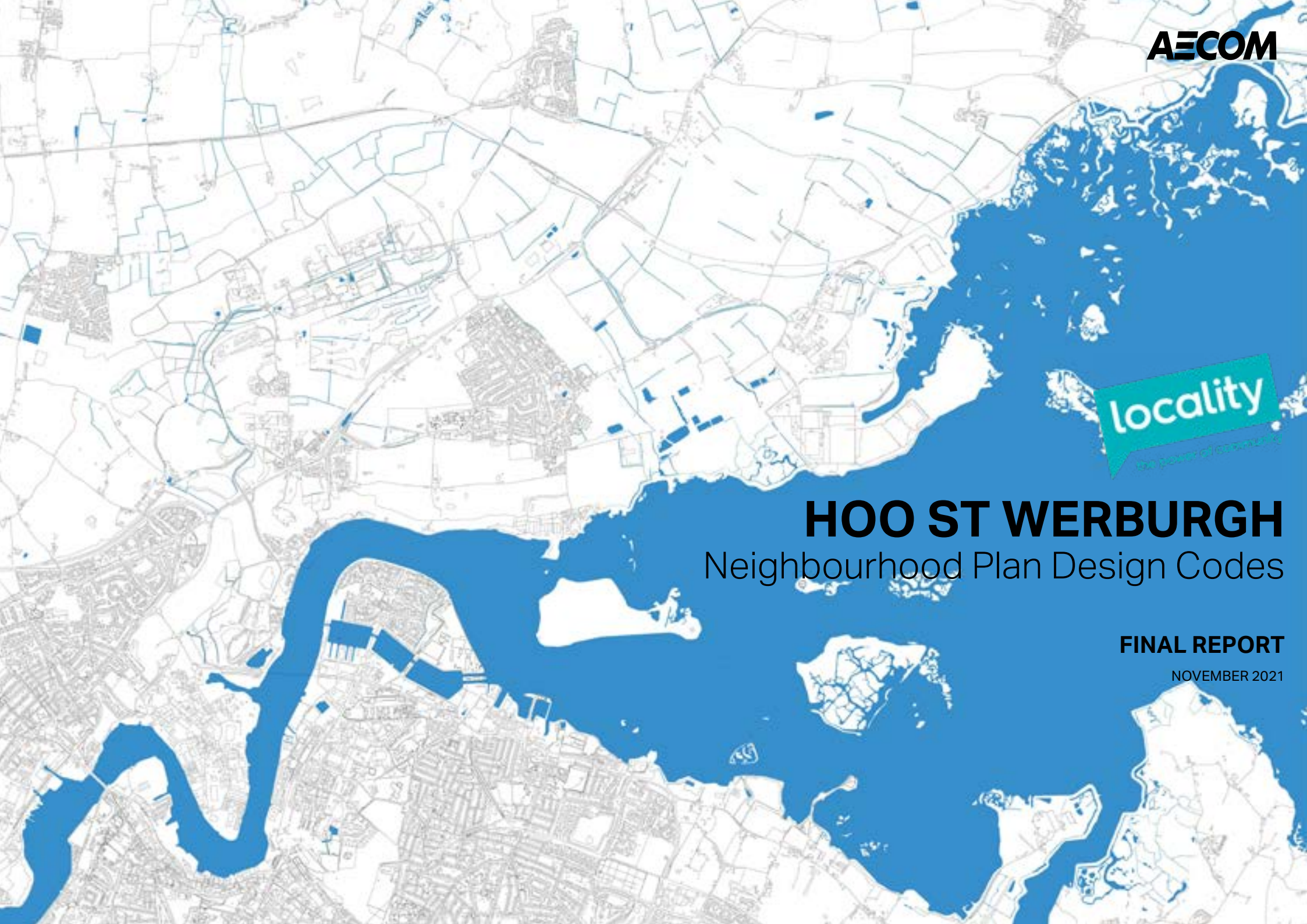

AECOM

locality

HOO ST WERBURGH

Neighbourhood Plan Design Codes

FINAL REPORT

NOVEMBER 2021

Quality information

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Revision History

Revision	Revision date	Details	Name	Position
3	05.11.2021	Edits	Ben Castell	Director
2	04.07.2021	Review	Elaine Cutting	Hoo St Werburgh Parish Council
1	21.06.2021	Review	Ben Castell	Director
0	10.03.2021	Research, site visit, drawings	Jing Yuan	Senior Urban Designer

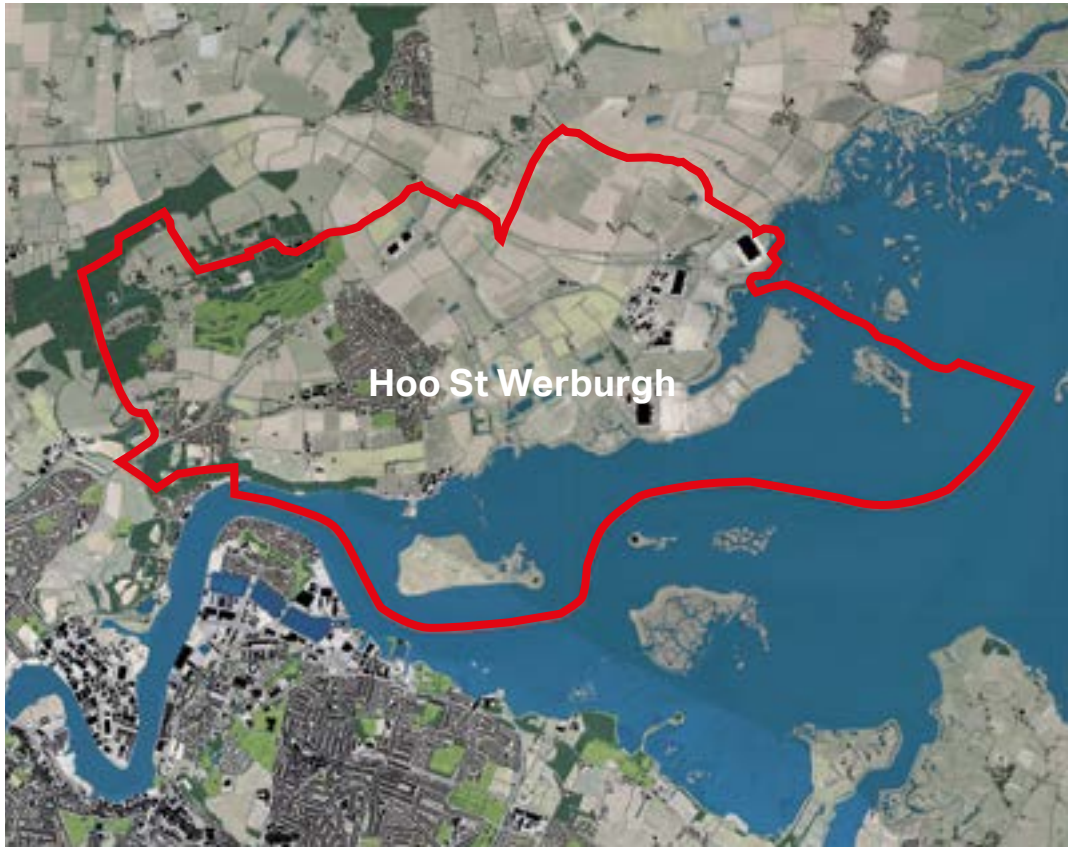

Figure 1: Aerial photograph of Hoo St Werburgh with the parish boundary highlighted

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Introduction

01

1. Introduction

1.1. Introduction

Through the Government Neighbourhood Planning Programme led by Locality, AECOM has been commissioned to provide design support to Hoo St Werburgh Parish Council.

The emerging Medway Local Plan envisages a very high level of growth for Hoo St Werburgh. It is crucial that the quality of new development is very high. This document supports Neighbourhood Plan policies on design and provides a framework for the assessment of development proposals.

1.2. Objective

The main objective of this report is to develop design codes for the Neighbourhood Plan that will inform the design of future planning applications and residential developments in the Neighbourhood Plan Area. It promotes the creation of distinctive places that are integrated into the Parish.

1.3. Process

Following an inception meeting and a virtual site visit, AECOM and Hoo St Werburgh Neighbourhood Plan steering group members carried out a high level assessment of the village. The following steps were agreed with the group to produce this report:

- Initial meeting between AECOM and the Hoo St Werburgh Neighbourhood Planning Group and joint site visit;
- Review of existing baseline documents;
- Preparation of design codes and guidance;
- Draft report; and
- Final report.

1.4. Area of study

Hoo St Werburgh is a parish in the Medway district of Kent, situated 5 miles to north-east of Rochester.

The parish includes two villages - Hoo St Werburgh and Chattenden - as well as the Hoo Marina and London Medway Commercial Park (formerly Kingsnorth Industrial Estate and power station).

The Parish is connected to the Medway towns and the wider Kent area via the A228, although this route gets congested as peak times due to the volume of traffic and lack of alternatives. The main vehicular accesses are provided by Main Road connecting Chattenden and the large scale industrial estate and former power station. The existing nearest station is Strood, located within 25 minutes cycling distance. It provides direct services to London via Southeastern and Thameslink lines.

Hoo St Werburgh is the largest settlement on the Peninsula, as well as a Service Centre function for wider Peninsula. At the time of the 2011 census, Hoo St Werburgh Parish had 8,945 usual residents.

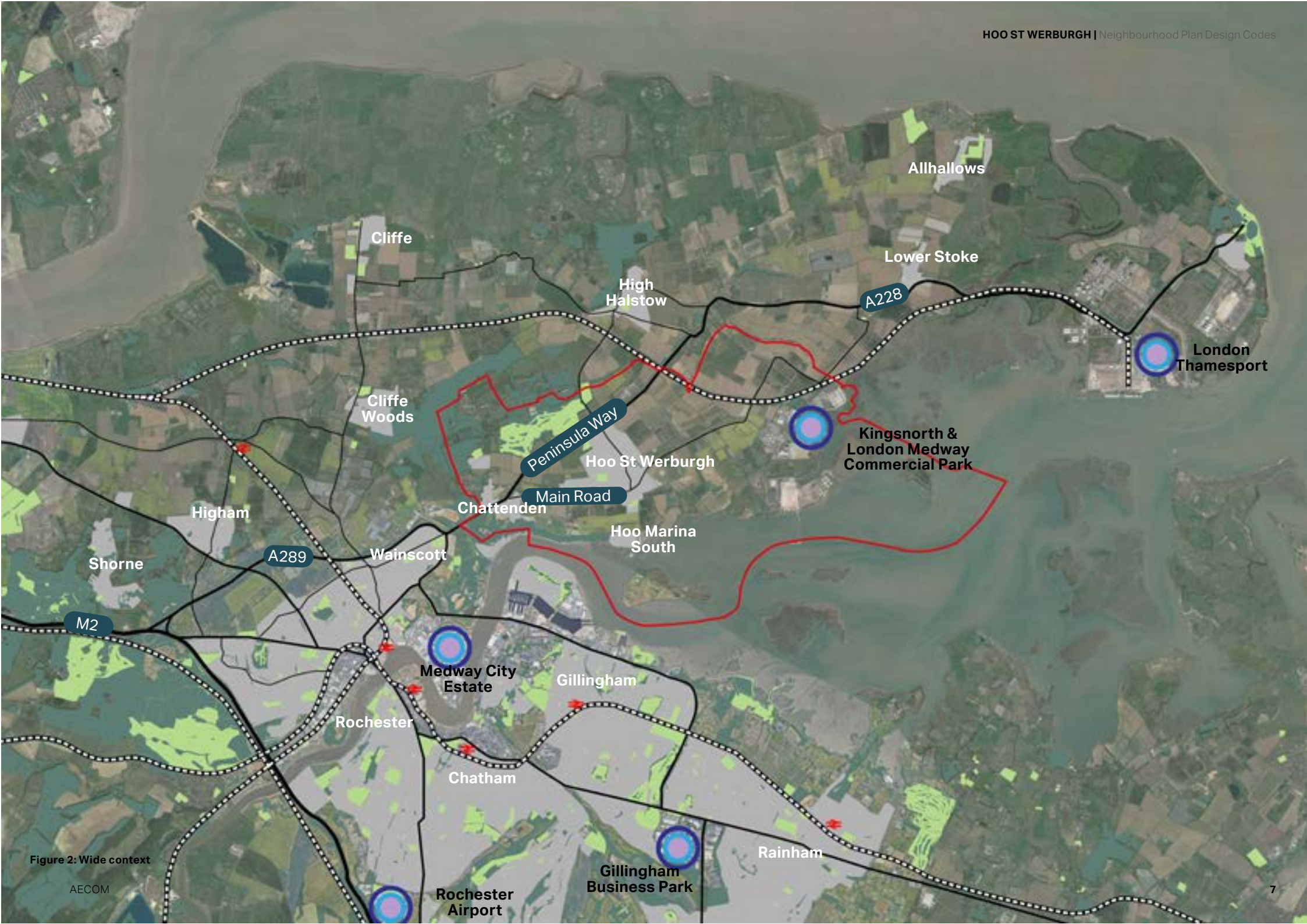


Figure 2: Wide context

Local Context

02

2. Local Context

2.1. Planning context

This section notes the existing and emerging planning policy context and highlights the policies of particular relevance. The current Development Plan for Medway is largely made up of the saved policies from the Medway Local Plan adopted in 2003. Medway Council is currently preparing a new Local Plan which will set out the vision for future development in Medway up to 2037. It is anticipated that the new plan will be adopted in 2022, subject to the outcomes of an independent examination. Once adopted it will replace the saved policies from the Medway Local Plan 2003.

Medway Local Plan (adopted 2003)

The Local plan identifies Hoo St. Werburgh as the preferred location for a significant increase in housing due to the presence of a wide range of services and necessary additional services will also need to be focused upon this settlement.

Policy H1: New Residential Development

- *ME390 East of Bell's Lane, Hoo St. Werburgh – 340 units*
- *ME389 Rear of Elm Avenue, Chattenden – 150 units*
- *MC001 Lodge Hill, Chattenden – 47 units*

Policy S14: Ministry of Defence Estate, Chattenden - *The council will not permit the piecemeal redevelopment of the Chattenden Barracks and military training areas during the lifetime of this plan. The site has long term development potential for business, educational and/or residential uses and this will be considered in the next review of the Medway local plan.*

Kingsnorth: *The designated existing site includes the Kingsnorth Power Station, and London Medway Commercial Park, which contains a mixture of general industries. Further development on adjacent land will be permitted for Class B1, B2 and B8 uses under Policy S12.*

Emerging Medway Local Plan (2019 to 2037)

The Development Strategy in general is a document which sets out the council's proposed approach to growth in Medway which will feed into the new Local Plan. It anticipates a significant amount of development in the Parish.

Section 3 - Development Strategy

Paragraph 3.27 "Growth would involve a number of strategic landholdings in and around Hoo St. Werburgh and Chattenden…"

Paragraph 3.56 "The emerging proposal seeks to deliver a residential led scheme for up to 2,000 homes, as part of a wider strategic development of the wider Hoo rural town. It would also include land for a primary school, over 29 hectares of public open space, some mixed use facilities, for community uses, small retail units and commercial land. The proposal focuses on two areas – expanding the existing Chattenden village, and a new village at Lodge Hill Camp. Development at an expanded Chattenden would seek to sensitively integrate with the current village, as well as possible development that may come forward on adjacent land as part of a strategic growth allocation…"

Section 4 - Housing

Paragraph 4.4 "…The proposal for a small rural town on the Hoo Peninsula would provide for a wide range and mix of housing types, that could provide homes suitable for different groups in society. Infrastructure, services, green spaces, shops and employment areas would also be planned as part of new residential areas to provide balanced growth."

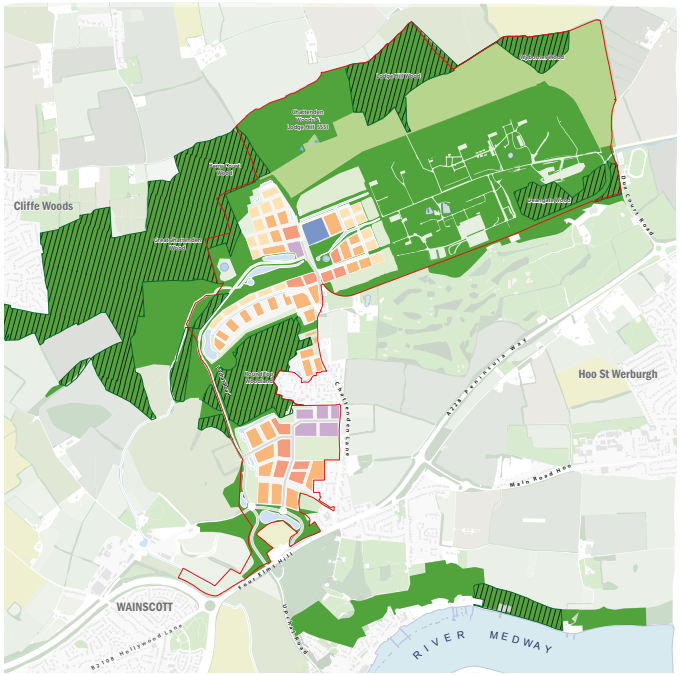


Figure 3: Lodge Hill Masterplan (Source: Development Strategy)

2.2. Major sites with planning permission or applications

Medway One

This is a major scheme to redevelop the disused Kingsnorth Power Station

- Area: 113 hectares (62 hectares of the site is readily available).
- Majority of the site is allocated in the current adopted Medway Local Plan 2003, for industrial development. In the emerging Local Plan, Future Medway, also identifies the Kingsnorth site as an appropriate area for more intensive commercial activities, whilst also offering opportunities for energy uses.
- An outline planning application, with all matters reserved (except access), was submitted to Medway Council in Spring 2021.

Cockham Community Parkland

A planning application has been submitted for land on the ridge (MC/20/3264) on Cockham community parkland funded by HIF bid money

"Change of use from agricultural land to community park, comprising the installation of a toilet facility, formation of two car and cycle parking areas, two vehicle accesses (Main Road and Vicarage Lane), landscaping, tree planting, boundary treatments and associated works."

Figure 4: Medway One Illustrative Masterplan (Source: Medway One)

Figure 5: Cockham community parkland (Source: Planning Application Documents MC/20/3264)

2.3. Sites overview

Numerous sites have been identified by Medway Council (Medway Strategic Land Availability Assessment (SLAA) 2019) as being potentially suitable for development, enabled by transport and environmental improvements and mitigation from the Housing Infrastructure Fund (HIF).

It should be noted that at this stage the sites are only found to be potentially suitable but not allocated. Allocation is subject to Local Plan processes.

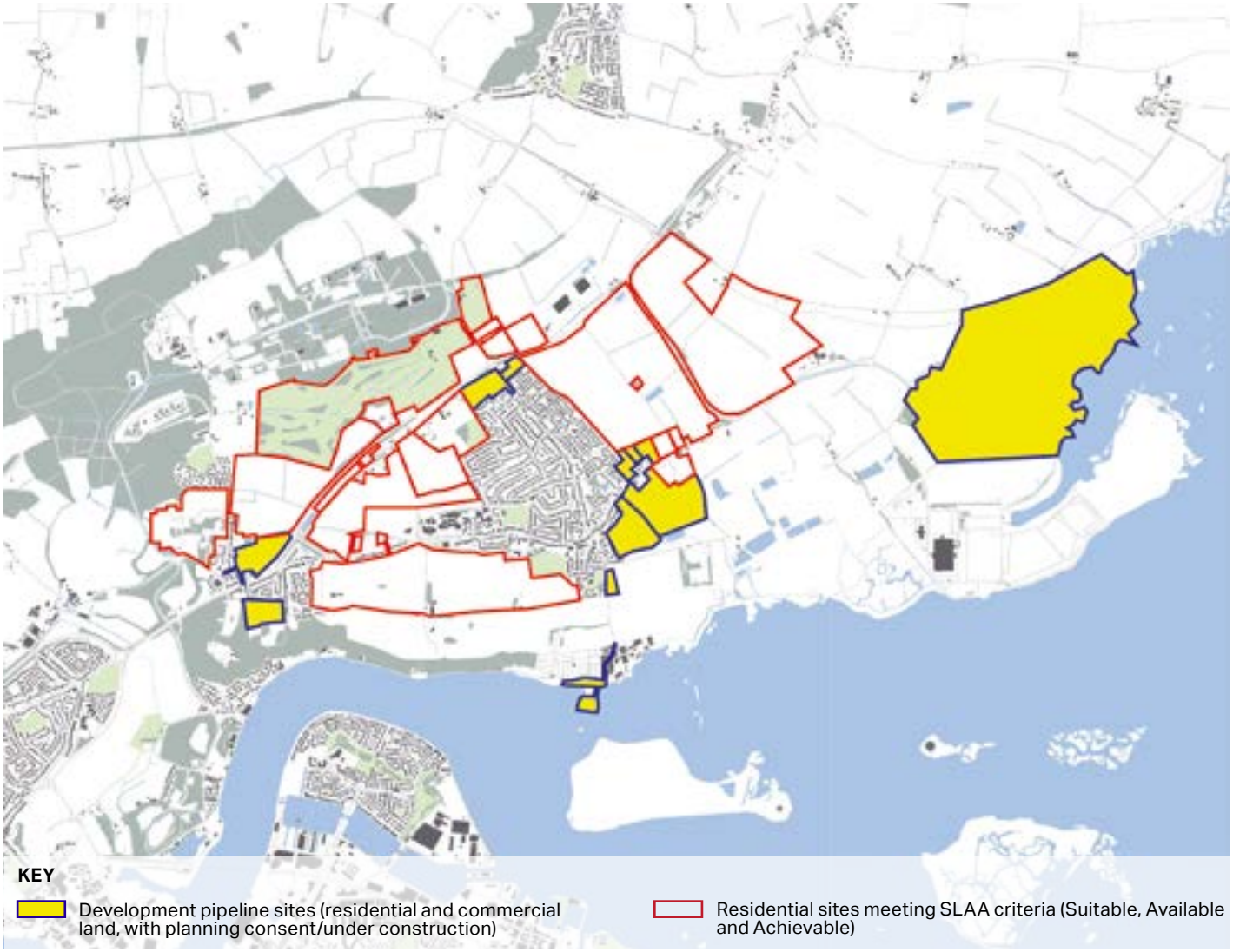


Figure 6: Medway SLAA 2019 sites

2.4. Major infrastructure proposals

As noted above, Medway Council has been granted money by Government (HIF) for road and infrastructure to unlock significant housing growth in the area. The infrastructure works are due to complete Spring 2024.

Hoo New Routes to Good Growth (HIF Consultation Proposals - January 2021) states:

"Secured £170 million funding from government for the proposal outlines in the report. They comprise highway improvements on the Hoo Peninsula, a new railway station south of Sharnal Street and the reintroduction of a passenger rail service, and environmental management measures."

"The HIF proposals are intended to address the challenge of getting on and off the peninsula by providing three ways on and three ways off of the peninsula (the new road linking the A289 to A228, the existing but improved Four Elms Hill junction and the new rail passenger service). This is in addition to the improvements being planned for Bell's Lane, Ropers Lane and Main Road junctions."

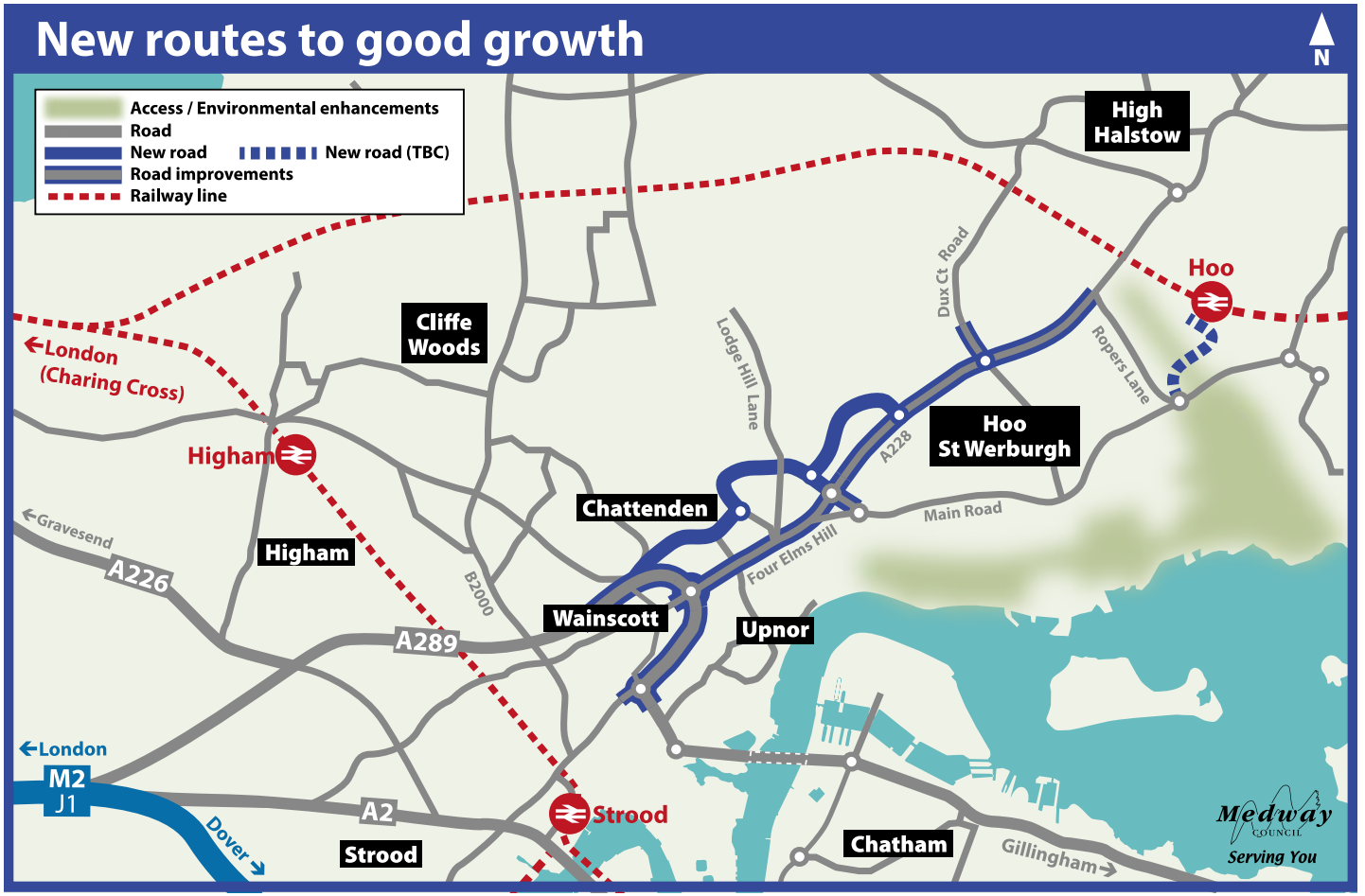


Figure 7: Proposed routes (Source: Hoo, New Routes to Good Growth)

2.5. Movement

The main vehicular accesses are provided by Main Road connecting Chattenden and Kingsnorth. The A228 is directly linked to Medway towns and wider Kent area, which providing significant but congested east-west connections.

The network of footpaths is of high importance to Hoo St. Werburgh. Connecting people with nature and offering alternative ways of transportation is important for national and local planning policy and the Neighbourhood Plan. The existing footpaths facilitate connection with the countryside which surrounds the settlement. Furthermore, footpaths also offer easy access to the beach, existing woodlands, amenity spaces located within and outside the settlement.

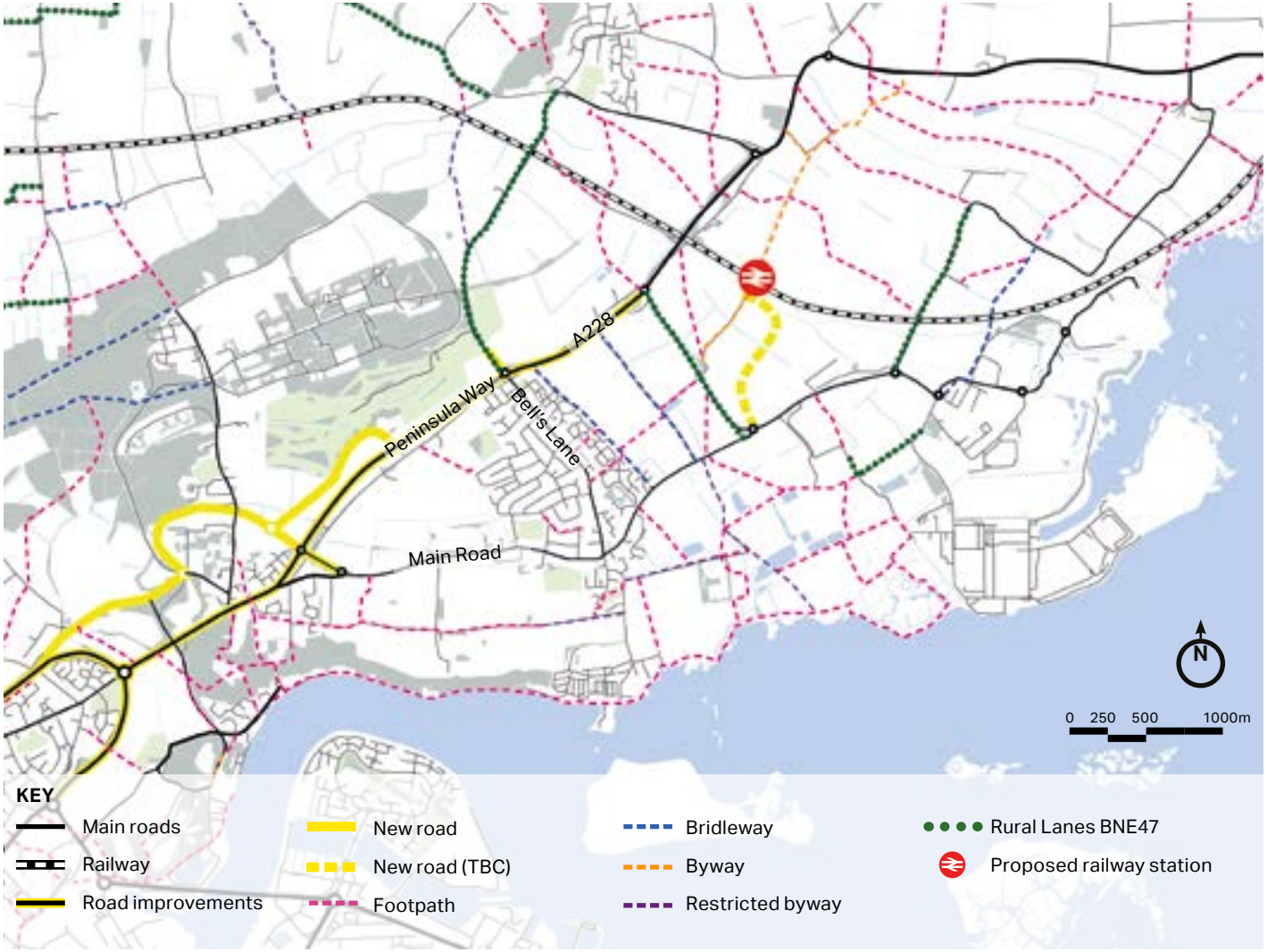


Figure 8: Transport context

2.6. Landscape character

The Parish is located within the Greater Thames Estuary National Character Area (NCA 81) as defined by Natural England. At a county scale, the Parish is located within the Hoo Peninsula character area and the Medway Marshes character area, as defined by Medway Landscape Character Assessment. The characteristic features of these character areas are:

Medway Marshes

- *"Open expansive areas of marshland with big skies and wide views; includes substantial areas of water which contribute to a strong sense of place*
- *An area of high biodiversity value with national and international designations"*

Hoo Peninsula

- *"flat or undulating arable farmland – large open arable fields with long views*
- *Broad leaved woodland (much of it protected with ancient woodland and SSSI designations) forms significant landscape feature*
- *Includes a number of RSME sites; notably Lodge Hill site identified for development as a new, mixed-use* settlement
- *Role of countryside of Hoo Peninsula (farmland, woodland and villages) to provide a rural green buffer between the protected areas of the Thames and Medway estuaries and the urban settlements of Medway."*

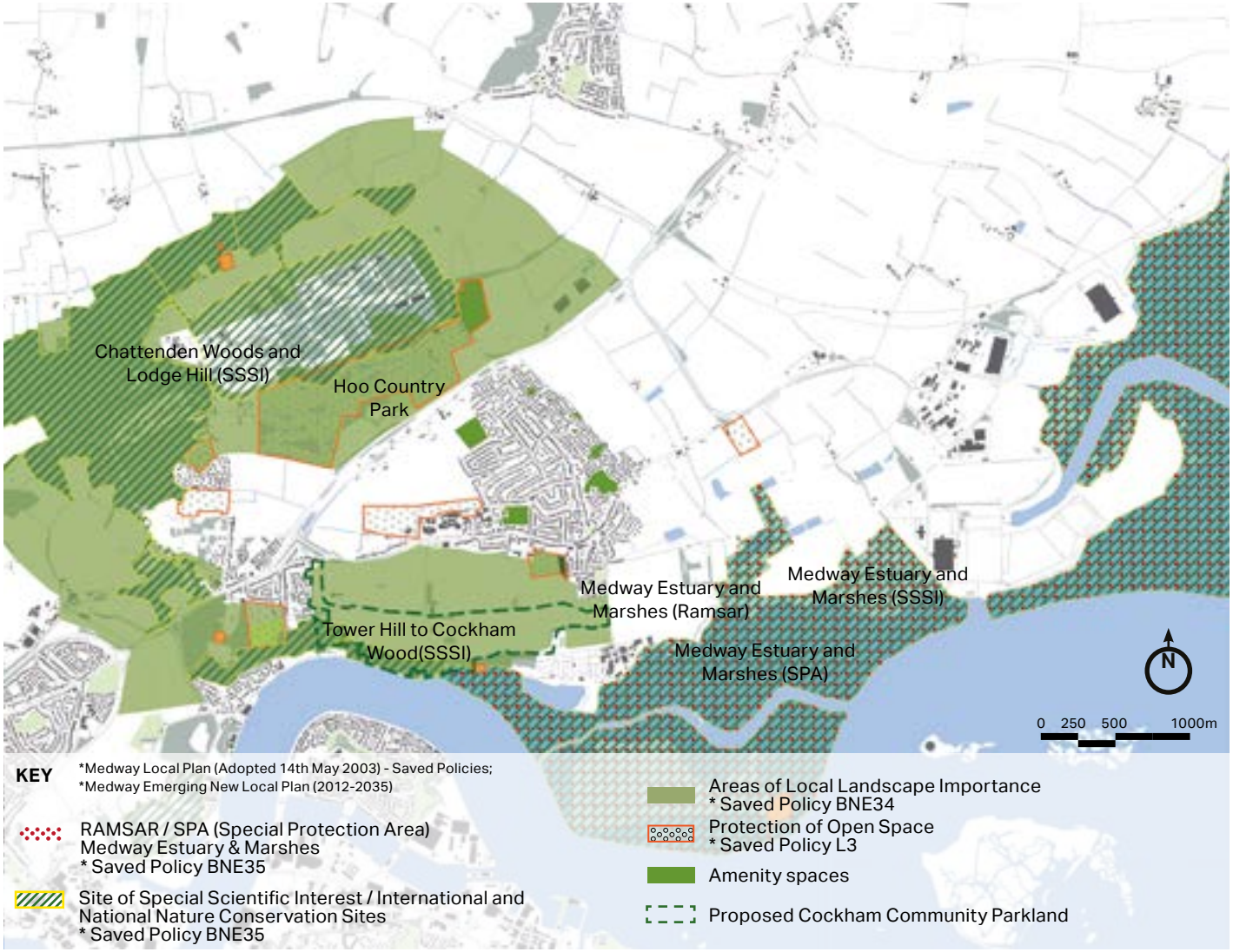


Figure 9: Landscape related designations

2.7. Land uses

Besides residential buildings, the Parish is mostly made up of local retail, service and employment uses. There is a cluster of educational facilities with accessed provided by Main Road (including the St Werburgh Primary School, Marlborough Centre, Hundred of Hoo Nursery & Kids Club and The hundred of Hoo Academy). Retails are situated close together in the historical core of the village, which serve as a local centre for the villagers.

London Medway Commercial Park and former power station and Hoo Marina Industrial Estate provide major employment spaces.

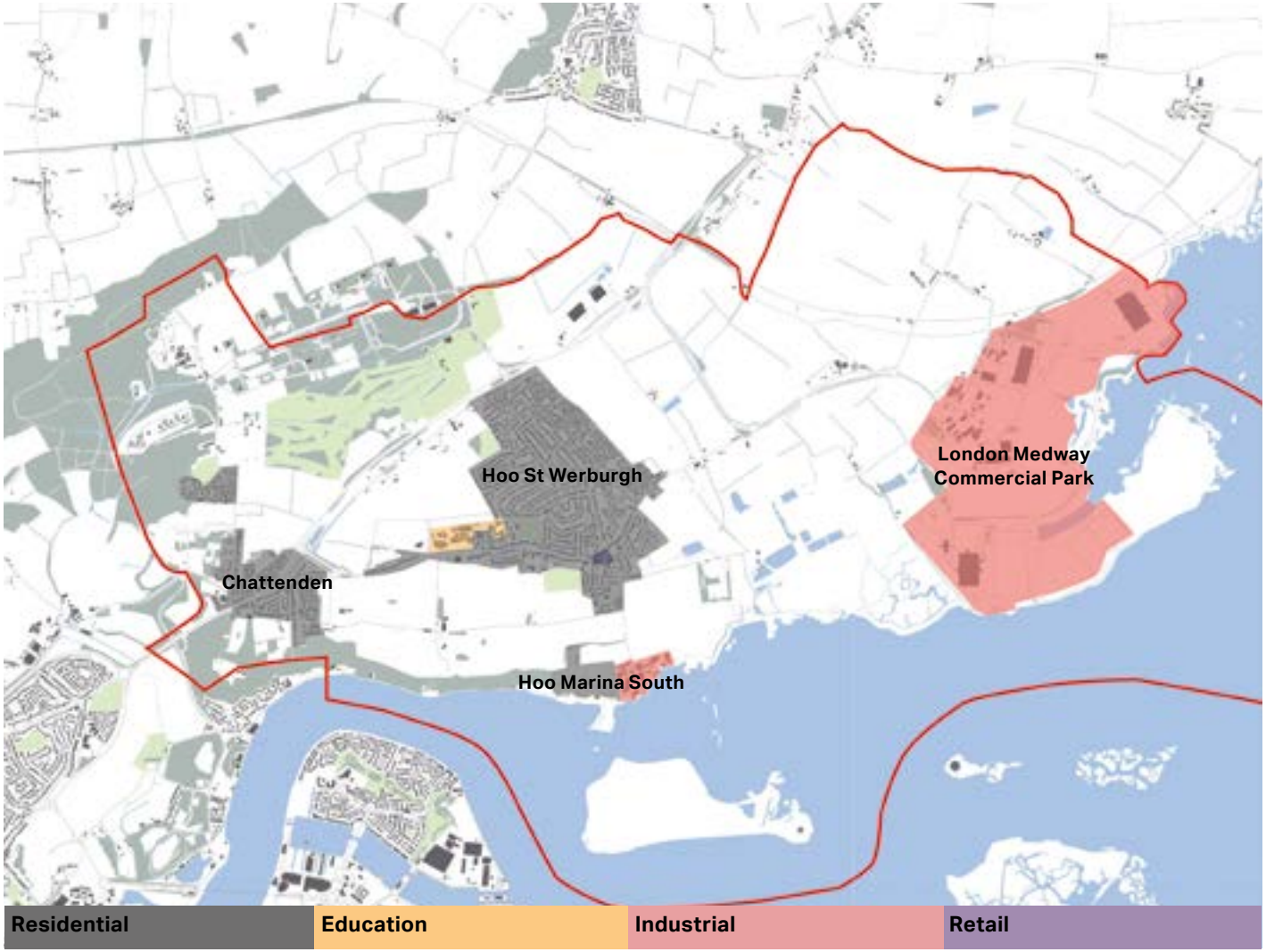


Figure 10: Lane uses

2.8. Built form

Developments within the Parish vary in age and characteristics that can be categorised by the different time periods in which they were established.

These residential areas are categorised as follows:

- Pre-1930s residential areas;
- 1930s-1940s residential areas;
- 1950s-1960s residential areas;
- 1970s-1980s residential areas
- 1990s-2000s residential areas; and
- Most recent residential areas.

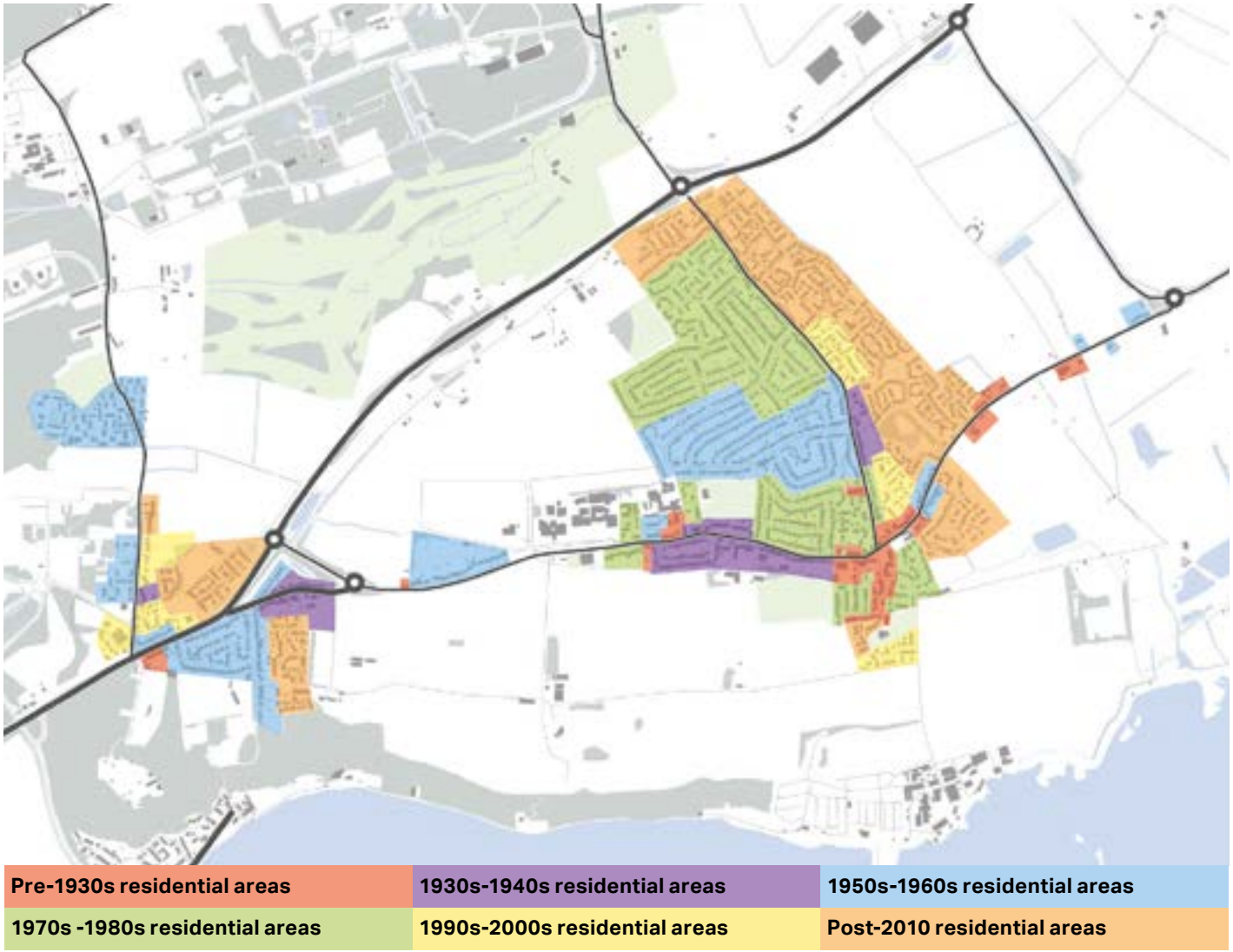


Figure 11: Residential areas by predominant period of construction

Pre-1930s residential areas

The houses in these areas are predominantly terraced and detached houses sitting immediately to the back of the footpath, with no or little setback, although some have only a small front garden or planting strip of insufficient size to allow for vehicle parking.

The terraced houses in these areas have distinct façades with uniformed dormers.

Local vernacular is provided in the brick built dwellings.

Figure 12: Main Road

Figure 13: Church Street

1930s-1940s residential areas

The houses in these areas are mostly semi-detached and terraced with buildings limited to 2 storey in height.

Building details are very rare. Render is often a feature of this area.

Figure 14: St Werburgh Crescent

Figure 15: Main Road Chattenden

1950s-1960s residential areas

The houses in these areas are predominantly one and two storey detached and semi-detached. Some houses however are 1.5 storeys.

The regular breaks between buildings, considerable set back from the street create a more public feel throughout the neighbourhoods. The houses are typically red brick and have consistent building lines.

Figure 16: Broadwood Road

Figure 17: Miskin Road

1970s-1980s residential areas

These character areas feature bungalows and semi-detached houses. The street layouts are more continuous and tend to avoid cul-de-sacs..

The more uniform built form produces consistent building lines. These developments are articulated by gently curving roads following contours, creating attractive streetscape.

Theses areas also feature sloping front gardens with well maintained garden vegetation. However some houses with relatively small and steep front gardens cannot accommodate a on-plot car parking space.

Typical materials used in these areas are red brick and sometimes hung tiles on upper floors of the buildings.

Figure 18: Marley Road

Figure 19: King's Hill Drive

1990s -2000s residential areas

Short cul-de-sacs and no-through roads have been used to structure layouts for these developments.

Most houses are detached and semi-detached with private driveways and garages but with much smaller front gardens compared to the previous period.

Houses are diversified in terms of details and materials. Dormer, chimney, bay window and porch are widely-used. There are white painted timber weatherboarding, red brick and hung tiles on upper floors of the buildings, which are sympathetic in local vernacular, strongly contributing to the character of the villages.

Figure 20: Church Farm Close

Figure 22: Grandsire Gardens

Post-2010 residential areas

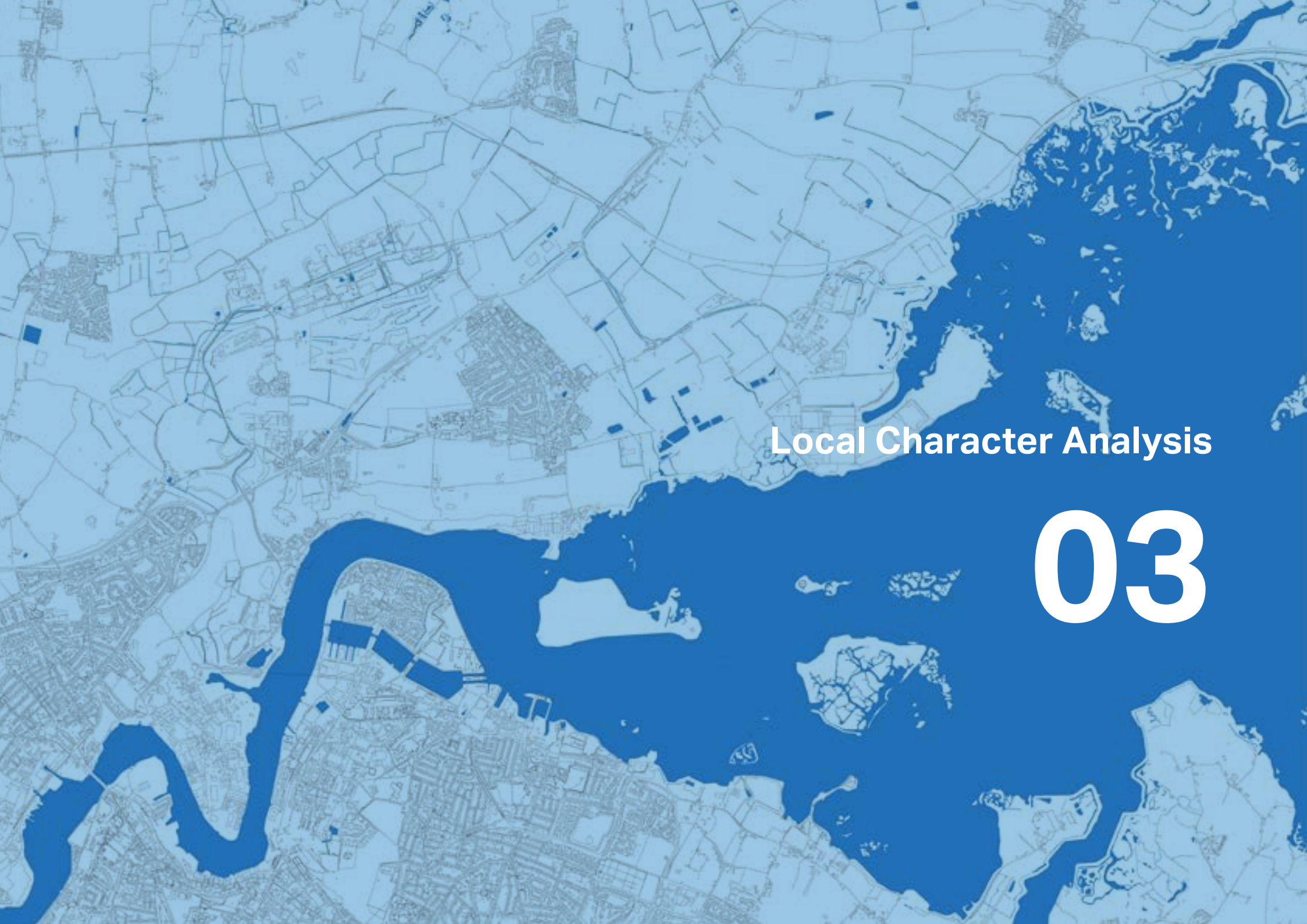
Houses built in this period do not feature front gardens or individual garages as much as the previous types. Houses are located much closer to one another, meaning that these areas tend to have higher densities than elsewhere. Developments often comprise a central open space, contributing a sense of place. Public realm is defined with strong building frontage.

Building are typically 2 and 2.5 storeys. Some apartment buildings can be found in most recently established residential areas. The apartment buildings are only three storeys in height and have architectural features that are in keeping with the character of the neighbourhood.

Mixture of red and yellow brick and weatherboarding are widely used.

Figure 21: Toad Hall Crescent

Figure 23: Gamelan Crescent



Local Character Analysis

03

3. Local Character Analysis

The settlements within the Parish each have a different character. Understanding that character can help to generate design cues for future development to follow. This section outlines the broad physical contextual characteristics of the settlements, and is helpful in identifying what is special and distinctive about each area. The character traits identified in this section inform the design codes.

Whilst 11 character areas are identified in this section, the Design Code in the following chapter focuses predominately on the residential ones.

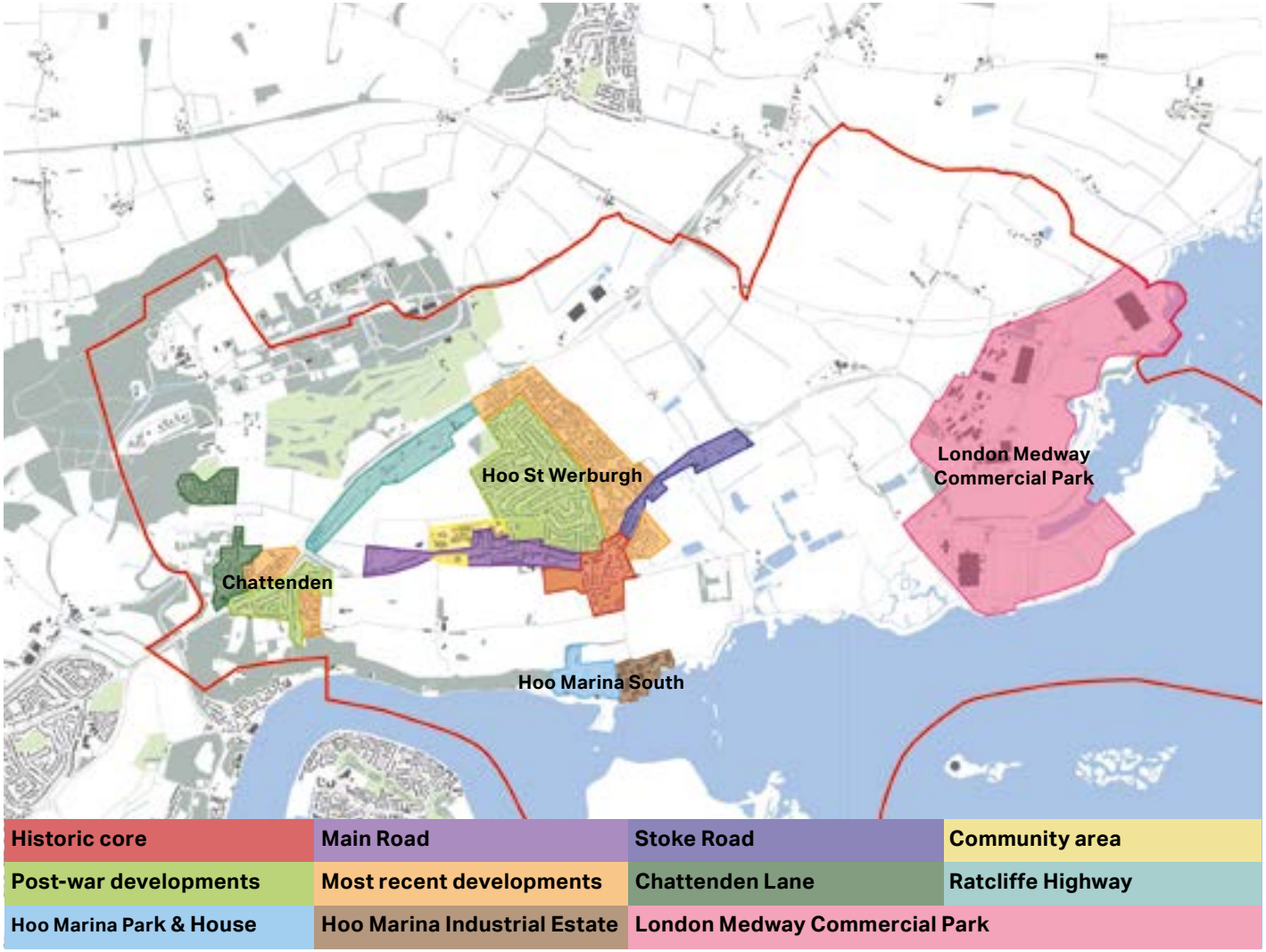


Figure 24: Character areas

3.1. Historic core

This is the oldest part of Hoo St Werburgh village. This area contains the village's historic fabric and buildings. It remains the functional core of the village.

- The area is a mix of houses from various historic periods and in a number of styles. Plot sizes vary in size and form, as does building massing and setbacks, which results in an informal and dynamic building line and façade rhythm.
- Buildings are relatively denser sitting on smaller plots with smaller gardens.
- A collection of historic buildings, such as the Chequers Tavern, Ivy House, etc. display a wide range of architectural detailing and materials.
- Buildings are typically two storeys. Gabled roofs are commonplace. Some roof elements (ie.dormer and chimney) have been included that add interest to the roof line.
- The Parish Church of St. Werburgh is an important landmark feature.

3.2. Main Road

Main Road is characterised by ribbon development. This area contains historical built forms with modern infill developments.

- Most local facilities, such as Werburgh Primary School, Hoo Sports Centre, The Hundred of Hoo Academy are located on Main Road.
- Green verges and mature trees are present and these contribute strongly to the well-vegetated character of the road.
- Property typologies vary from large detached and semi-detached dwellings to small terraced houses on relatively tight plots.
- To the west of Main Road, buildings have deep and spacious front garden which add to the sense of openness and greenery. As Main Road moves east, an enclosed streetscape appears in the centre of village.

3.3. Stoke Road

Stoke Road is an access route to London Medway Commercial Park and the potential access to the proposed new train station.

- To the west of Stoke Road, old buildings directly adjoin the rear of the pavement with no setback, or only have a small front garden or planting strip. However more recent buildings are evident and are set back from the road.
- Heading east, Stoke Road was until recently fronted by houses on one side and open fields on the other, creating a strong open and rural feel.
- In some locations new developments are organised in cul-de-sac layouts away from Stoke Road.

3.4. Community area

The character area is formed by a cluster of educational facilities.

- Buildings are arranged in groups away from Main Road.

3.5. Post-war developments

Much of Hoo St Werburgh and Chattenden are included in this character area.

- The most common housing typologies are semi-detached houses and bungalows, followed by detached houses. The materials used are mainly red brick, which creates a monotonous architectural style for this character area.
- The area is characterised by undulating ground levels. Developments are articulated by gently curving roads that follow the contours, combined with subtle changes in the building alignment, providing varied and attractive street views.
- Large front gardens enable transition between levels, giving the street a green character. However, some of small front gardens cannot accommodate a on-plot car parking.

3.6. Most recent developments

Most recent developments expanded outwards to eastern side of Bell's Lane and eastern edge of Chattenden village.

- Short cul-de-sacs and no-through roads have been used to structure layouts for small developments.
- Buildings are diversified in terms of heights, materials and types.
- Gabled and hipped roofs are commonplace, varying in roof orientation, eaves height and angle. Some roof elements have been included that add interest to the roof line.
- Some apartment buildings can be found in most recently established residential areas.

3.7. Chattenden Lane

Chattenden Lane leads to Chattenden Woods and Lodge Hill SSSI.

- Buildings face Chattenden Lane with a wide range of setbacks.
- Chattenden Lane has an open feel, especially where pocket green spaces and green verges can be found. As the lane moves north, a more rural feel with very green, planted streetscape is represented.
- Affordable housing and MOD housing are characterised by monotonous building styles with small front gardens. On-street parking and parking courtyard are common.

3.8. Ratcliffe Highway

Ratcliffe Highway is parallel to Peninsula Way.

- Ratcliffe Highway is a rural lane with a mix of detached and semi-detached dwellings within generous plots.

3.9. Hoo Marina Park and House Boats

All the buildings in this character area are detached 1-storey residential park homes, with shallow pitched roofs and a raised entrance or outside decking area.

- This character area is highly distinctive because the housing all has a similar height and massing giving a more uniform feel than elsewhere within the parish.
- This uniformity can also be seen in the roofscape, with shallow, pitched roofs and within the materials and colour palette. This area is dominated by shades of white and cream.

3.10. Hoo Marina Industrial Estate

This character area is located east of Hoo Marina Park.

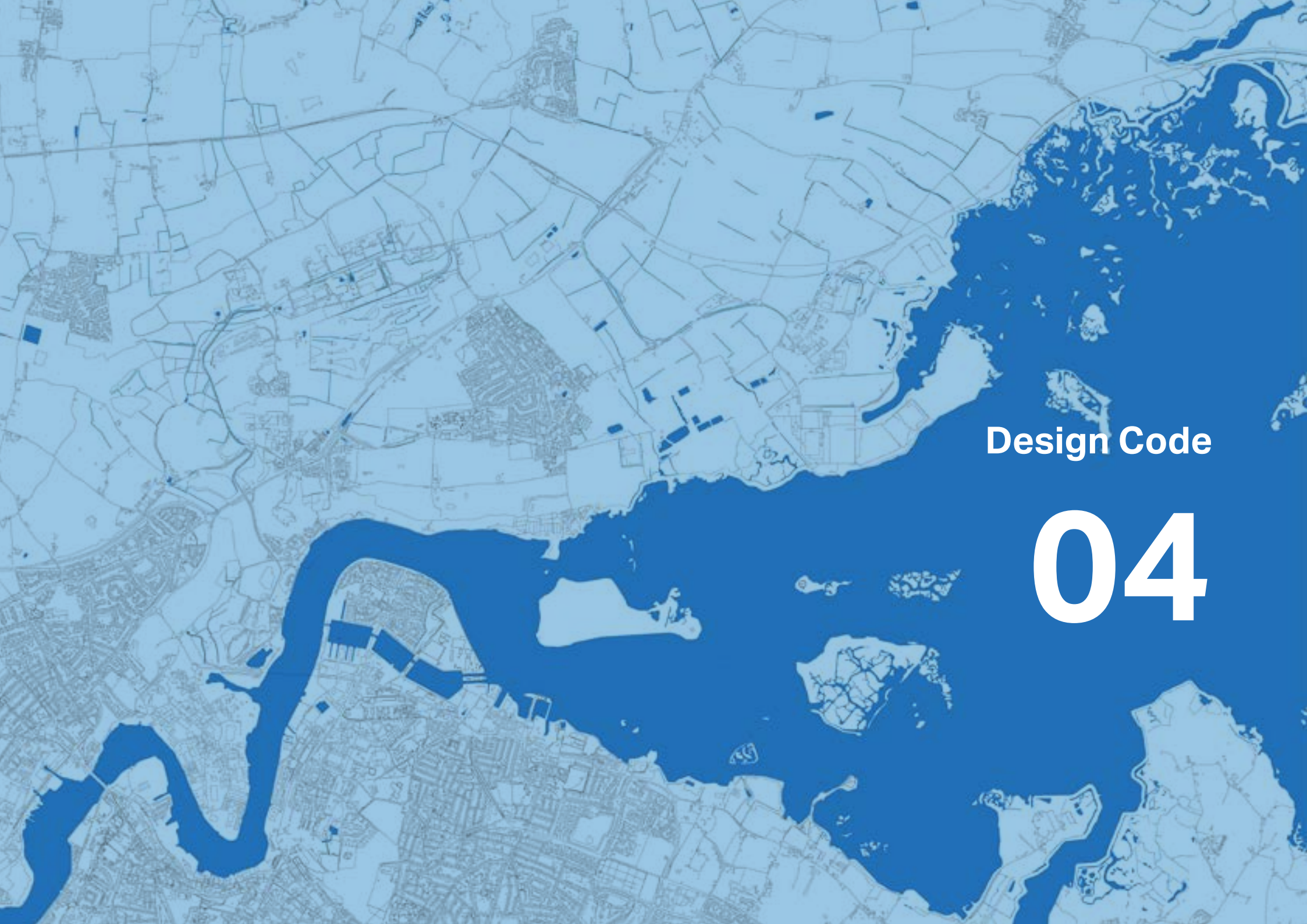
- Industrial units do not exceed two storeys in height.
- Most of public realm in this area is currently used for car parking.

3.11. London Medway Commercial Park

This character area is an important employment area in Medway. Regeneration and redevelopment of this area is proposed, which will create a mixed-use development including commercial, manufacturing and industrial buildings.

3.12. Summary

Category	Good practice	Bad practice
Settlement pattern	• Connected streets and routeways	• Poorly-connected streets
Movement	• On plot car parking • Support the use of cycling and walking	• Parking on the pavement or open spaces • Inadequate parking arrangements
Green space, public realm and streetscape	• A sense of enclosure and greenery • Direct, safe and attractive streets to local facilities • A variety of spaces that can host a diverse range of activities and accommodate different users • Link green spaces and rural areas	
Building typology and layout	• Mix of housing typologies • Buildings fronting onto street • Frontage around open spaces.	• Single housing typology throughout some developments
Building line and boundary treatment	• Irregular set backs from the road • Setbacks that can provide front gardens, or alternatively small areas that offer buffer zones between private and public spaces • Hedgerow, picket fence or low brick wall	• Consistent building line without subtle variation • Panel fence • Hard boundary treatments in narrow paths
Building height and roofline	• Typically 2 and 2.5 storeys • Varying roof type, orientation, eaves height and angle	• Exceed 3 storeys • Monotonous building elevations
Architecture details	• Gabled, Hipped or half-hipped roof with dormer and chimney • Sash windows and bay windows	
Building materials	• White painted timber weatherboarding, red brick and sometimes hung tiles on upper floors of the buildings • White or light pastel render • Various but simple material palette • Clay and slate roof tiles	• Monotonous building materials • Use of materials with no reference to local vernacular



Design Code

04

4. Design Code

4.1. Introduction

This section provides guidance on the design of new development, setting out the aspirations of the Neighbourhood Plan in terms of the qualities, character and design detail that developers will be expected to consider, in detail, when preparing development proposals in Hoo St. Werburgh.

The guidelines set out in this 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 neighbouring buildings but also the wider qualities of the villages and surrounding landscape.

The local pattern of streets and spaces, building traditions, materials and the natural environment should all help to determine the character and identity of a development recognising that new building technologies are capable of delivering acceptable built forms and may sometimes be more efficient. It is important with any proposals that proper consideration is given to the local context and that the new design embodies the "sense of place" and meets the aspirations of people already living in that area.

4.1.1. Vision

The Neighbourhood Plan steering group have developed a vision for the Parish:

"Hoo St Werburgh will remain a large semi-rural village, and together with the hamlet of Chattenden, be the most prominent parish of the peninsula. In the future, the village will promote new housing design and affordable housing appropriate to its rural setting with shops, facilities and services, sustainably and viably meeting the daily requirements of local residents and other nearby communities. New developments will be integrated into the surrounding existing rural landscape. Hoo St Werburgh will remain physically separate from neighbouring villages and hamlets."

4.1.2. Hoo St. Werburgh design code

This section introduces a set of design principles that are specific to Hoo St Werburgh. These are based on:

- Local context and character analysis in Chapters 2 & 3;
- Understanding national design documents such as National Design Guide and National Model Design Code Documents which informed the principles and design codes; and
- Discussion with members of the neighbourhood plan steering group and the engagement that has been undertaken by the group.

The following codes are intended to guide the design of developments:

Figure 25: The ten characteristics of well-designed places (National Design Guide)

1. Land use/mix (LU)

LU 01. Housing mix

LU 02. Mixed use

2. Hierarchy of movement (HM)

HM 01. Connectivity

HM 02. Access

HM 03. Street types

HM 04. Car parking

3. Landscape, nature and open space (LOS)

LOS 01. Green network

LOS 02. Biodiversity

LOS 03. Wildlife

LOS 04. Landscape and public realm

LOS 05. Trees and landscaping

4. Built form (BT)

BF 01. Building scale and massing

BF 02. Density

BF 03. Block types

BF 04. Building lines

BF 05. Buildings turning a corner

BF 06. Enclosure

BF 07. Lifetime homes

5. Identity (I)

I 01. Boundary treatment

I 02. Roof, eaves and ridge lines

I 03. Chimneys

I 04. Windows

I 05. Porches and canopies

I 06. Materials

6. Sustainability (SU)

SU 01. Energy efficient

SU 02. Water management

4.1.3. Applying the code to different character areas

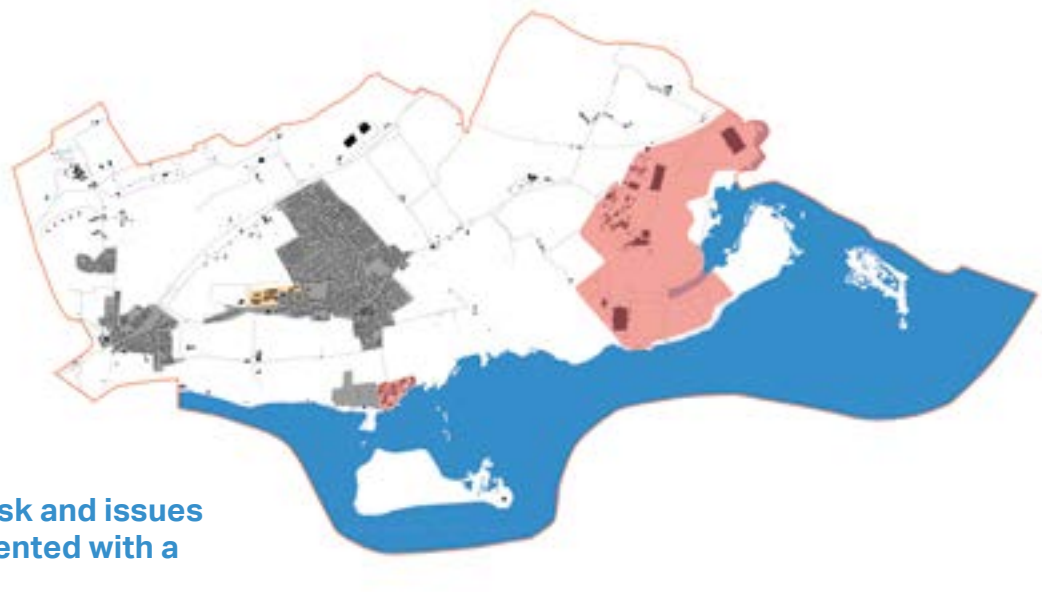
It is possible that all elements of the code will apply to all residential development across the Parish, but the table below shows which codes are particularly relevant to which character areas. As well as the character areas introduced above, the table includes a row for the major growth areas that are expected to be allocated in the new Local Plan.

Character area	LU 01	LU 02	HM 01	HM 02	HM 03	HM 04	LOS 01	LOS 02	LOS 03	LOS 04	LOS 05	BF 01	BF 02	BF 03	BF 04	BF 05	BF 06	BF 07	I 01	I 02	I 03	I 04	I 05	I 06	I 07	SU 01	SU 02
Historic core		y					y	y	y	y	y	y			y	y		y	y	y	y	y	y	y	y	y	y
Main road							y	y	y	y	y	y			y	y		y	y	y	y	y	y	y	y	y	y
Stoke Road							y	y	y	y	y	y			y	y		y	y	y	y	y	y	y	y	y	y
Post-war							y	y	y	y	y	y			y	y		y	y	y	y	y	y	y	y	y	y
Most recent							y	y	y	y	y	y			y	y		y	y	y	y	y	y	y	y	y	y
Chattenden Lane							y	y	y	y	y	y			y	y		y	y	y	y	y	y	y	y	y	y
Ratcliffe Highway							y	y	y	y	y	y			y	y		y	y	y	y	y	y	y	y	y	y
Hoo Marina Park		y					y	y	y	y	y	y			y	y		y	y	y	y	y	y	y	y	y	y
Local Plan growth sites	y	y	y	y	y	y	y	y	y	y	y	y	y	y	y	y	y	y	y	y	y	y	y	y	y	y	y

4.2. Land use/mix (LU)

New development has the potential to make a significant contribution to housing supply, as well as create a diversity of activity within neighbourhoods and contribute to the vitality and sustainability of villages by providing retail, health, education and wider community facilities to the local area.

It is also important that development proposals should provide a variety of house types, sizes and tenures which will help to ensure a range of housing needs are met and a more interesting environment created. The emerging Medway Local Plan (2019-2037) requires the provision of affordable housing within schemes of 15 dwellings or more.



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

- Does development proposals demonstrate how the mix of dwelling types and sizes and the mix of tenures meet strategic and local need and are appropriate to the location?
- Do the affordable units comply with high quality design requirements?
- What community/local facilities have been considered? Are they located in an easily accessible location?

LU 01. Housing mix

Design codes for Housing Mix must comply with the emerging Medway Local Plan (2019-2037) Policy H2.

Design principles

- New housing proposals should provide a mix of house types, sizes and tenures, including affordable housing in schemes of 15 dwellings or more.
- Bungalows and nursing homes should be an important part of the housing mix.

Figure 26: Local examples of housing mix

LU 02. Mixed use

Design principles

- Community facilities play an important role in well-being, social interaction and community cohesion. Where appropriate, new development should bring forward local facilities to meet population growth. Provision of facilities so that schools, shops, health services, community uses, open spaces and sports provision should be planned and located to everyone's benefit.
- The site allocations for new local facilities should be accessible by walking and cycling, and reduce the need of travel.
- The type and scale of new community facilities should take into account the existing provision nearby.

Figure 27: Local centre

4.3. Hierarchy of movement (HM)

There is concern locally about the traffic and air quality impacts of significant levels of housing and employment development. Applicants will need to show how these impacts have been considered and mitigated.

The network of streets should be designed to enable direct and convenient walking routes to public transport stops and to village and local centres. Streets should be considered as spaces for use by all, not just by motor vehicles. They must provide a safe and pleasant-to-use environment at all times of the day. Streets should be designed considering the needs of users in the following order:

- Pedestrians;
- Cyclists;
- Public transport users; and
- Other motor traffic.

Streets should be differentiated based on their character, role and function, and can be identified based on their proportion to the scale of development as primary, secondary or tertiary.

To stimulate and support district and local centres, movement routes should be designed in a way that they go 'through' places rather than 'around' them.

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

- Does it favour accessibility and connectivity over cul-de-sac models? 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?
- Do new streets provide adequate street widths, including for public transport and emergency vehicles?
- 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?
- 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?
- Can electric vehicle charging points be provided?

HM 01. Connectivity

Varied links should be enabled and created that favour pedestrian and cycle connections. This means that streets should be connected with each other and different travel options and routes should be considered. Good practice favours a generally connected street layout that makes it easier to travel by foot, cycle, and public transport. These routes should benefit from natural surveillance, activity and paths with good sightlines and unrestricted views which make people feel safer. It must comply with emerging Medway Local Plan (2019-2037) Policy T9.

This connected pattern creates a 'walkable neighbourhood'; a place where streets are connected and routes link meaningful places together.

Design principles

- New developments should create permeable networks of pedestrian, cycle and vehicle connections within sites as well as connecting to the wider locality and to public footpath networks in the countryside beyond.
- A permeable street network at all levels provides people with a choice of different routes and allows traffic to be distributed more evenly across the network rather than concentrated on to heavily trafficked roads.
- Short and walkable distances are usually defined to be within a 10 minute walk or a five mile trip by bike. If the design proposal calls for a new street or cycle/ pedestrian link, it must connect destinations and origins.
- It is important that, in the case of new developments, streets are integrated with green spaces.
- The Police Secured by Design Guidelines[1] warn against the "security of development being compromised by excessive permeability, for instance by allowing the criminal legitimate access to the rear or side boundaries of dwellings, or by providing too many or unnecessary segregated footpaths".

1. The Police Secured by Design Guidelines. Available at: https://www.securedbydesign.com/guidance/design-guides

HM 02. Access

The needs of all users of any development should be taken into account in the design process. This includes children and their carers, elderly people and people with disabilities. Designs should encourage social interaction while facilitating movement.

Design principles

- New developments should create a barrier free environment, except where vehicular movement needs to be restricted.
- Gradients, changes in level, openings, boundaries, textures and colours, lighting, shelter, street furniture and parking areas should have regard to the full range of age and abilities at the outset in the design process.

Figure 28: Local examples of highly connected residential areas.

HM 03. Street types

Design principles

- New streets, if required, must meet the technical highways requirements, including being wide enough for emergency and service vehicles to pass, as well as be considered a 'space' to be used by all, not just motor vehicles. It is essential for new developments to have streets designed for the needs of pedestrians and cyclists. Existing roads should be retrofitted for the same purpose and to discourage speeding.
- Within existing and new settlement boundaries, streets must not be built to maximise vehicle speed or capacity. Streets and junctions must be built or retrofitted to ensure the safety and accessibility of vulnerable groups such as children and wheelchair users. They may introduce a range of traffic calming measures such as raised junction tables and kerb extensions.
- New streets should be linear with gentle meandering to provide interesting and evolving views. Subtle variations in width may also be introduced to discourage speeding and reflect the layout of existing country roads in the Parish. New streets and paths should be laid out in a permeable pattern, allowing for multiple connections and a choice of routes, particularly on foot.

The following pages introduce suggested guidelines and design features including a range of indicative dimensions for street types in the new residential areas.

Street types	Street dimensions									Access & parking	
	Privacy strip	Footpath	Cycle lane	Parking/ layby/ SuDS/ landscape	Carriageway	Parking/ layby/ SuDS/ landscape	Cycle lane	Footpath	Privacy strip	Direct Vehicular access to properties	On street parking
Avenue (major road)		Road Width 15.5m-22m								Yes	Yes:1) one side parallel with SuDS opposite; or 2) both side parallel parking
	Yes	Min 3m		Min 2.6m	Min 5.5m	Min 2.6m	N/A	Min 1.8m	Yes		
Minor road		Road Width 10.6m-15m								Yes	Yes, one side or both sides parallel parking, with the rest as landscape
	Yes	Min 1.8m	N/A	Min 2m	Min 5m	Min 2m	N/A	Min 1.8m	Yes		
Lanes					Road Width 3.5m-4.1m					Yes	No
	Yes	N/A	N/A	N/A	Min 6m	N/A	N/A	N/A	Yes		
Mews					Road Width 5m-6m					Yes	No
	Yes	N/A	N/A	N/A	Min 5m	N/A	N/A	N/A	N/A		
Edge lanes		Road Width 7.3m-8.1m								Yes	Yes, one side parallel parking, with the rest as landscape
	Yes	Min 1.8m	N/A	Min 2m	Min 3.5m						
					Road Width 3.5m-4.1m					Yes	No
	Yes	N/A	N/A	N/A	Min 3.5m						

HM 03. 01. Avenue

Avenues can be the main access routes into new development locations with tree-planted verges connecting the site with a main road and neighbourhoods with each other. They can also be used for utility and emergency vehicles, as well as buses, if any. Avenues are fronted by houses on both sides with front gardens.

Design principles:

- Avenues should be designed to include the planting of trees and green verges along the road.
- Avenues should be defined by hedged boundaries enclosing generous front gardens.
- As the principal street(s), avenues should be wide enough to accommodate traffic within the scheme and connect to development beyond the site (5.5m – 6.0m carriageway). Avenues can be designed to be appropriate locations for on-street cycleways or for cycleways to be segregated from traffic by the planted verges
- Swales and rain gardens could be also added into the landscaping to address any flooding issues.

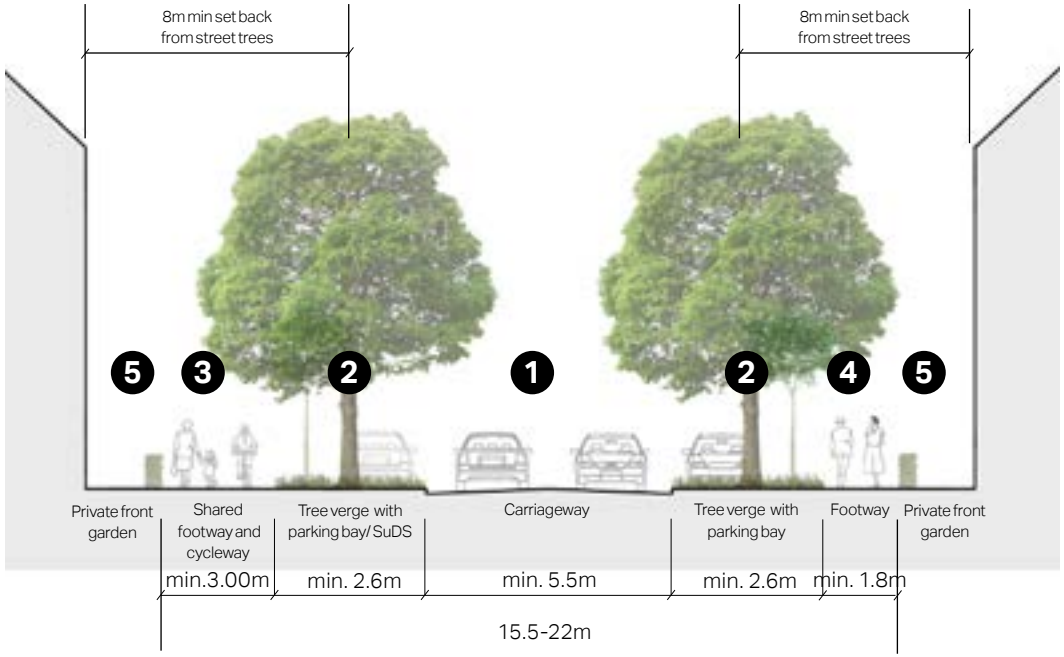


Figure 29: Section showing indicative dimensions for primary roads.

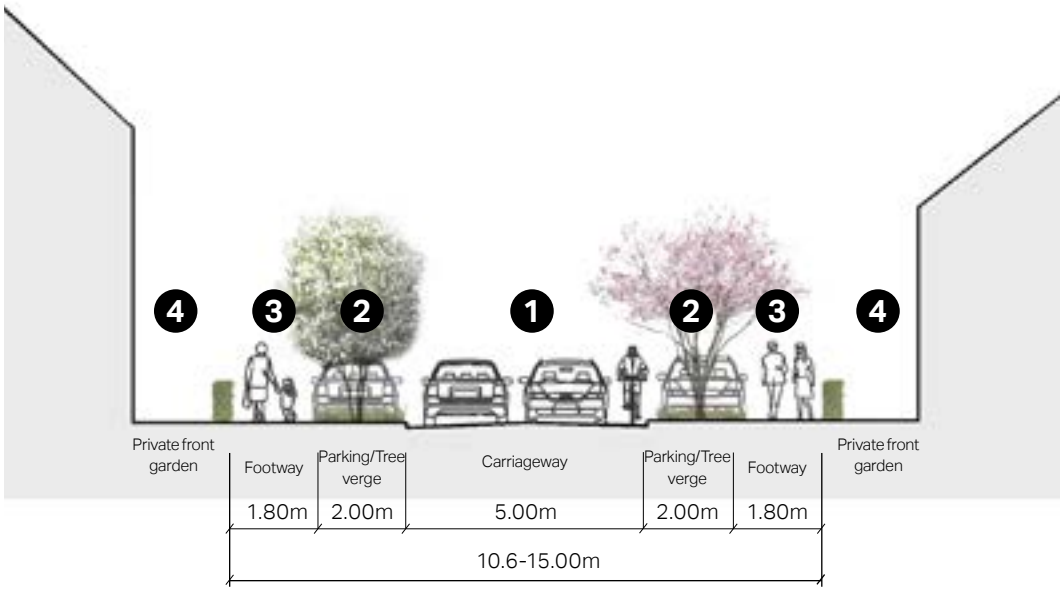
1. **Carriageway (town-wide traffic).**
2. **Green verge with tall trees. The latter are optional but would be positive additions. Parking bays to be inset into the verges to avoid impeding moving traffic or pedestrians.**
3. **Shared footway and cycleway can provide an opportunity for cyclist to be segregated from vehicle traffic.**
4. **Footway.**
5. **Residential frontage with boundary hedges and front gardens.**

HM 03. 02. Minor road

Minor roads have a strong residential character and provide direct access to residences from the major roads. They should be designed for low traffic volumes and low speed.

Design principles

- Carriageways should accommodate two-way traffic and parking bays on both sides. They may also include green verges with small trees on one or both sides. Verges may alternate with parking to form inset parking bays. These roads should also accommodate footways with a 1.8m minimum width on either side, and must be designed for cyclists to mix with motor vehicles. Traffic calming features such as raised tables can be used to prevent speeding.
- Minor roads should be formed with a high degree of built form enclosure, with consistent building lines and setbacks.
- Street trees should be provided with suitable gaps wherever possible.



1. **Shared carriageway (local access). Traffic calming measures may be introduced at key locations.**
2. **Green verge with small trees. The latter are optional but would be positive additions. Parking bays on both sides of the carriageway to alternate with trees to avoid impeding moving traffic or pedestrians.**
3. **Footway.**
4. **Residential frontage with boundary hedges and front gardens.**

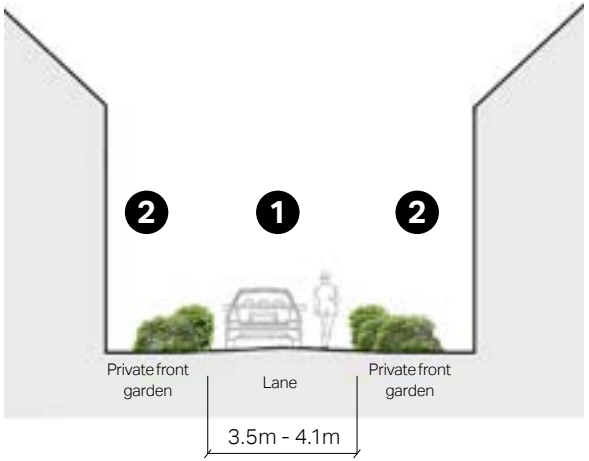
Figure 30: Section showing indicative dimensions for tertiary roads. In some places tree verges may be omitted from one or both sides.

HM 03.03. Lane

Lanes serve areas with a low volume of traffic and are fronted by houses with gardens on both sides.

Design Principles:

- Lanes should be designed with an informal layout with soft landscaping (such as trees, hedges and verges) a dominant feature of the street scene.
- As tertiary streets, lanes should be narrow but can vary in width (3.5m – 4.1m) and should be made safe for pedestrians, mobility scooters, cycles and vehicles to share.
- Variations in materials and textures should be used instead of kerbs or road markings.



1. **Lanes (shared by local vehicle access, cyclists and pedestrians).**
2. **Residential frontage with front hedges and gardens.**

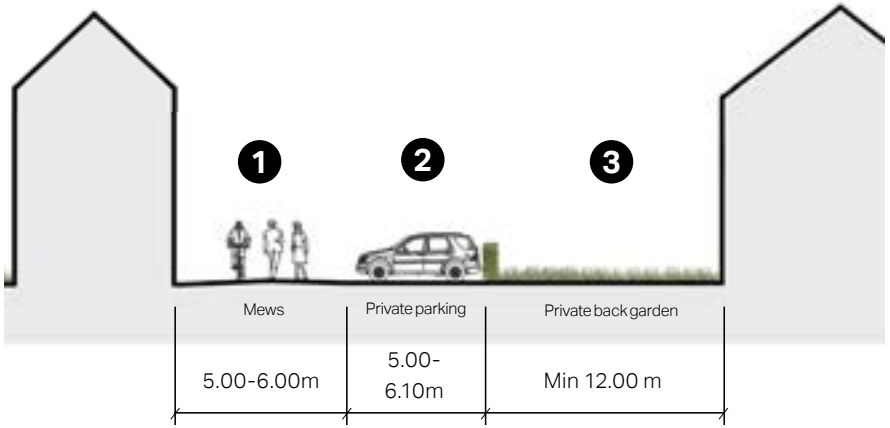
Figure 32: Section showing indicative dimensions for lanes and private drives.

HM 03.04 Mews

Mews should be positively enclosed attractive streets with a strong residential presence and not a collection of car courtyards. Buildings are generally set closely around a semi-public street. Parking is usually accommodated within the mews and in directly adjacent parking spaces or garage.

Design Principles:

- Mews should be made safe for pedestrians, cycles and vehicles to share the semi-public courtyard.
- Variations in materials and textures can be used instead of kerbs or road markings.
- Opportunities should be taken to include specimen trees and/or shallow front gardens to soften the edges.



1. **Shared mews (no footway) - width to vary.**
2. **Perpendicular parking bays to be interspersed and give adequate space to moving traffic or pedestrians.**
3. **Back garden width varied, but the minimum width is 12.00 metre.**

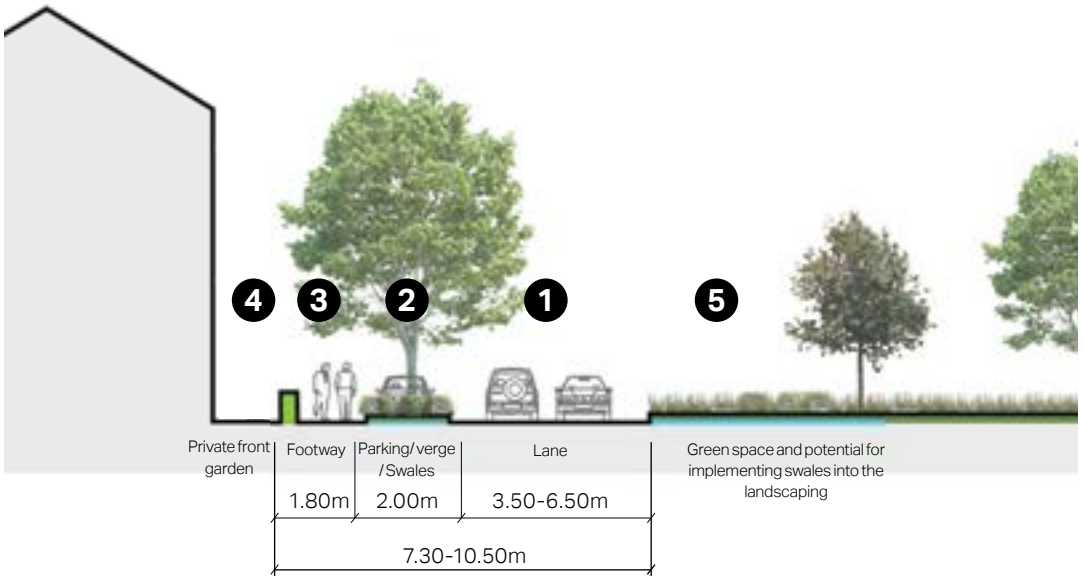
Figure 31: Section showing indicative dimensions for mews. The mews width may vary to discourage speeding or provide space for parking.

HM 03. 05. Edge Lanes

Edge lanes are low-speed and low-traffic roads that front houses with gardens on one side and a green space on the other. Carriageways typically consist of a single lane of traffic in either direction and are shared with cyclists.

Design principles

- 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.
- Swales and rain gardens could be also added into the landscaping to address any flood issues.
- Edge lanes should be continuations providing high level of connectivity and movement.



1. **Shared lane (local access) - width to vary.**
2. **Green verge with trees. The latter are optional but would be positive additions. Parking bays to be interspersed with trees to avoid impeding moving traffic or pedestrians.**
3. **Footway.**
4. **Residential frontage with boundary hedges and front gardens.**
5. **Green space and potential for implementing swales into the landscaping.**

Figure 33: Section showing indicative dimensions for edge lanes. The lane width may vary to discourage speeding or provide space for parking.

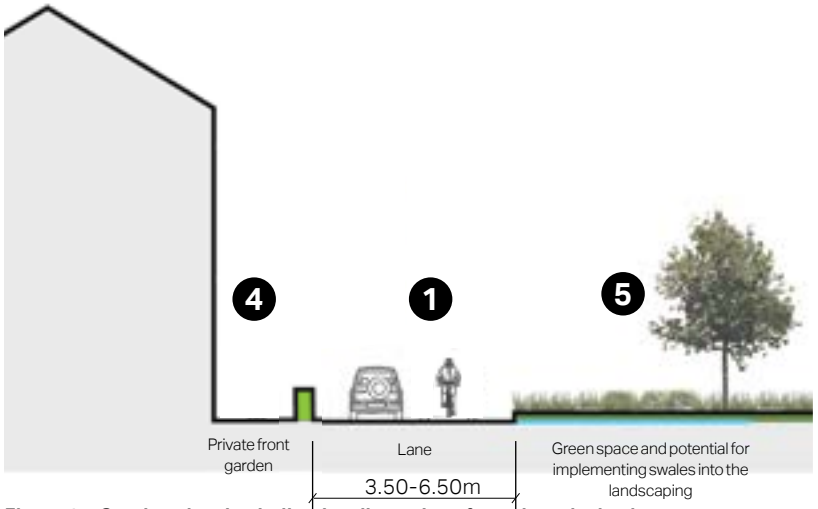


Figure 34: Section showing indicative dimensions for a shared edge lane.

HM 04. Car parking

Parking areas are a necessity of modern development. However, they should not dominate or be unsightly within the street scene. Parking provision should be undertaken as an exercise of placemaking. It must comply with emerging Medway Local Plan (2019-2037) Policy T10.

When needed, residential car parking can be translated into a mix of on-plot side, garage, and courtyard parking, and complemented by on-street parking.

Design principles

- For detached or semi-detached homes with gardens, parking spaces and garages should be on-plot at the side of the property.
- For mews or terraced homes with little or no front garden, parking should be accommodated within the mews building or on-street in front of dwellings with continuous parking areas separated by planting.
- For small pockets of housing, a rear court is acceptable.
- Car parking design should be combined with landscaping to minimise the presence of vehicles.
- Parking areas and driveways should be designed to improve impervious surfaces, for example, through the use of permeable paving.
- Opportunities must be created for new car parking spaces to incorporate electric car charging.

HM 04.01. On-plot side

Design principles

- On-plot parking can be visually attractive when it is combined with high quality and well designed soft landscaping.
- 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.

Figure 35: Illustrative diagram showing an indicative layout of on-plot side parking.

HM 04.02. On-plot garage

Design principles

- 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 and ensuring continuity of the building façade. However, it should be understood that garages are not prominent elements and they must be designed accordingly.
- Considerations must be given to the integration of bicycle parking and/or waste storage into garages.

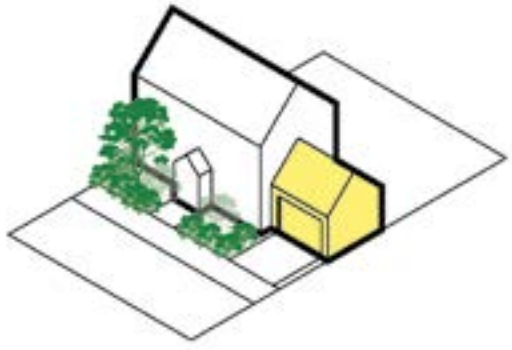


Figure 36: Illustrative diagram showing an indicative layout of on-plot garage parking.

HM 04.03. On-street parking

Design principles

- 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.
- On low-traffic residential streets or lanes that are shared between vehicles and pedestrians, parking bays can be clearly marked using changes in paving materials instead of road markings.

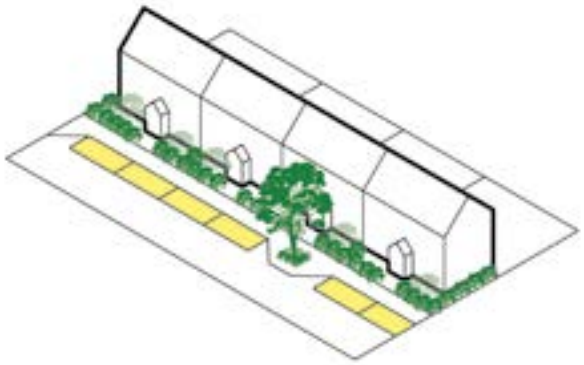


Figure 37: Illustrative diagram showing an indicative layout of on-street parking.

HM 04.04. Parking courtyards

Design principles

- Parking courts should benefit from some natural surveillance.
- Parking courts should complement the public realm; hence it is important that high-quality design and materials, both for hard and soft landscaping elements, are used.
- Parking bays should be arranged into clusters with small groups of spaces interspersed with trees and soft landscaping.

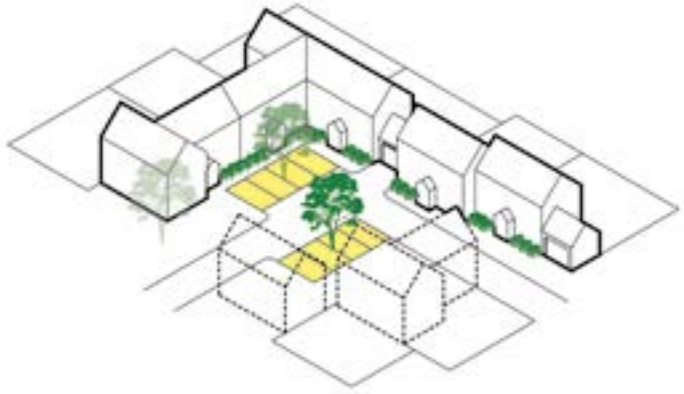


Figure 38: Illustrative diagram showing an indicative layout of parking courtyards.

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4.4. Landscape, nature and open space (LOS)

Landscape and natural features play a vital role in creating attractive environments and providing wildlife habitats. It is notable that much of Hoo St Werburgh Neighbourhood Plan Area is subject to National or International environmental designations such as Special Protection Area (SPA), RAMSAR site and Sites of Special Scientific Interest (SSSI). There are also some valuable open green spaces within the settlements offering spaces for outdoor activities. New developments in Hoo St Werburgh should

- Incorporate and respond to natural features, and should provide net gains for biodiversity.
- Minimise harm to the area's landscape character and function.
- Consider the need for new development to make provision for open space.

Open space provision should accord with the emerging Medway Local Plan Policy I6, I7 and I8.

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

- 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?
- Has the proposal been considered within its wider physical context and recognised the importance of environmental designations?
- 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 affect the character of a rural location?
- How does the proposal impact on existing views which are important to the area and how are these views incorporated in the design?
- Is there adequate amenity space for the development?
- Does the new development respect and enhance existing amenity space?
- Will any communal amenity spaces be created? If so, how will this be used by the new owners and how will it be managed?
- Has the proposal been provided opportunity to open up access to the countryside?

LOS 01. Green networks

Green networks, corridors and linkages are widely seen as a key mechanism for reversing the effects of fragmentation on biodiversity. New developments should seek to create a mix of open spaces such as parks, natural open spaces and green corridors with multiple functions integrating blue and green infrastructure.

Hoo St Werburgh has a wide range of green spaces. Future open spaces should be planned considering the following principles:

Design principles

- Provide a connected network of private and public green spaces that includes generous and vegetated back and front gardens, public green spaces, fields and natural open spaces.
- If appropriate, green spaces should be linked to form connected green networks. The networks are often more useful to create visual amenity, for recreational use and wildlife corridors than isolated parks. Where direct links are not possible, it may be appropriate to link these together through green routes, shared surfaces and streets. Tree lined avenues can achieve a visual and physical connection to open space.
- SuDs schemes should be designed sensitively to augment the landscape and newly created street scene and provide biodiversity and amenity benefits (please see SU 02.01 for SuDS design guidance).

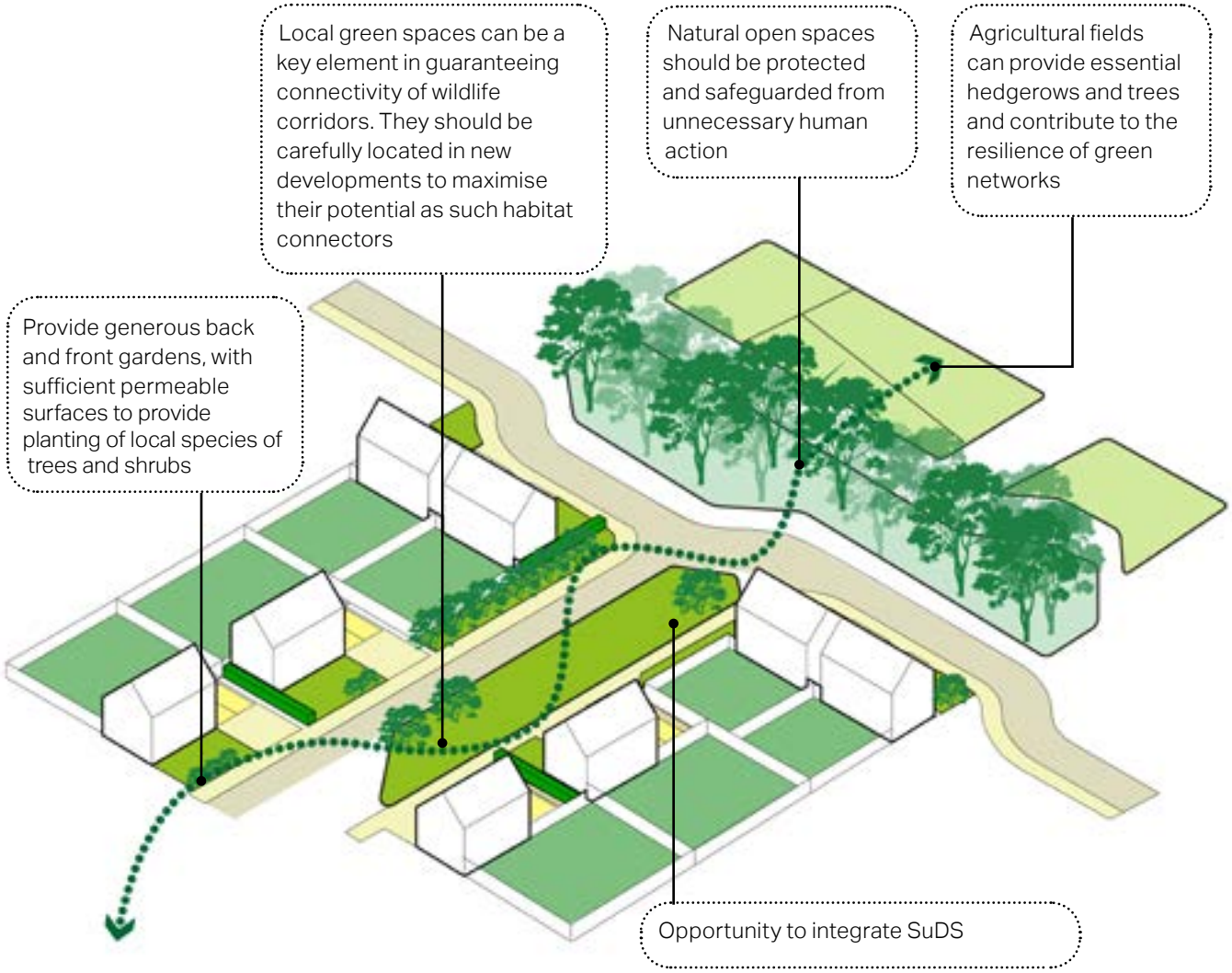


Figure 39: Diagram showing green networks

LOS 02. Biodiversity

Design principles

- Protect and enhance woodlands, hedges, trees and road verges, where possible. Natural tree buffers should also be protected when planning for new developments.
- Avoid abrupt edges to development with little vegetation or landscape on the edge of the settlement and, instead, aim for a comprehensive landscape buffering.
- Ensure habitats are buffered. Widths of buffer zones should be wide enough and based on specific ecological function.
- Include the creation of new habitats and wildlife corridors in the schemes, for example by aligning back and front gardens or installing bird boxes or bricks in walls.
- Propose wildlife corridors in the surrounding countryside by proposing new green links and improving existing ones. This will enable wildlife to travel to and from foraging areas and their dwelling areas.
- Protect mature and veteran trees, wide green verges and species-rich hedgerow as they are essential for biodiversity. Hedgerows in particular, provide habitat for the fauna and contribute also to prevent soil erosion.

LOS 03. Wildlife

Back and front gardens, together with public green open spaces and surrounding fields can have a key role in supporting wildlife in built-up areas. They have the potential to create habitat mosaics and enable wildlife corridors, often linking up with parks, tracks, churchyards and hedgerows. Users can follow these steps to foster wildlife and habitat creation in their community.

Design principles

- Reduce or eliminate use of chemicals in gardens, use companion planting and physical removal to combat pests such as aphids, slugs and sawfly.
- Create habitats for wildlife; bee boxes, bat boxes, owl holes, hedgehog homes and gaps, log and stone piles for invertebrates, toads and slow worms who will also inhabit a compost heap.
- Plant late, mid-season and early blooming nectar rich flowers to attract pollinators and beneficial insects all year round.
- Make a pond, keep it ice free in winter by floating a ball on the top and ensure that it is safe for children.
- Feed birds through the winter and supply nesting boxes.
- Allotments can be another green structuring element that improves natural habitats, consider the need

LOS 04. Landscape and public realm

Design principles

- Open spaces should offer a variety of spaces that can host a diverse range of activities and accommodate different users.
- Open spaces should respond to local character and encourage civic pride.
- Development adjoining public open spaces and important gaps should enhance the character of these spaces by either providing a positive interface (i.e. properties facing onto them to improve natural surveillance) or a soft landscaped edge.
- New and existing landscapes and open spaces should be located within walking distance from their intended users.
- 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. Native trees and shrubs should be used to reinforce the more rural character of the area.

LOS 05. Trees and landscaping

LOS 05.01. Give spatial enclosure, provide screening and privacy

The use of hedges, hedgerows trees and walls contribute to the strong character of the area and a sense of enclosure. To respect the existing context, both the building and the boundary feature should be consistent with the prevailing character, although there should be some allowance for an some of variation to provide added visual interest.

Design principles

- Existing hedges, hedgerows trees and walls should, wherever appropriate, be retained to contribute to this sense of enclosure. Additional or replacement hedges and trees should be planted to maintain the continuity of existing hedges provide continuity of hedge and hedgerow tree cover.
- Where appropriate and feasible, any new developments should have setbacks that allow for front gardens or else a small area to provide a planted buffer zone between the private space and public space.

LOS 05.02. Complement public realm and enhance built environment and local identity

Planting can make an appreciable difference to the appearance of an area, as well as adding to the local identity.

Design principles

- New development should use boundary features which are complementary to the street and enhance the character of the village. The use of trees, hedges and planting in publicly visible areas, including edges and interfaces, should be encouraged.

LOS 05.03. Form focal points and frame views

Design principles

- In addition to the intrinsic value of trees, they can also have practical use value. In a small-scale open space, trees provide focal point of interest.

LOS 05.04. Soft development boundaries

Design principles

- Strategic landscaping on the boundary with the countryside provides the opportunity to soften the transition from build form to the landscape beyond.

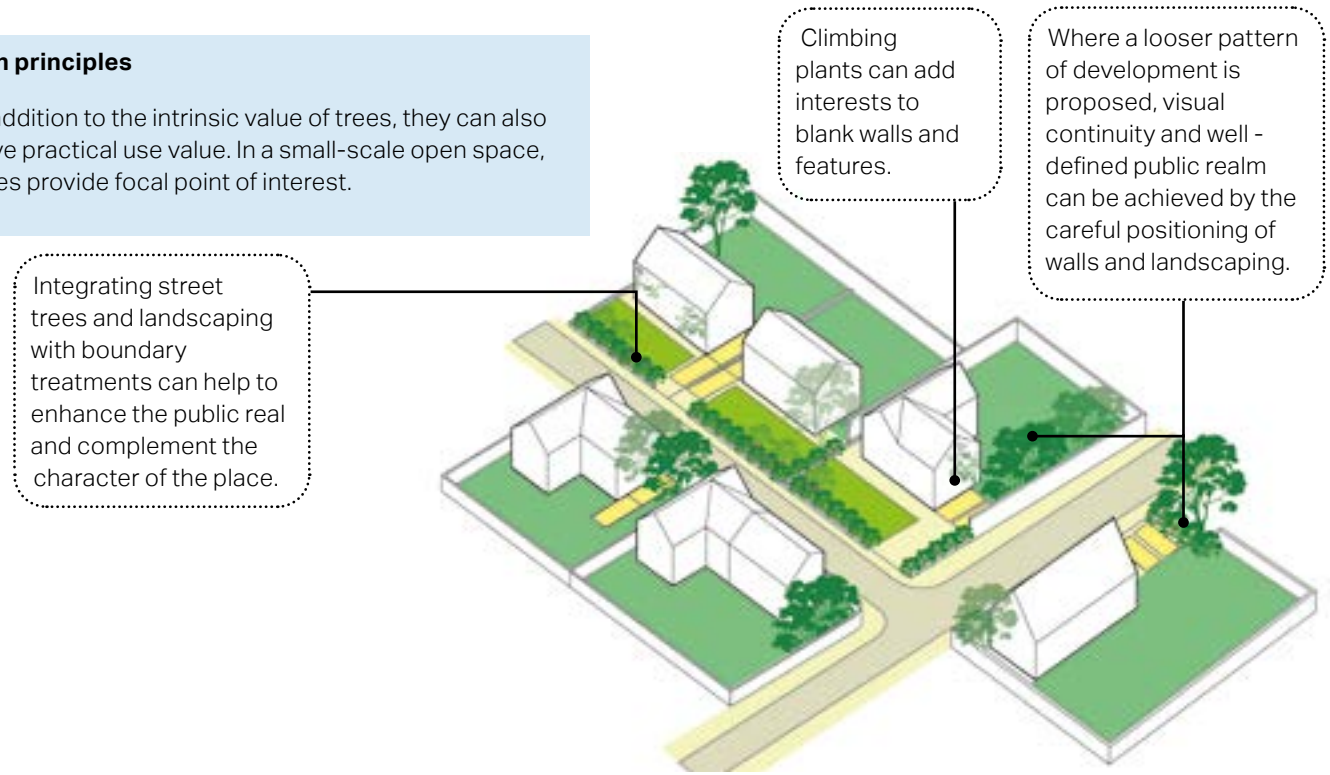


Figure 40: Diagram showing trees and landscaping that complement the public realm and create a sense of enclosure

4.5. Built form (BF)

New developments should respect the particular building and open space patterns of its neighbourhood to contribute positively to its character. In particular:

- Any new development in Hoo St Werburgh should be carefully sited to minimise negative impacts on the landscape.
- New developments must demonstrate an understanding of the scale, building orientation, enclosure, and façade rhythm of the surrounding built environment to respect its character.
- New properties should show a variety of types. The use of a repeating type of dwelling along the entirety of the street should be avoided to create variety and interest in the streetscape, unless uniformity is a characteristic or the streetscene already.
- Any proposal that would adversely affect the physical appearance of the surrounding character area, or give rise to an unacceptable increase in the amount of traffic, noise, or disturbance would be inappropriate.

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

- Are proposed groups of buildings offering variety and texture to the villagescape?
- What effect would the proposal have on the streetscape?
- What are the characteristics of the roofline?
- Have the proposals paid careful attention to height, form, massing, and scale?
- What are the characteristics of the building line?
- How has the building line been respected in the proposals?

BF 01. Building scale and massing

Design principles

- Buildings should be sympathetic in scale to the context of the site and should not normally exceed 2 or 2.5 storeys (with rooms/ dormer windows in the roof).
- Subtle variations in height should be created by altering eaves and ridge heights to add visual interest.

BF 02. Density

Housing density must comply with Emerging Medway Local Plan (2019-2037) Policy BE4 - Housing Density Approach.

Design principles

- Development forms should make the most efficient use of land appropriate to the local rural context, delivering net residential densities of 30 – 40 dwellings per hectare in villages, slightly higher around transport interchanges (rail stations and bus stops).

BF 03. Block types

Urban structure compromises the pattern or arrangement of urban blocks, streets, buildings, public realm and landscape. The size and organisation of any block varies, depending upon diverse parameters such as location, land use and density. For example the avenue block will be fronted by larger detached houses set back from the public domain by a hedged boundary whereas the mews development will be set closely around a semi-public street with limited or no front garden.

New development should respond to the existing pattern of development within Hoo St Werburgh, taking cues from existing block sizes and structures, patterns of plot subdivision and the relationship between the built and the non-built private space. Most blocks will be perimeter blocks with new homes facing the street and back gardens backing onto back gardens.

Design principles

- Block types should be principally back to back rear gardens, development edge and mews block types.
- Buildings on both sides of street should work together to create visual interests and a pedestrian experience and thus create a strong sense of place.
- The blocks either side of the street should resonate to each other (i.e. symmetrical or asymmetrical rhythm).
- Buildings on both side of the street should present sufficient façade depth to create visual interests.

BF 03.01. Back to back rear gardens

The back to back rear gardens block type is a type of perimeter development defined by houses which face apart and have private gardens in between the rears of the buildings. Considering local preference for housing typologies, this kind of block organisation is suitable for most types of houses: detached, semi-detached and terraced.

Design principles

- Secure rear garden spaces should be provided by creating blocks where houses face the street and have private gardens in between the rears of the buildings avoiding back gardens along streets.

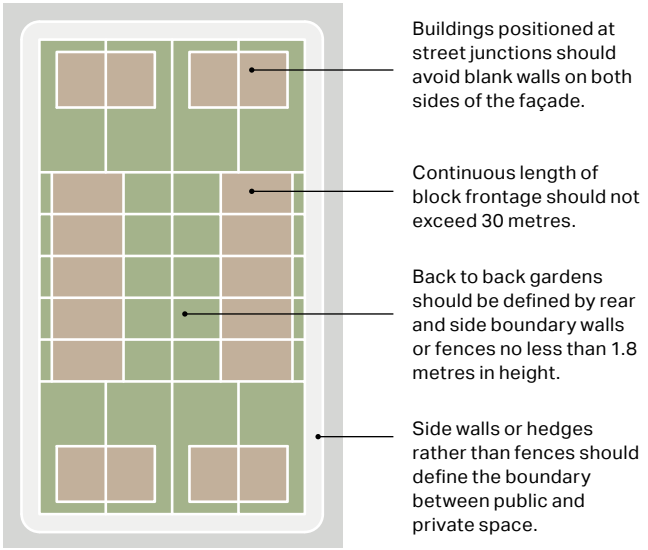


Figure 41: Back to back rear gardens.

BF 03.02. Development edge

As a settlement's public face, the treatment of the edge of development is particularly important when facing open countryside, other open space and primary roads. Buildings should face outwards towards the countryside to present a more attractive edge façade and ensure natural surveillance of the abutting road/ footpath/ landscape buffer and countryside.

Design principles

- New development should provide a positive edge which has a clear and well defined external image.
- Regardless of dwelling type (terraced, semi-detached or detached house), buildings at the development edge should face outwards, with a front garden and a street or footpath/cycleway between the home and the open space.
- Frontages should have strong architectural forms and careful detailing, in view of their prominence.
- Back and side fences should not border the development edge in order to avoid a harsh and unattractive edge to new development and the absence of natural surveillance.
- Interfaces between the existing settlement edges and new development should be carefully designed to integrate new and existing communities. New buildings should usually be no higher than existing homes where they are adjacent. This is particularly important where new residential buildings will face existing residential properties that until now faced onto open fields.
- Belts of trees and hedges that define the existing settlement edge should be integrated into, and supplemented by, the new neighbourhood as part of the scheme's green infrastructure.

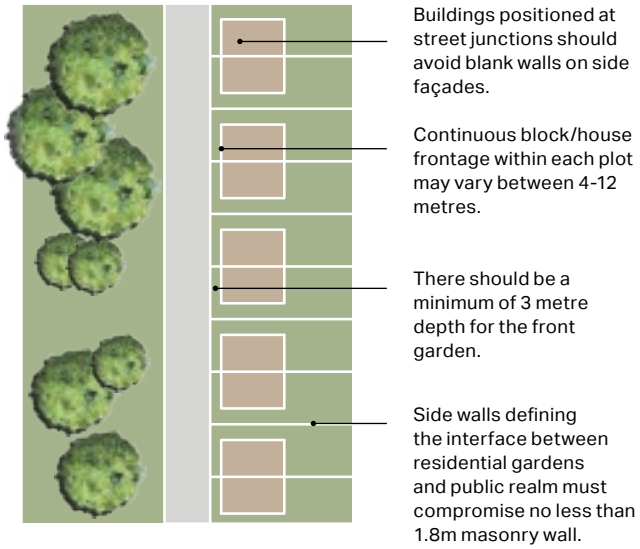


Figure 42: Development edge.

BF 03.03. Mews

The access mews block is designed as a complete perimeter block where primary dwelling frontages line the perimeter streets.

Design principles

- Frontage should be as continuous as possible, with good street rhythm created by windows and front doors.
- In the case of integral garages, the access to this part of the building should be well integrated within the overall design, to minimise negative impact on public realm.

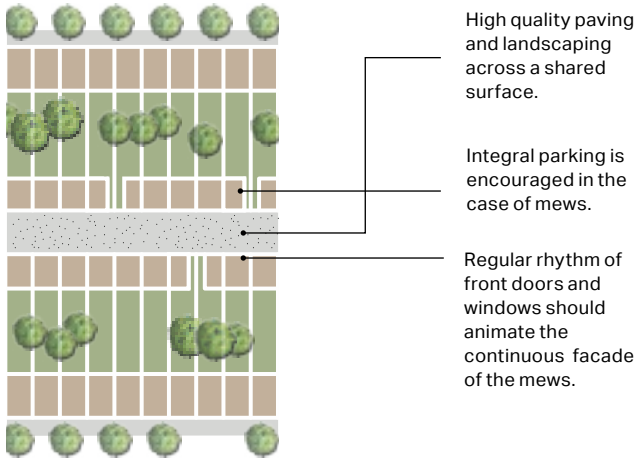


Figure 43: Mews.

BF 04. Building lines

The way buildings sit in relation to the street can affect the feel and attractiveness of a development. Building lines should have subtle variations in the form of recesses and protrusions but should generally form a unified whole.

Boundary treatments should reinforce the sense of continuity of the building line and help define the street. Also, boundary treatments should not impair natural surveillance.

A setback is the distance between the back of the pavement and the building line. The size of the setback contributes to the overall character and sense of enclosure along a street. The setbacks of residential developments in rural character areas can be deeper due to large front gardens.

Design principles

- A coherent street frontage should be achieved by coordinating the setback between buildings and the road.
- Large differences in setbacks for adjacent properties should be discouraged as this does not contribute to the overall streetscene or cohesiveness of place. The range of set back from the dwelling to the front boundary should generally be between 3-6m but some lanes and mews courts may have shallow, or no, front gardens (National Model Design Code, MHCLG, 2021).

Figure 44: Diagram reflecting positive treatment of building line; building frontage creating variety as well as cohesiveness in the streetscape.

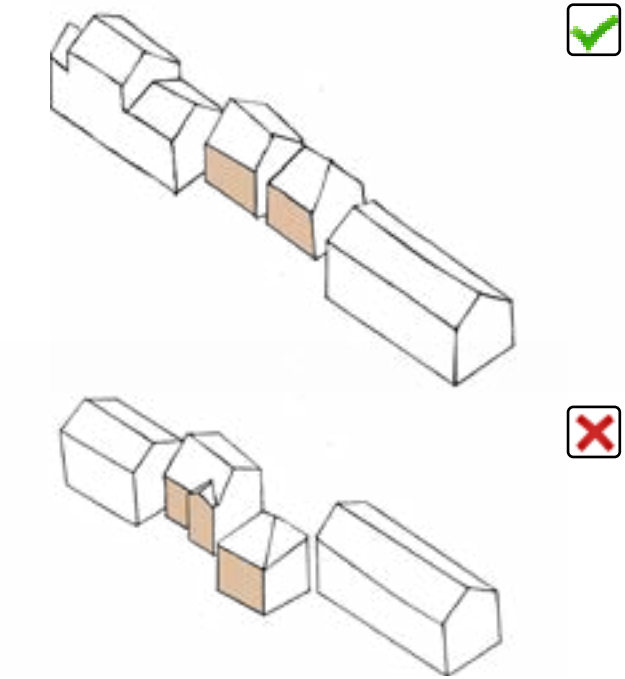


Figure 45: New buildings should respect the established building line.

Figure 46: A local example of building lines with subtle variations

Figure 47: A local example of consistent building line

BF 05. Buildings turning a corner

Together with the creation of potential local landmarks, one of the crucial aspects of a successful villagescape 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.

Design principles

- Streets should have strong continuity of frontage not only for being visually attractive and enhancing the streetscape, but also for providing high levels of natural surveillance.
- Buildings should be designed to turn corners and terminate views. Corner buildings should have both side façades animated with doors and/or windows. Exposed, blank gable end buildings with no windows fronting the public realm should be avoided.
- Given their prominence, decorative architectural elements should also be considered in treating corner buildings.
- In the case of fencing for back gardens or perimeter walls, the quality of the materials should be high. Panel fencing should be avoided. Instead, different treatments should be used such as: patterns created with bricks; a green wall; hedges and planting; a combination of timber and brick; country fencing, etc.

Figure 48: Diagram reflecting design principles for corner buildings.

BF 06. Enclosure

Clearly defined spaces help to achieve cohesive and attractive urban form, and help in creating an appropriate sense of enclosure.

The following principles serve as general guidelines that should be considered for achieving satisfactory sense of enclosure and continuity:

Design principles

- Façades should have an appropriate ratio between the width of the street and the building height.
- Long spaces can lack visual enclosure. Variation to the building lines and visual pinch points can be introduced to avoid this problem.
- Open gaps between buildings could be closed by using detached buildings, linking walls and outbuildings. However, in exceptional circumstances gaps in the block may be allowed or required either for movement, visibility or historical context.
- In the case of terraced buildings, it is recommended that within the strong framework created, a variety of plot widths, land use and small setbacks should be considered during the design process to create an attractive villagescape without undermining the sense of continuity.
- 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.

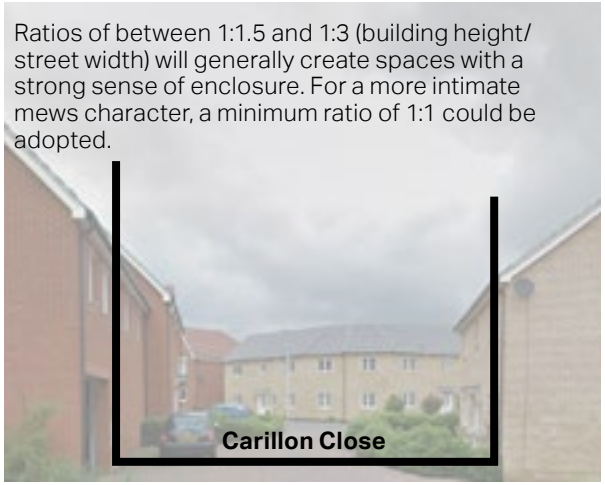


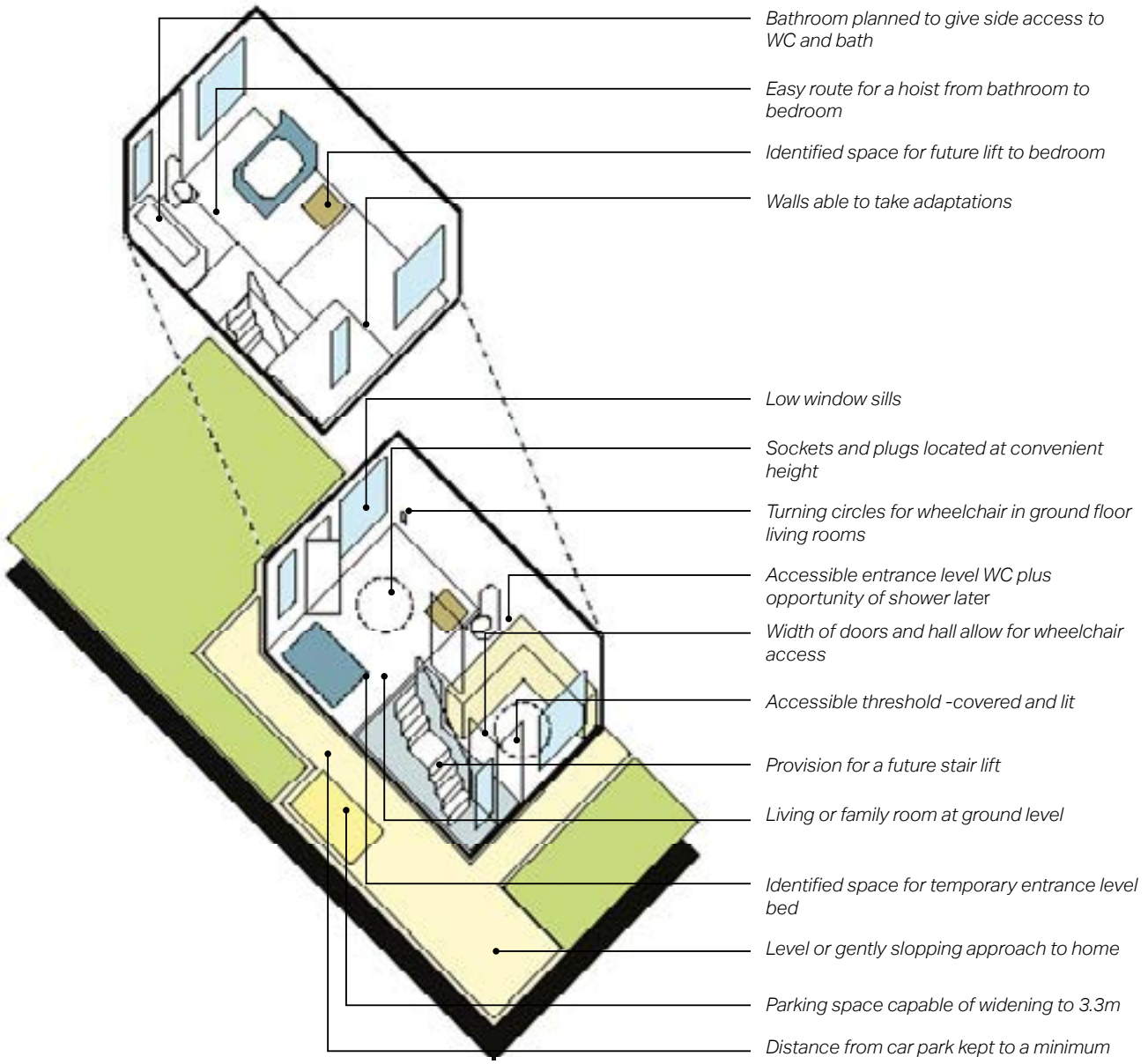
Figure 49: The various enclosure ratios depend on the amount of front garden width, road width, tree canopies and building heights.

BF 07. Lifetime homes

Houses should be designed to meet the differing and changing needs of households and people's physical abilities over their entire lifetime. One way to achieve this is to incorporate Lifetime Homes Standards design criteria in the design of new homes and to assess whether they can be retrofitted in existing properties.

The diagram to the left illustrates the main principles of inclusivity, accessibility, adaptability and sustainability.

Bungalows are also a way of ensuring that homes are provided for people as their needs change.



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4.6. Identity (I)

Within the Parish there is a wide variety of architectural style and development from different time periods, all of which contribute to its character and sense of place. The recurring architectural forms and features of this rich mix of precedents provides developers with solid basis for design development and should be the starting point of reference in developing site proposals.

This section includes some examples of building materials and details that contribute to the local vernacular within the Hoo St Werburgh Parish area, and these, among others, could be used to inform future development. This list is not exhaustive and each design proposal must explain its architectural and material strategy and demonstrate how it fits with the context of the area.

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

- Has the appropriateness of the boundary treatments been considered in the context of the site?
- Has the local architectural character and precedent been demonstrated in the proposals?
- What is the distinctive material in the area, if any?
- Does the proposed material harmonise with the local materials?
- Have the details of the windows, doors, eaves, and roof been addressed in the context of the overall design?
- Have development proposals made a success of designed variety?
- Has development demonstrated distinction between the villages and area?

I 01. Boundary treatment

Boundary treatment varied by street level, local character and type of structure.

Most of the 20th century semi-detached houses have open plan front gardens or low wall/hedge boundaries which make the streetscape spacious. However, large properties tend to have well-defined boundary walls.

The 21th century developments are with private driveways and garages but with relatively smaller front gardens compared to the previous period. Hedge boundaries, railing and picket are very common, providing an enclosed and well-planted street scene.

Design principles

- 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 and not impair natural surveillance.
- Boundary treatments should consider the street scene, street hierarchy and size of the development.
- Boundary features should be consistent with the character while enabling enough variations for visual interest.
- Locally distinctive landscape features and planting, such as flint and brick boundary walls and hedges of native species should be used in new development to define boundaries. Any material that is not in keeping with the local character should be avoided.
- Typically, boundaries are between 0.6-1.2m in height and should predominantly comprise native hedges.
- If placed on the property boundary, waste storage should be integrated as part of the overall design of the property. Landscaping could also be used to minimise the visual impact of bins and recycling containers.

Figure 50: Images above show local examples of boundary treatment

I 02. Roof, eaves and ridge lines

Creating variety and interest in the roofscape is an important element in the design of attractive buildings and places.

Gabled roofs are the most common, however hipped roofs also appear in the settlement. Roof materials include thatch, slate, clay tile and pantile.

The majority of buildings in the Parish do not exceed two storeys in height. Depending on the roofing material used, pitches from 35 to 55 degrees are generally found on traditional houses in the Parish. The overall character of the roofline is consistent and creates a low settlement.

Design principles

- The scale and pitch of the roof should always be in proportion with the dimensions of the building itself.
- Monotonous building elevations should be avoided, therefore, subtle changes in roofline can be achieved during the design process. Roof shapes and pitches must, however, employ a restrained palette on a given building; overly complex roofs must be avoided.
- Local traditional roof detailing elements such as dormers and chimneys should be included in the design.
- Deep, overhanging open eaves should be encouraged to add interest to buildings.
- Where Solar Photovoltaic Panels are incorporated in the roofline, they should be flush with the roof tiles.

Figure 51: Images above show positive examples of roofscape articulations and roof detailing

I 03. Chimneys

Traditionally, Buildings of Hoo St. Werburgh display simply-shaped brick chimney stacks. Chimneys add interest to roof lines, even if they are no longer needed to heat the home and they contribute towards the local vernacular. These structures can accommodate wood burners, which are an opportunity to use locally sourced timber for fuel.

Design principles

- Chimneys shall rise above the roof and when on an end elevation should connect to the ground.
- A modern approach should be taken to chimney design and should only be incorporated where they serve a function. In the case of small dwellings without fireplaces, gas fuel or soil and vent outlets can be combined into chimney structures.

I 04. Dormers

A dormer is a roofed structure, often containing a window, that projects vertically beyond the plane of a pitched roof. They can add interest to the roof. Gabled and hipped dormers are the most common in Hoo St. Werburgh.

Design principles

- Detailed evidence will be required, from developers, to show that their choice of design solution for dormers fits with the prevailing character and is correct in terms of proportion, relative to the size of the roof, and that it fits the general roofscape.

Figure 52: Images above show local styles of chimney and dormer

I 05. Windows

Windows are the 'eyes' of a building and are crucial to its character. A limited range of traditional window patterns are characteristic of traditional houses in Hoo St. Werburgh and provide appropriate models where a period effect is sought or required.

Traditionally, ground floor windows were larger than upper floor windows. Casement windows are widely-use in the 20th Century housing. Sash window can be found in the 19th Century housing. Bay windows are part of the local vernacular so they are encouraged to be used in new developments. They add interest and strengthen local character along any streetscene. Timber windows allow a finer profile to be achieved and if they are maintained properly they tend to be more durable than uPVC alternatives.

Design principles

- The number and size of the windows should be proportionate to each elevation. Because sunlight has an important effect on the circadian rhythm, windows must be of sufficient size and number for abundant natural light.
- Ground floor windows can be larger and deeper than upper floor windows, as they add more animation to the streetscape and allow greater light penetration.
- A restrained palette of window styles and shapes must be used across a given façade to avoid visual clutter and dissonance. Within a cluster of buildings, however, diversity in fenestration can add visual interest and avoid monotonous repetitions.
- In general, traditional styled windows are often pained white, although other colours are welcomed as they add interest to the street scene.
- Bay windows should be considered to add interest and strengthen local character along any streetscene.

Figure 53: Images above show local styles of window

I 06. Porches and canopies

Porches are often the key focal point of a building and should be incorporated into the scheme with care from the initial stage of design. A well-designed porch or canopy can enhance and give interest to a new building as well as reinforcing local building traditions. On the contrary, a poorly designed porch can blight even a well-designed new building and add an inappropriate and discordant feature to the overall character of the building and have a negative impact on the streetscene.

Within Hoo St. Werburgh porches and canopies those were part of the original design of a house, or added later, were generally very simple gabled.

Design principles

- Porches should be simple and relate to the style of the building to which they are attached. Leaving an open canopy is often the most appropriate form.
- Modern enclosed porches should be included in designs if they are an integral part of the overall design of the house.
- Porch roofs should be visually separated from the main roof of the dwelling (unless part of a catslide design) in order to produce an authentic feature.

Figure 54: Images above show local styles of canopy and porch

I 07. Materials

It is important that the materials used in new developments are of a high quality and reinforce the local character of Hoo St. Werburgh.

Bricks and tiles with varying hues and mixtures of materials are widely-used in Hoo St. Werburgh. In addition, weatherboarding contributes strong character to the Parish area. In Hoo St. Werburgh, the buildings may have a brick ground floor with a first floor clad in weatherboarding or hung tiles. Rendering can be used to protect the walling material beneath. Traditionally, render is applied in a smooth floated finish in a limited range of naturally occurring colours. The local rendering tradition suggests a white or light pastel colouring. It is recommended to keep render to subtle tones.

Design principles

- Materials proposed for use in new development should match or be guided by those used in existing buildings of the area. (Typically orange/yellow bricks, weatherboarding, rendering and hanging tile walls with plain clay tile or slate roofs).
- Any new development should use a simple and local material palette. Richness should be achieved through varied roofscapes, building styles and careful detailing.
- Any new materials should be durable, sourced from eco-friendly, recycled and sustainable supplies when possible.

I 07.01. Weatherboarding

Design principles

- White painted or black stained timber panels or oak boards should be used unless a different material or colour can be justified and would not lead to a pastiche with an unsympathetic and unnatural appearance.

I 07.02. Render

Design principles

- Light pastel coloured rendering should be used unless a different colour can be justified.

I 07.03. Brick and tiles

Design principles

- Bricks and tiles should predominantly be rich hues of red and yellow.
- Variety should be introduced by mixing a brick ground floor with a first floor clad in weatherboarding or hung tiles.

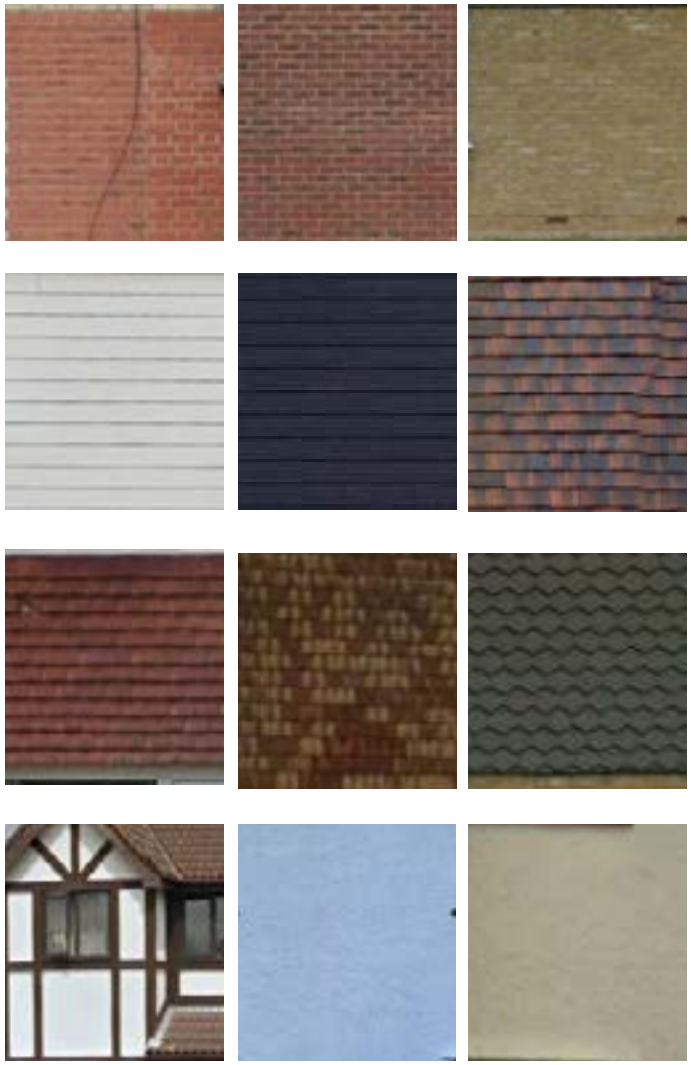


Figure 55: Examples of local materials

Figure 56: Examples of arrangements of local materials

4.7. Sustainability

The following section elaborates on energy efficient technologies that could be incorporated in buildings and at broader Parish design scale as principles.

Use of such principles and design tools should be encouraged in order to contribute towards a more sustainable environment.

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

- Does development proposals 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?
- If any of the buildings were to be heated by an individual air source heat pump (ASHP), is there space to site it within the property boundary without infringing on noise and visual requirements?
- Will the roof structure be capable of supporting a photovoltaic or solar thermal array either now, or in the future?
- Have SuDs and methods of water management been taken into account?

SU 01. Low carbon development

Energy efficient or eco homes combine all around energy efficient construction, appliances, and lighting with commercially available renewable energy systems, such as solar water heating and solar electricity.

The aim of these interventions is to reduce home overall energy use as cost effectively as the circumstances allow for. Whereas, the final step towards a high performance building would consist of other on-site measures towards renewable energy systems.

Existing homes

1. **Insulation** in lofts and walls (cavity and solid)
2. **Double or triple glazing with shading** (e.g. tinted window film, blinds, curtains and trees outside)
3. **Low- carbon heating** with heat pumps or connections to district heat network
4. **Draught proofing** of floors, walls, windows and doors
5. **Highly energy- efficient appliances** (e.g. A++ and A+++ rating)
6. **Highly waste- efficient devices** with low-flow showers and taps, insulated tanks and hot water thermostats
7. **Green space (e.g. gardens and trees)** to help reduce the risks and impacts of flooding and overheating
8. **Flood resilience and resistance** with removable air back covers, relocated appliances (e.g. installing washing machines upstairs), treated wooden floors

Additional measures for new build homes

- A **High levels of airtightness**
- B **More fresh air** with the mechanical ventilation and heat recovery, and passive cooling
- C **Triple glazed windows and external shading** especially on south and west faces
- D **Low-carbon heating** and no new homes on the gas grid by 2025 at the latest
- E **Water management and cooling** more ambitious water efficiency standards, green roofs and reflective walls
- F **Flood resilience and resistance** e.g. raised electrical, concrete floors and greening your garden
- G **Construction and site planning** timber frames, sustainable transport options (such as cycling)
- H **Solar panel**
- I **Electric car charging point**

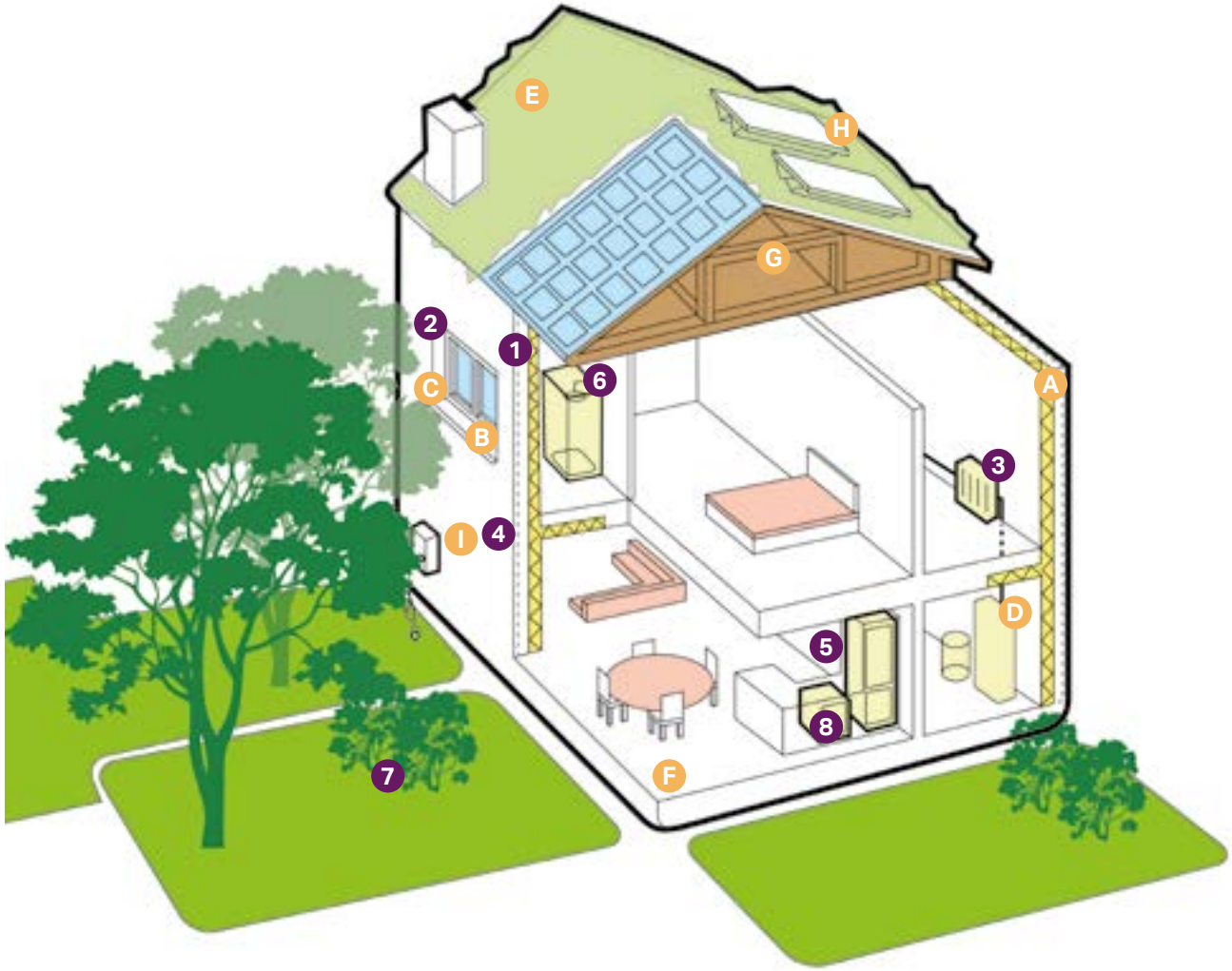


Figure 57: Diagram showing low-carbon homes in both existing and new build conditions (adapted from Commission on Climate Change)

SU 01.01. Solar roof panels

Solar roof panels should be designed in from the start, forming part of the design concept. Some attractive options are solar shingles and photovoltaic slates or tiles. In this way, the solar panels can be used as a roofing material in their own right.

Design principles

- The colour and finish of solar panels and how they reflect light should be chosen to fit in with the building or surroundings.
- Consider the style of the building and, if possible, position the solar PV panels so they are in proportion to the building and its features. For example, they can resemble roofing elements such as roof lights or windows.
- The way in which panels are laid out in relation to one another can make a huge difference to the appearance of the system – symmetrical installations tend to work much better.

SU 01.02. Heat pumps

Heat pumps are an efficient alternative to fuel oil and electrical systems for heating and cooling. Heat pumps can be either ground or air source.

Ground source heat pump

Ground source heat pumps, as the name suggests, use the ambient temperature of the land upon which the dwelling sits to generate heating and hot water, reducing energy bills and carbon footprint.

The ground pipework can be installed in two ways, either vertically or horizontally. Horizontal pipework is only suitable for a large garden. For properties that have less space, the pipework can be laid vertically, which usually requires a deep hole to be bored into the garden. When considering installing a ground source heat pump householders or developers should check the prevailing ground conditions and ensure they are aware of any underground obstructions and/or utilities lines.

Air source heat pump

Air source heat pumps use the ambient heat in the air, even on cold days. They are generally easier to install than ground source heat pumps. They can be installed immediately adjacent or at some distance from the building to be heated. Typically, the following guidelines should be considered.

Design principles

- Generally, installing an air source pump should not breach any local planning or building regulations.
- The pump should be placed in a location where it is not visually intrusive to minimise its effect on the external appearance of the building.
- The pump should be not be installed in the front of the property or on a narrow alleyway. It is best located at the back of the property.
- The pump should be at least one metre away from the property boundary and units installed on a flat roof should be at least one metre away from the external edge of the roof.
- Any plants or shrubs should be at least a metre away from heat pumps.
- Planning permission may be required for installations within the curtilage of a Listed Building, a site designated as a Scheduled Monument, a Conservation Area or a World Heritage Site.
- The pump should not have a harmful effect on neighbouring properties in terms of noise. It should not be placed immediately adjacent to neighbouring occupied buildings.

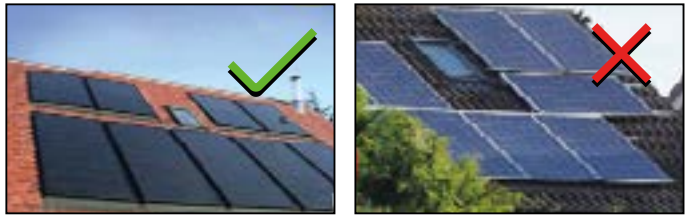


Figure 58: Favour symmetrical arrangements

Figure 59: Place pumps in a recessed space to minimise the visual impact

SU 02. Water management

SU 02.01. Sustainable Drainage Systems

The term SuDS stands for Sustainable Drainage Systems. It covers a range of approaches to manage surface water in a 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 the collection of surface water to 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; and
- 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:

Design principles

- All development should be designed to eliminate the risk of surface water flooding and potential overloading of the sewage network, and maximise environmental gain, such as: water quality, water resources, biodiversity, landscape and recreational open space.
- All development should include appropriate sustainable drainage systems (SuDS) for the disposal of surface water in order to avoid any increase in flood risk or adverse impact on water quality, and to mimic the drainage from the pre-developed site. SuDS features should always be the preferred option and provided onsite wherever practicable.
- SuDS schemes should demonstrate that clear arrangements have been established for the operation and maintenance of the SuDS component for the lifetime of the development.

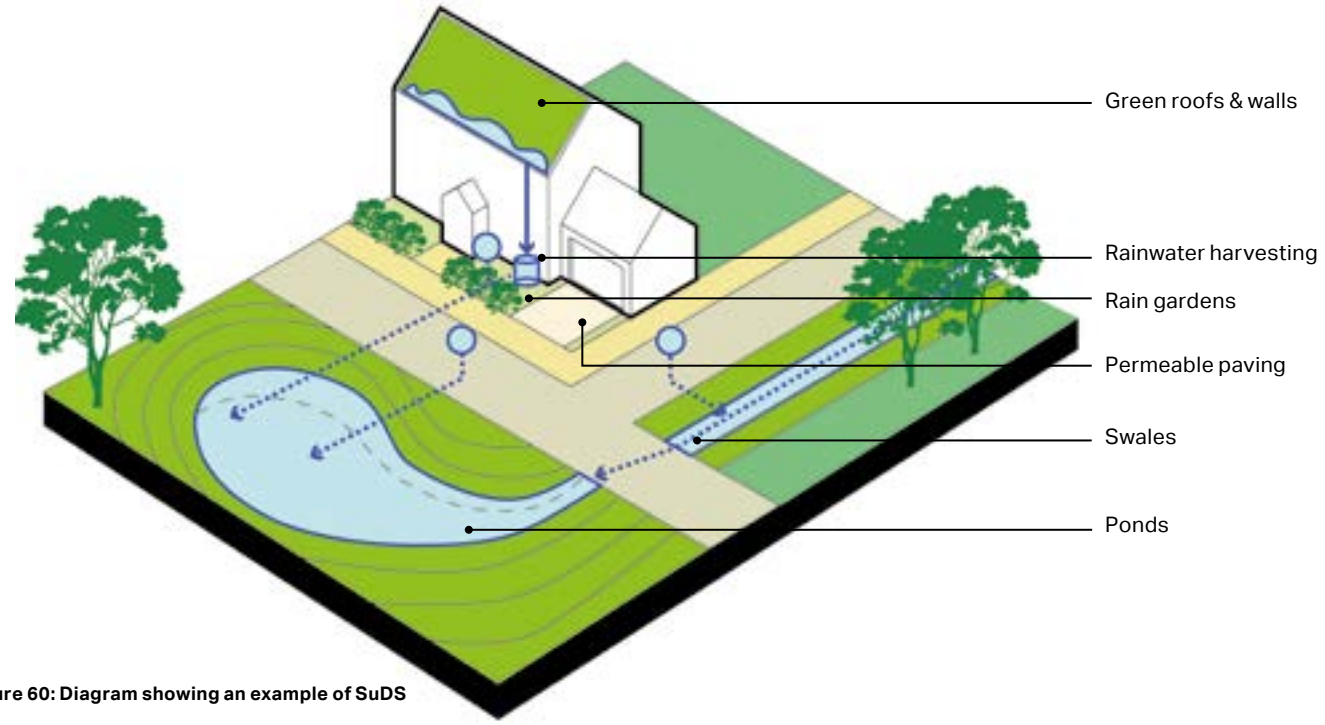


Figure 60: Diagram showing an example of SuDS

SU 02.02. Green roof

Green roofs are increasingly accepted and often can be seen integrated in new building design. Whether the roof is partially or completely covered with vegetation, their design should follow some design principles.

Design principles

- Sunlight, orientation and overshadowing from surrounding buildings have to be taken into account. Green roofs should be designed to minimise power use, at that effect, consider the orientation of the roof, and the access to natural light. Where possible, use gravity and not pumps for watering systems.
- The design of green roofs should complement (where applicable) the surrounding landscape.
- The green roof should be easy to reach and maintain.

Figure 63: Favour ease of maintenance and accessibility to the green roof

SU 02.03. Permeable paving

Permeable pavements offer a solution to maintain soil permeability while performing the function of conventional paving. The choice of paving in public areas should also have reference to public safety, so some materials may not be appropriate and, therefore, permeable paving might be more difficult to install. In domestic properties, there may be greater scope for the use of permeable surfaces on driveways and footpaths.

Design principles

- The choice of permeable paving units should be made with reference to the local context; in Hoo St Werburgh, therefore, the units may take the form of unbound gravel, clay pavers, or concrete setts.

Figure 64: Examples of permeable paving treatments: unbound clay pavers (left), precast concrete setts (centre), and gravel (right).

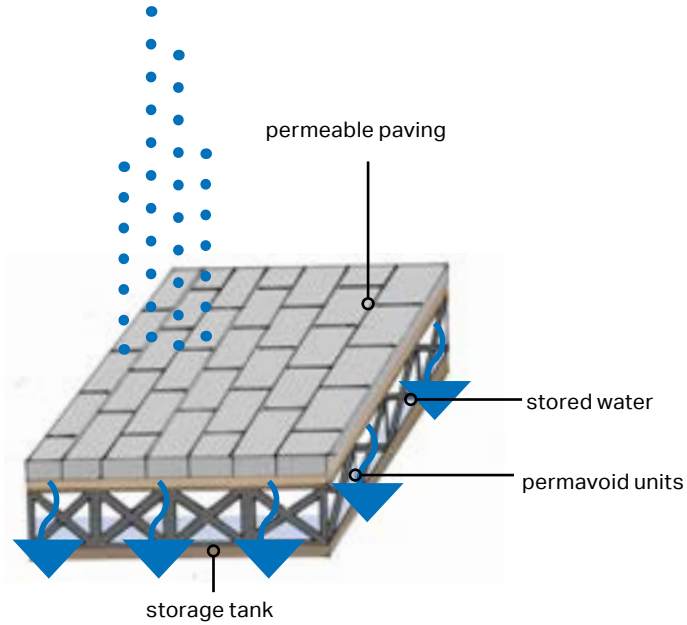


Figure 61: Diagram illustrating the functioning of a soak away

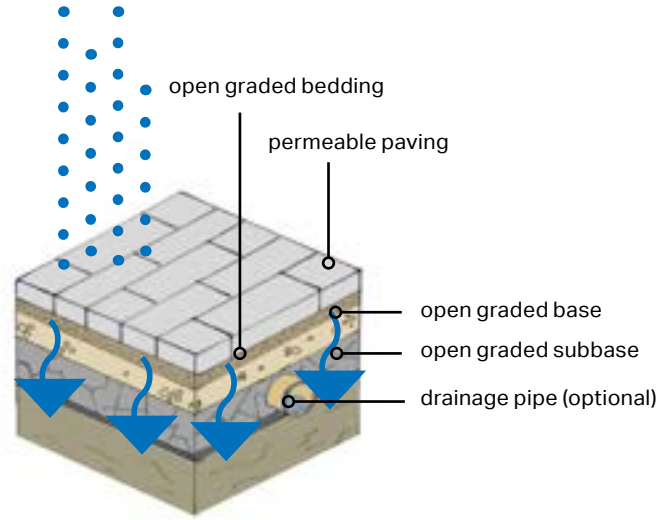


Figure 62: Diagram illustrating the functioning of a soak away

SU 02.04. Attenuation ponds and detention basins

Where appropriate, opportunities to integrate attenuation ponds and detention basins into new and existing developments in Hoo St Werburgh should be examined to reduce the risk and severity of flooding.

Attenuation ponds are permanent bodies of water with stormwater storage capacity above the permanent water level. Detention basins are similar to attenuation ponds, but without a permanent pool of water.

Detention basins provide more attenuation storage per unit surface area than attenuation ponds of the same depth, so may be used when space is more limited. However, attenuation ponds are preferred due to the greater amenity and biodiversity benefits they can provide.

Attenuation ponds must be of a natural appearance to complement the rural character of the site. They can also be of educational benefit to schools and the local community.

Design principles

- Detention basins should be vegetated to provide greater water quality benefits, such as through the removal of sediment. They should be designed to permit alternative uses when not in use, where appropriate.
- Attenuation ponds and detention basins must actively contribute as new public amenities and green spaces. It must be expected that people will interact with the water and landscaping, therefore they must be designed for safe public access and not fenced off.

SU 02.05. Bioretention systems

Bioretention systems, including soak away and rain gardens, can be used within each development, along verges, and in semi-natural green spaces.

Design principles

- 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.

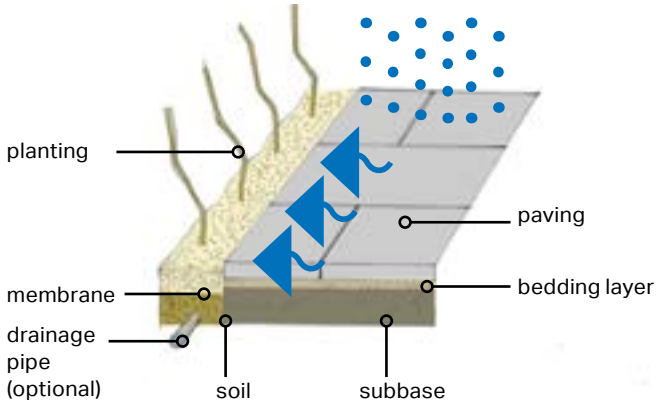


Figure 66: Diagram illustrating the functioning of a soak away garden

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

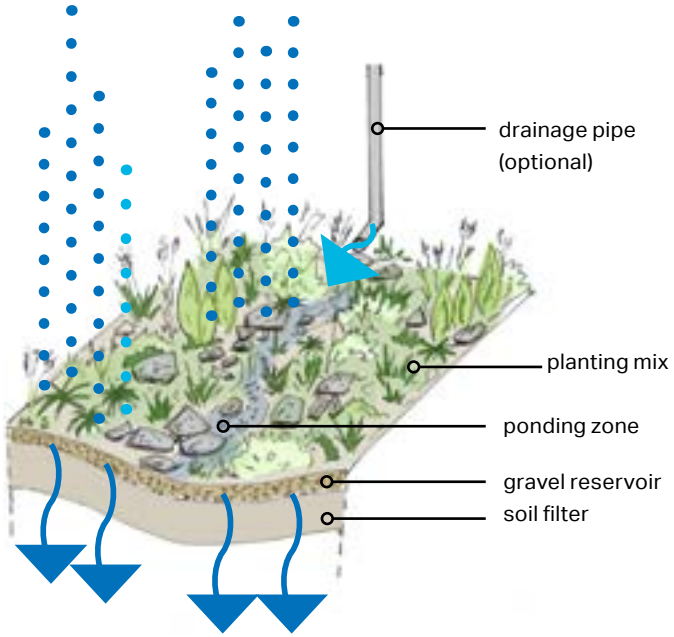
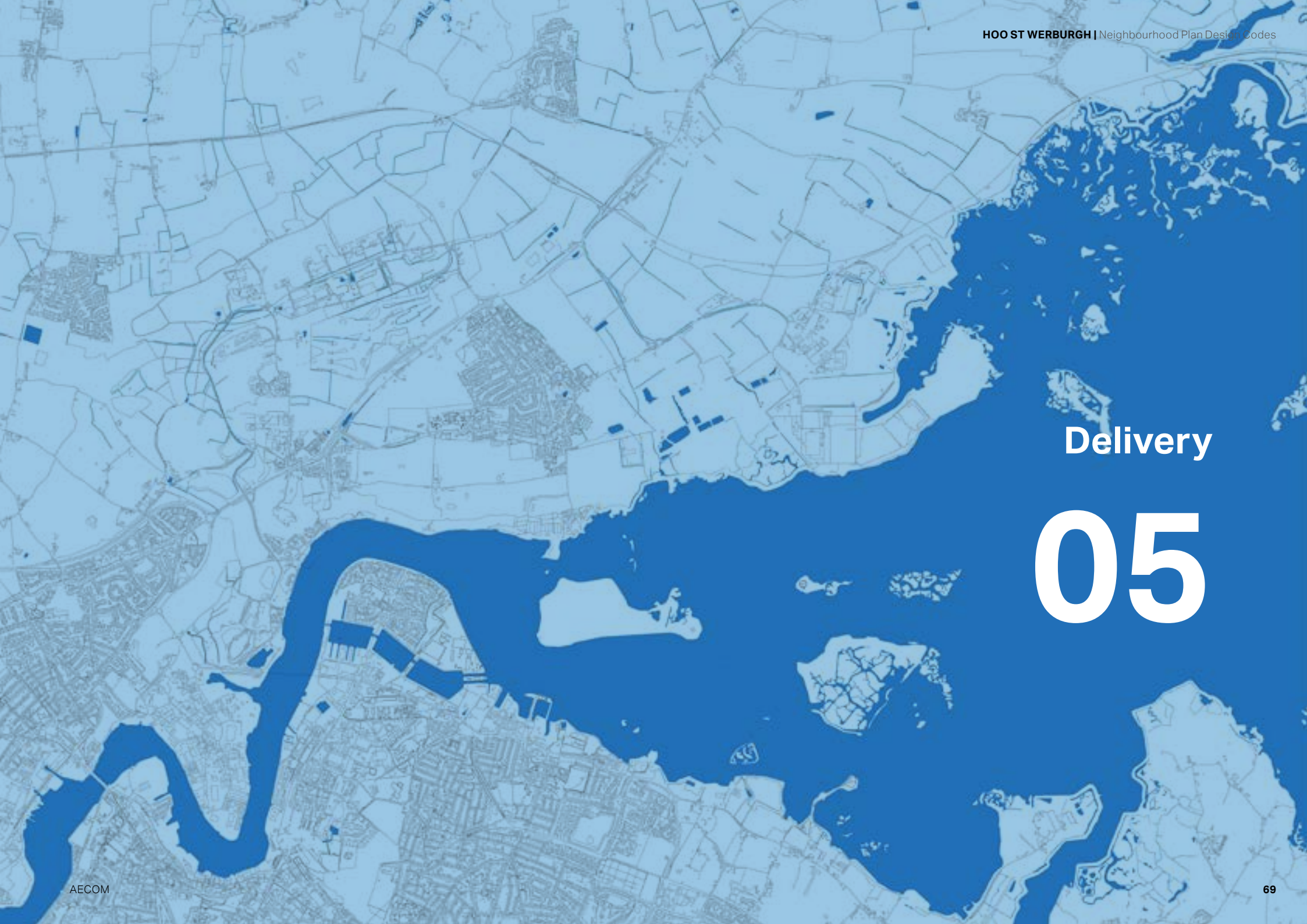


Figure 65: Diagram illustrating the functioning of a rain garden



Delivery

05

5. Delivery

Delivery

The Design Codes will be a valuable tool in securing context-driven, high-quality development in Hoo St Werburgh. 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 Codes as planning consent is sought.
Local Planning Authority	As a reference point, embedded in policy, against which to assess planning applications. The Design Codes should be discussed with applicants during any pre-application discussions.
Parish Council	As a guide when commenting on planning applications, ensuring that the Design 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.

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AECOM is built to deliver a better world. We design, build, finance and operate infrastructure assets for governments, businesses and organizations in more than 150 countries. As a fully integrated firm, we connect knowledge and experience across our global network of experts to help clients solve their most complex challenges. From high-performance buildings and infrastructure, to resilient communities and environments, to stable and secure nations, our work is transformative, differentiated and vital. A Fortune 500 firm, AECOM had revenue of approximately $17.4 billion during fiscal year 2016. See how we deliver what others can only imagine at aecom.com and @AECOM.

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