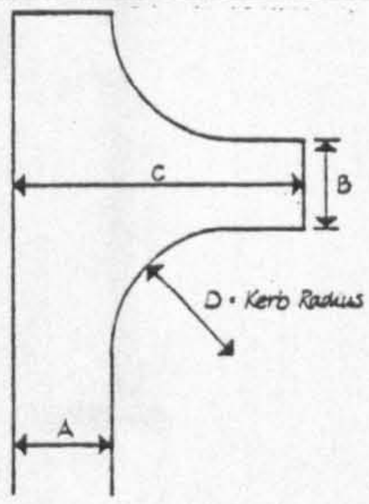
Note: When defining aspect no account is taken of stair or bathroom windows as these are not considered by Part L of the Building Standards (Scotland) Regulations – Daylighting and Space about Houses

Aspect



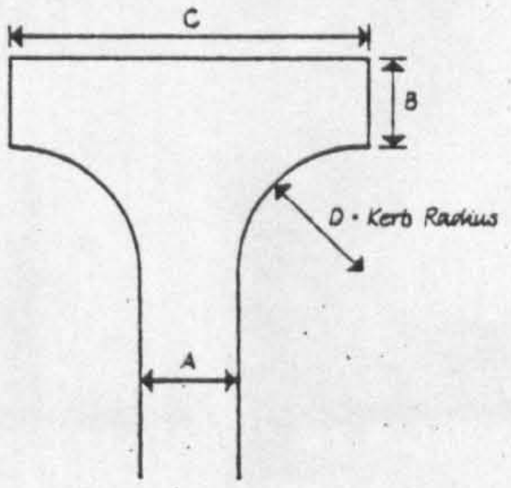
Turning Circle

	A	B	C	D
Cars only	5·5	3·0	6·2	3·7
Refuse Vehicle	5·5	3·5	10·2	7·5

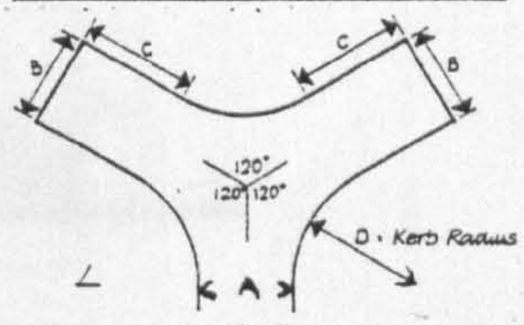


Offset Hammerhead

	A	B	C	D
Cars only	3·0	3·0	6·5	3·5
	5·5	5·0	9·0	3·5
Refuse Vehicle	3·0	3·0	16·6	9·0
	5·5	5·0	16·6	7·0



Simple T Hammerhead

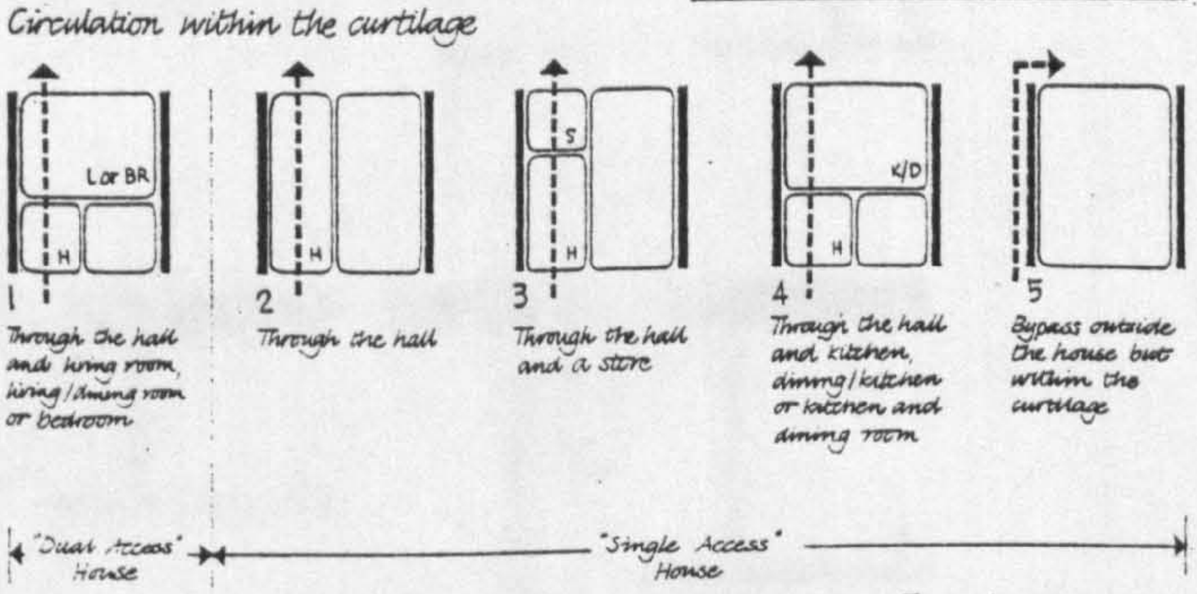


Improved T Hammerhead

	A	B	C	D
Cars only	3·0	3·0	11·8	3·5
	5·5	5·0	8·5	1·5
Refuse Vehicle	3·0	3·0	20·0	9·0
	5·5	5·0	19·0	7·0

	A	B	C	D
Cars only	3·0	3·0	3·5	3·5
	5·5	5·0	3·5	3·5
Refuse Vehicle	3·0	3·0	6·5	9·0
	5·5	5·0	6·5	7·0

Circulation within the curtilage



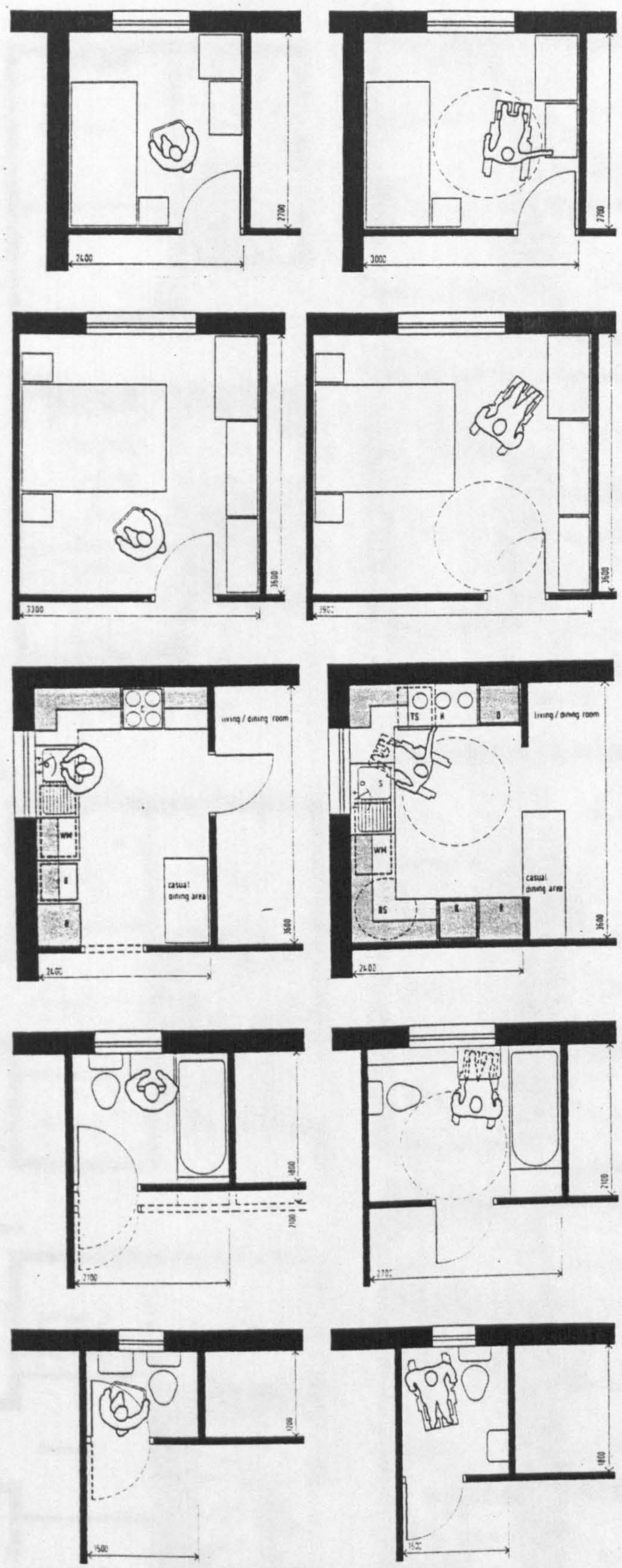
Circulation pattern 1 requires dual access. Patterns 2-5 require only single access. Therefore house types with circulation pattern 1 are classified as "dual access" houses and house types with patterns 2-5 are classified as "single access" houses (although they may also be used in layouts providing dual access)

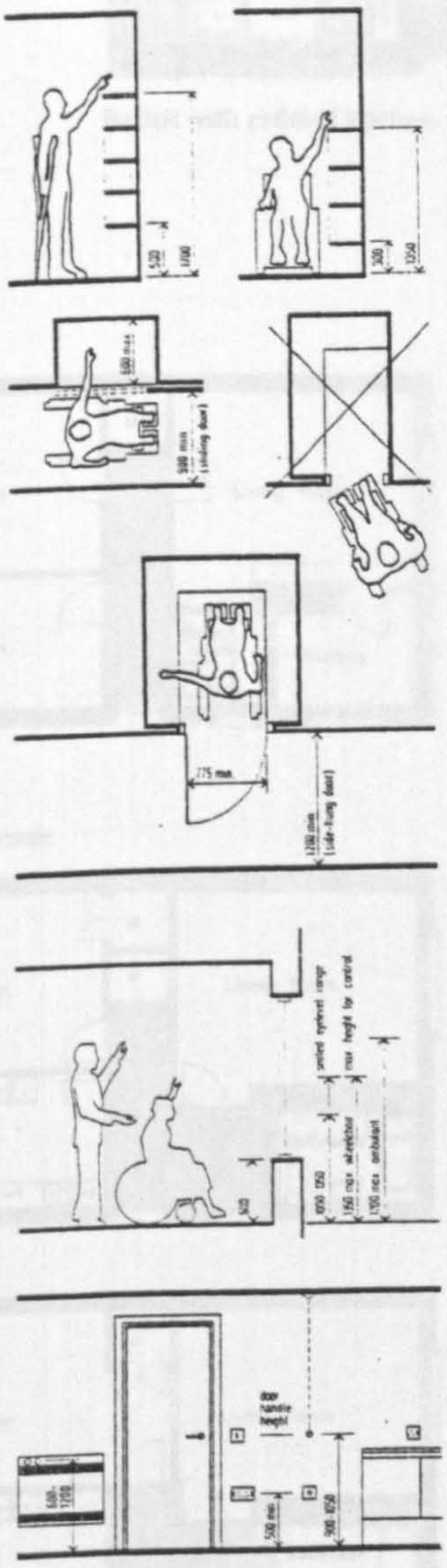
Access

Figure 7.07

Housing for the Disabled S.H.H.6 1979

Number of bedspaces per dwelling	Type of Dwelling	Ambulant Disabled Housing	Wheelchair Housing
1	Flat	32.5	38.0
	1 storey house	33.0	38.5
2	Flat	47.5	52.5
	1 storey house	48.5	53.5
3	Flat	60.0	66.0
	1 storey house	61.0	67.0
4	Flat	73.5	76.5
	(Balcony Access flat	70.5)	
	1 storey house	71.5	77.5
	(2 storey house	76.5)	
	(2 storey mid terraced house	79.0)	
5	Flat	82.5	89.5
	1 storey house	80.0	90.5
	2 storey house	86.5	95.5
	(2 storey mid terraced house	89.5)	
6	Flat	90.0	98.0
	1 storey house	88.5	99.0
	2 storey house	96.5	106.0
7	2 storey house	114.5	119.5

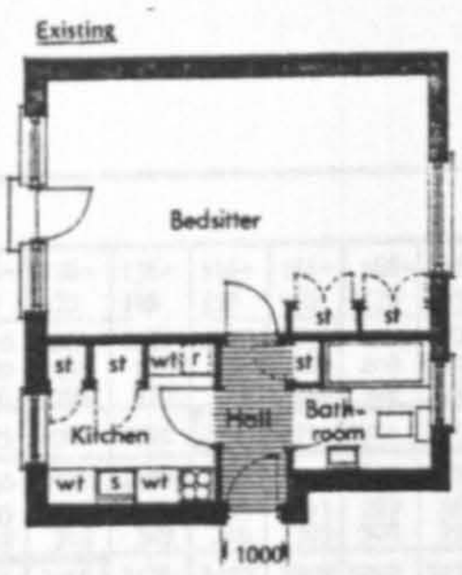




Similar wheelchair constraints information to Housing for Old People.
Recommended minimum room dimensions however generally require less rectangular rooms, for example a wheelchair double bedroom which was 4.20 x 3.25 in NSIII3 is in SHII6 3.9 x 3.6 with a marginal increase in room area.
Note increase in house floor area for wheelchair housing.

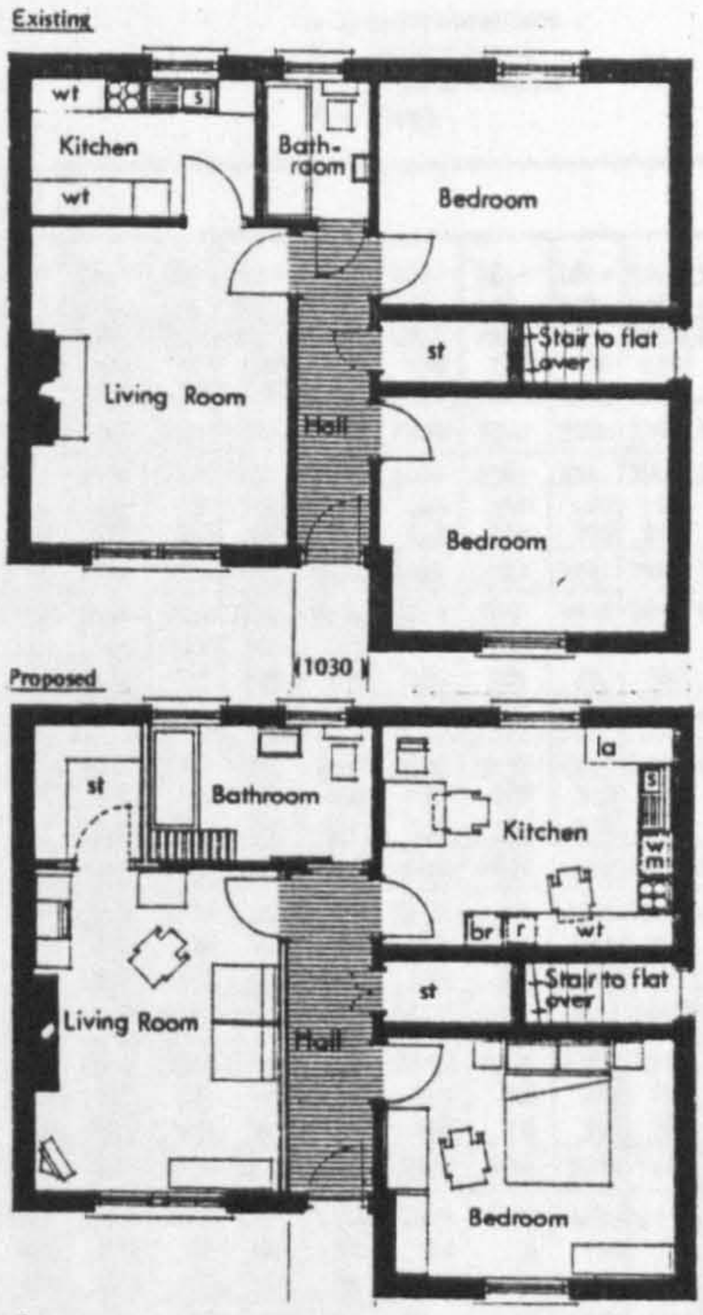
Figure 7.08

Disabled Tenants and the Older Housing Stock S.L.A.S.H.

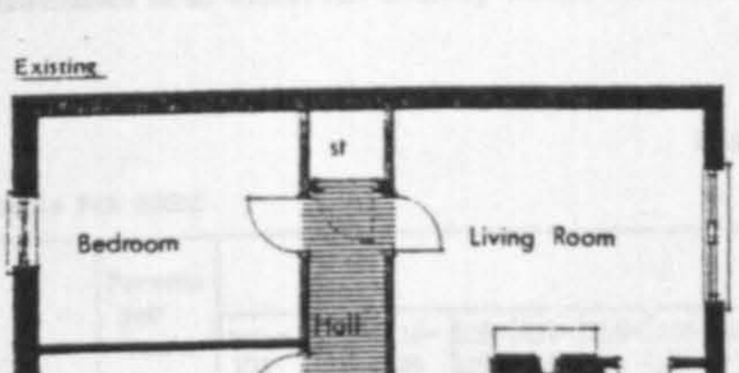


Bedsit with refitted kitchen.

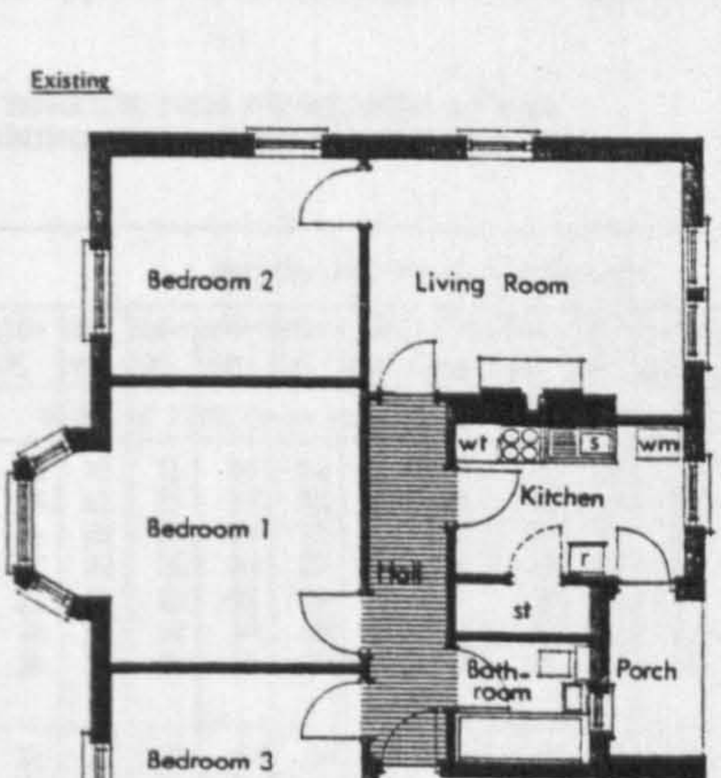
1 person wheelchair house.



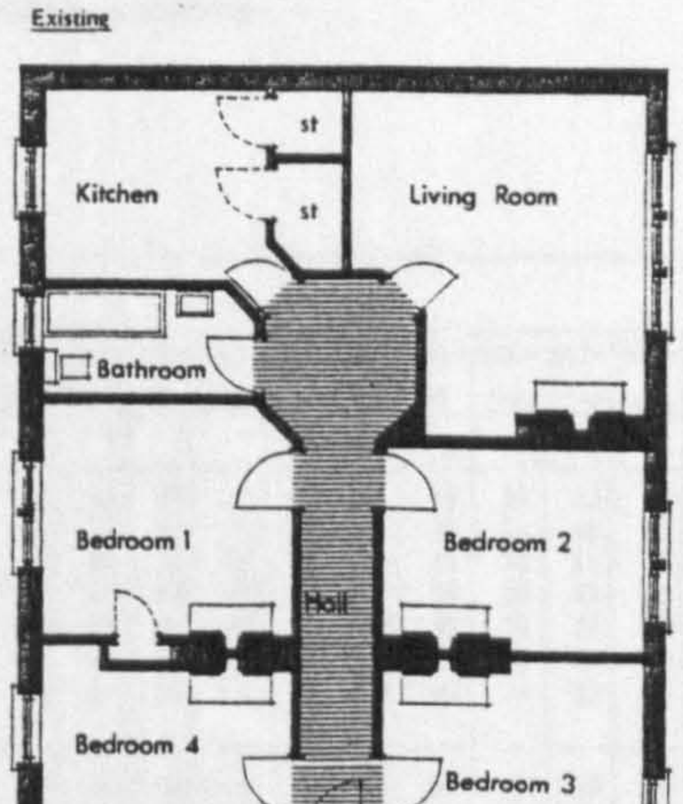
2 person wheelchair house.



2 person ambulant or wheelchair disabled.



4 person ambulant disabled.



4 person ambulant, en suite bathroom

Figure 7.09

Indicative Cost Tables 1972

COSTS IN £s PER HOUSE

INDICATIVE COSTS FOR NEW HOUSE BUILDING
HOUSE ERECTION COSTS

a = superstructure
b = substructure
c = external works
t = total

Persons per house		Density in Persons per Hectare																												
		Under 101	101-115	116-125	126-135	136-145	146-155	156-165	166-175	176-185	186-195	196-205	206-220	221-235	236-250	251-265	266-280	281-300	301-320	321-340	341-360	361-380	381-400	401-420	421-440	441-460	461-480	481-500	501-525	526-550	Over 550
1	(a)	2138	2174	2210	2234	2253	2273	2273	2273	2273	2273	2273	2996	2505	2593	2675	2750	2825	2900	2954	2954	2954	2954	2954	2954	2954	2954	2954	2954	2954	2954
	(b)	390	339	289	255	229	200	200	200	200	200	200	187	176	167	159	151	143	136	130	130	130	130	130	130	130	130	130	130	130	130
	(c)	280	277	274	271	270	268	268	268	268	268	268	259	251	246	239	233	228	222	218	218	218	218	218	218	218	218	218	218	218	218
	(t)	2808	2790	2773	2760	2752	2741	2741	2741	2741	2741	2741	2842	2932	3005	3073	3134	3196	3258	3302	3302	3302	3302	3302	3302	3302	3302	3302	3302	3302	3302
2	(a)	2476	2476	2440	2440	2408	2549	2595	2635	2671	2704	2744	2744	2744	2744	2744	2801	2924	3046	3153	3242	3332	3406	3471	3528	3561	3561	3561	3561	3561	3561
	(b)	409	409	403	403	369	338	311	287	265	246	222	222	222	222	222	218	208	199	191	184	177	172	167	162	160	160	160	160	160	160
	(c)	321	321	312	312	309	306	303	300	298	296	294	294	294	294	294	290	283	275	268	262	257	252	248	244	242	242	242	242	242	242
	(t)	3206	3206	3155	3155	3176	3193	3209	3222	3234	3246	3260	3260	3260	3260	3260	3309	3415	3520	3612	3688	3766	3830	3886	3934	3963	3963	3963	3963	3963	3963
3	(a)	2732	2732	2692	2692	2652	2652	2692	2762	2823	2876	2929	2981	3043	3091	3091	3091	3091	3091	3205	3337	3460	3555	3618	3734	3810	3886	3942	4037	4037	4037
	(b)	424	424	418	418	412	412	395	366	340	318	296	274	248	228	228	228	228	228	222	216	210	204	200	195	192	188	185	180	180	180
	(c)	391	391	381	381	371	371	369	366	362	360	357	355	351	349	349	349	349	349	341	331	323	315	308	302	297	291	287	280	280	280
	(t)	3547	3547	3491	3491	3435	3435	3466	3494	3525	3554	3582	3610	3642	3668	3668	3668	3668	3668	3768	3884	3983	4074	4157	4231	4299	4365	4414	4497	4497	4497
4	(a)	3037	3037	3037	2993	2993	2948	2948	2991	3056	3111	3167	3223	3283	3339	3385	3413	3413	3413	3413	3466	3587	3717	3837	3916	4043	4130	4217	4304	4391	4600
	(b)	436	436	436	429	429	423	423	412	395	381	367	352	337	326	310	303	303	303	303	298	285	271	259	248	237	228	219	210	201	190
	(c)	434	434	434	423	423	411	411	408	404	401	397	394	390	387	384	382	378	382	382	379	370	361	352	345	338	332	326	320	314	306
	(t)	3907	3907	3907	3846	3846	3783	3783	3811	3855	3893	3931	3969	4010	4048	4079	4098	4098	4098	4098	4133	4242	4349	4448	4539	4618	4690	4762	4834	4906	4996
5	(a)	3306	3306	3306	3258	3258	3258	3210	3210	3210	3266	3333	3405	3482	3549	3605	3656	3723	3723	3723	3723	3723	3770	3911	4041	4158	4276	4370	4465	4670	4665
	(b)	480	480	480	473	473	473	466	466	466	461	434	415	394	377	362	349	331	331	331	331	331	326	312	298	286	274	264	255	244	234
	(c)	464	464	464	461	461	461	439	439	439	435	431	426	422	417	414	410	406	406	406	406	406	403	392	383	374	366	359	352	344	337
	(t)	4250	4250	4250	4182	4182	4182	4115	4115	4115	4152	4198	4246	4298	4343	4381	4415	4460	4460	4460	4460	4460	4499	4615	4722	4818	4916	4993	5072	5158	5236
6	(a)	3442	3442	3442	3442	3392	3392	3392	3342	3342	3342	3365	3446	3542	3622	3696	3759	3827	3913	3913	3913	3913	3913	3913	4050	4174	4285	4397	4609	4608	4723
	(b)	514	514	514	514	506	506	506	499	489	479	483	470	442	420	399	381	361	337	337	337	337	337	337	326	317	308	299	290	283	274
	(c)	486	486	486	486	472	472	472	469	469	469	468	463	447	442	437	433	429	424	424	424	424	424	424	414	406	398	390	382	375	367
	(t)	4442	4442	4442	4442	4370	4370	4370	4300	4300	4300	4316	4368	4431	4484	4532	4573	4617	4674	4674	4674	4674	4674	4674	4790	4897	4991	5086	5181	5266	5361
7	(a)	3744	3744	3744	3744	3690	3690	3690	3635	3635	3635	3679	3774	3876	3964	4046	4116	4186	4268	4268	4268	4268	4268	4268	4448	4627	4777	4897	5031	5166	5301
	(b)	580	580	580	580	571	571	571	563	563	563	551	524	496	471	448	428	409	396	386	386	386	386	386	370	353	340	329	317	304	292
	(c)	526	526	526	526	512	512	512	497	497	497	494	488	481	475	469	464	460	464	464	464	464	464	464	442	430	419	411	402	393	384
	(t)	4850	4850	4850	4850	4773	4773	4773	4695	4695	4695	4724	4786	4853	4910	4963	5008	5055	5108	5108	5108	5108	5108	5108	5260	5410	5536	5657	5750	5863	5977

Low allowance is at different density bands for each house type but is always higher at the top and the bottom densities.

INDICATIVE COSTS FOR NEW HOUSE BUILDING
HOUSE ERECTION COSTS - ADDITIONAL COSTS FOR SLOPE

COSTS IN £s PER HOUSE

Slope	Persons per House	Density in Persons per Hectare																												
		Under 101	101-115	116-125	126-135	136-145	146-155	156-165	166-175	176-185	186-195	196-205	206-220	221-235	236-250	251-265	266-280	281-300	301-320	321-340	341-360	361-380	381-400	401-420	421-440	441-460	461-480	481-500	501-525	526-550	over 550
1:30	1p - 7p	0	0	0	0	0	0	0	0	Slope of 1:30 to be recorded as zero								0	0	0	0	0	0	0	0	0	0	0	0	0	0
1:25	1p	26	23	20	18	17	15	15	15	15	15	15	15	14	14	14	14	13	13	13	13	13	13	13	13	13	13	13	13	13	13
	2p	27	27	27	27	25	23	21	19	18	17	15	15	15	15	15	15	15	15	15	14	14	14	14	14	14	14	14	14	14	14
	3p	28	28	28	28	28	28	27	25	24	22	21	20	18	17	17	17	17	17	17	16	16	16	16	16	15	15	15	15	15	15
	4p	30	30	30	30	30	30	30	29	27	25	25	24	22	21	20	19	19	19	19	19	19	18	18	18	18	18	18	17	17	17
	5p	32	32	32	32	32	32	32	32	32	31	29	27	26	24	23	22	20	20	20	20	20	20	20	19	19	19	18	18	18	18
	6p	32	32	32	32	32	32	32	32	32	32	32	30	28	27	25	24	23	21	21	21	21	21	21	21	20	20	19	19	19	18
	7p	34	34	34	34	34	34	34	34	34	34	33	31	29	27	26	24	23	21	21	21	21	21	21	21	20	20	20	19	19	19
1:20	1p	44	40	37	35	33	31	31	31	31	31	31	30	29	29	28	28	27	26	26	26	26	26	26	26	26	26	26	26	26	26
	2p	46	46	46	46	44	42	40	38	37	36	34	34	34	34	34	34	32	31	31	30	29	28	28	27	27	27	27	27	27	27
	3p	56	56	56	56	56	56	54	51	48	46	43	41	38	36	36	36	36	36	35	34	33	33	32	31	31	30	30	29	29	29
	4p	58	58	58	58	58	58	58	56	54	52	50	47	45	43	42	40	40	40	40	40	39	38	37	37	36	35	35	34	34	33
	5p	59	59	59	59	59	59	59	59	59	57	55	52	49	47	45	43	41	41	41	41	41	41	40	39	38	38	37	37	36	35
	6p	60	60	60	60	60	60	60	60	60	60	59	57	54	51	49	47	45	42	42	42	42	42	42	41	41	40	39	39	38	37
	7p	63	63	63	63	63	63	63	63	63	63	62	59	56	54	51	49	47	45	45	45	45	45	45	44	43	42	41	40	40	39
1:15	1p	92	83	74	68	63	58	58	58	58	58	58	57	55	54	53	52	52	51	50	50	50	50	50	50	50	50	50	50	50	50
	2p	94	94	94	94	88	83	79	75	71	68	64	64	64	64	64	63	61	60	58	57	55	54	53	52	52	52	52	52	52	52
	3p	108	108	108	108	108	108	105	100	96	92	88	85	80	77	77	77	77	77	75	72	70	68	66	64	63	61	60	58	58	53
	4p	116	116	116	116	116	116	116	113	109	106	102	98	94	91	88	86	86	86	86	85	82	80	77	75	73	71	69	67	65	63
	5p	124	124	124	124	124	124	124	124	124	121	117	112	108	104	100	97	93	93	93	93	93	92	88	85	82	79	77	75	72	70
	6p	135	135	135	135	135	135	135	135	135	135	132	128	121	115	110	106	101	95	95	95	95	95	95	92	89	86	84	81	79	76
	7p	153	153	153	153	153	153	153	153	153	153	150	142	134	127	121	115	110	103	103	103	103	103	103	99	94	91	88	85	81	78
1:10	1p	156	140	125	114	105	97	97	97	97	97	97	94	91	89	86	84	82	80	79	79	79	79	79	79	79	79	79	79	79	79
	2p	167	167	167	167	156	146	138	131	124	117	110	110	110	110	110	108	104	100	96	93	90	87	85	83	82	82	82	82	82	82
	3p	174	174	174	174	174	174	169	161	154	148	142	136	129	123	123	123	123	123	119	114	110	106	102	99	96	94	92	88	88	88
	4p	196	196	196	196	196	196	196	191	183	176	169	162	155	148	142	139	139	139	139	137	132	127	122	117	113	110	106	103	99	95
	5p	211	211	211	211	211	211	211	211	211	204	196	187	178	170	163	157	149	149	149	149	149	147	141	135	130	125	120	116	112	107
	6p	231	231	231	231	231	231	231	231	231	231	226	217	204	193	183	175	166	154	154	154	154	154	154	148	143	138	133	128	124	119
	7p	267	267	267	267	267	267	267	267	267	267	260	245	230	216	203	193	182	169	169	169	169	169	169	161	153	146	141	135	129	123

Slope allowance is greater at low density to reflect greater site area and greater percentage of substructure.

Figure 7.10

Darnley, Glasgow

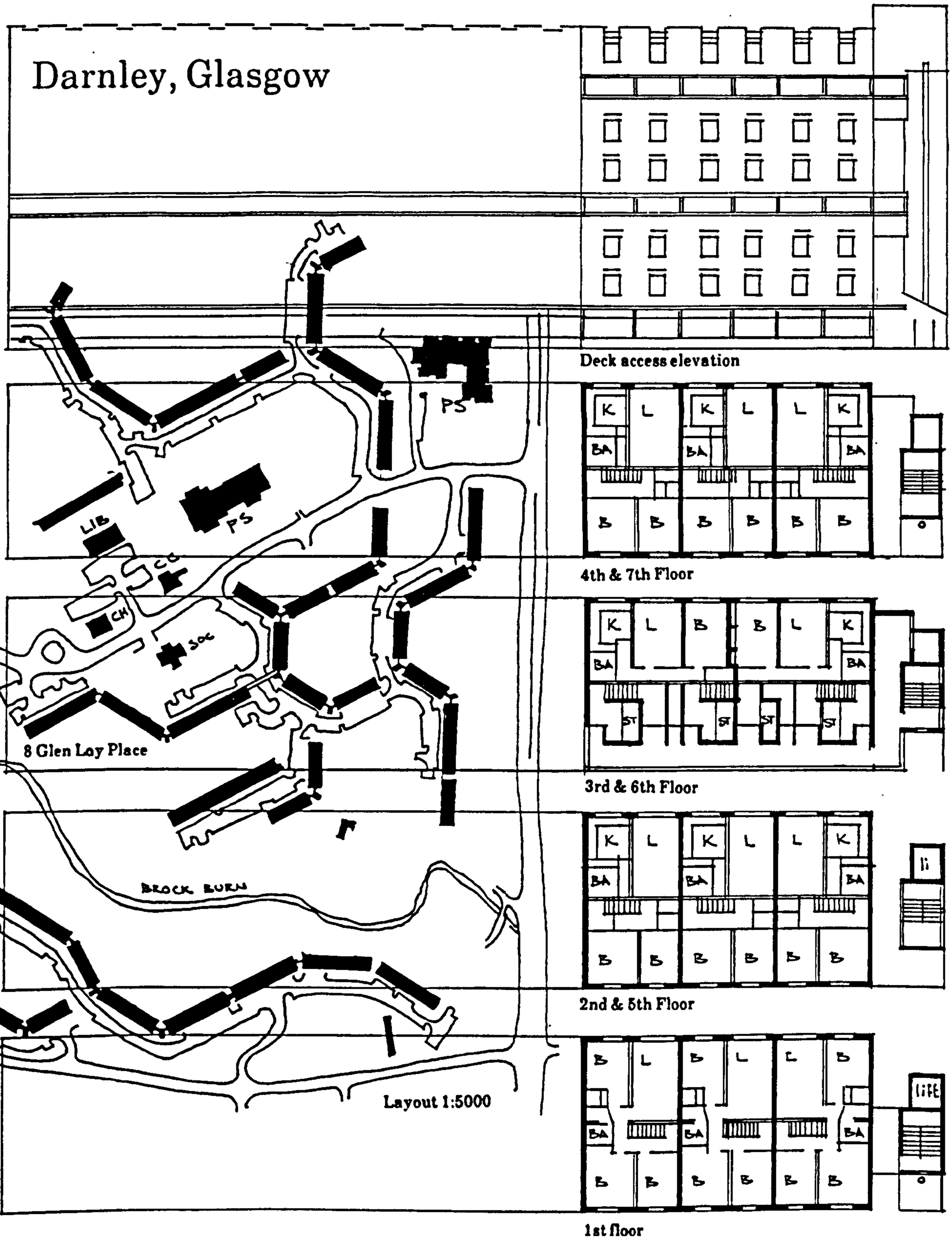
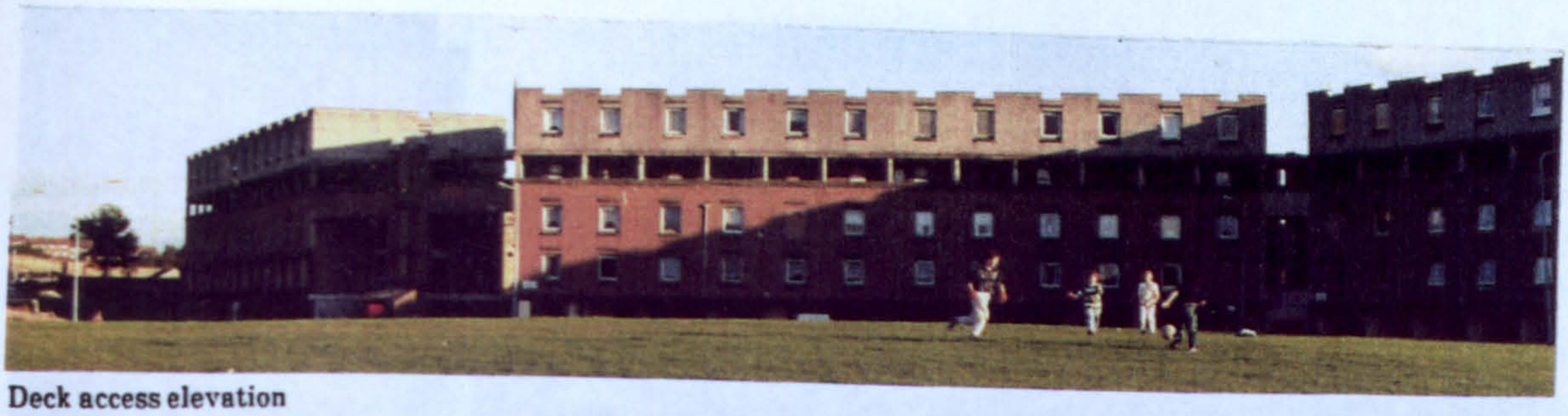


Figure 7.11

Darnley, Glasgow



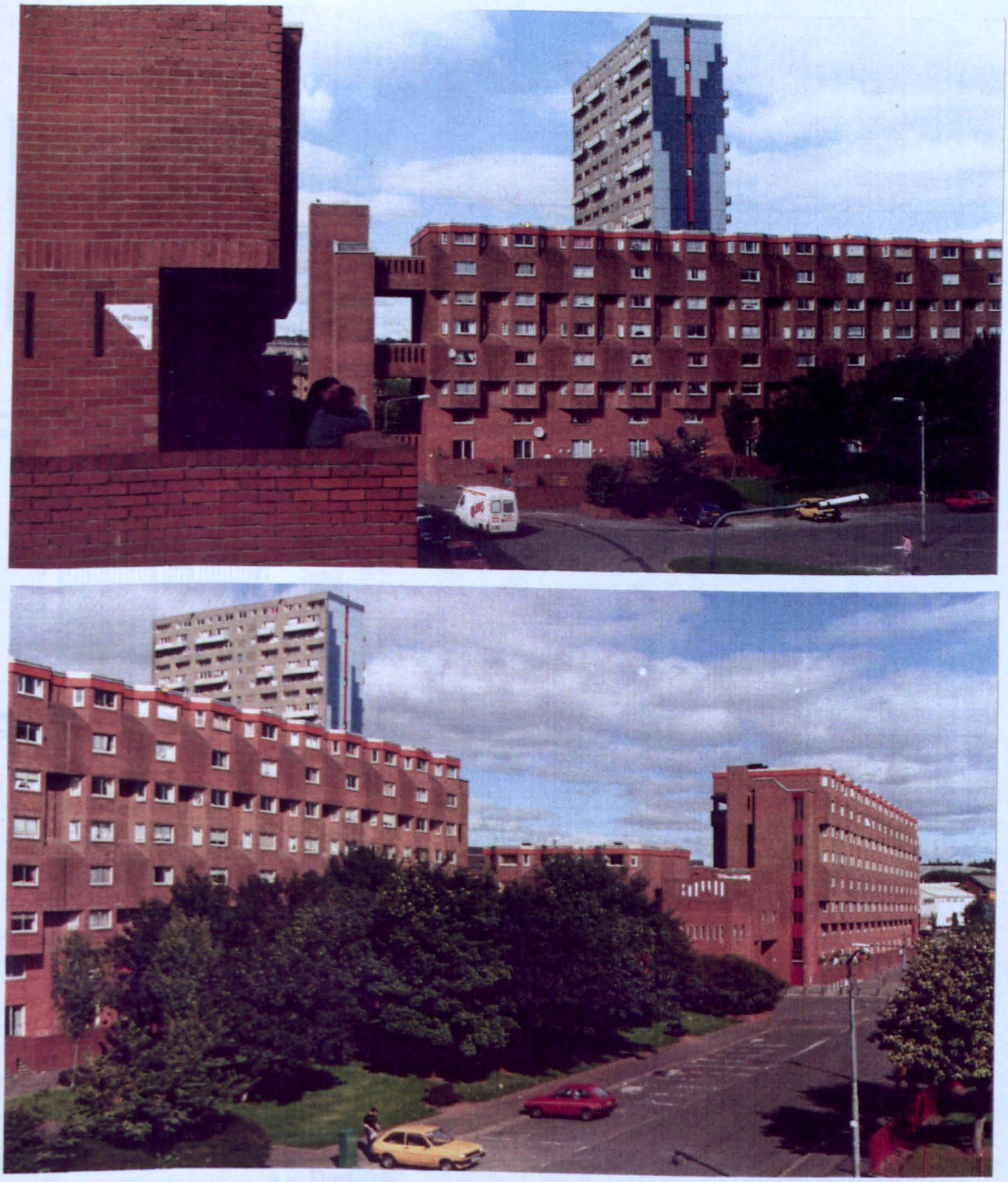
Deck access elevation

Living room elevation

One wing demolished 1994

Figure 7.12

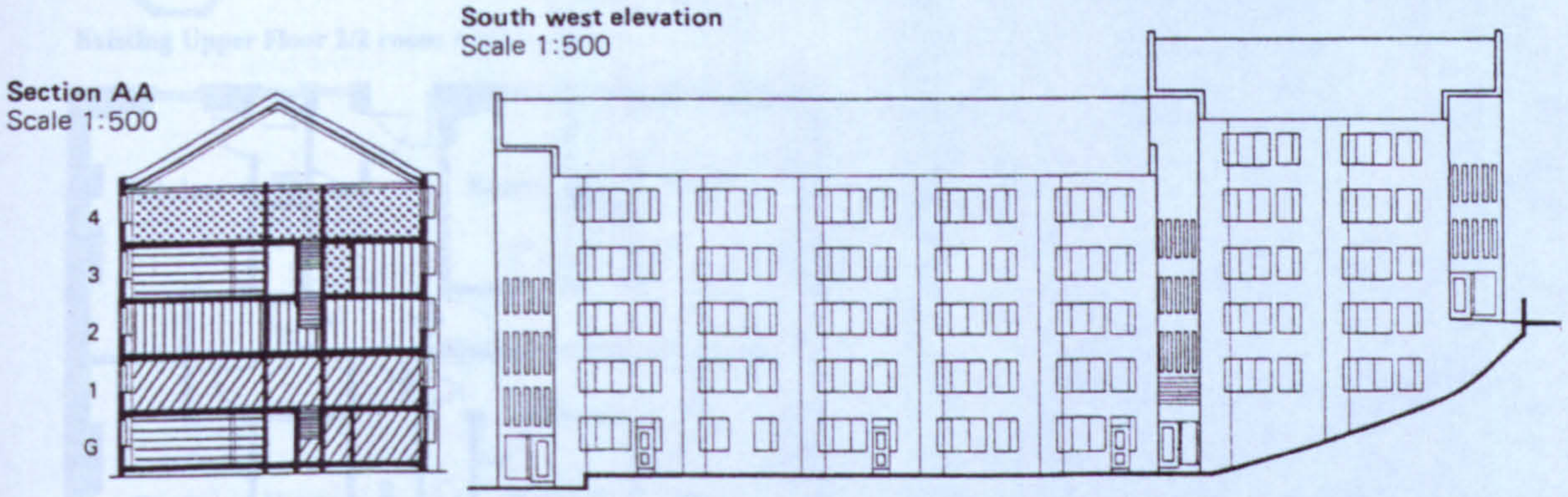
Phase 3, Woodside, St. George's Road, Glasgow



This is a hybrid of deck access from lift and escape stair and the traditional tenement.
A series of access stairs (independent of the main escape stair) rising from the 2nd floor upwards
gives access to two flats off each landing. The elevations also have the bay window feature of the tenements.

Figure 7.13

India Place, Stockbridge, Edinburgh



Saltire Commendation 1976, Michael Laird & Partners

Figure 7.14

ASSIST

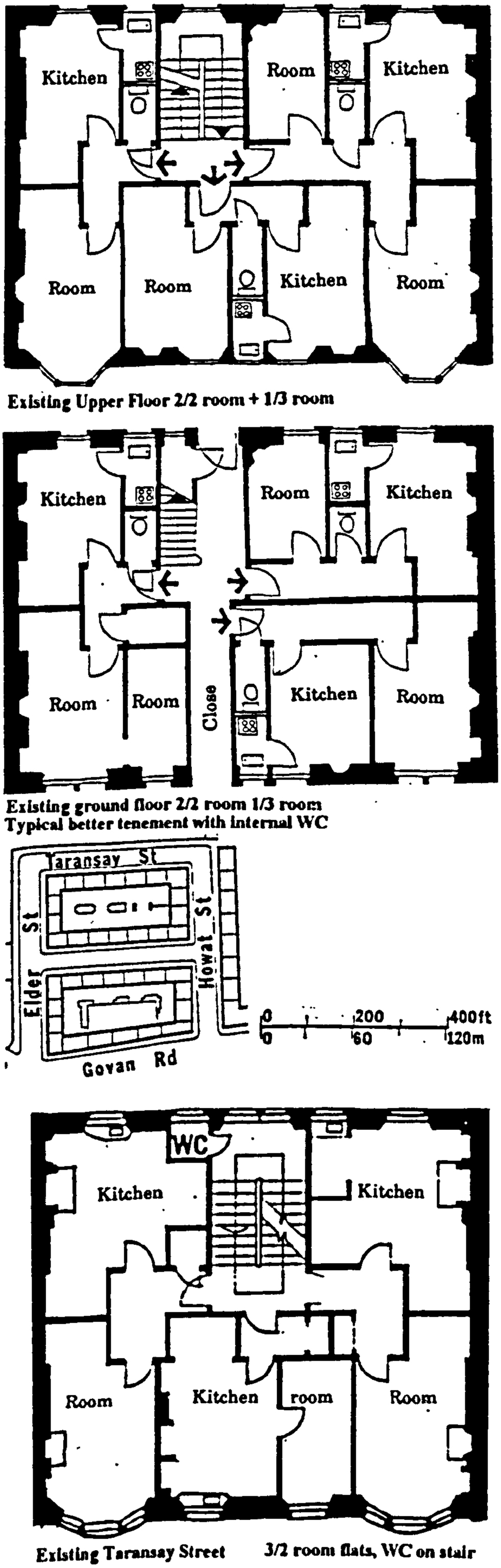
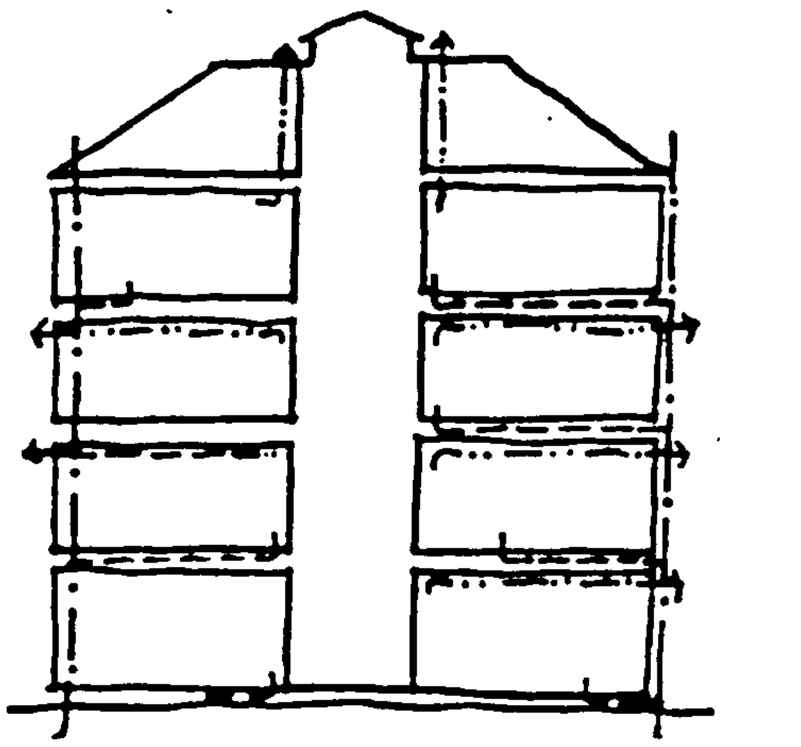
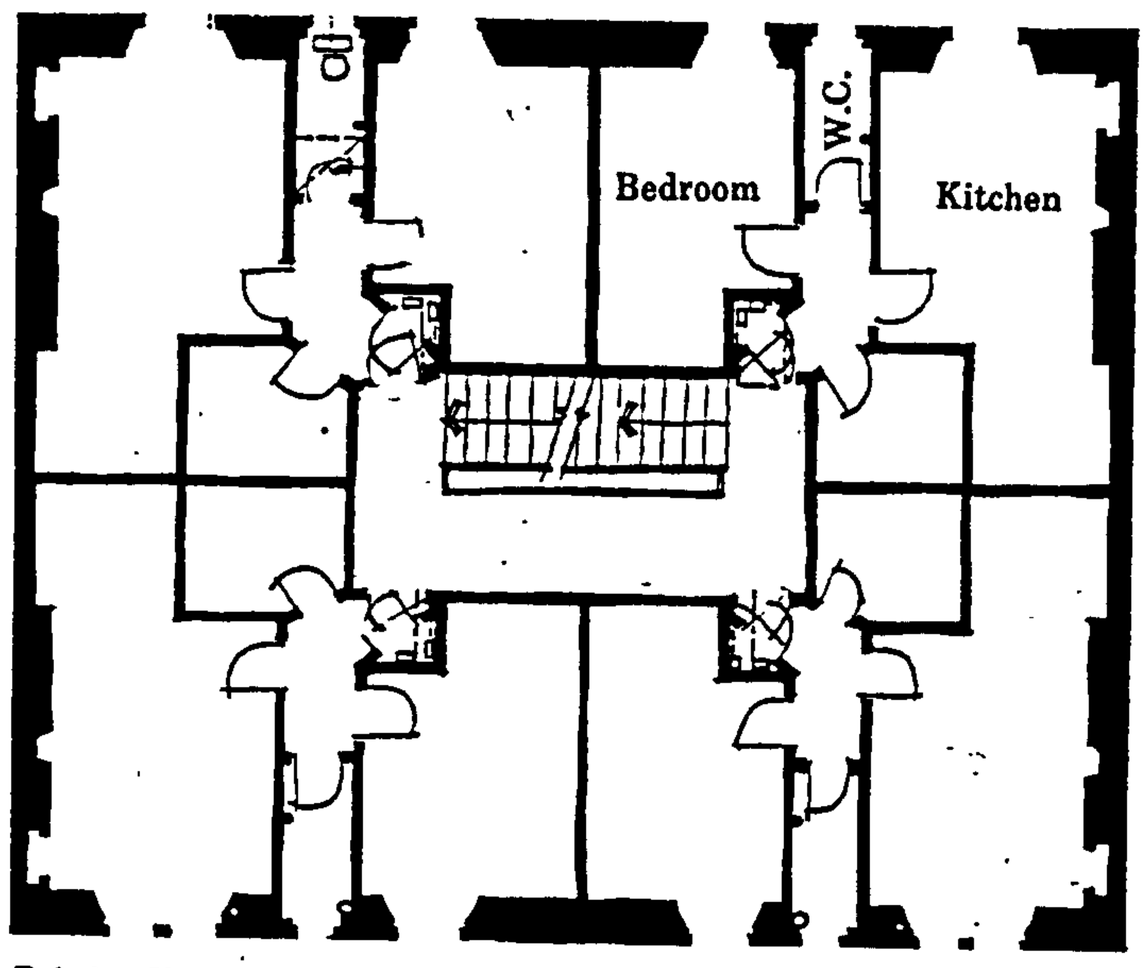


Figure 7.15

Phased Tenement Improvement

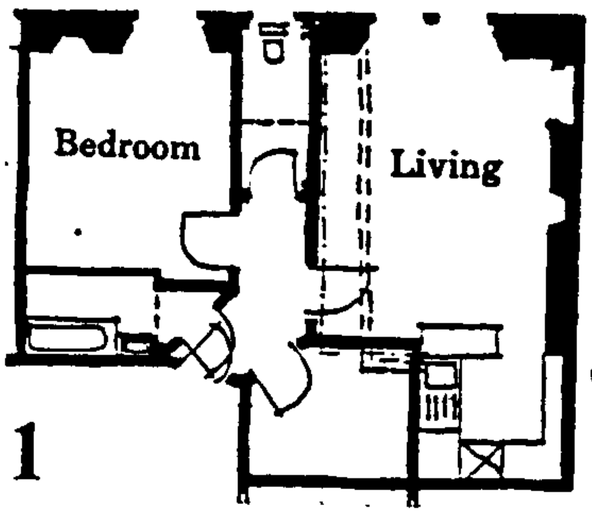




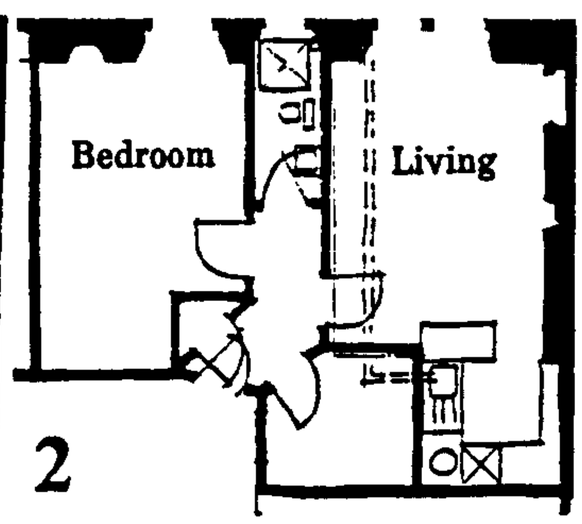
Existing Upper floor 4/2 room flats
Typical Edinburgh tenement

Flat improvements 6 typical alternatives

1. Bath and kitchen in recesses
2. Shower in WC, kitchen in recess
3. Shower in WC, kitchen in boxroom
4. Bath in boxroom, kitchen in recess
5. WC extended to form shower
6. WC extended to form bathroom



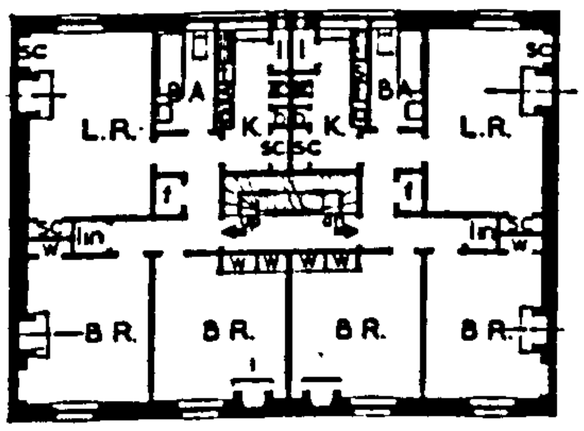
Bath and kitchen in recesses



Shower in WC, kitchen in recess

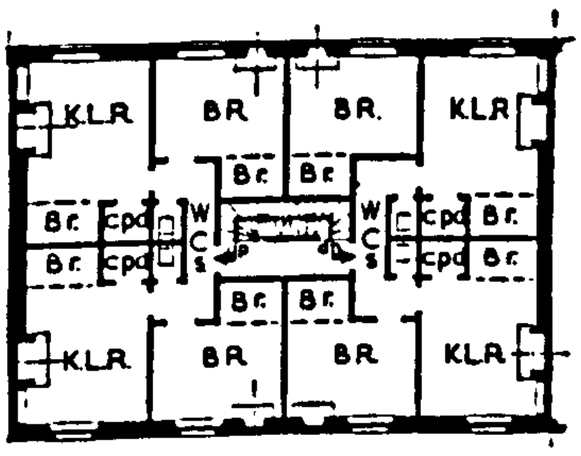
Modernising our Homes 1947

PLAN AFTER MODERNISATION



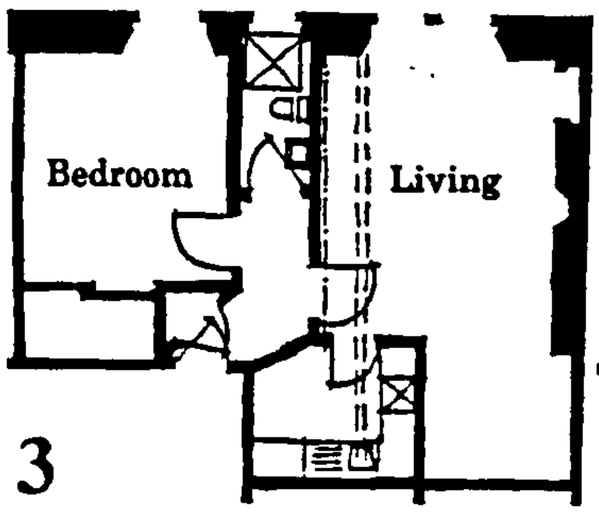
UPPER FLOOR
Two 3-Apartment Houses on each Floor.

PLAN AS EXISTING

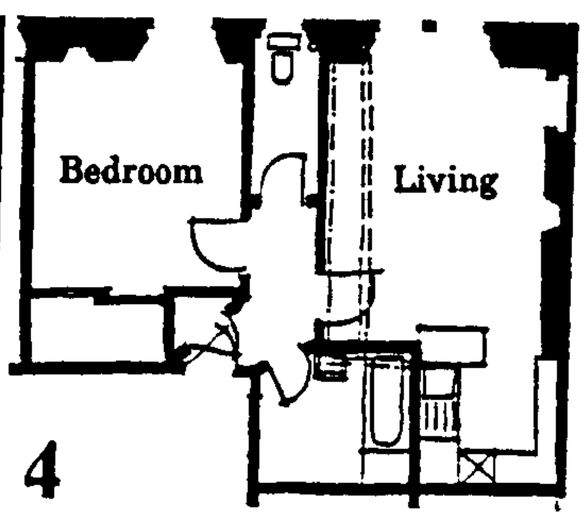


UPPER FLOOR
Four 2-Apartment Houses on each Floor.

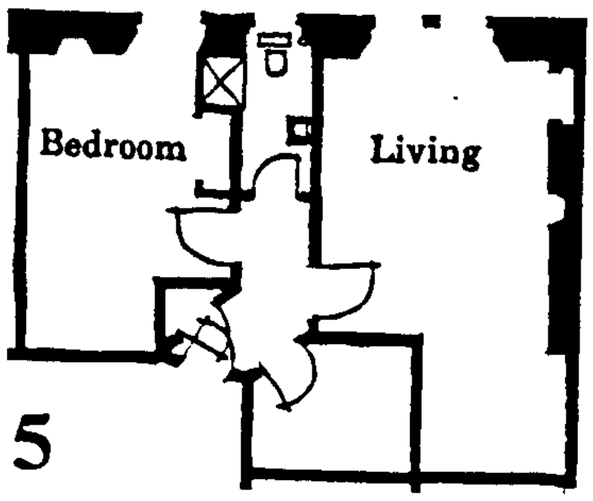
TENEMENT OF BACK-TO-BACK 2-APARTMENT HOUSES EACH HAVING A DARK W.C. TWO HOUSES COMBINED AND MODERNISED TO FORM ONE "THROUGH" HOUSE OF THREE APARTMENTS



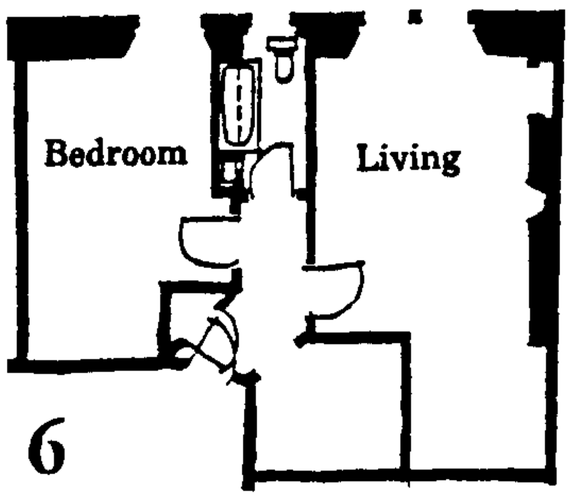
Shower in WC, kitchen in boxroom



Bath in boxroom, kitchen in recess



WC extended to form shower



WC extended to form bathroom

Figure 7.16

New Lanark Housing Association

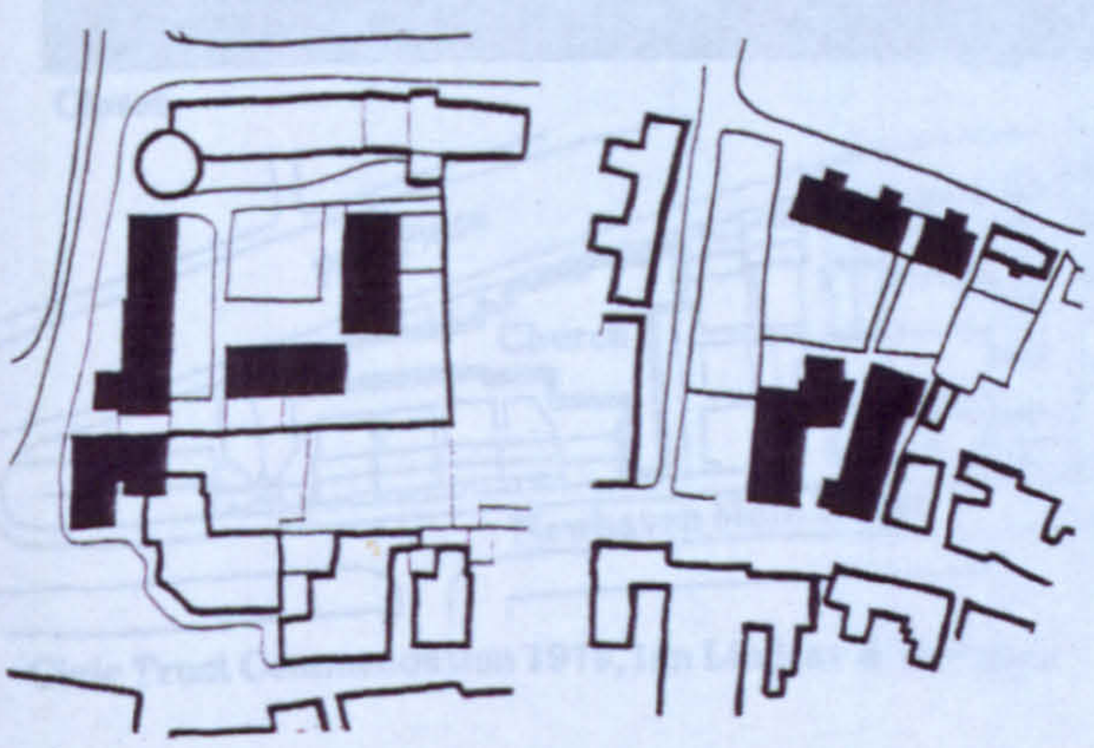
Nursery buildings and shop.

New Lanark Village

Phase 2 - Civic Trust Award 1971, Bronxfield Row R.I.C.S. Conservation Award 1981, Ian Lindsay & Partners

Figure 7.17

Palace Road, Spence's Square, Kirkwall, Orkney



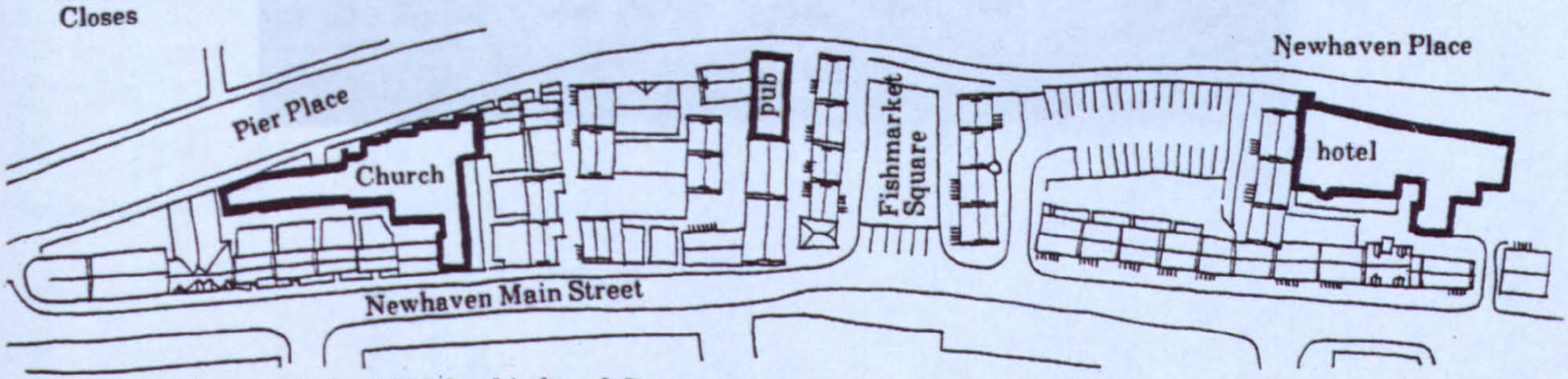
Top. Palace Road, Saltire Award 1970
Mid. Spence's Square, Victoria Street, Saltire Commendation 1978, Civic Trust Commendation 1980
Foot Left. Palace Road. Restoration on street, new cottages behind
Foot Right. Spence's Square, Victoria Street. Restoration on street, new cottages behind
Sinclair Macdonald & Son

Figure 7.18

Newhaven C.D.A., Edinburgh

Newhaven Main Street

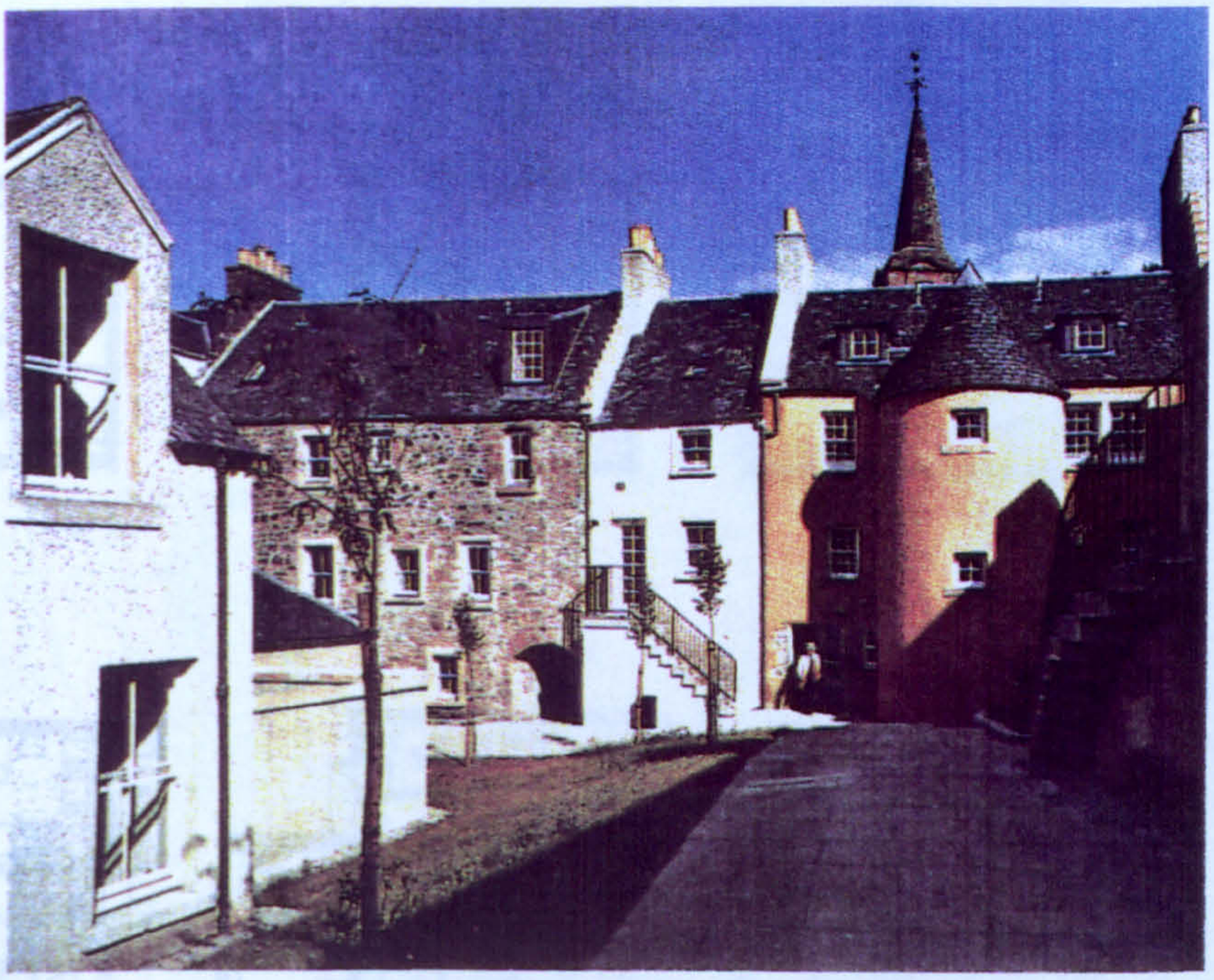
Closes



Civic Trust Commendation 1979, Ian Lindsay & Partners

Figure 7.19

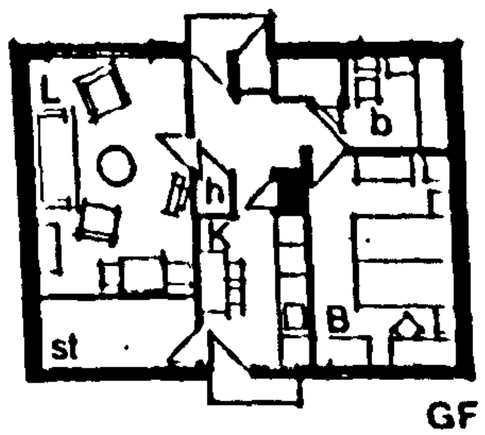
Market Place, Castlegate, Exchange Street, Jedburgh



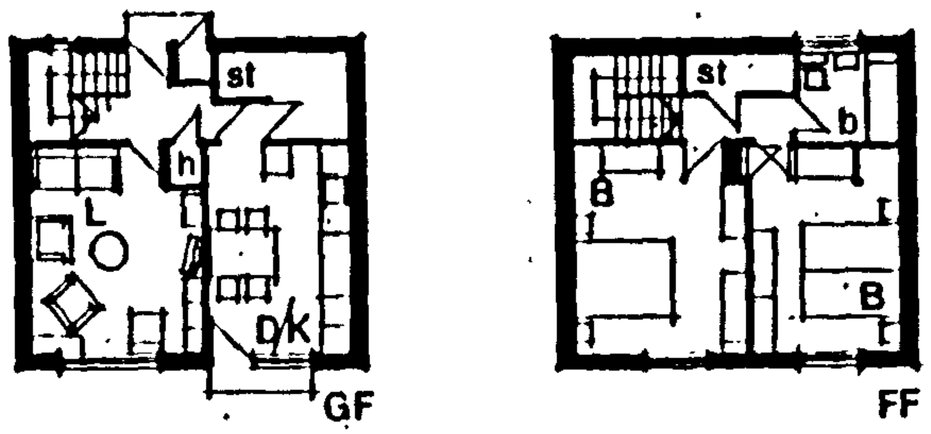
Saltire Award 1977
Civic Trust Award 1978,
Europa Nostra Medal 1980, S.S.H.A.

Figure 7.20

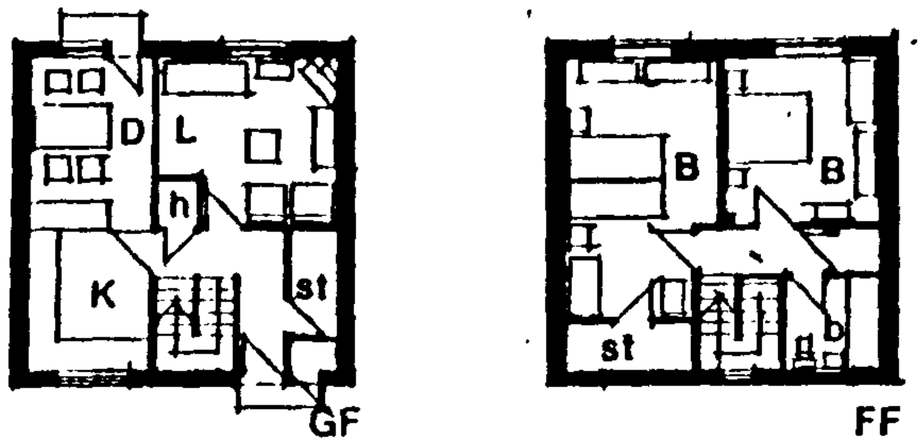
Type A.
2 Person
2 Apt.



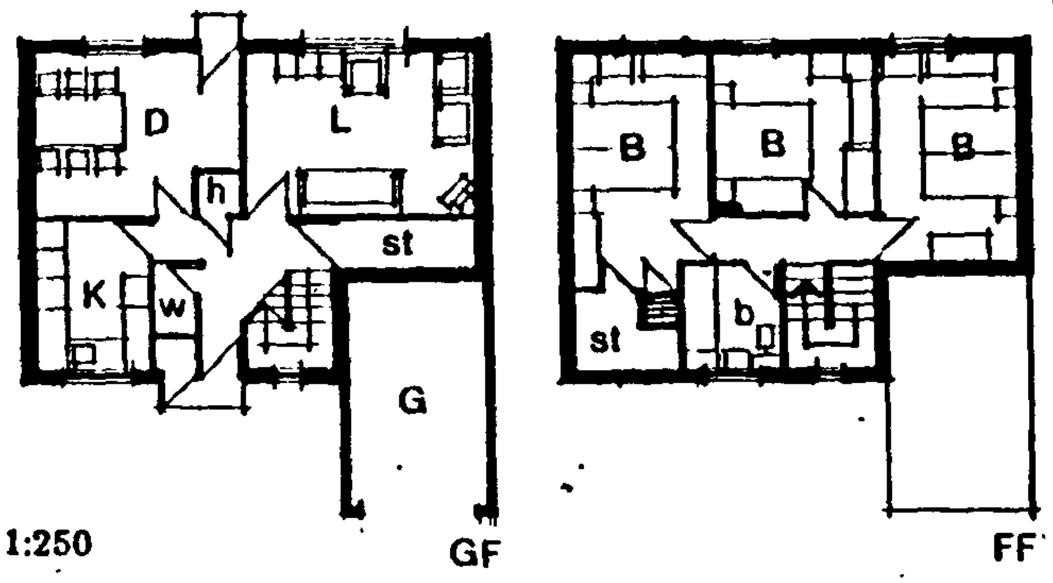
Type B.
4 Person
3 Apt.



Type C.
4 Person
3 Apt.

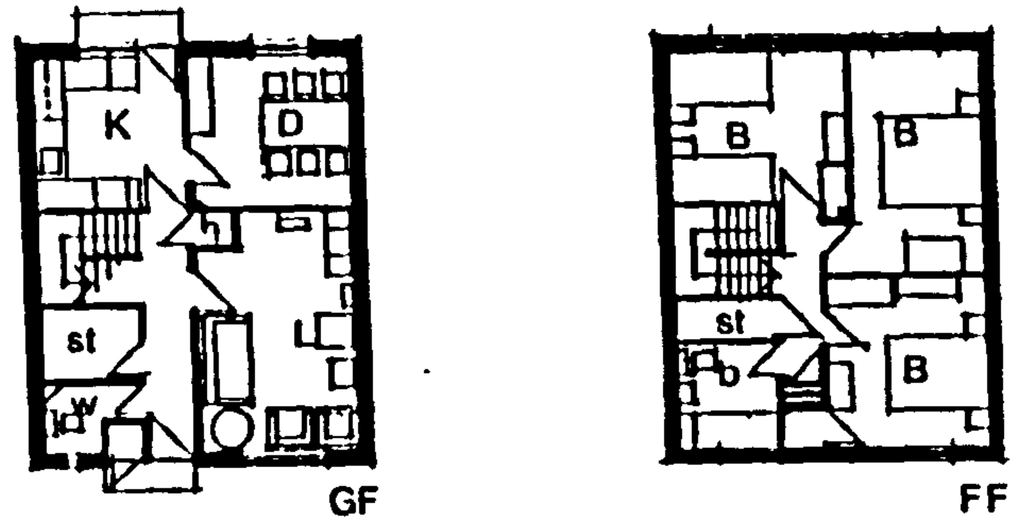


Type D.
6 Person
5 Apt.

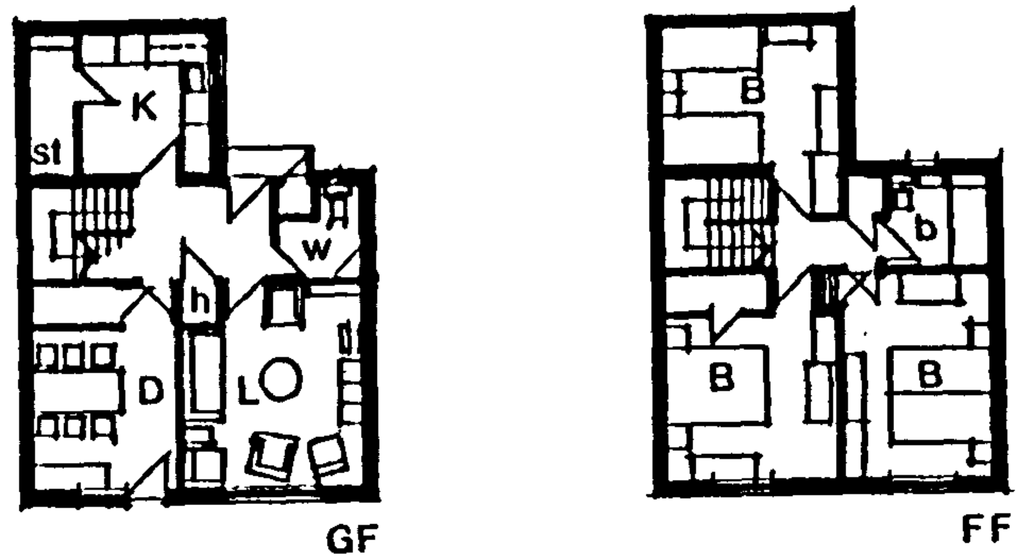


house type scale 1:250

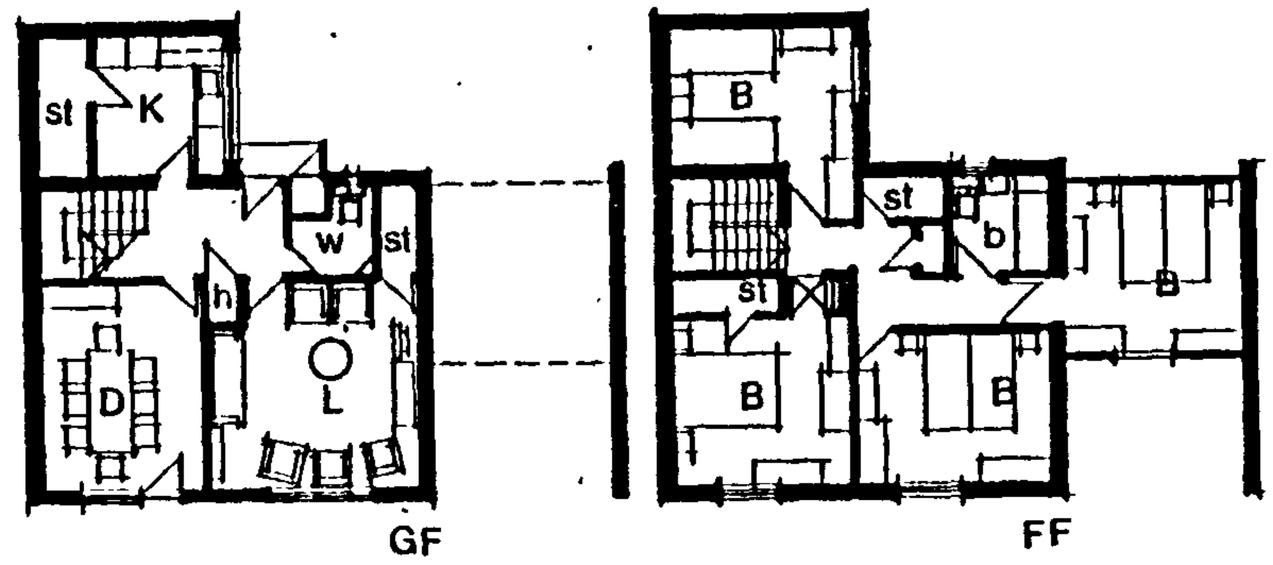
Type E.
6 Person
5 Apt.



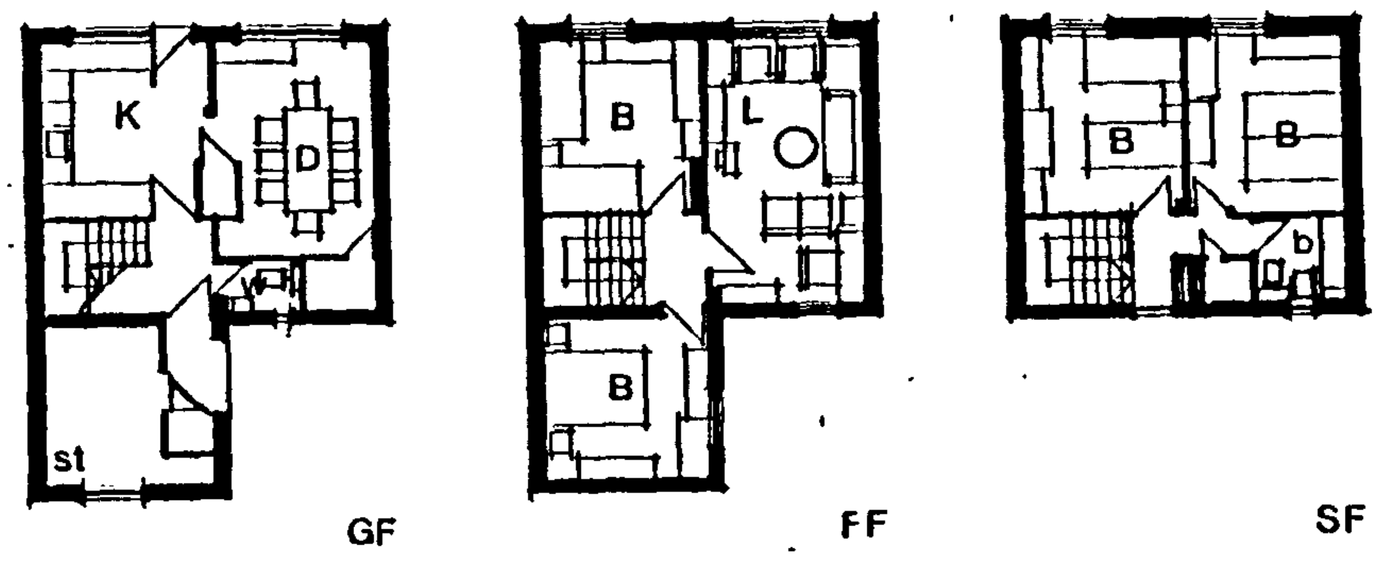
Type F.
6 Person
5 Apt.



Type G.
8 Person
6 Apt.



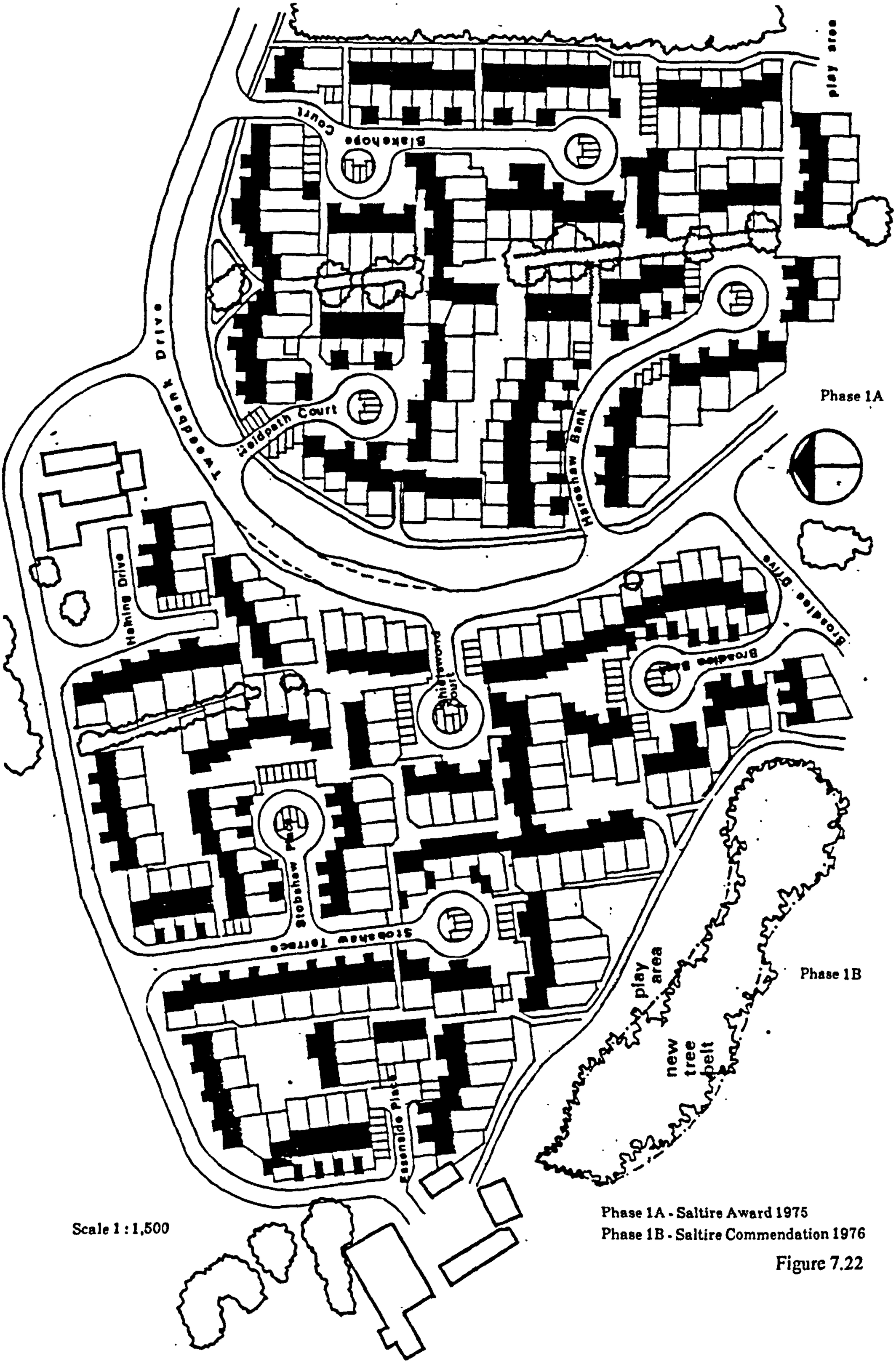
Type H.
8 Person
6 Apt.



Tweedbank Phase 1, Galashiels

Figure 7.21

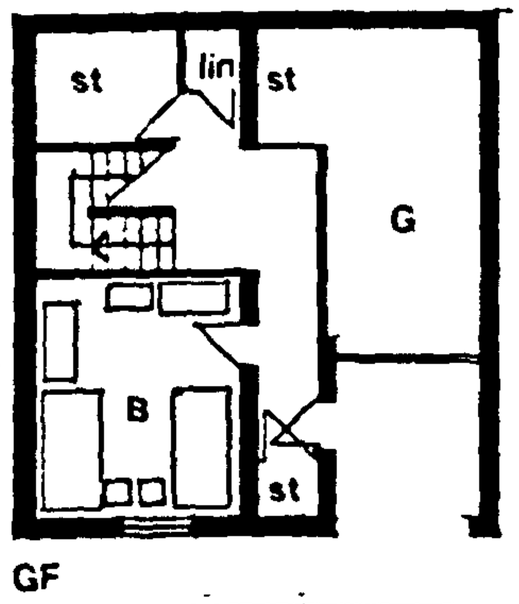
Tweedbank Phase 1, Galashiels



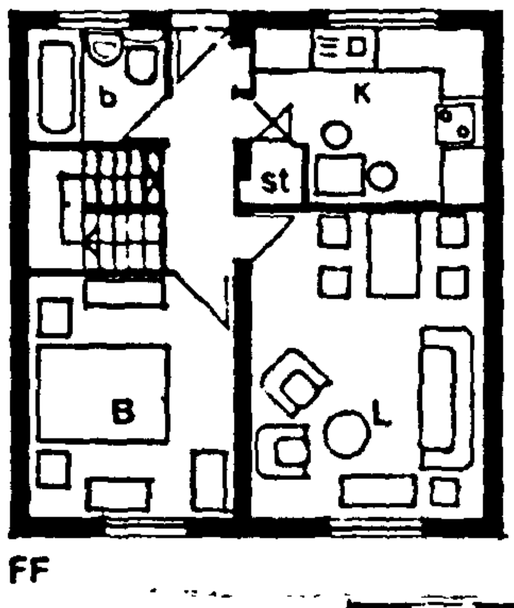
Phase 1A - Saltire Award 1975
Phase 1B - Saltire Commendation 1976

Figure 7.22

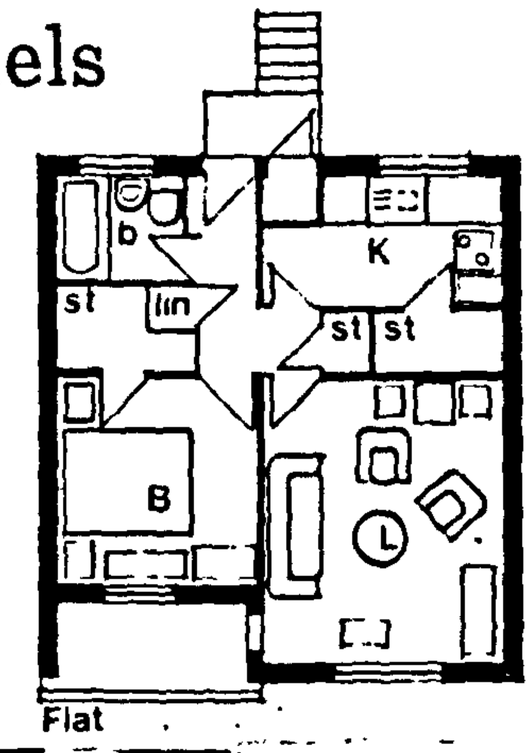
Tweedbank, Phase 3A, Galashiels



GF



FF



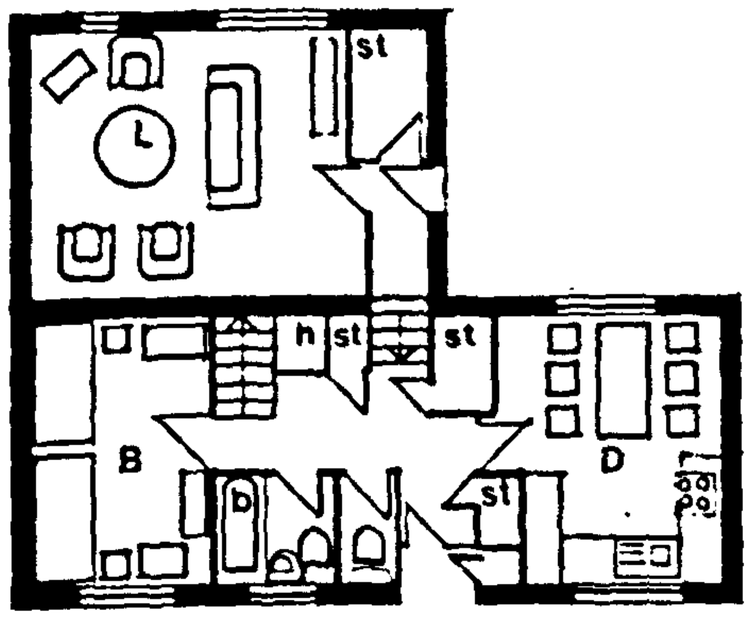
Flat

Type A1

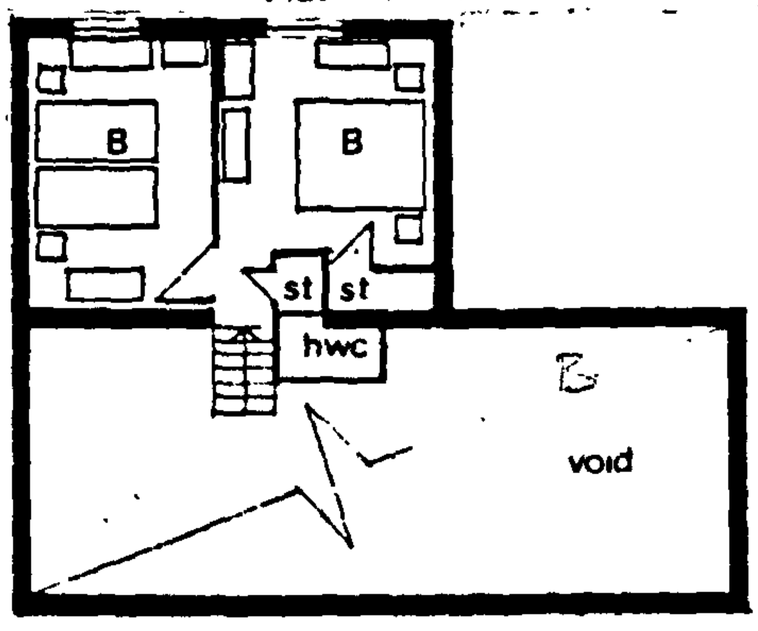
4 Person
3 Apt

A2.

2 Person
2 Apt



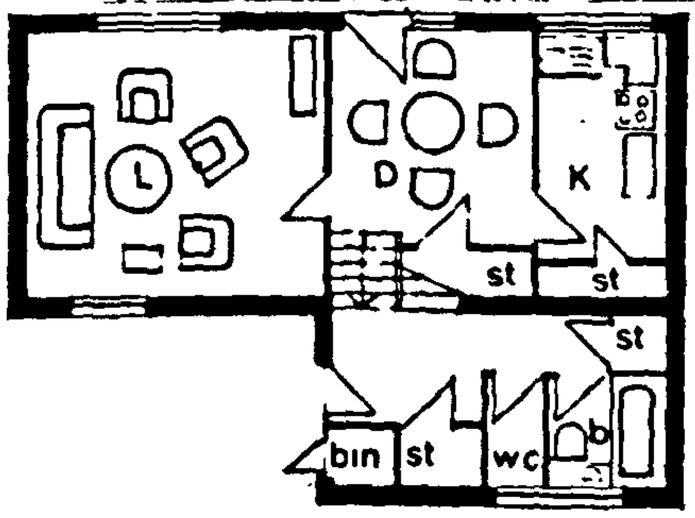
GF

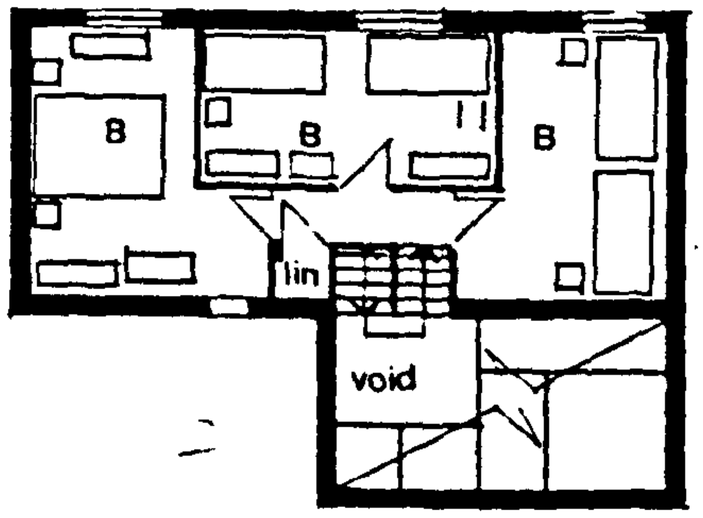


FF

Type B

6 Person
4 Apt split level



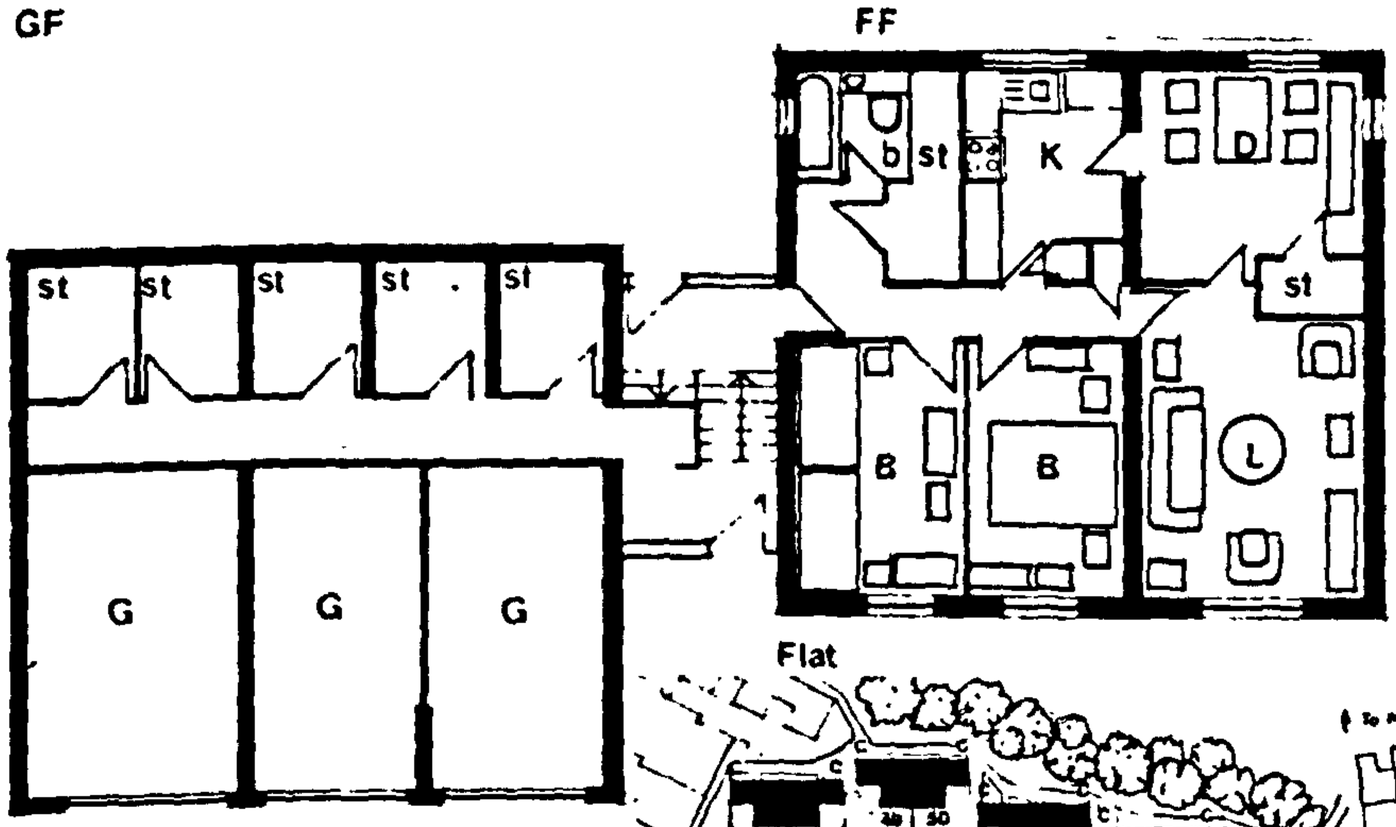


Type C.

6 Person
5 Apt split level

GF

FF

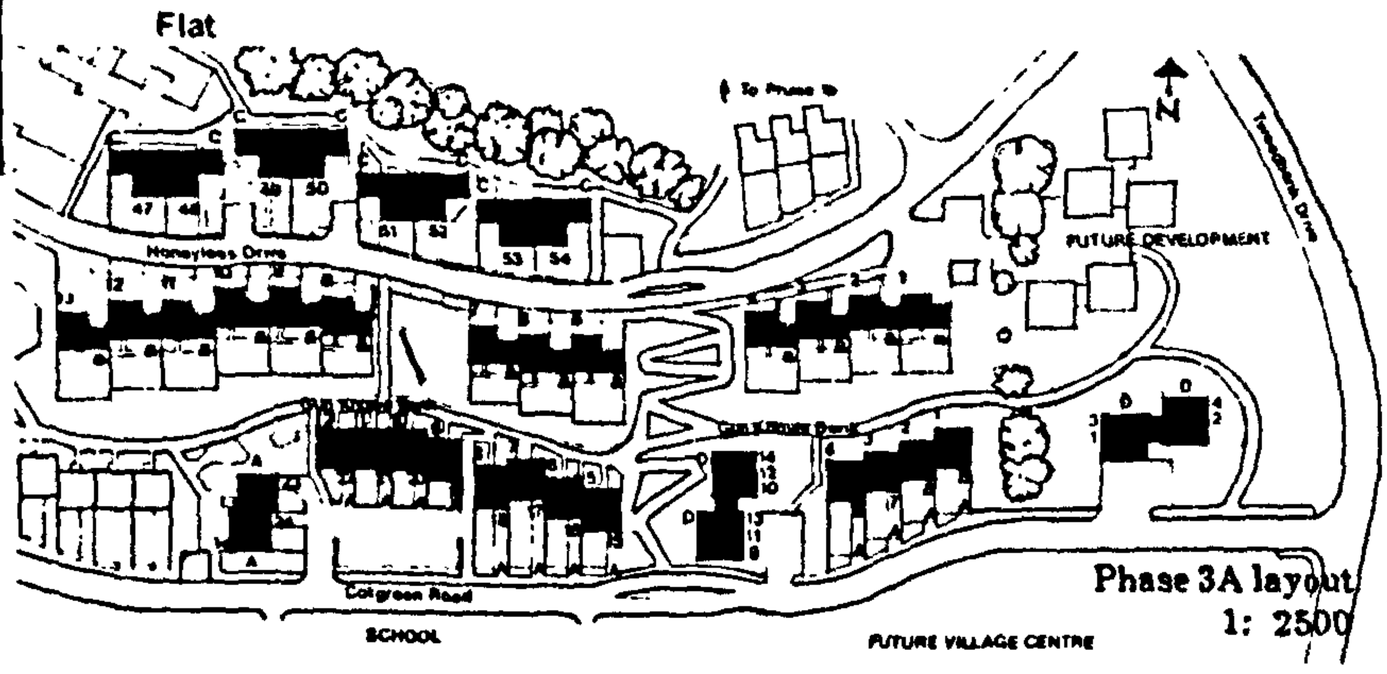


Flat

Type D

4 Person
3 Apt

house types 1:200



Phase 3A layout
1: 2500

Figure 7.23

Tweedbank, Galashiels

Top. Garaging off access road
Mid. Pedestrian vehicle court
Foot. Phase 3A two person flat over 4 person house on south facing slope

Figure 7.24

Bourtreehill, Irvine

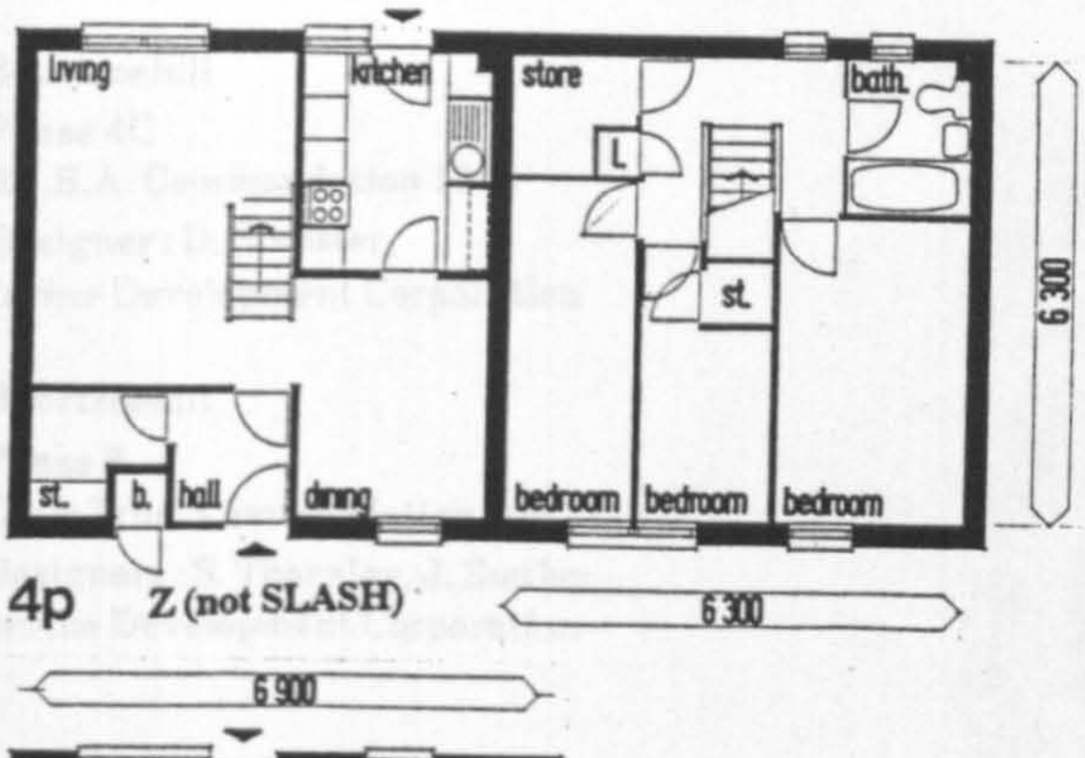
Short culs-de-sac and winding roads used to reduce traffic speed. Roads are used by both pedestrians and vehicles

Bus only community route at Bourtreehill Phase 1

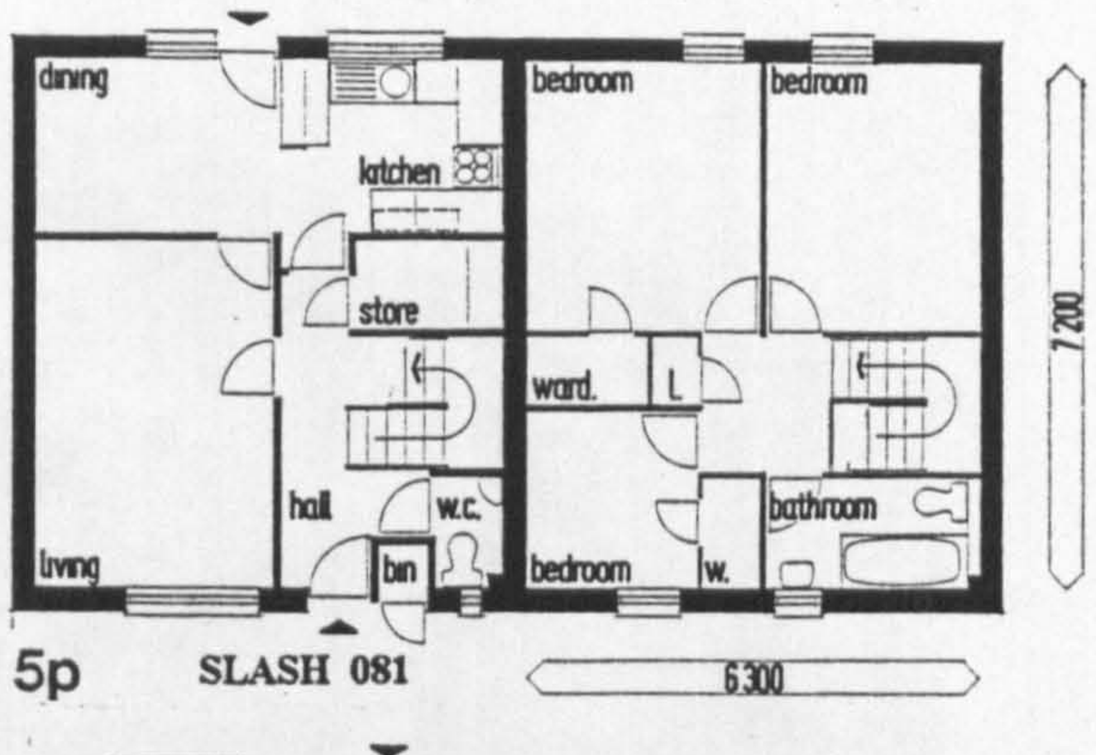
Figure 7.25

Bourtreehill, Irvine

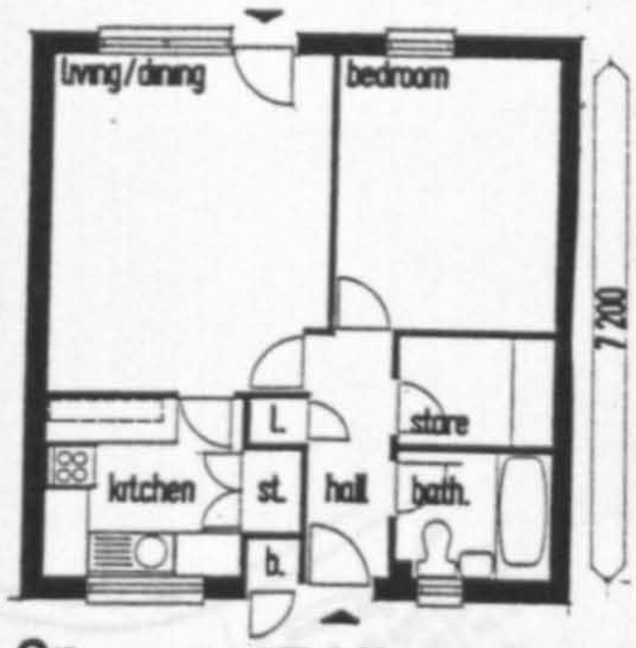
SLASH House Types



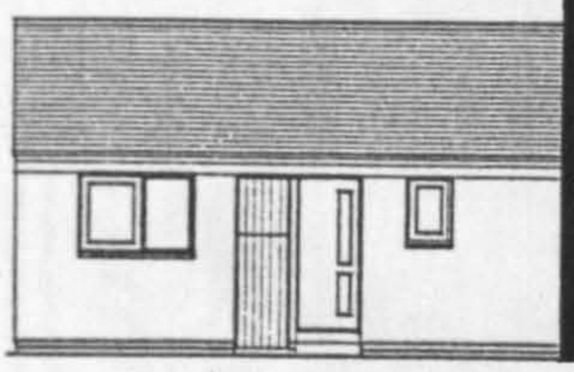
4p Z (not SLASH)



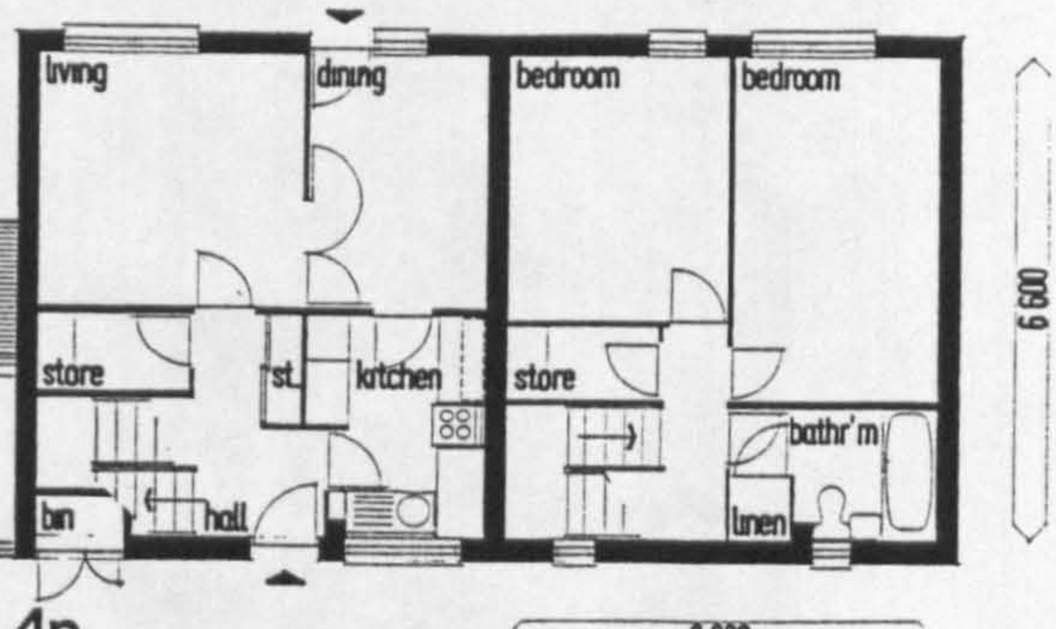
5p SLASH 081



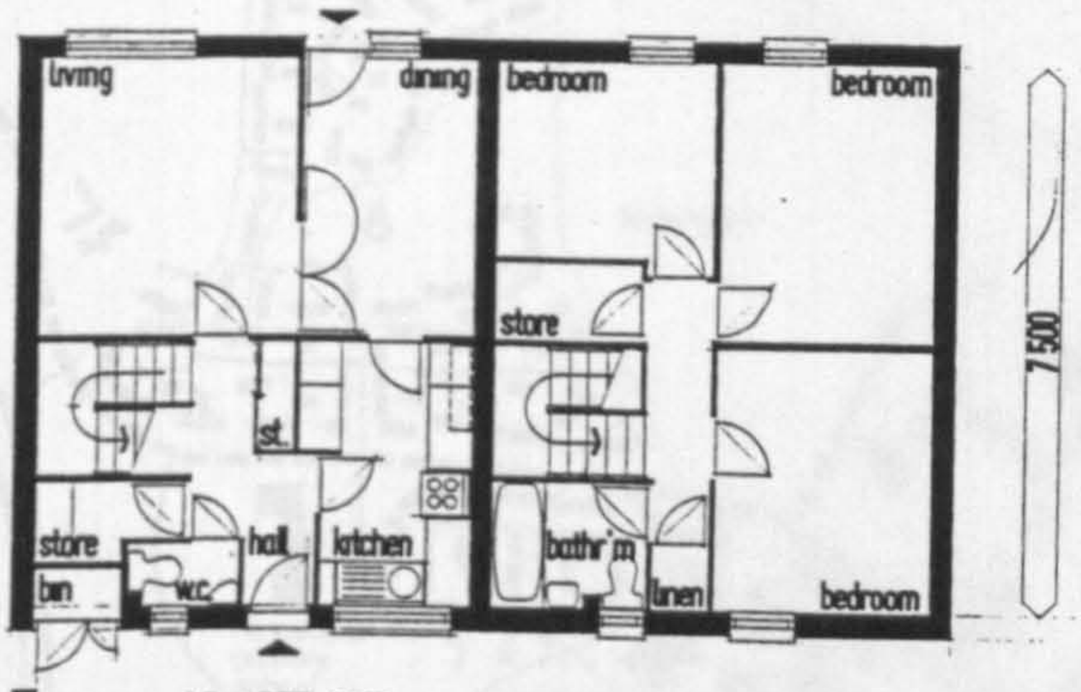
2p SLASH 261



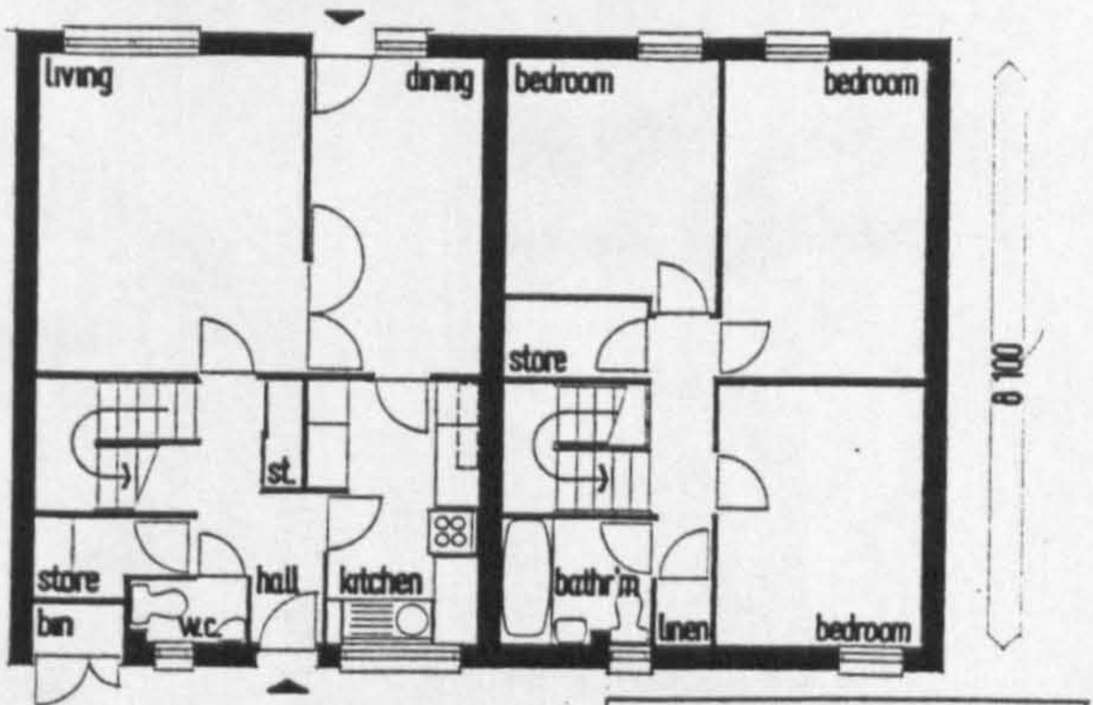
SLASH 261



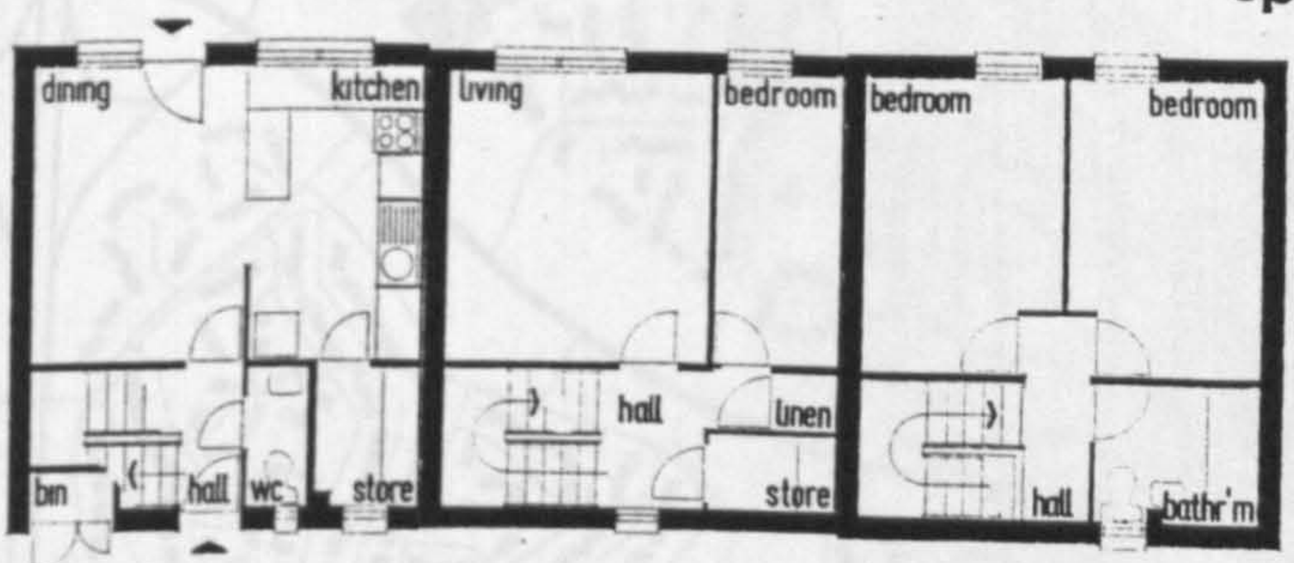
4p SLASH 281



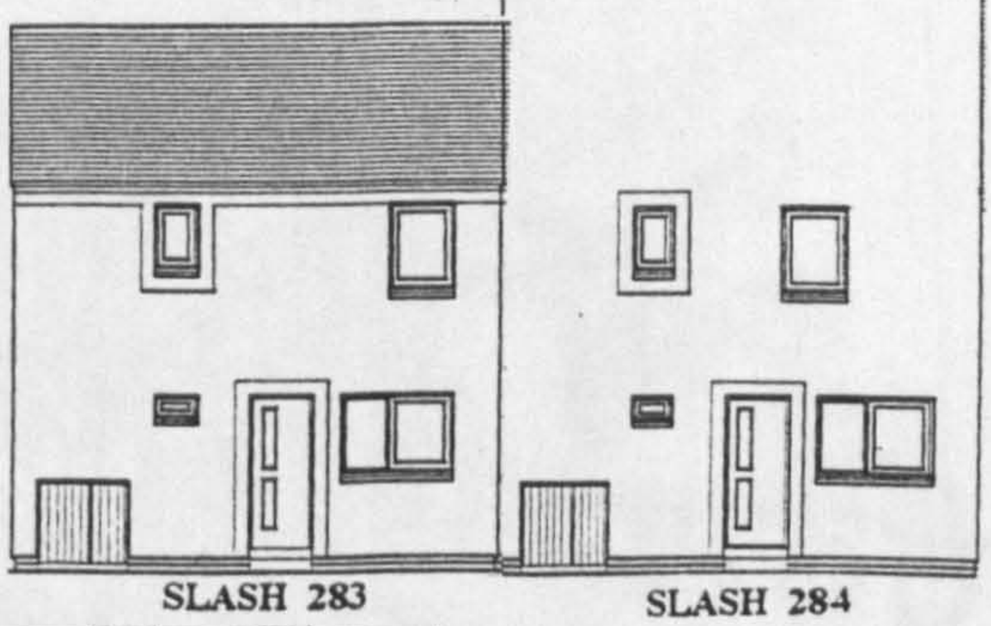
5p SLASH 283



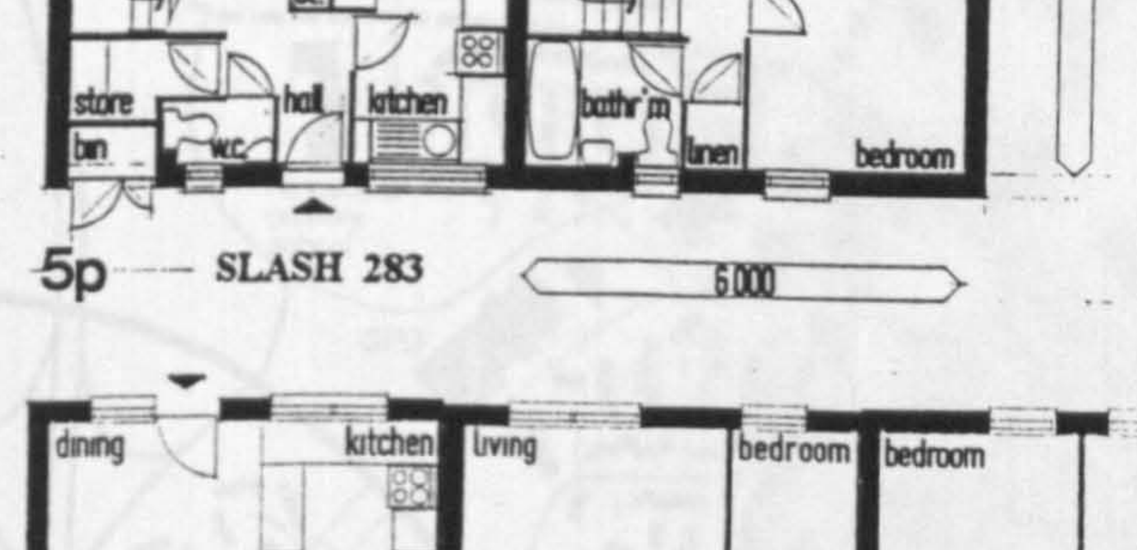
6p SLASH 284



5p SLASH 247



SLASH 283 SLASH 284



7p SLASH 355

Figure 7.26

Bourtreehill, Irvine

Bourtreehill
Phase 4C
R.I.B.A. Commendation 1978
Designer : D. Simister,
Irvine Development Corporation

Bourtreehill
Phase 8
Civic Trust Commendation 1980
Designers : S. Thornley, J. Smiley,
Irvine Development Corporation

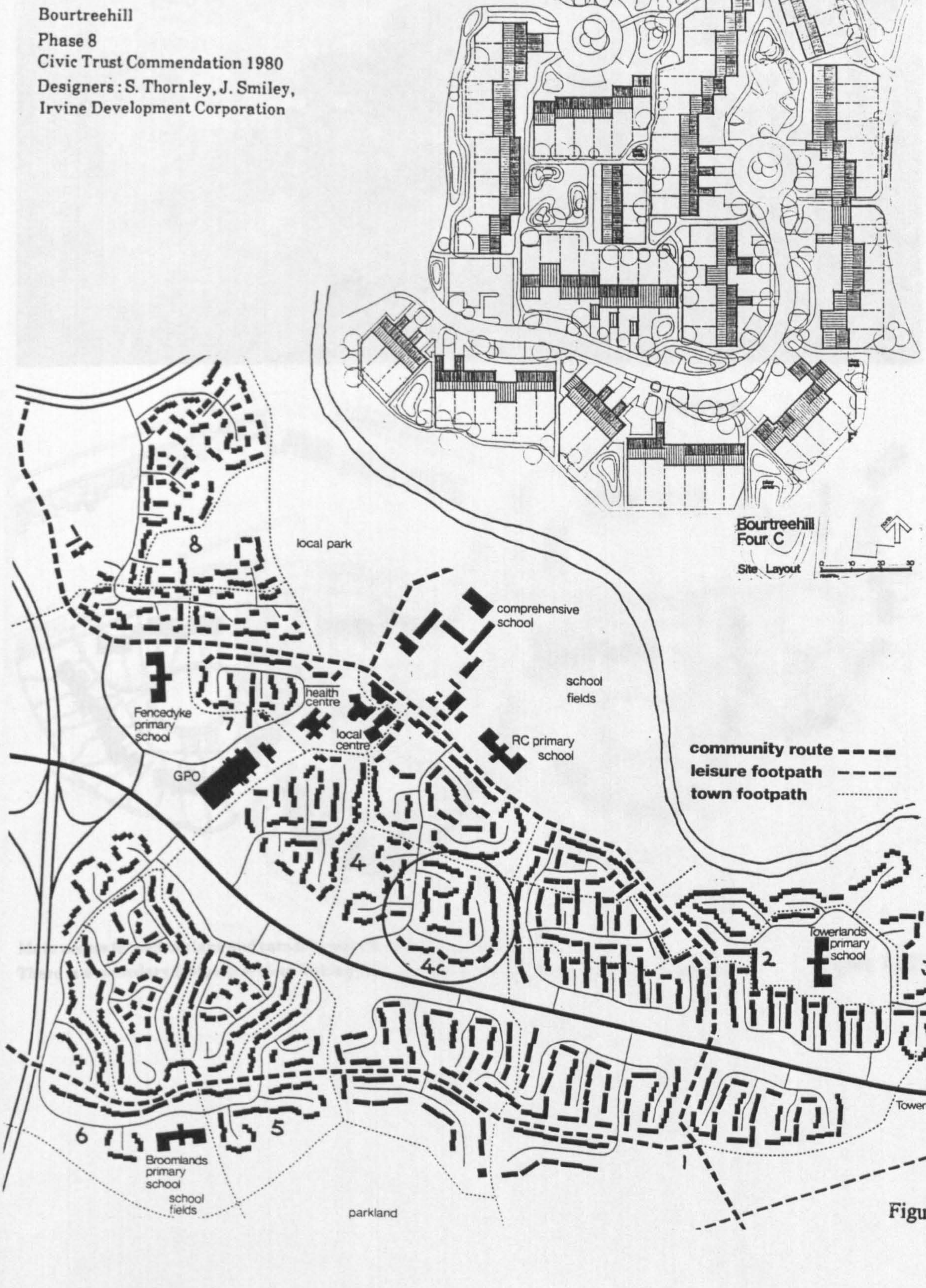
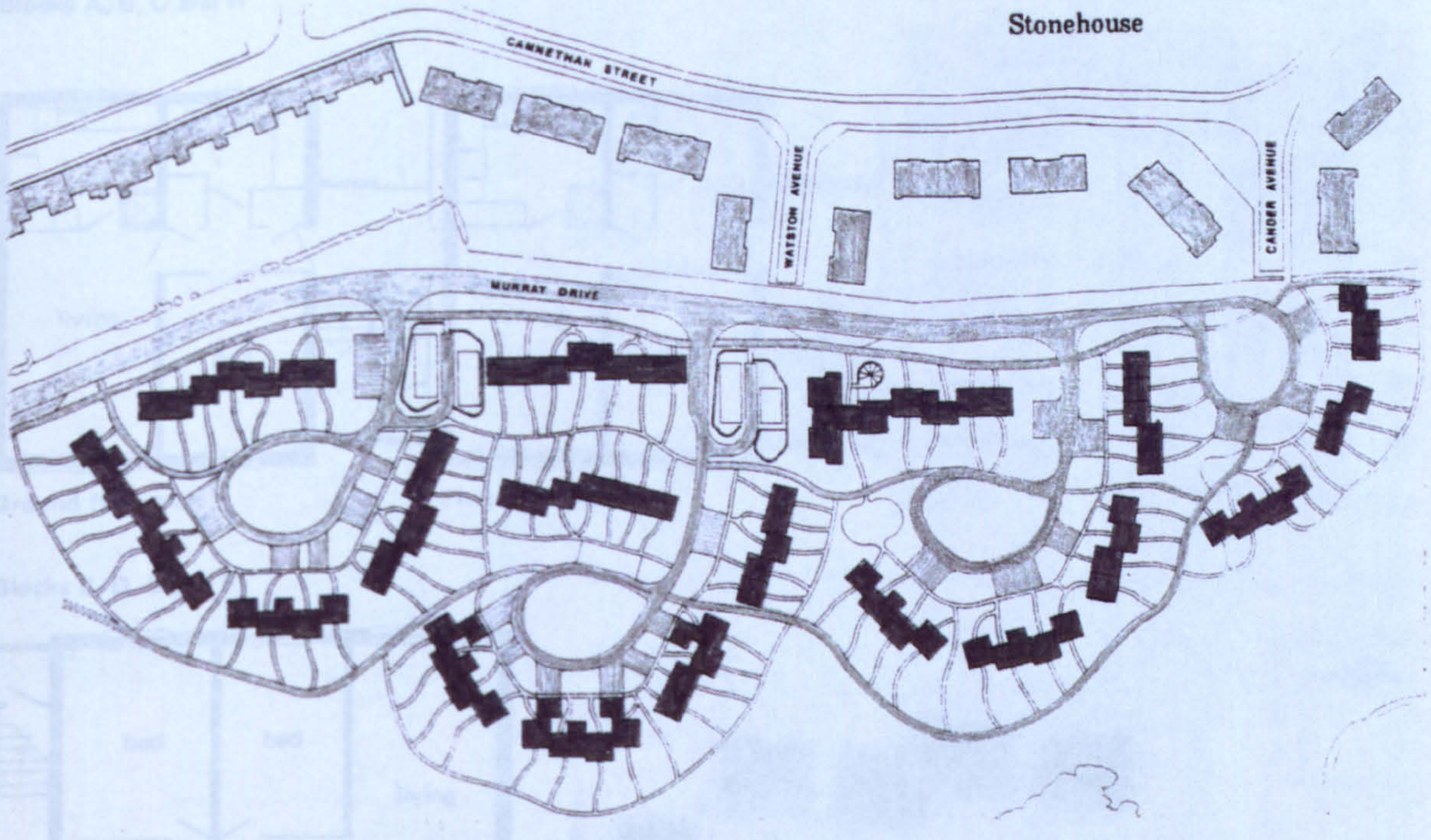


Figure 7.27

Stonehouse New Town



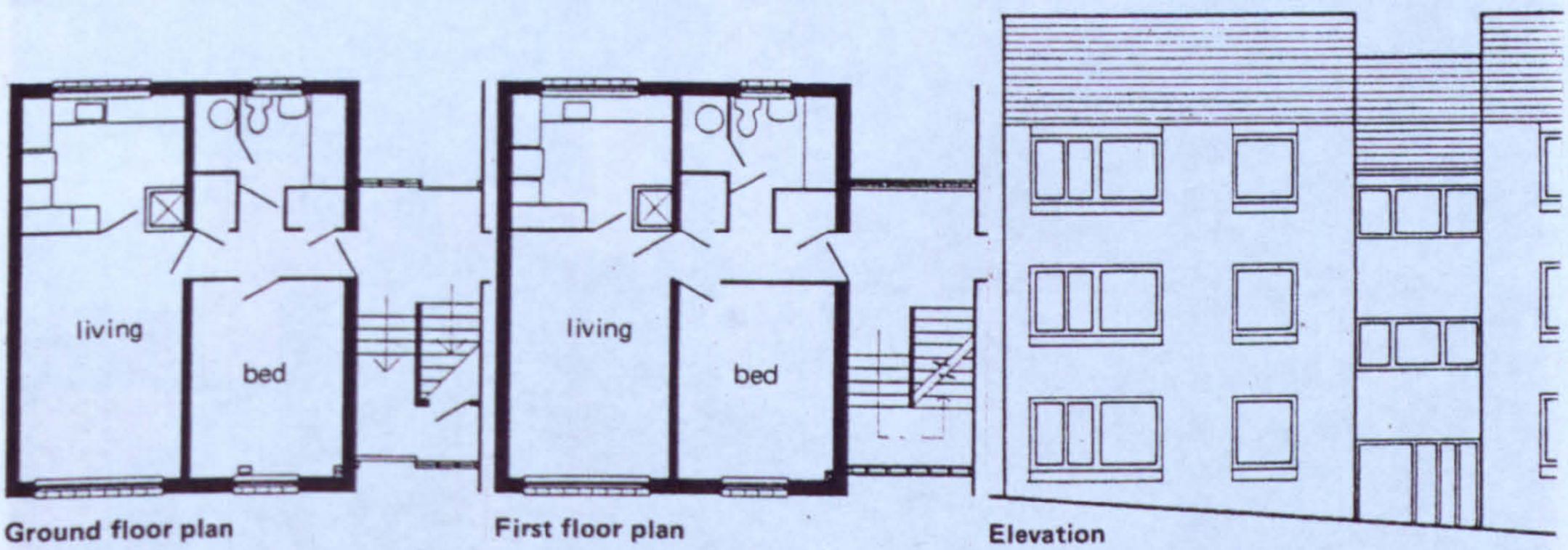
Main access for pedestrians and cars to houses is on 3 metre wide roads.
There is a secondary footpath system linking housing courts and giving access to back gardens.

Figure 7.28

Shaw Place and Trafalgar Square, Greenock

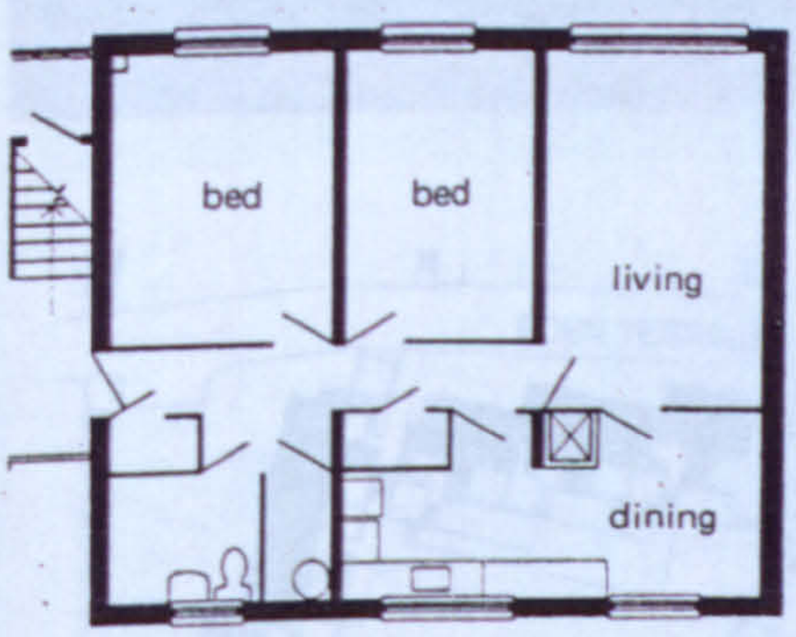
Walk up flats traditional form lacks the detail quality of the existing buildings

Blocks A, B, G and H



Ground floor plan **First floor plan** **Elevation**

Blocks C, D, E and F



Ground floor plan
Scale 1:200
Building 11 February 1977

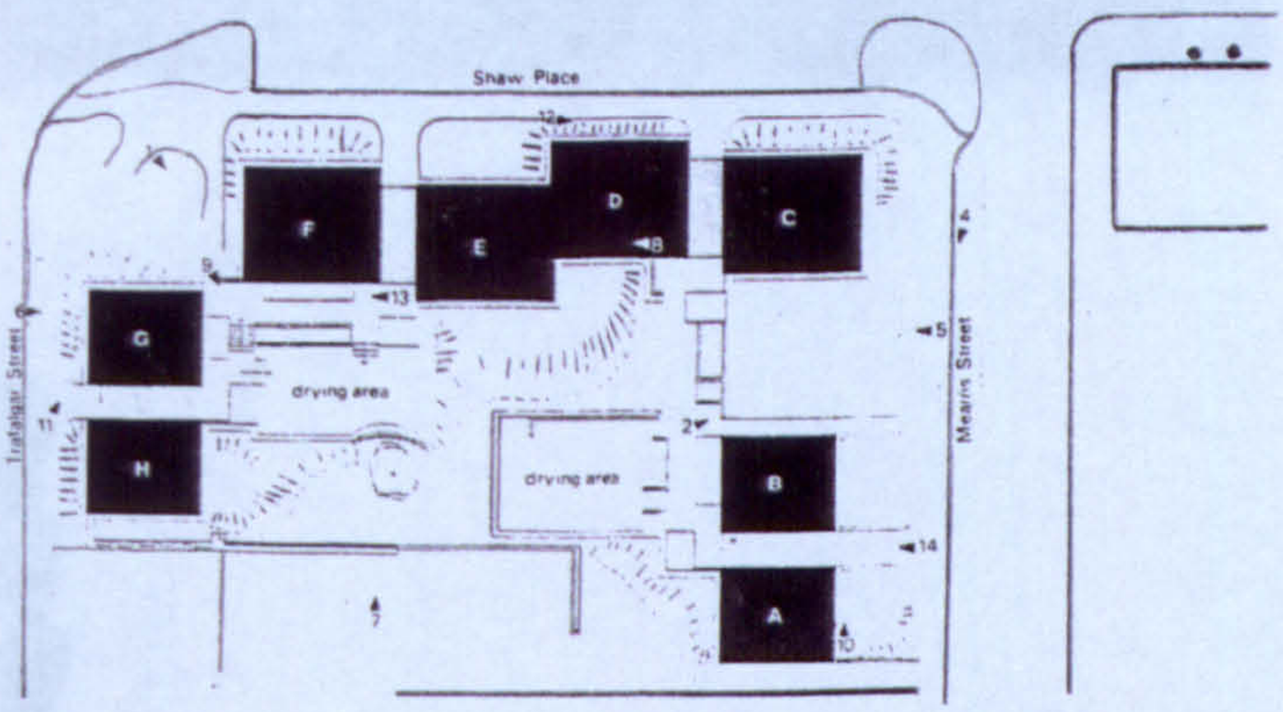
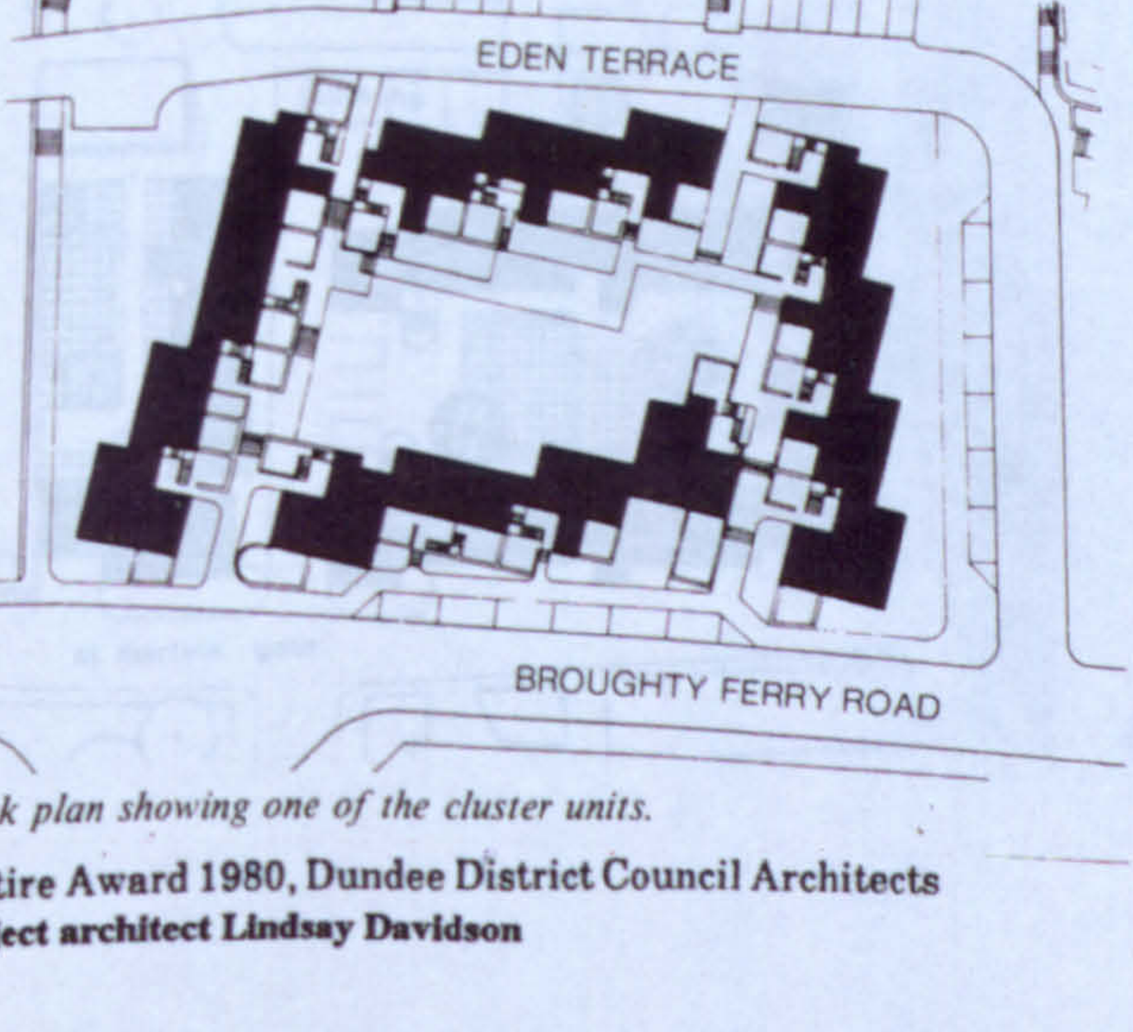


Figure 7.29

Watson Street, C.D.A., Dundee

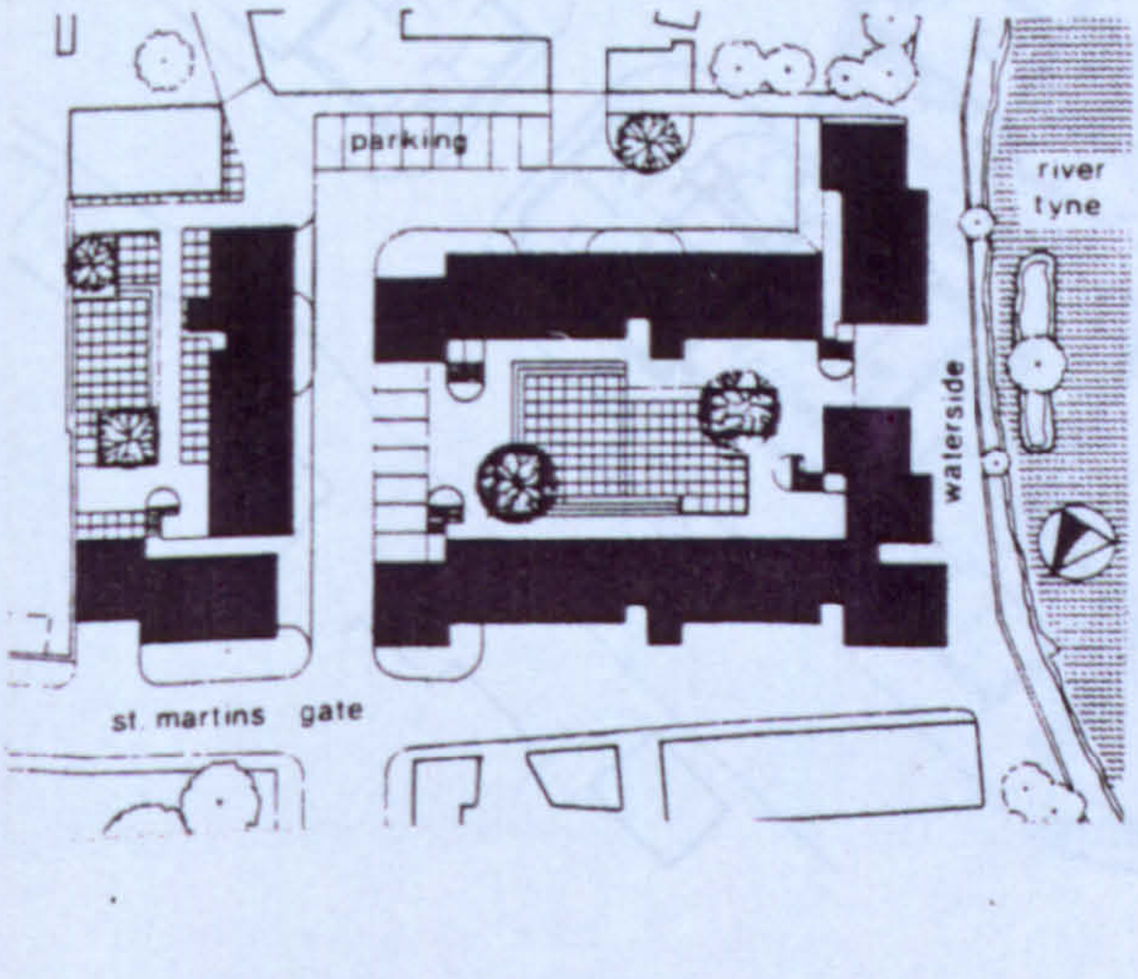


Block plan showing one of the cluster units.

Saltire Award 1980, Dundee District Council Architects
project architect Lindsay Davidson

Figure 7.30

Tyne Court, Haddington, East Lothian

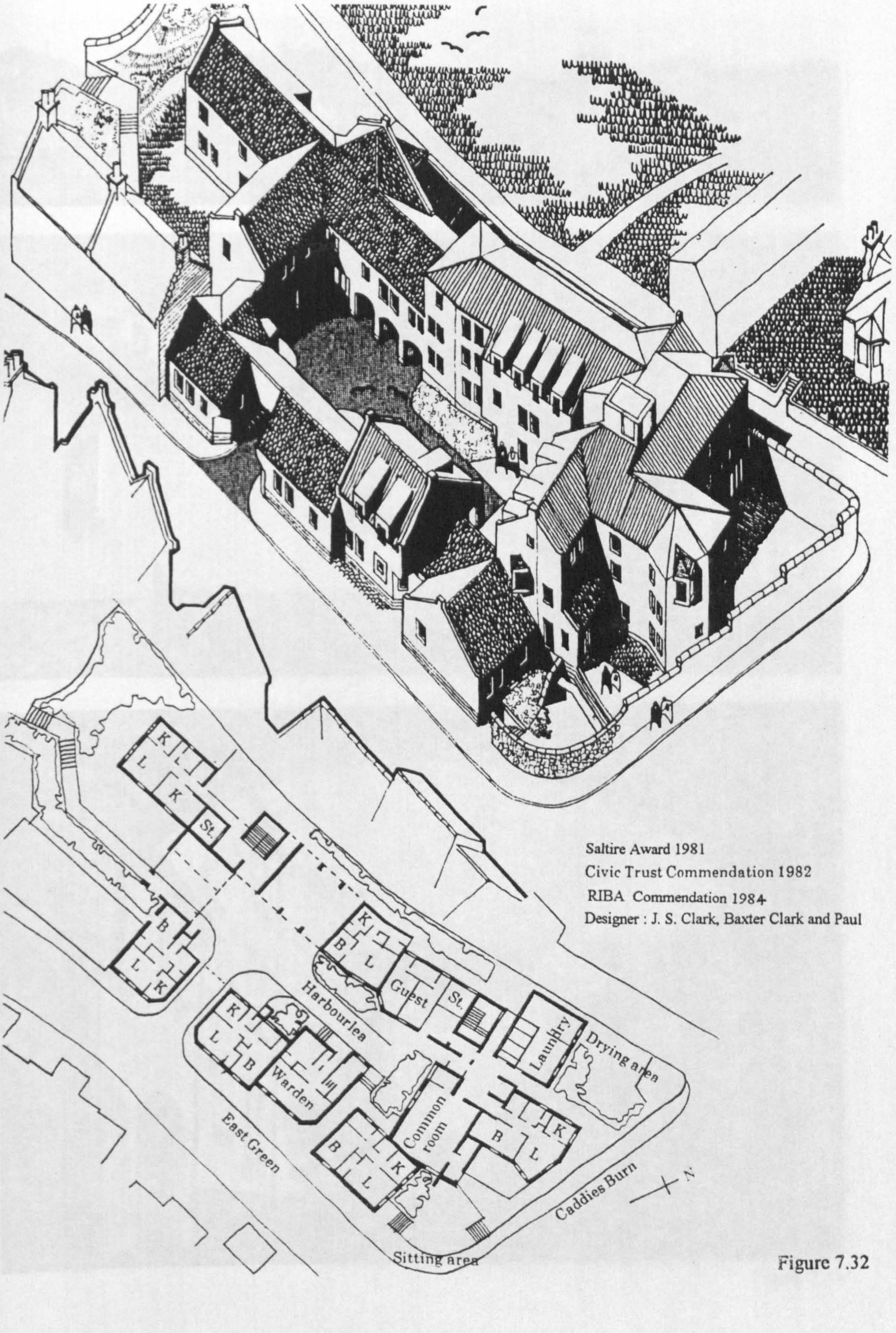


As the site is subject to occasional flooding the 30 flats and maisonettes are provided over drying spaces and garages.

Civic Trust Award 1978, J.A.W. Grant

Figure 7.31

Harbourlea, Anstruther, Fife - Sheltered Housing



Saltire Award 1981
Civic Trust Commendation 1982
RIBA Commendation 1984
Designer : J. S. Clark, Baxter Clark and Paul

Figure 7.32

Harbourlea, Anstruther, Fife - Sheltered Housing

Figure 7.33

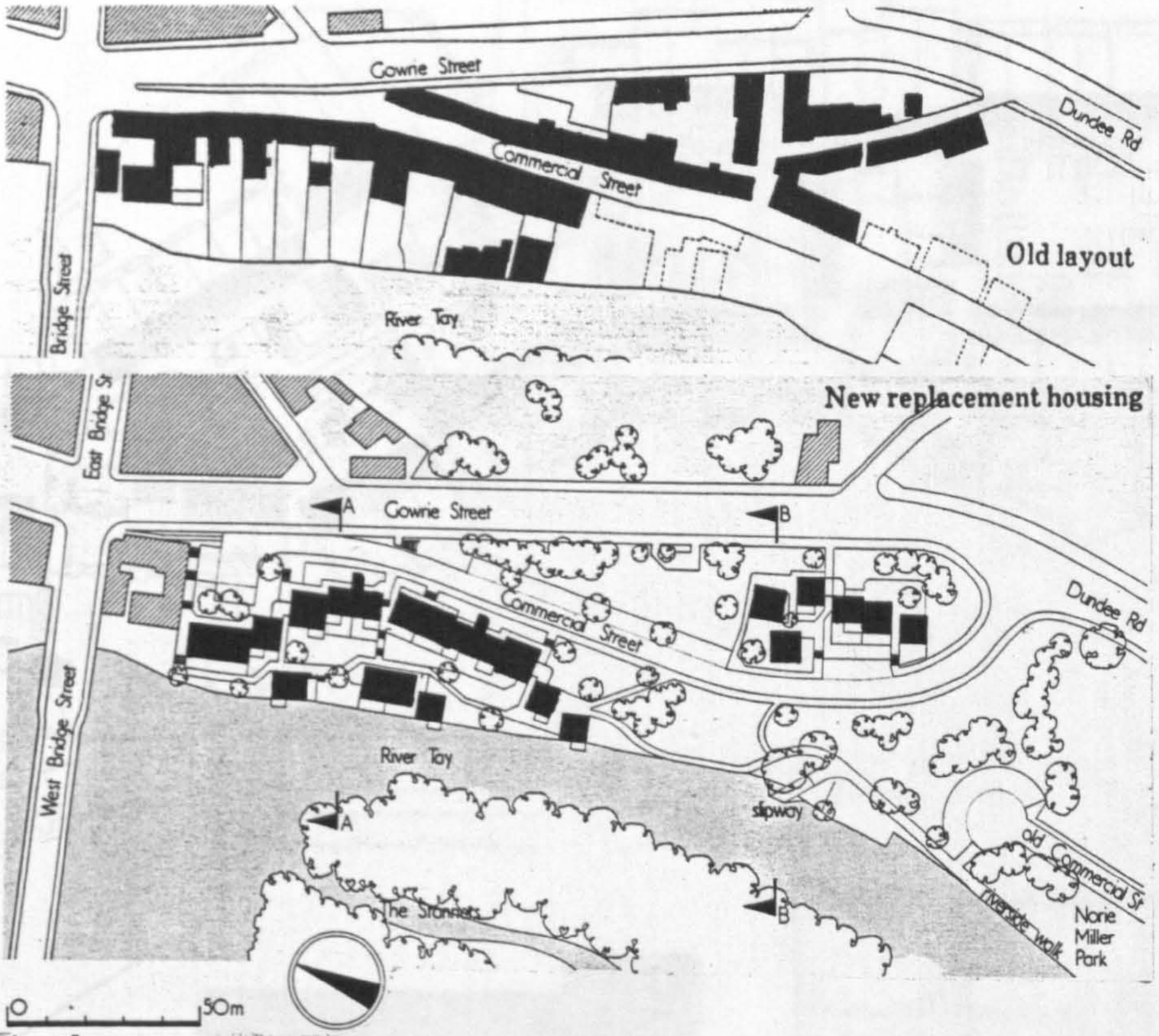
Commercial Street, Perth

Saltire Award 1978
Civic Trust Award 1980
RIBA Commendation 1983

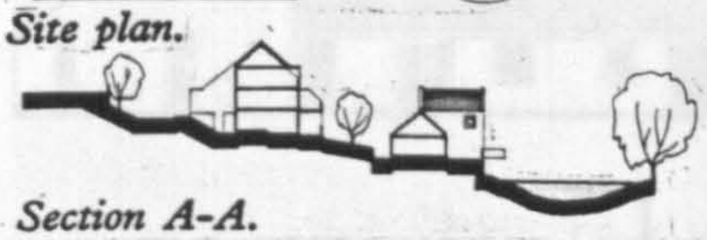
Designers Angus MacDonald, J.F. Stephens, James Parr & Partners

Figure 7.34

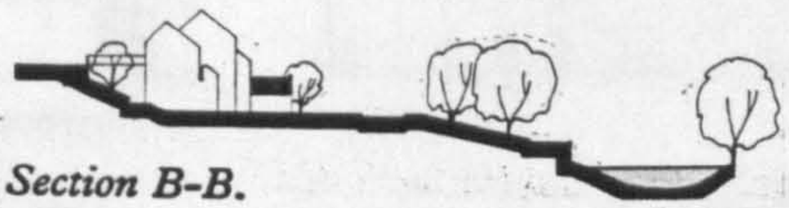
Commercial Street, Perth



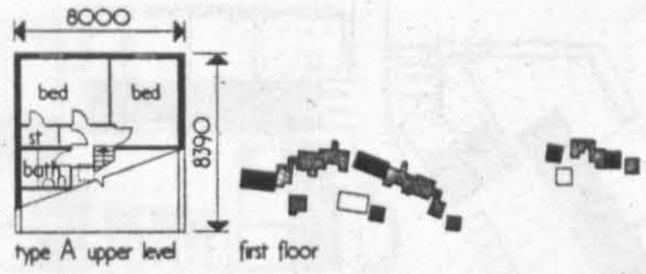
Site plan.

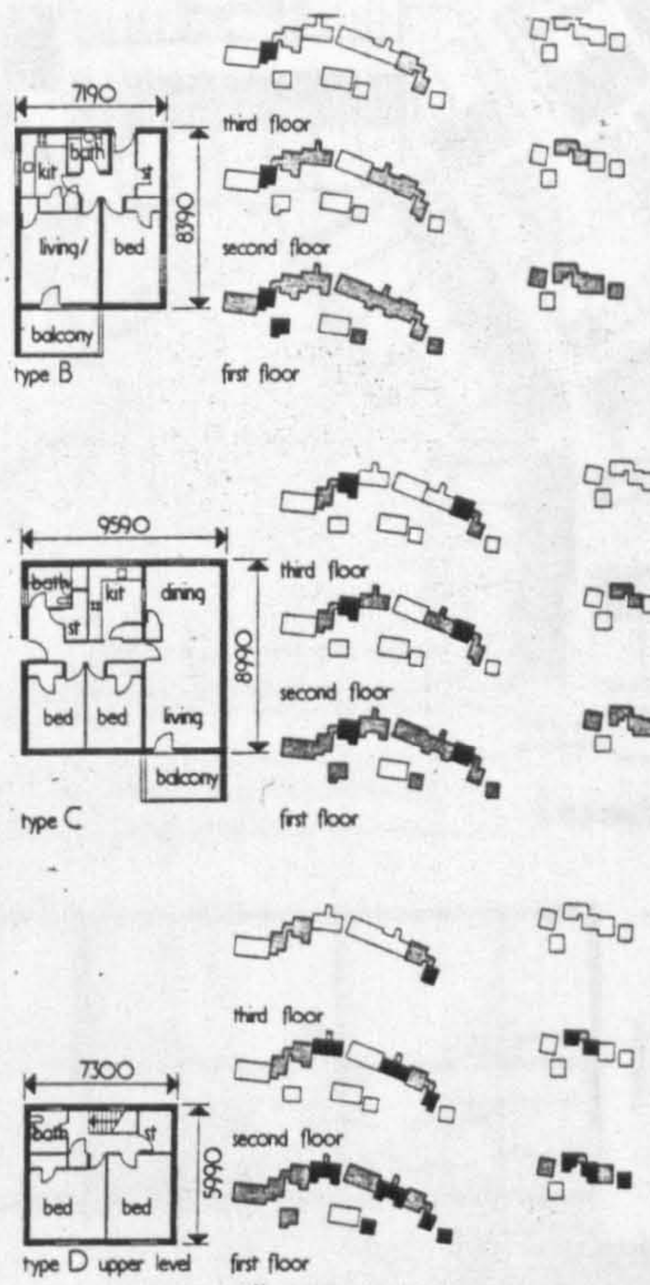


Section A-A.



Section B-B.





Northern end of layout

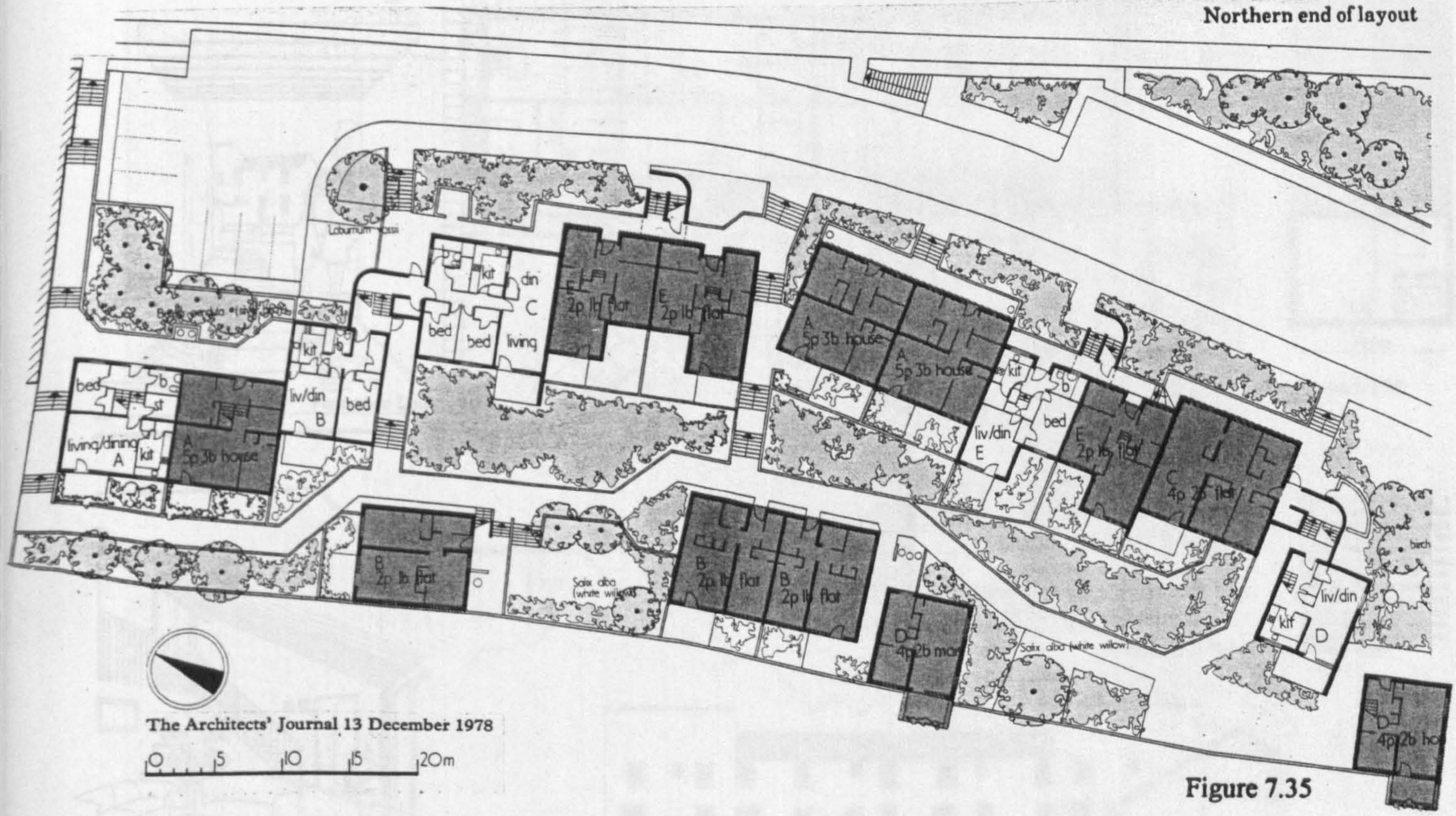
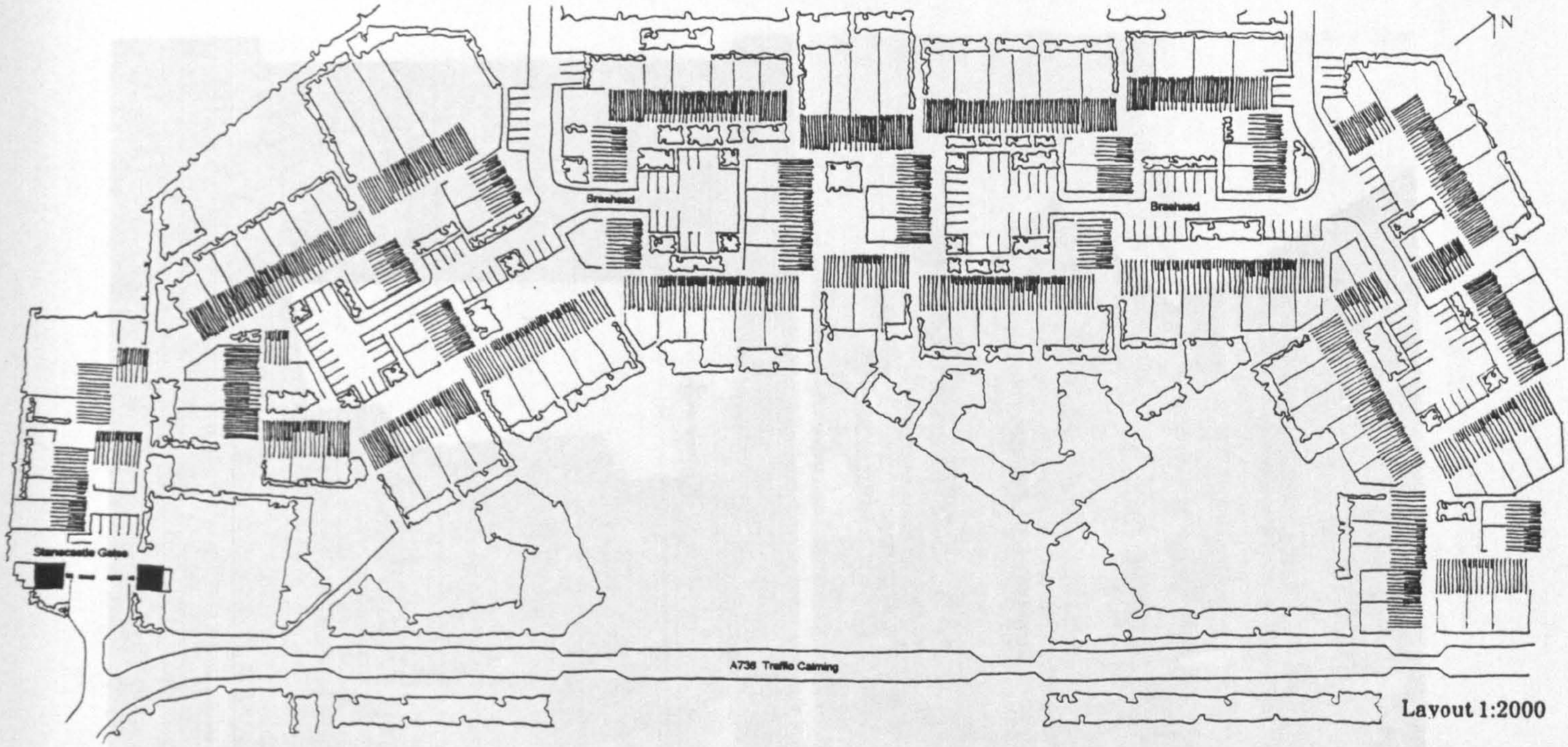
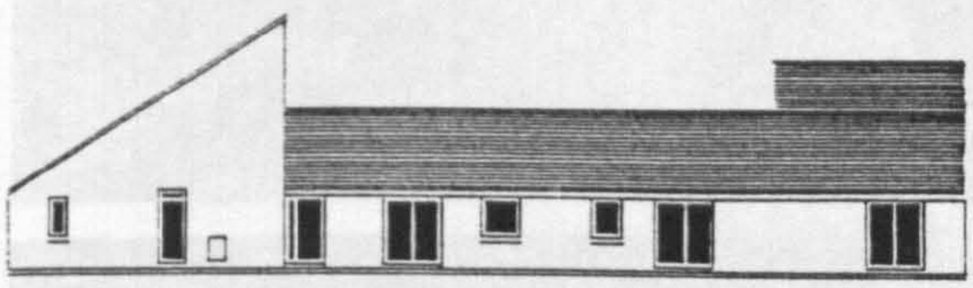


Figure 7.35

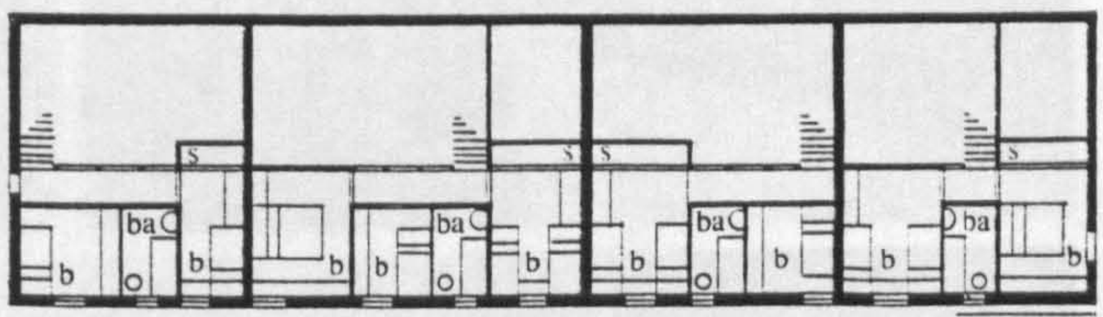
Braehead, Irvine



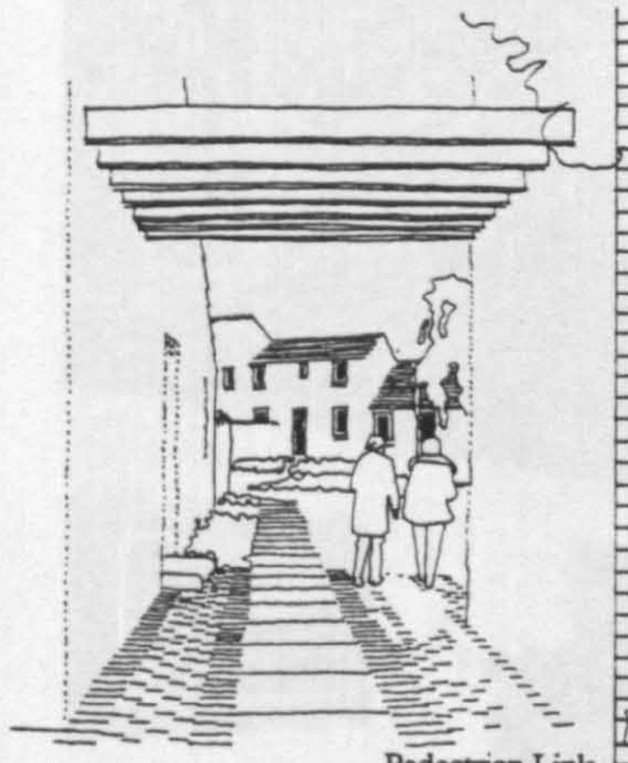
Layout 1:2000



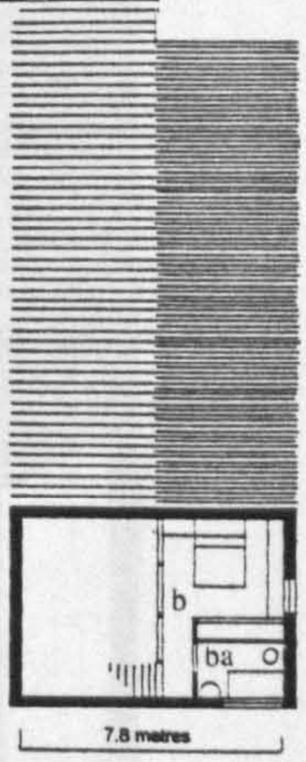
Elevation to Garden



First Floor Plan

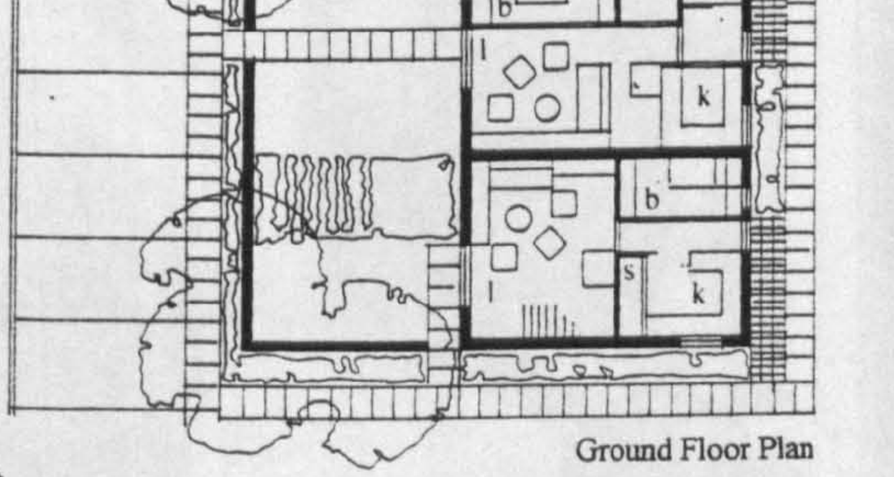


Pedestrian Link

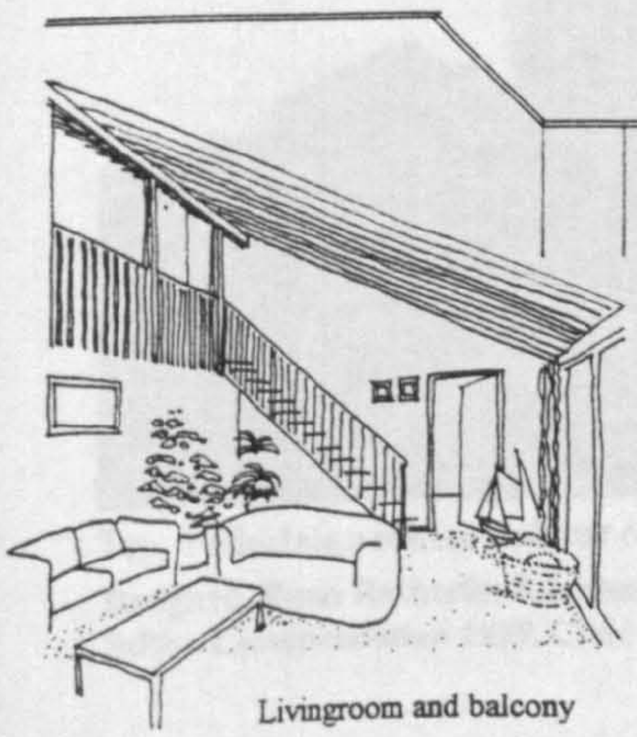


Plans 1:400

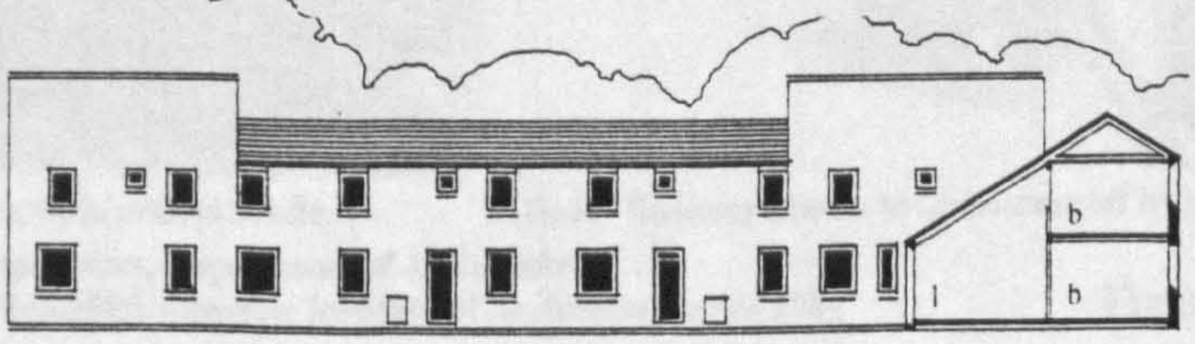
Brasehead is laid out along a ridge. House types are single storey to the gardens to avoid overlooking and shading of the garden. Family house types are two storey to the street with balcony access to first floor bedrooms. All house types have at least one ground floor bedroom which can be used as a second livingroom or bedroom suitable for someone with difficulty using stairs.



Ground Floor Plan



Livingroom and balcony



Elevation to Street

Figure 7.36

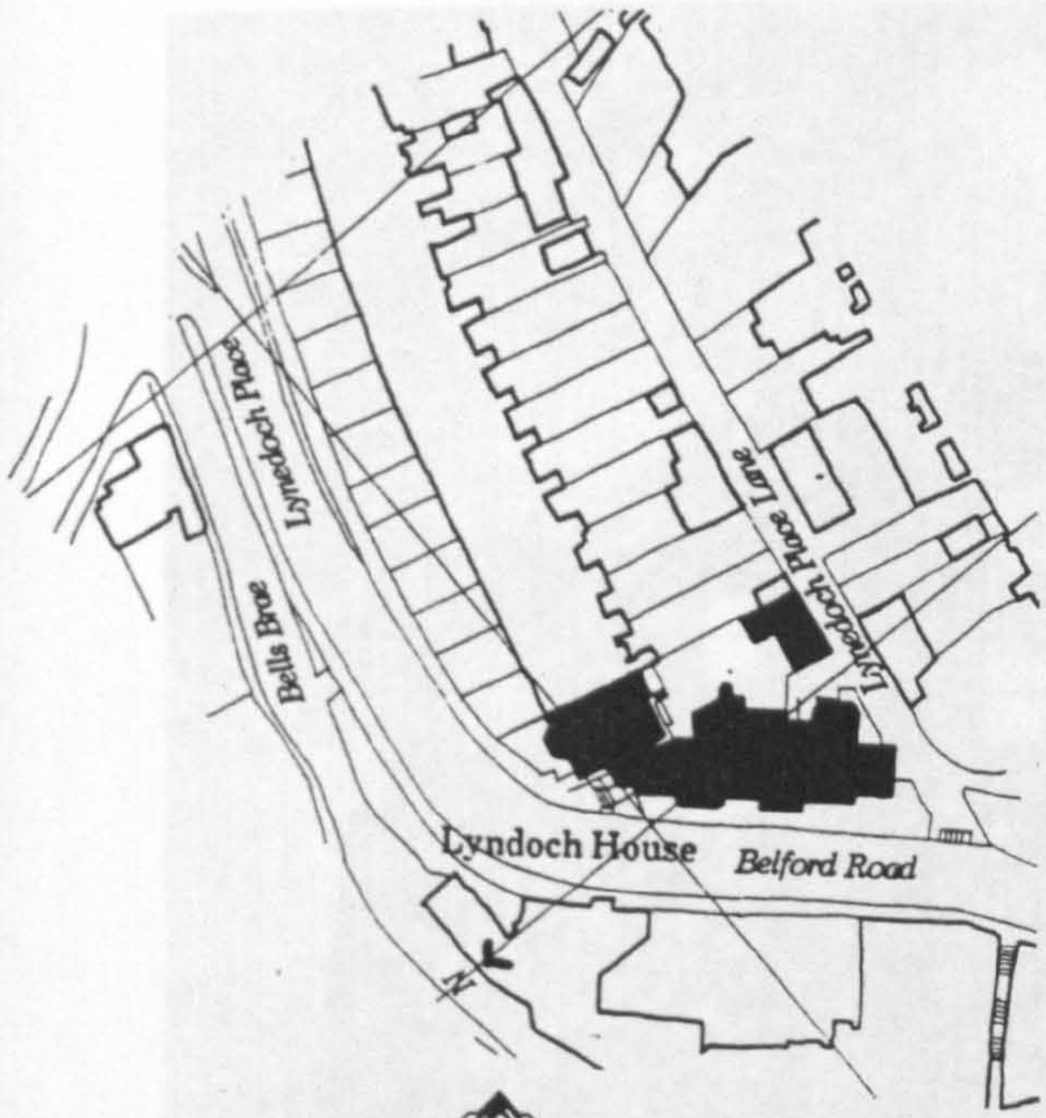
Braehead, Irvine

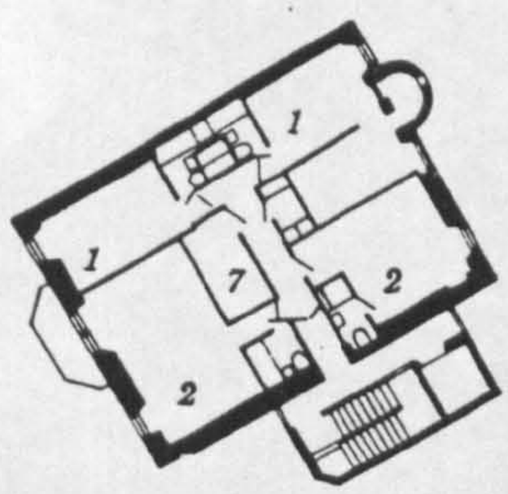
Top. Pedestrian routes link car courts with 3 metre wide access roads. Foot. Balcony access to bedrooms off livingroom

Designed Roan Rutherford, Irvine Development Corporation, Department of Architecture
Saltire Commendation 1979, Civic Trust Commendation 1980, Glasgow Institute of Architects Award 1981

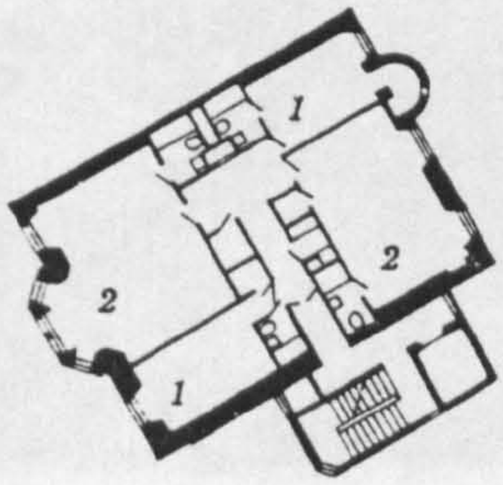
Figure 7.37

Lyndoch House, Edinburgh - Sheltered Housing

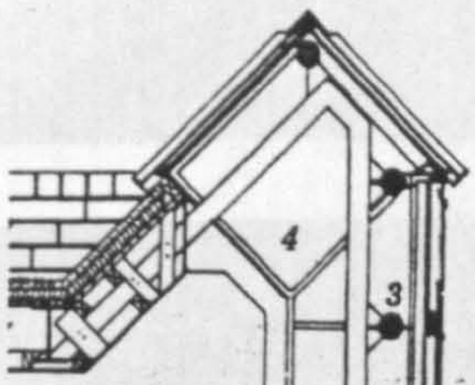




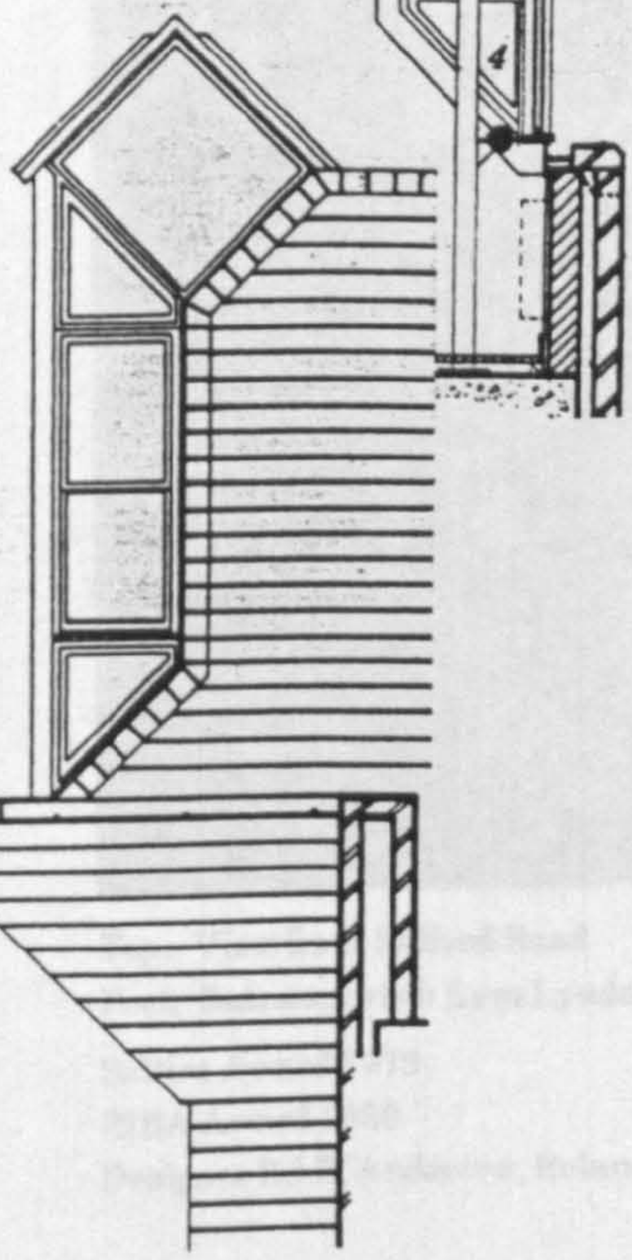
Third floor level



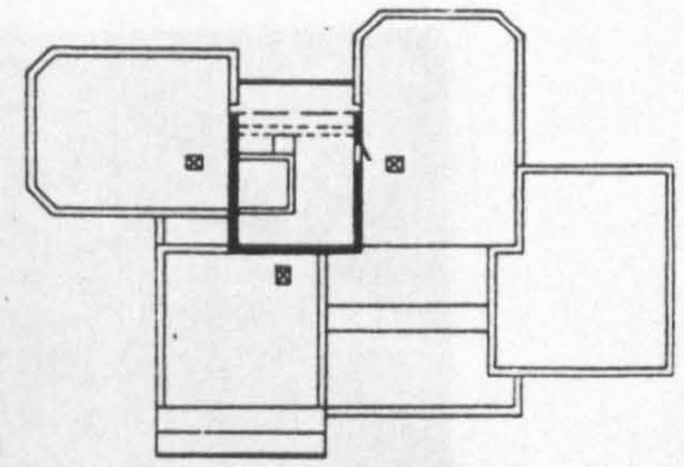
second floor level



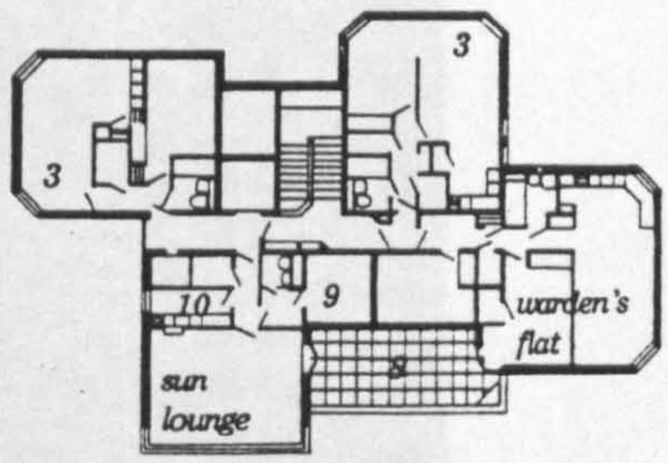
section



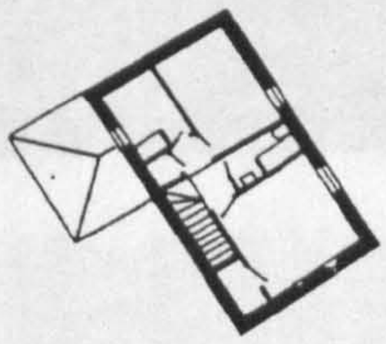
First floor level

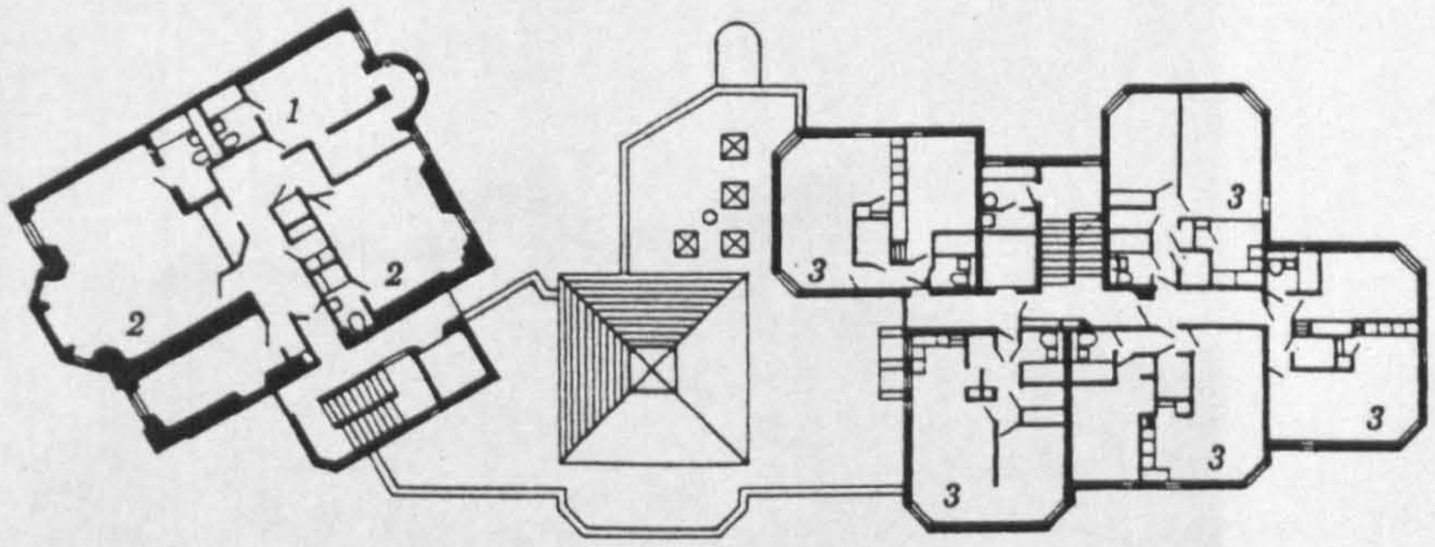


roof level



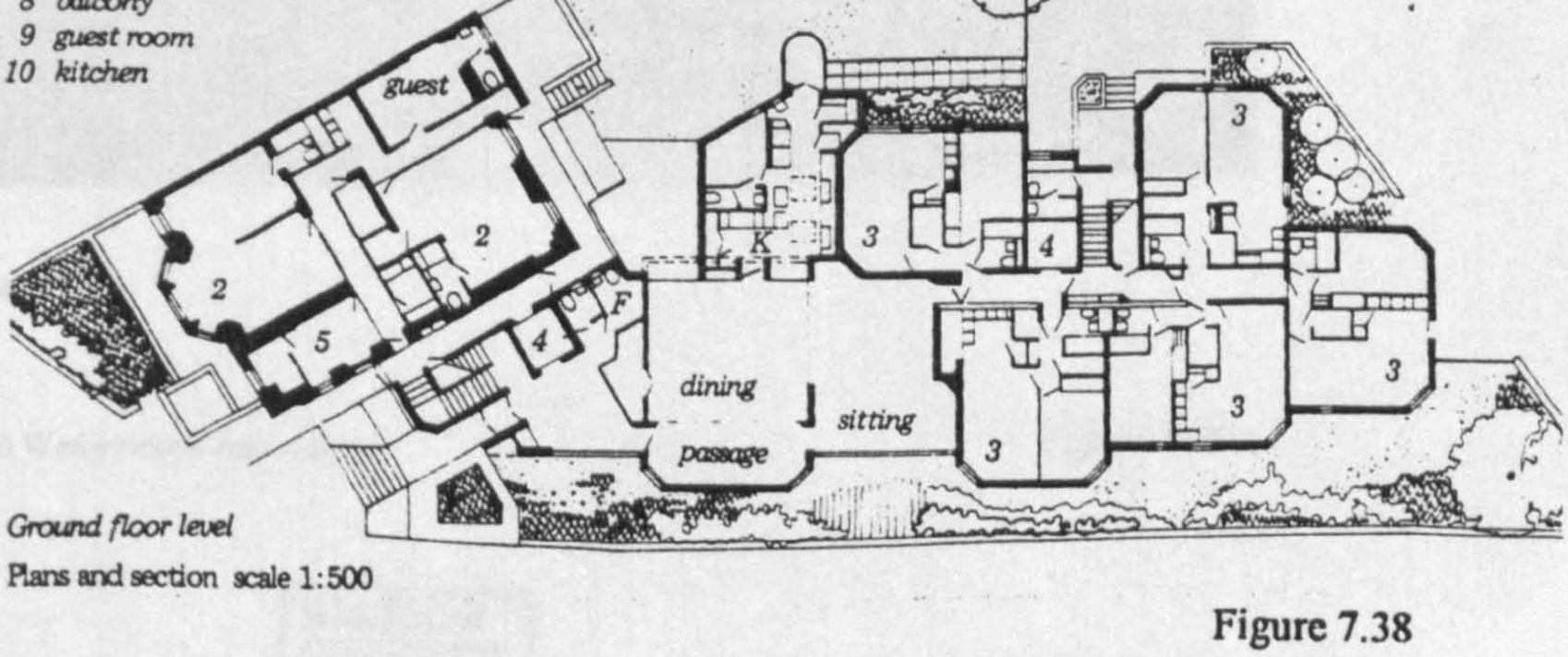
fourth floor level





first, second and third floor levels

Key
1 one bed flatlet
2 two bed flatlet
3 two person flat
4 lift
5 warden's office
6 office
7 boiler
8 balcony
9 guest room
10 kitchen



Ground floor level

Plans and section scale 1:500

end elevation

Building 15 August 1980

Figure 7.38

Lyndoch House, Edinburgh - Sheltered Housing

Top. View from Belford Road
Foot. Entrance view from Lyndoch Place

Saltire Award 1979
RIBA Award 1980
Designer R.I.S. Anderson, Roland Wedgewood Associates

Figure 7.39