

Houses with South-facing Fronts

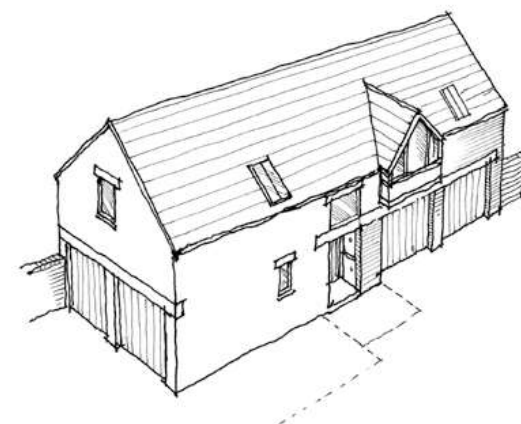
- 6.22.11 Orientating housing to optimise solar gain and provide attractive private garden space is an important objective but can be challenging when the fronts of buildings face south onto the street. The design of the front boundaries is important. The design of the elevation will need to take into consideration the conflicting demands of solar gain and glare, privacy, security, and outlook. The resulting street 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.
- 6.22.12 Solar gain can result in overheating and opportunities should be sought to manage this during summer months. This could include the use of low g-value glazing (which lets through a low percentage of solar heat); shutters and blinds; and brise-soleil (shading of windows and building facades). Internal layouts should also be designed to allow adequate ventilation. The use of landscaping and vegetation, such as shrubs, hedging, small trees, and creepers, can also provide natural cooling and is encouraged.



Figure 152: Houses having a south facing frontage

6.23 Avoidance of Single Aspect Houses and Flats

- 6.23.1 This house type consists of two-bedroom single aspect flats above four garages, or patio-type single storey houses and is often used in tight backland situations, in housing blocks or as infill. Single aspect dwellings should not face south and should only be used when there are no alternative opportunities for other designs. It is important that habitable rooms have adequate natural light, be of sufficient size and have protection from potential ground floor noisy uses (such as take aways, restaurants, pubs). Consideration must also be given to the provision of satisfactory refuge storage and cycle storage within the site.



Sam Smith:
Suggest including following wording on overheating.

"Single aspect dwellings are at an increased risk of overheating due to lack of cross ventilation. Such dwellings should be assessed against overheating risks and incorporate appropriate mitigation if required".

"Overheated homes can have direct effects on occupants' health, comfort, and productivity during overheating episodes and for a period after. Overheating can also disrupt sleep (itself an adverse impact) with consequential effects on health, safety, and productivity". (Note: this is repeated again in the 'Resources' section)

Figure 153: A coach-house type

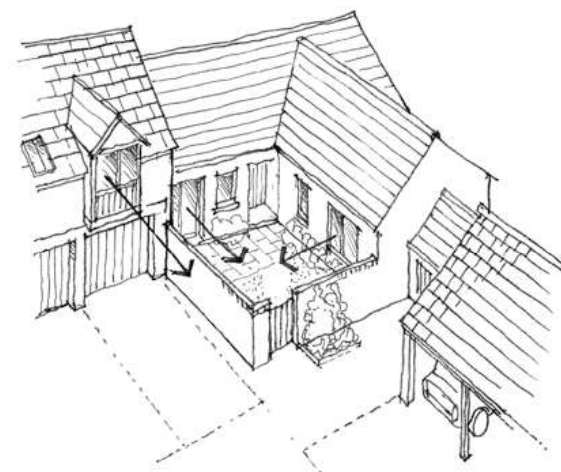


Figure 154: Single aspect types utilising a difficult internal corner

6.26 Balconies

6.26.1 Balconies can provide an important external space but care needs to be taken to ensure the elevation. They should be designed to complement the overall street scene and public realm/highway.

Sam Smith:
Air Pollution risks from balconies facing onto major roads are a risk. Suggest following wording is included:
"Internal air quality may be impacted from open balconies facing onto sources of air pollution such as major roads or polluting uses. Air pollution risks also need to be considered and alongside noise risks, may be mitigated through the use of enclosed balconies or winter gardens. Where used these need to be thermally separated from the interior and drained to avoid standing water."
Also may want to consider requiring soffits to be installed under balconies, will avoid the internals of the balcony structure being visible from underneath and street level which can look quite ugly and also means the builders will need to come up with a proper integrated drainage solution rather than just draining water onto the balcony below.

6.26.2 External noise levels for occupiers having access to the balcony area also need to be considered, particularly in relation to ground floor uses. Guidance on sound insulation and noise reduction for buildings (BS8233:2014) is the British Standard regularly referred to by Local Authority planning departments to ensure that residents of proposed new build or refurbished developments have adequate noise insulation and are suitably protected from noise outside. The acoustic design standards set out in BS8233:2014 are expected to be achieved in this respect.

6.26.3 The design of the balustrading and guarding to the balcony should also be carefully considered. The Building Regulations Part K requires a maximum spacing between vertical guarding of 100mm. Contextual use of vertical supports such as black painted metal flats or expressed timber uprights can be effective in providing a layered vertical emphasis to an elevation. Other approaches include the use of opaque glazing which can help screen householder possessions on the balcony from being seen from the public realm. Compliance of final designs with fire regulations and Building Regulations will also be necessary.

6.27 Materials

6.27.1 The choice and distribution of materials can help to add interest to a building façade and influence the character of streets and spaces as well as the overall development. The choice of materials should normally reflect the character of the setting of the development, or role of the building in its setting. In large schemes the contextual analysis should create a character area strategy which can be used to inform the materials within different parts of the wider scheme.

6.27.2 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 building materials within the setting of a proposed development, this should be recognised and complemented in the choice of proposed materials. The following criteria should be applied when selecting materials:

- ▶ 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 (assertive, complementary, or recessive): Bold or assertive colours may be appropriate on a key frontage or for a key corner building.
- ▶ Performance: e.g., ventilation, thermal and acoustic properties, heat retention (heat islands) and reflection, embodied carbon, and environmental impact rating.
- ▶ Durability: e.g., design life, robustness, and ease of maintenance.
- ▶ Sourcing: sourcing the materials locally/regionally.

6.27.3 The Context and Identity section of this Design Guide includes guidance on traditional material typologies in Central Bedfordshire, which should be considered where traditional materials are appropriate or where Listed buildings and conservation areas are involved.

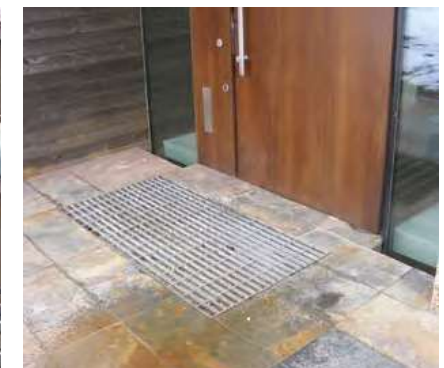


Figure 162: (bottom left) Simple expression of materials, lintels, and colours to convey the character of riverside buildings in the region, and to be legible in long distance views (Biggleswade)
Figure 163: (top) A limited palette of materials helps enforce a strong character for this street (Sandringham Drive, Dunstable)
Figure 164: (bottom right) Careful detailing of materials to achieve a flush threshold in a rural setting (Nicolas Tye Architects studio near Maulden)

Could diagrams/examples of best practice be included to visualize?

7.3 Key Design Principles – Pedestrian Networks

7.3.1 Nationally, pedestrian journeys make up around 27% of all journeys. In Central Bedfordshire, 50% of children walk to school. Pedestrians should be given the highest priority and places should be designed in accordance with the following key principles:

- ▶ Pedestrians should be provided with routes to all key local destinations, which should be as direct as possible, safe, and attractive and involve a walk time of 20 minutes or less (for large-scale major applications). Facilities include a play area, a shop selling convenience goods, a children’s nursery, a primary school, and an amenity space equipped with a bin.
- ▶ Routes should be logical and wherever feasible, afford pedestrians with an advantage over other modes. For the most part these routes should follow the pattern of the vehicular routes.
- ▶ Routes to local facilities should reflect natural desire lines, both at road junctions, across the development and how it links into the wider footway network, avoiding right angle turns.
- ▶ Routes should be intuitive to the user seeking to navigate their way through an area they lack familiarity with. The network of routes within a development should be “legible” and memorable in terms of streets, signage, and landmarks, including public art.
- ▶ The pedestrian network should be permeable, creating high quality links for 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 footpaths and cut throughs. In most cases separate footpaths and cut throughs will also be used by cyclists and should be designed to accommodate both uses.
- ▶ A 2-metre-wide service margin should normally be provided on both sides of streets, either as a verge or footway. 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, the design of such streets should afford a priority to pedestrian movements and in some cases, footways may also need to be secured in such locations to achieve a safe continuity of a key pedestrian route.
- ▶ Segregated footways should be appropriately surfaced and should only have low-level planting alongside them to ensure a measure of openness and security, ensuring to minimise clutter on footway as per the planting guidance.
- ▶ 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 100 metres. Suitable facilities might be a seat, a low public wall or other feature including public art installations. Ideally these should be planned to be in pleasant locations such as by play parks or other areas of activity, with good natural surveillance and be well lit.
- ▶ Footways should be clutter free. Sufficient space should be provided, either on the property side or carriageway side, to accommodate street trees, signs, streetlamps, waste bins, bus shelters or seating so that pedestrians using the footway are in no way inconvenienced or disadvantaged.
- ▶ Planting adjacent to footways and footpaths must be suitably set back to ensure there is no risk of future encroachment and obstruction.
- ▶ Where a street is designed to accommodate parking adjacent to a footway, care must be taken to deter ‘half-on’ behaviour. This could be through the use of designed in parking bays or using design and materials to influence appropriate parking behaviour.

- ▶ Where a cycle track is provided adjacent to a footway this should be segregated by means of a kerb and ideally, change in level.
- ▶ A marginal strip should be provided on streets designed to accommodate vehicle speeds of 30 miles per hour to aid pedestrian comfort and safety. These protective margins are distinct from service margins and could take the form of a grass verge.
- ▶ Footways and paths should be constructed to an adoptable standard and have crossfall in accordance with the [Highways Construction Standards and Specifications Guidance](#).
- ▶ Where a footway within a development is recorded as part of the Public Rights of Way network, it should be upgraded to be of an appropriate width and have a tarmac surface.

7.4 Key Design Principles - Cycling

7.4.1 Cycle routes should be as direct as possible and safe to use by a competent 12-year-old travelling independently. Places should be designed in accordance with the following key principles:

General principles

- ▶ Cycle routes should interlink to form a permeable network and should be appropriately connected to the wider promoted cycle and road network.
- ▶ The cycle route network should serve all key destinations such as town centres, schools, shops, and local transport hubs and interchange facilities. With the widespread adoption of e-bikes, in most locations cycling offers a convenient, attractive, and sustainable alternative to using the car for local journeys of up to 3 miles.
- ▶ All dwellings and buildings should be provided with secure cycle parking in accordance with Central Bedfordshire Council’s Parking Standards for New Development SPD.
- ▶ Where a cycle track borders a heavily trafficked road they should be separated from the carriageway by a verge or hard shoulder, as per guidance in the Cycle Infrastructure Design [LTN 1/20](#).

Sharing the carriageway

- ▶ Residential fronted streets should look to have a maximum speed limit of 30 miles per hour. Where cycle and equestrian routes cross minor roads this should preferably happen at kerb height by means of a raised road table/pillow. Alternatively, where traffic speeds are higher, this should be facilitated by dropped kerbs at either side and tactile paving. Where speeds are higher than 30mph depending on the context, we may be asking for a controlled crossing. Please find detailed advice within the Cycle Infrastructure Design [LTN 1/20](#).
- ▶ Routes recommended for cycling should be signed.
- ▶ Where on carriageway cycling is allowed for cycle lanes, cycle lanes should be provided at locations where traffic queues are likely and should have a minimum width of 1.5 metres. Advance stop lines, with appropriate lead in lanes, are encouraged as are cycle contraflows (designed to appropriate standards) on any street converted to one-way operation. Cycle contra-flows on one-way streets are only acceptable when the road width permits, otherwise this can create a danger for cyclists.



Figure 191: Careful siting of trees and using suitable species is important so that it does not obstruct visibility, Fairfield

Street trees and parking

- 7.8.10 Large areas of car parking severely undermine the quality of residential developments. High quality landscape design, utilising new tree planting to enhance areas of hardstanding along with low level landscaping, can improve the visual aesthetics of a residential development, moderate the microclimate (e.g. reduce summer temperatures through shading) and provide many other environmental benefits. Where landscaping is used in parking areas, consideration needs to be given to how occupants will access their vehicles. For example, ensuring there is sufficient space and hardstanding for the occupant to open the doors on their vehicle without trampling on or hitting the landscaping features.
- 7.8.11 For further guidance see the Parking Standards for New Developments SPD.

Conflict management

- 7.8.12 Conflicts with above and below ground utilities, sightlines, street lighting and shading of solar panels can result in pressure to prune or remove trees in the future, once they have become established and grow larger. Landscapes should be designed to ensure that new tree planting has priority, with careful consideration given to predicted tree sizes and potential future conflicts. Planting new trees close to buildings, infrastructure, and private gardens, may limit their future potential canopy size and leaf area either through physical barriers or through pruning requirements.
- 7.8.13 The selection of an appropriate species will be vital in terms of the impact that it will have on the surrounding environment. There should be adequate space allowed for newly planted trees to reach their full mature height and spread without causing nuisance to adjacent buildings and occupants.

- 7.8.14 Trees should be given appropriate growth space away from main buildings that will be sufficient throughout their life cycle. This excludes small structures such as garages and bin stores. Trees with a fastigate habit will be considered in their own context and with potential variation from these distance requirements.
- 7.8.15 Planting trees into hard landscapes, such as pavements or public squares may be required in some circumstances to break up large areas of hard surface. However, such planting can present unique challenges with regards to tree establishment and thus to maximising future benefits. Factors relevant to hard landscapes can include soil volume, water infiltration, drainage, aeration, and soil compaction, along with simultaneously providing structural support for hard surfaces. Where additional new trees are to be planted within areas of hard landscape, applicants should use proven, up-to-date technical solutions to tree pit design in these areas.
- 7.8.16 These solutions may also serve multiple purposes, such as storm water management. The amount of soil volume required for the trees to successfully establish and mature should be calculated and justified. Street furniture should be carefully considered in relation to context, and soft landscaping features. In some circumstances street furniture can help to protect trees within public spaces which enhances their lifespan and quality.

Integrating street trees with wider objectives

- 7.8.17 Tree pits and planters can be designed to collect and attenuate run off by providing additional storage within the underlying structure. The soils around trees can also be used to filter out pollutants from run off directly. The Council supports the integration of trees with the drainage system and use of SUDS on new developments to help drain the adoptable highway. Design guidance around trees in hard landscapes and surface water drainage can be found in the [CIRIA Suds Manual C753](#), Chapter 19. This chapter is concerned specifically with use of trees in planting beds, pits, structural soils below pavements and similar structures as part the surface water management system.
- 7.8.18 For further guidance on the placement of trees please consult the [Highway Construction Standards & Specifications Guidance](#).

7.9 School Streets and Play Streets

- 7.9.1 The built environment is an important space for social interaction and community spirit and outdoor play for children and young people should be maximised wherever possible. Creating a safe and sustainable environment for children's journeys can help to embed positive attributes around active travel and create an environment outside the home that people want to use and engage with. Two opportunities for this are the ideas of school streets and play streets, that are often retrofitted where opportunities allow.

Again, could diagrams/examples help to visualise this. We're really supportive of this approach, if some health stats/input would help strengthen message please let us know.

School Streets

- 7.9.2 School Streets are designed to be closed to motor traffic at one of both ends of the school day. Scotland was the first in the UK to introduce school street schemes in 2015. Camden was the first in London in 2017. This initiative can have health benefits around active travel and air quality, road danger reduction and encouraging independent mobility.

- 10.3.15 All public entrances to dwellings and other uses should be designed to be accessible to Building Regulations Part M. There are additional standards for residential uses (see Chapter 11: Homes and Buildings) that must also be taken into consideration.

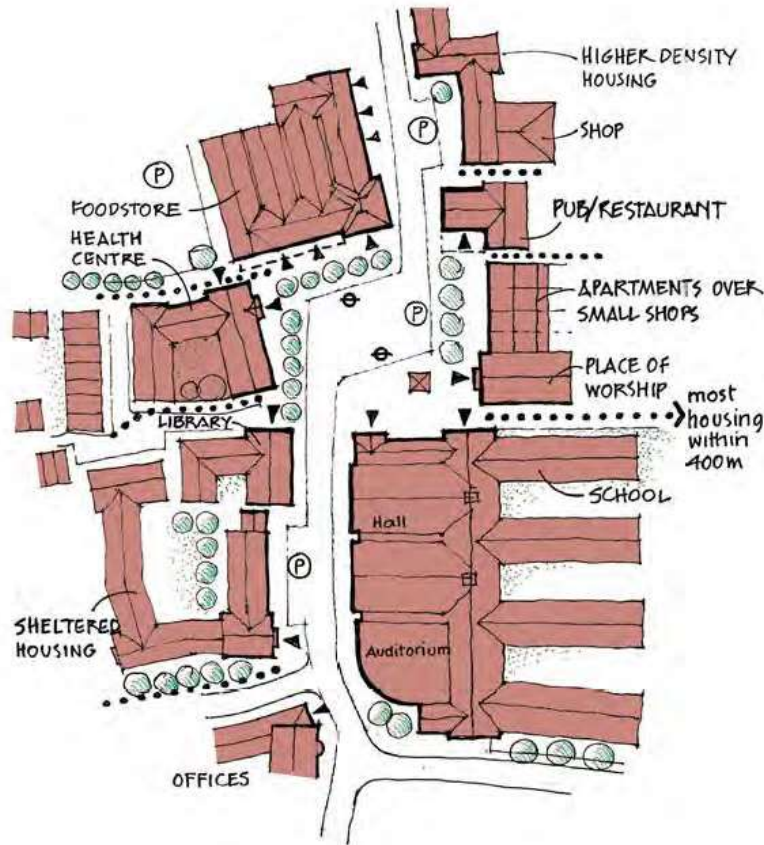


Figure 273: Indicative layout of town centre development showing possible mix of uses

- 10.3.16 Care should be taken to ensure that uses can be compatible and that the potential for incompatibility is designed out. The types of uses and block design will require careful consideration to minimise the possibility of conflict. Access arrangements, noise generation and safety issues must be satisfactorily addressed.
- 10.3.17 While habitable room windows and balconies open to the town centre streets are encouraged to provide more overlooking and activity out of retail hours to improve safety, it is important to also ensure that private open space is provided away from potential noise sources such as pubs and restaurants, and particularly away from servicing. Deliveries and servicing of retail and commercial use within or next to residential development will need to be sensitively dealt with so that these activities are adequately separated and do not occur during unsociable hours.

Sam Smith:
We would suggest adding in some specific reference to the conflicts between residential and some commercial uses and how these can be resolved. I am thinking of takeaways/restaurants with residential above. Can be some issues with ventilation equipment and the amenity of residents. Particularly now with Use Class E can shift shop to restaurant without permission. I've personally come across with issues of restaurant ventilation taking over a podium level amenity space.

Amenity

- 10.3.18 A raised courtyard deck can be a useful way to separate residential and office amenity spaces from conflicting uses. This allows for servicing, retail, and restaurant uses below, with a landscaped courtyard above. Residential entrances can be located where convenient at street level and access across the courtyard can be utilised to access groups of apartments either side of stairs so that the residential accommodation is arranged around the perimeter of a landscaped space. It is important to allow enough depth between the ground and first floors for meaningful landscaping. This depth for a landscape zone in the courtyard can also be utilised as a service zone between ground floor uses and residential upper floor uses.
- 10.3.19 Where a potential clash of uses in terms of acoustics is unavoidable, acoustic measures should be taken to protect residential amenity such as triple glazing, additional sliding glazing to enclose balconies and whole house ventilation to guarantee ventilation to dwellings. Rules regarding hours of servicing can also be implemented so that the extent of conflict issue can be reduced. BS8233 (2014) "Guidance on sound insulation and noise reduction for buildings" is the British Standard regularly referred to by Local Authority planning departments to ensure that residents of proposed new build or refurbished developments have adequate noise insulation and are suitably protected from noise outside.
- 10.3.20 The existing buildings and spaces, urban grain, plot widths and other building subdivisions should influence the width of the proposed development. This is particularly important in a street of continuous frontages, in order to maintain the scale and vertical emphasis of the street elevation (see Chapter 6: Built Form).



Figure 274: (left) Accessible entrance to Grove Theatre Dunstable, part of a Mixed- Use Development
Figure 275: (right) Accessible Entrance to Houghton Regis Hub, Bedford Square

- 10.3.21 It is important that dwellings above other uses have adequate amenity space with individual balconies being provided at a minimum of 1.5 metres in depth and at 5 square metres in area. The opportunity for additional shared residential amenity to the rear should also be explored, as balconies are unlikely to provide sufficient amenity space on their own.

Sam Smith: PH suggest placing this more strategically to set as a theme for the whole document. Not to dismiss importance within Gypsy, Roma, and Traveller communities, it could be repeated. We'd be keen to discuss and explore ideas about how to bring this forward in the document with you.

Health and Wellbeing

- 10.4.27 Everyone should be able to live in a community that is safe, healthy and provides opportunities, whether that home is a house, a flat or mobile home. Health and wellbeing play a large part in the success of development no matter the size, location, or use. Integrating health and wellbeing principles can be through the physical design as well as provision and management of sites. Considerations should include:
- ▶ Promoting high quality design through environmental sustainability;
 - ▶ Providing convenient local healthcare services;
 - ▶ Providing interesting and stimulating open spaces and natural environments;
 - ▶ Promote independent living;
 - ▶ Promoting access to healthy and locally sourced food;
 - ▶ Encouraging active travel, most particularly cycling and walking;
 - ▶ Creating safe and accessible environments.
- 10.4.28 When designing the layout of a site, careful consideration must be given to the health and safety of all residents, given the likelihood of a high density of people on a site and relatively high levels of vehicle ownership amongst some groups of Gypsies and Travellers.
- 10.4.29 The design must cater for all abilities by ensuring accessible access across a development is provided. This is to ensure that all design is compliant with Building Regulations Part M.
- 10.4.30 For vehicle access, it is recommended that clear and effective signage are introduced where speed restriction or other traffic calming measure are applied. It is also recommended that appropriate traffic calming measures are considered for all sites. Similarly, clear directions should be in place to indicate the location of hydrants and other access points for the fire service etc when attending an emergency on site. The need for separate vehicular/ pedestrian site access should be considered. It is important that consultation with local fire and rescue services are undertaken at an early stage.
- 10.4.31 Many security issues can be addressed at an early stage avoiding a sense of isolation amongst Gypsy and Traveller communities. An approach to designing out crime and social exclusions should be a priority when assessing development and layout. Designing in community safety and social inclusion through openness of design should be promoted at all design and planning stages. Site design should maximise natural surveillance enabling residents to have clear views of access and open space.
- 10.4.32 These can be reviewed in in partnership with the Bedfordshire Police, Designing Out Crime team. Public communal spaces and private pitches should be clearly defined. Defined boundaries should be included where this aids in avoiding vandalism, fly tipping and unauthorised caravans. Consultation should be undertaken on the level of security provided on a site. For example, lockable gates where control can be had over access can reduce unauthorised parking and caravans being pitched.

Play

- 10.4.33 Communal areas for children should be included where possible. The provision of play should be provided where suitable provision is not available within walking distance on a safe walkable route or by using public transport. Play spaces should be designed for all ages and families and children should be consulted to ensure the provided equipment is best used. The siting of play spaces should be within a central location allowing natural supervision.

10.5 Travelling Showpeople

- 10.5.1 The requirements for Travelling Showpeople sites are similar in terms of the overall principles of good design, however, some aspects are unique. For example, with the layout it is important to give recognition of the mixed nature of the use with separated areas for storage and maintenance of commercial equipment and vehicles; and residential areas to allow for static homes of permanent occupiers to be separated, if necessary, from seasonal occupiers and area set aside for stationing of tourer caravans only used on the road and not occupied on the permanent site. Therefore, consideration should be given at an early stage as to how all the various elements that are required on a site will be incorporated to give an environment which is suitable and appropriate for the intended use.

Sam Smith:
Consideration should be given to thinking about design for people living with dementia. Some examples of this could include using some principles from the MKCC Dementia Friendly Places SPD.

10.6 Extra Care Housing

- 10.6.1 Extra care housing is about providing flexible and attractive homes for individuals which can meet their aspirations as well as their needs; and is not about providing a further form of institutional care. Extra care housing comes in a variety of forms, and it may be described as sheltered housing, housing with care or retirement communities. Occupants may be owners, part owners or tenants.

Key Considerations

- 10.6.2 The design principles applied for other types of residential accommodation should be applied to extra care schemes but those below are specifically relevant.
- 10.6.3 Extra care schemes should:
- ▶ Be centrally located with good access to services and facilities
 - ▶ Adopt progressive privacy principles
 - ▶ Carefully consider the placement and use of communal areas to aid social interaction
 - ▶ Consider the provision of a community hub to aid integration with the wider community
 - ▶ Maximise natural light and provide high quality artificial lighting
 - ▶ Minimise unwanted solar gains - elderly are more vulnerable to high temperatures
 - ▶ Provide general flexibility of space and 'care ready design'
 - ▶ Use quality landscaping to enhance outside space
 - ▶ Incorporate accessible design for visual, hearing, cognitive and mobility impairment
 - ▶ Consider the use of new assistive technology e.g., movement detection and telecare systems
 - ▶ Strive to be domestic in style.

Sam Smith:
Suggest reference is made here to the air pollution impacts as mentioned on page 56 (might be better made here if want to avoid repetition).

11.10 Amenity Space for Apartments

- 11.10.1 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. 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.
- 11.10.2 Where possible, ground floor apartments should have their own small private rear garden. Private outdoor space should not be located to the front, within the public realm, where activities of the occupants will be very visible from passers-by.
- 11.10.3 Balconies should be attached to living rooms rather than bedrooms. Juliet' style balconies will not be acceptable as the primary provision for apartments. Ground floor balconies should be designed to ensure that they are secure from external access. 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 Table 12: Private outdoor space requirements for apartments). External noise levels for the balcony area also need to be considered, and the acoustic design standards set out in British Standard BS8233:2014 are expected to be achieved in this respect. All apartments should provide space to dry clothes either within the apartment or within a communal facility.
- 11.10.4 All apartments should provide space to dry clothes either within the apartment or within a communal facility.

11.11 Private Communal Amenity Space

- 11.11.1 The minimum area for usable communal space is 50 square metres, plus 5 square metres per additional unit over five units.
- 11.11.2 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. 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. Where significant numbers of children are expected to use the on-site play facilities, careful consideration should be given to layout to dissipate noise, to avoid conflict with surrounding households.
- 11.11.3 The layout and design of the communal garden should offer privacy for dwellings adjoining the space. As with private amenity spaces, external noise levels for occupiers having access to the communal amenity space also need to be considered, and the acoustic design standards set out in British Standard BS8233:2014 are expected to be achieved in this respect. Table 12 sets out the private outdoor space requirements for apartments.

Table 12: Private outdoor space requirements for apartments

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	1.5m	9 m ²

11.12 Waste, servicing and utilities

- 11.12.1 At the design stage, consideration should be given to waste, servicing and utilities so that they are unobtrusive and well-integrated into neighbourhoods.

11.13 Bin Storage and Collection - Key Principles for Layout & Design

- 11.13.1 Waste and recycling storage areas should be well located in relation to the property and the following key principles will apply:
- ▶ Appropriately designed bin storage should be considered for all types of developments. Communal bin storage is particularly important for flats to ensure accessibility, safety, and odour/cleanliness.
 - ▶ To avoid conflicts between uses, bin storage must be located outside of the public highway and outside of visibility splays.
 - ▶ Drag distances must be designed in accordance with the Building Regulations BS5905:2005 Waste Management. Storage areas must be within 10 metres of an access point for collection vehicles. Residents should not have to take their waste and recycling more than 30 metres to a bin storage area.
 - ▶ Bin storage areas should avoid blocking views between occupied rooms and the street 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. The visual impact of communal bin stores needs to be considered and balanced with accessibility and overlooking to create natural surveillance.

12.1 Introduction

- 12.1.1 Central Bedfordshire must play a pivotal role in evolving business if we are to reach our sustainability goals. The dioxide emissions from the area's key emission sources institutional buildings, and new developments.
- 12.1.2 This section of the Design Guide sets out guidance on including electric vehicles and sustainable drainage systems.
- 12.1.3 This section should be read in conjunction with chapters 2, 9, 11, 12, 14, 15, 16 and 17 of the [NPPF](#), adopted [Local Plan](#) (policies, T1-T6, EE3, EE4, EE10, EE11, EE14, CC1-CC8, HQ1, HQ9, HQ11, DC1, DC5) and the [National Design Guide](#), Resources R1 to R3, which highlights how new development needs to be efficient with conservation of natural resources and resilient to the impacts of climate change.
- 12.1.4 This section should be viewed alongside relevant guidance documents and resources which includes:
- ▶ [CBC Sustainability Plan](#)
 - ▶ [Central Bedfordshire 2050 Vision](#)
 - ▶ [Central Bedfordshire Sustainable Drainage Guidance \(2015\)](#)
 - ▶ [CBC Air Quality Guidance](#)
 - ▶ [Building Regulations \(Planning Portal\)](#)
 - ▶ [CBC Climate Change Risk Assessment](#)
 - ▶ [The Environment Act 2021](#)
 - ▶ [The Road to Zero: Next steps towards cleaner road transport and delivering our Industrial Strategy \(HM Government\)](#)
 - ▶ [United Nations Sustainable Development Goals](#)
 - ▶ [Energy hierarchy and zero carbon hub](#)
 - ▶ [Passivhaus standard](#)
 - ▶ [BREEAM standard](#)
 - ▶ [National Planning Practice Guidance Climate Change](#)
 - ▶ [Renewable energy and technologies - \[www.energysavingtrust.org.uk\]\(http://www.energysavingtrust.org.uk\); \[www.microgenerationcertification.org\]\(http://www.microgenerationcertification.org\)](#)
 - ▶ [Green roofs](#)
 - ▶ [UK Rainwater Harvesting Association](#)
 - ▶ [Waterwise](#)
 - ▶ [Building for a Healthy Life](#)
 - ▶ [Your home in changing climate: retrofitting existing homes for climate change impacts. Arup, February 2008](#)
 - ▶ [Designing homes for the 21st Century: Lessons for low energy design. NHBC Foundation, May 2013](#)

Sam Smith:
Suggest adding in about the benefits of a warm and efficiently heated home (or the issues of a cold/damp home!); but also the risks of overheating too.

Suggested wording (happy to draft the positives if preferred):
"Cold homes are bad for health. If people are unable to heat their homes efficiently and homes become cold and damp, people's health suffers. Besides poor health, cold-related illness causes absence from work, social isolation, and sleep deprivation. It may lead to mental or stress related illnesses too.

Therefore building homes that are well insulated and warmed via efficient and sustainable methods can help to improve people's health"

Overheating:
"Overheated homes can have direct effects on occupants' health, comfort, and productivity during overheating episodes and for a period after. Overheating can also disrupt sleep (itself an adverse impact) with consequential effects on health, safety, and productivity".

- ▶ [Understanding overheating – where to start: An introduction for house builders and designers. NHBC Foundation, July 2012](#)
- ▶ [Overheating in new homes. A review of the evidence. NHBC Foundation, November 2012](#)
- ▶ [Lessons from Germany's Passivhaus experience. NHBC Foundation, December 2012](#)
- ▶ [ROSPA managing risk around waterbodies](#)
- ▶ [Guidance – Contaminated Land Statutory Guidance](#)

12.2 Key Sustainability Principles

Optimise Site Potential

- 12.2.1 Well-designed places must consider sustainability at an early stage and consider:
- ▶ Location in relation to opportunities 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 30 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.
 - ▶ Sustainable drainage (SUDS) – to be considered at the outset of the design process and includes green, brown and blue roofs, permeable surfaces, swales and basins, infiltration trenches, filter drains, rainwater harvesting systems, rain gardens, soakaways, downpipes fed into gardens, bio retention tree pits, ponds and wetlands.
 - ▶ Re-use of Buildings – consider whether it would be more sustainable to refurbish rather than demolish existing structures.

Follow the energy hierarchy

- 12.2.2 Well-designed places and buildings should follow the energy hierarchy of:
- ▶ Reducing the need for energy through passive measures including form, orientation, and fabric.
 - ▶ Using energy efficient mechanical and electrical systems, including heat pumps, heat recovery and LED lights.
 - ▶ Maximising renewable energy through decentralised sources, including on-site generation and community-led initiatives.