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5.00 Residential Development

5.01 Introduction

5.01.01

This Supplement addresses aspects of design with respect to individual houses, groups of houses in a street, and the environment immediately around the house, most notably private front and rear gardens.

5.01.02

Guidance on these aspects of a development are considered important as together, individual houses and the private space immediately around them contribute significantly to the quality and character of the overall new development.

5.01.03

It is essential also to consult the Placemaking Principles Supplement which outlines the suggested approach to analysing a site and its surroundings and forming an understanding of the overall character of a new development, and provides guidance on the overall layout of the development.

5.01.04

Once the Main Principles within the Placemaking Principles Supplement has been considered and applied, the more detailed guidance within this supplement, pertaining to individual homes and the private space around it, becomes important to factor into the preparation of planning applications and reserved matters. Together, the application of the guidance in the Placemaking Principles Supplement and this Residential Supplement (as well as the other supplements) will ensure sustainable, high quality developments are delivered.

5.01.05

This supplement provides practical guidance for the creation of high quality residential developments. It includes guidance on:

- Achieving Privacy through Design
- Community Safety
- Space Standards and Storage (including garages)
- Bin Storage and Collection
- Gardens and Private Amenity Space



Fig 5.01 Good street-making: subtly different houses with clearly defined and well overlooked frontages. (Ampthill)

- Frontage Conditions/Setbacks
- Boundary Treatments
- Housetype Design
- Architectural Style and Elevational Design
- Incorporation of Renewable Energy
- Internal Layout for Passive Solar Capture
- Infills and Backland Development

5.02 Achieving Privacy through Design

5.02.01

The achievement of absolute visual privacy is not usually possible and is not necessarily desirable, as it would reduce social contact and could lead to a feeling of insecurity, In order to ensure visual privacy back to back distances will be enforced. In conventional suburban environments, a 'rule of thumb' of approximately **21 metres** distance between the rear of one **2 storey** property and the rear of another facing it (at first floor level in both instances), is an acceptable norm, but there may be circumstances where lower distances are acceptable.

5.02.02

Side and rear boundary treatment should be at least **1.8m** in height which will supplement this basic level of privacy.

5.02.03

Three storey dwellings and above heights would require an increase in distance if this basic standard was applied.

5.02.04

In higher density areas a more three-dimensional approach to achieving acceptable levels of privacy is required. Effective visual privacy can be achieved through:

- The careful relationship of habitable rooms of a dwelling in relationship to others (either in the proposed scheme or existing neighbours)
- The relationship of one dwelling with another (e.g. at angles to each other)
- The height, size and shape of upper floor windows, compatible with providing means of escape (Building Regulations).
- The use of single aspect or internal courtyard housing units
- The design of screen walls and the specification of tree species to ensure privacy and colour
- The use of garages, bicycle stores and other buildings requiring little or no outlook.

5.02.05

Traditional buildings and layouts found in Central Bedfordshire can provide some useful indications

of established ways in which privacy at relatively high densities have been accomplished, for example the burgage plots in Ampthill and intimate groups of buildings in most small settlements, such as Tebworth, Ridgmont and Clophill.

5.02.06

Aural privacy is a necessity in an environment where domestic music systems and vehicle noise can be a nuisance.

5.02.07

Density of wall construction, double or tripleglazing, and the absorbency of external materials (trees, planting and timber finishes) can all help to ameliorate the worst aspects of noise transmission.



Fig 5.02 Achieving privacy and defensible space in higher density housing (Linslade)



5.03 Community Safety Considerations

5.03.01

The Placemaking Principles Supplement also includes a section on Community Safety which focuses on 6 of the attributes of Safer Places that address how the overall layout of a development can contribute to a safer place.

5.03.02

Two of the Safer Places attributes deal specifically with the design of the dwelling:

- Surveillance There should be multiple opportunities for passive surveillance. Blank gable walls or re-entrants should be avoided, especially where properties face footpaths or the public realm.
- Physical Protection places that include necessary, well designed security features. e.g. gates, fences, walls, planting

5.03.03

The Secured by Design Standards for new housing include a set of standards relating to the environmental design and physical security of residential developments and adherence to them via conditions is considered an effective way of meeting this attribute. Environmental design standards relate to the layout and design of the development. Physical security standards relate to building construction issues, such as doors and windows of enhanced security standards, laminated glass etc. More information on Secured by Design Standards can be found on the following website: www.securedbydesign.com

5.03.04

Where it is not a requirement to meet full Secured by Design Standards, the standards pertaining to doors, windows and glazing should still be met.

- Front doors should be visible from the public realm (to reduce the possibility of screening of an intruder **(see Fig 5.06 and 07)**.
- Avoid single storey flat roofs for garages, porches etc. which provide an easy step for gaining access to first floor windows.



Fig 5.04 Learning from local precedent: attractive grouping of cottages (Tebworth)



Fig 5.05 Encourage a sense of security and tranquility through a clear distinction between the public and private side of a house



Fig 5.06 Ideally dwellings should wrap around corners to ensure that all parts of the public realm are overlooked. This may require the use of double-fronted dwellings avoiding blank facades

5.04 Accessible and Adaptable Homes

5.04.01

Homes should be designed to be as adaptable as possible, considering that households evolve as the requirements of families and individuals change. Thus considering the needs of an elderly or disabled person from the outset, might determine the need for ground floor toilets, wider doorways and adequate space for a future lift provision. Appropriate sill heights for windows might also be a factor for consideration.

5.04.02

The design of the ground floor to accommodate a future one room extension, or the possible conversion of roofspace (e.g. through appropriate roof pitch and construction) should be a design consideration.



Fig 5.07 Recommended Entrances clearly seen from the street. Not Recommended Vulnerable side entrance.



5.05 Space Standards and Storage

5.05.01

In order to protect the amenity and well-being of the future occupants, each dwelling should be adequate for the family or household which is likely to occupy it. New housing is expected to be big enough to meet the needs of the occupants for living, cooking, dining, sleeping, washing and storage of household goods with convenient access to adequate residential amenity space.

5.05.02

Inadequate space in new homes has however in the UK been identified on a national level. One of the reasons put forward for dissatisfaction with space in the home is that in every other country in Western Europe, and every other property sector in the UK, space is purchased or rented by the square metre (or square foot). For residential schemes in the UK, space is rented or purchased by the number of bedrooms. Unfortunately for the occupant, the number of bedrooms is not always a helpful indication of the amount of useful space within a home.

5.05.03

The Commission for Architecture and the Built Environment (CABE) commissioned a report by UCL 'Space standards: the Benefits' published in 2010, which concludes with a list of 6 benefits of space standards as follows:

- Improved health and wellbeing from living in a well designed home that provides sufficient space to function well and support privacy and social activity.
- Family life and the opportunity for children to study in private and therefore achieve more, increase educational attainment and the opportunity (for adults) to work from home.
- Flexibility of space within the home and adaptability to changing needs.
- The ability to respond to occupants' changing physical requirements over their lifetimes.
- Benefits to society from reduced overcrowding, which can result in anti-social behaviour.
- A more stable housing market underpinned by an understanding of long term need and the usability of homes rather than short-term investment

5.05.04

Further, research carried out by CABE for the document 'Space in new homes – what residents think' (2009), highlighted preferences for:

- 1. More space for accommodating furniture and storage cupboards.
- 2. More space for circulation and movement of furniture.
- More space in the kitchen for food preparation and for supervision by adults of children at play.
- 4. Adequate space for waste bins and efficient waste removal.

The following sections set out the internal and external space standards that should be met in all new developments in Central Bedfordshire. An overview of the standards is included in Appendix 1 for reference.

The suggested minimum standards for new housing are based on the RIBA : The Case for Space (2011): the size of England's new homes are:

Gross Internal Areas (m2)

Dwelling type	Number of bedrooms (b) & bed spaces (p)	Suggested Gross Internal Floor Area (m ²)	
Flats	1p	37	
	1b2p	50	
	2b3p	61	
	2b4p	70	
	3b4p	74	
	3b5p	86	
	3b6p	95	
	4b5p	90	
	4b6p	99	
Two storey	2b3p	71	
houses	2b4p	83	
	3b4p	87	
	3b5p	96	
	4b5p	100	
	4b6p	107	
Three storey	3b5p	102	
houses	4b5p	106	
	4b6p	113	
For dwellings for more than 6 persons	10m ² per person		

5.05.06

The suggested standards from RIBA provide a useful guide to overall dimensions but it is expected that the following minimum bedroom and cooking, eating and living (CEL) standards will be complied with to ensure that suitably sized rooms are delivered. The configuration of these rooms and the overall space provided is however at the designer's discretion.

5.05.07

Daylight

Developers should ensure that key rooms within new dwellings and outdoor spaces have sufficient daylight to allow their comfortable use. As well as providing for the amenity of residents the provision of buildings and dwellings with good quality natural light allows opportunities for passive solar gain.

Minimum bedroom areas - Essential minimum standards						
Bedroom	Area	Minimum width	Minimum length			
Single (1 bedspace)	8 m ²	Not specified	Not specified			
Double (2 bedspaces)	12 m ²	Not specified	Not specified			

Bedroom dimensions -					
Advocated minimum standards					
Bedroom	Area	Minimum width	Minimum length		
Single (1 bedspace)	8 m ²	Not specified	3m		
Double (2 bedspaces)	12 m ²	2.6m	3m		

Cooking Eating and Living (CEL) areas – Essential minimum standards

Number of bedspaces	Area in Square metres
2 bedspaces	23
3 bedspaces	25
4 bedspaces	27
5 bedspaces	30
6 bedspaces	33
CEL to be provided in 2 or mor or more bedrooms.	e rooms in family units with 3
Minimum width of living area (essential minimum standard)	3.2m



Fig 5.09 The spaces missing from a Smaller Three Bedroom House

5.05.08

Storage

Adequate storage provision is critical for the effective management and convenience of a dwelling. Since the revoking of the Parker Morris Standards, storage space has usually been reduced, at a time when demand for space has rarely been higher.

5.05.09

Internal storage is basically cupboard space and may be counted as part of the minimum Gross Internal Area (GIA). Walk-in wardrobes would also fall within this category. As well as the storage of personal possessions, storage of items for recycling and household goods including tall items such as vacuum cleaners brooms and mops, ironing boards and tall items of sports equipment need to be accommodated.

General storage areas

Number of Bed Spaces	2	3	4	5	6	
Square meters of floorspace	1.5	2	2.5	3	3.5	
0.5 square metres to be added for each additional bed space						

5.05.10

As a minimum, storage space should meet the following minimum standards (Ashford Borough Council: Residential Space and Layout SPD, 2011).

5.05.11

There should also be direct access to the exterior to storage space for various bins and containers associated with recycling. Similarly, parking for bicycles is essential. Garden and house maintenance equipment can be bulky and require adequate space. The list would be very long, but the designer should consider the appropriate size and location for storage.

Garages

Garages are used for a variety of functions in addition to car parking. Where a garage is intended as an allocated car parking space, provision should be made for a minimum of 3m² floor area for general household storage along with cycle parking within the garage. Alternatively, a separate, secure, weatherproof structure should be suitably designed within the curtilage of the home, or in a conveniently located space nearby.

5.05.13

A garage intended for car and cycle parking including storage provision should have a minimum width of 3.3m (3.15 between piers) and a minimum length of 7.0m; preferably 3.6m x 7.3m. Where the total amount of cycle parking is housed separately, the width of the garage can be reduced to a minimum of 3.0m between piers to allow for sufficient car door access. Garage doors should be a minimum of 2.4m to allow both convenient access for cars and space for cycles to be accessible whilst the car is in the garage. Where the character and density of a development allows, space in front of garages should either be of sufficient size to accommodate a second parked vehicle (6.0m is needed to allow the garage door to open), or short enough to discourage parking which could overhang a footway or shared surface.

5.05.14

Garages which are designed below the minimum stated here, will not be counted as a parking space.

5.05.15

Where garages exist, recycling storage and bicycle parking should be integrated. Thus, whilst a garage for a single car of 3.0 metres wide by 5.5 metres long may be an adequate minimum, a garage of 3.3 - 3.6 metres wide by about 7.0 metres long, will allow for the realistic requirements of two bicycles, recycling, garden equipment, DIY tools and workbench.



It is recommended that bicycles should be accessed without the need to move a car. The width shown also allows for wheelchair access

Bin Storage and Collection: Key Principles for Layout & Design

Ensuring waste/recycling storage areas are well located and designed in relation to the property:

- Appropriately designed communal bin storage should be considered for all types of developments rather than just flats.
- Bin storage areas should avoid blocking views between occupied rooms and the street so as to maintain natural surveillance of the street
- Opportunities should be taken to integrate the design of external bin storage with the building facade, or as an element of the semi-private outdoor space between the building and the street. Whilst the visual impact of communal bin spaces on public areas needs to be taken into account, they need to be located to allow good access, and in a position which does not create an isolated space hidden from the view of overlooking buildings. The location of communal bin areas within a shared private courtyard with vehicle access enables the area to be out of sight from public view, whilst retaining a degree of natural surveillance from overlooking dwellings.
- Bin storage areas can form a significant fire risk and therefore fire resistant separation should be provided between any bin storage area, accommodation and doors to accommodation

or dwellings. Ventilation in particular should be carefully considered in relation to bin storage so that it meets environmental and fire safety requirements without impacting upon the potential convenience of the facility.

- Ensuring a means of getting waste containers from the rear of the property to the front (without having to carry waste through the house on collection days), or where that is not possible, to create a suitable storage area;
- Providing a collection point near to the highway at which bins/sacks can be easily collected by collection crews;
- Provide communal bin stores where necessary that are fit for purpose, well located and designed and accessible to the collection crews.



Fig 5.11 Bin stores integrated well within the facade of the dwelling

 The provision of facilities which facilitate the separate collection and storage of wastes enables specific wastes to be directed to the most efficient recovery or disposal route. Developers should ensure that all new developments have sufficient internal and external space for the storage of waste containers including separate containers for recyclable materials.

5.05.17

Bin Sizes

The dimensions of typical wheeled bin containers are as follows. Bin stores should be designed with these dimensions in mind.

Bin Container Dimensions

TYPE	Volume	Height	Width	Depth
Single	140 I	1070 mm	480 mm	550 mm
Single	240 I.	1070 mm	590 mm	740 mm
Communal	360 I	1090 mm	600 mm	880 mm
Communal	660 l	1190 mm	1220 mm	770 mm
Communal	1100 I	1470 mm	1380 mm	1090 mm



Fig 5.12 Example bin store



Fig 5.13 Well integrated communal bin stores

Single Dwelling

- Minimum space for waste/recycling storage per individual property of 0.75m x 2.04m (3 x 240 litre wheeled bins).
- In the North (former Mid Bedfordshire District) space is also required for a 5lr food waste caddy
- Appropriate space for a composting unit should be provided in private gardens.

Communal Dwellings

- 180 ltrs of Residual Waste, and 180 ltrs of recycling capacity for dwellings up to 2 bedrooms per fortnight in a communal bin.
- Over 2 bedrooms, this capacity is increased to 240 Itrs for Residual Waste and 240 Itr of recycling capacity per fortnight in a communal bin.
- For communal properties there is the option of an additional 140 ltr bin per bin store

5.05.19

Communal Flats

Communal properties must be provided with adequate storage to meet residents needs. All bin stores must allow free access by the refuse collectors on the day of collection, it is recommended they are secure to ensure residents use only. The specific details of each bin store should be discussed and agreed with the Council. Storage should be convenient since the need to transfer recycling, as well as residual waste containers over long distances or up and down multiple building levels can be a deterrent to separating waste material streams for recycling.

5.05.20

Collection Pull Distance

Communal bins will be collected from the bin store by the Council's contractor, emptied and then returned to the bin store. Due to the size of communal bins and manual handling regulations Central Bedfordshire Council requires the store to be located at a point (or points) that is a minimal distance from the collection vehicle, not exceeding more than 10 metres.

5.05.21

Store Size

It is the applicants responsibility to ensure that a bin store is provided and is adequate in size for the number of bins required. Stores need to allow the easy manoeuvring of bins on collection day. Bin stores should be designed to allow ease of separation of recycling material and residual waste.

5.05.22

Access to Bin Stores

Due to the size and potential weight of communal bins, the Council does not expect the contractor to move bins over any undulating, non paved, uneven surface, or where the gradient is deemed excessive.

5.05.23

Access Criteria

Where access to bin stores is restricted, whether that be gates onto the development or bin store access, keys or codes must be supplied in order to ensure unrestricted access on collection days.

5.05.24

Kerbs

Where necessary drop-kerbs should be provided immediately adjacent to the dedicated storage areas for containers. The top of the drop kerb shall be no more than 12mm above the highway surface. The pulling area should be free from permanent obstructions and have a suitable level surface.

5.05.25

Clearance

Structures which cross the vehicular access to the bin store should be designed in accordance with the Design Manual for Roads and Bridges suitable to an adoptable standard.

5.06 Gardens and Private Amenity Space

5.06.01

It is important for both children and adults to have access to some private or at least, semiprivate outdoor space. In the case of non-flatted developments, this can most easily be provided in the form of a private enclosed garden. The provision of a garden also makes it easier to provide outside covered storage for items such as bicycles, garden tools, garden furniture and outdoor toys.

5.06.02

A private outdoor space is one which is not overlooked from the street or other public place.

5.06.03

In determining the appropriate garden size, consideration should be given to ensuring that the privacy of the dwelling is not compromised through overlooking or overshadowing from adjoining properties. Where gardens include existing mature trees, gardens will need to be larger to provide space for trees.

5.06.04

The minimum depth for all rear gardens should be 10m to ensure both that suitable levels of privacy are maintained, and that reasonable sized gardens are created. Wider frontage properties will therefore tend to provide larger gardens. Rear gardens for three and four bedroom homes should ideally be about 100sqm but generally no less than **60sqm.** It is however accepted that garden size will vary according to property size with occupants of smaller homes that may have no children potentially wanting smaller gardens than those with larger homes having more children. The below table outlines a sliding scale for garden sizes based on size of property. These dimensions provide a modestly sized garden but in most cases can accommodate a sitting out area, clothes drying area, small shed and area of play as well as space to plant shrubs and small trees. To accommodate these items, they should not be awkwardly shaped or very narrow. For example, where a garden tapers to a narrow point and the plot size is not yet fixed, it will be necessary to compensate for the loss of area by extending the length of the garden. Similarly minimum areas should include side gardens to account for awkwardly shaped plots where the garden can't be lengthened.

Private garden requirements for houses

Number of Bedrooms	Minimum areas (m ²) based on 5m width	Minimum depth (m)
2	50	10
3+	60	12

Ideally both the minimum area and minimum depth should be met. It is however recognised that in certain circumstances, such as infill sites, this may not be possible. In these cases one of the standards should be met as a minimum.

5.06.05

Gardens should be designed to ensure that they receive afternoon sun. Consequently, north-facing gardens may need to be longer than south-facing gardens. Alternatively, front gardens which face south, need to be longer to enable sitting usage in the sunlight.

5.06.06

An individual private garden should preferably include an area which is not directly overlooked by other residents this is usually referred to as the 'patio area'.



5.06.07

There should be a direct entrance from the dwelling into the garden and this should preferably be from a living room, dining room or kitchen.

5.06.08

Apartments

Within flatted developments, each apartment must have access to private open space. This can be provided in the form of private gardens for ground floor flats, balconies, roof gardens or terraces, or private shared gardens.

5.06.09

While balconies may take the place of a garden, easily accessible communal areas will also be required for relaxing and play as well as areas for hanging washing.

5.06.10

Where possible, ground floor apartments should have their own small private rear garden. Private outdoor space should not be located to the front where activities of the occupants will be very visible from passers by

5.06.11

Balconies should be attached to living rooms rather than bedrooms. Juliet' style balconies will not be acceptable as the primary provision for apartments.

5.06.12

Ground floor balconies should be designed to ensure that they are secure from external access.

5.06.13

All apartments should provide space to dry clothes either within the apartment or within a communal facility.

5.06.14

A balcony for an apartment should be large enough to accommodate a small table and two chairs to allow residents to sit out comfortably (see below table) (Ashford Borough Council: Residential Space and Layout SPD, 2011).

5.06.15

Private Communal Amenity Space

The minimum area for usable communal space is $50m^2$, plus $5m^2$ per additional unit over five units.

5.06.16

Communal gardens should be enclosed by walls or buildings with no public access or visibility from the street or other public areas. They should however be overlooked by the occupants of the dwellings they serve.

5.06.17

They should be of sufficient size to be useable, and should incorporate seating and play areas with a combination of hard and soft landscape features, including trees.

5.06.18

The layout and design of the communal garden should offer privacy for dwellings adjoining the space.

5.06.19

Where significant numbers of children are expected to use the on-site play facilities, careful consideration should be given to layout to dissipate noise, in order to avoid conflict with surrounding households.

5.06.20

Communal outdoor spaces should be private and not visible from the street or other public areas but overlooked by the occupants of the dwellings they serve.

Private open space requirements for flats

Number of bed spaces	Minimum depth of balconies (m)	Minimum area of private outdoor space per flat (balcony, roof garden or ground level patio or open space)
1	1.5m	5 m ²
2	1.5m	5 m ²
3	1.5m	6 m ²
4	1.5m	7 m ²
5	1.5m	8 m ²
6	1.5	9 m ²

5.07 Frontage Conditions and Setbacks

5.07.01

The width/depth of private space between the front of the house and the back of the street (including footpath if relevant), as well as how continuous or broken a building line is has a significant influence on the character of the street and development.

5.07.02

The amount of frontage amenity space or setback to a dwelling should be determined by the existing or proposed character of the street and its degree of urban, suburban, formal or informal nature.

5.07.03

In all but exceptional cases, the frontage should be no less than 0.5 metres (to allow for opening windows, canopies, steps, planting, bins etc) and is unlikely to be more than 6 metres. The preferred approach for larger homes (4-bed plus) that are likely to accommodate children is a minimum 2m setback.

5.07.04

Under no circumstances should parked vehicles (whether allotted to the property or not) be less than 1.5 metres from the windows of a habitable room. This is to ensure a minimum level of amenity and freedom from disturbance/nuisance from vehicles starting up or being loaded.

5.07.05

Similarly, where there are no footpaths (i.e. level surface streets) setbacks should be a minimum of 1.5 metres.



5.07.06

Generally setbacks will be smaller (0.5-2 metres) where a more urban, higher density, pedestrian friendly character with lower traffic speeds is to be created, with larger setbacks (3-6 metres) where a more open, green, lower density character is to be created.'

5.07.07

Furthermore, within a more urban area, building lines and therefore setbacks should be more consistent, not (all other things equal) varying in depth along the length of a street by more than approximately 2 metres. In more suburban, lower density areas, building lines and setbacks can vary more.

5.07.08

Setbacks greater than approximately 4 metres will allow on plot parking to the front. Where this occurs sufficient planting should be provided to help soften the impact cars may have on the streetscape.

5.07.09

For south-facing housing along east-west aligned streets, there may be a case for larger setbacks and hence larger front gardens for solar gain capture.

5.07.10

Continuous building frontages (90-100% of a street occupied by building frontages) are appropriate in urban contexts, while more broken frontages (occupying less than 60% of a street frontage) are appropriate in less urban contexts where a more green character is desirable. In both cases the continuity of a building frontage can also help reinforce the street hierarchy contributing to legibility.



Fig 5.16 Minimal setbacks to create a more intimate urban streetscene



Fig 5.17 Setbacks can be larger and more varied in lower density/rural areas or to emphasise green character. Sufficient planting should be provided to soften the impact on the streetscape of any on-plot parking

5.08 Active Frontages

How to Achieve Active Frontages

- Have **frequent doors and windows** with few blank walls
- Consider **narrow frontage** buildings to give vertical rhythm to the street
- Use projections such as bays, balconies and porches to articulate facades, provide a welcoming feeling and provide a more comfortable threshold in inclement weather, prolonging activities and enabling uses to overlap into the street
- Where appropriate consider **lively internal uses** visible from the outside, or spilling onto the street e.g. pavement cafes
- Use transparent glass for windows, where privacy allows, rather than mirrored or frosted glass that only allows occupants to benefit from views out
- Consider level changes between the ground building level and pavement, with steps up to house front doors or raised terraces for pubs or restaurants, for example. A change of up to 450mm is often desirable to give a sense of privacy and surveillance, but only where suitable alternative disabled access is available

The grouping of houses to create streets of different levels of enclosure and continuity depends on the way in which frontages are designed and the plan shape of house types.

Fig 5.18 NOT RECOMMENDED Detached cubic forms give a 'boxy' appearance, with no predominant axis. This tends to result in a random looking layout and difficulty in turning corners. Staggered corners produce awkward 'sawtooth' rooflines and footprints.



Fig 5.19 RECOMMENDED Rectangular plans give a pronounced axis, which can either be aligned parallel or at right angles to the street. Gentle or right angled changes in direction can be achieved successfully with this shape.









Fig 5.21 Continuous Frontage Higher density central location



5.09 Boundary Treatments

5.9.01

Coupled with the width of private space (setbacks) to the front of the house, the nature or type of front boundary treatment in particular can be a major influence in the creation of a certain character for a street and development.

5.9.02

It is a fundamental urban design principle to clearly demarcate public and private space and hence appropriate boundary treatments are required. All planning applications should be accompanied by details of treatments for all boundaries – front, side and rear.

5.9.03

Boundaries (particularly front) should be clearly defined, using appropriate boundary markers, such as low walls, fences and hedges. In some cases, it may be appropriate to mark the boundary between public and private space through a change in hard surfacing or through groundcover shrub planting. This may be particularly appropriate in courtyards, and mews where the objective is to create a more intimate enclosed space. An appropriate use of materials or planting can ensure that pedestrians and motor vehicles are kept away from ground floor windows, thereby protecting residents' privacy. Boundary treatments should respect the required vehicular and pedestrian visibility splays.

5.9.04

As a general rule, low walls and/or metal railings (less than 1.2m in height) are more appropriate as front boundary treatments in more urban areas along streets higher in the street hierarchy, while soft planting, hedging and picket fencing is more appropriate in rural villages and lower density areas which have a softer and greener character.

5.9.05

Lengths of side boundaries onto the public realm should be kept to a minimum and rear boundaries should be avoided. Where this does occur boundary treatments should be of brick, hedging or other appropriate materials, such as ivy screens which can soften the wall and add to the character of the street. Standard close boarded timber fencing will not be acceptable as it undermines the quality of the public realm.

5.9.06

In rural areas and infill developments in particular, good boundary design can help to integrate new development with an existing environment. Green boundaries which form the interface between open countryside and a built up area, particularly as seen from major roads or entry routes to settlements are especially significant. Certainly not in these locations but in fact in all locations where rear or side boundaries are visible from the public realm, brick walls rather than close boarded fencing should be used as the latter is not only visually unattractive but where it interfaces with open countryside will be regarded as detrimental to the character of the area. In these cases walls should incorporate green planting such as "ivy screens" so as to add to the character of the green countryside.

5.9.07

Existing hedgerow or tree boundaries are particularly important and the presumption shall be that they are retained, reinforced by new planting and a maintenance plan.

5.10 Designing Housetypes



Fig 5.23 Brick wall with railings providing a formal front boundary treatment (Ampthill)



Fig 5.24 Railings providing a formal front boundary treatment (Ampthill)



Fig 5.25 Soft boundary treatment creating defensible space to the front of habitable rooms (Dunstable)



Fig 5.26 lvy screens forming a soft and green side boundary treatment (Oxley

5.10.01

Apart from infill sites and sites in other critical locations, the majority of developments use a limited set of house types. It is therefore essential that the types have regard to their role in the making of streetscapes and the creation of places, rather than adopt a 'one-size-fits-all' plan which assumes a standard suburban context. The design of house types should reconcile placemaking requirements with those of local distinctiveness and meeting national targets of carbon neutrality.

5.10.02

House types for a development would include most if not all of those below:

- a. Houses that turn corners
- b. Houses that terminate views
- c. Street houses
- d. Three storey houses
- e. Houses that have south facing fronts
- f. Single aspect houses and flats

a. Houses That Turn Corners

5.10.03

Corners are a key element in placemaking; they are a 'pivot' in moving from one space to another. Without good corners the townscape falls apart.

5.10.04

Corners offer challenging design opportunities, and their resolution will make an important contribution to the character and attractiveness of a place.

5.10.05

The corner building is one that is seen in three dimensions and inevitably will become a minor landmark. The corner is also a speed control device.



Fig 5.28 Building that turns the corner well (Fairfield)



Fig 5.30 - 45° convex corner frontage type This should be avoided as it normally results in overlooking and overshadowing problems in rear gardens. It is alien in alignment in traditional townscapes



Fig 5.27 2 linked houses turning concave corner



Fig 5.29 Large individual corner house: steep pitched roof and bay windows emphasise its pivotal position



Fig 5.31 - 45° concave corner frontage type This gives a spacious entry impression to a development. Appropriate in relatively formal situations. Good rear gardens

b. Houses That Terminate Views

5.10.06

Classic townscapes comprise a sequence of linked spaces of walkable distances. These spaces are prevented from being endless corridors by buildings which terminate long views. Buildings which terminate views at street junctions become an integral part of keeping vehicular speeds low.

5.10.07

In formal places these views are symmetrical and are of a scale which is legible from a greater distance than the street. Thus elements such as gable ends, openings, string courses and other architectural features are given emphasis.

5.10.08

In more informal contexts, a building can terminate a view by its location at the head of a T junction: its profile does not have to be symmetrical, but it should dominate the space.



Fig 5.32 Victorian cottage terminating a view



Fig 5.34 The architectural expression shown here is indicative only. Many different ways of expressing an elevation can be used depending on context i.e. urban, suburban or rural, formal or informal



Fig 5.33 A strongly emphasised centreline gives a focus to the view. Emphasise windows, doors etc. on the centreline



Fig 5.35 Avoid placing garages in a terminating position; they do not fully enclose the view and there is little to focus upon

c. Street Houses

5.10.09

Successful streets are comprised of houses which ensure continuity of frontage and an appropriate sense of enclosure. They should relate to each other, yet have sufficient variety to allow for individual preferences and a degree of personalisation.

5.10.10

The terraced house is an efficient type, which can achieve higher densities without having to resort to high rise. Traditional terraces in the smaller settlements of Central Bedfordshire demonstrate that this effective form of housing can make attractive streetscapes.

5.10.11

The challenge is to develop a family of terrace types with related characteristics, but which offer different combinations of accommodation, have different plot widths and frontage depths and the ability to achieve subtle changes of direction.





Fig 5.37 An informal terrace of traditional cottages (Silsoe)



Fig 5.38 An informal terrace (Lidlington)

d. Three Storey Houses

5.10.12

Three storey houses have been built in the area since at least the 18th Century. They are usually found in town centres in groups e.g. Leighton Buzzard, Woburn and Ampthill, or sporadically in some smaller settlements e.g. Aspley Guise and Potton. These precedents are usually wide fronted types. Most three storey houses are narrow fronted with integral garages.



Fig 5.40 Vehicular access way (Ampthill). Note also the upper windows centred over the archway



5.10.13

As a consequence they have a vertical emphasis and a deep plan and are best laid out in a formal way, enclosing squares. They are less successful if laid out following a curve, as they are rarely designed to change direction in this way.

5.10.14

Generally the three storey house should be used in the higher density areas of a scheme, enclosing urban spaces. They can also be used successfully to front a formal avenue. Single groups of two or three can be used as corner elements or as accents in the street scene. It is unlikely that the whole or most of any scheme will be three storey, except in higher density infill situations.

5.10.15

Apartments and affordable housing may also be of three storey units. Apartments will be of a shallower plan.

5.10.16

This guidance on height applies to houses; higher buildings may be acceptable for apartments depending on the context.

e. Houses With South-facing Fronts

5.10.17

Orientation to optimise solar gain and provide attractive private garden space is an objective which is more challenging for the designer, where southerly frontages face the street.

5.10.18

The issue is to accommodate reasonably private garden areas within relatively short frontages at higher densities.

5.10.19

The design of the front boundaries is important. Elevational design will also make a positive contribution with the resolution of the conflicting demands of solar gain and glare; privacy, security and outlook.

5.10.20

The resulting streetscape can potentially have a pleasant green linear fringe on one side, with more traditional shorter frontages on the north-facing side. This asymmetric street profile can lend a specific character to streets with an east-west orientation.





f. Single Aspect Houses and Flats

5.10.21

This house type can be used in tight backland situations, in housing blocks or as infill. It consists of a two bedroom single aspect flat above four garages, or patio-type single storey houses.

5.10.22

Courtyards can be accessed through an undercroft. The dimensions of the opening should be quite modest where the courtyard has up to six units.

5.10.23

Large archway openings introduce a massive scale and reduce the intimacy and defensible space characterised by the courtyard.



Fig 5.42 Minimum height of arch 3.7m if it has to be accessed by a fire appliance





Fig 5.43 Avoid two storey high archways, especially if topped only by a roof and spanning a full road width. This creates and emphasises a large, non-domestic scale



Fig 5.45 Single aspect types utilising a difficult internal corner

5.11 Architectural Style/ Elevational Design

5.11.01

Guidance on the massing and layout of development is provided throughout the Placemaking Principles Supplement. This section outlines some basic considerations which influence elevational design.

5.11.02

The guidance is intended to aid decision making regarding the appropriateness of an elevational design approach, related to the character of the building, its context and its site. It is stressed that there is no single design solution appropriate to every situation, nor is there any stated preference regarding architectural style.

5.11.03

This supplement is not advocating or prescribing a particular style of architecture for new residential development across Central Bedfordshire as there are so many different contexts that require different architectural responses. The Guide also does not want to constrain design skills and architectural creativity.

5.11.04

The Design Guide does however argue that the detailed design appearance of housing is important in so far as it can contribute to or undermine the character, identity or sense of place of a development. This is in part because the external appearance of a building creates an important and visual backdrop to the public realm. All developments should also be tenure blind so that affordable housing cannot be differentiated from market housing by inferior standards and quality of design e.g. lack of detailing like chimneys.

5.11.05

If a designer regards a particular style to be appropriate (vernacular, classical, Victorian etc) rather than a contemporary design, it is essential that the design demonstrates a full understanding of the style – its intentions, its guiding proportions and correct detailing: a pastiche design derived from poorly understood principles does not contribute to the creation of a sense of place for a development nor the quality of the built environment, especially if it is seen in relation to historic buildings.

5.11.06

For small scale infill developments cues on style and elevational design can be more easily taken from surrounding development, whereas for large developments on greenfield sites the challenge is to create a new architectural character.

5.11.07

All schemes should be tenure blind so that the required affordable housing is indistinguishable in appearance from market housing.

5.11.08

The key with all buildings is good quality, honest architecture – in other words, keeping it simple without unnecessary 'gimmicks'. Much of the following guidance provides advice on how to achieve this.



Fig 5.46 Good quality architecture in a traditional style (Ampthill)



Fig 5.47 Contemporary design (Sandringham Drive, Dunstable)



Fig 5.48 Good quality design in a traditional style (Ampthill)



Fig 5.49 Good quality traditional architecture that has created a strong character (Silsoe)



Fig 5.50 Scale is not only defined by height and bulk, but by the size and proportions of the openings in an elevation and the size of the units (brick or precast panel) in relation to the person







Fig 5.51 Vertical Emphasis is seen in more urban contexts where vertically proportioned buildings occur on a narrower fronted building, often in a terraced group. The principles outlined in these examples are relevant to most types Fig 5.52 A Balanced elevation occurs where the verticals of the openings are balanced by the banding or cladding materials (e.g. brick plinth up to cill or door head and render or weatherboarding above). This approach is appropriate to most suburban situations Fig 5.53 Horizontal Emphasis is usually more appropriate in a rural context where horizontal lines predominate and most cottages tend to adopt a low profile. Note the 'lining through' of the horizontals.

5.12 Elevational Design Considerations

5.12.01

Symmetrical/Asymmetrical Balance

Symmetry is usually associated with classical design and is organised around the vertical centre line of the building. Symmetrical design is most appropriate in formal situations and where the elevation of a building is likely to be seen in full. **Fig 5.54**

5.12.02

An asymmetrical elevation is composed of differently sized elements, which appear to balance through careful consideration of their visual effect (e.g. a large window on one side of a doorway may be offset by a larger amount of wall with small windows on the other). This approach usually reflects the functional requirements of the different rooms in the house. **Fig 5.55**

5.12.03

Subservient/Additive Form

Successful elevational design often stems from the mass of a larger building being broken down into its component parts (e.g. the main house as the dominant form, with the garage and minor projections such as the porch, playing a subservient role as additions). **Fig 5.56**



5.12.04

Modelling of the Elevation

The degree to which the parts of an elevation project or recede will have a considerable effect on the character of the house and its impact on the streetscape. Three broad design options involving the amount of elevational modelling are identified in **figs 51-53**.



Fig 5.55 Asymmetrical elevations



Fig 5.56 Subservient additions to the main dominant form



Fig 5.55 The requirements of sustainable design provide opportunities for creative roof profiles and elevations



Fig 5.56 Flush façade

5.12.05

Flush façade

This approach is adopted when simple building forms and shapes are required. Many existing vernacular cottages, farm buildings and contemporary designs demonstrate these characteristics. Windows, doors, cills and eaves are usually aligned flush with the façade.

5.12.06

Deep modelling

Where elements of the building are projected or set -back from the main line of the elevation, this can produce dramatic effects. However, an exaggerated footprint building form and roofline can result in a fussy or over-assertive impact in some situations.

5.12.07

This design approach can result in deep shadows and parts of elevations being deprived of sunlight. Some use of recessed elements, such as garages,



Fig 5.57 Deep modelling

can link buildings and provide some privacy between rear gardens.

5.12.08

Shallow modelling

This is appropriate in most situations, as it is a characteristic of most established streetscape design. The effect of highlight and shadow can enliven a façade and differentiate various elements of the building. These elements such as porches, bay windows and gable ends project from the main plane of the elevation, but usually by no more than a metre.

5.12.09

Windows and doors are often set back by the depth of a brick and cills project by no more than 100mm. Eaves, canopies, string courses and surface mounted or recessed rainwater pipes can also contribute to this elevational effect.



5.12.10

Elevation A illustrates the use of vertical proportions in openings – a characteristic of many town centres. Exposed lintels and/ or infill panels under windows can reinforce vertical proportions. The 'chimney' element is a bold skyline feature grouping together extracts, ventilation equipment or sunpipes.

5.12.11

Elevation B (not recommended) illustrates a poor pastiche solution using domestic scaled proportions and windows which appear awkward in larger wall areas, where floor to ceiling heights are greater than in domestic situations. Avoid non functional chimneys and repetitive and/or exaggerated party wall parapets, boxy dormers, cutaway eaves and visually weak arches.



5.12.12

Windows

The pattern of window openings has a profound effect on the elevation and within an overall streetscene can impact on the character of the development.

5.12.13

It is important to consider the basic window to wall ratio: more window to wall gives a light airy impression, whilst more wall than window conveys a robust, thick set exterior. Consider the dimensions and placing of windows in an elevation. The diagram shows different cill heights related to activities and sitting positions in the home. **Fig 5.59**

5.12.14

Glazing bars are important to consider as they potentially can look cumbersome, clutter the elevation and restrict daylight entering the house if too thick.

5.12.15

Careful consideration must be given to window reveals – structural depth can be created by employing deep window reveals which can enliven the façade through contrasts of light and shade.

5.12.16

If a more contemporary approach to elevational design is sought, differently shaped windows should be considered (e.g. floor to ceiling, windows that 'turn the corner'), while glazing bars and visible sills and lintels could be excluded.

5.12.17

Notwithstanding the above, the size and proportion of windows should relate to the function of the room.

5.12.18

The sill heights shown (in millimetres) are approximate guides. Narrower windows are usually more appropriate on the 'public' side of the house as they reduce visibility of the interior from the public realm. White glazing bars can reinforce this effect. On the other hand, white glazing bars can tend to dominate and clutter an elevation and could be avoided if a contemporary elevation is sought.



Fig 5.56 Interesting and lively elevational design resulting from use of windows related to room functions (Broughton, Milton Keynes)



Fig 5.57 Size and proportion of windows should relate to the function of the room

E EAVES

5.12.19

Materials

The choice and distribution of materials can help to articulate and add interest to a façade and influence the overall character of a development as well as particular streets.

5.12.20

The cumulative effect of the use of the wide range of standardised materials available to designers can result in 'fussy' or 'busy' elevations and streetscapes and can contribute to the erosion of a sense of place and local distinctiveness.

5.12.21

The use of a relatively limited palette of materials can be extremely effective in creating a strong character for a street in particular. Brick can be used to create both a traditional and contemporary character.

5.12.22

The choice of those materials should normally reflect the character of the setting of the development, or role of the building in its setting. Thus the choice of materials for a development should relate to its urban, suburban or rural location, whether it is large or small scale, or whether the building is a 'landmark' (small or large). Where there is a well established pattern of local vernacular building materials within the setting of a proposed development, this should



34

be recognised and complemented in the choice of proposed materials. The following criteria should be applied when selecting materials:

- $\boldsymbol{\cdot}$ Appropriateness to the function of the building.
- Scale: the unit size of the material related to a person or those in adjacent buildings.
- Colour and texture: should the colour be assertive, complementary or recessive? Bold or assertive colours may be appropriate on a key frontage or for a key corner building
- Performance: e.g. thermal properties.
- Durability: e.g. design life, robustness and ease of maintenance.
- Sourcing: can the materials be sourced locally/ regionally?

5.12.23

Where traditional materials are considered appropriate, sections xxxxxx in this document should be consulted. Where Listed buildings and conservation areas are involved, the Historic Environment Supplement should be consulted.



Roofs

As with windows and materials, the design of roofs can add interest and character to a development.

5.12.25

The following elements need to be considered regarding roofs:

- Roofing materials;
- Construction form and detailing.
- Roof pitch and shape (e.g. plain, gable, hip, flat, monopitch etc);
- Eaves overhang, fascias, bargeboards;
- Dormers and rooflights;
- Parapets;
- Whether a living roof is appropriate.

5.12.26

A variety of roof styles can be used across a large development. Developments should not just include the traditional pitched roof but, particularly on key frontages, should consider incorporating alternative styles such as mono-pitch, flat and curved as they can help create a distinctive character for a development or street.

convey the character of riverside buildings in the region, and to be legible in long distance views (Biggleswade)

Fig 5.61 Simple expression of materials, lintels and colours to



Fig 5.60 A limited palette of materials helps enforce a strong character for this street (Sandringham Drive, Dunstable)



Fig 5.62 Careful detailing of materials to achieve a flush threshold in a rural setting (Nicolas Tye Architects, studio near Maulden)



5.12.27

Living Roofs can provide many environmental benefits including thermal insulation and biodiversity and so should be considered. Further guidance can be found at www.livingroofs.org

5.12.28

Pitched roofs which over-dominate the building should be avoided.

5.12.29

A series of detached or terraced houses with each individual roof turned through 90 degrees so that a gable end fronts the street should be considered. This not only creates a more interesting building frontage and street scene, but it can also provide additional enclosure to a street through the extra attained height.

5.12.30

Similarly, mono-pitch roofs which have their tall side facing the street can provide verticality onto a street that requires a greater presence.

5.12.31

Monopitch roofs also provide a greater roof area for the inclusion of Photovoltaics.

5.12.32

While lengthy stretches of pitched roof on terraces at the same ridge height must be avoided they must not be over complicated. The massing of roof forms can be broken by vertical protrusions through the eaves into the roof. Variations of the conventional pitch form to a projecting bay should be considered.

5.12.33

Careful consideration must be given to the use of dormers. They can clutter the roofscape and spoil the proportions of the building if they are used excessively, or made too large and overcomplicated in design. Conversely a well-designed dormer can add interest and quality to the building.

5.12.34

Chimneys

Chimneys should be provided on traditional house styles as they are the sort of detailing that enlivens roofscapes, and enhances the overall quality of houses.



Fig 5.63 Buildings with prominent gable ends creating a strong character (Tilia Place, Dunstable)

5.12.35

Balconies

Balconies can provide an important external amenity area for apartments and can add interest to an elevation but care needs to be taken that firstly, they maintain the privacy of nearby properties and secondly, to ensure they do not overly clutter the elevation. In this regard they should be recessed or cantilevered (rather than be supported by an external frame). If external frames are the only viable option, care needs to be taken that they complement the overall elevation design and are not seen as a 'bolt-on' that clutters the elevation.



Fig 5.64 The use of a mono-pitched roof adds character to this development (Sandringham Drive, Dunstable)

5.12.36

The external treatment of balconies should preferably be made of opaque glazing which can help screen householder possessions on the balcony from being seen from the public realm.

5.12.37

Buildings on Key Frontages

These are the buildings that will be seen by the most people and therefore help establish an image for an area. They primarily pertain to the avenues and boulevards as discussed in section 3 or to existing primary streets through a development and need greater attention to design detail. Elements that need to be considered include:

- ・Height;
- Roof Style;
- · Window detailing;
- Elevational materials (including the use of coloured render);
- Vertical proportions may want to be emphasised to give the impression of height. In this case windows should be designed so that their vertical axis is greater than the horizontal and/ or dividing each panel into a series of vertically proportioned glazing panels. Horizontally proportioned windows can be given more vertical emphasis by incorporating vertically proportioned glazing panels.

5.12.38

In order to reinforce the character of a key frontage, the buildings on both sides of the street should be designed holistically with a small selection of materials so that they can be "read as one".

5.12.39

Incorporation of Renewable Energy Technology

Photovoltaic panels and solar heating panels, should be incorporated in the roof profile at the outset of the design process. This will determine the optimum roof pitch and orientation (e.g. approx 35° pitch, 30° either side of due south). Of course other factors may influence variations to this pattern. Panels should be fitted as flush as possible with the roof finish.

5.12.40

Natural air ventilators and heat exchange units should be considered as a positive roofline feature, as should stacks for biomass boilers.

5.12.41

Internal Layout for Passive Solar Capture

The following guidance is applicable for passive solar houses (i.e. those that face within 30° of south).

5.12.42

The most heated and frequently used rooms should be placed on the south side of the dwelling (for south-facing houses this implies fronting the street while for north facing it means being located at the back of the house facing the rear garden).

5.12.43

Rooms that benefit little from sunlight such as hallways, utility rooms, and bathrooms should be placed on the north side of the dwelling and have smaller windows.

5.12.44

It is not necessary for passive solar houses to have very large south-facing windows. However it is important to ensure that the glazing area is biased to the south rather than the north and that northfacing windows are no bigger than they need to be for adequate daylighting (at least 15% of a room's floor area). South-facing glazing can be avoided in the kitchen in order to minimise overheating from a combination of solar gain and internal heat gain.

5.13 Infills and Backland Development

5.13.01

Much of the guidance within this supplement and in particular the Placemaking Principles Supplement relates to larger scale development involving the creation of new street networks and block structures. However, the principles of good urban design/placemaking are just as relevant to small-scale infill development whether it be small plots of vacant land or intensification of existing plots through redevelopment or by developing in the rear gardens of large houses.

5.13.02

Whilst there may be a general justification for this approach particularly in small villages where it may help retain or enhance the provision of facilities and shops, redevelopment should not take place at the expense or loss of the positive aspects of the character of the street scene, the area as a whole, or the unacceptable loss of amenity of the original house on the plot, or its neighbours. Any development should enhance the existing positive character

5.13.03

The immediate context of the site is therefore critical in the design of these small-scale residential schemes, particularly where development infills within an existing streetscene. The 'area character appraisal template' within the Placemaking Principles Supplement should be used to assess the character of development adjoining the site.

5.13.04

The analysis of the immediate area should identify what aspects of the context are important to reflect in the infill development. It may be that there is a uniform use of materials, a consistent building line, or predominant building type.

5.13.05

In particular, account should be taken of the existing:

5.13.06

Assessing Capacity

The character of the streetscene, the adjacent residential area, the plot and the house should be appraised to assess the amount, layout and form of development which may be appropriate. Where the site is within a conservation area, these factors will have increased importance. The assessment of capacity should be undertaken in a Design and Access Statement

5.13.07

The Streetscene

Development proposals should take cognisance of existing front boundary treatments and not result in the significant loss of characteristic boundary walls, hedges, gateposts etc, or the creation of new road junctions which result in the unacceptable loss of those features above or which are unacceptable within the terms of 'Manual for Streets'.

5.13.08

Development should not result in the 'terracing' of previously freestanding villa-type existing development, where gaps between buildings contribute to the positive character of the streetscene.

5.13.09

The Adjacent Residential Area

The character of the area in terms of continuity of frontage, setbacks, building types, landscape, privacy etc should be considered in the design and layout of new development. Where a rear garden adjoins countryside, the existing character of the interface between the plot and the countryside should influence the amount of proposed development.

5.13.10

Adjacent Buildings

The scale/plot coverage, height, roofline, materials, fenestration and details should be noted and the proposed development should complement them. New development should:

- Avoid dominating the adjacent buildings
- Respect privacy of adjacent buildings

5.13.11

The Site or Plot

Existing features on the site or plot, which contribute to area character, especially specimen trees, walls, ponds etc. should be considered as locally distinctive.

5.13.12

The setting and amenity of the adjacent house/ housing should be established. It is essential that the proposed development does not result in it being cramped or 'hemmed in' by new development. Access and parking should not dominate the scheme.

5.13.13

Indicative Layout Options

The following three generic approaches to layout design relate to the backland garden of a substantial Victorian house. The plot width is 27 metres and the available plot depth is between 35 and 40 metres. Similar properties are adjacent to the site. The original house faces a southerly direction. The site is flat, with one tree of interest near the existing house. The schemes demonstrate that higher numerical density per site does not always result in higher buildings or loss of privacy.



- A Boundary design, intervals of access points, potential access for deliveries etc.
- B Established building line
- C Spacing between buildings (minimum & maximum)
- D Characteristics of the original building (height, massing, roof pitch, elevational proportions etc)
- E Plot characteristics (trees, structures, boundaries etc).
- F Privacy/amenity considerations

SCHEME A (UNACCEPTABLE)

5.13.14

A terrace of 5 narrow fronted 2 storey, 3 bedroom houses is located across the site, 11 metres from the rear boundary. A range of 5 garages with associated hard standing lies on the western boundary. An access road has been created, with a turning head, which has significantly widened the existing driveway. A garage has been provided for the existing house, near the specimen tree.

5.13.15

The scheme is unacceptable as it creates a road and parking dominated scheme, eroding the front boundary and severely encroaching onto the eastern side of the existing house.

5.13.16

The terrace of houses and the garage block are laid out with no regard to the enclosed and green character of the site or to its relationship to the house and with the implication that a new suburban street of terraces could be extended on an east-west axis. The proximity of the ends of the terrace to the site boundary would create the feeling of neighbours being overlooked, even if existing development is beyond the conventional minimum of 21 metres. Two storey gable walls almost on the boundary, may also have an intrusive effect.



Fig 5.66 Scheme A (Unacceptable)

SCHEME B (UNACCEPTABLE)

5.13.17

Four semi-detached 2 storey, 3 bedroom houses, are laid out along the long axis of the property, set back by 0.5 metres from the east and west boundaries.

5.13.18

Garages are provided between the houses and at the head of the approach road. A turning head is provided. The specimen tree is removed for the provision of a garage for the existing house.

5.13.19

The scheme is unacceptable as it is dominated by an estate road which is over- designed for the accommodation on the site, erodes the original front boundary and severely encroaches on the eastern side of the house. The scheme has a severe geometry at odds with the bucolic character of the site.

5.13.20

The twin garages at the end of a very long estate road, fail to terminate this view effectively, and reinforce the effect of car domination. The house at the northern boundary of the site may present overlooking issues for neighbours. The remnant rear garden area for the existing house is unacceptably cramped. Whilst this scheme could be 'softened' by house design and east-west boundary planting, other factors above would suggest a redesign of the overall scheme.



SCHEME C (ACCEPTABLE)

5.13.21

Seven two bedroom units, i.e.; 5 single storey courtyard houses and 2 mews flats over garages, are planned around an informal courtyard which incorporates space for vehicle turning. The original driveway gate piers and front boundary have been retained. The specimen tree has been retained and a garage for the existing house provided. This design concept is more likely to be acceptable as it is based upon a 'stable courtyard' type of form and layout. This would not be inappropriate for a large historic house and allows for an informal group of subservient building of 1 and '1.5' storeys, and an inward looking scheme.

5.13.22

This approach is likely to minimise problems of privacy and bulk as perceived by adjacent properties. In some contexts it may be necessary to create more space between each unit. The drive has been considered as an informal shared surface space, softened by planting with the view terminated and deflected by a low building and wall. The road junction is designed to reduce vehicle speed on entering and leaving the site and to make pedestrian movement along the pavement as convenient as possible.



Fig 5.68 Scheme C (Acceptable)

5.13.23

This approach is likely to be most sympathetic to the character of the area. The development and would need to be negotiated in detail with highway officers.

5.13.24

The scheme allows for a relatively spacious garden area or the existing house, larger and more private than in schemes A and B.

5.13.25

Any scheme is likely to be influenced by the requirements for access for recycling collection and storage, and for access for emergency and removals vehicles. This should be designed through the use of tracking, the location and design of bin storage, and acceptable walk distances.





DESIGN CONCEPT

- A Terrace: About 11m from garden boundary to north. Tree screen planted. Terrace terminates view on entry to the site. Ideal alignment for photovoltaics.
- **B** 2.5 storey flats: on same alignment as adjacent house. B forms a 'pivot' between front and rear of site.
- **C** This part of terrace CD continues the established street alignment and respects adjacent property re scale and outlook.
- **D** This part of terrace CD set back to reduce air quality and noise impact. Creates shelter and enclosure for space between CD and A, B. Terminates view from east.
- **E** Garage block reinforces street alignment and recalls layout of farm buildings in similar locations.

5.14 Lifetime Homes

5.14.01

Lifetime Homes are standard homes which incorporate 16 design criteria that can be universally applied to new homes at relatively minimal cost. Each design feature adds to the comfort and convenience of the home and supports the changing needs of individuals and families at different stages of life. Lifetime Homes enable the property to adapt to changing needs over time which promote flexibility, adaptability and independence.

5.14.02

The Lifetime Homes Standard seeks to enable 'general needs' housing to provide, either from the outset or through simple and cost-effective adaptation, design solutions that meet the existing and changing needs of diverse households. This offers the occupants more choice over where they live and which visitors they can accommodate for any given time scale.

5.14.03

Housing that is designed to the Lifetime Homes Standard will be convenient for most occupants, including some (but not all) wheelchair users and disabled visitors, without the necessity for substantial alterations. Lifetime Homes are not, however, a substitute for purpose-designed wheelchair standard housing. Many wheelchair users will require purpose-designed wheelchair housing.

5.14.04

Some although not many of the Lifetime Home Criterion are currently covered by Building Regulations. The table following paragraph **5.14.07** for ease of reference outlines the relationship between Lifetime Homes Criterion and Building Regulations and the degree of overlap.

5.14.05

The Lifetime Homes Principles

The Lifetime Homes concept is based on five overarching principles. These inform and establish the functional basis for the statements of principle that have been introduced for each of the sixteen Lifetime Homes criteria. Principle One: Inclusivity Principle Two: Accessibility Principle Three: Adaptability Principle Four: Sustainability Principle Five: Good Value

5.14.06

In Central Bedfordshire it is recognised that delivering all 16 criteria may not be practical or cost-effective so the criteria have been assessed as either essential to meet the requirements of Development Strategy Policy 32: Lifetime Homes or desirable.

5.14.07

For detailed specifications relating to the above criteria, please see www.lifetimehomes.org.uk

Lifetime Homes	Criterion	Principle	Specification	Essential/	Building Regulations Coverage
Criterion	Description			Desirable	
1a – 'On plot'	Parking	Provide, or enable by cost effective	Where a dwelling has car parking within its	ESSENTIAL	The only reference to parking spaces
(non-communal)	(width or	adaptation, parking that makes	individual plot (or title) boundary, at least		is in the context of bays for disabled
parking	widening	getting into and out of the vehicle	one parking space length should be capable		people in commercial developments,
	capability)	as convenient as possible for the	of enlargement to achieve a minimum width		where Diagram 2 of Approved Document
		widest range of people (including	of 3.3m		M and Fig.3 of BS8300 state a minimum
1b – Communal or		those with reduced mobility and/	Where parking is provided by communal or	DESIRABLE	bay width of 2.4m with a 1.2m access
shared parking		or those	shared bays, spaces with a width of 3.3m		zone between spaces (giving an overall
		with children).	should be provided.		min width of 3.6m).
2	Approach	Enable convenient movement	The distance from the car parking space	DESIRABLE	In essence the same as the Lifetime
	to dwelling	between the vehicle and dwelling	of Criterion 1 to the dwelling entrance		Homes guidance, except supporting
	from parking	for the widest range of people,	(or relevant block entrance or lift core),		requirements/dimensions/details
	(distance,	including those with reduced	should be kept to a minimum and be level		contained in Approved Document M and
	gradients and	mobility and/or those carrying	or gently sloping. The distance from visitors		BS8300 are referred to.
	widths)	children or shopping.	parking to relevant entrances should be as		
			short as practicable and be level or gently		
			sloping.		
3	Approach to	Enable as far as practicable,	The approach to all entrances should	DESIRABLE	In essence the same as the Lifetime
	all entrances	convenient movement along other	preferably be level or gently sloping,		Homes guidance but Building
		approach routes to dwellings for			Regulations only insist on the principal
		the widest range of people.			entrance/s being accessible rather than
					all entrances. Supporting requirements/
					dimensions/details contained in
					Approved Document M and BS8300
					are referred to. In this case the main
					entrance to a block of flats and
					individual flat entrance doors would be
					covered.

4	Entrances	Enable ease of use of all entrances	All entrances should:	ESSENTIAL	No contradiction between Lifetime
		for the widest range of people.	a) Be illuminated		Homes guidance and Building
			b) Have level access over the threshold; and		Regulations. Supporting requirements/
			c) Have effective clear opening widths		dimensions/details contained in
			In addition, main entrances should also:		Approved Document M and BS8300 are
					referred to.
			d) Have adequate weather protection		
			e) Have a level external landing.		
5	Communal	Enable access to dwellings above	5a – Communal Stairs	DESIRABLE	No contradiction between Lifetime
	stairs and	the entrance level to as many	Principal access stairs should provide easy		Homes guidance and Building
	lifts	people	access, regardless of whether or not a lift is		Regulations. However, the taller blocks
		as possible.	provided.		of flats become, the more expensive
			5b – Communal Lifts		and technically difficult it is to provide
			Where a dwelling is reached by a lift, it		a lift, so there can be an unwillingness
			should be fully accessible		to extend lifts to serve the top floor(s).
					Building Regulations do not cover
					this circumstance
6	Internal	Enable convenient movement in	Movement in hallways and through	ESSENTIAL	In essence the same as the Lifetime
	doorways and	hallways and through doorways.	doorways should be as convenient to the		Homes guidance. Supporting
	hallways		widest range of people, including those		requirements/dimensions/details
			using mobility aids or wheelchairs, and		contained in Approved Document M and
			those moving furniture or other objects. As		BS8300 are referred to
			a general principle, narrower hallways and		
			landings will need wider doorways in their		
			side walls		
7	Circulation	Enable convenient movement	There should be space for turning a	ESSENTIAL	Not covered by Building Regulations for
	Space	in rooms for as many people as	wheelchair in dining areas and living rooms		domestic buildings, but for commercial
		possible.	and basic circulation space for wheelchair		developments reaches to accessible WCs,
			users elsewhere.		accessible changing areas, accessible
					hotel bedrooms, accessible auditoria/
					theatres, corridors etc.

8	Entrance level	Provide accessible socialising space	A living room/living space should be	DESIRABLE	Not covered by Building Regulations
	living space	for visitors less able to use stairs.	provided on the entrance level of every		
			dwelling		
9	Potential for	Provide space for a member of the	In dwellings with two or more storeys,	DESIRABLE	Not covered by Building Regulations
	entrance level	household to sleep on the entrance	with no permanent bedroom on the		
	bed-space	level if they are temporarily unable	entrance level, there should be space on		
		to use stairs (e.g. after a hip	the entrance level that could be used as a		
		operation).	convenient temporary bed-space.		
10	Entrance	Provide an accessible WC and	Where an accessible bathroom, in	DESIRABLE	The Building Regulations require only an
	level WC	potential showering facilities for:	accordance with Criterion 14, is not		accessible WC on the entrance level of
	and shower	i) any member of the household	provided on the entrance level of a		a building
	drainage	using the temporary entrance level	dwelling, the entrance level should have an		
		bed space of Criterion 9, and:	accessible WC compartment, with potential		
		ii) visitors unable to use stairs.	for a shower to be installed.		
11	WC and	Ensure future provision of grab	Walls in all bathrooms and WC	ESSENTIAL	Not covered by Building Regulations
	bathroom	rails is possible, to assist with	compartments should be capable of firm		
	walls	independent use of WC and	fixing and support for adaptations such as		
		bathroom facilities.	grab rails.		
12	Stairs and	Enable access to storeys above the	The design within a dwelling of two or more	ESSENTIAL	Not covered by Building Regulations
	potential	entrance level for the widest range	storeys should incorporate both:		
	through-	of households.	a) Potential for stair lift installation; and,		
	floor lift in		b) A suitable identified space for a through-		
	dwellings		the–floor lift from the entrance level to a		
			storey containing a main bedroom and a		
			bathroom satisfying Criterion 14.		
13	Potential for	Assist with independent living by	Structure above a main bedroom and	ESSENTIAL	Not covered by Building Regulations
	fitting of	enabling convenient movement	bathroom ceilings should be capable of		
	hoists and	between bedroom and bathroom	supporting ceiling hoists and the design		
	bedroom/	facilities for a wide range of	should provide a reasonable route between		
	bathroom	people.	this bedroom and the bathroom.		
	relationship				

14	Bathrooms	Provide an accessible bathroom	An accessible bathroom, providing ease of	ESSENTIAL	Not covered by Building Regulations
		that has ease of access to its	access in accordance with the specification		
		facilities from the outset and	below, should be provided in every dwelling		
		potential for simple adaptation to	on the same storey as a main bedroom.		
		provide for different needs in the			
		future.			
15	Glazing and	Enable people to have a reasonable	Windows in the principal living space	DESIRABLE	Not covered by Building Regulations
	window	line of sight from a seated position	(typically the living room), should allow		
	handle	in the living room and to use at	people to see out when seated. In addition,		
	heights	least one window for ventilation in	at least one opening light in each habitable		
		each room	room should be approachable and usable		
			by a wide range of people – including those		
			with restricted movement and reach		
16	Location	Locate regularly used service	Service controls should be within a height	ESSENTIAL	Building Regulations require most
	of service	controls, or those needed in an	band of 450mm to1200mm from the floor		controls to be located between 400-
	controls	emergency, so that they are usable	and at least 300mm away from any internal		1200mm above floor level, and no
		by a wide range of household	room corner.		nearer than 350mm from room corners
		members - including those with			
		restricted movement and limited			
		reach.			



LIFETIME HOMES

- **1** Parking space capable of being widened to 3.3m
- 2 Distance from car parking space kept to a minimum
- **3** Level or gently sloping approach to Lifetime Home
- 4 Accessible threshold covered and lit
- **6** Width of doors and hall allow for wheelchair access
- 7 Turning circles for wheelchair in ground-floor living rooms
- 8 Living (family) room at entrance level
- **9** Identified space for temporary entrance level bed
- **10** Accessible entrance level WC (opportunity for shower later in 3 bed or larger homes)
- **11** Walls able to take adaptations
- **12** Identified space for future platform lift to bedroom
- **13** Easy route for a hoist from bedroom to bathroom
- **14** Bathroom planned to give side access to WC and bath
- 15 Low window sills
- **16** Sockets, controls, etc. situated at a convenient height

5.15 Checklist of Key Considerations

- Have you considered distances from neighbouring properties to achieve appropriate levels of privacy? These may be less in 'infill' situations but the use of non-habitable rooms or screening could be considered.
- Have you considered community safety through the use of natural surveillance or other security features e.g. fencing and planting?
- Does your layout allow for a house with the specified internal space standards?
- Have you thought about accommodating bins or the use of a communal bin store?
- Have you noted that garages must be provided to the specified standards in order to constitute a parking space?
- Have you noted the new garden area and depth standards and left sufficient space on your layout?
- Have you considered what an appropriate setback would be for your development?
- Have you considered appropriate boundary treatments?
- Does your development and selected housetype/s make a positive contribution to the street as a whole?
- Is it's character and style appropriate to the street scene?
- Have you considered the orientation of your layout to maximise solar gain?
- Have you considered materials and detailing? Both should be of high quality
- Have you remembered to ensure that a proportion of your homes are built to 'Lifetime Homes' standards as defined at 5.14