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Section 1



1.0 Introduction and context

Design is a crucial issue, and encompasses far more than the aesthetics of a building. It also involves the space around buildings, the features required to make the building function successfully, e.g. parking, garden space, access for people with disabilities and the way in which buildings and spaces can mitigate and adapt to the effects of climate change.

1.1 High Quality Development

1.01.01

The Council places great emphasis on the need for new development to be of the highest possible quality, ensuring that the places created now provide a lasting legacy and are locally distinctive. The Council is also planning for a number of large urban extensions so this new residential development will need to provide homes that are of the right size and that have good size gardens and amenity space to facilitate the needs of modern families.

1.01.02

This document will be adopted as technical guidance and will sit underneath the local development plan and in particular provide detailed support to Policy 43: High Quality Development.



Fig 1.2 Example of quality distinctive development at Fairfield Park demonstrating a mix of uses, greenway, amenity space and local centre

Section 1

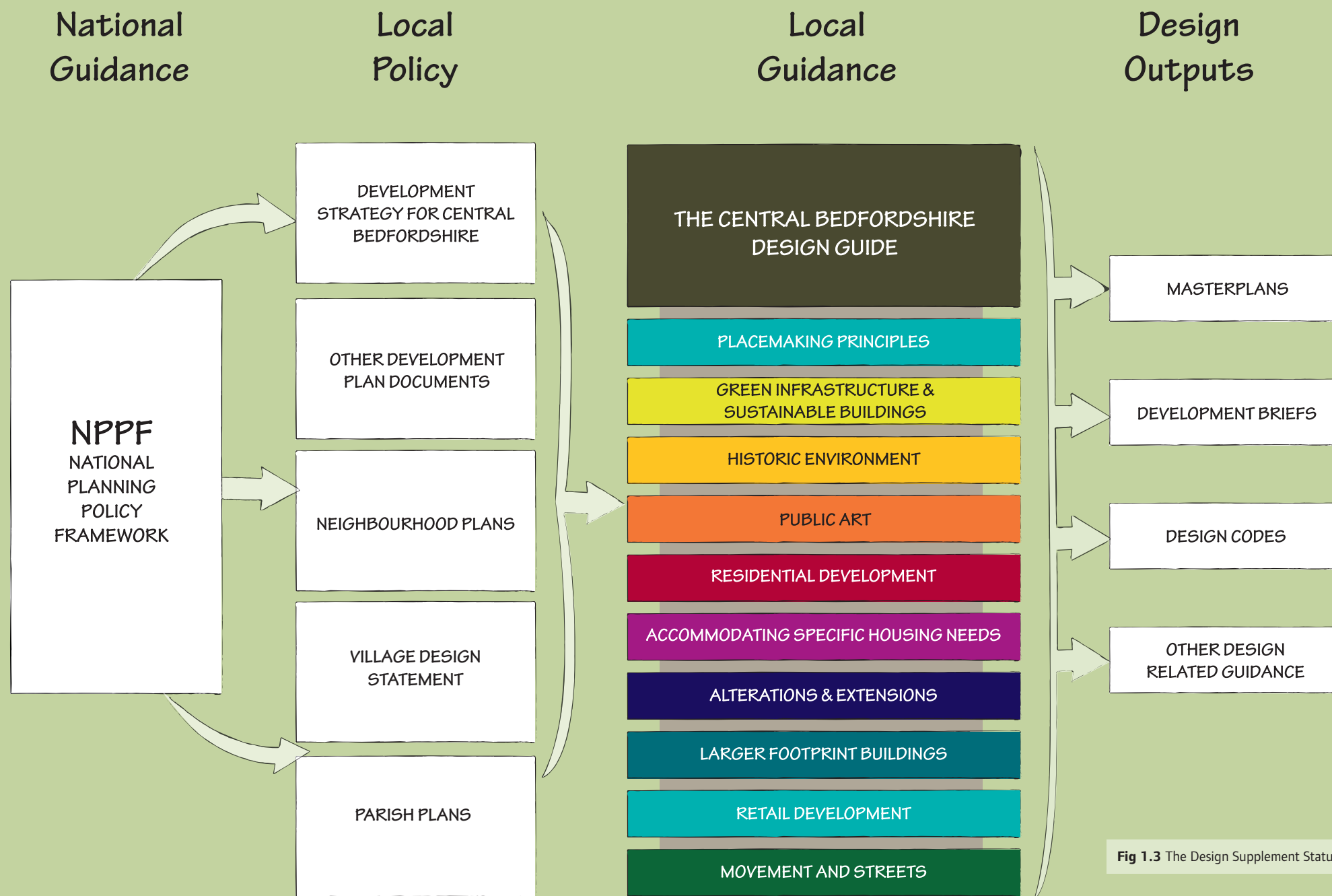


Fig 1.3 The Design Supplement Status

1.2 Development Strategy Policy

1.02.01

This updated Design Guide has been produced to work towards good placemaking and sustainable development, whilst ensuring the creation of a safe, accessible and healthy built environment. It seeks to ensure that each proposal responds to the challenges, opportunities and character of its site and setting by helping to identify the aspects which contribute to their character and local distinctiveness.

1.02.02

The Guide sets out a range of policies and objectives. These policies and objectives are intended to guide good design solutions. This guidance is not intended to be a straightjacket to produce narrow conformity, and as such it is therefore unlikely that the standard 'anywhere' designs from applicants will be accepted as a valid approach by the Council.

1.02.03

The Guide should be a useful tool for developers, their agents, elected Council members, planning officers and all those who play a part in the regulation of the built environment, in making clear the Council's agenda for good design.

1.02.04

The Guide provides a comprehensive schedule of considerations which broadly follow the stages

of the design process. It should therefore prove useful at pre-application negotiations between the Council and Applicants, as well as for designers and planners when assessing design proposals.

1.02.05

The drawings in this Guide are intended to illustrate how the principles of layout and massing etc. can be implemented. They show generic built form wherever possible, rather than imply a standard stylistic preference.

The Guide is organised into two parts:

A Placemaking Principles (this document)

1.02.05

The Placemaking Principles supplement sets out the policy context and generic design guidance relevant to almost every type of development likely to be encountered in Central Bedfordshire. It also provides advice on the character of the area and methods of appraising sites and their settings. It should therefore be consulted whatever the type of development being undertaken.

B Design Supplements

Each Design Supplement provides detailed advice on a specific type of development .

The Design Supplements are set out in the flowchart opposite

"The Government attaches great importance to the design of the built environment. Good design is a key aspect of sustainable development, is indivisible from good planning, and should contribute positively to making places better for people

(The National Planning Policy Framework, 2012, Paragraph 56)

Development Strategy Policy 43: High Quality Development

1.02.06

The Council aims to deliver the highest possible quality of new development within Central Bedfordshire to provide a lasting legacy and to continue to meet the needs of residents and businesses. As such, proposals for all new development will be required to meet the criteria set out in the table opposite.

1.02.07

A development brief covering the policy criteria set out in the matrix may be required from any proposal for 35 dwellings or more or where there are complex design or amenity issues;

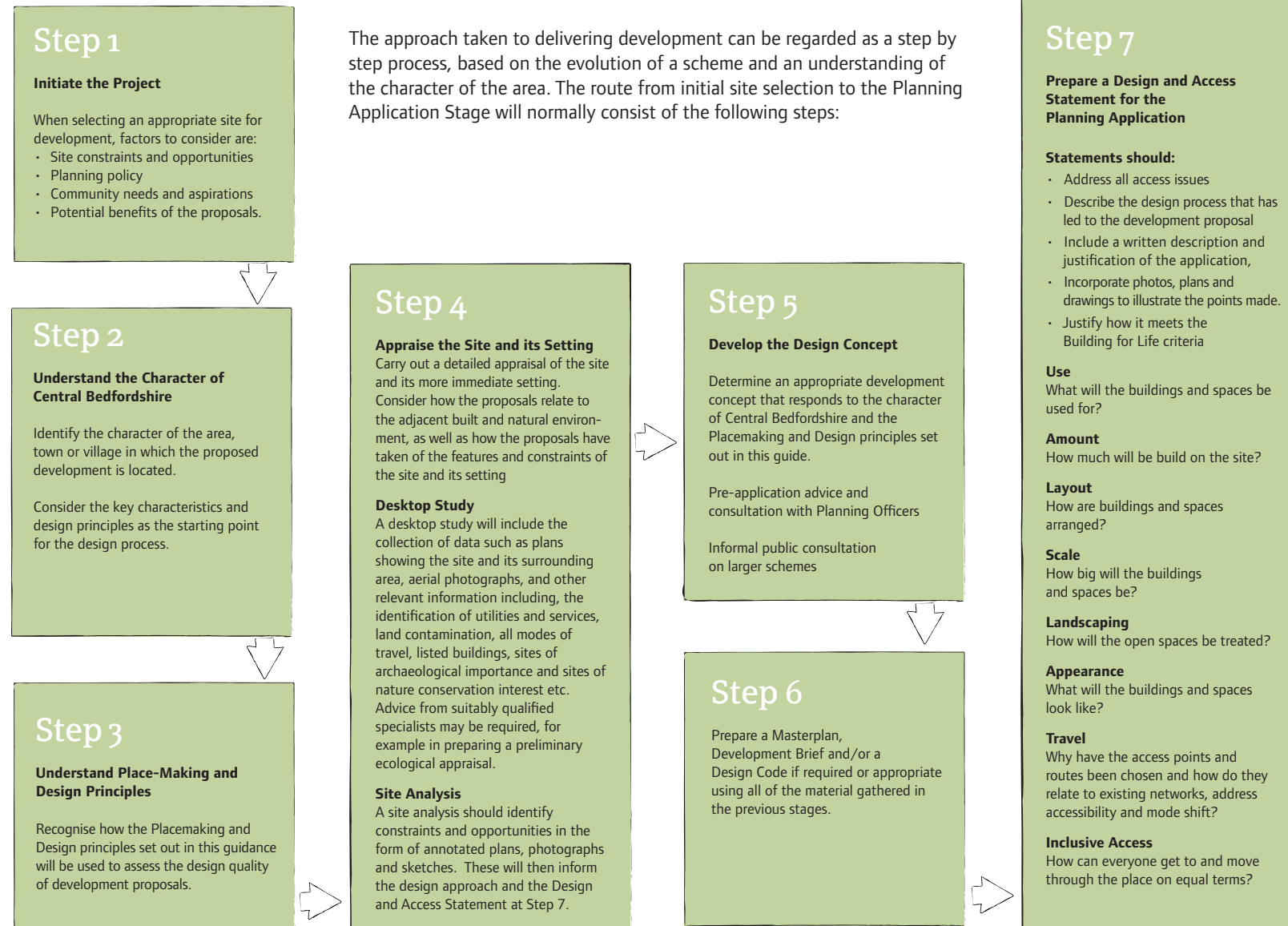
1.02.08

For sites of 75 dwellings and over, particularly where there are several schemes affecting a town or village; a sustainable communities assessment may be required as part of the master planning process. The Buildings Research Establishment (BRE) is one of the bodies that provides these assessments (www.bre.co.uk)

Policy Criterion	Placemaking Principles	GI and Sustainable Buildings	Historic Environment	Public Art	Residential Development	Accommodating Specific Housing Needs	Alterations and Extensions	Larger Footprint Buildings	Retail Development	Movement and Streets
Be appropriate in scale and design to their setting	X	X	X	X	X	X	X	X	X	X
Contribute positively to creating a sense of place and respect local distinctiveness through design, layout, use of materials and planting	X	X	X	X	X	X	X	X	X	X
Use land efficiently, taking into account quality of life,	X	X			X	X	X	X		
Respect the amenity of surrounding properties, and their occupiers					X		X	X	X	
Provide adequate areas for parking and servicing	X				X			X	X	X
Be complementary to the landscape setting both in the immediate proximity as well as longer views	X	X	X							
Respect and complement the context and setting of all Heritage Assets particularly those that are designated	X		X							
Enhance community safety	X									
Meet the required standards for energy and resource efficiency and include climate change adaptation and mitigation measures	X	X								
Comply with the current guidance on noise, waste management, contaminated land, vibration, odour, water, light and airborne pollution	X									
Incorporate appropriate access and linkages, including provision for pedestrians, people with disabilities, elderly persons and for those with prams and pushchairs, cyclists and public transport	X									X
Promote the use of shared space, speed management measures and for residential development the design speed should normally be 20mph										X
Provide soft and hard landscaping, greenspace, and green corridors appropriate in scale and design to the development and its setting with appropriate linkages for wildlife and human access to existing landscape features, corridors and green infrastructure	X	X								
Consider the provision of art in the public realm				X						
For housing, contain a locally appropriate mix of sizes and types of dwellings, including larger family homes					X					
Ensure that buildings are accessible for all, and comply with current guidance on accessibility to buildings	X									

Fig 1.4 Policy Criterion

1.3 Route Map



1.4 Design Codes

1.04.01

Design codes are an effective mechanism for implementing the masterplans, particularly when there is more than one housebuilder involved in the development of a site.

1.04.02

They comprise detailed written and graphically presented rules for building out a site or an area. The elements which are coded may include aspects relating to layout, townscape and landscape considerations, building form and materials. By determining structural elements like streets, it enables the other elements of a design to evolve.

1.04.03

When is a Design Code Required?

The Council will expect design codes to be produced for developments of over 400 dwellings to ensure that a uniform design vision can be realised across a site. Smaller sites with the following characteristics should also produce a design code

- Large sites (or multiple smaller related sites) that will be built out in phases over a long period of time.
- Sites in multiple ownership, where coordination between the parties is desirable.
- Sites likely to be developed by several different developers and/or design teams.

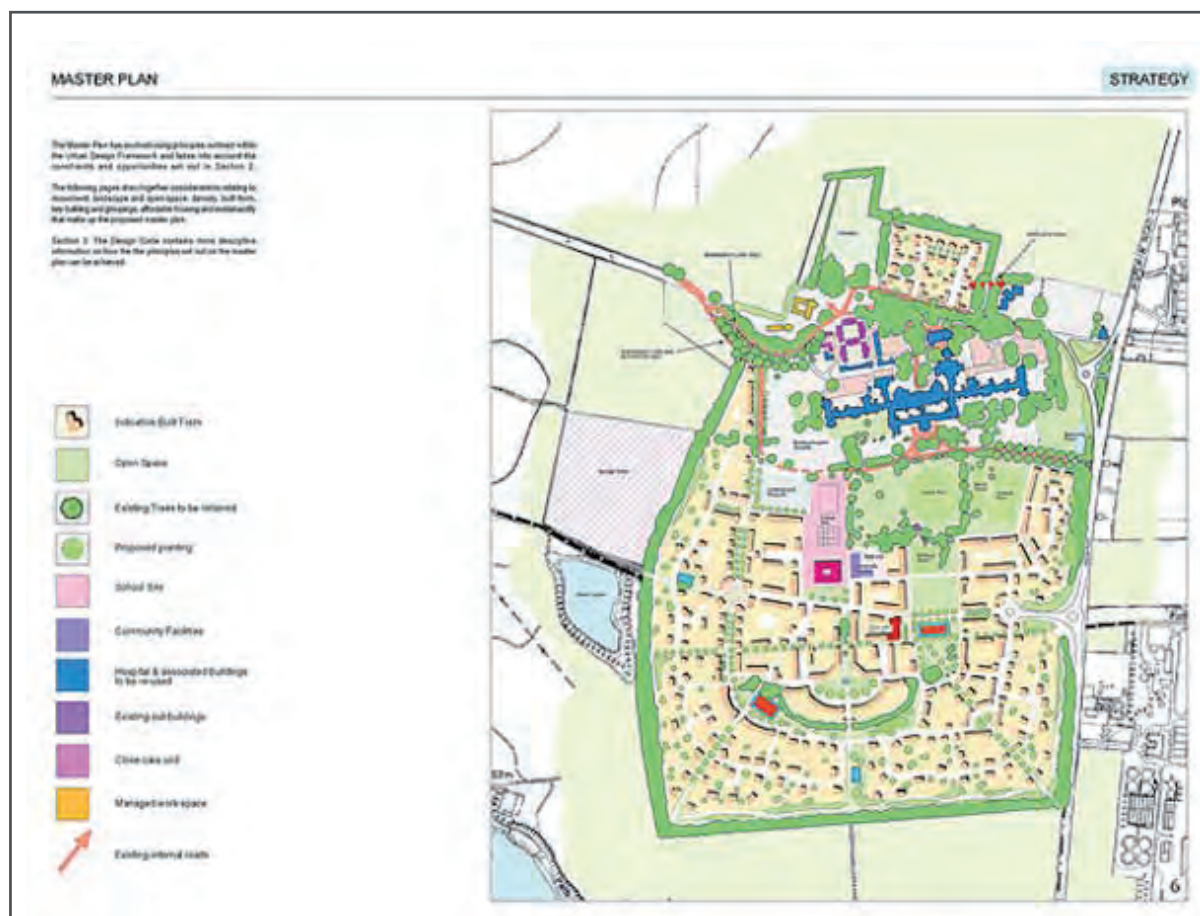


Fig 1.5 Fairfield design code master plan

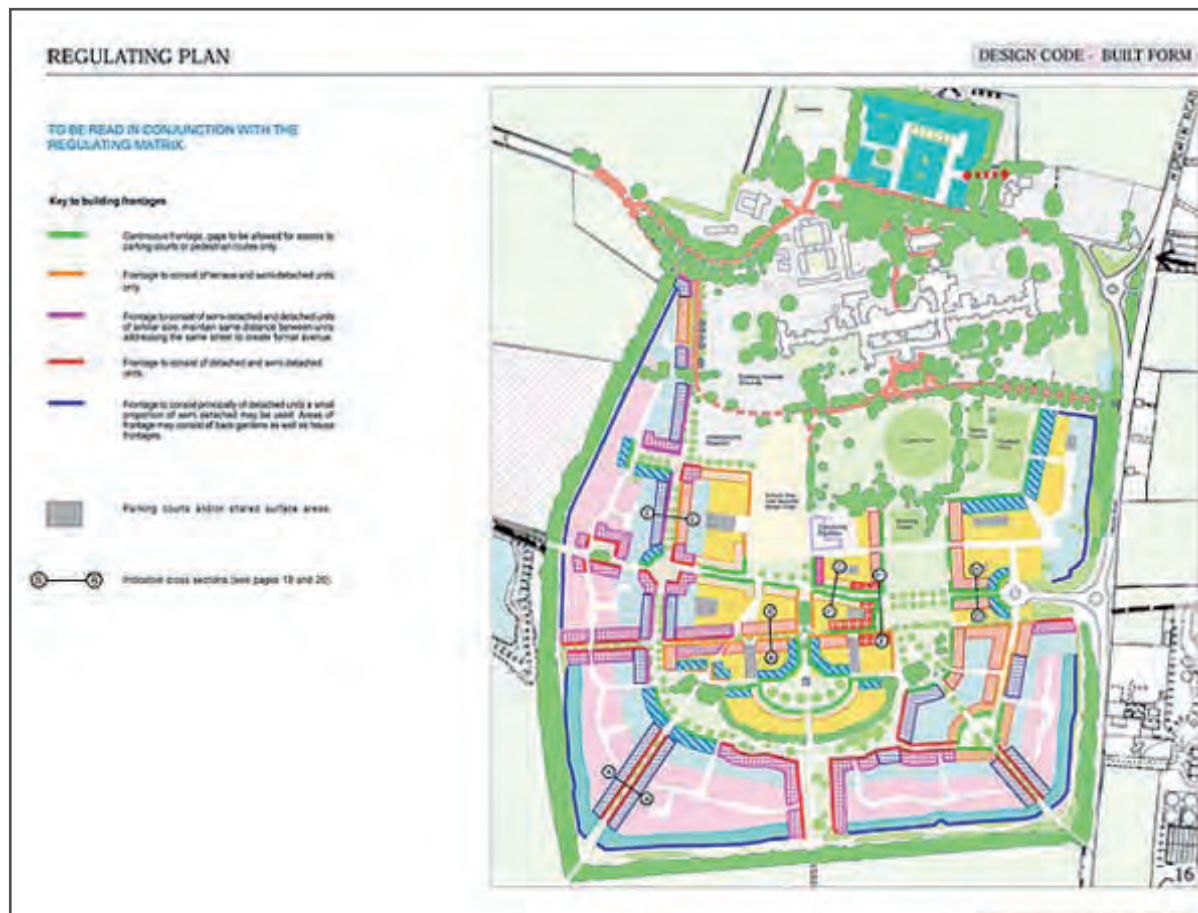


Fig 1.6 Fairfield design code regulating plan



Fig 1.7 Resulting development reflecting design code



Fig 1.8 Resulting development

1.5 The Character Of Central Bedfordshire

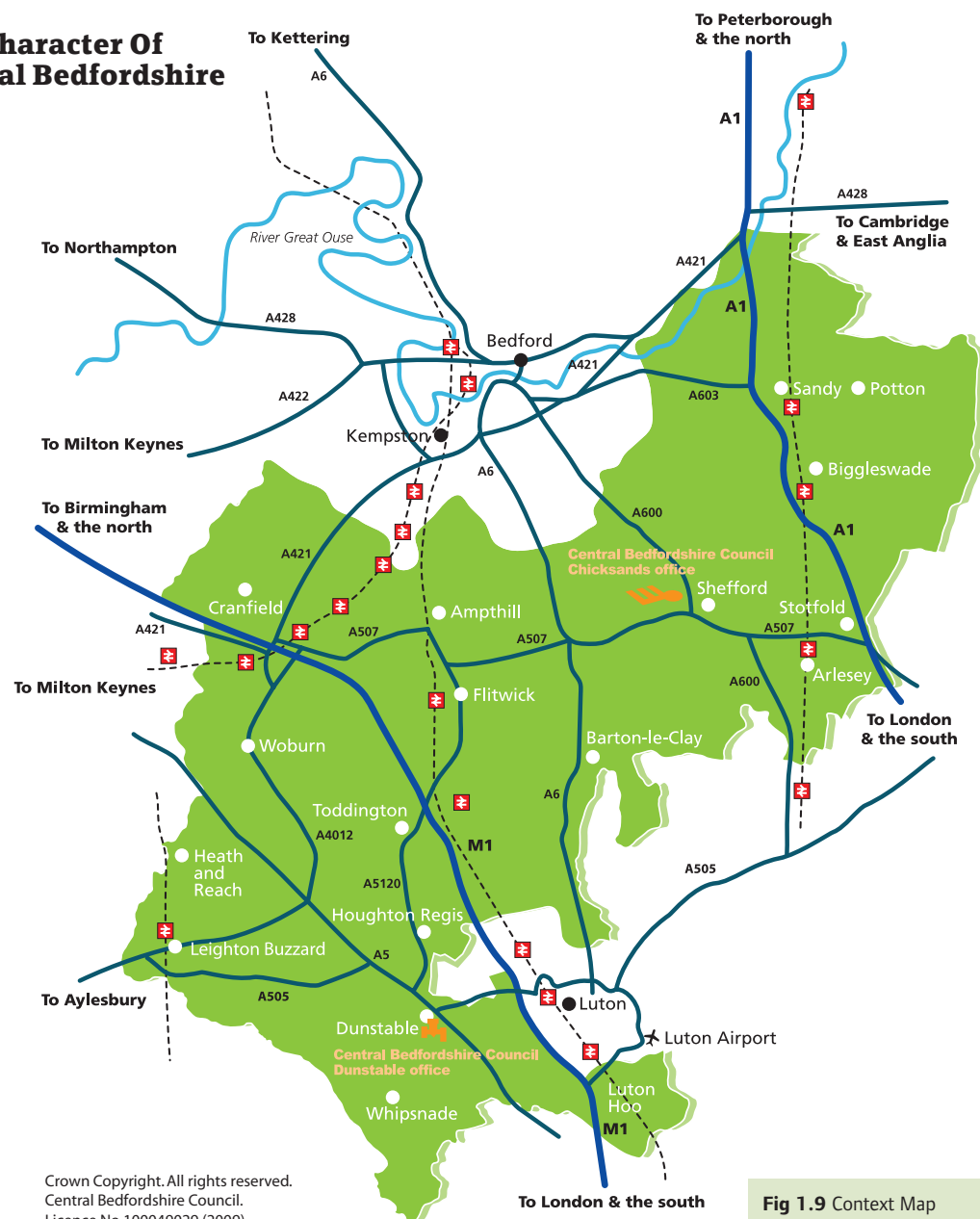


Fig 1.9 Context Map

1.05.01

The landscape of Central Bedfordshire is dominated by three features, mainly following a south west – north east alignment. Together these give form and shape to the area and create different types of landscape, all of which are within view of each other. The three main structural landscape features are:

- (a) The Greensand Ridge to the north
- (b) The intervening clay vales and low hills and the Ivel valley running north
- (c) The Chiltern Hills, escarpment and dipslope along the southern boundary.

1.05.02

Whilst Central Bedfordshire might be regarded generally as being a low lying region of England, its ridges and valleys give it an interesting topography. The lowest point in the area is 18 metres above sea level and lies at its northern tip, near Tempsford. The highest point, on the Dunstable Downs is 223 metres above sea level. Most of the Greensand Ridge is between 80 and 120 metres above sea level. The wide open landscapes of the Ivel valley are punctuated by well established hedgerows and tree belts. The Greensand Ridge is well wooded for much of its length; the Chilterns whilst less wooded overall have attractive woodlands in their dipslope valleys.

Skylines

1.05.03

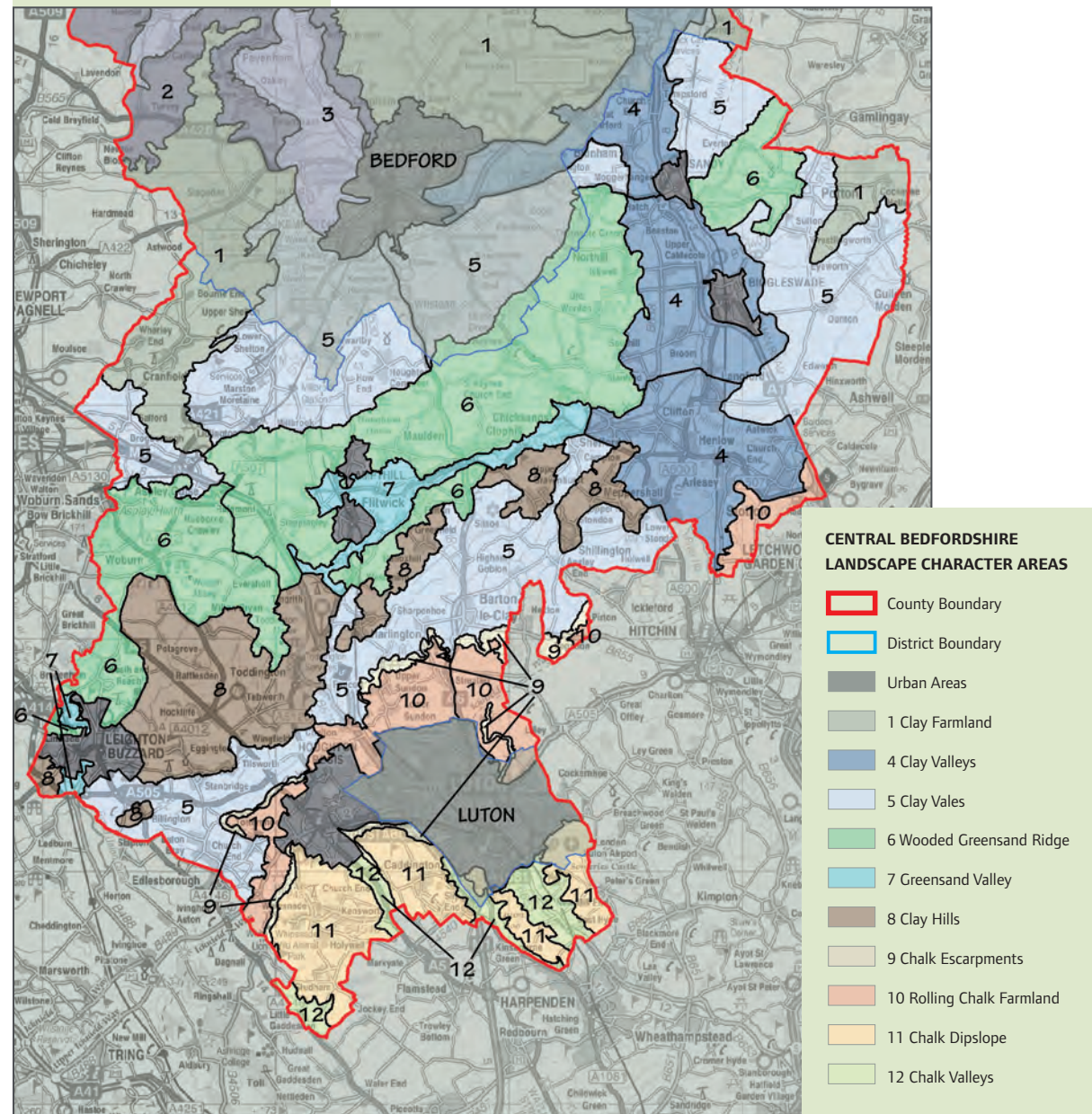
Church towers are often visible landscape features, for instance Totternhoe, Leighton Buzzard, Eaton Bray, Shillington and Maulden. Skylines of established landmarks, wooded ridgelines and other positive long views should be taken into account when considering the massing and layout of new development. The skyline of new development should aim to enhance the landscape character of its setting, by determining if it should be either visible or should remain below established skylines.

Conserved Landscapes

1.05.04

The positive character of much of Central Bedfordshire's landscape is reflected in its many registered historic parks and gardens, its inclusion within the Chilterns Area of Outstanding Natural Beauty and the existence of a designated scenic drive threading through an extensive part of the District. Moreover, the many Conservation Areas in Central Bedfordshire require that the setting of a conservation area is considered in the layout and massing of new development. The Forest of Marston Vale, located to the north west of the Greensand Ridge is one of 12 Community Forests in England. Each one is designated by Government as a national priority area for environmentally-led regeneration of degraded land. By using trees and woodland a new landscape will be created with 30% tree cover by 2030.

Fig 1.10 Landscape Character Areas



1.6 Traditional Materials Typology

1.06.01

The following section should be read in conjunction with the Historic Environment Supplement and provides a summary of the palette of traditional materials found in Central Bedfordshire. It is important to understand the subtleties of material changes throughout the area.

1.06.02

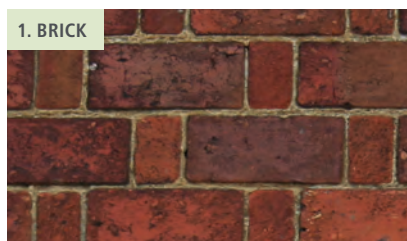
Often the decision will need to be taken whether to attempt to match the original materials or whether a modern high quality alternative may be more appropriate. In some cases attempts to replicate the original material can often result in a poor match and this can diminish the overall quality of the extension/new building.

1.06.03

In all cases careful consideration should be given to the specification of materials and it is advised to speak to the Council's planning officers and conservation team (in the case of a listed building/ site in a conservation area) before finalising materials to be used for a development.



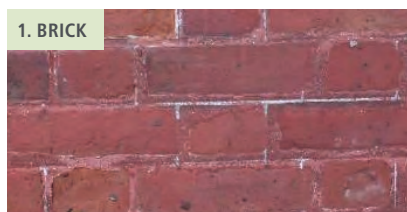
1a Red brick in Flemish bond with burnt headers



1b Red brick rat trap bond



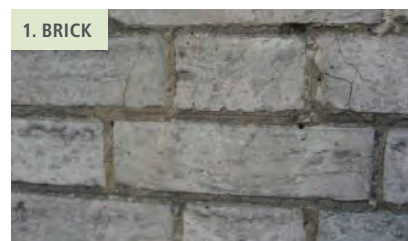
1c Red brick Flemish bond



1d Red brick Flemish bond formerly tuck pointed or penny struck to joints



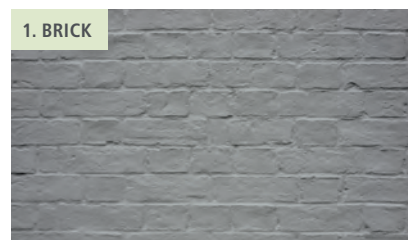
1e Gault white brick stretcher bond



1f White gault brick Flemish bond



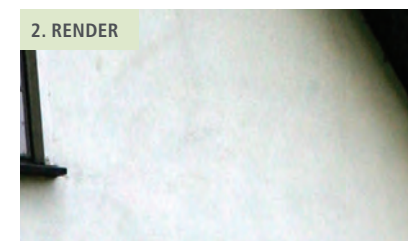
1g White gault brick rat trap bond



1h Painted brick



1i 'Luton Grey' (plum) brick



2a Painted render



3a Rock faced coursed ironstone



3b Coursed ironstone rubble

3. STONE



3c Coursed and uncoursed cobble/rubblestone

4. TIMBER



4c Light framing (studs) with brick

6. SLATE



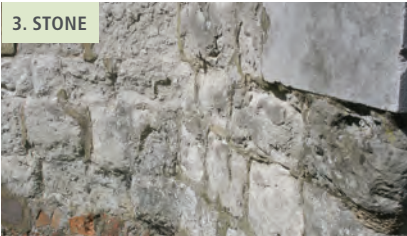
6a Natural Welsh slate

8. EAVES/GABLE DETAIL



8a Dogtooth brick cornice

3. STONE



3d Clunch; coursed rubble

5. CLAY TILES



5a Brown/Red handmade clay tiles

7. THATCH



7a Long straw with flush ridge

8. EAVES/GABLE DETAIL



8b Decorative barge boards

4. TIMBER



4a Weatherboarding

5. CLAY TILES



5b Decorated clay tiles

7. THATCH



7b Long straw with decorated block cut ridge

8. EAVES/GABLE DETAIL



8c Multi layered thatch

4. TIMBER



4b Light framing (studs) with render

5. CLAY TILES



5c Pantiles (mottled colouring)

7. THATCH



7c Combed Wheat reed ('eyebrow' dormer)

8. EAVES/GABLE DETAIL



8d Gambrel roofs

1.7 Land Use Evolution

Small-scale Nomadic Farming

The lighter soils on the chalk hills and river valley gravels were the earliest areas to be farmed. This was initially characterised by short-term clearances. Areas would have been cultivated until the soil became impoverished. Woodland resources were still exploited for food alongside domesticated sheep and cattle.

Dispersed Settlements

Anglo-Saxon settlements characterised by farms or small hamlets scattered throughout the landscape, each with its own agricultural land.

Parkland

The concentration of parkland on the Greensand Ridge is due to its poorer soils and wooded nature, where landowners created parkland landscapes around their country houses. Woburn and Old Warden are the prime examples of this. The other major historic parkland is Luton Hoo, designed by Capability Brown in the 18th century.

1000Bc

AD43

900AD

1200-

1700-

Woodland Clearance

Over time, the loss of woodland on the Chiltern Hills and in the river valleys became permanent, as cultivation and grazing prevented regeneration. This resulted in a significantly more open landscape. By the Roman invasion the area of Bedfordshire was a landscape of farmsteads and small hamlets, enclosed fields, open grazing and woodland, connected by networks of local tracks and long-distance routeways.

Population growth

Population growth resulted in the creation of new settlements towards the margins of parishes, either as rows or blocks of dwellings laid out over former open fields or as farmsteads set up in land cleared from woodland (e.g. Cranfield). Existing villages and towns were also re-planned: Pottton and Biggleswade both appear to have shifted their location to a new market place in this period.

Enclosure

The process of enclosure of the open fields was well underway by the early 19th century, driven by large landowners. The characteristic pattern of regular enclosures is most evident in the clay vale landscapes. Enclosure was usually accompanied by the amalgamation of small farms and the construction of new farmsteads. The Duke of Bedford's estate invested heavily in the building of planned farmsteads, often incorporating mechanised processing of the grain and yards for cattle set within the enclosed fields. This resulted in the loss of many farmsteads that were previously located within the villages, explaining the relatively low survival of working agricultural buildings prior to 1750. As with the settlement pattern, the distribution of planned and model farmsteads shows a clear distinction between the areas either side of the Ivel valley. The estates were also influential in the building of the architecturally significant estate cottages and villages which characterise the north of the area.

Community forest

Substantial tree planting on the former brickfields followed the designation in 1992 of the Forest of Marston Vale, which extends into the north west of the area.

1800-

Field patterns

On the poorer, sandy soils of the Greensand Ridge a wood-pasture farming system developed with irregular enclosures being taken out of the woodland and heath. This pattern of small, irregular fields, often with mature hedges, is still visible in the landscape today.

Market gardening

From the 19th century horticulture developed on the light fertile soils of the Ivel valley, particularly in the area Sandy. Vegetables are transported to London by the railway. Whilst a range of vegetables were grown, the area is probably best known for onion growing which led to the construction of buildings specifically used for the drying and storage of onions.

1992-

1.8 APPRAISING THE SITE AND ITS SETTING - WHAT IS THE SITE CONTEXT?

NATURAL ENVIRONMENT	Key Questions to Ask	Additional Questions to Ask
Topography	Which way does the site slope?	
Drainage	Is the site liable to flooding?	
Trees/hedges	What trees and hedgerows are to be found on the site?	
Biodiversity	Are there any wildlife habitats within the site?	
Watercourses	Are there any watercourses crossing the site?	
Species	What species can be found on site?	
BUILT ENVIRONMENT		
Easements	Are there any easements for services that cannot be built on?	
Buildings	Are there any buildings/structures within the site	Should they be retained?
Listed Buildings	Are there are any listed buildings within or adjoining the site?	
Contamination	Is the site contaminated?	
Archaeology	Are there any archaeological remains on the site?	
Adjoining Buildings	Are there any buildings adjoining the site?	What is the form, scale and layout of these?
Conservation Areas, Historic Parks and Gardens	Does the site lie within or adjoin a Conservation Area or Historic Park?	
LAND USES		
Local facilities	What local facilities are there within walking distance of the site?	
Surrounding Land Use	What is the use of land adjoining the site, either existing or proposed?	
Existing Land Use	What is the existing land use of the site?	
MOVEMENT		
Rights of Way	Are there any existing rights of way across the site?	
Movement Networks	How does the site relate to the existing movement framework?	
Public Transport	Where are the nearest bus routes and bus stops?	
Access	What are the access points to the site?	
Desire lines	What are the desire lines to local facilities?	
Walking and Cycling	What are the local walking and cycling networks like?	
LEGIBILITY		
Views	Are there any important views	From the site or of the site from off-site?
Landmarks	Are there any important landmarks on or off site?	

AMENITY	Key Questions to Ask	Additional Questions to Ask
Neighbouring Properties	What is the relationship of neighbouring buildings to the site?	Do neighbouring properties overlook the site?
Adjoining Uses	Will there be any impacts such as noise from neighbouring uses?	
WHAT IS THE CHARACTER OF THE SURROUNDING AREA?		
LAYOUT		
Block structure/size	What size and shape are the blocks?	
Are the blocks rectilinear or irregular in shape?	Does this make a positive contribution to the character of the area?	
Street types	Is there a recognisable street hierarchy - e.g. mews, residential streets, park edges etc.?	Does this element make a positive contribution to the character of the area?
Orientation	Does building orientations provide the best opportunities for solar gain?	
Street layout	Is there a connected street network?	
Are street layouts straight or irregular?	Does this element make a positive contribution to the character of the area?	
Plot sizes	What size and shape are the residential plots?	Does this element make a positive contribution to the character of the area?
Relationship of building to street	Do buildings front the street?	
Are the buildings gable end on to the street?	Does this element make a positive contribution to the character of the area?	
Continuity of frontage	Do the streets have a continuous frontage or are there gaps in the built frontage?	Does this element make a positive contribution to the character of the area?
Setbacks/building line	How far are the buildings set back from the highway?	Does this element make a positive contribution to the character of the area?
Car parking	Is parking provided on plot, on street, in front parking courts or in rear parking courts?	Does this element make a positive contribution to the character of the area?
Front boundaries	What form of front boundary treatment is there - hedges, walls, soft landscaping etc?	Does this element make a positive contribution to the character of the area?

Section 1

OPEN SPACE/LANDSCAPE	Key Questions to Ask	Additional Questions to Ask
Public space	Is the street layout characterised by areas of public space - e.g. public squares, circuses, SUDs?	Does this element make a positive contribution to the character of the area?
Garden sizes	What size and shape are the gardens?	Does this element make a positive contribution to the character of the area?
Street trees/hedges	Are the streets characterised by tree planting and/or existing hedges?	Does this element make a positive contribution to the character of the area?
BUILDING FORM		
Building height	What is the height of the buildings?	Does this element make a positive contribution to the character of the area?
Building type	Are buildings flatted, detached, semi-detached or terraced?	Does this element make a positive contribution to the character of the area?
	Are buildings square, rectangular or L-shaped?	
	Are buildings narrow or wide-frontage?	
STYLE		
Roof form	What is the roof type - flat,ridge,hipped etc.?	Does this element make a positive contribution to the character of the area?
	What is the degree of slope?	
	Are there dormer windows?	
Materials	What materials are used - brick, stone, tile, slate etc.?	Does this element make a positive contribution to the character of the area?
	What is the typical colour?	
Windows	What type are they - sash, bays?	Does this element make a positive contribution to the character of the area?
	How many are there and what are their size and shape?	
	What proportion of the facade do they take up? - solid to void ratio	
	What colour is the frame of the window?	

Building for Life 12

1.08.01

Once you have worked up a scheme, how well does it meet the following objectives?

Integrating into the neighbourhood

1 Connections

1.08.01

Does the scheme integrate into its surroundings by reinforcing existing connections and creating new ones; whilst also respecting existing buildings and land uses along the boundaries of the development site?

2 Facilities and services

1.08.02

Does the development provide (or is it close to) community facilities, such as shops, schools, workplaces, parks, play areas, pubs or cafes?

3 Public transport

1.08.03

Does the scheme have good access to public transport to help reduce car dependency?

4 Meeting local housing requirements

1.08.04

Does the development have a mix of housing types and tenures that suit local requirements?

Creating a place

5 Character

1.08.05

Does the scheme create a place with a locally inspired or otherwise distinctive character?

6 Working with the site and its context

1.08.06

Does the scheme take advantage of existing topography, landscape features (including water courses), wildlife habitats, species on site, existing buildings, site orientation and microclimates?

7 Creating well defined streets and spaces

1.08.07

Are buildings designed and positioned with landscaping to define and enhance streets and spaces and are buildings designed to turn street corners well?

8 Easy to find your way around

1.08.08

Is the scheme designed to make it easy to find your way around?

Street and Home

9 Streets for all

1.08.09

Are streets designed in a way that encourage low vehicle speeds and allow them to function as social spaces?

10 Car parking

1.08.10

Is resident and visitor parking sufficient and well integrated so that it does not dominate the street?

11 Public and private spaces

1.08.11

Will public and private spaces be clearly defined and designed to be attractive, well managed and safe?

12 External storage and amenity space

1.08.12

Is there adequate external storage space for bins and recycling as well as vehicles and cycles?

1.9 Design for Movement

User Hierarchy

1.09.01

Street design should follow a user hierarchy which recognises both the need to support sustainable modes of travel and the community function of streets as spaces for social interaction in addition to their role as a movement corridor.

Consider first:

- 1 **Pedestrians**
- 2 **Cyclists**
- 3 **Public transport users**
- 4 **Consider last other motor traffic**

“The hierarchy should not be rigidly applied and does not necessarily mean that it is always more important to provide for pedestrians than it is for the other modes. However, they should at least be considered first, followed by consideration for the others in the order given” (Manual for Streets).

Permeability

1.09.02

Developments should be structured around a layout that minimises travel distances by private vehicles to key facilities and services. It is usually good practice to design for permeability or the ease with which you can move through a space.

However, this must be done with regard to community safety concerns.

These can be addressed by the use of:

- **Natural surveillance**
- **Layout of properties that overlook spaces**
- **Good lighting**
- **Sensible landscaping schemes**
- **Securing rear access points**
- **Clear boundaries between public and private spaces.**

The position of streets determines how buildings should be laid out as the built form defines the edge of streets or movement corridors. When designing streets we need to be aware of:

- The existing network of streets and what connections can be made
- The historic character of existing streets
- The needs of all road users not just vehicular traffic
- The scale (is it a major route or is it a minor lane leading to just a few properties)
- How the street adds to a sense of enclosure
- Safety and visibility for all road users
- Safe routes to schools and other major public destinations
- Legibility – how well does the street pattern enable people to navigate through the space?



Fig 1.11 Consider how best the site can be connected with nearby main routes and public transport facilities



Fig 1.12 pedestrian-friendly approach that integrates with the surrounding community, links existing and proposed streets, and provides direct links to public transport.



Fig 1.13 The resulting street pattern forms the basis for perimeter blocks, which ensure that buildings contribute positively to the public realm

1.10 Making Provision for Walking and Cycling

1.10.01

Comfortable walking and cycling distances to a range of facilities have been established by research. The diagram opposite provides a guide to what might be appropriate when designing a new development.

1.10.02

Pedestrians and cyclists should generally be accommodated on streets rather than routes segregated from motor traffic. Being seen by drivers, residents and other users affords a greater sense of security. However, short pedestrian and cycle-only links are generally acceptable if

designed well. Regardless of length, all such routes in built-up areas, away from the carriageway, should be barrier-free and overlooked by buildings.

Walking

1.10.03

Nationally, pedestrian journeys make up around 27% of all journeys. In Bedfordshire, 50% of children walk to school. Pedestrian convenience should therefore have the highest priority.

- To encourage walking, facilities need to be nearby. The average walk journey is 0.7 miles long, whilst around 70% of walk journeys are under a mile and 95% under 2 miles.
- Routes should be as direct as possible, safe and attractive.
- Routes should follow natural desire lines" both at the scale of junctions, across the development and how it links into the wider footway network.
- Routes and network should make sense to the user. The network should be "legible" and memorable in terms of streets, signage and landmarks.
- The pedestrian network should be permeable, creating high quality links for real pedestrian journeys without creating an unnecessary multitude of routes that are likely to be poorly used.
- Windows overlooking the footway and activity at ground level can help create a sense of security and safety. These principles also apply to any separate paths and cut-throughs. In most cases separate paths and cut-throughs will also be used by cyclists and should be designed to appropriate widths.
- Footways should normally be provided on both sides of streets. Possible exceptions are where one side is undeveloped, for example adjacent to an open space, in existing narrow streets in low density schemes, or where a shared surface would be appropriate. However, footways may also need to be secured in such locations to achieve a safe continuity of a key pedestrian route.
- Many older people and people with disabilities can only walk a limited distance before needing a rest. In line with Inclusive Mobility, a resting area should be built in on main pedestrian routes every 100m. Suitable facilities might be a seat or low public wall. Ideally these should be planned to be in pleasant locations such as by play parks or other areas of activity and well lit.

Cycling

1.10.04

- Within developments, streets should generally be designed for low traffic levels and low vehicle speeds so that cyclists and vehicles can safely share the carriageway. Cycle routes whether on or off carriageway should be as direct as possible and attractive to use.
- The cycle network should be permeable and well-connected to the wider cycle and road network.
- Cycle connections to all key locations such as town centres, schools, shops and railway stations within cycling distance should be assessed to encourage sustainable journeys. In many locations, cycling can provide the most convenient and attractive alternative to using the car.
- Secure cycle parking should be provided for residents and workers within or close to dwellings and places of work, along with convenient cycle parking for visitors in accordance with Bedfordshire cycle parking standards.

http://www.bedford.gov.uk/environment_and_planning/planning_town_and_country/highways_transport_issues/highways_design_guides.aspx

- New developments should link into the strategic cycle network and individual site specific assessment is required depending on location, opportunities and constraints.



Fig 1.14 Cycle friendly development. Accordia, Cambridge

1.11 Route Hierarchy

1.11.01

The hierarchy of the routes and streets in the development will determine the scale of the buildings. The place of the street within the hierarchy is determined by the movement function of the route.

Determining function

How much traffic?

This may be determined by the number of dwellings served or for mixed uses by the peak hourly vehicles flows.

What sort of traffic?

Will the route have to be suitable for HGVs or farm vehicles/machinery?

Will the route need to be suitable for public transport such as buses?

What is the context?

Where is the traffic going to – are there any key services that would be served by any new routes?

How many dwellings or other buildings will the route be serving?

Is the route capable of being a shared surface based on likely traffic volumes?

An evaluation of the route hierarchy is necessary before detailed layouts are finalised as it will affect the position and layout of the buildings the scale that is appropriate.

Overall, greater permeability will provide the opportunity for more local trips to be made on foot or by cycling.

Further information on street hierarchies can be found in section 10.02 of the Movement and Streets Supplement.

1.12 Street Design Principles

Key principles

- Appropriate landscaping should be integral to the initial design of all streets.
- All streets in residential areas should be designed to ensure a maximum speed of 20mph.
- Level surfaces with appropriate crossing points and demarcations should be considered on all streets.

Further detail can be found in the Movement and Streets supplement (10).

Fig 1.15 Creation of a sense of enclosure ensures that buildings rather than roads have priority

RECOMMENDED



NOT RECOMMENDED

Layout with consistent road widths and bends has no sense of priority and lacks legibility

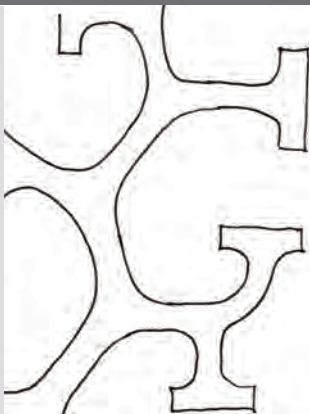


Fig 1.16 A clear hierarchy of avenues, streets, squares and courts create a legible structure

RECOMMENDED



NOT RECOMMENDED

Winding, cul-de-sac layout gives poor links and is illegible: awkward plot layout, resulting in spaces left over



Fig 1.17 A coherent, legible street network allowing logical building layout and connections where appropriate

RECOMMENDED



NOT RECOMMENDED

Road dominated: lack of enclosure



Fig 1.18 Frequent changes of direction and tight corners with narrow sight lines to control speed

RECOMMENDED



NOT RECOMMENDED

'Fast' road with gentle bends and wide sight lines controlled by humps and bumps gives mixed messages

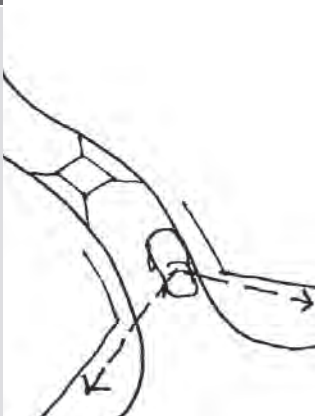


Fig 1.19 Shared surfaces and the reduction of signs convey to the driver a sense of entering a pedestrian priority space

RECOMMENDED



NOT RECOMMENDED

Road environment with excessive signage gives priority to the vehicle and intrudes on the street scene



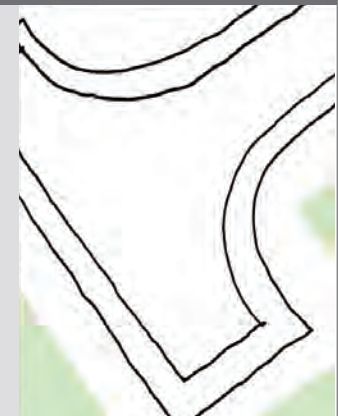
Fig 1.20 Streets with irregular carriageway, widths which allow for vehicular tracking

RECOMMENDED



NOT RECOMMENDED

Road dominated: lack of enclosure



1.13 Parking

1.13.01

Parking has a major impact on the quality of the built environment and solutions should be sought which respect the character of the area but still meet car owners' desire to park near their property.

1.13.02

New developments will be expected to comply with the Council's minimum parking standards for residential development as set out on page 29. Sites with good access to facilities and public transport may, in exceptional circumstances, not require the same level of parking. Local evidence of special circumstances e.g. a mainline railway station or guided busway link would be required to justify a lower level of provision.



Fig 1.21 On-plot parking to front of houses



Fig 1.22 Good example of on-street echelon parking

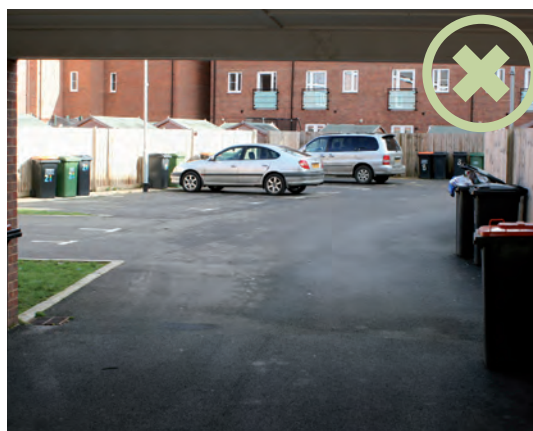


Fig 1.23 Poorly considered rear courtyard parking



Fig 1.24 Inappropriate parking on pavement due to inadequate provision of on street parking spaces



Fig 1.25 Rear parking courts with no correlation to housing

1.13.03

The Movement and Streets Supplement provides more detailed guidance on on-street parking specifications. In determining parking solutions consideration should be given to the context of the site:

- Is the site in an urban area that is potentially well served by public transport and has good connections to facilities to enable access on foot or cycle?
- Is the site in a rural area where there is likely to be a greater reliance on the private car? This will be the case for the majority of sites in Central Bedfordshire which remains a comparatively rural area ill-served by east-west public transport connections.

1.13.04

A parking space may be interpreted as a garage or a hardstanding within the house plot, an allocated garage space within a group of garages within sight of the house, an undercroft parking space or an allocated space adjacent to the street. Garages must conform to the dimensions specified in the Residential Supplement (7m x 3.3m) to be considered as a suitable parking space. Disabled parking spaces should conform to Part M of Building Regulations, see;

www.planningportal.gov.uk/uploads/br/BR_PDF_ADM_2004.pdf

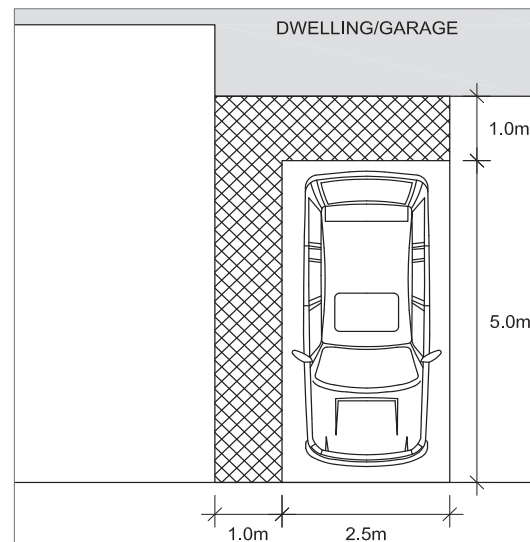


Fig 1.26 Dimensions of a curtilage parking space

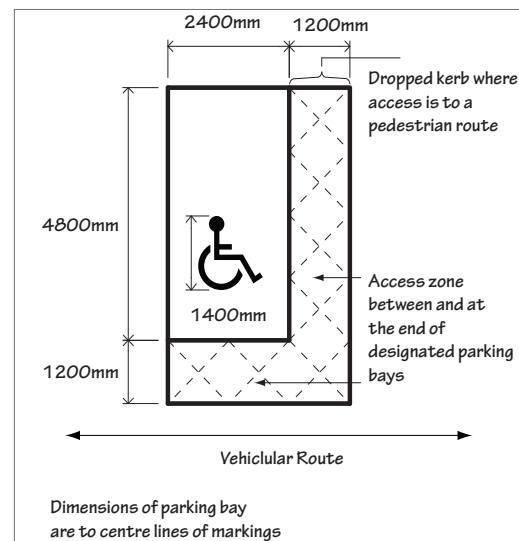


Fig 1.27 Disabled parking bays should conform to Part M of Building Regulations 2010

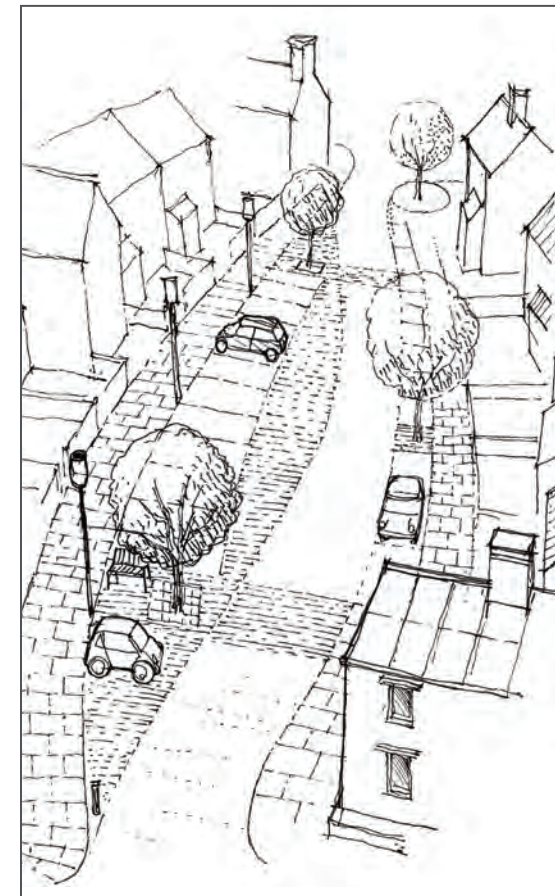


Fig 1.28 A parking street: indicative layout. Early discussions with the highway engineers would be required, to agree details for adoption.

Key car parking principles

- Parking design should be in keeping with the characteristics of the settlement, relate well to dwellings and be incorporated with the overall built form as far as possible.
- There is no best solution to provide car parking – a combination of on-plot, off-plot and on-street will often be appropriate. On street parking is efficient, understandable and can increase vitality and safety. Streets should be designed to accommodate parking from the outset with the use of inset parking bays to avoid inappropriate parking.
- Echelon parking should be considered in all locations as an efficient, safe and attractive method of accommodating parked vehicles together with suitable landscaping. The Movement and Streets supplement provides further detail on this.
- Rear courtyard parking may serve around five properties to increase the sense of ownership afforded to such areas.
- There are many examples of recent developments, designed at a time where planning policy required higher densities and low levels of parking, where well designed and realistic parking provision has not been achieved and this has resulted in on-street parking problems, such as parking on footpaths and verges. In order to avoid the need for controlled parking enforcement measures new developments must ensure that sufficient parking provision is made for residents and visitors. The Council may require a parking enforcement plan to be implemented, particularly during the site construction phase, in order to encourage appropriate parking behaviour
- An equivalent of 0.25 spaces for dwelling should be provided for visitor parking, and should be accommodated in public areas, either in marked bays or within widened sections of the carriageway.
- Tandem parking of more than two cars will not be acceptable. In accordance with the parking standards on page 29, in designing new streets one parking space out of three/four for larger properties may be provided in front of the property within the extent of the highway on streets of a sufficient width, or in inset parking bays on a narrower street. Further guidance on street parameters is included in the Movement and Streets supplement.
- Parking as part of a square may count towards the required parking provision.
- Parking surfaces must be permeable to comply with current regulations. There are three main solutions;
 - Using gravel or a mainly green, vegetated area.
 - Directing water from an impermeable surface to a border rain garden or soakaway.
 - Using permeable block paving, porous asphalt or concrete.

1.14 Parking Standards

Residential Parking Standards

Type of Property	4/4+ bedroom		3 bedrooms		2 bedrooms		1 bedroom	
	Minimum No. of Spaces	†Suggested No. of Spaces	Minimum No. of Spaces	†Suggested No. of Spaces	Minimum No. of Spaces	†Suggested No. of Spaces	Minimum No. of Spaces	†Suggested No. of Spaces
Detached	3*	4*	2	3	2	2	1	2
Semi-Detached	3*	4*	2	3	2	2	1	2
Terraced	2	2.5	2	2.5	2	2	1	2
Apartment	2	2	2	2	2	2	1	2

*One parking space out of the three required for four bedroom properties can be provided on street and thus unallocated.

†The suggested parking standards will allow flexibility to provide additional parking if specific needs dictate this i.e. in rural areas or to provide choice for larger homes

Commercial Parking Standards

Use Class	Land Use	Space Standard
A1 Retail	Food-retail	1 per 14sqm (>1000sqm) 1 per 35sqm (<1000sqm)
	Non-food Retail	1 per 20sqm (>1000sqm) 1 per 35sqm (<1000sqm)
A2 Financial and Professional Services		1 per 30sqm
A3 Food and Drink	Restaurant	1 per 25sqm
	Fast Food Takeaway	1 per 25sqm
B1 Business	Offices other than A2	1 per 30sqm (urban zones) 1 per 25sqm (rural zones)
	Business Parks	1 per 25sqm
B2 General industry	General Industry	1 per 100sqm (more than 500sqm)
		1 per 30sqm (less than 500sqm)
B8 Storage and Distribution	Storage and Distribution	1 per 200sqm (more than 500sqm)
		1 per 30sqm (less than 500sqm)

To be considered as a qualifying parking space, garages must be a minimum size of 3.3m X 7m

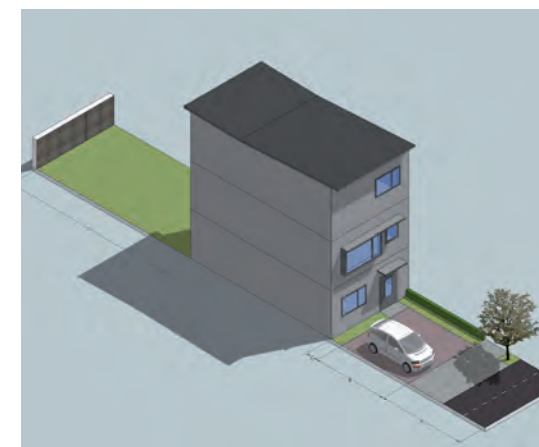


Fig 1.29 Indicative on plot, independently accessible parking layout for terraced property



Fig 1.30 Indicative Parking layout with rear parking court for apartments.



Fig 1.32 Indicative Parking layout for 3 bedroom bungalow



Fig 1.34 Indicative Parking layout for garage and on plot parking in front layout.



Fig 1.31 Wide front units allow cars to be located on plot and be accessed independently

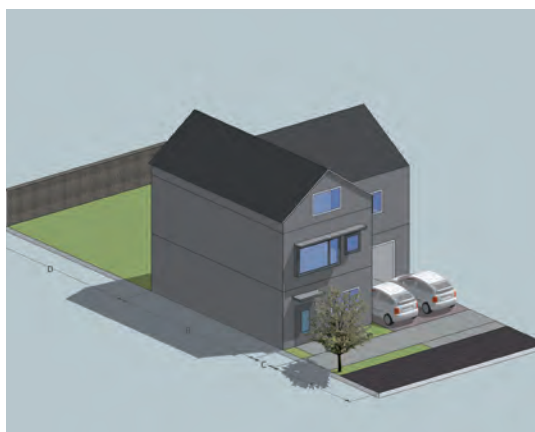


Fig 1.33 L-Shaped housing can allow 2 cars to be accessed independently on plot and be screened by part of the house

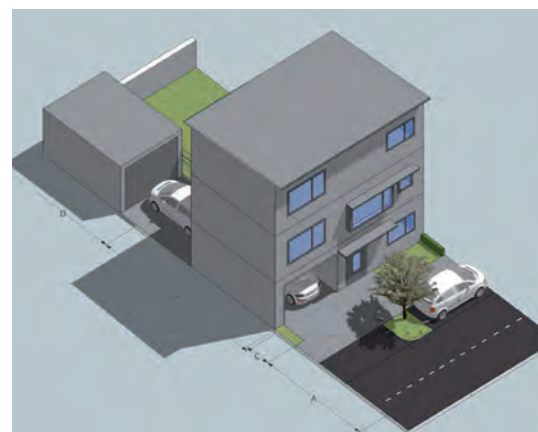


Fig 1.35 Where tandem parking is included, it is important to have on street parking as close as possible to the property's front door.

1.15 Access For All

Why is access for all important?

1.15.01

All users whether those in wheelchairs, those with pushchairs or those with a range of other disabilities or needs must be accommodated within the built environment. This should not be an add-on where special provisions are made but should be integrated into the design process at the outset. Further information about accessible homes will be provided in the Accommodating Specific Housing Needs Supplement.



Fig 1.36 Grove Theatre, Dunstable



Fig 1.37 Houghton Regis Hub, Bedford Square

Checklist of Criteria for Good Access for All

- Are surfaces level and should dropped kerbs be provided?
- Are gradients not too steep and manageable for all users?
- Are surface materials appropriate e.g. many may struggle with cobbles?
- Are openings at a level where wheelchair users can access them?
- Are there automated doors where appropriate?
- Are changes in level clearly marked and only made where necessary?
- Is appropriate lighting installed?
- Is street furniture appropriate for all users (widths of benches and shelters and space alongside for pushchairs and wheelchairs should be considered)

Consideration to the approach to buildings and access arrangements should be given for all users when detailing the approach to buildings.

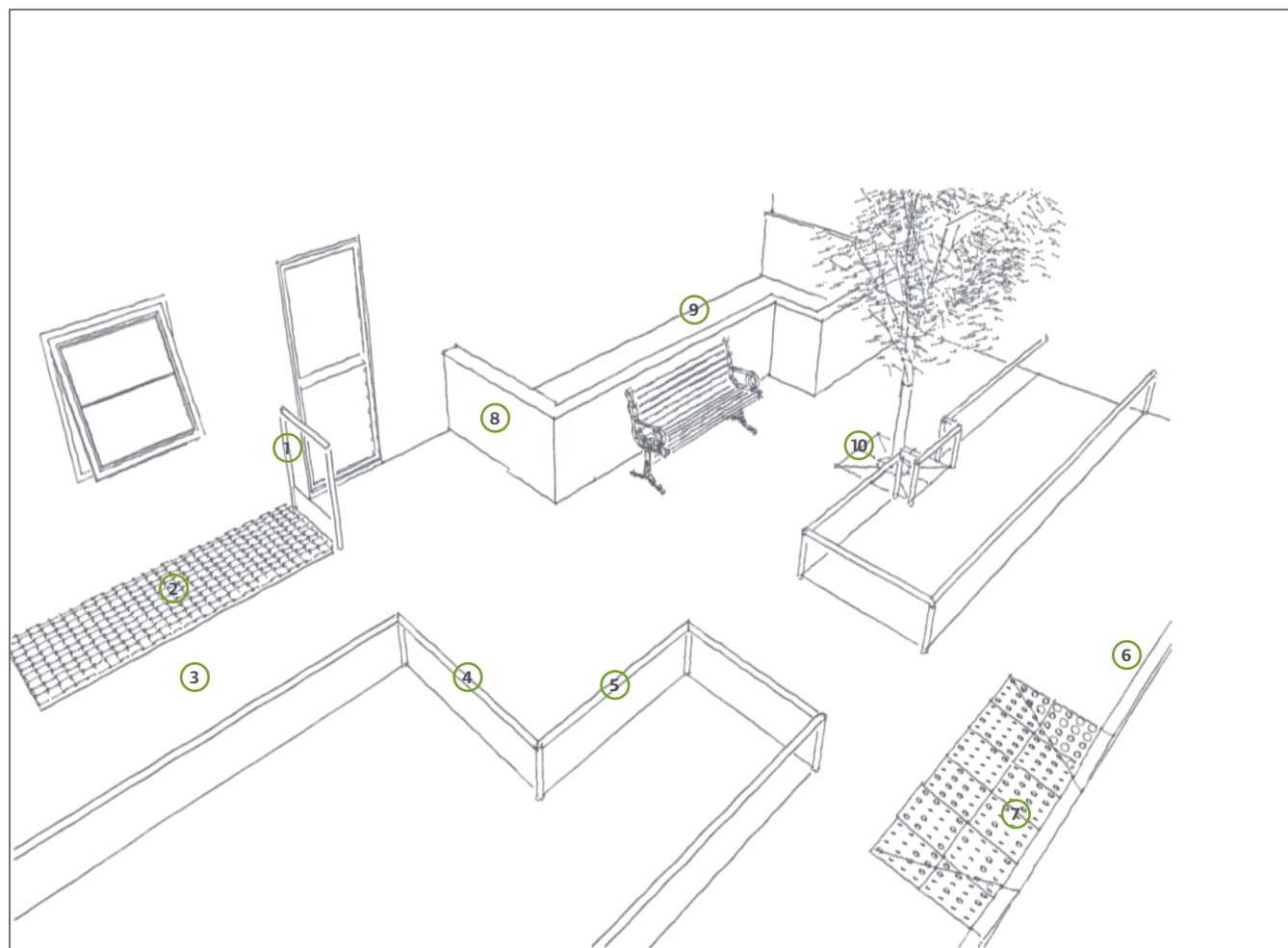


Fig 1.38 Indicative illustration showing required access arrangement considerations when detailing approach to buildings

Approach to buildings

1. Rail Guard against opening door
2. Raised texture surface to warn of hazard
3. Firm, non-slip surface
4. Path edge with kerb or low rail
5. 800mm high walls / planters
6. Bollards 1000mm high with visually contrasting band
7. Warning surface and drop kerb at crossing points
8. Extra congregating space
9. Seat with arms and space for wheelchair set back from path
10. Tactile paving or changes in surface to indicate the presence of obstacles.

1.16 Block Structure

1.16.01

Housing should be laid out such that there is a clear distinction between public and private space. The front of a property should face onto public space, preferably a street, while the private back garden should be private and afforded security by facing other private space - it should not face the public realm.

1.16.02

Perimeter blocks are one way of achieving this. They come in a variety of layouts (see fig 1.4.1) but all exhibit the common characteristic of the fronts of buildings facing the public realm with private rear gardens enclosed on the inside.

1.16.03

Some perimeter blocks provide a continuous frontage facing the street and help to maintain a sense of enclosure and continuity of built form.

1.16.04

Perimeter blocks can also make dual aspect accommodation easier to achieve if the blocks are not too deep. Greater internal light levels are obviously better for health and wellbeing.

1.16.05

There is also always a trade off between block size and the provision of outside space. Large blocks deliver high levels of green space but have low permeability and small blocks the inverse of this. A medium block size of between 60-90 metres is probably a reasonable compromise.

1.16.06

The continual use of narrow blocks (eg 40m in depth) being used in the same direction has the disadvantage of tending to create inactive frontages along the street that has the short ends of each block facing it.

1.16.07

Larger more square blocks can be created through the use of short cul-de-sacs yet still achieve a perimeter block structure



Fig 1.39 Cul-de-sac have been used to break up a larger block of approx 110m x 110m



Fig 1.40 A Perimeter block structures

1.17 Areas of Play

1.17.01

The standards for the provision of open space and play areas are based on best practice guidance and are set out in the Central Bedfordshire Leisure Strategy.

1.17.02

The following diagrams illustrate how play areas that meet the different levels of provision required across the age bands can be designed effectively. These may be grouped if appropriate.

- 1 Well overlooked from adjacent housing
- 2 Demonstrative features
- 3 Well drained, reasonably flat surface with grass or hard surface
- 4 Min 100 sq m activity zone
- 5 Position next to a well used pedestrian route
- 6 Within 1 min walking distance
- 7 Buffer Zone: Varied planting using mix of scent, colour & texture
- 8 Sign to indicate area is for children's play
- 9 May need a 600mm guard rail, low fence or planting indicate a perimeter

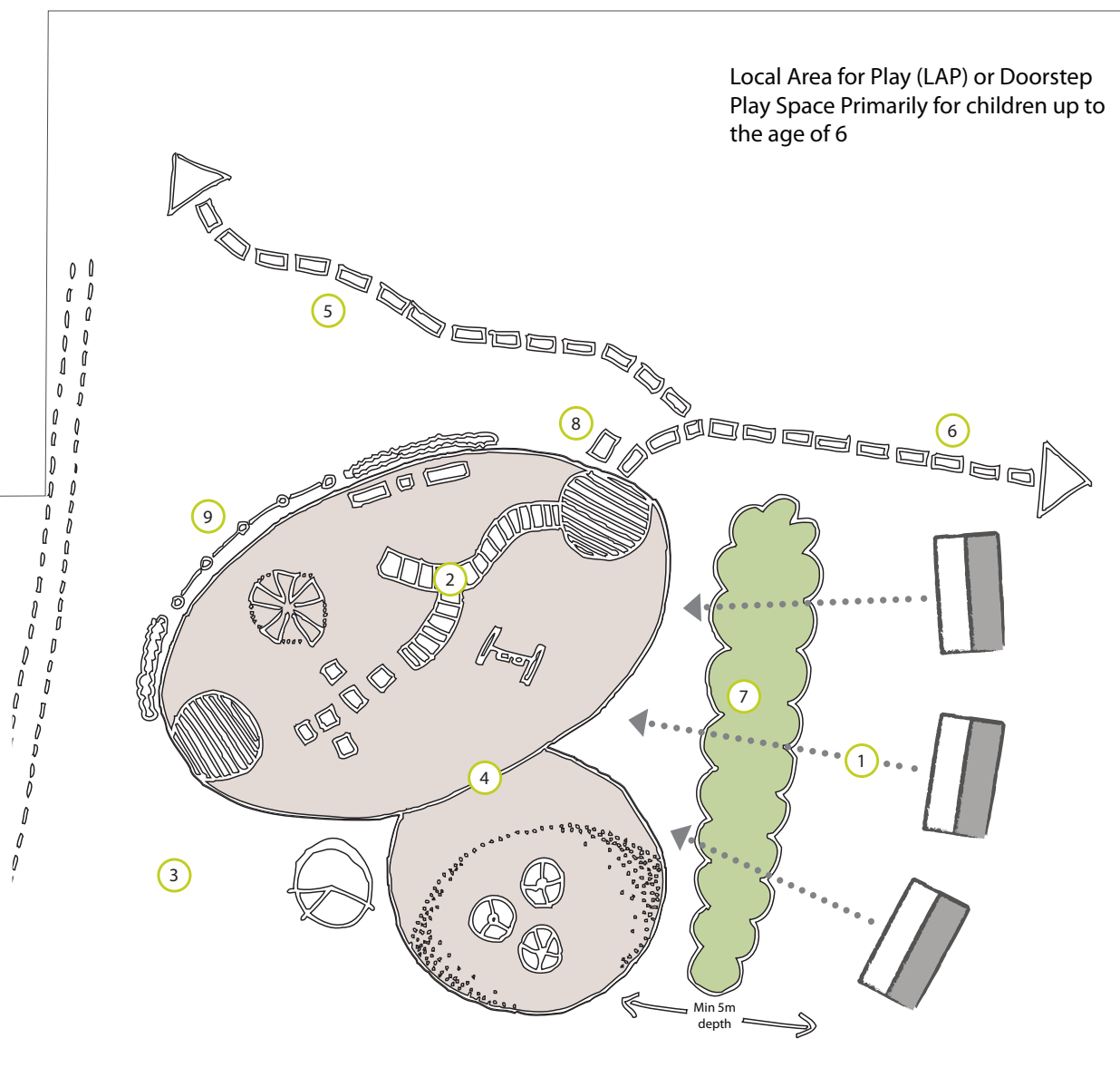


Fig 1.41 Local Area for Play (LAP) or Doorstep Play Space Primarily for children up to the age of 6

Local Area for Play – LAP (equipped)

- Caters for children 3 to 6 years of age.
- Has a minimum activity zone area of 100 m².
- Has a buffer zone of 5-10m between the activity zone and the nearest dwelling.
- Contains 3+ pieces of play equipment suitable for this age group, offering a range of play activities which contribute to the overall play value of the site
- Appropriate impact absorbing surfacing is provided
- All playground equipment provided must conform to EN 1176 and EN 1177, or subsequent replacements/amendments.
- Is within 1 minute's walking time from home (100m)
- Has informal surveillance from surrounding houses and is located on a well-used route / area.
- Play areas should not be bordered by gable ends or other exposed walls, however, where this is unavoidable wall should be protected from use for ball games by, for example, providing a strip of dense planting of 1m minimum depth and knee rail fencing.
- Occupies a reasonably flat, well-drained site with grass and hard surface entrances/paths.
- Has landscaping which creates an environment which enhances the play value and enables children to experience natural scent, colour and texture.
- Contains seating for parents or carers.
- Has litter bins
- Has fencing of 1m min. in height around the perimeter, with two self-closing pedestrian gates, in bright contrasting colours, to prevent access by dogs.
- Has a footpath barrier to limit the speed of a child entering or leaving the facility.
- Has a sign indicating: the relevant age group of children for which the site is designed, contact details of the site owner, nearest emergency telephone, prohibition of litter, glass, smoking; dogs are excluded.
- Where appropriate is provided in conjunction with a LEAP plus NEAP play areas to provide play experiences for all age groups.

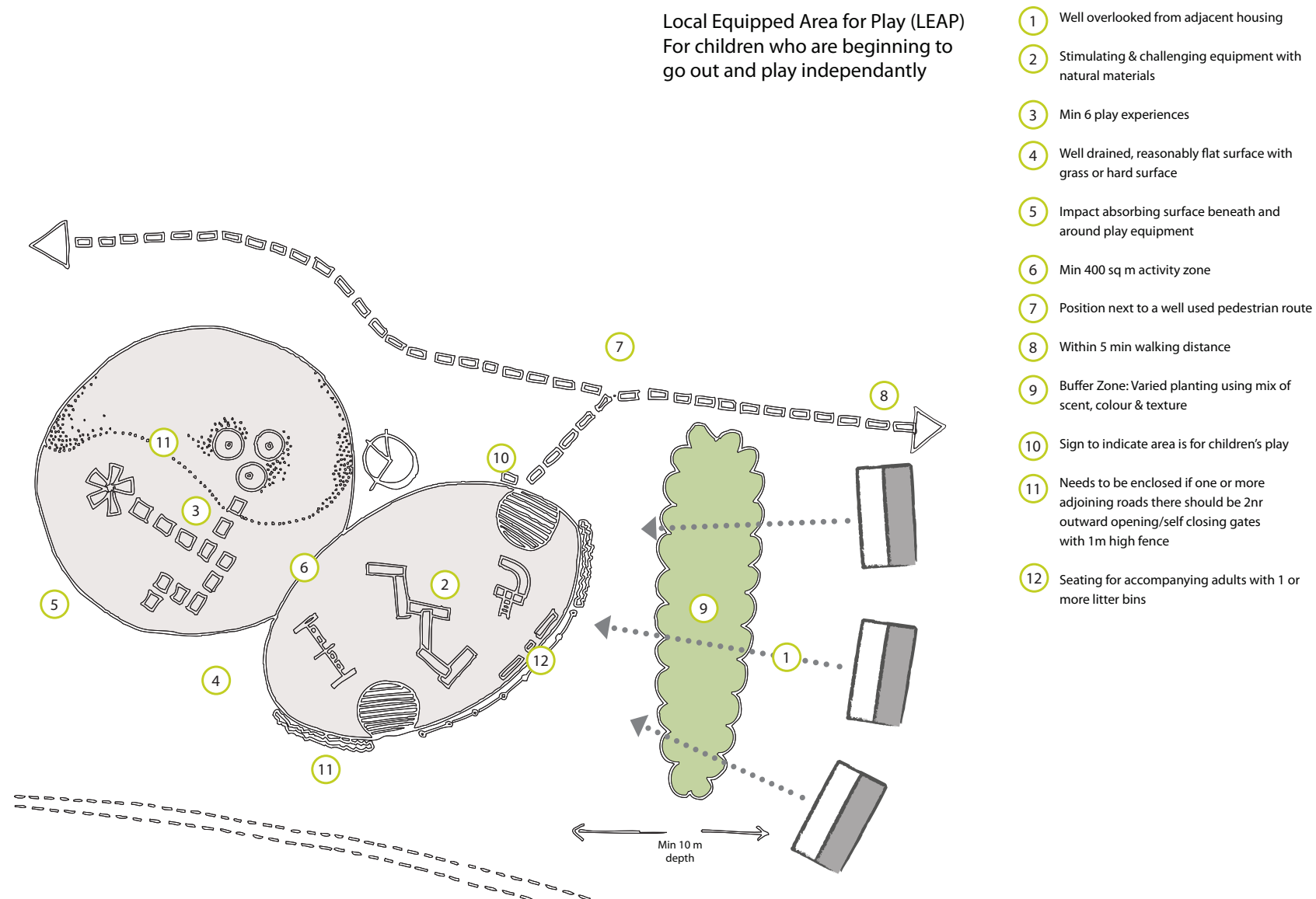


Fig 1.42 Local Equipped Area for Play (LEAP) for children who are beginning to go out to play independently

Local Equipped Area for Play - LEAP

- Caters for children from 5 to 9 years of age
- Has a minimum activity zone of 400m²
- Has a minimum buffer zone of 20m between the activity zone and the nearest dwelling
- Contains 5+ pieces of play equipment suitable for this age group, offering a range of play activities which contribute to the overall play value of the site
- Appropriate impact absorbing surfacing is provided
- All playground equipment provided must conform to EN 1176 and EN 1177 or subsequent replacements/amendments.
- Provides stimulating & challenging equipment which offer a range of physical activities
- Is within 5-10 min walking distance from home (400m)
- Has landscaping and earth mounding features which create an interesting and distinctive environment which enhances the physical play value and enables children to experience natural scent, colour and texture.
- Has informal surveillance from surrounding houses and is located on a well-used route / area.
- Occupies a reasonably flat, well-drained site with grass and hard surface entrances/paths.
- Contains seating for parents or carers.
- Has fencing of 1m min. in height around the perimeter (where appropriate), with two self-closing pedestrian gates, in bright contrasting colours, to prevent access by dogs. A vehicle maintenance gate is also required.
- Has a footpath barrier to limit the speed of a child entering or leaving the facility.
- Has a sign indicating: the relevant age group of children for which the site is designed, contact details of the site owner, nearest emergency telephone, prohibition of litter, glass, smoking; Dogs are excluded.
- Where possible is provided in conjunction with a LAP and/or NEAP play areas to provide play experiences for all age groups.

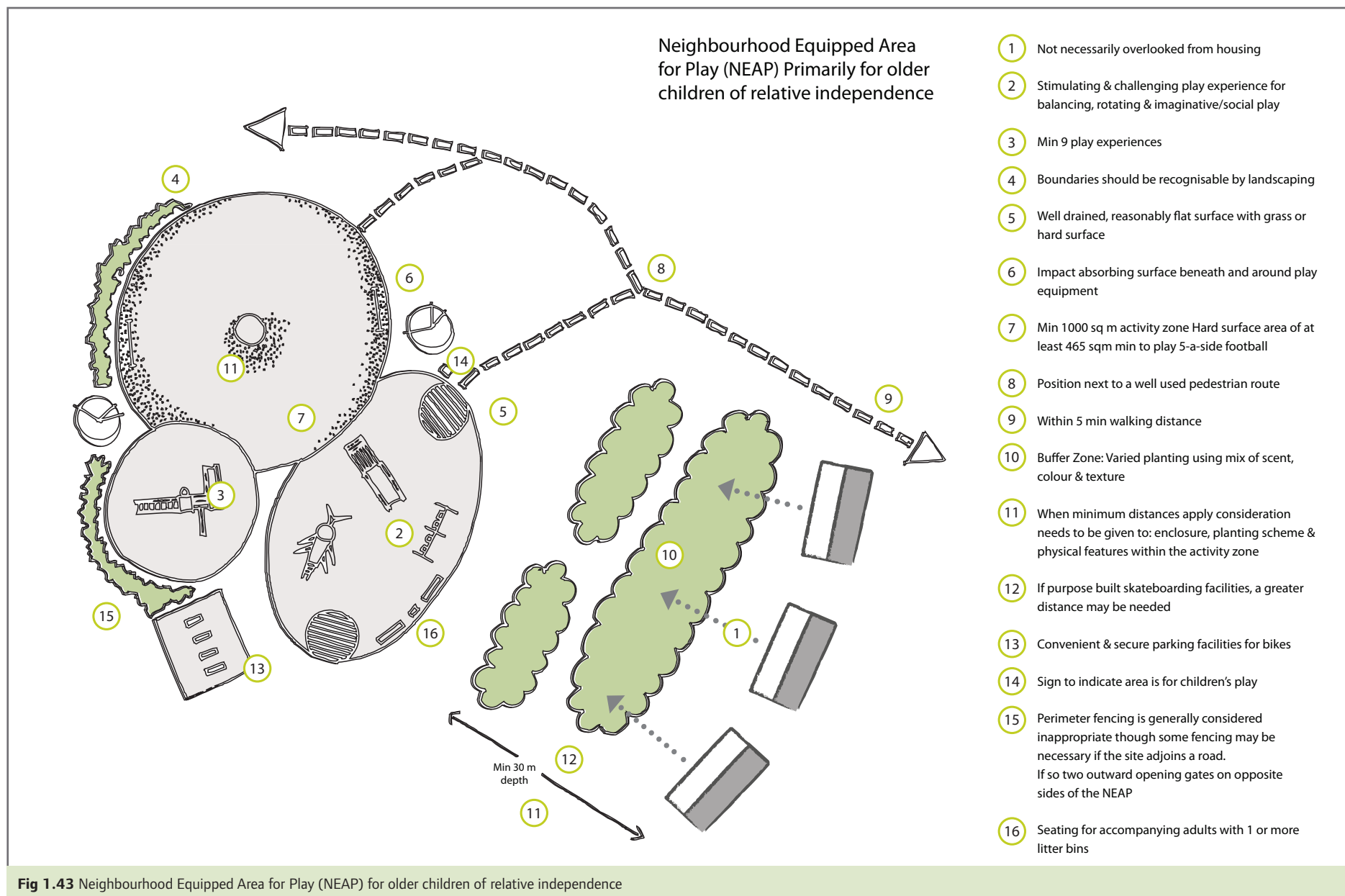


Fig 1.43 Neighbourhood Equipped Area for Play (NEAP) for older children of relative independence

Neighbourhood Equipped Area for Play - NEAP

- Caters for children from 10 to 14+ years of age
- Has a minimum activity zone of 1,000m²
- Has a minimum buffer zone of 30m between the activity zone and the nearest dwelling
- Contains 8+ pieces of play equipment suitable for this age group, offering a range of play activities which contribute to the overall play value of the site
- Appropriate impact absorbing surfacing is provided
- Has a hard surface area of at least 465m² which provides a kick-about area, basketball court or other facilities
- If a skateboarding facility is provided, a greater buffer distance may be needed
- All playground equipment provided must conform to EN 1176 and EN 1177 or subsequent replacements/amendments.
- Provides a range of innovative, contemporary equipment which challenges and improves users physical, mental and social abilities
- Has fencing of 1m min. in height around the perimeter (where appropriate), with two self-closing pedestrian gates, in bright contrasting colours, to prevent access by dogs. A vehicle maintenance gate is also required.
- Perimeter fencing may not always be required although fencing may be necessary if the site adjoins a road.
- Is within 15 min walking distance from home (1,000m)
- Has significant landscaping and earth mounding features which create an stimulating and distinctive environment, which enhances the sites play value but can also separate zone within the site and screen quieter areas used by younger children or older users.
- Is not necessarily overlooked by housing but is located on a well-used route / area.
- Occupies a reasonably flat, well-drained site with grass and hard surface entrances/paths.
- Contains seating for parents or carers.
- Has a sign indicating: The relevant age group of children for which the site is designed, contact details of the site owner, nearest emergency telephone, prohibition of litter, glass, smoking; dogs are excluded.
- Where possible is provided in conjunction with a LEAP play area to provide play experiences for all age groups.

1.18 Hierarchy of Spaces and Enclosure Ratios

1.18.01

The level of enclosure across a street or public space is an important factor in varying and determining character across a development. It can help reinforce legibility as well as the hierarchy of routes. Most well designed places have an appropriate sense of enclosure.

1.18.02

Moving through a built environment a variety of levels of enclosure can be encountered, large and small scale, formal and informal, building dominated or landscape dominated or an amalgam of the two. Spaces can be “static” such as a square or courtyard – with a sense of arrival or “dynamic” such as a street or avenue where movement is the characteristic.

1.18.03

Enclosure is determined by frontages and the way that buildings relate to the street or square.

1.18.04

An effective enclosure ratio for a residential street is 1:3, the maximum for a square of very wide street such as an avenue is 1:6 and a mews generally should have a tighter ratio of 1:1.

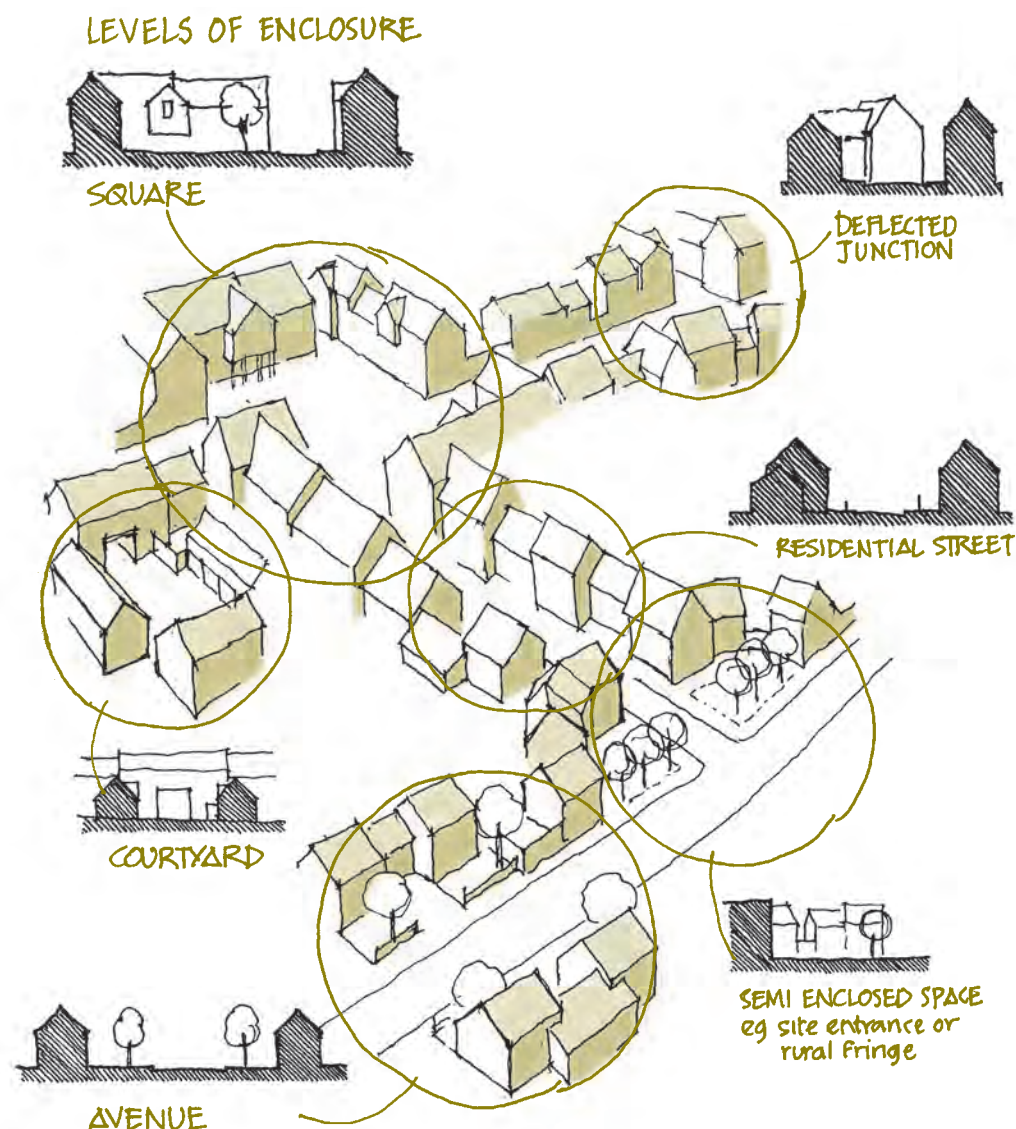


Fig 1.44 A scheme should demonstrate a hierarchy of spaces and different senses of enclosure, contributing to its character

1.19 Focal Point and Key Building Groups

1.19.01

Key building Groups sited carefully at specific locations, make a significant contribution to the character or sense of place of a development.

1.19.02

Gateways are buildings, sites or landscapes that symbolize an entrance or arrival to a place.

1.19.03

Landmarks help people to navigate within spaces and are buildings, structures and spaces which create distinct visual orientation points that provide a sense of location to the observer



Fig 1.45 Key Building Groups.

within the neighbourhood or district, such as that created by a significant natural feature or by an architectural form which is highly distinctive relative to its surrounding environment. Offsetting the angle of street that approach the landmark can help to create a sense of surprise.

1.19.04

Vistas are a line of vision, contained by buildings or landscaping, to a building or other feature which terminates the view. Well designed vistas aid legibility.

1.19.04

Focal Points are prominent structures, features or areas of interest or activity. A common example is a transport interchange or other node



Fig 1.46 Gateways.



Fig 1.47 Vistas



Fig 1.48 Landmarks.



Fig 1.49 Focal Points



Fig 1.50 Example of Gateway building in Silsoe.



Fig 1.51 Landmarks

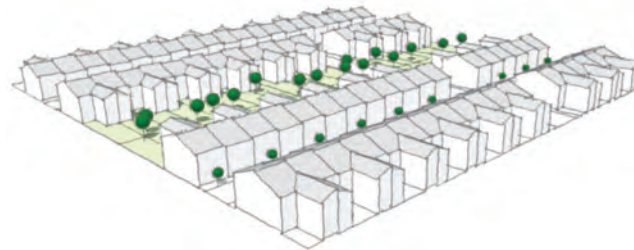


Fig 1.52 Terminating a streetscene and emphasising the corner in the road. Fairfield Park

1.20 Densities

1.20.01

The density of a development is an important consideration in placemaking. A variation in density across a large development creates different character and hence interest. Higher densities make shops, facilities and public transport more viable and create more walkable environments that are not only more sustainable but have a greater degree of vitality.



1.20.02

Higher densities (over 50du/ha net) are appropriate in town centres and accessible locations close to public transport routes, shops and facilities while lower densities (below 25du/ha net) are appropriate toward the edges of development or in rural locations and small villages.

1.20.03

Fundamentally density should therefore be determined by the context within which a development is to be built. It should be sympathetic in terms of the surrounding built form.

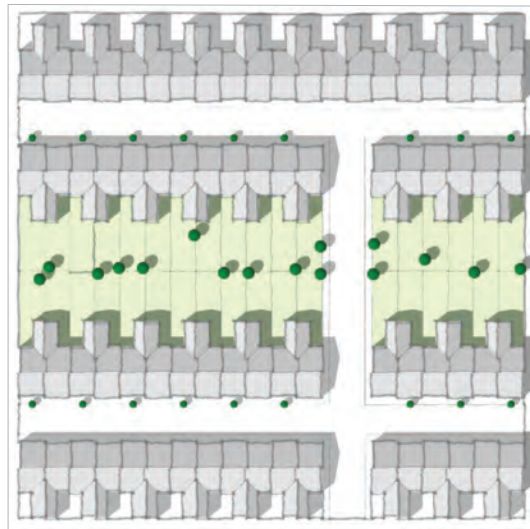


Fig 1.53 Low Rise - High Coverage. (74 units per hectare)

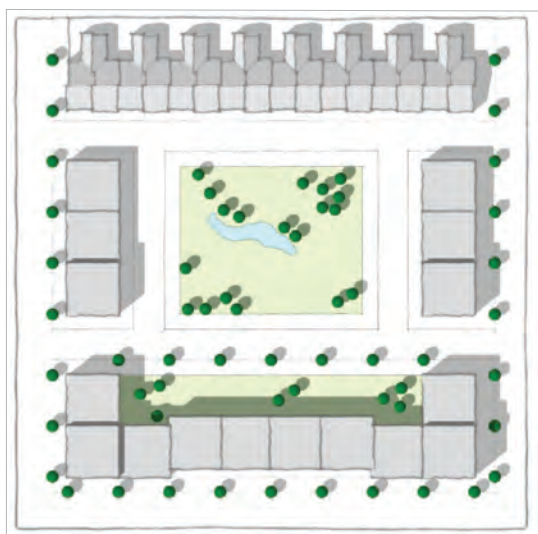
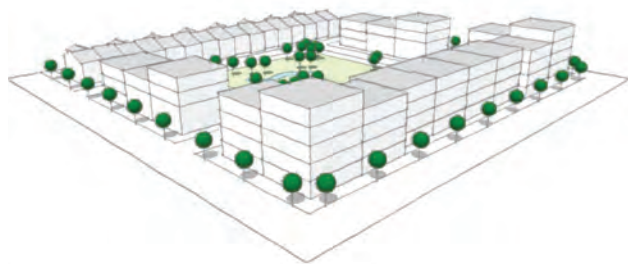


Fig 1.54 Medium Rise and Coverage. (74 units per hectare)

1.20.04

It is important to note that high or low density does not necessarily equate to a certain built form. These three schemes are all built at the same density but each create a completely different character, so the key to creating an appropriate design is not about achieving a certain density, but much more about block design, massing, heights, housing mix, and use of open space. However, changes in density across a large scheme or in urban settings can often be appropriate and add variety and mix providing that they are well-designed.

1.20.05

If appropriate, densities can be maximised along existing and potentially new public transport corridors in order to secure the provision of commercially viable services.

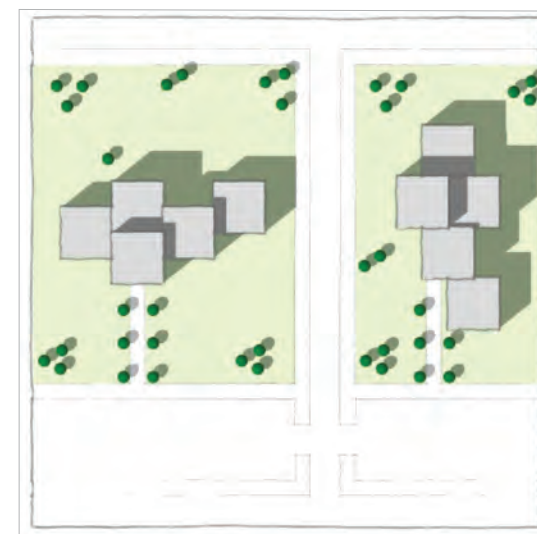


Fig 1.55 High Rise - Low Coverage. (74 units per hectare)

The examples on the following pages shows some typical density ranges within Central Bedfordshire

Density of 74 dwellings per hectare (dph)

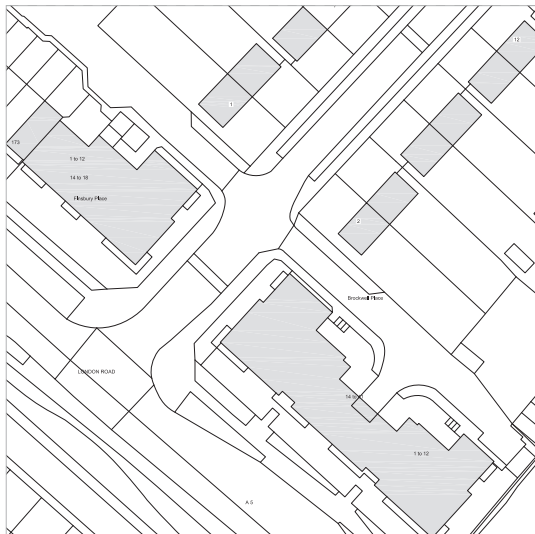


Fig 1.56 Density calculated at 74 dwellings per hectare.



Fig 1.57 Aerial view London Road, Dunstable.



Fig 1.58 Density Street View

Density of 60 dwellings per hectare (dph)



Fig 1.60 Aerial view of Biggleswade



Fig 1.59 Density calculated at 60 dwellings per hectare



Fig 1.61 Density Street View.

Density of 35 dwellings per hectare (dph)



Fig 1.63 Aerial view Manor road, Flitwick.



Fig 1.62 Density approximately 35 dwellings per hectare.



Fig 1.64 Density Street View

Density of 20 dwellings per hectare (dph)



Fig 1.65 Aerial view Whipsnade road, Dunstable



Fig 1.71 Density calculated at 20 dwellings per hectare.



Fig 1.66 Density Street View

Density of 12 dwellings per hectare (dph)



Fig 1.67 Density calculated at 12 dwellings per hectare.



Fig 1.68 Aerial view of Eversholt.



Fig 1.69 Density Street View

1.21 Key Sustainability Principles

1.21.01

Optimise Site Potential

- Location in relation to opportunity to travel by sustainable modes to key services and facilities (work, education, shopping, and health)
- Orientation – seek to maximise daylight for optimum light, heating, cooling and shading as appropriate. This is achieved by orientating buildings within 20 degrees of due south giving an east-west street pattern. Acoustic and visual privacy can also be achieved with a careful layout.
- Landscaping – retention and or replacement of trees and shrubs should be part of the initial design and not a bolt-on. Consider both functional and visual aspects of landscaping for general amenity, shading, softening built form and increasing biodiversity.
- SUDS – consider green roofs, permeable surfaces, swales and basins, infiltration trenches and filter drains, and ponds and wetlands.
- Re-use of Buildings – consider whether it would be more sustainable to refurbish rather than demolish existing structures.

1.21.02

Optimise Energy and Water Use

- Use water efficient appliances and low water flow fittings
- Provide facilities to recycle water like water butts
- Provide sufficient insulation (glazing, lagging etc.)
- Consider the use of renewable energy or low carbon energy
- Consider operational and maintenance practices at the preliminary design phase in order to reduce lifetime building running costs and allow the monitoring of energy usage

1.21.03

Greener Construction

- Consider lower toxicity materials from sustainable sources
- Minimise construction waste (for further information see CBC guidance)

1.21.04

Mobile Infrastructure

The Mobile Infrastructure Design Guide provides principles and guidelines for the sensitive siting and appearance of mobile communications base stations

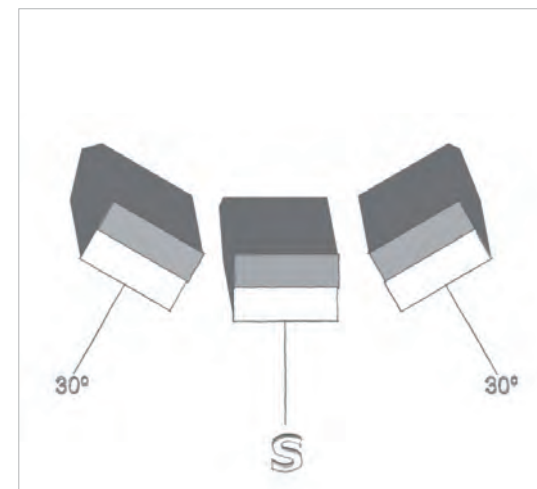


Fig 1.70 Site orientation for optimum solar gain

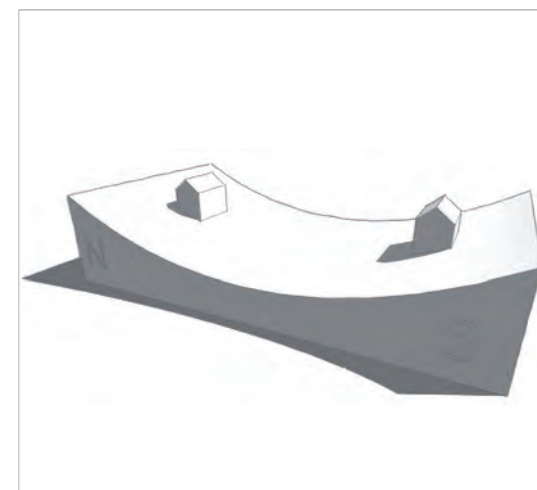


Fig 1.71 Building orientation on a sloping site

1.22 Safeguarding the Environment and Development from Pollution

1.22.01

Pollution can cause adverse health risks, damage the environment and interfere with amenity. It can also adversely affect neighbouring land uses, cause long term contamination and hinder regeneration. The aim is that acceptable balances are reached in terms of pollution to achieve more sustainable workplaces, homes and recreation areas. Trade offs and balances might be agreed to achieve acceptable targets across pollution types.

- Air
- Light
- Noise
- Soil
- Water
- Vibration

1.22.02

Noise and Vibration

Nuisance from noise can severely impact upon the health and quality of life of residents within the community. It can also affect the ability to learn effectively in educational establishments; and can impair health and productivity in the workplace.

Possible sources of noise and/or vibration include

- Roads,
- Railways
- Industrial commercial
- Entertainment
- Construction
- Mechanical plant
- Deliveries.
- Domestic noise especially when houses are built at high density
- Other Transport Corridors

1.22.03

How can we Limit Noise Pollution?

1. In terms of limiting noise from external sources the primary approach is to physically separate conflicting land uses.
2. If this cannot be achieved then emphasis should be placed on maximising layout, orientation and screening of buildings and private gardens (i.e. location of non habitable rooms on exposed façades, use of less sensitive land uses as buffers rather than barriers).
3. As a final resort the inclusion of barriers or high sound insulation on exposed facades

(i.e. mechanical ventilation, enhanced glazing etc) may be acceptable. However for sites to meet the sustainability objectives each applicant should demonstrate that it would not be practicable to use alternative attenuation measures in order to achieve acceptable acoustic conditions.

- 4 The layout and placement of rooms within the building should be considered at an early stage in the design process to limit the impact of noise on sensitive rooms such as bedrooms and living rooms. (i.e. limit the transmission of airborne and impact sound from common areas, place bedrooms next to and above bedrooms and finally ensure that walls between bedrooms and the living room and WCs provide adequate resistance to the passage of sound).
5. New builds should exceed the minimum standards set out in Building Regulations Part E in line with the target levels of the Code for Sustainable Homes.

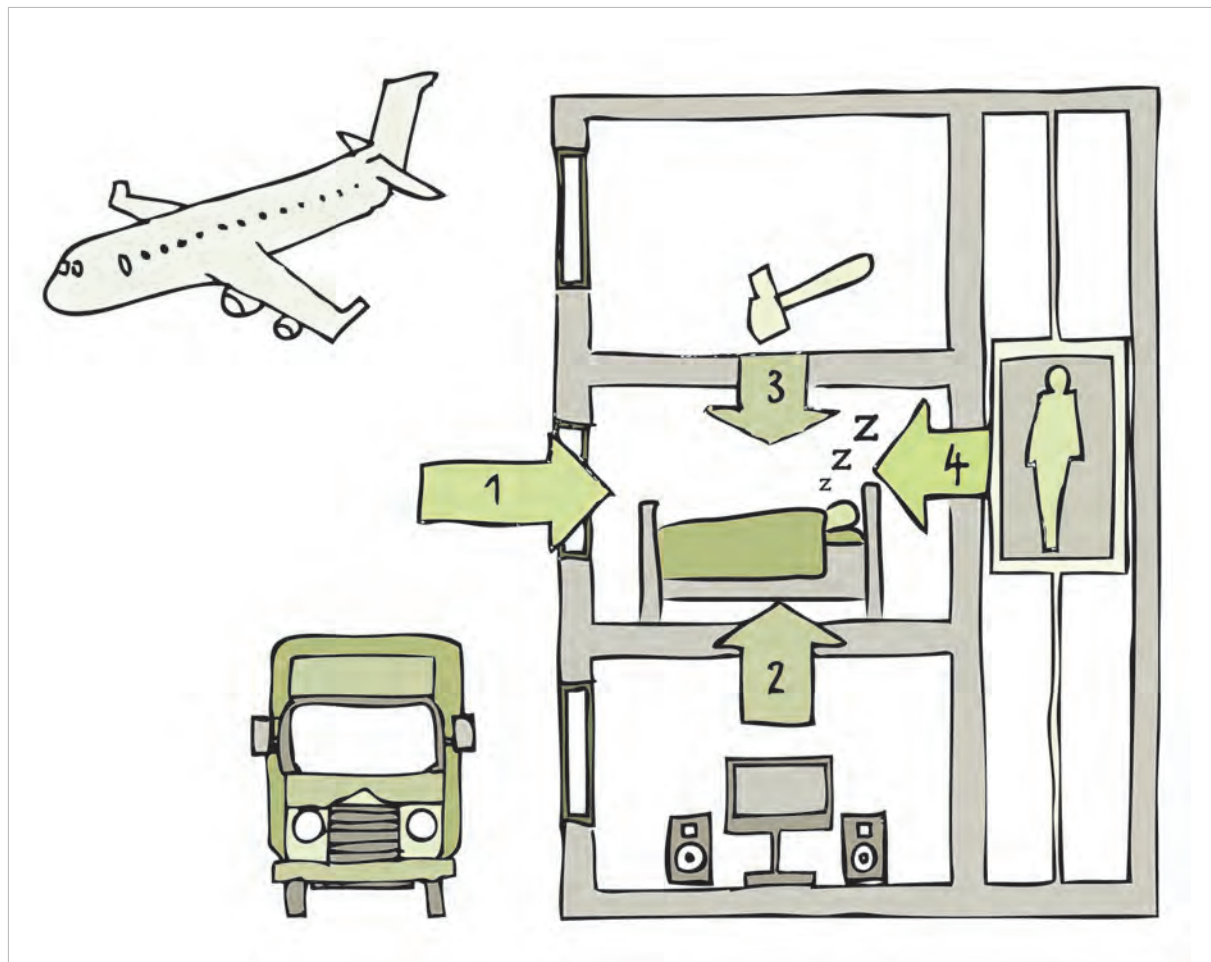


Fig 1.72 Noise Impact Assessment

1.22.04

A Noise Impact Assessment is to be undertaken and provided before an application can be determined. Any applications are also looked at in terms of the cumulative impact in the context of committed developments.

1. Exterior noise coming from road traffic, trains and aeroplanes.
2. Airborne noise coming from inside the house such as conversations, hi-fi, television, etc.
3. Structure-borne noise coming from footsteps, objects falling on the floor, house hold equipment, etc.
4. Noise from technical equipment coming from heat and ventilation, lifts, water pipes, etc.

Contaminated Land

1.22.05

Central Bedfordshire has a varied industrial history and many sites now pose a threat to the environment and the health of humans, animals and plants. However, there is a growing need to reclaim and redevelop these sites.

1.22.06

3 Key Aims in terms of Contaminated Land

- ensure that risks associated with land contamination are reduced to an acceptable level,
- bring contaminated sites back to beneficial use, and
- make sure that the cost burdens in doing so are proportionate, manageable and economically viable.

Contaminated Land Key Points

- It remains the responsibility of the landowner/developer to identify land affected by contamination and ensure that remediation is undertaken to secure a safe development.
- This is in addition the legal responsibilities the Council is currently implementing to deal with existing contaminated land through its duties under Part IIA of the Environmental Protection Act 1990
- Where contamination is identified then further appropriate investigations will be required to determine the extent of any contamination, identify the risks posed by it and devise appropriate schemes for remediation.
- Applicants will be required to demonstrate in terms of environmental, economic and social indicators, that the benefit of undertaking remediation is greater than its impact and that the optimum remediation solution is selected through the use of a balanced decision-making process.

Air Quality

1.22.07

The Council requires an Air Quality Impact Assessment to be undertaken and provided before an application can be determined.

Modelling scenarios need to present a realistic assessment of the future air quality situation in the locality of the development, taking into account the cumulative effect of all developments.

1.22.08

3 Key Aims for Air Quality Assessments

- To prevent people from being exposed to unacceptable levels of air pollution.
- To prevent the need to designate new Air Quality Management Areas (AQMAs).
- To prevent an increase of pollution, particularly within AQMAs.

1.22.09

Where an assessment indicates a development is likely to have a significant impact on local air quality, the Council will seek to secure mitigation to offset the impact of the development and also the significance of air quality impacts.

1.22.10

Examples of mitigation measures which might be considered include (but are not limited to);

- Redesign to eliminate / reduce exposure
- Traffic reduction / management measures
- Restrictions to car parking
- Incentives for low emission vehicles
- Robust Travel Plans aimed at encouraging modal shift to low carbon transport modes.
- Financial contributions to Air Quality Action Planning and monitoring of emissions or Low Emission Strategy Implementation secured through s.106 agreements.

1.22.11

Air Quality considerations are not only isolated to those prescribed in the Governments' Air Quality Strategy which relate primarily to transport as prescribed above. Wider considerations need to be given to industrial and commercial processes and issues to be considered will include odour / fumes and gases emitted from such. The Council will also require appropriate assessments in accordance with the relevant technical guidance in these instances to be submitted with the application to demonstrate that amenity is protected.

Light Pollution

1.22.12

The problems and issues associated with the provision of outdoor lighting are becoming more widely recognised as a source of pollution. Obtrusive lighting can be damaging and be both an environmental and intrusive visual nuisance arising predominantly from glare and light spillage. Light pollution in the countryside can lead to a suburban feel, losing the sense of distinctiveness associated with the countryside.

1.22.13

Whilst the importance of artificial lighting for security, pedestrian and traffic safety, in promoting access to sport and recreation and for enhancing historic and architecturally important buildings is recognised, lighting can have a marked impact on the night time scene, significantly changing the character of the locality and altering wildlife and ecological patterns. On the widest scale, dark skies and views of the stars are now becoming a thing of the past except in the remotest of areas.

1.22.14

The Council requires an assessment of light to be provided before an application can be determined

3 Key Aims for Light Assessments To prevent:

- sky glow - the orange glow visible around urban areas resulting from the scattering of artificial light by dust particles and water droplets in the sky;
- glare - the uncomfortable brightness of a light source when viewed against a dark sky;
- light trespass - light spillage beyond the boundary of the property on which a light is located.

Key Considerations

- Light Direction
- Hours of Use
- Design of Lighting
- Context (Historic for example)
- Purpose (enhancing buildings, for sport etc.)

1.23 GLOSSARY

Access

This can have two meanings:

- (1) The mode of transport and the route taken to a destination
- (2) “Access for All” The design concept which aims to create a built environment which is easily and equally accessed by everyone, regardless of age or mobility.

Active Frontage

A frontage to the public realm which is characterised by multiple entrances and windows (domestic, commercial or retail), allowing an interaction of people between the public realm and the premises facing the street.

Character

The combination of features of a building or a place that give it a distinctive identity compared with other buildings or areas.

Code (Street code etc)

A design guidance document for larger housing schemes which sets out a framework of key dimensions for different types of street. They cover highway layout standards, plot sizes and also building height and form for each type of street, in order to create a legible hierarchy of streets and places.

Context (or setting)

The physical (built and landscape), community and economic surroundings in which the development takes place.

Deflection (deflected view)

The arrangement of street buildings to create a gentle bend to encourage anticipation of what lies ahead (instead of a totally straight street).

Density

A measure of the number of dwellings or people per hectare. This can be expressed as a net figure (the area of a development purely devoted to residential and ancillary land uses and related access) or as gross related to the total area of a site (which may include mixed uses, landscape areas etc).

Design

The integrative process of manipulating elements of built form, landscape and the public realm, to achieve specific functional, sustainable, social and aesthetic effects. It involves working at a variety of levels from strategic to detailed.

Enclosure

The arrangement of buildings, walls, trees etc to provide different levels of containment of a space.

Footprint

The shape taken up at ground level by a building or group of buildings.

Formal/Informal

A formal layout of streets and building groups is characterised by symmetrical or geometric plans and elevations. The features of an informal design include layout and elevations which are asymmetrical, winding and which relate to natural site characteristics.

Grain

The pattern of property lines, both on plan and elevation, plots, streets and lanes. The general shape and direction of building footprints. Fine grain refers to the higher intensity of smaller plots or streets. Coarse grain refers to larger scale plots with fewer roads.

Hierarchy

A logical sequence of spaces, streets or building forms, increasing or decreasing in size or density throughout a development.

Legibility

The layout of a residential development is legible if it is easily comprehended by residents and visitors. The hierarchy of built form, routes and landmarks are structured to facilitate orientation.

Local distinctiveness

A locally distinctive scheme is one where the design has been influenced by its setting, not one which is standard to any location. The design will refer to site characteristics, local built forms, layouts and (where still available) materials.

Massing

The three dimensional arrangement of the volume of a building to achieve specific effects, e.g. simple forms, fragmented or symmetrical forms etc.

Permeability

The degree to which a residential development can be penetrated by routes by foot and vehicle and the connectivity of the development to adjacent development

Place

A space in the built environment that has some meaning for people due to the activities and uses which characterise the space, or the quality of the space itself.

Placemaking

Creating the physical conditions that people find attractive, safe, neighbourly and legible. This is achieved through using good urban design principles. Placemaking is particularly important where there are few obvious positive site characteristics.

Public realm

The spaces between buildings accessible to the public; including the highway, green areas, squares etc.

Scale

This can have two meanings: either equivalent to mass or bulk (see massing above) or (more strictly correct) the subdivision of a building to create different effects e.g. domestic or civic. Subdivision by bays, intervals of windows, proportions etc.

Setting

(See Context)

Streetscape

The character of the street environment, existing or proposed.

Sustainable Development

An all embracing concept which in the context of a residential environment includes (in no order of priority):

- Reducing the need to and distances travelled by private vehicles and to maximise opportunities to travel by walking, cycling and public transport
- Maintenance and enhancement of biodiversity
- Re-use of resources such as land, buildings and materials
- Encouragement of the use of renewable energy sources

- Reduction of energy resources
- Sensitive use of site features

Termination, terminated view

A building or other feature which is placed at the end of a view down a street or square, to aid enclosure or provide a landmark.

Townscape

The urban equivalent of landscape: the overall effect of the combination of buildings, changes of level, green spaces, boundary walls, colours and textures, street surfaces, street furniture, uses, scale, enclosure, views etc.

Vernacular buildings

Mainly refers to pre-industrial era buildings which were created by local people from local (natural) materials, for everyday purposes. They were rarely designed by architects. Late 19th century artisans cottages could also be termed vernacular in that they were everyday buildings built by builders. However, whilst some brick may have been local, other bricks and slates were sourced from further afield.

Checklist of Key Placemaking Considerations

- Does the proposal seek to meet national and local policy requirements?
- Have all steps in the design route map (section 1.3) been followed?
- Does the site require a Design Code, Masterplan or Development Brief?
- Has consideration been given to the local character and context of the area, in terms of landscape and local materials for example?
- Has a site appraisal been conducted in accordance with the questions in section 1.8 and have all the constraints and opportunities been identified?
- Has the scheme responded to the street user hierarchy and created streets that encourage and give priority to walking, cycling and public transport use?
- In larger schemes, has a route hierarchy been identified?
- Does the scheme meet the parking standards (page 29) and have the key principles for parking been followed (page 28), to provide an appropriate solution for accommodating parking?
- Are streets fully accessible to all?
- Does the scheme provide an appropriate distinction between public and private space?
- Have play areas been provided in accordance with the Central Bedfordshire Leisure Strategy and have the principles for their design been followed?
- Has consideration been given to the enclosure of streets, key groupings and focal points?
- Is the scheme of an appropriate density to reflect the surrounding context? For larger developments, have a range of densities been provided?
- Have sustainability principles been integrated into the overall design, including:
 - Orientation of streets and buildings to maximise solar gain.
 - Measures to optimise energy and water use.
 - Landscaping and SUDS.
 - Green construction or the re-use of existing structures.
- Has the scheme responded to any potential sources of pollution (air, light, noise, soil, water or vibration)?