

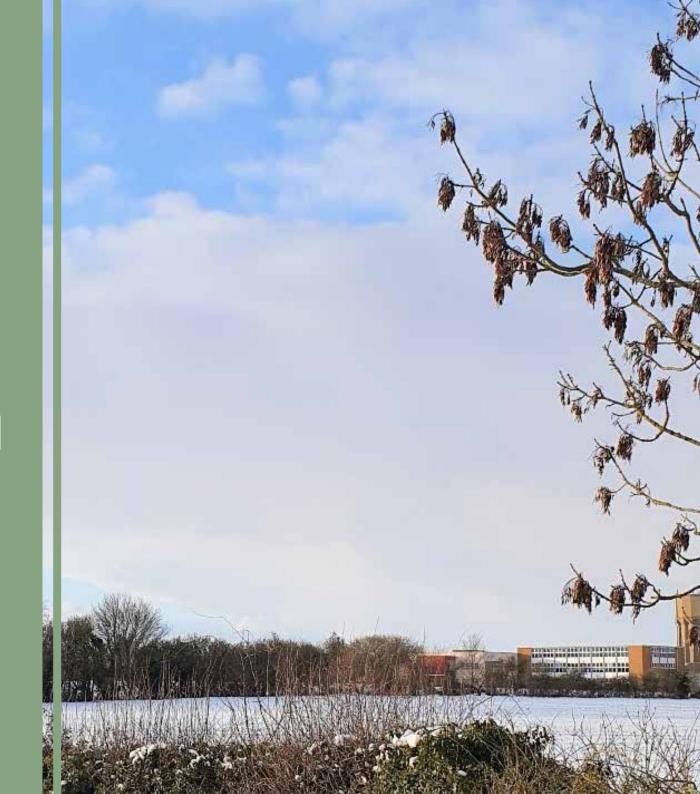
SAXMUNDHAM

Design Guidelines and Codes for the Garden Neighbourhood site and the Neighbourhood Plan area.

Final Report

August 2021





Quality information

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Revision History

Revision	Revision date	Details	Name	Position
4	110821	Review	John Wilkinson	Locality
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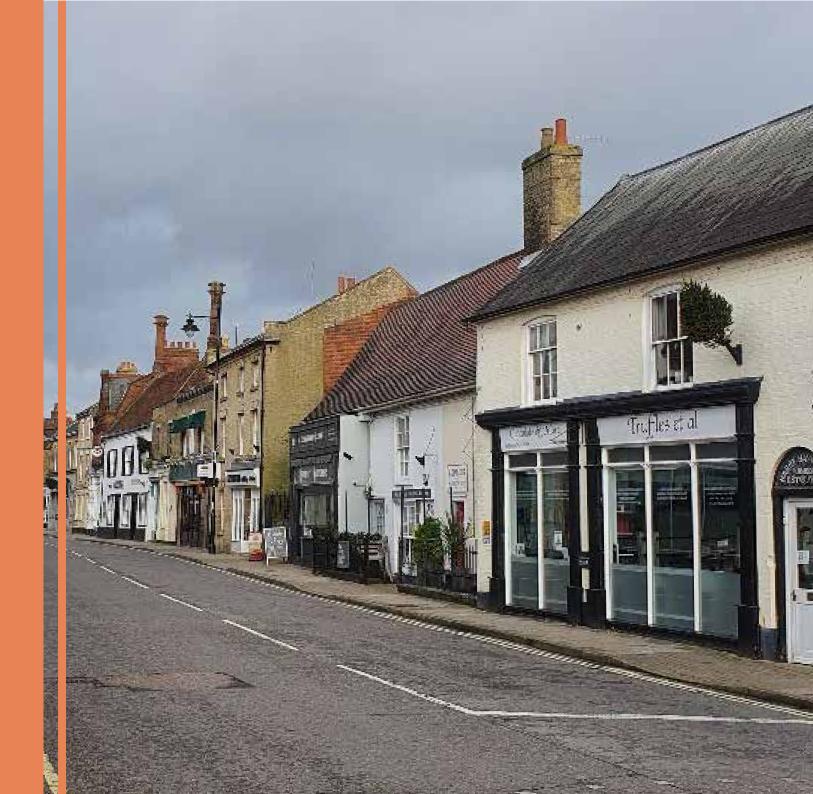
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Introduction

01



1. Introduction

Through the Ministry of
Housing, Communities and
Local Government (MHCLG)
Neighbourhood Planning
Programme led by Locality,
AECOM has been commissioned
to provide design support to
Saxmundham Town Council.

1.1 Background

Approximately 800 new dwelling units have been allocated in the East Suffolk/ Suffolk Coastal Local Plan (adopted in 2020) in South Saxmundham Garden Neighbourhood.

The study area is located partially within Saxmundham Town Council, whilst the rest of the land belongs to Benhall Parish.

This document provides design guidance and codes for the new development that will come forward in the plan period. Any design code submitted as part of a development scheme is expected to comply with the guidance outlined in this code.

The main purpose is to create distinctive places that are well-integrated with the existing settlement and to promote high-quality and popular built forms.

1.2 Objective

The main objective of this report is to present design guidance and codes for the Neighbourhood Plan, and to inform the design of future development in the South Saxmundham Garden Neighbourhood.

It elaborates on key design elements that were agreed with the Neighbourhood Plan Steering Group at the outset of the project.

1.3 Process

The following steps were undertaken to produce this report:

1

Initial meeting between AECOM and the Saxmundham Neighbourhood Planning Group. As this was during the national Covid 19 lockdown, a joint virtual site visit was carried out online:

2

Preparation of the design principles, guidelines and codes to be used to inform the design of the Garden Neighbourhood;

3

Draft report with design guidelines and codes; and

4

Submission of a final report.

1.4 The area of study

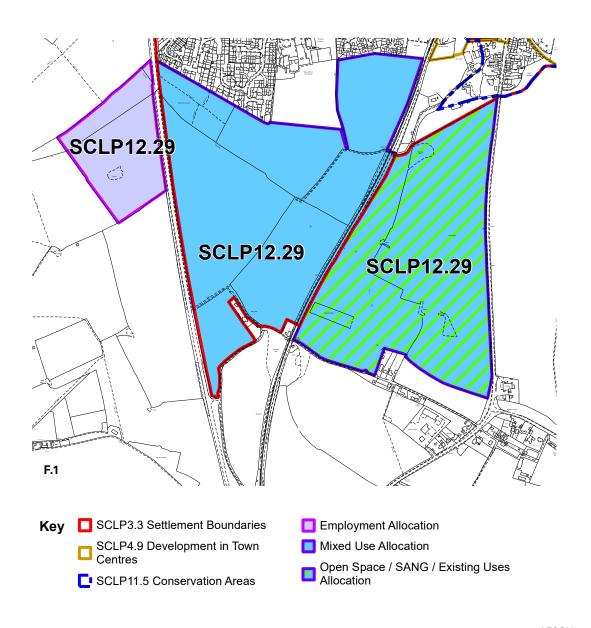
The area of study encompasses 66.6 ha and it is expected to provide a residential led scheme for up to 800 dwellings, new primary school community facilities, employment land and open spaces.

The strategy for the southern part of Saxmundham town is to provide new opportunities for housing, employment and community facilities, focused around the principles of an inclusive community and integration with Saxmundham and the surrounding countryside through enhancing green infrastructure networks.

<u>Figure 1</u> shows how the above land uses have been allocated in the Local Plan.

The development of the design code has been circumscribed to the boundaries shown in the Local Plan.

Figure 1: Policies map for South Saxmundham Garden Neighbourhood.



1.5 Masterplanning package

A high-level masterplan has been proposed for the area of study (SCLP12.29) and it is included in the separate Masterplanning report. This report is part of another package that has been granted to the Neighbourhood Plan Group by Locality,

This masterplan, shown in Figure 2, is aligned with the design guidelines and codes presented in this document and therefore, it is important that both reports are read together.





Figure 2: Proposed high-level masterplan for the Garden Neighbourhood site (part of the separate Masterplanning report).

Design guidelines and codes

02



2. Design guidelines and codes

The aim of this chapter is to develop design guidelines and codes for future development that consider the local character and can enhance local distinctiveness by creating good quality developments and thriving communities.

2.1 Place making

What urban designers and planners call 'placemaking' is about creating the physical conditions that residents and users find attractive and safe, with good levels of social interaction and layouts that are easily understood.

The placemaking principles set out in the following pages should be used to assess the design quality of future development or regeneration proposals. These key principles should be considered in all cases of future development as they reflect positive placemaking and draw on the principles set out in many national urban design best practice documents including Building for a Healthy Life, the National Design Guide and National Model Design Code, 2021.



2.2 General principles

A brief reference to general design principles will be mentioned before the main part of the design guidance and codes with reference to Saxmundham Neighbourhood Plan Area.

The guidelines and codes developed in the document focus on residential environments. However, new housing development should not be viewed in isolation. Considerations of design and layout must be informed by the wider context, considering not only the immediate neighbouring buildings, but also the townscape and landscape of the wider locality. The local pattern of streets and spaces, building traditions, materials and natural environment should all help to determine the character and identity of a development.

It is important with any proposal that full account is taken of the local context and that the new design embodies the 'sense of place' and also meets the aspirations of people already living in that area.

As a first step, there are a number of design principles that should be present in any proposal. In particular, new development should:

- Respect the existing settlement pattern in order to preserve the character.
- Integrate with existing paths, streets, circulation networks, as well as natural features such as tree groups, hedge rows and public rights of way.
- Reinforce or enhance the established character of streets, greens and other spaces.
- Harmonise and enhance existing settlement in terms of physical form, architecture and land use.
- Retain and incorporate important existing features into the development.
- Respect surrounding buildings in terms of scale, height, form and massing.

- Adopt contextually appropriate materials and details.
- Incorporate necessary services and drainage infrastructure without causing unacceptable harm to retained features.
- Ensure all components e.g. buildings, landscapes, access routes, parking and open space are well related to each other.
- Aim for innovative design and ecofriendly buildings while respecting the architectural heritage and tradition of the area.

2.3 Design guidance and codes for the Garden Neighbourhood

There are a set of general design principles that are specific to the South Saxmundham Garden Neighbourhood and are organised in themes as shown on this page.

These are based on the analysis of the study area, shown in the separate Masterplanning Report, as well as on discussions with members of the Neighbourhood Plan Steering Group.

- 1 STRATEGIC PRINCIPLES AND BEST DESIGN PRACTICE
- 2 GUIDELINES AND CODES FOR STREET TYPOLOGIES AND PARKING

3. GUIDELINES AND CODES FOR BUILT FORM

4 GUIDELINES AND CODES FOR ENVIRONMENT AND ENERGY EFFICIENCY

STRATEGIC PRINCIPLES AND BEST DESIGN PRACTICE



Consider the context



Connect



Enable wayfinding



Retain and improve the green network

2.3.1 Consider the context

The Saxmundham area boasts high quality natural areas in close proximity to the settlement; more specifically, in close proximity to the southern part of the Neighbourhood Plan Area, where the Garden Neighbourhood has been located. This area consists of open fields, woodlands and water elements. Thus, the existing qualities of the site need to be preserved and enhanced in the future. Some guidelines for future development are:

- New development should respect and retain the existing green assets of any form; trees, woodlands, hedges, hedgerows. These elements will inform the baseline for the design process and shape the design outcome.
- New development should be wellintegrated into the existing settlement pattern and avoid any kind of fragmentation. For that reason, the connection with the settlement to the

- north and the town centre need to be highlighted and prioritised through pedestrian and cycle links. This will create accessible places and a more joined up social tissue.
- New development should prioritise creating a well-connected green system and promote alternative ways of transportation. There is a good number of public rights of way on the site and woodland sites that could be taken into consideration in the design process.
- New development should improve the connection with the surrounding countryside by enhancing existing links or creating new ones. In edge locations, it is important to connect all streets to the network of public pathways and rights of way.
- New development should make use of the agricultural landscape in the surroundings and promote freedom of movement within arable fields. Safe accessible paths and corridors within

- agricultural fields can become structuring elements that connect rural settlements to their hinterland. An appropriate signage system can also help navigate people around and make them aware of walking and cycling routes.
- New development should make sure to protect any site of archaeological significance and propose ways to enhance it, contributing to the distinctiveness of the area in which it is located.
- New development should take local character into careful consideration.
 Design should consider scale, layout, density, mass, materials and architectural features, as well as incorporate a high standard of landscaping to add to the quality of the place.
- New development should avoid coalescence with neighbouring settlements; for instance with Benhall Green to the south. For that reason, it is important to include green buffer zones that act as strategic gaps.

- New development should make sure that any negative impact from and to the development of the highways and transportation network is minimised.
- The existing typologies in the parish should also be reflected in the new development. In particular, there is a variety of building typologies in the Neighbourhood Plan Area; terraced housing, semi-detached, detached and bungalows. It is important that this mixture of typologies is retained and promoted in new development in order to create variety and interest in the streetscape.

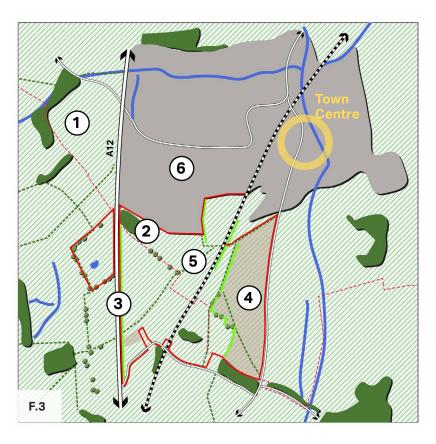




Figure 3: Immediate context to Garden Neighbourhood site.

- Saxmundham is surrounded by open fields and countryside.
 Safe and accessible corridors within the fields can improve the connectivity with the natural environment.
- Existing green and blue assets like woodlands, trees, hedges, hedgerows, ponds and rivers need to be retained and integrated in the design.
- Any negative impact on the new development, due to the highway and the railway, needs to be mitigated.
- Any site of archaeological and historic significance should be retained and enhanced to contribute to the character of the town.
- New development needs to be well-integrated into the existing settlement through pedestrian and cycle connections.
- The architectural styles, details and materials of the existing settlement need to be used as reference for the new development.

2.3.2 Connect

Streets should be connected with each other and walking and cycling routes are expected to feature. Good practice favours a connected street layout that makes it easier to travel by foot, cycle, and public transport, as well as private car. A more connected pattern creates a 'walkable neighbourhood'.

This should be the priority for any future development in the Garden Neighbourhood and some guidelines related to the street network are:

 New development should prioritise pedestrian movements to reduce car dependence and support healthy mobility choices. Disabled access needs to be improved by implementing measures like dropped kerbs and ramps, where appropriate. The site needs to be literally considered as a 'garden neighbourhood' where people will be able to walk or cycle along pleasant environments.

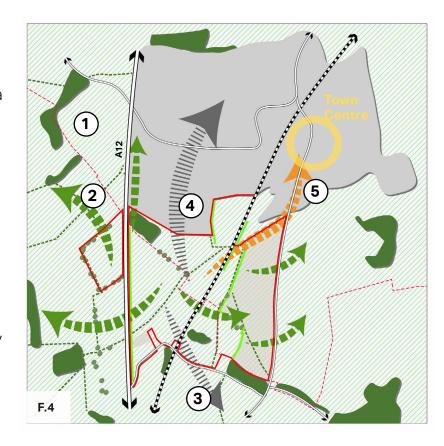
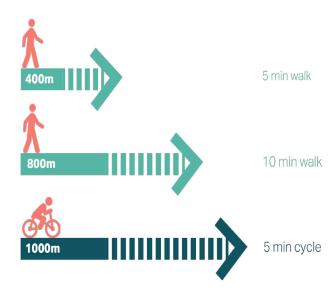




Figure 4: Connections to the existing settlement, Town Centre and open countryside.

- Saxmundham is surrounded by open fields and countryside. New development should provide pleasant walking and cycle routes to encourage people to connect with nature.
- New development should prioritise green corridors and buffers within the settlement to create a green walkable neighbourhood.
- New development should provide links to settlements of close proximity, like Behall Green.
- New development needs to be well integrated into the existing settlement through pedestrian and cycle connections. Locals and new residents should not feel isolated from each other, but part of the same community.
- New development should provide safe and well sign-posted routes to the town centre and high street.

- New development should provide direct and attractive footpaths between neighbouring streets, existing or new local facilities. Thus, establishing a robust pedestrian network: a) across any new development; and b) among new and existing developments, is key in achieving good levels of connectivity among any part of Saxmundham to encourage walking.
- New development should be well integrated into the existing settlement pattern and avoid any kind of fragmentation. For that reason, the connection with the settlement to the north and the town centre need to be highlighted and prioritised through pedestrian and cycle links. This will create accessible places and a more cohesive social tissue, whilst residents of the new or existing settlements will not feel isolated from each other but part of the same community.
- New development should propose short and walkable distances. The success of a place is influenced by how walkable it is. Thus, it is good practice to plan new homes within a 400 metres walking distance (= 5 minutes) of bus stops and within 800 metres (= 10 minutes) of convenience store or community building.



Perimeter block typology

New development should propose routes laid out in a permeable pattern, allowing for multiple connections and choice of routes, particularly on foot. Any cul-de-sacs should be relatively short and provide onward pedestrian links, subject to community safety considerations.

Thus, a perimeter block structure with no public access to its centre is a well-proven and flexible approach to the layout of residential and other areas. It contributes to safety by clearly distinguishing between the fronts and the backs of buildings, between public and private space, and by enabling continuous overlooking of the street. It can be very efficient in terms of development density. Back gardens can be private, communal or both.

Most suburban developments in England follow a version of this typology, featuring houses with back to back rear gardens. Considering local preference for housing typologies, this kind of block organisation is suitable for terraced, semi-detached and detached houses.

Figure 5: Example of a perimeter block within Saxmundham (@google earth).

This typology is the most common in residential areas as it provides secure rear garden spaces and it avoids creating back gardens along streets. These blocks must:

- Accommodate a range of housing types to create a strong sense of place and legible environment.
- Create good street rhythm by addressing the roofscape and keeping regular plot widths.
- Define public and private domains within and around these blocks by locating all front entrances facing surrounding streets, resulting in active street frontages.
- Maintain a proper distance between building face to building face at the rear of dwellings to provide residential privacy.



2.3.3 Enable wayfinding

When places are well signposted, they are easier for the public to comprehend. People feel safer when they can easily memorise places and navigate around them. It is easier for people to orientate themselves when the routes are direct, particularly for people with dementia and related cognitive and sensory challenges. Thus, some guidelines for new development are:

- A familiar and recognisable environment makes it easier for people to find their way around. Obvious and unambiguous features should be designed in new development.
- Buildings which are located at corners, crossroads or along a main road could play a significant role in navigation.
- At a local level, landmark elements could be a distinctive house, public art, or even an old and sizeable tree.
- New signage design should be easy to read. Elements likes languages, fonts, text sizes, colours and symbols should be clear and concise, and avoid confusion.

- Signage can also help highlight existing and newly proposed footpaths and cycle lanes, encouraging people to use them more.
- Signage should be strategically located to signalise gateways and access points, creating connections with important places and destinations.
- Signage elements and techniques should be appropriate to the character of the area and be a nice fit to the existing architectural style and details. <u>Figures</u>
 6 and 7 represent two types of signage; the former could be implemented into the natural environment, whilst the latter within the urban fabric.

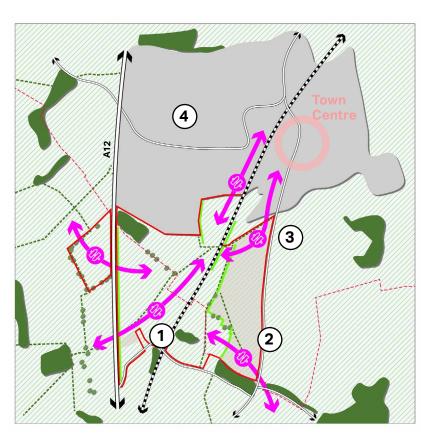


Figure 7: Example of signage posts within the urban fabric to help navigate people and provide information about important places and destinations. Diss town centre.





Utilise high quality trees and landscaping to help with the wayfinding along the main desired pathway. Local landmark buildings or distinct building features -such as Make the best towers, chimneys, use of mature or porches- at trees to mark the key nodes and entrance to a arrival points help development. orientation.



- Signage should aim to provide mental connections with different parts of the development.
- New signage should also provide information about available links with surrounding settlements to reinforce a level of connectivity.
- Signage should have the form of gateways to signalise the access to the new development or main walking and cycle routes.
- New signage should respect other signage styles already implemented in the surroundings that serve the same purpose and provide a similar result.



- **F.8** Figure 8: Illustration with some basic design principles on signage and wayfinding.
- **F.9** Figure 9: Connections to the existing settlement, Town Centre and open countryside.

2.3.4 Create a green network

Green networks, corridors and linkages are widely seen as a key mechanism for reversing the effects of fragmentations on biodiversity as well as having a positive social impact to communities. Thus, some guidelines for new development are:

- New development should offer a variety of open spaces hosting a diverse range of planting and trees. This landscape also improves air quality and can help to mitigate flooding.
- New developments should incorporate existing native trees and shrubs and avoid unnecessary loss of flora. Any trees or woodland lost to new development must be replaced.
- Landscape in open spaces should be of high quality and incorporate native species that are likely to thrive, thus encouraging local character and civic pride.

- New and existing landscapes and open spaces should be located within walking distance from their intended users and be connected via other green and urban networks such as footpaths, tree lined streets and public rights of way.
- These networks are often more useful to create visual amenity, for recreational use and wildlife corridors than isolated parks.
- New developments when adjoining public open spaces and important gaps should always provide a positive interface in the form of a soft landscape edge made up by front gardens or planted privacy strips around properties.

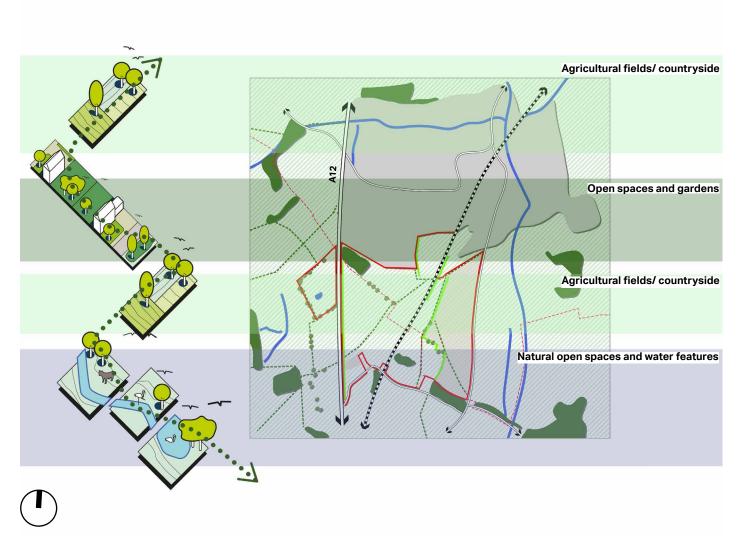
Agricultural fields can provide essential hedgerows and trees and contribute to the resilience of green networks.

Provide generous **back and front gardens**, with sufficient permeable surfaces to provide planting of local species of trees and shrubs.

Local green spaces can be a key element in guaranteeing connectivity of wildlife corridors. They should be carefully located in new developments to maximise their potential as such habitat connectors.

Agricultural fields can offer opportunities for SANG (Suitable Alternative Natural Green Space) areas.

Natural open spaces and water features should be protected and safeguarded from unnecessary human action.



F.10 Figure 10: Natural elements within the Garden Neighbourhood site that can help create green corridors.

GUIDELINES AND CODES FOR STREET TYPOLOGIES AND PARKING



Street typologies



Car parking solutions



Cycle parking solutions



Street planting



Street lighting

2.3.5 Main street

This street provides the main access spine of a new development and connects it to the rest of the settlement. It will carry most of the heavy traffic, whilst the rest of the street network will only carry low neighbourhood traffic. The design guidelines for this street typology are:

- Provide front gardens and street planting along the main streets to contribute to the general feeling of openness in the area.
- Where possible, locate parking to the side of properties and consider using garages to mitigate the impact of cars on the streetscape. Planting and vegetation on the front gardens and sides of the properties can also help improve the aesthetics of the environment.
- Main streets serve as accesses to the new development. This role can be highlighted by providing planting and appropriate signage on the junctions

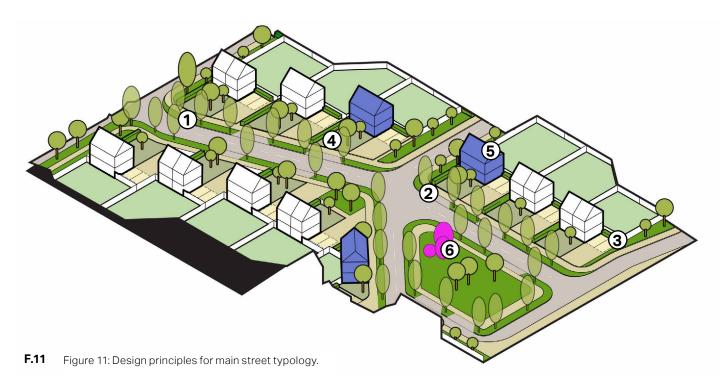
with existing roads. This will create a welcoming character. Corner buildings can have special features to provide interest to the main spine and to also be used as landmarks helping navigation.

- Planting on street corners, junctions, and at the end of vistas can help with wayfinding and serve as open spaces in their own right.
- Green verges and street trees should be integrated in the design, where possible, to create attractive neighbourhoods and provide shade to pedestrians and cyclists.
- Where on-street parking is proposed, it should be interspersed with trees to avoid impeding moving traffic or pedestrians.
- Cycle lanes are encouraged on main streets to promote alternative methods of transportation.

Design principles:

- 1. Green verges along the main street with large street trees to provide shading and create a 'garden' neighbourhood feel.
- 2. Potential for on-street parking to be interspersed with trees to avoid impeding moving traffic or pedestrians and also mitigate the visual impact of vehicles.
- 3. On-plot side parking is suggested as the main parking typology in the area.

- 4. Front gardens is a key element to contribute to the openness of the streetscape with rich vegetation and planting.
- 5. Corner buildings should act as landmarks in order to create memorable routes and improve the architectural quality of the area.
- 6. Potential for public art installations in open spaces to improve the aesthetics of the environment and help navigation.

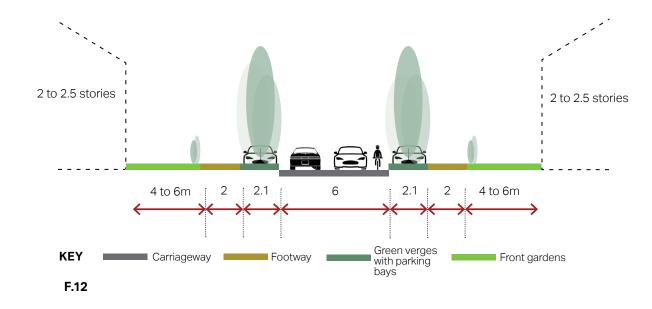


Key dimensions

The nominal dimensions on the sections in this page provide a guide for the key elements and proportions to be provided on the main access street:

- Maximum building height is 2-2.5 storeys following the average local building height.
 However, height can go up to 3 stories in the case of landmark buildings.
- Minimum width of pavements is 2m. An additional 2m is provided for street planting if required.
- Minimum width of front gardens is 4m. Tree planting is encouraged.
- Width of the carriageway is 6m with the option to also accommodate a cycle lane.
- 1. Shared carriageway (neighbourhood traffic). Traffic calming measures may be introduced at key locations if needed.
- 2. Footway utilities typically located underneath.
- 3. Green verges and street trees. Parking bays could also be inserted.
- 4. Residential frontage with boundary hedges and front gardens.

Figure 12: Illustrative section of a main street typology.
Figure 13: Local example of street that shares some similar qualities as the ones shown in the section, Brook Farm Road.





2.3.6 Cycle avenue

This street typology consists of a formal cycle avenue, where the carriageway is located on either side. Both carriageways have the character of a typical residential street, as shown in page 28.

The design guidelines for this street typology are:

- They must be designed for low traffic volumes and low speed. They should include design elements that support lower speeds e.g. minimising the corner kerb radius.
- Carriageways should accommodate twoway traffic (no.1).

- Front gardens should be well-vegetated to create an attractive walking environment (no.2).
- Locate parking to the side of the property to mitigate the impact of cars on the streetscape, subject to building typology (no.3).
- Cycle avenue should be equipped with street trees and hedges to create a pleasant cycling route (no.4).

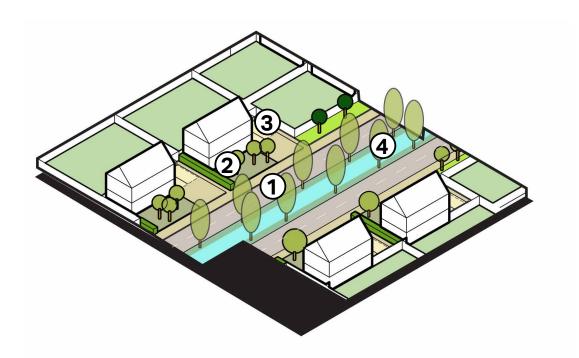


Figure 14: Design principles for cycle avenue typology.

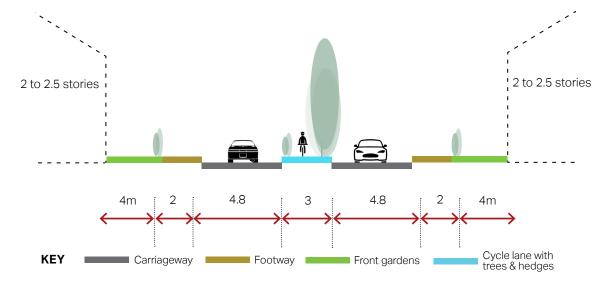
F.14

Key dimensions

The nominal dimensions on the sections in this page provide a guide for the key elements and proportions to be provided on the main access street:

- Maximum building height is 2-2.5 storeys following the average local building height.
- Minimum width of pavements is 2m. An additional 2m is provided for street planting if required.
- Width of the cycle lane is 3m. Tree planting and preservation of any existing hedges is encouraged.
- Minimum width of front gardens is 4m. Tree planting is encouraged.
- Width of the single lane carriageway on both sides of the cycle lane is 4.8m.
- 1. Carriageway (neighbourhood traffic). Traffic calming measures may be introduced at key locations if needed.
- 2. Footway utilities typically located underneath.
- 3. Cycle lane with trees and hedges.
- 4. Residential frontage with boundary hedges and front gardens.

Figure 15: Illustrative section of a cycle avenue typology. Figure 16: Example of a street with a designated cycle route, Netherlands.



F.15



2.3.7 Residential streets

Residential streets have a strong residential character and provide direct access to residences. The design guidelines for this street typology are:

- They must be designed for low traffic volumes and low speed. They should include design elements that support lower speeds e.g. minimising the corner kerb radius.
- Carriageways should accommodate two-way traffic and parking bays should be designed for cyclists to mix safely with motor vehicles.
- Front gardens should be well-vegetated to create an attractive walking environment.
- Locate parking to the side of the property to mitigate the impact of cars on the streetscape, subject to building typology.

In the case of cul-de-sac development some other design guidelines for this street typology are:

- Cul-de-sacs should have pedestrian paths that connect them to surrounding areas and increase their connectivity, with careful consideration given to the landscaping and lighting of these paths to increase their safety.
- It is generally advisable to back onto gardens of other properties. A side dwelling typology is suggested here as an alternative when properties back onto the open countryside. It provides distant views to the open land from the street.
- Parking should be placed in well overlooked areas, however it should not dominate the streetscape. A balance must be sought between achieving residential density and providing parking, for example by employing house types and sizes that generate less parking. Garages separate from dwellings are not acceptable and neither are parking courtyards.

Design principles:

- 1. Wide pavements to encourage pedestrian flow and street trees to provide shading and create a 'garden' neighbourhood feel.
- 2. On-plot side parking is suggested as the main parking typology in the area.
- 3. Front gardens are a key element to contribute to the openness of the streetscape with rich vegetation and planting.

- 4. Stagger opposing buildings along the street to increase variation and reduce monotony on the street.
- 5. Increased density in cul-de-sacs favours activity and prevents isolation of these areas. A balance must be achieved between density and parking provision; dwelling types and sizes that generate less parking are preferred.
- 6. When cul-de-sacs are proposed, there should be an adequate connection with the footpath networks available in the area.

Typical residential street

F.17

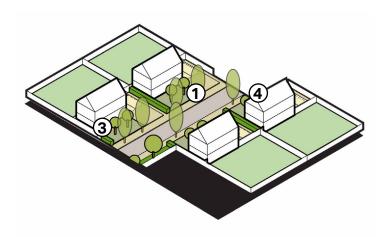


Figure 17: Design principles for a typical residential street.

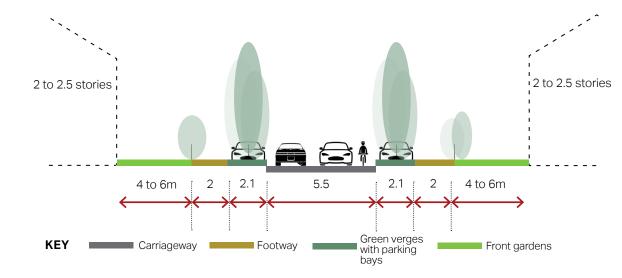
F.18 Figure 18: Design principles for a typical cul-de-sac street.

Key dimensions

The nominal dimensions on the sections in this page provide a guidance for the key elements and proportions to be provided on the main access street:

- Maximum building height is 2-2.5 storeys following the average local building height...
- Minimum width of pavements is 2m. An additional 2.1m is provided for street planting and parking bays if required.
- Minimum width of front gardens is 4m. Tree planting is encouraged.
- Width of the carriageway is 5.5m with the option to also accommodate a cycle lane.
- 1. Shared carriageway (neighbourhood traffic). Traffic calming measures may be introduced at key locations if needed.
- 2. Footway utilities typically located underneath.
- 3. Residential frontage with boundary hedges and front gardens.

Figure 19: Illustrative section of a residential street typology. Figure 20: Local example of street that shares some similar qualities as the ones shown in the section, St Johns Road.



F.19



2.3.8 Edge lanes

Edge lanes should be proposed when a street is adjacent to the countryside or large open spaces. The design guidelines for this street typology are:

- Edge lanes must be low-speed roads (20 mph or less) edged by front houses with gardens on one side and a green space / countryside on the other. Carriageways typically consist of a single lane of traffic in either direction and could be shared with cyclists; nominally 6 to 8 m wide and no footway.
- Provide a planting buffer and landscaping between the edge of the carriageway and the countryside in order to provide transition and control pedestrian accessibility where required. (no.1). The use of hedgerows where edge lanes face onto agricultural land is particularly encouraged. This buffer future proofs the development against potential development that might front onto the edge lane in the future.

- These lanes can gently meander, providing interest and evolving views while helping with orientation (no.2).
- Connect the edge lane to paths and other public rights of way where possible (no.3).
- The lane width can vary to discourage speeding and introduce a more informal and intimate character. Variations in

- paving materials and textures can be used instead of kerbs or road markings (no.4).
- Swales and rain gardens could also be added into the landscaping to address any flood issue (no.5).

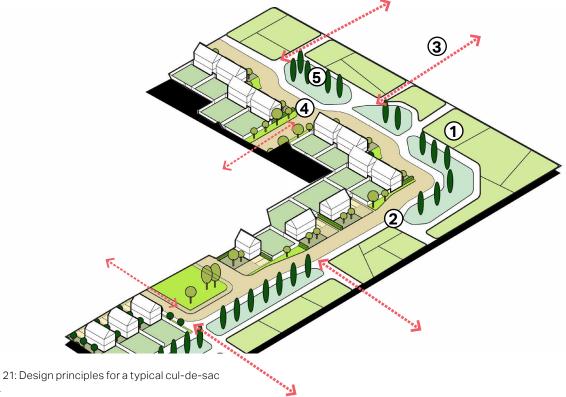


Figure 21: Design principles for a typical cul-de-sac F.21 street.

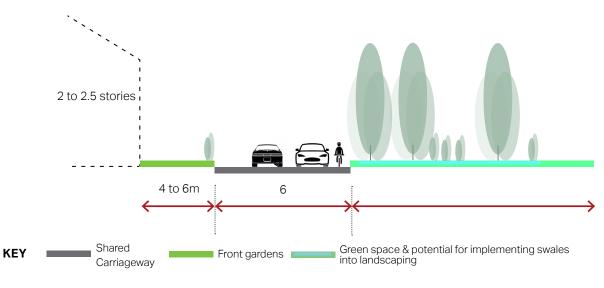
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Key dimensions

The nominal dimensions on the sections in this page serve as a guide for the key elements and proportions to be provided on the main access street.

- Maximum building height is 2-2.5 storeys following the average local building height...
- Minimum width of pavements is 2m. An additional 2m is provided for street planting if required.
- Preferred minimum width of front gardens is 6m, but 4-6m may be acceptable if well designed to allow more flexibility. Tree planting is encouraged.
- The buffer guarantees separation from the open countryside, and from potential new developments that might come forward beyond the boundary of the current site.
- 1. Shared lane.
- 2. Footway (optional).
- 3. Residential frontage with front gardens.
- 4. Green space and potential for implementing swales into the landscaping.

Figure 22: Illustrative section of an edge lane typology. Figure 23: Local example of a street that shares some similar qualities as the ones shown in the section, cul-de-sac on Carlton Road.



F.22



2.3.9 Private lane

- Lanes and private drives are the accessonly types of streets that usually serve a small number of houses. They must be minimum 6m wide and serve all types of transport modes including walking and cycling, and allow sufficient space for parking manoeuvre (no.1).
- Opportunities to include green infrastructure, hedges, and/or private gardens to soften the edges must be maximised (no.2).
- Note: some local authorities may prefer to maintain pedestrian and vehicle spaces separate to help partially sighted pedestrians orientate themselves. For this purpose, new streets may retain a slight kerb upstand between the footways and carriageways and incorporate contrasting materials and surface textures.

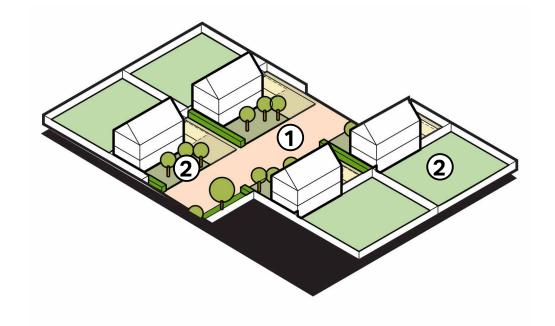


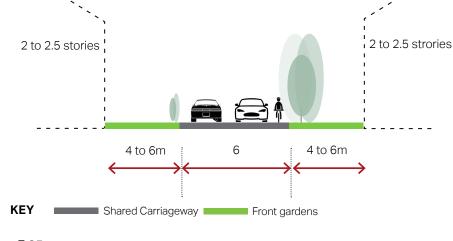
Figure 24: Design principles for a private lane typology.

Key dimensions

The nominal dimensions on the section on this page serve as a guide for the key elements and proportions to be provided on both residential and cul-de-sac streets.

- Maximum building height is 2-2.5 storeys.
- Width of the shared carriageway is 6m to accomodate vehicles, cyclists and pedestrians.
- Minimum width of front gardens is 4m. Tree planting is encouraged.

- 1. Shared carriageway (neighbourhood traffic). Traffic calming measures may be introduced at key locations if needed.
- 2. Residential frontage with boundary hedges and front gardens.



F.25



Figure 25: Illustrative section of a private lane typology.
Figure 26: Local example of a street that shares some similar qualities as the ones shown in the section, Gull Road.

2.3.10 Car parking solutions

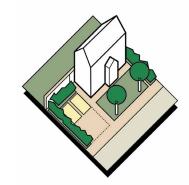
The demand for private cars still remains high, at the time of writing, and therefore car parking has to be carefully integrated into neighbourhoods. A good mix of parking typologies should be deployed, depending on, and influenced by location, topography and market demand. The main types to be considered are shown on this page and the next one.

- Vehicle parking should be mainly provided on-site. In general, the approach to the provision of parking should be flexible not only with the types of parking solutions but also the use of parking spaces over time. For example, the use of off-site parking facilities may be adapted depending on the long-term evolution of parking demand to serve different mobility needs such as car clubs, scooters, or bicycle storage.
- Car parking design should be combined with landscaping to minimise the presence of vehicles.
- Parking areas and driveways should be designed to minimise water run off through the use of permeable paving.

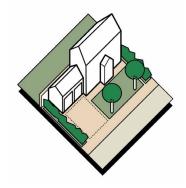
- For small dwelling clusters, a front or rear parking court is acceptable. It is important to also introduce vegetation and appropriate boundary treatment to soften the presence of cars. For family homes, cars may be placed at the front or side of the property, the latter being preferred.
- When placing parking at the front, the area should be designed to minimise visual impact and to blend with the existing streetscape and materials. The aim is to keep a sense of enclosure and to break the potential of a continuous area of car parking in front of the dwellings by means of walls, hedging, planting, and use of differentiated quality paving materials.
- A very useful website that helps define appropriate car parking solutions depending on the type of development is http://www.spacetopark.org/. This resource should be used as a design tool in new developments.

The car parking solutions that will be analysed on the next pages are:

On-plot parking on driveway



On-plot parking on garage



On-street parking adjacent public open space



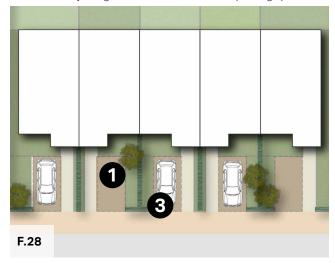
On-plot side or on front parking

Some guidelines for future development are:

- On-plot parking can be visually attractive when it is combined with high quality and well designed soft landscaping. Front garden depth from the pavement must be sufficient for a large family car.
- Boundary treatment is the key element to help avoid a car-dominated character.
 This can be achieved by using elements such as hedges, trees, flower beds, low walls, and high quality paving materials between the private and public space.
- Hard standing and driveways must be constructed from porous materials to minimise surface water run-off.



- 1. Front parking with part of the surface reserved for soft landscaping. Permeable pavement to be used whenever possible.
- 2. Side parking set back from the main building line. Permeable pavement to be used whenever possible.
- 3. Boundary hedges to screen vehicles and parking spaces.



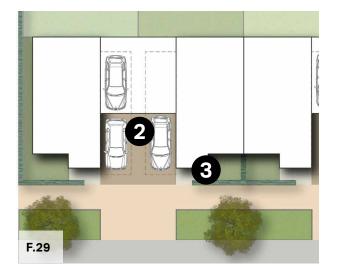


Figure 27: Illustration showing the effect of keeping on plot parking subservient to landscape and property boundary treatment.

Figure 28: Illustrative diagram showing an indicative layout of onplot front parking.

Figure 29: Illustrative diagram showing an indicative layout of on-plot side parking.

On-plot garages

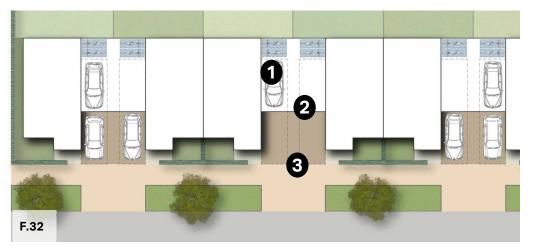
Some guidelines for future development are:

- Where provided, garages must be designed either as free standing structures or as additive form to the main building. In both situations, it must complement and harmonise with the architectural style of the main building rather than forming a mismatched unit.
- Often, garages can be used as a design element to create a link between buildings, ensuring continuity of the building line. However, it should be considered that garages are not prominent elements and they must be designed accordingly.
- Consideration must be given to the integration of bicycle parking, electric vehicle charging points, and/or waste storage into garages.

Figure 30: Local example of on-plot garage parking, Heron Road. Figure 31: Local example of on-plot garage parking, Gull Road. Figure 32: Illustrative diagram showing an indicative layout of on-plot parking with garages.







- Side parking set back from the main building line. Permeable pavement to be used whenever possible.
- Garage structure set back from main building line. Height to be no higher than the main roofline.
- Boundary hedges to screen vehicles and parking spaces.

On street parking

Some guidelines for future development are:

- On-street parking should be allowed along main roads, where most of the facilities are located, in order to support delivery and emergency vehicles. In any other residential street or rural roads onplot parking should be encouraged.
- The streetscape should not be dominated by continuous on-street parking spaces.
 Where possible, tree planting and other gaps between parking bays should be incorporated.
- On-street parking must be designed to avoid impeding the flow of pedestrians, cyclists, and other vehicles, and can serve a useful informal traffic calming function.
- Parking bays can be inset between kerb build outs or street trees. Kerb build outs between parking bays can shorten pedestrian crossing distances and can host street furniture or green infrastructure. They must be sufficiently wide to shelter the entire parking bay in order to avoid impeding traffic.

 Opportunities must be created for new public car parking spaces to include electric vehicle charging points. Such provision must be located conveniently throughout the town and designed to minimise street clutter.



- 1. On-street parking bay inset between kerb extensions.
- 2. Footway additional green verge if street width permits.
- Planted kerb extensions width to be sufficient to fully shelter parking bay. Trees are optional but would be positive additions.
- 4. Boundary hedges.

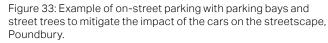
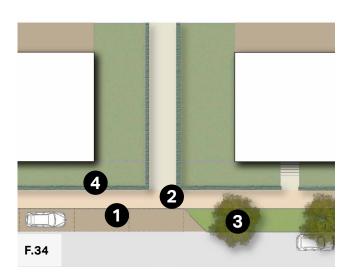


Figure 34: Illustrative diagram showing an indicative layout of onstreet inset parking.



Electric vehicle charging points

On-street car parking

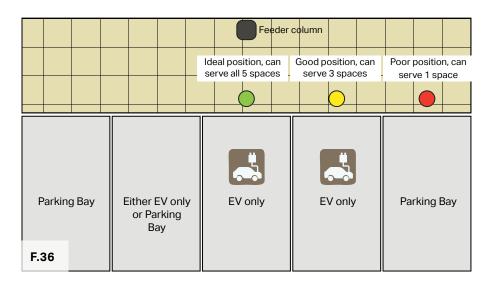
- Car charging points should be provided when on-street parking is suggested, always adjacent with public open space.
- Where charging points are located on the footpath, a clear footway width of 1.5m is required next to the charging point, for a wheelchair user and a pedestrian to pass side-by-side.
- Charging points should never be placed in such a way that forces drivers to park on the pavement or across spaces for cables to reach the charging point from the vehicle.
- Charging points should be placed so they can serve as many vehicles as possible.
 This helps to overcome issues associated with charged vehicles or petrol or diesel vehicles blocking dedicated EV spaces.
 This can make the charging point unusable for others if the charging cables cannot reach other spaces.

Off-street car parking

 Mounted charging points and associated services should be integrated into the design of new developments, if possible with each house that provides off-street parking. Avoid cluttering elevations, especially main façades and front elevations.



Figure 35: Off-street mounted car charging points.
Figure 36: How the placing of on-street charging points and dedicated EV bays can restrict or maximise access.



2.3.11 Cycle parking solutions

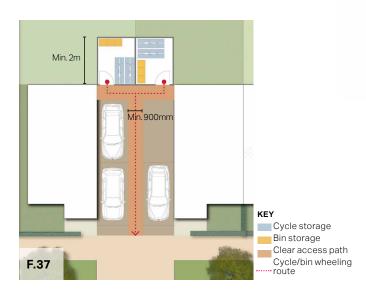
A straightforward way to encourage cycling is to provide secured covered cycle parking within all new residential developments and publicly available cycle parking in the public realm, as well as parking courts if available.

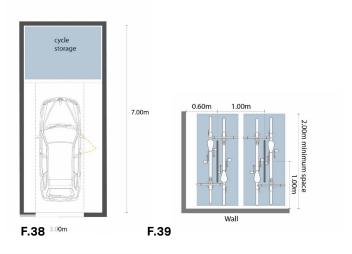
Houses without garages

- Cycle storage must be provided at a convenient location with an easy access.
- When provided within the footprint of the dwelling or as a free standing shed, cycle parking should be accessed by means of a door at least 900mm wide and the structure should be at least 2m deep.
- Cycle parking should be secure, covered and it should be well integrated into the streetscape if it is allocated at the front of the house.
- The use of planting and smaller trees alongside cycle parking can be used to mitigate any visual impact on adjacent spaces or buildings.

Houses with garages

- The minimum garage size should be 7mx3m to allow space for cycle storage.
- Where possible cycle parking should be accessed from the front of the building either in a specially constructed enclosure or easily accessible garage.
- The design of any enclosure should integrate well with the surroundings.
- The bike must be removed easily without having to move the vehicle.





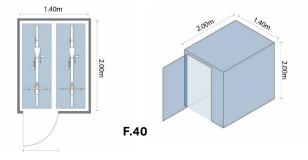


Figure 37: Indicative layout of a bicycle and bin storage areas at the back of semi-detached properties.

Figure 38: Indicative layout of a garage with a cycle storage area.

Figure 39: Sheffield cycle stands for visitors and cycle parking illustration.

Figure 40: Secure covered cycle store for two cycle storage illustration.

2.3.12 Street planting

New street planting helps maintain visual consistency along the public realm. It is associated with better mental health and well-being by reducing stress, lessening heat islands, and providing protection from natural elements such as wind and rain. Some guidelines for new development are:

- Flower beds, bushes and shrubs should be welcomed in new developments, since they contribute to the livelihood of the streetscape. Normally planted within the curtilage boundary, ornamental species add interest and colour to their surroundings and become an identity and expressive feature of each dwelling.
- Hedgerows can be planted in front of bare boundary walls to ease their visual presence or they can be used to conceal on-plot car parking and driveways within curtilages.
- Trees can normally be used to mark reference points and as feature elements in the streetscape. When planted in

intersections and key locations they can help with privacy whilst enhancing the wayfinding and distinctiveness of the area. These tend to be within property curtilages.

- Trees should also be present in any public open space, green or play area to generate environmental and wildlife benefits.
- Retained trees should be considered at the earliest design stage to ensure that any retained trees will be able to grow and mature in the future without outgrowing their surroundings.
- The success of tree planting is more likely to be achieved when it has been carefully planned to work in conjunction with all parts of the new development, parking, buildings, street lights etc.

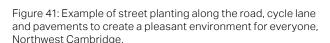


Figure 42: Example of street planting and vegetation along footpaths between properties to create a pleasant environment and encourage people to walk, Great Kneighton, Cambridge.



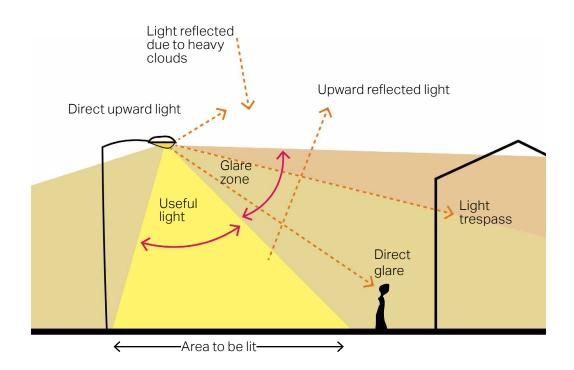


2.3.13 Street lighting

For maximum benefit, the best use of artificial light is about getting the right light, in the right place and providing light at the right time. Lighting schemes can be costly and difficult to change, so getting the design right and setting appropriate conditions at the design stage is important. Some guidelines for new development are:

- Any new development shall ensure that lighting schemes will not cause unacceptable levels of light pollution particularly in intrinsically dark areas in the countryside.
- New development shall avoid the use of lighting, e.g blue LED light, that has a negative impact on health and wellbeing.
- New development must consider lighting schemes that could be turned off when not needed.
- The needs of particular individuals or groups should be considered where appropriate (e.g. the safety of pedestrians, cyclists, drivers or older users).

 Vegetation and planting on front gardens should be dense to absorb light and also offer some separation between public and private space.



F.43

Figure 43: Diagram to illustrate the different components of light pollution and what 'good' lighting means.

2.3.14 Mitigation of noise pollution

Mitigating any adverse impact of traffic noise from the A12 is important to achieve a calm atmosphere in the new development. Therefore, there are some principles that should be sought to achieve this aim:

- Protect and enhance natural and landscape features of the site, such as trees, woodlands or hedgerows to use as means for noise mitigation.
- The impact of traffic noise will need to be addressed in development proposals, ensuring there will not be an adverse effect after mitigation.
- Site promoters will be expected to provide suitable noise mitigation which could include, for example, barriers, planting or non-residential buildings.
- The road edge should be softened with planting, avoiding a harsh fence given that this edge will be so prominent.
- Dwelling should be oriented such that habitable rooms and gardens are located furthest from noise sources.

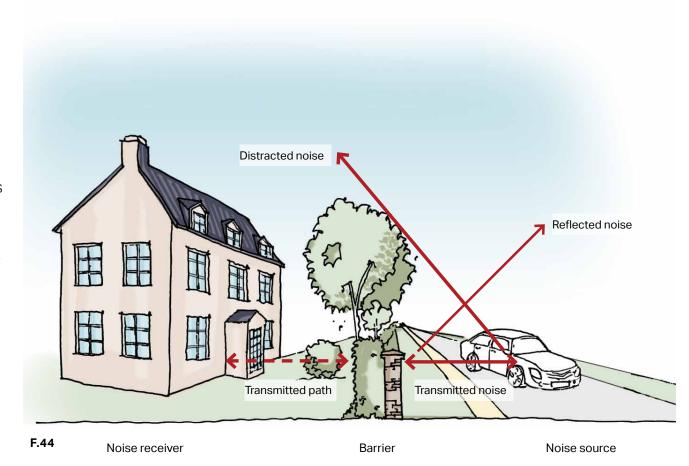


Figure 44: Diagram showing noise pollution mitigation.

GUIDELINES AND CODES FOR BUILT FORM



Overlooking the public space



Corner treatment



Building lines and boundary treatments



Gateways



Enclosure



Building scale and massing



Building heights and roofline

GUIDELINES AND CODES FOR BUILT FORM



Services & utilities



Architectural details



Windows



Ground appearance



Materials

2.3.15 Overlooking the public space

Designing out crime and designing community safety is essential to the creation of successful, safe and attractive developments.

The following guidelines are in line with the latest manual endorsed by the police 'Secured by Design Homes 2019'. The guidelines for new development are:

- There should be well-defined routes. spaces and entrances that provide convenient movement without compromising security.
- Main building façades should overlook the open spaces to improve natural surveillance. In addition, side windows and driveways should also be well-overlooked.
- Integrate facilities into the open spaces that meet the needs of the people living close by in order to make them attractive.

Figure 45: Properties facing the public space can offer nice views as well as reinforce natural surveillance to the area, Poundbury. Figure 46: 3D diagram to illustrate some design principles for overlooking the public space.

- Avoid using too much green screening on the front gardens in order to allow for some views to the street and the open spaces.
- Integrate light installations along the streets as well as in the open spaces in order to improve the feeling of safety in the area.

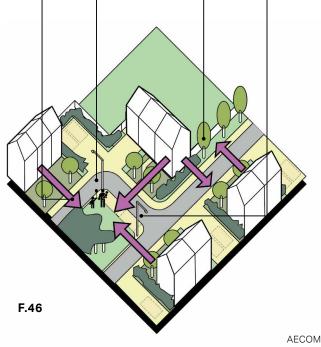
Recognisable entrances and routes improve wayfinding and reduce ambiguity on the street. Clear pathways to entrances are particularly relevant in areas with large front gardens.

Protect exposed gardens with walls. Include landscaping and planting to balance their bareness and to shelter them further.

Promote activity on the street, by providing public open spaces, generous pavements and accessible street furniture.

Enhance overlooking by designing safe windows to the street. They can be buffered with planting to increase privacy. Provide good levels of lighting on the public realm.





46

2.3.16 Corner treatment

Together with the creation of potential local landmarks, one of the crucial aspects of a successful townscape and urban form is the issue of corners. Because these buildings have at least two public facing façades, they have double the potential to influence the street's appearance. Therefore, the following guidelines apply to corner buildings.

- If placed at important intersections the building could be treated as a landmark and thus be slightly taller or display another built element, signalling its importance as a wayfinding cue.
- The form of corner buildings should respect the local architectural character.
 Doing so improves the street scene and generates local pride.
- All the façades overlooking the street or public space should be treated as primary façades.
- Figure 47: Diagram reflecting design principles for corner buildings.
- Figure 48: 3D diagram to illustrate some design principles for corner treatment.

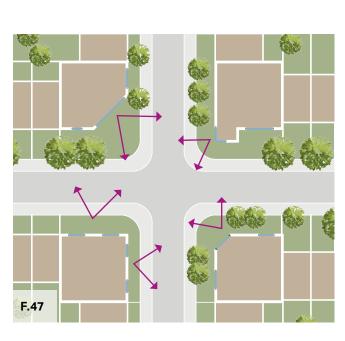
- They should have some form of street contact in the form of windows, balconies, or outdoor private space.
- Road layouts should be designed to slow traffic and advantage pedestrians over vehicles.

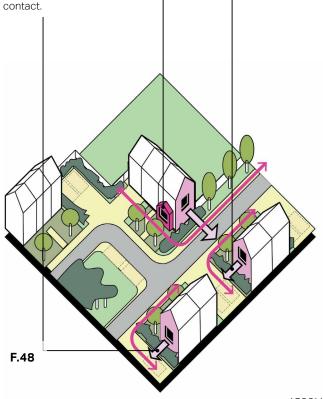
Buildings turning a corner have the opportunity to generate new local character, they are in visible points of the development, and can be key elements to reduce monotony and improve orientation. They can feature architectural elements that underline their special conditions.

Windows and other

fenestrations create street

In every case, overlooking towards the street and privacy of the dwellings should be carefully balanced.





2.3.17 Building lines and boundary treatments

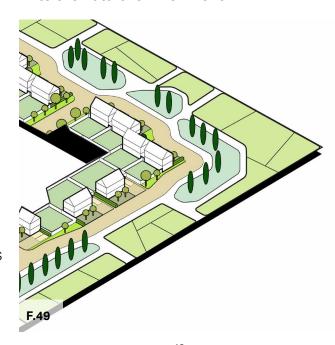
Building line and boundary treatments vary across the town. To respect the existing context, both the building and the boundary features should be consistent with neighbouring properties while enabling enough variations for visual interest.

- Buildings should front onto streets. The building line should have subtle variations in the form of recesses and protrusions but should generally form a unified whole.
- Buildings should be designed to ensure that streets and/or public spaces have good levels of natural surveillance from buildings. This can be ensured by placing ground floor habitable rooms and upper floor windows facing the street.
- Natural boundary treatments should reinforce the sense of continuity of the building line and help define the street, appropriate to the character of the area. They should be mainly continuous hedges and low walls, as appropriate, made of

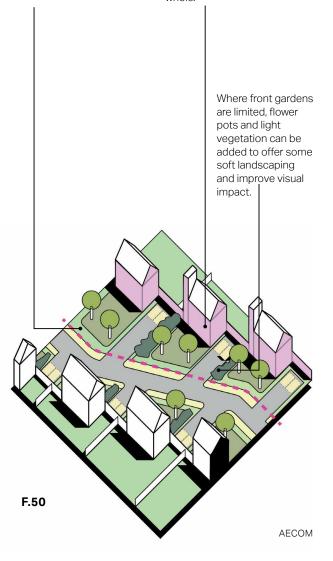
Figure 49: Local example illustrating the subtle variations in the form of recesses in the building lines, Saxon Road.
Figure 50: 3D diagram to illustrate some design principles for building lines.

traditional materials found elsewhere in the town such as local bricks. The use of either panel fencing or metal or concrete walls in these publicly visible boundaries should be avoided. Natural boundary treatments should still enable adequate natural surveillance.

 In the case of edge lanes, shown in <u>F.49</u>, natural boundary treatments can act as buffer zones between the site and the countryside and offer a level of protection to the natural environment.



Boundary walls and treatments should reinforce the sense of continuity of the building line and help define the street. Building lines could have subtle variations in the form of recesses and protrusions, but should generally form a unified whole



48

2.3.18 Gateways

- Future design proposals should consider placing gateway elements to clearly mark the access or arrival to any potential developed sites. This is particularly important for developments at the edge of settlements due to their location at the interface between the built-up area and the countryside.
- The sense of departure and arrival can often be achieved by a noticeable change in scale, enclosure, or road configuration.
 The gateway buildings or features should however reflect local character. For example, they must reflect the informal characters of the settlements in the Parish and reflect their architectural diversity.

- Besides building elements acting as gateways, high-quality landscaping features could be considered appropriate to fulfil the same role.
- It must be noted that gateway features should mainly be placed to mark a sense of arrival and departure and help with orientation, not to exclude non-residents either physically or symbolically. New developments should also be designed with an open and legible layout rather than an enclosed one.

2.3.19 Enclosure

Focal points and public spaces in new development should be designed in good proportions and delineated with clarity.

Clearly defined spaces help create an appropriate sense of enclosure - the relationship between a given space (lane, street, square) and the vertical boundary elements at its edges (buildings, walls, trees).

The following principles serve as general guidelines that should be considered for achieving a satisfactory sense of enclosure in new development:

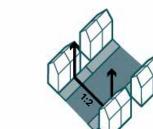
- When designing building setbacks, there must be an appropriate ratio between the width of the street and the height of the buildings.
- Buildings should be designed to turn corners and create attractive start and end points of a new street or frontage.

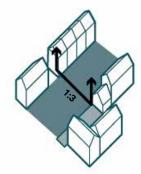
onto streets. Variation to the building line can be introduced to create an informal character.In the case of terraced and adjoining

- Generally, building façades should front

- In the case of terraced and adjoining buildings, it is strongly recommended that a variety of plot widths, land use, building heights, and façade depth should be considered during the design process to create an attractive streetscape and break the monotony of the street wall.
- Trees, hedges, and other landscaping features can help create a more enclosed streetscape in addition to providing shading and protection from heat, wind, and rain.







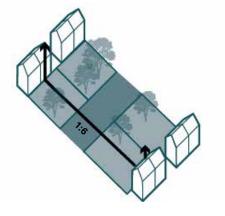


Figure 51: The relationship between the buildings, the trees and width of the footway create a sense of enclosure for the pedestrian, Poundbury.

Figure 52: The various enclosure ratio depends on the amount of front garden width, road width, tree canopies and building heights.



2.3.20 Building scale and massing

The average building height in the Saxmundham existing settlement is 2-2.5 storeys. Thus, new buildings must be sympathetic in mass, height, and scale to the existing context. Any new building above 2.5 storeys will only be supported in exceptional circumstances.

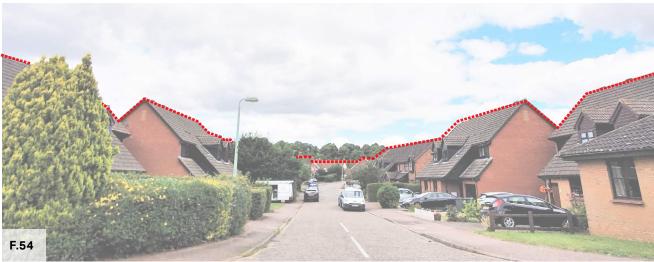
Subtle variation in height is encouraged to add visual interest. The bulk and pitch of roofs, however, must remain sympathetic to the tree canopy, the local vernacular, and the low-lying character of the town. Another way to achieve visual interest could be by varying frontage widths and plan forms.

The massing of new buildings must ensure a sufficient level of privacy and access to natural light for their occupants and avoid overshadowing existing buildings. New buildings must not significantly compromise existing property views of open and green spaces and big skies.

Figure 53: Photo showing the roofline and building scape of the buildings along Brook Farm Road.

Figure 54: Photo showing the roofline and building scape of the buildings along Felsham Rise.





2.3.21 Building heights and roofline

Creating a good variety in the roof line is a significant element of designing attractive places. There are certain elements that serve as guidelines in achieving a good variety of roofs:

- The scale of the roof should always be in proportion with the dimensions of the building itself.
- Monotonous repetitions of the same building elevations should be avoided, therefore subtle changes in roofline should be ensured during the design process.
- Traditional local roof materials, shapes, and detailing should be considered and implemented where possible in cases of new development.

 Dormers can be used as a design element to add variety and interest to roofs. They should be proportional to the dimensions of the roof and façade, and their design should be coordinated with the materials and architectural style used on the rest of the elevation.





Figure 55: Local example from the existing settlement to highlight the roofline of modern development, Mayflower Green Estate. Figure 56: Local example from the existing settlement to highlight the roofline of the cottages along South Entrance.

2.3.22 Windows

Some guidelines related to windows are:

- Windows on public/private spaces increase the natural surveillance and enhance the attractiveness of the place.
 Considerations for natural surveillance, interaction, and privacy must be carefully balanced.
- Corner buildings should incorporate windows on both primary and secondary façades. Long stretches of blank (windowless) walls must be avoided.
- Windows should be of sufficient size and number for abundant natural light.
- Site layout and building massing should ensure access to sunshine and avoid overshadowing neighbouring buildings.
 New developments should also maximise opportunities for long-distance views through a careful placement of windows.

 Consistent window styles and shapes should be used across a given façade to avoid visual clutter and dissonance.
 Varieties in window types, shapes, and details should however be encouraged across the same development.









Figure 57: Images showing positive examples of window articulations

2.3.23 Services and utilities

Services and utilities are necessary parts in the operation of public and domestic environments. Poor planning of utilities could hinder the overall quality of the urban environment and create unattractive new development schemes. Some guidelines related to utilities in new development are:

- Design shared common trenches for service and drainage runs to minimise disturbance to buildings and reserve space for pipeworks and drainage under the verges and service strips.
- Where existing pavements are excavated, they should be reinstated with matching materials to ensure coherent surfacing.
- Avoid any damage to the root system of retained trees. Service runs should not be located within the tree root spreads or new tree planting corridors.
- Use sympathetic materials to the surrounding paved areas for manhole covers and that they fit with the surface

- material used. Ease of maintenance should be a priority.
- Integrate substations and other service kiosks into the design of new developments from the start.
- The location and design of services on a building must be considered carefully and every effort should be made to locate these items as unobtrusively as possible.
- Pipework should be grouped together and run internally wherever practical.
 Chimneys can be used to disguise gas flues where they do not serve as a working fireplace.
- Meter boxes should be designed into a scheme from the outset to avoid cluttering the elevations. They should be on the end rather than front elevations where possible and be in a colour that blends in with the surrounding wall.
 External meter boxes can be avoided through the use of smart meters.

Poorly located meter boxes, their presence clutters front elevations.





Positive example of drainage channel as demarcation of thresholds of water run-off from and to dwellings





Porches / recessed entries can conceal the presence of meter boxes





Use clean lines and sympathetic colours for gutters and downpipes





2.3.24 Ground appearance

Paved areas

Paved areas are a major element within most developments, and their design has a significant impact on the overall appearance and quality of a scheme. Care must be taken when choosing the materials and when detailing paved areas as part of the overall design.

- Materials should be robust, aesthetically attractive and with excellent weathering characteristics defining a sustainable and attractive place for residents and visitors.
- Surface water management should be considered when designing paved areas.
- It is important that where there are large development projects with more than one developer, these different developers adopt the same consistent palette of materials and designs.

Road paving

Tarmac or block paving is generally recommended as road surface. In all cases, large unbroken areas of a particular surface material should be avoided, especially tarmac, and areas can be broken up successfully using materials of a similar colour, but with different textures.

Pavements

- High quality materials such as stone, brick or block paving can all constitute good options for pavements. Permeable pavements will be preferred.
- Tarmac pavements are generally the most economical option but can generate monotony and make wayfinding more difficult. Their repair in patches create dissonant streetscapes.
- The laying pattern and materials used can make a significant contribution to the overall appearance, quality and success of a scheme.

 45-degree herringbone patterns are less visually pleasing than other laying patterns such as random bond, broken bond, gauged width, and the European fan layout pattern.

Driveways

Permeable paving options can be successfully applied to driveways to maximise the accumulation effect of front garden greenery as a way to enhance the street landscape. Prioritise bigger portions of green within the pavement rather than a very granular paving pattern.

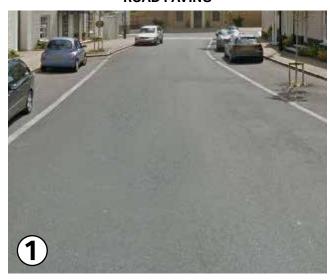
Pavements over driveways

Pavement patterns should prevail over the driveway access. To guarantee a coherent street and a continuous walkable path, parking kerbs should not invade the pedestrian pavement.

Crossings

Consider the use of traditional materials such as pebbles in setts to manage traffic speed and contribute to traffic calming.

ROAD PAVING



PAVEMENT OVER DRIVEWAY



FOOTWAY



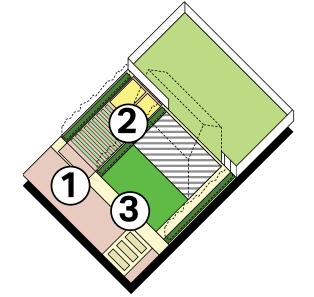


Figure 58: Illustration of the types of ground materials that can be used.

F.58

2.3.25 Materials and colour palette

There is a range of architectural styles used within the town for walls, roofscape and fenestration. The materials and architectural detailing used throughout Saxmundham can be a reference point for new development and contribute to its character.

The materials that will be used in the new developments should be of a high quality and reinforce local distinctiveness. Development proposals should demonstrate that the palette of materials has been selected based on an understanding of the surrounding built and natural environment.

In new developments, locally sourced bricks or bricks that match the buildings in the surrounding area would be the most appropriate. Particular attention should be given to the bonding pattern, size, colour, and texture of bricks.

This section includes examples of architectural details and building materials that contribute to the local vernacular of Saxmundham and which could be used to inform future development.





Red brick



Yellow brick



Coloured facade







Gable roof



Vegetation in front garden



Chimney



Hedges



Old Mill house

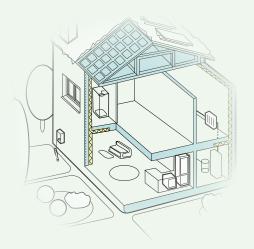


Flowers in front garden



Slate roof

GUIDELINES AND CODES FOR ENVIRONMENT AND ENERGY EFFICIENCY



Building fabric



Low carbon development



Rainwater and harvesting



Renewable/low carbon energy



Permeable pavements



Storage



Wildlife friendly environment

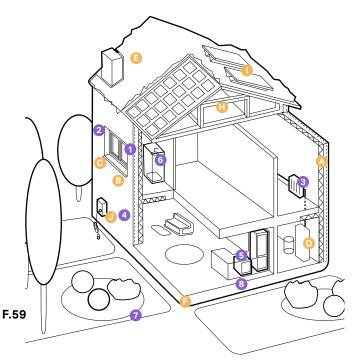
2.3.26 Low carbon development

The following section elaborates on energy efficient technologies that could be incorporated in buildings.

The use of such principles and design tools is strongly encouraged to future proof buildings and avoid the necessity of retrofitting.

Energy efficient or eco design combines all around energy efficient appliances and lighting with commercially available renewable energy systems, such as solar electricity and/or solar/ water heating.

The diagram opposite features an array of sustainable design features. Those on the left show the features that should be strongly encouraged in existing homes, while those on the right show additional features that new build homes should be encouraged to incorporate from the onset.



Existing homes



Insulation in lofts and walls (cavity and solid)



Double or triple glazing with shading (e.g. tinted window film, blinds, curtains and trees outside)



Low- carbon heating with heat pumps or connections to district heat network



Draught proofing of floors, windows and doors



Highly energyefficient appliances (e.g. A++ and A+++ rating)



Highly wasteefficient devices with low-flow showers and taps, insulated tanks and hot water thermostats



Green space (e.g. gardens and trees) to help reduce the risks and impacts of flooding and overheating



Flood resilience and resistance with removable air back covers, relocated appliances (e.g. installing washing machines upstairs), treated wooden floors

Additional features for new build homes



High levels of airtightness



More fresh air with the mechanical ventilation and heat recovery, and passive cooling



Triple glazed windows and external shading especially on south and west faces



Low-carbon heating and no new homes on the gas grid by 2025 at the latest



Water management and cooling more ambitious water efficiency standards, green roofs



Flood resilience and resistance e.g. raised electrical, concrete floors and greening your garden

and reflective walls



Construction and site planning timber frames, sustainable transport options (such as cycling)



Solar panels



Electric car charging point

Figure 59: Diagram showing low-carbon homes in both existing and new build conditions.

2.3.27 Building fabric

Thermal mass

Thermal mass describes the ability of a material to absorb, store and release heat energy. It can be used to even-out variations in internal and external conditions, absorbing heat as temperatures rise and releasing it as they fall. Thermal mass can be used to store high thermal loads by absorbing heat introduced by external conditions, such as solar radiation, or by internal sources such as appliances and lighting, to be released when conditions are cooler.

Insulation

- New development should provide thermal insulation to any wall or roof to the exterior to prevent heat losses.
 Pay particular attention to heat bridges around corners and openings in the design stage.
- New development should provide acoustic insulation to prevent the transmission of sound between active (i.e: living room) and passive spaces (i.e: bedroom).

 New development should provide fire insulation and electrical insulation to prevent the passage of fire between spaces or components and to contain and separate electrical conductors.

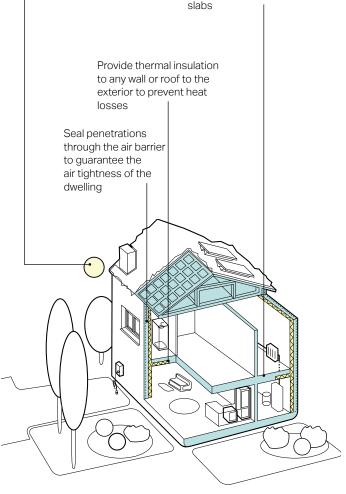
Air tightness

Airtight constructions help reduce heat loss, improving comfort and protecting the building fabric. Some guidelines for new development are:

- Form an airtightness layer in the floor, walls and roof.
- Seal the doors, windows and rooflights (if applicable) to the adjacent walls or roof.
- Link the interfaces between walls and floor and between walls and roof.
- Seal penetrations through the air barrier. Consider waste pipes and soil pipes, ventilation ducts, incoming water, gas, oil, electricity, data and district heating, chimneys and flues, including air supplies to wood burning stoves or similar, connections to external services, such as entry phones, outside lights, external taps and sockets, security cameras, satellite dishes.

Pay attention to possible thermal bridges in openings and corners

Provide thermal storage in construction elements, such as concrete floor

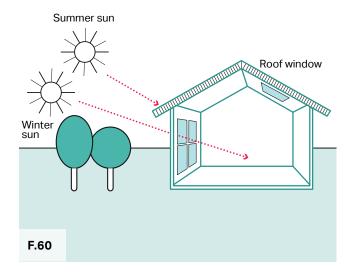


2.3.28 Aspect and orientation

Buildings should be designed to maximise solar gain, daylight and sun penetration, while avoiding overheating. Subject to topography and the clustering of existing buildings, they should be orientated to incorporate passive solar design principles. Those principles include:

- One of the main glazed elevations should be within 30° due south to benefit from solar heat gain. Any north-facing facades might have a similar proportion of window to wall area to minimise heat loss on this cooler side.
- If houses are not aligned east-west, rear wings could be included so that some of the property benefits from solar passive gain.

- Homes should be designed to avoid overheating through optimisation of glazed areas, natural ventilation strategies including high- and low- level openings, longer roof overhangs, deep window reveals and external louvres/ shutters to provide shading in hotter summer months
- North facing single aspect units should be avoided or mitigated with the use of reflective light or roof windows.



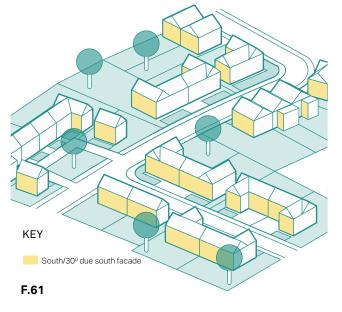


Figure 60: The use of roof window, pitch roof, location and size of windows in favour of maximising solar gain
Figure 61: Elevations that would benefit from passive solar gain

2.3.29 Renewable/low carbon energy

The use of renewable/low carbon energy solutions such as air and ground source heat pumps, district heating, and solar panels are strongly encouraged.

District heat networks may play an important role in the transition to low carbon energy. Centralised energy production systems are more efficient than individual heating systems and generate less carbon emissions.

The design and installation of solar panels should be done carefully considering potential implications within Conservation Areas; preserving the character of the town should be taken into account.

Some solutions of sensitive implementation of solar roof panels are suggested as follows:

Figure 62: Use of shingle-like solar panels on a slate roof, with the design and colour of the solar panels matching those of the adjacent slate tiles.

Figure 63: Positive example of implementing solar panels from the design stage.

Figure 64: Positive example of implementing solar panels from the design stage.

On new builds:

- Design solar panel features from the start, forming part of the design concept.
 Some attractive options are solar shingles and photovoltaic slates; and
- Use the solar panels as a material in their own right.







2.3.30 Rainwater and harvesting

SuDs

This section outlines a range of sustainable drainage solutions to potential drainage capacity and flooding problems in the parish. Although these design interventions can help improve drainage in the parish, other solutions might be needed to solve the main drainage issues.

The term SuDS stands for Sustainable Drainage Systems. It covers a range of approaches to managing surface water in a more sustainable way to reduce flood risk and improve water quality whilst improving amenity benefits.

SuDS work by reducing the amount and rate at which surface water reaches a waterway or combined sewer system. Usually, the most sustainable option is collecting this water for reuse, for example in a water butt or rainwater harvesting system, as this has the added benefit of reducing pressure on important water sources.

Where reuse is not possible there are two alternative approaches using SuDS:

- Infiltration, which allows water to percolate into the ground and eventually restore groundwater.
- Attenuation and controlled release, which holds back the water and slowly releases it into the sewer network. Although the overall volume entering the sewer system is the same, the peak flow is reduced. This reduces the risk of sewers overflowing. Attenuation and controlled release options are suitable when either infiltration is not possible (for example where the water table is high or soils are clay) or where infiltration could be polluting (such as on contaminated sites).

The most effective type or design of SuDS would depend on site-specific conditions such as underlying ground conditions, infiltration rate, slope, or presence of ground contamination. A number of overarching principles can however be applied:

- Manage surface water as close to where it originates as possible.
- Reduce runoff rates by facilitating infiltration into the ground or by providing attenuation that stores water to help slow its flow down so that it does not overwhelm water courses or the sewer network.
- Improve water quality by filtering pollutants to help avoid environmental contamination.
- Form a 'SuDS train' of two or three different surface water management approaches.
- Integrate into development and improve amenity through early consideration in the development process and good design practices.

- SuDS are often as important in areas that are not directly in an area of flood risk themselves, as they can help reduce downstream flood risk by storing water upstream.
- Some of the most effective SuDS are vegetated, using natural processes to slow and clean the water whilst increasing the biodiversity value of the area.
- Best practice SuDS schemes link to the water cycle to make the most efficient use of water resources by reusing surface water.
- SuDS must be designed sensitively to augment the landscape and provide biodiversity and amenity benefits.



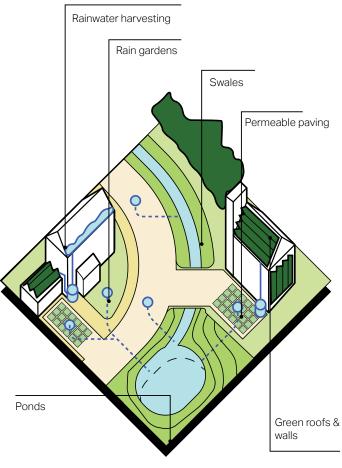


Figure 65: Examples of SuDS designed as a public amenity and fully integrated into the design of the public realm in Stockholm, Sweden

2.3.31 Bioretention systems

Bioretention systems, including soak away and rain gardens, can be used within each development, along verges, and in semi-natural green spaces. They must be designed to sit cohesively with the surrounding landscape, reflecting the natural character of the parish. Vegetation must reflect that of the surrounding environment.

They can be used at varying scales, from small-scale rain gardens serving individual properties, to long green-blue corridors incorporating bioretention swales, tree pits and mini-wetlands, serving roads or extensive built-up areas.

These planted spaces are designed to enable water to infiltrate into the ground. Less use of downpipes into drainage and, instead, enabling roof water to flow into rain gardens can significantly reduce the runoff into the sewer system.

The UK Rain Garden Design Guidelines provides more detailed guidance on their feasibility and suggests planting to help improve water quality as well as attract biodiversity.¹

¹ UK Rain Gardens Guide. Available at: https://raingardens.info/ wp-content/uploads/2012/07/UKRainGarden-Guide.pdf

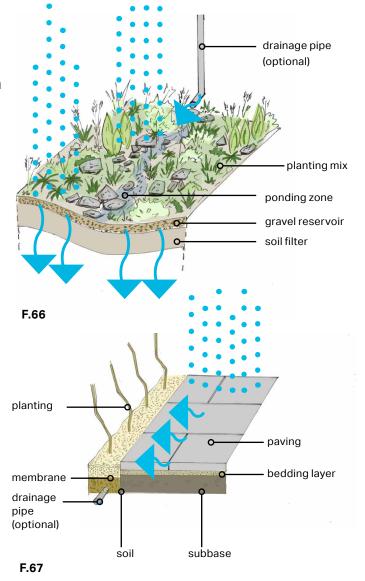


Figure 66: Diagram illustrating the functioning of a rain garden

Figure 67: Diagram illustrating the functioning of a soak away garden $\,$

2.3.32 Permeable pavements

Most built-up areas, including roads and driveways, increase impervious surfaces and reduce the capacity of the ground to absorb runoff water. This in turn increases the risks of surface water flooding. Permeable pavements offer a solution to maintain soil permeability while performing the function of conventional paving. The choice of permeable paving units must be made depending on the local context; the units may take the form of unbound gravel, clay pavers, or stone setts.

Permeable paving can be used where appropriate on footpaths, public squares, private access roads, driveways, and private areas within the individual development boundaries. In addition, permeable pavement must also have regard to:

- Flood and Water Management Act 2010,
 Schedule 3.¹
- The Building Regulations Part H Drainage and Waste Disposal.²

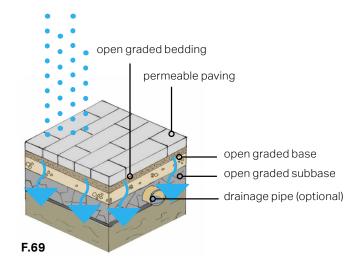
² Great Britain (2010). The Building Regulations Part H – Drainage and Waste Disposal. Available at: https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/442889/BR PDF AD H 2015.pdf

 Town and Country Planning (General Permitted Development) (England) Order 2015.³

Regulations, standards, and guidelines relevant to permeable paving and sustainable drainage are listed below:

- Sustainable Drainage Systems nonstatutory technical standards for sustainable drainage systems.⁴
- The SuDS Manual (C753).5

F.68



³ Great Britain (2015). Town and Country Planning (General Permitted Development) (England) Order 2015. Available at: http://www.legislation.gov.uk/uksi/2015/596/pdfs/uksi-20150596 en.pdf

⁴ Great Britain. Department for Environment, Food and Rural Affairs (2015). Sustainable drainage systems – non-statutory technical standards for sustainable drainage systems. Available at: https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/415773/sustainable-drainage-technical-standards.pdf

⁵ CIRIA (2015). The SuDS Manual (C753).

Figure 68: Example of a permeable paving option.
Figure 69: Diagram illustrating the functioning of a soak away.

2.3.33 Wildfriendly environment

Maintaining and creating a wild life friendly environment is a top priority for the parish. The existing green and blue assets give the opportunity for wildlife sites which can be the home of native species and plants. Some guidelines for future development are:

- Biodiversity and woodlands should be protected and enhanced where possible. Hedges, trees, road verges along roads as well as natural tree buffers should be protected when planning for new developments.
- Abrupt edges to development with little vegetation or landscape on the edge of the settlement should be avoided and, instead, a comprehensive landscape buffering should be encouraged.
- New developments and building extensions should aim to strengthen biodiversity and the natural environment.
- Ensure habitats are buffered. Widths of buffer zones should be wide enough and based on specific ecological function.

 New development proposals should include the creation of new habitats and wildlife corridors. This could be by aligning back and front gardens or installing bird boxes or bricks in walls. Wildlife corridors should be included to enable wildlife to travel to and from foraging areas and their dwelling areas.





Figure 70: Example of a bughouse located in an outdoor playground facility.

Figure 71: Example of a structure used as a frog habitat corridor located in an outdoor green space.

2.3.34 Storage and slow release

Rainwater harvesting refers to the systems allowing the capture and storage of rainwater as well as those enabling the reuse on-site of grey water.

Simple storage solutions, such as water butts, can help provide significant attenuation. To be able to continue to provide benefits, there has to be some headroom within the storage solution.

If water is not reused, a slow release valve allows water from the storage to trickle out, recreating capacity for future rainfall events. New digital technologies that predict rainfall events can enable stored water to be released when the sewer has greatest capacity to accept it.

These systems involve pipes and storage devices that could be unsightly if added without an integral vision for design.

Therefore, some design recommendation would be to:

- Conceal tanks by cladding them in complementary materials.
- Use attractive materials or finishing for pipes.
- Combine landscape/planters with water capture systems.
- Underground tanks.
- Utilise water bodies for storage.





Figure 72: Examples of water butts used for rainwater harvesting in Reach, Cambridgeshire

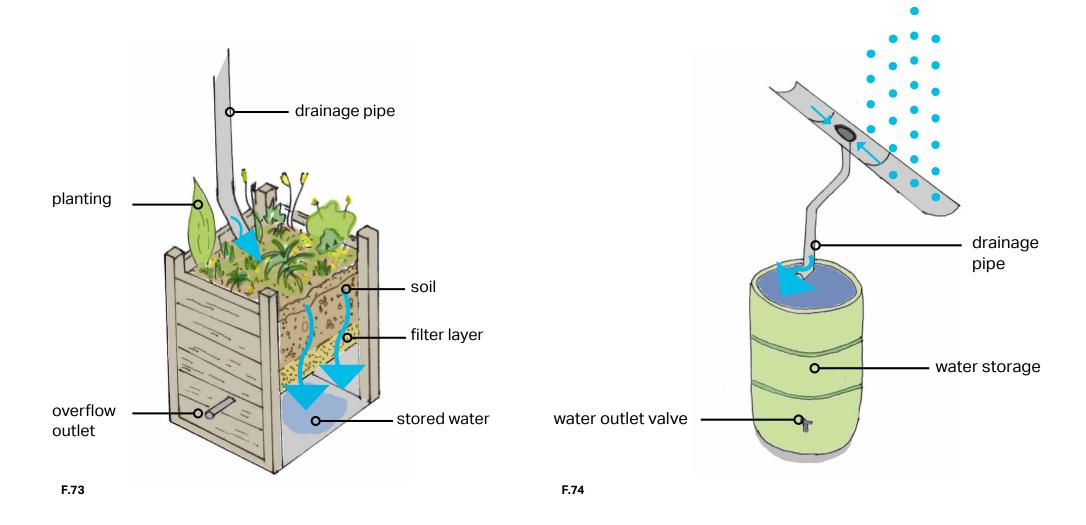


Figure 73: Diagram illustrating the functioning of a stormwater planter

Figure 74: Diagram illustrating the functioning of a water butt

2.3.35 Storage

Bicycles

- A straightforward way to encourage cycling is to provide secured spaces for bicyles within all new residential developments and publicly available cycle parking racks in the public realm.
- For residential units, covered and secured cycle parking should be provided within the domestic curtilage. The most appropriate location to avoid clutter on the streetscape is to provide space for bicycles within garage sheds or in secure bike storage boxes on the rear gardens.
- Access from the street to rear gardens should be provided via secured gates.
 Bulky bike storage on front gardens should be avoided.

Refuse bins

With modern requirements for waste separation and recycling, the number of household bins that need to be stored has generally increased. It is important that these are accommodated in ways that allow convenient access, and without increasing street clutter or harming the appearance of new buildings.

- The most appropriate location to avoid clutter on the streetscape is to provide space for waste bins in rear gardens.
- It is normally advisable to have access
 to the back garden from the street with a
 secured door. It is also recommended to
 have direct exit to the back garden via the
 kitchen. A paved section on the garden
 can be located nearby and hold the
 required bins so they can take the organic
 waste generated in the kitchen and be
 taken out to the front of the property for
 collection.
- There are several solutions to minimise the presence of wheelie bins on the garden, by using screening or planting to conceal them.





Figure 75: Provide secured storage space for bikes within the domestic curtilage.

Figure 76: Positive example on how to conceal the presence of bins in back gardens.

Community storage/ recycling area

For developments of up to 3 flats individual bins should be used for waste collection. For developments of 3 or more flats communal bins should be used. The formula below should be used to estimate the storage space required for a centralised collection area:

Number of x Footprint x Manoeuvre containers of each factor*

*The manoeuvre factor allocates space required to move the containers inside the storage facility. A value of 2.00 to 2.25 is recommended

The layout and design of communal bin storage facilities located in internal and/or external spaces and on the ground floor/basement of buildings should follows the following principles:

 The siting and design of bin storage areas should consider the impact of noise and smells on the occupiers of neighbouring properties, existing and proposed.

- Bin storage areas should be planned as an integral part of the design of the development. The enclosed area should be provided with appropriate drainage to assist cleaning. The storage area should be easily accessible to residents of all abilities and located within 10 m of the nearest kerbside or stopping point of the collection vehicle:
- Bin storage areas should be well lit and ventilated to promote responsible use of the bin store and ensure a clean environment is maintained.







General questions to ask and issues to consider when presented with a development proposal

Because the design guidelines and codes in this chapter cannot cover all design eventualities, this section provides a number of questions based on established good practice against which the design proposal should be evaluated. The aim is to help the Town Council to best assess all proposals by objectively answering the questions below. Not all the questions will apply to every development. The relevant ones, however, should provide an assessment as to whether the design proposal has taken into account the context and provided an adequate design solution.

As a first step there are a number of ideas or principles that should be present in all proposals. These are listed under 'General design guidelines for new development'. Following these ideas and principles, a number of questions are listed for more specific topics.

1

General design guidelines for new development:

- Does it integrate with existing paths, streets, circulation networks and patterns of activity?
- Does it reinforce or enhance the established settlement character of streets, greens, and other spaces?
- Does it harmonise and enhance existing settlement in terms of physical form, architecture and land use?
- Does it relate well to local topography and landscape features, including prominent ridge lines and long-distance views?
- Does it reflect, respect, and reinforce local architecture and historic distinctiveness?
- Does it retain and incorporate important existing features into the development?
- Does it respect surrounding buildings in terms of scale, height, form and massing?

- Does it adopt contextually appropriate materials and details?
- Does it provide adequate open space for the development in terms of both quantity and quality?
- Does it incorporate necessary services and drainage infrastructure without causing unacceptable harm to retained features?
- Does it ensure all components e.g. buildings, landscapes, access routes, parking and open space are well related to each other?
- Does it make sufficient provision for sustainable waste management (including facilities for kerbside collection, waste separation, and minimisation where appropriate) without adverse impact on the street scene, the local landscape or the amenities of neighbours?

1 (continued)

- Does it positively integrate energy efficient technologies?
- Does it ensure that places are designed with management, maintenance and the upkeep of utilities in mind?
- Does it seek to implement passive environmental design principles by, firstly, considering how the site layout can optimise beneficial solar gain and reduce energy demands (e.g. insulation), before specification of energy efficient building services and finally incorporate renewable energy sources?

2

Street grid and layout:

- Does it favour accessibility and connectivity? If not, why?
- Do the new points of access and street layout have regard for all users of the development; in particular pedestrians, cyclists and those with disabilities?
- What are the essential characteristics of the existing street pattern; are these reflected in the proposal?
- How will the new design or extension integrate with the existing street arrangement?
- Are the new points of access appropriate in terms of patterns of movement?
- Do the points of access conform to the statutory technical requirements?

Local green spaces, views and character:

- What are the particular characteristics of this area which have been taken into account in the design; i.e. what are the landscape qualities of the area?
- Does the proposal maintain or enhance any identified views or views in general?
- How does the proposal affect the trees on or adjacent to the site?
- Can trees be used to provide natural shading from unwanted solar gain? i.e. deciduous trees can limit solar gains in summer, while maximising them in winter.
- Has the proposal been considered within its wider physical context?
- Has the impact on the landscape quality of the area been taken into account?
- In rural locations, has the impact of the development on the tranquillity of the area been fully considered?

- How does the proposal impact on existing views which are important to the area and how are these views incorporated in the design?
- Can any new views be created?
- Is there adequate amenity space for the development?
- Does the new development respect and enhance existing amenity space?
- Have opportunities for enhancing existing amenity spaces been explored?
- Will any communal amenity space be created? If so, how will this be used by the new owners and how will it be managed?

- Is there opportunity to increase the local area biodiversity?
- Can green space be used for natural flood prevention e.g. permeable landscaping, swales etc.?
- Can water bodies be used to provide evaporative cooling?
- Is there space to consider a ground source heat pump array, either horizontal ground loop or borehole (if excavation is required)?

Gateway and access features:

- What is the arrival point, how is it designed?
- Does the proposal maintain or enhance the existing gaps between settlements?
- Does the proposal affect or change the setting of a listed building or listed landscape?
- Is the landscaping to be hard or soft?

5

Buildings layout and grouping

- What are the typical groupings of buildings?
- How have the existing groupings been reflected in the proposal?
- Are proposed groups of buildings offering variety and texture to the townscape?
- What effect would the proposal have on the streetscape?
- Does the proposal maintain the character of dwelling clusters stemming from the main road?
- Does the proposal overlook any adjacent properties or gardens?
 How is this mitigated?

- Subject to topography and the clustering of existing buildings, are new buildings oriented to incorporate passive solar design principles, with, for example, one of the main glazed elevations within 30° due south, whilst also minimising overheating risk?
- Can buildings with complementary energy profiles be clustered together such that a communal low carbon energy source could be used to supply multiple buildings that might require energy at different times of day or night? This is to reduce peak loads. And/or can waste heat from one building be extracted to provide cooling to that building as well as heat to another building?

Building line and boundary treatment

- What are the characteristics of the building line?
- How has the building line been respected in the proposals?
- Has the appropriateness of the boundary treatments been considered in the context of the site?

7

Building heights and roofline

- What are the characteristics of the roofline?
- Have the proposals paid careful attention to height, form, massing and scale?
- If a higher than average building(s) is proposed, what would be the reason for making the development higher?
- Will the roof structure be capable of supporting a photovoltaic or solar thermal array either now, or in the future?
- Will the inclusion of roof mounted renewable technologies be an issue from a visual or planning perspective?
 If so, can they be screened from view, being careful not to cause over shading?

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8

Household extensions

- Does the proposed design respect the character of the area and the immediate neighbourhood, and does it have an adverse impact on neighbouring properties in relation to privacy, overbearing or overshadowing impact?
- Is the roof form of the extension appropriate to the original dwelling (considering angle of pitch)?
- Do the proposed materials match those of the existing dwelling?
- In case of side extensions, does it retain important gaps within the street scene and avoid a 'terracing effect'?

8 (continued)

- Are there any proposed dormer roof extensions set within the roof slope?
- Does the proposed extension respond to the existing pattern of window and door openings?
- Is the side extension set back from the front of the house?
- Does the extension offer the opportunity to retrofit energy efficiency measures to the existing building?
- Can any materials be re-used in situ to reduce waste and embodied carbon?

9

Building materials and surface treatment

- What is the distinctive material in the area?
- Does the proposed material harmonise with the local materials?
- Does the proposal use high-quality materials?
- Have the details of the windows, doors, eaves and roof details been addressed in the context of the overall design?
- Do the new proposed materials respect or enhance the existing area or adversely change its character?

- Are recycled materials, or those with high recycled content proposed?
- Has the embodied carbon of the materials been considered and are there options which can reduce the embodied carbon of the design? For example, wood structures and concrete alternatives.

Car parking

- What parking solutions have been considered?
- Are the car spaces located and arranged in a way that is not dominant or detrimental to the sense of place?
- Has planting been considered to soften the presence of cars?
- Does the proposed car parking compromise the amenity of adjoining properties?
- Have the needs of wheelchair users been considered?
- Can electric vehicle charging points be provided?
- Can secure cycle storage be provided at an individual building level or through a central/ communal facility where appropriate?
- If covered car ports or cycle storage is included, can it incorporate roof mounted photovoltaic panels or a biodiverse roof in its design?

11

Architectural details and design

- If the proposal is within a Conservation Area, how are the characteristics reflected in the design?
- Does the proposal harmonise with the adjacent properties?
- This means that it follows the height massing and general proportions of adjacent buildings and how it takes cues from materials and other physical characteristics.
- Does the proposal maintain or enhance the existing landscape features?
- Has the local architectural character and precedent been demonstrated in the proposals?
- If the proposal is a contemporary design, are the details and materials of a sufficiently high enough quality and does it relate specifically to the architectural characteristics and scale of the site?

- Is it possible to incorporate passive environmental design features such as larger roof overhangs, deeper window reveals and/or external louvres/shutters to provide shading in hotter months?
- Can the building designs utilise thermal mass to minimise heat transfer and provide free cooling?
- Can any external structures such as balconies be fixed to the outside of the building, as opposed to cantilevering through the building fabric to reduce thermal bridge?

Next steps

03



3. Next steps

The Design Guidelines and Codes will be a valuable tool in securing context-driven, high quality development within the South Saxmundham Garden Neighbourhood. They will be used in different ways by different actors in the planning and development process, as summarised in the table.

ACTORS	HOW THEY WILL USE THE DESIGN GUIDELINES
Applicants, developers, and landowners	As a guide to community and Local Planning Authority expectations on design, allowing a degree of certainty – they will be expected to follow the Guidelines as planning consent is sought.
Local Planning Authority	As a reference point, embedded in policy, against which to assess planning applications. The Design Guidelines and Codes should be discussed with applicants during any pre-application discussions.
Town Council	As a guide when commenting on planning applications, ensuring that the Design Guidelines and Codes are complied with.
Community organisations	As a tool to promote community-backed development and to inform comments on planning applications.
Statutory consultees	As a reference point when commenting on planning applications.