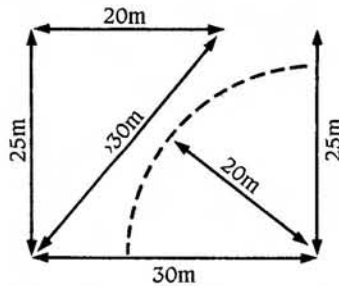


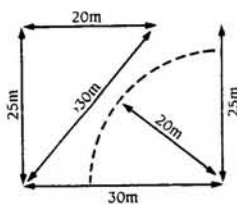
design guidance



for new

RESIDENTIAL
DEVELOPMENT

design guidance



for new

RESIDENTIAL DEVELOPMENT

1. *introduction*
2. *designing for everyone*
3. *space standards*
4. *open space*
5. *providing for vehicular and pedestrian access*
6. *car parking*
7. *site boundaries*
8. *landscaping*
9. *noise*
10. *amenity of nearby residents*
11. *infill sites – maintaining the existing character of the area*

Approved by Economic Development and
Planning Committee

3 JULY 1991

1.0

introduction

- 1.1* These standards are considered to be the minimum that achieve basic levels of design and layout. Proposals which fall below these standards may not obtain planning permission. It is also emphasised that development should not be “designed down” to minimum standards. They should be considered as a starting point. The City Council is committed to encouraging the achievement of the highest standards of design in all circumstances.
- 1.2* In considering all planning applications the City Council has to carefully balance the needs of an applicant on the one hand against the effects on nearby residents and the wider community on the other. All proposals will be examined taking into account the following criteria:
- The need to maintain at least minimum design standards within the proposed site.
 - The need to maintain the amenity of nearby residents.
- 1.3* This guidance is specifically directed at the layout of new residential developments and the consideration of their impact on existing residents. The City Council has produced separate guidance on the particular design problems encountered in extending existing residential property. However the minimum standards contained in this document on such matters as car parking, garden size and over-looking can also be considered to apply to house extensions, although in the widely varying circumstances applying to such situations, each case will be treated on its own merits.
- 1.4* The City Council will also examine all planning applications with a view to reducing the potential for crime and improving safety factors in new developments. Consultations will take place with the West Midlands Police Crime Prevention Officer where such issues arise.

2.0

designing for everyone

2.1 *general principles*

Ordinary housing is traditionally designed for use by fit able-bodied people, often meaning that unfit or disabled people suffer inconvenience or even complete inability to manage.

All house occupiers have been or are young children, the majority will live to become elderly people and some will become pregnant. Also the majority at some time in their lives will be disabled, and most wish for people to visit them. Very few of these people need specialist housing or would need to move from their homes if ordinary houses were constructed to a few basic design principles which, initially, would not usually add to their cost.

The aim should therefore be to achieve the following standards for Mobility Housing for as large a proportion of suitable properties as possible. As a minimum, residential developments in excess of 20 dwellings will normally be required to include at least 25% built as mobility housing.

2.2 *design standards for mobility housing*

2.2.1 *Suitable properties*

Bungalows
Two-storey houses
Ground floor flats
Other flats with lift access

2.2.2 *Pedestrian approach*

From highway/parking space/garage/car port/private garden (as appropriate) to dwelling:-

- i Hard, not loose, preferably slip resistant, surface; 900mm minimum width throughout its length; unobstructed by kerbs or steps.
- ii Preferably level or with gradient less steep than 1 in 20 (any section graded between 1 in 20 and the maximum permissible gradient of 1 in 12 to have at top and bottom a level landing of 1200mm minimum length with an intermediate landing of 1200mm minimum length in any section longer than 10m).

For flats other than those accessed directly at ground level:-

- i The lift car shall measure internally at least 1100mm wide x 1400mm long.
- ii The clear opening width of the lift door shall not be less than 800mm.

2.2.3 *Parking*

Whether provided as garage(s), car port(s) or car space(s):-

- i One space per dwelling shall not be less than 3m wide.
- ii It shall be surfaced as required for a pedestrian approach.

2.2.4 *Entrance to dwelling*

The main entrance door and (where provided) that from the private garden area:-

- i Flush Threshold.
- ii Minimum 900mm opening (1000mm where there is a right angle turn immediately inside the door).

2.2.5 *Internal arrangements*

Circulation:-

- i Halls, landings, corridors or passageways shall have a minimum unobstructed width of 900mm.
- ii Doorways shall have a minimum 900mm structural opening.

Minimum accessible accommodation to which the internal circulation requirements apply:-

- i In a flat or a bungalow; the living and dining areas, kitchen, bathroom, WC, and at least one bedroom.
- ii In a two-storey house;
 - (a) the bedroom may be on a ground floor capable of use as a bedroom, and
 - (b) the bathroom may be on a floor other than the entrance floor, provided that the dwelling has a straight-run staircase suitable for installing a stair-lift, or the structure is designed so as to accommodate the installation of a through ceiling lift.

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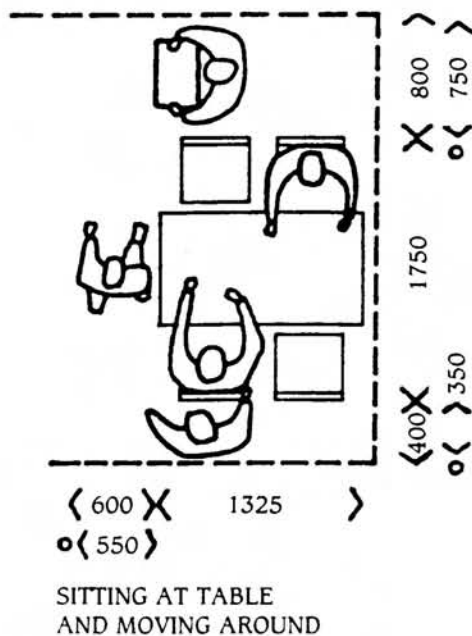
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3.0

internal space standards

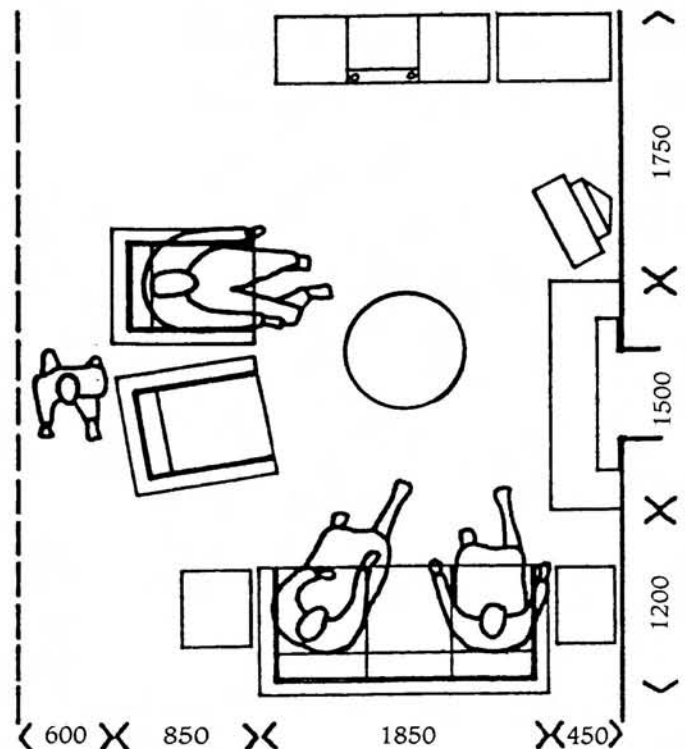
3.1 general

- 3.1.1 The Council does not operate specific standards for the internal dimensions or spaces within dwellings. However, it is important that all dwellings, irrespective of their size, are practical in terms of living arrangements. Sufficient space needs to be provided to accommodate fixtures and fittings, furniture and storage space, in layouts which allow easy access and convenient usage. Planning applications should therefore be submitted with schemes of furniture layouts based on the guidelines contained in 'Space In The Home.' This will illustrate that full consideration has been given to these practical requirements (Fig 1).



- 3.1.2 Pedestrian access from the front to the back of a dwelling without going through a habitable room shall always be possible.

*Design Bulletin No. 6 'Space In The Home'
Housing Department Directorate HMSO 1968.



TYPICAL ARRANGEMENT SITTING AROUND
FIREPLACE WHILST WATCHING T.V.

FURNITURE LAYOUTS (1:50 SCALE) Fig. 1.

3.2 refuse collection

- 3.2.1 Dustbins shall be located so that they are not directly visible from the street. It must be possible to gain direct access to them from the street, eg without having to pass through a habitable room.
- 3.2.2 The maximum carrying distance from the dustbin location to a refuse vehicle shall be not more than 25m, to assist the efficient collection of refuse.
- 3.2.3 Where bin stores are provided on front elevations they should be properly designed and screened from view.

4.0

open space

4.1 *private gardens*

- 4.1.1 Minimum size of private garden
- for 1-2 person dwellings = 30m²
- for 3 or more person dwellings = 50m²
- 4.1.2 Private gardens must be to the rear or side of houses suitably screened from public areas. Smaller private gardens may be acceptable where they abut communal garden areas.
- 4.1.3 Garden size should be related to size of dwelling and to the range of likely activities. For family housing, space is required for sitting out, children's play, gardening, drying or washing and other activities. Where possible a larger than minimum size should be provided.
- 4.1.4 A reasonable size of garden also helps to provide for adequate space between dwellings, for a reasonable standard of amenity for residents and for the planting of trees and large shrubs.
- 4.1.5 The size of garden required will also be influenced by the need to maintain the character of an area regarding the overall density of existing development. In an area where gardens tend to be large, this existing character should be respected.
- 4.1.6 Where more than one dwelling is provided, a range of garden sizes will be preferred, so as to give a degree of choice.
- 4.1.7 Paths should be at least 0.9m wide and constructed of hard material. To accommodate the needs of the disabled, there should be no steps, and gradients should not exceed 1 in 12.

4.2 *public open space*

- 4.2.1 The DOE's Planning Policy Guidance Note No.3 states that local authority planning policies will need to ensure that provision for open space is properly coordinated with development proposals and that new family housing schemes should include the adequate provision of suitable children's play areas. This being particularly important in highly built-up areas where the existing amount and distribution of public open space and play areas may not be adequate to meet the needs of the local community.
- 4.2.2 This advice is clearly reflected in Policy GS 28 of the City of Coventry Unitary Development plan which states that:-

"When assessing proposals for development or preparing development briefs, the City Council

will consider the need for recreational provision which may be required as part of any new development".

- 4.2.3 On this basis therefore the City Council has adopted the following criteria with regard to children's play areas which will be applied in order to achieve minimum levels of provision:-

- (i) For schemes including family housing providing more than 10 child bed spaces (calculated by subtracting 2 from the total bedspace capacity of each dwelling), toddlers play areas of a minimum size of 30 square metres should be provided on the basis of 3 square metres for each child bedspace.
- (ii) In developments of over 50 dwellings a play area for older children may also be required in addition to the above provision for toddlers play areas. This would include a 50 square metre play space and a 100 square metre kickabout area. It would be most appropriate for such facilities to be located within larger areas of open space.

- 4.2.4 In relation to informal public open space for recreation and nature conservation purposes such provision shall be required in residential developments of over 50 dwellings. For certain sites such provision will be considered as part of a housing brief and in all instances the extent and location of these facilities will be the subject of negotiation with the developer.

- 4.2.5 Where required and appropriate the City Council will consider adopting amenity areas by agreement provided they are laid out in accordance with its specifications. Adoption agreements should be entered into as early as possible within the development process and will require the provision of finance for future maintenance in addition to the initial laying out of the area. Alternatively the City Council may require the developer to enter into a planning obligation (made under Section 106 of the Town and Country Planning Act 1990, as amended) to secure the provision of these facilities as part of the new development.

- 4.2.6 However there will be certain circumstances in which it will not be appropriate to provide such play areas or open space provision within the new development scheme. In these instances the City Council will seek contributions from developers, by entering into such planning obligations, to provide, enhance or secure the provision of sporting, recreational or other community facilities in the local area close to the new development.

5.0

providing for vehicular and pedestrian access

5.1 For the full principles of Highway, Footway and Cycleway Design in new residential development the prospective developer should consult "The Design of New Streets in Residential Areas", Coventry City Council (January 1991).

5.2 *design philosophy*

The main principle to be followed is that of the relationship between drivers and pedestrians. Drivers need to be made aware on entry and throughout the site that they are in surroundings where the needs of pedestrians are expected to take precedence over the convenience and free flow of vehicles. In large developments the aim should be to provide a convenient progression from roads where the needs of the drivers predominate to those where pedestrians' requirements are of greatest importance. In many residential areas the most important activities will be children playing, pedestrians walking with prams, and cycling. This change of relationship between driver and pedestrian should be reflected in the design.

5.3 *design objectives*

The primary objective of these standards is to create safer and more attractive places for people to live in. The general layout of any new housing development shall be designed to meet the following objectives:

- i eliminate danger and nuisance from through traffic in residential areas;
- ii minimise vehicle speeds in the vicinity of homes to ensure safety of pedestrians;
- iii provide adequate off-street parking to eliminate danger resulting from parking on highway;
- iv ensure safe pedestrian, vehicular and cycle movements;
- v enable residents' needs for Emergency and Statutory Services to be met efficiently;
- vi allow the designer to create interesting and varied layouts which reflect the established character of the surroundings;

vii enable maintenance to be carried out economically;

viii to produce a layout conducive to reducing crime.

5.4 *road types*

To meet these objectives and the general philosophy as set out above, the following road types are to be used.

i Local Distributor Roads

These are through routes, never culs-de-sac, which distribute traffic within districts. In residential areas they form the link between roads within housing areas and the main highway network of Primary and District Distributor Roads.

ii Collector Roads

These are loop roads or culs-de-sac serving up to 400 and 150 dwellings respectively. They link together Access Areas and connect to local distributors.

iii Access Areas

As much housing as possible should be served off these roads generally constructed as joint pedestrian and vehicle streets with distinctive surface treatment. Access areas will serve a maximum of 30 dwellings. Short culs-de-sac will be encouraged.

iv Shared Private Drives

The provision of shared private drives can enhance the informal nature of particular types of development by utilising building land which cannot be developed in any other manner. Shared private drives may serve the following numbers of dwellings:

- for 1 or 2 bedroom dwellings – up to 5 dwellings
- for 3 bedroom dwellings – up to 4 dwellings
- for 4 or more bedroom dwellings – up to 3 dwellings

5.5 *footpaths*

5.5.1 *Desire Lines*

Consider possible desire lines and the need to control the direction of movement. Pedestrians tend to use the most direct route on corners unless prevented.

5.5.2 *Design*

If not properly planned footpaths in residential areas can result in disturbance, vandalism and anti-social behaviour and they may endanger the security of private property.

Footpaths should be located between areas of significant activity so that they will be well used and preferably where they can be overlooked from windows. Ideally footpaths should be short, straight, wide and well-lit.

5.5.3 *Pedestrian/vehicular conflict*

In pedestrian circulation areas, use guard rails or walls where conflict with vehicles may occur. Barriers should be simple, easily maintained and their height and construction should deter children from climbing over them.

5.5.4 *Width and gradient*

To enable prams and wheelchairs to pass, ensure a width of at least 1.8m. Avoid steps and gradients of more than 1 in 12. Hard surfacing should be used, with a non-slip texture where slope exceeds 1 in 20.

5.6 *cycle ways*

Where there is likely to be a concentration of cycle movements, the provision of cycleways in addition to footpaths should be considered. The main objectives in providing cycleways are to improve safety and to increase comfort and convenience for the cyclists.

Special attention must be paid to their location in order to attract as many cyclists as possible to use them. Great care needs to be taken with the details design to encourage cyclists to use them properly. This is particularly important where shared use with pedestrians is contemplated.

Cycleways should be constructed to a minimum width of 2.5m and have well drained smooth surfaces with low gradients. They must also be lit during darkness. Clear signing of cycleways should be provided.

6.0

car parking

6.1 *parking provision*

6.1.1 For dwellings with parking generally within curtilage the following provision is required:

- For dwellings up to and including 93 sq m. (1001 sq ft) – 2 spaces.
- For dwellings of more than 93 sq m. (1001 sq ft) and less than 121 sq m. (1302 sq ft) – 3 spaces.
- For dwellings of 121 sq m. (1302 sq ft) or more – 4 spaces.

NOTE 1: For dwellings requiring 3 or 4 spaces, one may be provided outside the dwelling curtilage, in an off-street location, and in close proximity to the dwelling it serves. Alternatively the design of the front garden should be capable of accommodating this space, if required at some future date.

NOTE 2: Any further relaxation of these standards will only be considered for high density urban sites in order to achieve other planning objectives. In such circumstances, the overall requirement will not be less than the standard set out below.

6.1.2 For flats, maisonettes and certain managed schemes where garages or car spaces are provided outside the curtilage and where the spaces are provided on a communal basis the following provision is required:

- For dwellings up to and including 45 sq m. (484 sq ft) – 1.25 spaces.
- For dwellings of more than 45 sq m. (484 sq ft) and less than 93 sq m. (1001 sq m. – 1.75 spaces.
- For dwellings of 93 sq m. (1001 sq ft) or more – 2.25 spaces.

6.1.3 Old persons dwellings, 1-2 person units in managed schemes, warden resident

	Resident/ visitor parking unallocated	Staff
1 Bedroom	0.5 per unit	2 per Warden Unit
2 Bedrooms	0.75 per unit	2 per Warden Unit

6.1.4 Student accommodation

Purpose built accommodation or use by students, where this limitation on use can be enforced:

- 1 space per 5 students if on Campus.
- 1 space per 3 students if resident off Campus but within 1500m of Campus.
- 1 space per 2 students if resident off Campus.

This Policy does not apply to on Campus provision at the University of Warwick where a comprehensive parking policy applies based on overall provision.

6.2 *design requirements for car parking*

6.2.1 Dimensions of parking space (Fig. 2)

(also see 2.2.3.)

– 4.8m x 2.4m for parking space/internal size of garage. Provide an extra 0.7m of length where parking space only is provided and this is directly off the highway.

– 5.5m for length of parking space between footpath or roadway and garage (to allow for opening of garage doors).

– 5.5m x 3m for parking space surrounded by walls, buildings, etc (to allow for pedestrian access and car washing).

6.2.2 Safety (Fig. 2)

Vision splays of 2.4m x 2.4m from the back of any footpath on each side of a garage access or parking space, with unimpeded visibility above a height of 0.6m.

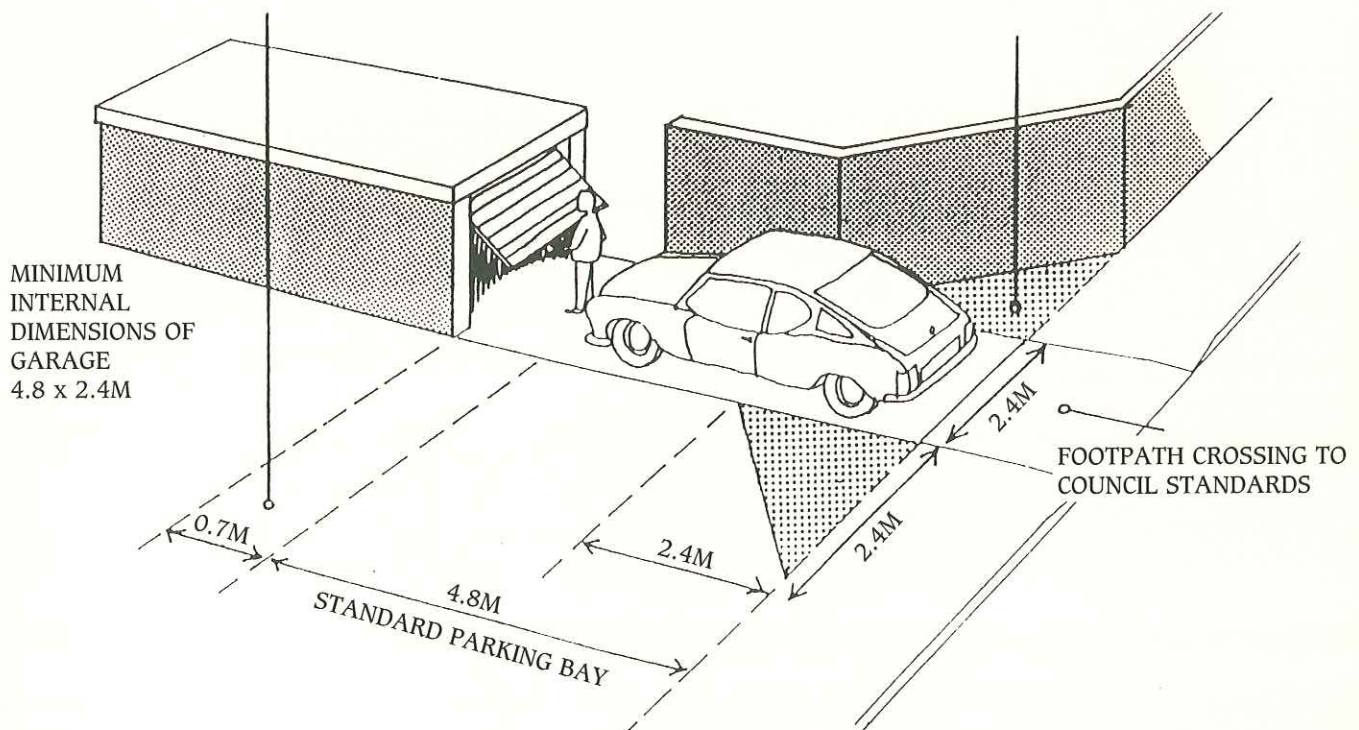
6.2.3 Communal Parking Areas

- Avoid garage courts, (these are inconvenient for users and they encourage on-street parking, misuse and vandalism).
- Provide spaces in small groups as appropriate (not in one large area).
- Locate groups close to the dwellings they serve.
- Locate parking areas where they can be supervised from nearby dwellings.
- Design groups to prevent use for lorry parking, or other undesirable uses.

PARKING REQUIREMENTS FIG. 2

FOR PARKING BAYS IN FRONT OF GARAGES
ADDITIONAL CLEARANCE WILL GENERALLY BE
REQUIRED TO KEEP PARKED CARS CLEAR OF FOOTPATHS
OR SHARED ACCESS DRIVES WHEN OPENING GARAGE DOORS

VISION SPLAYS –
AREAS CLEAR OF OBSTRUCTIONS
ABOVE 0.6M



7.0

site boundaries

7.1 screen walls

7.1.1 In visually prominent positions eg. front gardens and around boundaries of corner plots, screen walls of brick, or live hedges, will be preferred to fences, since fences are easily damaged (Fig. 3). In Conservation Areas, and areas of a particular character or considerable townscape quality, the details and materials of walls should be appropriate to the area.

7.1.2 Long walls can be stiffened by piers, or by a staggered plan (Fig. 3). Copings should be simple and in character with the area eg. blue brick and tile crease, or bull nose headers.

7.2 boundary structures to front gardens

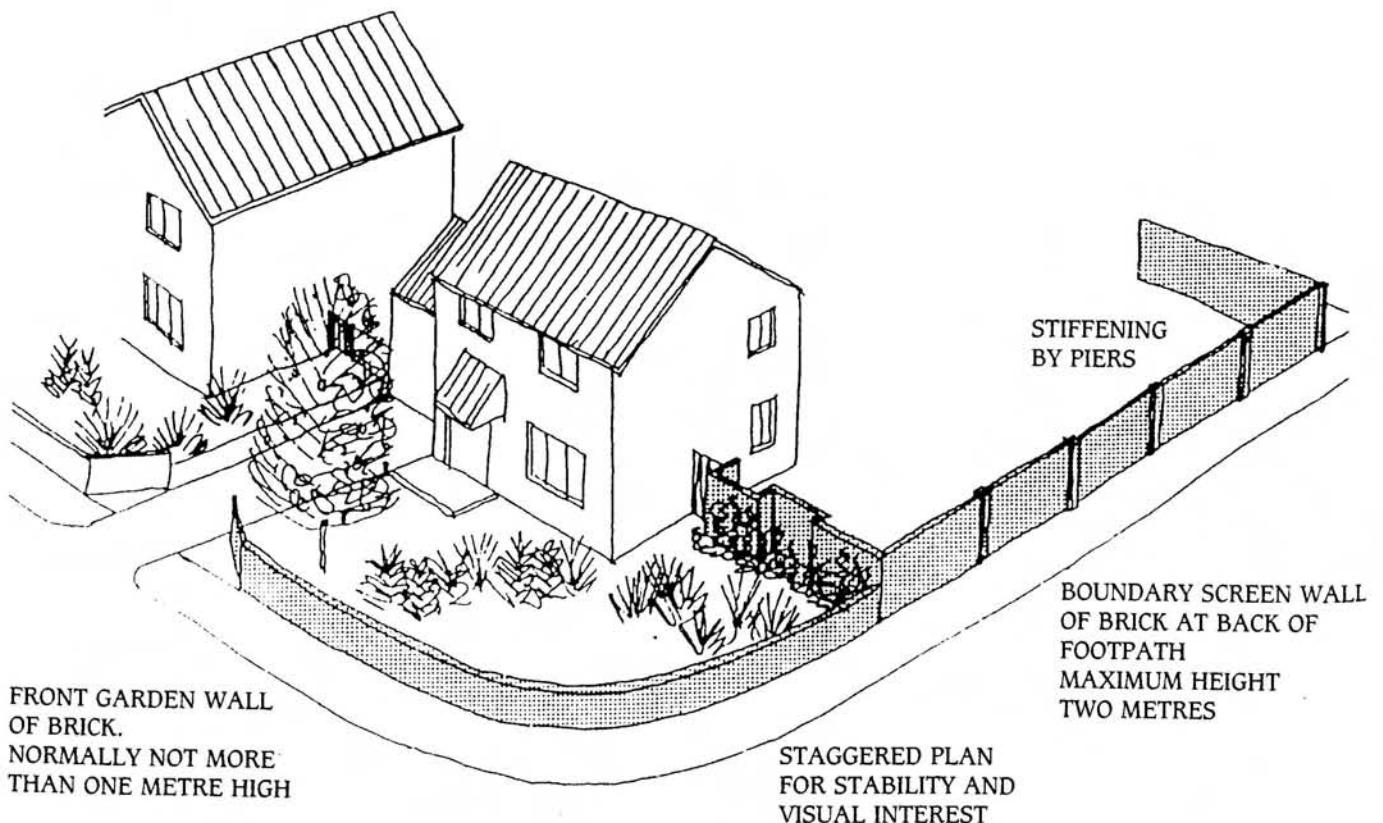
7.2.1 These should not normally exceed one metre in height and should be of simple and robust construction. (Fig. 3).

7.2.2 The use of painted timber, concrete post and wire, or perforated concrete blocks is not acceptable.

7.2.3 Open plan street frontages are not normally successful, since the original linear and unified landscaped area is often subdivided into individual, distinct plots. Front garden walls, or live hedges, are preferred.

7.2.4 Avoid leaving small areas of open land outside dwelling curtilages which would not be considered suitable for adoption by the City Council.

SCREEN WALLS FIG. 3

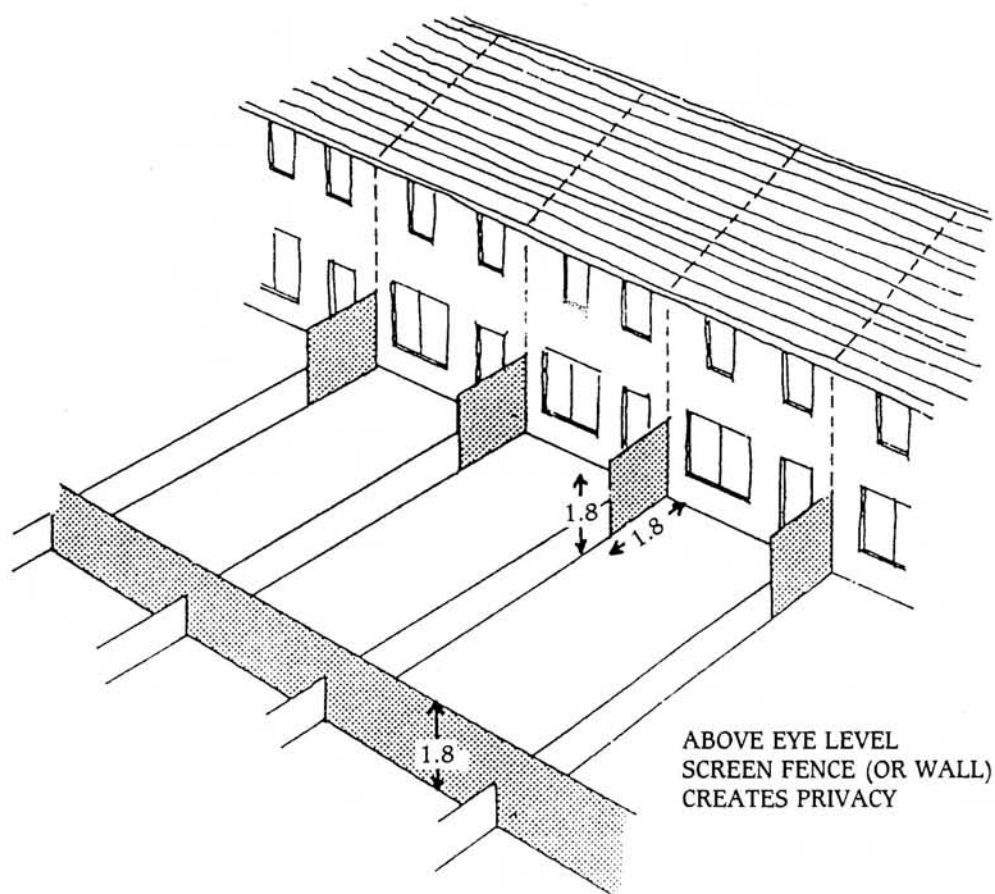


7.3 *screen fencing*

7.3.1 This is normally about 1.8 metres high and will be confined mainly to rear gardens. All fencing must be substantial and, as far as possible, maintenance free.

7.3.2 On the boundaries of side to side gardens, a minimum of 1.8m high by 1.8m long fencing will be required adjoining dwellings. On the boundaries of back to back gardens a 1.8m high fence will be required. This will provide for reasonable privacy. (Fig. 4).

SCREEN FENCING FIG. 4



8.0

landscaping

Landscaping is not an optional extra. Planning legislation requires that in considering any applications for development, adequate provision is made for the preservation and planting of trees.

8.1 *existing features*

8.1.1 Every effort must be made to retain and incorporate existing landscape features of importance.

Plans and sections showing existing and proposed ground levels must be submitted with all full applications and reserved matter submissions, except those relating just to external appearance. In some cases this information may be needed at outline stage.

Ground levels should also be shown.

8.1.2 Tree Preservation Orders and Trees within Conservation Areas.

Except in a limited number of special cases, the prior consent of the Council is required before any significant work is considered on a tree which is the subject of a Tree Preservation Order. Prior notification of works to trees in Conservation Areas is also required.

8.1.3 Young trees

Where many young trees exist, retain as many as possible, so as to provide initial cover.

8.1.4 Larger trees

If possible, retain larger trees within **public** areas where these exist, eg. linear areas alongside streams or roadways. If larger trees are incorporated into larger gardens, ensure that the space available is sufficiently large to adequately accommodate such trees and their future growth. Ensure that large old trees, with a possibly limited life, are not "trapped" in enclosed areas where eventual removal would be impossible or very costly.

8.1.5 Ground levels

Change ground levels as little as possible, especially within the branch and root spread of trees, so as to safeguard their lives. Erect fences to coincide with the spread of trees to be retained, to avoid damage during building operations.

8.1.6 Protection

To protect trees and shrubs to be retained and to avoid disturbing underground works, ensure that drains, service runs and foundations are outside the root spread and canopy of trees and allow adequate space for future growth. The following formula gives the **minimum distance** between any building or drain and the trunk of a tree. These also relate to new planting.

On shrinkable clay soils:

greedy rooted trees – (eg. Poplars, Willows)
distance = ultimate height
of trees

other trees –
distance = $\frac{2}{3}$
ultimate height of tree

On other soils:

greedy rooted trees –
distance = $\frac{1}{3}$ ultimate
height of tree

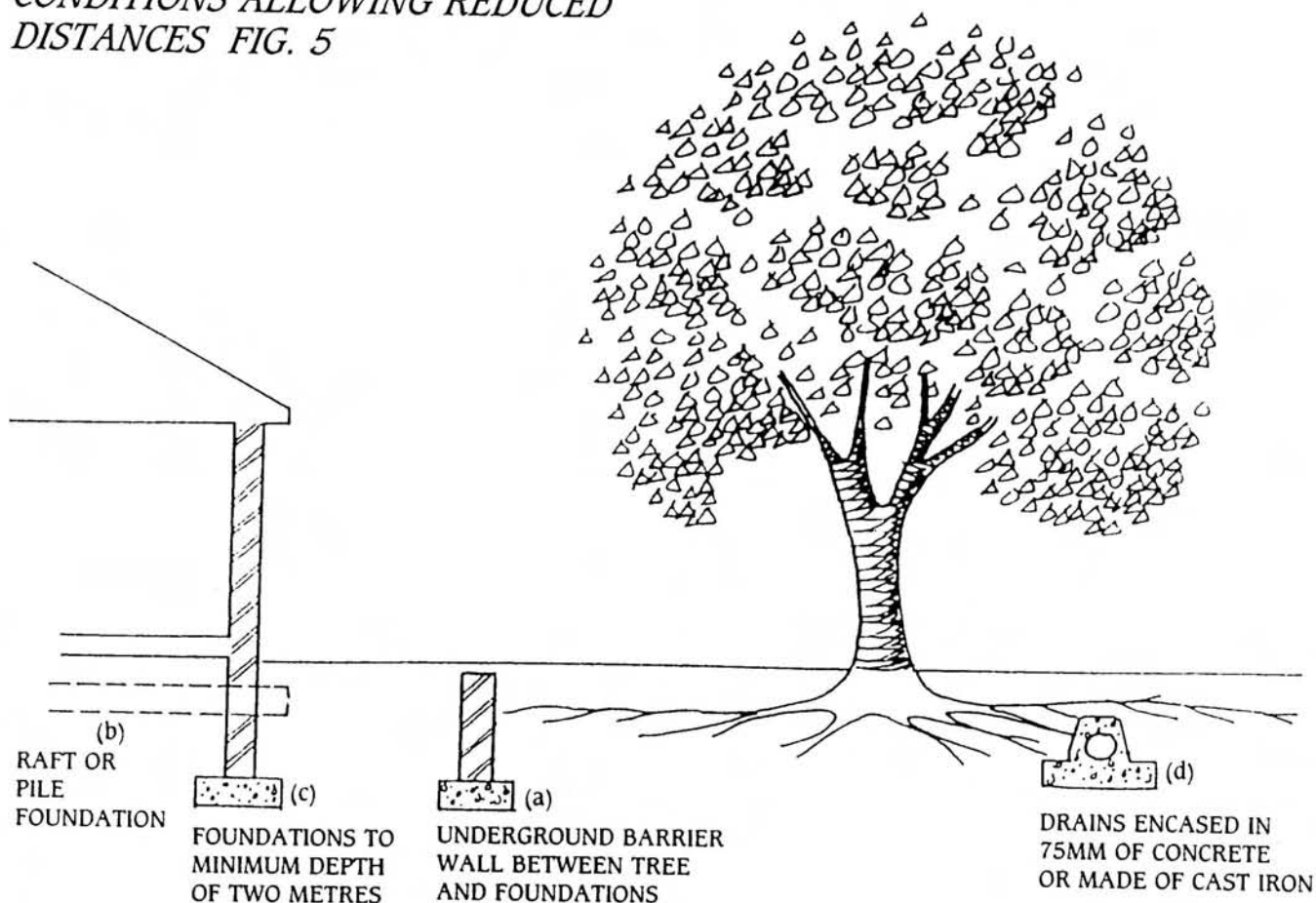
other trees –
distance = 5
metres except for small
light-foliaged species (3m)

These distances may be reduced if:

- there is an underground barrier wall between the tree and the soil foundations;
- the building is on a raft or pile foundation;
- the foundations are to a minimum depth of 2 metres, or
- the drains are encased in 75mm of concrete or are made of cast iron,

provided that adequate consideration is given to other factors such as loss of light and leaf fall. (Fig. 5).

CONDITIONS ALLOWING REDUCED DISTANCES FIG. 5



8.2 new planting schemes

8.2.1 Landscaping schemes

All full planning applications must be accompanied by a detailed landscaping scheme. This is to ensure that full and proper consideration is given to the landscaping element of any scheme, and to ensure that developers are fully aware of the costs of landscaping when drawing up their proposals. The scheme should indicate the species, initial size and spacing of all new planting, give full details of all paving, walls, fences and any other external works, and show existing and proposed levels. It is strongly recommended that a qualified landscape architect be employed for all major schemes.

New tree planting will generally be required in addition to any existing trees to be retained. Shrub planting, in grouping or in mass, to act as a ground cover is also important.

In line with Government advice conditions will normally be imposed on all planning permissions

regarding replacement of any specimens dying, being severely damaged, or becoming seriously diseased within 5 years of planting.

8.2.2 Maintenance

Minimise the need for maintenance. Choose strong growing, hardy species which have proved tolerant of local conditions. On earth mounding, avoid slopes of more than 1 in 3 to avoid maintenance and/or erosion problems.

To avoid danger to blind or partially-sighted people, choose species which will not repeatedly or regularly overgrow pedestrian routes and which will not require to be regularly cut back.

8.2.3 Slopes

Where steep slopes exist, protect from erosion by planting with shrubs and quick-growing ground cover and by fencing until the planting is sufficiently established to give stability.

9.0

noise

9.1 road traffic noise

9.1.1 The Council supports the noise standards suggested by the Wilson Report – in particular the maximum measurement of 60 dB(A) measured at 3.7m from dwellings.

9.1.2 When assessing the implications of road traffic noise on dwellings, readings are usually taken between 6.00 am and 12.00 pm and expressed in dB(A) on the L10 (18 hour) scale. The L10 18 hour descriptor has been found to correlate well with peoples' perception and levels of annoyance to road traffic noise and is enshrined in legislation.

9.1.3 The Department of the Environment Circular 10/73 "Planning and Noise" states that there should be a strong presumption against development where noise levels are in excess of 70 dB (A) measured on the L10 (18 hour) scale and Local Authorities should wherever possible, adopt as their noise criteria a substantially lower value.

9.1.4 Hence, where there is an external noise level one metre from the facade of a dwelling of more than 68 dB (A) measured on the L10 (18 hour) scale, no new residential development will be permitted and wherever possible the Council will seek to achieve an external noise level one metre from the facade of a dwelling of 65 dB (A) measured on the L10 (18 hour) scale.

9.1.5 Even in circumstances where high externally generated noise cannot be avoided, the design of a building must achieve an internal noise level, when windows are closed, of 40 dB (A) measured on the L10 (18 hour) scale. This guideline is based on the assumption that a closed window gives a reduction of noise level of about 20 dB (A).

9.2 other noise

9.2.1 If a site is subjected to noise levels from a source other than road traffic (eg. rail or air traffic) the L10 (18 hour) scale will not be applicable. Therefore where there is an intention to develop such a site, advice should be sought from the Director of Economic Development and Planning as soon as possible.

9.3 reducing the impact of external noise

9.3.1 When considering the development of a site for housing purposes, the developer must identify whether or not noise control needs to be an element of the design and, if so, consult with the Director of Environmental Services and private noise consultancies, so as to determine appropriate measures which should be taken.

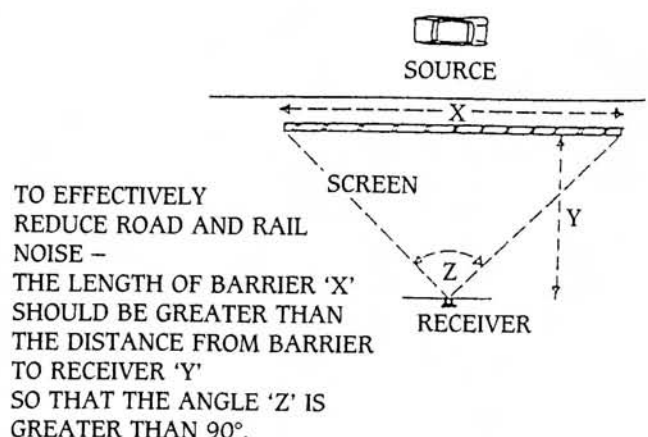
9.3.2 New housing developments must be protected not only from noise from existing uses but also from committed proposals which are likely to produce excessive noise.

9.3.3 Trees and vegetation on their own will not reduce noise but they may have a small psychological advantage by obscuring views of the noise source.

9.3.4 Distance alone, eg. a buffer area of open space, is rarely satisfactory in reducing noise.

9.3.5 Some type of barrier is usually needed, ie. a wall or earth bank (Fig. 6) preferably with a soft ground surface. For maximum effect, the barrier should be as near to the noise source as possible, have sufficient mass to resist sound transmission, have a capacity for damping, and be high enough and long enough to give the required protection.

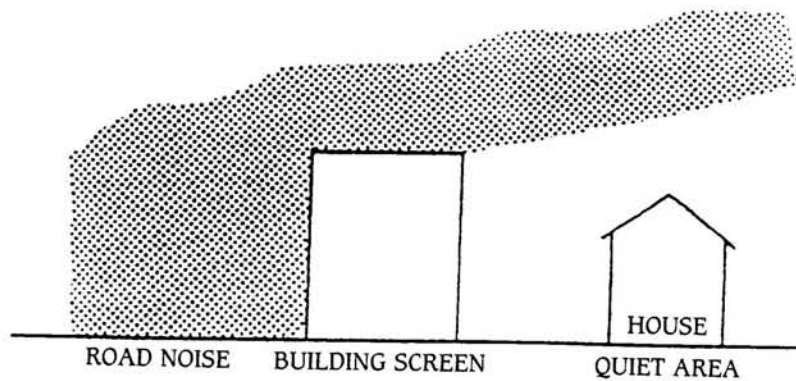
BARRIER REDUCES NOISE FIG. 6



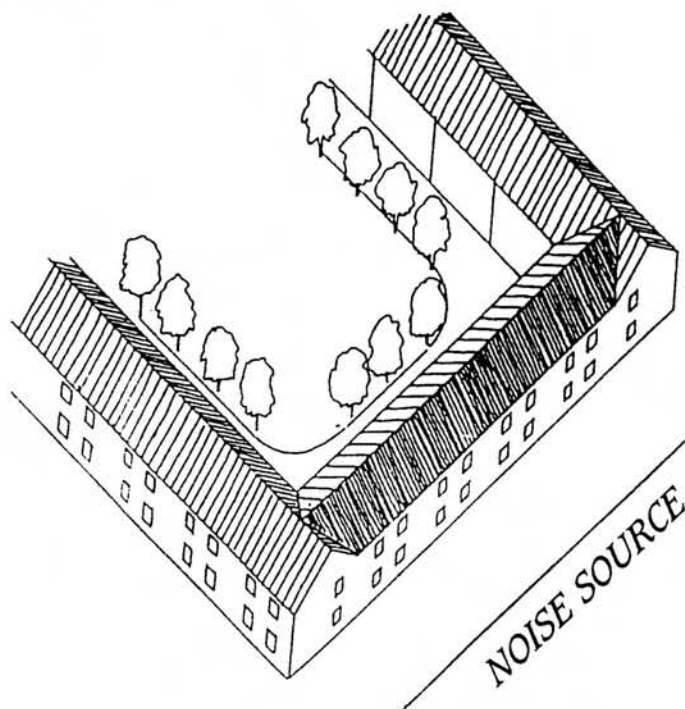
It is essential that such barriers are designed according to a specification detailed by an appropriately qualified person who is experienced in noise attenuation measures.

- 9.3.6 The form and layout of buildings may provide some defence, eg. a building between the noise source and housing, (Fig. 7) or a quadrangle of terraced houses or flats, with double glazing and small outer windows (Fig. 8). The effect and design of such measures must be assessed and implemented in consultation with a suitable qualified and experienced person.

BUILDING SCREENS NOISE FIG. 7



QUADRANGLE LAYOUT REDUCES NOISE FIG. 8



10.0

amenities of nearby residents

10.1 distances

10.1.1 To protect the amenity of existing residents a minimum of 20m is required between new and existing windows. This applies to both front and rear window situations. (Fig. 9).

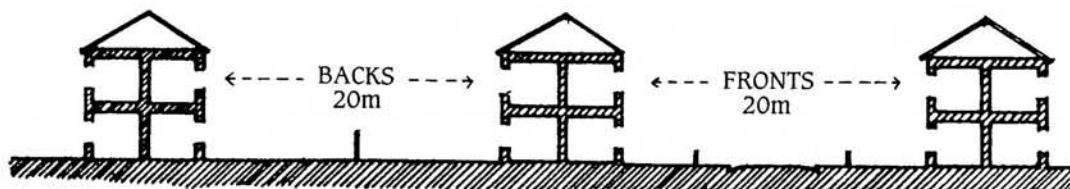
This 20m distance can be reduced (Fig. 10) if:

- the angle between windows is less than a right angle.
- there is a permanent and substantial barrier preventing intervisibility, such as would be provided for example by a wall or fence at least 2m high between courtyard bungalows.

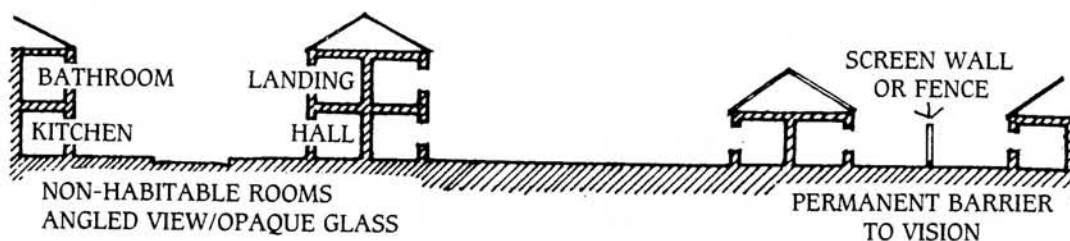
- the relevant windows in the new development are not to habitable rooms, are obscure glazed or otherwise designed to limit outward views.

The exact reduction in distance in these circumstances will be a matter of judgement and influenced by such factors as the character of the area, the appropriate density of development and the design quality of the proposed scheme.

NORMAL MINIMUM DISTANCES FIG. 9



REDUCTION IN NORMAL MINIMUM DISTANCES FIG. 10



10.1.2 The minimum distance between windows must be increased to 23m if there is any possibility of overlooking of existing habitable rooms from an upper floor living room or kitchen, for example where a proposed new flat or maisonette development would overlook existing development (Fig. 11). A reduction of this figure may be allowed in circumstances as set out in 10.1.1.

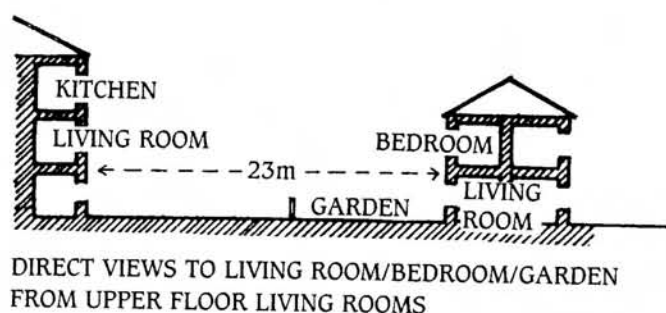
10.1.3 A minimum 10m depth of rear garden will normally be required in the interests of achieving acceptable standards of daylighting, to minimise overshadowing and maintain privacy.

10.1.4 For similar reasons a minimum distance of 12m will be required between the front or back of one dwelling and the side of another. (Fig. 12).

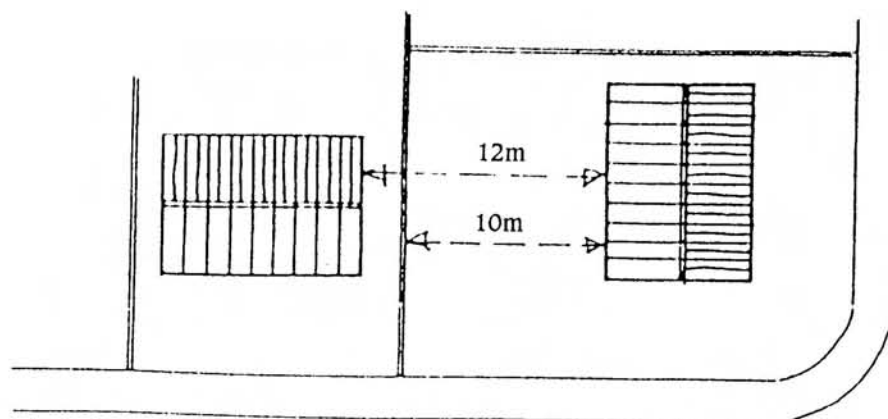
10.1.5 The distance between the wall of a dwelling and the boundary of the plot shall be such that:

- maintenance can occur on own property
- no part of a building overhangs the adjoining garden
- foundations do not adversely affect the adjoining garden

INCREASE IN MINIMUM DISTANCE FIG. 11



BACK TO SIDE DISTANCE FIG. 12



11.0

infill sites – maintaining the existing character of the area

11.1 *introduction*

In this Design Guidance Note infill development is considered as five dwellings or fewer. This is the maximum number of dwellings which can be served from a private drive [but see 5.4 (iv)].

Infill development must satisfy the general criteria for residential development (as set out in the preceding sections), and also an additional criterion, which is to maintain the existing character of an area.

Since infill development can occur in older densely built-up areas of the City, the standards for parking may be slightly relaxed, if this enables the character of the area to be maintained.

11.2 *maintaining the existing character of an area*

11.2.1 In addition to achieving minimum design standards, infill development should also take account of the amenity of immediate neighbours and the particular character of the area where the house is located.

11.2.2 A particular character may relate to the whole or part of a street, or it can distinguish a larger district. Districts of distinct common character give an area a structure and people identify with particular districts. Random infill development, where out of character, can eventually destroy or weaken the strong contrast between districts and leave everywhere looking much the same.

11.2.3 *General Criteria*

To maintain the character and visual unity of an area new development should fit into the existing context regarding the following:

- i Predominant dwelling type
 - detached houses
 - semi-detached houses
 - terraced houses
 - bungalows
 - a specific mixture of types

ii Type and density of layout eg:

- Victorian/Edwardian, eg. 'bye-law' streets
- inter-war suburban
- post-war suburban
- other specific type, eg. formally designed area of particular character

iii Building line, where strongly established

iv Amount of vegetation ie. trees, hedges, shrubs, flowers and grass. Development may greatly reduce the amount of visible vegetation, especially on a corner plot, by screening it with buildings or walls, or it may involve removal without leaving room for replacement. Even when new trees are planted as replacements they may take 30 years to attain the prominence of the original trees.

11.2.4 *Detailed Criteria*

If proposed development is satisfactory regarding the broad character of the area and space standards, it should still conform to the character of the area in terms of detailed building design where common features are well established. Since it is neither possible nor desirable to exactly copy existing buildings and gardens, the following items will need to be carefully considered:

i Building style

- plan form
- roof form eg. gabled, hipped, mansard, dormer
- roof pitch
- window form ie. relative size and vertical or horizontal alignment
- door type
- presence or absence of porches, and their style
- chimney stack form
- decorative details

ii Building materials (including boundary walls etc) ie.

- roofing materials: type, form, colour, texture
- walling materials: type, colour, texture

iii – Scale, mass and proportions

iv – Type and amount of planting

11.3 *development of rear gardens*

The erection of new dwellings in rear gardens, or in any backland site surrounded by housing, will affect the character of an area. In some cases this will reduce the length of gardens and the amount of vegetation, and in all cases will increase density. Whilst this change may not be visible from the street, it does affect the character of an area for nearby residents in terms of the view from their rear gardens. They will experience a more urban scene, shorter views, less greenery and increased activity. In terms of amenity there may also be overlooking and access may not be satisfactory, especially for large vehicles. For these reasons backland development will not normally be permitted.

11.4 *size of plot*

A common problem arises where a planning application relates only to land in a particular ownership and this land is insufficient to allow for a development which is in keeping with the character of an area. In this case it will be necessary to acquire a sufficient extra area of land. (Fig. 13). This may also be necessary in order to satisfy minimum design guidelines.

11.5 *parking*

The City Council may be prepared to slightly relax its parking standards as in 6.1.1 for housing infill sites meeting those criteria.

ADEQUATE SIZE OF PLOT FIG. 13

