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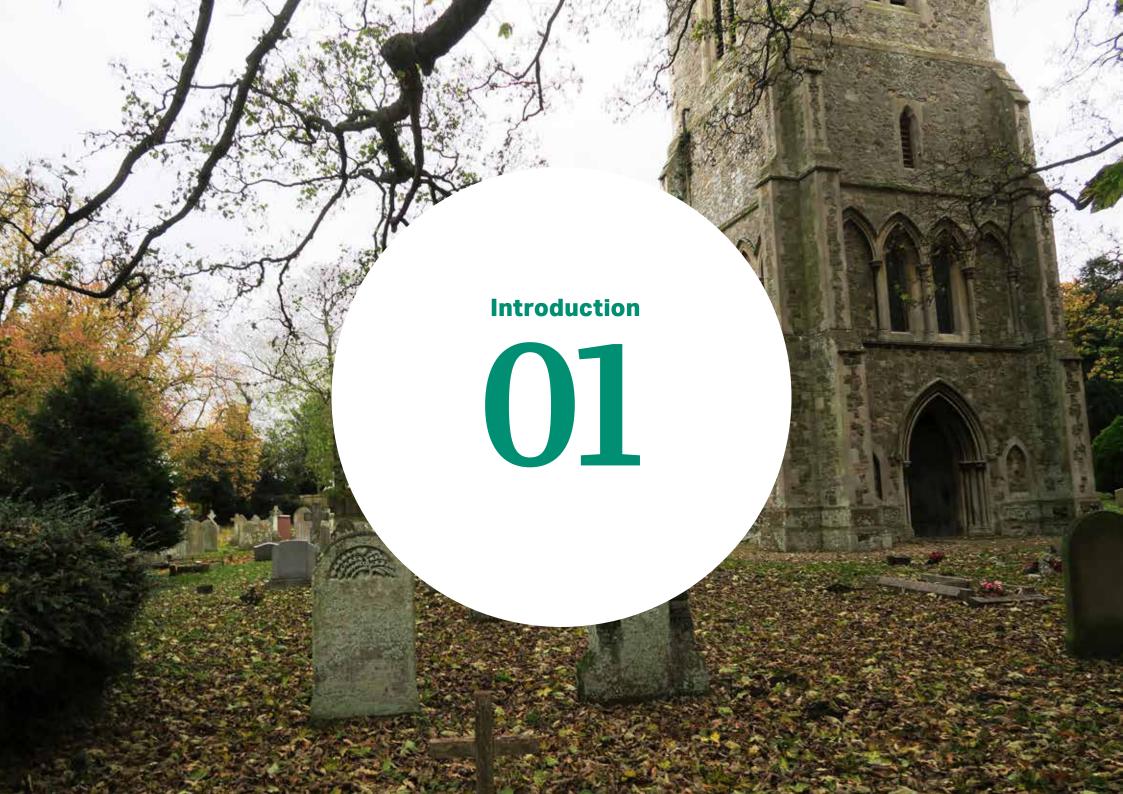
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Issue no.	Issue date	Details	Issued by	Position	Approved by
2	24-02-2022	Final report	Jimmy Lu	Senior Urban Designer	
	14-02-2022	Second draft	Sheina Rijanto	Urban Designer	Francis Shaw Locality
0	08-02-2022	First draft	Jimmy Lu Sheina Rijanto Holly MacMahon	Senior Urban Designer Urban Designer Graduate Urban Designer	Rachel Curtis Clerk to North Wootton Parish Council

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Contents

1. Introduction	5
1.1 Introduction	5
1.2 Objectives	5
1.3 Process	5
1.4 Area of Study	7
2. Neighbourhood area context analysis	9
2.1 Settlement patterns	9
2.2 Landscape character and designations	11
2.3 Topography and flood risk	12
2.4 Open spaces	14
2.5 Road network and footpaths	16
2.6 Built form and heritage	18
3. Design guidance & codes	20
3.1 Introduction	20
3.2 List of codes	20
3.3 General design principles	21
DC.01 - Site layout	23
DC.01.1 Consider the context	23
DC.02 - Built character	28
DC02.1 Lifetime homes	28
DC.02.5 Corner treatment	32
DC.03 Mobility and parking	38
DC.03.1 Interconnected streets	38
DC.04 Sustainability	45



1. Introduction

This section provides context and general information to introduce the project and its location

1.1 Introduction

Through the Department for Levelling Up, Housing and Communities (DLUCH) Neighbourhood Planning Programme led by Locality, AECOM has been commissioned to provide design support to North Wootton Parish Council. The North Wootton Neighbourhood Area was designated in June 2021 and the Neighbourhood Plan Steering Group is making good progress in the production of the North Wootton Neighbourhood Plan. The Parish Council has requested to access professional advice on design guidance and codes for any new development to ensure that new homes are in keeping with the existing character of North Wootton.

1.2 Objectives

The main objective of this report is to develop design guidance and codes for the Neighbourhood Plan, and to inform the design and assessment of future planning applications and residential developments in North Wootton. The guidance and codes in this document elaborate on key design elements that were agreed with the Neighbourhood Plan Steering Group at the outset of the project.

The recommendations made in this report are based on observations on the Neighbourhood Area as a whole, but they may be more relevant in some areas of the neighbourhood area than others. The elements that are more general are referred to as design guidelines. Other elements that are more prescriptive or set out parameters are the design codes.

1.3 Process

Following an inception meeting and a site visit with members of the Neighbourhood Plan Steering Group, AECOM carried out a high-level assessment of the Neighbourhood Area. The following steps were agreed with the Group to produce this report:

STEP 01

Initial meeting to discuss brief and a site visit between AECOM and the Group.

STEP 02

Urban design and local character analysis of the village.

STEP

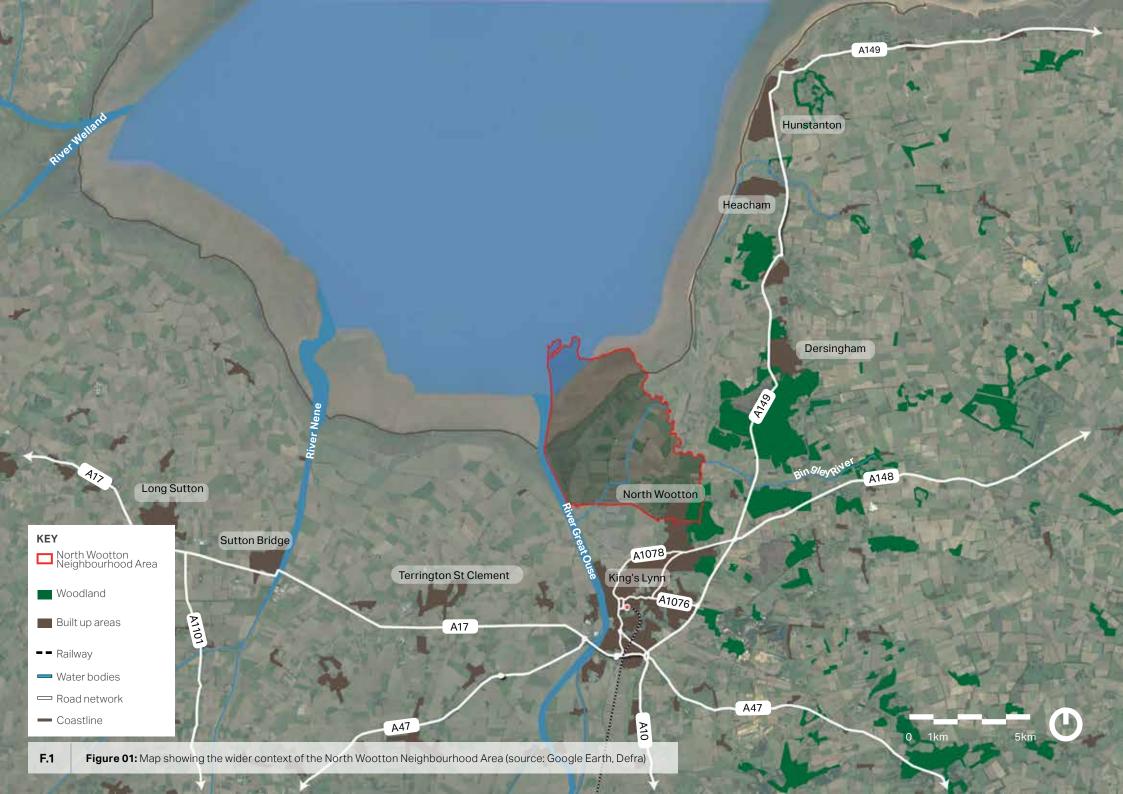
Preparation of the design principles, guidelines and codes to be used to inform the design of future developments.

STEP 04

Submission of a draft report.

O5

Submission of a final report.



1.4 Area of Study

The Neighbourhood Area is the civil parish of North Wootton in the district of King's Lynn and West Norfolk. The Parish borders the Wash and the river Great Ouse and the village of North Wootton is now contiguous with the built-up area of King's Lynn. It is located 4 km north of the centre of King's Lynn, 60 km west of Norwich, and 50 km north-east of Peterborough.

North Wootton has a village hall, a parish church at All Saints, two pubs at the Red Cat and House on the Green, a village surgery at the Woottons Surgery, a village store, a petrol station, and a primary school at North Wootton Academy.

Due to its location on the Norfolk coast and at the mouth of the Great Ouse, the coastal areas in the west of North Wootton are protected by various designations whose areas mostly overlap: National Nature Reserve, Ramsar sites, Sites of Special Scientific Interest (SSSI), and Special Areas of Conservation. Most of the Neighbourhood Area is located inside the

Norfolk Coast Area of Outstanding Natural Beauty (AONB). Small areas of woodland east of the village are included in the Priority Habitat Inventory under the deciduous woodland and conifer categories.

North Wootton does not have a Conservation Area but contains three Grade-II listed buildings including All Saints Church. Although most of the village was built in the 20th century, it also contains several unlisted but well-preserved buildings that provide good examples of the local vernacular architecture.

North Wootton is not served by any major roads. National Cycle Network (NCN) route 1 crosses the village. Since the closure of North Wootton railway station in 1969, the nearest station is in King's Lynn. The village is served by a small number of bus lines with stops located on All Saints Drive, Priory Lane, and that connect the Parish with King's Lynn, Gaywood, Castle Rising, and Wolferton.



Figure 02: Village sign on the green between Priory Lane and Gatehouse Lane



Figure 03: West tower of Grade-II listed All Saints Church (NHLE 1342413)



2. Neighbourhood area context analysis

This section outlines the broad physical, historic and contextual characteristics of North Wootton. It analyses the Parish's heritage, landscape and mobility.

2.1 Settlement patterns

Built-up areas only occupy a small area of the Neighbourhood Area, which remains dominated by marshland, open fields, and woodland. North Wootton developed as a distinct settlement but now forms the northern edge of the King's Lynn urban area and has merged into a contiguous built-up area with neighbouring South Wootton. Settlement patterns are low-scale and lowdensity across the settlement, with most constructions not exceeding two storeys in height. Properties are overwhelmingly equipped with front and back gardens. The expansion of the village is constrained by the flood-prone nature of most of the Parish due to its low-lying topography.

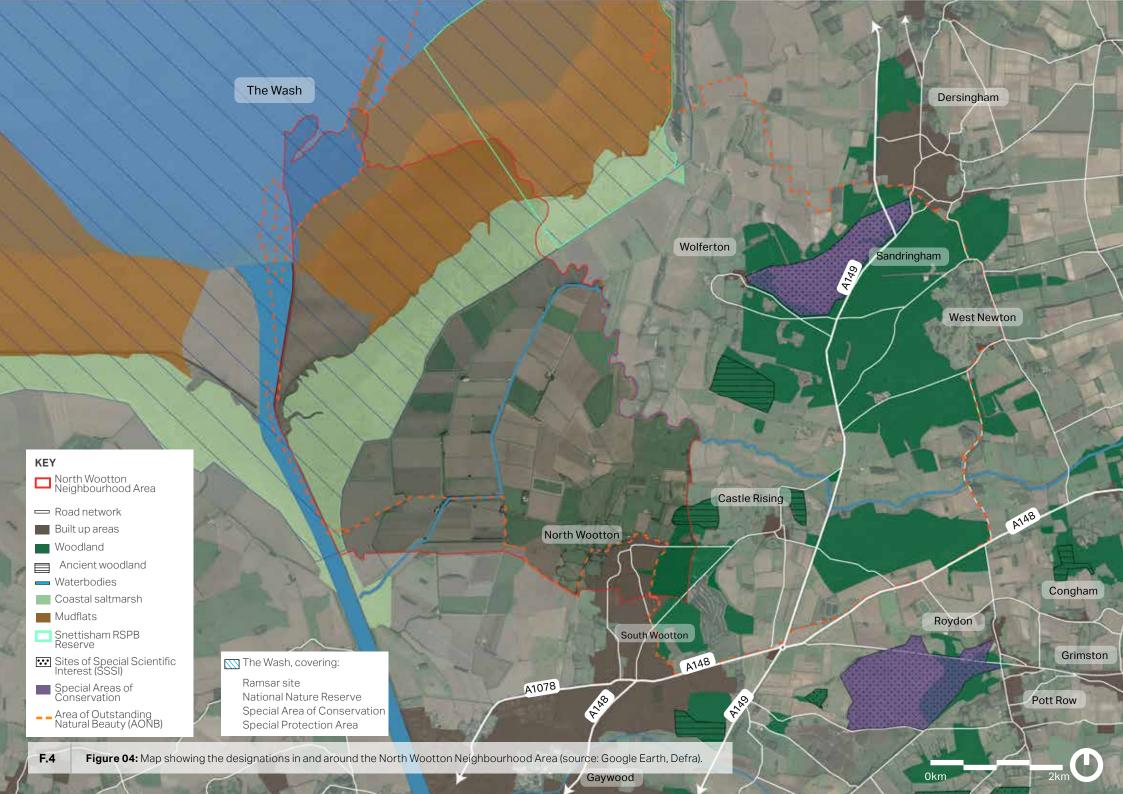
The oldest part of North Wootton is located at the north of the settlement, with the oldest buildings constructed along the northern end of Priory Lane, Manor Road, Station Road, and Little Carr Road. Buildings are dispersed in an informal and organic pattern on irregularly shaped plots. Variations in enclosure are created in two ways; firstly through the widening of meandering roads at junctions forming small triangular green spaces, and secondly with different levels of building setbacks whereby some buildings are placed directly on the back of the road with no front gardens.

Most of North Wootton, however, reflects settlement patterns typical of 20th-century residential suburban developments. Residential development is dominated by tract housing, which is characterised by detached and semi-detached houses built according to standardised models that results in a greater degree of homogeneity in the architecture and streetscape within each development. Houses are arranged in clusters served a network of winding

multi-branched cul-de-sac roads that feed into Priory Lane, All Saints Drive, and Ling Common Road. Clusters are often equipped with small pockets green spaces. In many places, the sinuous geometry of cul-de-sac roads exposes the windowless side façades of houses. Properties are typically equipped with front and back gardens, with most of the front garden space given to vehicle parking.

As a result of modern expansion, North Wootton now forms a contiguous built-up area with neighbouring South Wootton and the larger King's Lynn urban area. Only Wootton Park, the Pingle, and the grounds of North Wootton Academy remain as green gaps between North and South Wootton.

Outside the village, only a small number of isolated farms and agricultural buildings are dispersed across the landscape.



2.2 Landscape character and designations

According to the National Character Area Assessment, the Neighbourhood Area is located in National Character Area (NCA) 46 – the Fens. This area has a large, lowlying, flat landscape with extensive vistas to level horizons and many drainage ditches, dykes and rivers. It has valuable soils providing ideal conditions for large-scale cultivation of arable and horticultural crops, with fertile fields that have been historically drained and managed to make them viable for agriculture. Evidence of large-scale human intervention is visible in the strong rectilinear drainage patterns.

In the King's Lynn and West Norfolk Borough Landscape Character Assessment, North Wootton is divided between three distinct character areas: Open Coastal Marshes to the west, Drained Coastal Marshes to the centre, and Wooded Slopes with Estate Land to the east.

Open Coastal Marshes cover the western most areas of North Wootton located on the coast of the Wash. They form a low-lying and flat landform that provide distant and open views and create a strong sense of openness and exposure. The complex succession of mudflats, saltmarshes, brackish pools, lagoons, dykes, and drains creates a rich ecological habitat for wildlife. The ecological and scenic value of the area is reflected in its inclusion in the following, often overlapping areas of designation:

- Norfolk Coast Area of Outstanding Natural Beauty (AONB);
- National Nature Reserve The Wash;
- Ramsar site The Wash;
- Site of Special Scientific Interest (SSSI) The Wash:
- Special Area of Conservation The Wash & North Norfolk Coast;
- Special Protection Area The Wash; and
- The northernmost Open Coastal Marshes section is included in the Snettisham RSPB Reserve.

Drained Coastal Marshes cover the centre of the Neighbourhood Area. The landscape is dominated by large, geometric fields bordered by rectilinear drainage ditches, dykes, and hedges located on land reclaimed from the Wash. The flat and low-lying landform results in a strong sense of openness, with uninterrupted long-distance views. The west is delineated by sea defence walls while the east contains areas of woodland. A large section of the area is also located in the Norfolk Coast AONB.

Wooded Slopes with Estate Land covers the east of North Wootton. It contains substantial areas of arable farming interspersed by mixed woodland and has a gently undulating topography. There are contrasting degrees of enclosure, with open views across fields to the west and a more enclosed character defined by the woodland to the east. As with the two previous character areas, this part of the Parish is located in the Norfolk Coast AONB.

2.3 Topography and flood risk

Due to its location in the Fens and at the mouth of the Great Ouse, most of North Wootton has a low-lying flat topography comprised of marshland and fields separated by dykes and drainage channels. The east of the Neighbourhood Area, including the village of North Wootton, are located on higher grounds with a gently undulating topography. As a result of this topography, most of the area west of the village is prone to flooding from the Great Ouse or the Wash, which limits possibilities of westward expansion. In addition, parts of the built-up area are vulnerable to flooding from surface water, including the north of Wootton Park and the entrance of Woodland Gardens.



2.4 Open spaces

Most of the Neighbourhood Area remains unbuilt and consists of coastal marshland and open fields. To the east of the village are Ling Common and Wootton Carr, areas of mixed woodland that are crossed by a series of footpaths that connect to the village.

Formal areas of green and open spaces include Wootton Park and the Pingle, which along with the neighbouring grounds of North Wootton Academy are the last remaining green buffers between North and South Wootton. The churchyard of All Saints is another important green space in the village. The village is equipped with football and rugby pitches at Wootton Park, North Wootton Academy, and the West Norfolk Rugby Union Football Club.

Green corridors cross the village from west to east, creating gaps between developments and green connections.

One joins Nursery Land and All Saints

Drive above Alban Road, while another one contiguous with Wootton Park links All Saints Drive with Woodland Gardens and

Priory Lane. It joins with one preserved section of Ling Common east of Woodland Gardens, thus creating a green link across most of the village.

The village is punctuated by triangular pockets of open space created by the junction of roads and usually marked by prominent trees or local landmarks. The most important of them is the village green marked by the village sign between Priory Lane and Gatehouse Lane. Other examples can be found at the junctions between Ling Common Road and Gatehouse Lane, Manor Road and Priory Lane, All Saints Drive and Manor Road, and Priory Lane and Woodland Gardens. Many 20th-century cul-de-sac developments also incorporate small pockets of greenery.



Figure 06: A play area in Wootton Park Playground



Figure 07: A deer in Ling Common seen from Woodland Gardens



2.5 Road network and footpaths

North Wootton is mainly composed of local roads as it is not crossed by any major roads. Priory Lane, All Saints Drive, and Ling Common Road provide the main road armature that connect the village to neighbouring settlements and the greater King's Lynn area. Outside the village, the road network is sparse. Several public rights of way connect the village to Ling Common and Wootton Carr to the east, but few footpaths and roads link across the Fens to the Great Ouse or the Wash.

The sections of Station Road, Manor Road, and Priory Lane that cross the oldest parts of the village have an organic layouts with gentle bends and variations in width that reflect their origins as rural lanes. Junctions are punctuated by pockets of greenery with grass and trees where buildings are further recessed from the roads, reinforcing the spacious and green character of the village. Roads are usually framed by mature trees and boundary walls or hedges. In

some locations, visibility is restricted by the placement of buildings at the back of the pavement without any setback. The restricted width of some sections of Manor Road and Ling Common Road only accommodates pavements on one side.

Most of the road network in North Wootton reflects its major expansion period in the 20th-century. Roads built during this period have more regular and meandering layouts that prioritise vehicle traffic on the main roads. Despite the frequency of front gardens, roads are more rarely framed by vegetations or walls due to the large amount of space taken by vehicle parking and crossovers. Residential clusters are served by multi-pronged cul-de-sac roads. Although some are linked with footpaths that offer possibilities of onward pedestrian connections with open spaces and the main roads, most do not provide such links and their complex layout makes pedestrian navigation difficult.

North Wootton does not have any dedicated on-street cycling infrastructure but it is on the designated route of National Cycle Network (NCN) Route 1, which crosses a number of green spaces.



2.6 Built form and heritage

Buildings in North Wootton are predominantly detached and semidetached houses with a height of one or two storeys. Older buildings in the village reflect the variety of the local rural vernacular in their architecture style and shapes. Traditional construction materials include red and yellow bricks, carstone, sandstone with galletting. Roofs are typically clad with clay pantiles, slate, or plain tiles, while front gardens are delineated with landscaped hedges or low masonry walls.

The Neighbourhood Area has no Conservation Area but contains three listed buildings, all Grade II listed: All Saints Church (NHLE 1342413), Church Cottage circa 30 metres south of All Saints (NHLE 1168719), and the Priory (NHLE 1077614). A larger number of unlisted heritage buildings located on Priory Lane, Manor Road, and Station Road, provide rich examples of the local vernacular.

The majority of buildings in North Wootton reflect the period of rapid expansion of the village in the 20th-century. In contrast with traditional buildings, modern tract housing employs standardised shapes and materials, resulting in a more uniform streetscape within a given development. Most houses are equipped with side or front garages. Modern developments also introduced materials that are not traditional in the region such as concrete roof tiles, vinyl cladding, and timber fencing.



Figure 10: Grade II listed All Saints Church (NHLE 1342413)



Figure 11: Non-listed historic houses on Ling Common Road



3. Design guidance & codes

This section sets out the principles that will influence the design of potential small-scale development and to inform the retrofit of existing properties in North Wootton. The aim is to enhance local distinctiveness by creating good quality developments, thriving communities and enhance connections in and around North Wootton.

3.1 Introduction

An aim of this document is to ensure that future development within North Wootton is well-designed and built to last. This section focuses on the distinctive characteristics of the area and shows how they can influence or be incorporated into new development.

This section provides guidance on the design of development, which is informed by best practice from within North Wotton. It sets out the expectations that applicants for planning permission in the village will be expected to follow.

Due to several constraints, North Wootton will not likely expect large-scale development in the near future. The guidance and codes presented in this document mainly relates to the retrofit of existing properties or potential small-scale development.

The local patterns of streets and spaces, building traditions, materials, and the natural environment should all help to determine the character and identity of a development. However, it should be recognised that notes

of contemporary design and new buildings technologies are capable of delivering acceptable built forms and may sometimes be more efficient.

It is important that with any proposals, the local context is fully considered. Any form of contemporary design should still embody North Wootton's 'sense of place' and meet the aspirations of its current residents.

3.2 List of codes

This chapter is divided into five sections, each one with several sub-sections. Each section and sub-section is numbered (e.g. DC.01, DC.01.1) to facilitate its reading and consultation. These sub-sections are:

- DC.01 Site layout;
- DC.02 Built character;
- DC.03 Mobility and parking;
- **DC.04** Sustainable drainage;
- DC.05 The Future Homes Standard (2025).

3.3 General design principles

A brief mention of general design principles will be included before the specific design guidance and codes for North Wootton.

Considerations of design and layout must be informed by the wider context, informed not only by the immediate neighbouring buildings, but also the townscape and landscape of the wider area. The local pattern of streets and spaces, building traditions, materials and natural environment should all help to determine the character and identity of a development. The following page also highlights key points regarding the concepts of place making and walkable places.

- Respect the existing settlement pattern in order to preserve the character.
- Integrate with existing paths, streets, circulation networks.
- Reinforce or enhance the established character of streets, greens and other spaces.
- $oldsymbol{4}$ Enhance existing settlement in terms of physical form, architecture and land use.
- Retain and incorporate important existing features into the development.
- Respect surrounding buildings in terms of scale, height form and massing.
- Adopt contextually appropriate materials and details.
- Incorporate necessary services and drainage infrastructure without causing unacceptable harm to retained features.
- Ensure all components e.g. buildings, landscapes, access routes, parking and open space are well related to each other.
- Aim for innovative design and eco-friendly buildings while respecting the architectural heritage and tradition of the area.

3.3.1 Placemaking

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

The placemaking principles and design codes set out in this document should be used to assess the design quality of future development or regeneration proposals.

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

3.3.2 Walkable places

Creating new walking routes that are well connected to existing ones is prerequisite for any new development. Walking routes should usually be laid out in a way where they follow the shortest and straightest distance between two points. Pedestrian footpaths should be at least 2 metres wide and be well lit to encourage use throughout all times of the day and night.

The success of a place is influenced by how walkable it is. The principle of 20-minute neighbourhoods aims for most people's daily needs to be met within a short walk or cycle. It is good practice to plan new homes within a 400 metres walking distance (roughly 5 minutes) of bus stops and within 800 metres (roughly 10 minutes) of convenience store or community building.

In addition to this, street lighting plays a significant role in creating walkable routes where people feel safer to walk or cycle.



Figure 12: A play area in Wootton Park with a sign indicating a shared use path



Figure 13: Public seating located at key locations encourages walking and provides opportunities for resting

DC.01 - Site layout

DC.01.1 Consider the context

Each development must demonstrate an understanding of its relationship to the larger physical context of North Wootton:

- New development should respect and retain the existing green assets of any form; trees, woodlands, hedges, hedgerows. Those elements will inform the baseline for the design process and shape the design outcome.
- New development should take landscape and topography context into consideration. In particular, North Wootton's topography means that flooding is an important issue, making a cohesive approach necessary to create a more effective overall town drainage strategy.

- New development should be well-integrated into the existing settlement pattern. For that reason, future development surrounding existing settlement should prioritise connectivity, especially through pedestrian and cycle links.
- New development should prioritise well-connected green infrastructure and promote active travel.
- New development should make use of the agricultural landscape surrounding North Wootton and promote freedom of movement within arable fields. Safe, accessible paths and corridors within agricultural fields can connect rural settlements to their hinterland. An appropriate signage system can help navigate people around and make them aware of walking and cycling routes.

- New development should respect landscape designations and propose design that reflects any constraints that might appear (such as flood risk).
- Interfaces between the edges of existing properties and new developments must be carefully designed to guarantee a successful visual integration. This is particularly important for any potential development located at the edge of the existing settlement, especially at the western and northern edges of the village that are exposed to inward long-distance views.

DC.01.2 Patterns of growth

New developments, including infill, and conversions should respect the building and open space patterns of the existing settlement to contribute positively to its character and create a consistent scene. Some guidelines for development include:

- New development should be carefully sited to minimise the negative impacts on the landscape and existing woodlands.
- New development must demonstrate an understanding of the scale, building orientation, enclosure and façade rhythm of the existing settlement to respect its character.
- New development should provide a variety of house types. The use of a monotonous dwelling type should be avoided to create variety and interest in the streetscape.

- Any proposal that would adversely affect the physical appearance of the surrounding residential areas, or give rise to an unacceptable increase in the amount of traffic, noise, or disturbance would be inappropriate. Developments should avoid car-dependent layouts that are difficult to navigate and do not provide onward pedestrian connections.
- The layout of new development should optimise the benefits of daylighting, through the use of solar panels, and passive solar gains, through building orientation, as this can significantly reduce energy consumption.



Figure 14: Positive example of a new development incorporating mature trees and respecting the architectural traditions



Figure 15: Houses creating an identifiable building line while forming a spacious settlement pattern

DC.01.3 Landscape and green spaces

North Wootton has a good network of green infrastructure including parks, sports pitches, green corridors, and informal green open space. These spaces are a part of the village's character. Future green spaces should be planned with consideration to the following principles:

- Planting should be used to soften the mass of new development. For example, a 'semi-natural' strip of planting around 50 metres would be adequate for 2 rows of trees with a woodland footpath between.
- All existing good-quality woodland, hedgerows, trees and shrubs to be retained within the layout of the parks and enhanced with improved management.
- New trees, grassland and shrubs should be planted to supplement existing vegetation.

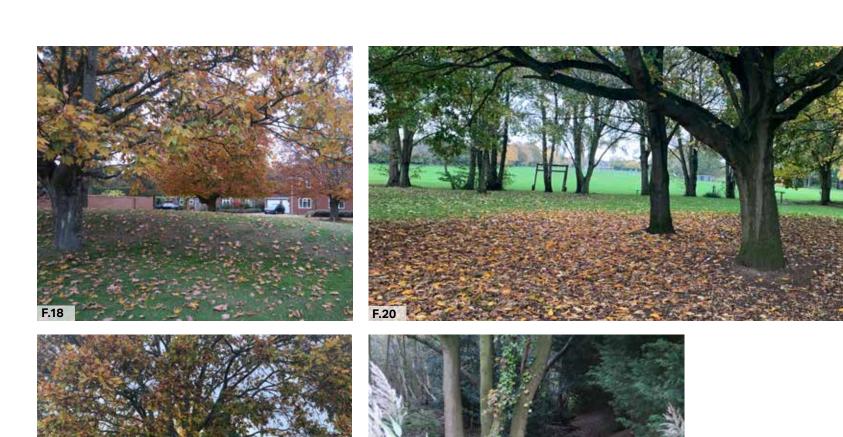
- Active frontages should face onto green spaces to increase natural surveillance.
- Flexible use of green space should be allowed for temporary uses accompanied by a changing programme of events and uses.





Figure 16: The flat landscape of the west of North Wootton enables long-distance views across the countryside

Figure 17: Church yard of All Saints



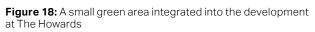


Figure 19: Public seating wrapping around a tree in a green corner at the junction of All Saints Drive and Manor Road

Figure 20: Sport pitches viewed from the northern edge of Wootton Park

Figure 21: A stream in Ling Common accessible from the village via Woodland Gardens

Prepared for: North Wootton Parish Council

DC.01.4 Infill

Most future developments in North Wootton are expected to take the form of infill, which will vary in scale, context and site constraints. Any new infill can have significant impact on the character and appearance of the built environment. The following guidance should be applied in any future infill site:

- Infill development should complement the street scene into which it is inserted. It does not need to mimic the existing styles, but its scale, massing and layout need to be in general sympathetic to the existing. This is particularly true for ridge/eave heights.
- The building line of new development should be in conformity with the existing. Where there is an irregular, meandering building line, it is acceptable that it closely aligns with the existing arrangement of buildings.

The scale of any new infill development should reflect its context and its location in the village (centre or edge). The optimum density will respond to surrounding context whilst making efficient use of land.



Figure 22: A contemporary house built at the back of an older property



Figure 23: Small-scale development on an infill site employing high-quality traditional local materials

DC.02 - Built character

DC02.1 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 opposite illustrates the main principles of inclusivity, accessibility, adaptability and sustainability that should be adopted.

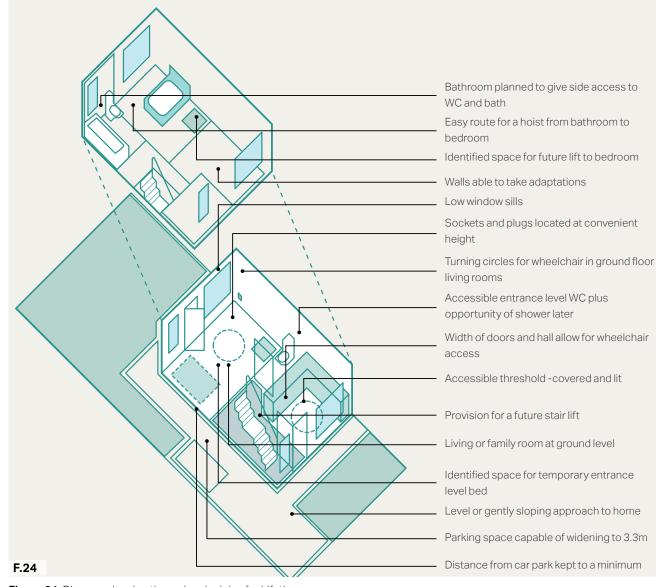


Figure 24: Diagram showing the main principles for Lifetime Homes

DC.0 2.2 Scale, form and massing

The scale, form and massing of buildings are important to the character of a place; therefore, the existing context needs to be considered and new development needs to react sensitively to preserve and enhance the best characteristics of a place. This will ensure a harmonious relationship with neighbouring buildings, spaces and streets. Considerations include:

- The scale and massing of new buildings should be consistent with the form and massing of neighbouring properties.
- New development should seek to respond to the context by using similar configurations with a modern interpretation, if appropriate. Buildings in North Wootton should provide high-quality and attractive homes using modern materials that are still inkeeping with its local character.

- The height of new buildings should respond to the surrounding context and should not be over-bearing or dominant in the existing street scene.
- Development within North Wootton should be of a scale and design that reinforces the locally distinctive character of the Neighbourhood Area.



 $\textbf{Figure 25:} \ \textit{Traditional buildings displaying a diversity in massing and forms}$



Figure 26: Variations in scale and roof shapes create a dynamic and ever-evolving streetscape

DC.02.3 Architecture detailing and materials

New development or any change to the built environment should provide a sympathetic response to the existing character and architectural details found in the Neighbourhood Area, especially when located within or near buildings of historic character. They should demonstrate an intelligent understanding of the historic building details without resulting in lowquality imitations of past styles. This page includes examples of building material that contribute to the local vernacular of North Wootton and that could be used to inform future development.



Carstone with red brick dressing



Clay pantiles



Landscaped hedges



Red brick



Black glazed pantiles



Red brick wall







Red brick with galletting



Clay plaintiles





Red brick and carstone boundary wall

DC.02.4 Building lines and boundary treatment

Building lines and boundary treatments vary along different roads across North Wootton. To reflect North Wootton's existing context, both the buildings and boundary treatments of future development should be consistent with neighbouring properties while enabling enough variations for visual interest.

- Building lines should have subtle variations in the form of recesses and protrusions but should generally form a unified whole.
- Buildings should be designed to ensure that streets and/or public spaces have sufficient natural surveillance. This can be ensured by placing ground floor habitable rooms and upper floor windows facing the street.
- The use of natural boundary treatments should still enable adequate natural surveillance.

- Natural boundary treatments should reinforce the sense of continuity of the building line and help define the streetscape and its established character. They should mainly consist of continuous hedges and low masonry walls, as appropriate, made of traditional materials such as red brick and carstone, occasionally with galletting. The use of either panel fencing, metal or concrete walls should be avoided as they do not reflect North Wootton's existing character.
- On residential streets, front gardens should be provided. Those should include some green elements, like flowers, hedges or trees if possible. Front gardens should not be entirely paved over for car parking, and vehicles should be screened to avoid creating a car-dominated character.



Figure 27: Buildings forming a well-defined building line while allowing for gentle variations in setbacks



Figure 28: Soft landscaping in front gardens create attractive boundaries between the public realm and private gardens while reducing the dominance of vehicle parking

DC.02.5 Corner treatment

A crucial aspect of successful streetscapes includes the treatment of corners. Corner buildings have at least two public facing facades, and double the potential to influence the streetscape. Therefore, the following guidance should be applied to the design of corner buildings:

- If located at an important intersection, the building could be treated as a local landmark. It could be slightly taller or display a distinct and local architecture element to increase the legibility of the area.
- The form of corner buildings should respect the local architecture characters that improves the street scene and re-establishes North Wootton's character.
- All the facades overlooking the street or public space should be treated as primary facades. They should include either windows, balconies, or outdoor space.

 Street layouts around corners and junctions should be designed to slow traffic and prioritise pedestrians over vehicles.



Figure 29: A building with windows overlooking both the main road (right) and the side lane (left)



Figure 30: Although not located at a junction, this building has windows overlooking both the front and side of the house

DC.02.6 Enclosure

Enclosure is the relationship between public spaces and the buildings or other vertical features that surround them. It is usually expressed as the ratio between the width of that space and the height of the vertical elements on its edges. A more cohesive and attractive urban form is achieved when this relationship is in proportion.

The enclosure ratio varies considerably across North Wootton, depending on the age of the development and the role and function of the space around which the buildings are clustered. The following guidance should be considered to achieve a satisfactory sense of enclosure:

- Façades should have an appropriate ratio between the width of the street and the building height.
- Corner buildings are placed in important locations and at the intersection of two streets.

- In most new developments, a variety of plot widths and façade depths should be considered during the design process to create an attractive rural character and avoid a monotonous street frontage.
- Excessively narrow gaps between buildings should be avoided. Buildings should be either detached/semidetached (with adequate side access to rear gardens) or properly linked.
- A good level of enclosure may be achieved through the use of vegetation such as street trees and landscaped hedges. This retains the rural quality of North Wootton and avoid an overly built-up character, especially at the edges of the settlement.
- Variations in the level of enclosure can be used at strategic locations such as junctions to help with orientation by creating more memorable routes.



Figure 31: Changes in the level of enclosure at junctions create opportunities for greening and create memorable routes



Figure 32: Nursery Lane has an attractive level of enclosure through the use of buildings, low walls, and mature trees.

DC.02.7 Well-defined public and private space

As North Wootton has a variety of streetscapes and land uses, both public and private, it is important to establish a welldefined separation between the two. Some guidance to consider include:

- Setbacks from the street and front garden landscaping, together with more detailed architectural design should seek to balance privacy for front living rooms with natural surveillance of the streets, and the need for street enclosure. The front garden depth should be a minimum of 3m from the elevation of the dwelling and be permanently screened by a wall, fence, or hedging. The only exception would be when the streetscape's historic form dictates that buildings should be aligned immediately to the rear of the footway.
- The privacy distance between the backs of two houses should be a minimum of 22 metres. This should be achieved between the faces of single or two-storey buildings backing each other.
- Appropriate boundary treatments including low walls, hedges, and fencing should be incorporated into design proposals to help distinguish public and private spaces.
- Design proposals should avoid using high-screening fences or walls above 2 metre to create this distinction between private and public spaces.



Figure 33: Even short front gardens can provide a buffer between public and private spaces while enabling surveillance



Figure 34: Delineations should create clear boundaries while enabling visibility from houses

DC.02.8 Extensions and alterations

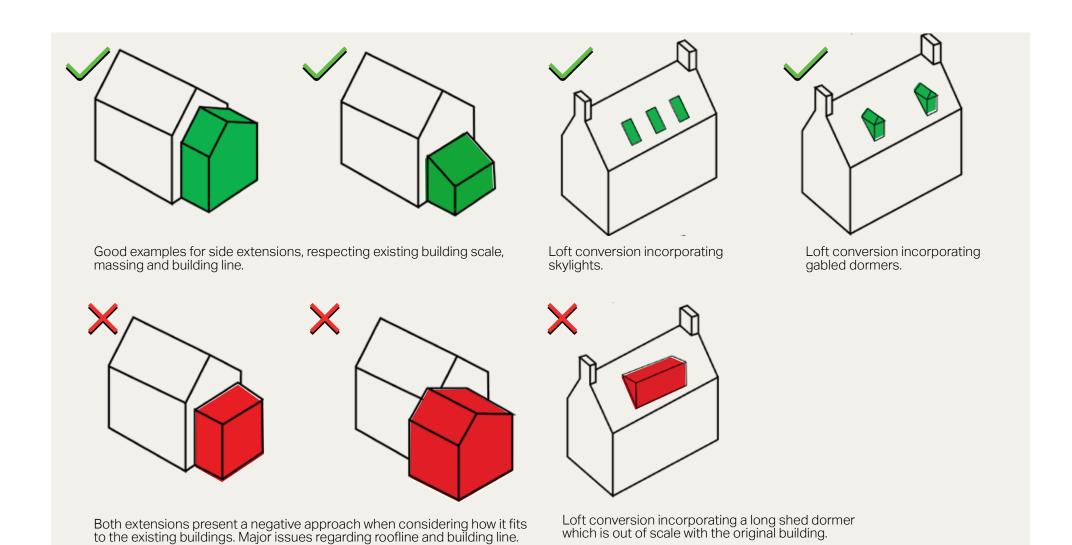
There are multiple ways to create extra space within a building using different types of extensions. Extensions must be designed to an appropriate scale and be secondary to the original building. The pitch and form of a building's roof forms part of its character, therefore, extensions should respond by enhancing the existing character. Extensions should consider the materials, architectural features and proportions of the original building and be designed to complement these existing elements.

Many household extensions are covered by permitted development rights, meaning that they do not need planning permission. The latest guidance can be accessed here: https://www.planningportal.co.uk/ info/200130/common_projects/17/extensions

Some general guidelines are included in the green boxes opposite and in the following pages.

- The character of the existing building, along with its scale, form, materials and details should be taken into consideration when preparing proposals for alterations and/or extensions.
- External extensions should respect or enhance the visual appearance of the original buildings and the character of the wider street scene.
- Extensions should be subordinate in terms of scale and form. They should not be visually dominant or taller than the existing building.
- Extensions should be recessed or in line with the existing building facades and should use lower ridge and eaves level to ensure that the length and width of the extension are less than the dimensions of the original building.
- Extensions should be designed using materials and details to match the existing building or alternately, use contrasting materials and details with

- a contemporary design approach. However, in either case, extensions should create a harmonious composition overall and a strong degree of unity with the original building.
- Extensions should safeguard the privacy and daylight amenity of neighbouring properties.
- Extensions should retain on-site parking capacity and a viable garden area to meet the needs of future occupiers.
- Extensions of existing buildings should help to reduce carbon emissions by complying with high energy efficiency standards and using low energy design.



Front extensions

These extensions should generally not be accepted. If proposed, in all cases, front extensions should take the form of the existing building, mirroring the roof pitch or have lower cornice height and their ridge should be below the existing ridge height.

Rear extensions

Single-storey rear extensions are generally the easiest way to extend a house and provide extra living space. Generally, the maximum depth should be 3.6m or 4m in the case of a detached dwelling. The extensions should be set below any first-floor windows and designed to minimise any effects on neighbouring properties, such as blocking day light. A flat roof is generally acceptable for a single storey rear extension.

Double storey rear extensions are not common as they usually affect neighbour's access to light and privacy. However, there are some instances where the size and style of the property allows for a two-storey extension. In these cases, the roof form and pitch should reflect the original building and sit slightly lower than the main ridge of the building.

Side extensions

These are a popular way to extend a building to create a larger living space. However, if poorly designed, they can negatively affect the overall appearance of the property. Single storey and double storey side extensions should be set back from the main building and complement the materials and detailing of those on the original building.

The roof of the extension should harmonise with that of the original building; flat roofs should be avoided. Side windows should also be avoided unless it does not create issues of overlooking. Proximity to the flank boundary in single storey extensions will be individually assessed.



Figure 35: A house with a side extension built with the same materials as the main building



Figure 36: A house with a rear extension built lower than the main building and using traditional local materials

DC.03 Mobility and parking

DC.03.1 Interconnected streets

Streets should be connected with each other and different travel options routes should be considered. Good practice favours a well-connected street layout that makes it easier to travel by foot, cycle and public transport. A more connected pattern creates a 'walkable neighbourhood', a place where routes link meaningful places together.

DC.03.2 Pedestrian and cycle paths connectivity

Public footpaths offer access to the wider landscape from the settlements and the wide variety of lanes play a crucial role in connecting the character areas within the parish. They also provide opportunities for people to enjoy nature, benefiting both their physical and mental health. The following guidance in the green box opposite should be considered to achieve interconnected streets and improved pedestrian and cycle paths in North Wootton.

- Streets should be considered a space to be used by all, not only vehicles. Therefore, it is essential that street design prioritises the needs of pedestrians, cyclists and public transport users. Pedestrian and cycle routes need to be continuous and well connected, and can be from point to point or circular depending on the relationship with the existing network.
- Propose short and walkable distances which are usually defined to be within a 10-minute walk or a 5-mile cycle. This information can be shown on signage at key points throughout North Wootton. If future design proposals call for a new street or cycle and pedestrian link, it must connect destinations and origins with multiple access points.
- Encourage improvements to existing green network to promote active travel opportunities, while also enhancing habitat and biodiversity.



Figure 37: Footpaths across green spaces provide traffic-free pedestrian links across the village



Figure 38: A path across Wootton Park with a signpost indicating destinations of walking and cycling routes

DC.03.3 Parking typologies

Parking areas are a necessity for households of North Wootton. However, they should not be unsightly or dominate views towards properties. Parking provision should be well designed to retain the attractiveness of the village and ensure a 'sense of place' for the residential streets within North Wootton. Some general guidance for parking design includes:

- When placing parking at the front of a property, the area should be designed to minimise visual impact and to blend with the existing streetscape and materials. The aim is to keep a sense of enclosure and to break the potential of a continuous area of car parking in front of dwellings. This can be achieved by means of walls, hedging, planting, and the use of quality paving materials.
- When needed, residential car parking can be translated into a mix of onplot side, front and garage parking complemented by on-street parking.

- For family homes, cars should be placed at the side of the property or front of the property.
- The provision of tandem parking encourages on-street parking. Where on-plot parking spaces is limited, tandem parking is acceptable, but should be avoided in areas which offer general access (e.g. parking courts).
- 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 through the use of permeable paving.
- Long-term strategies to manage parking demand, such as cycling infrastructure and parking, car sharing, and carpooling schemes should also be explored.



Figure 39: Vehicle parking placed at the side of a house and surfaced with porous materials



Figure 40: A property with a garage set back from the main building line and screened by attractive soft landscaping

On-plot parking

Some general guidance to consider when providing on-plot parking include:

- On-plot parking can be less visually intrusive 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.
- Hard standing and driveways must be constructed from porous materials to minimise surface water run-off and help manage flood risk.
- 1. Front parking with part of the surface reserved for soft landscaping. Permeable pavement to be used whenever possible.
- 2. Side parking set back from the main building line. Permeable pavement to be used whenever possible.
- 3. Boundary hedges to screen vehicles and parking spaces.

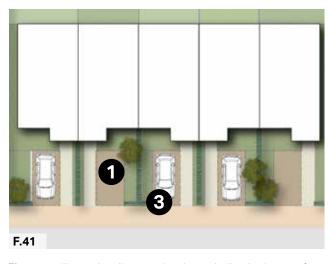


Figure 41: Illustrative diagram showing an indicative layout of on-plot front parking

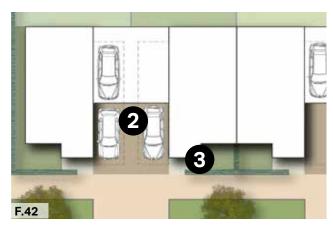


Figure 42: Illustrative diagram showing an indicative layout of on-plot side parking

On-plot parking with garages

Some general guidance to consider when providing on-plot parking with garages include:

- Garages should be designed with sufficient space to accommodate a modern car. It should however be noted that many garages are not used for storing vehicles, and so may not be the best use of space on a plot.
- Considerations must be given to the integration of bicycle parking, electric vehicle charging points, and/or waste storage into garages.
- Where provided, garages must be designed either as free-standing structures or as an additive form to the main building. In both situations, it must complement and harmonise with the architecture 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 facade.
However, it should be understood
that garages are not prominent
elements and they must be designed
accordingly.



Figure 43: This garage is set back from the property line, built lower than the main building, and clad with traditional pantiles



Figure 44: A property with garages tucked at the back and built with materials that respect the local architectural tradition

41

On-street parking

Some general guidance to consider when providing on-street parking include:

- The streetscape should not be dominated by continuous on-street parking spaces. Where possible, tree planting and other gaps between parking bays should be incorporated.
- On-street parking can serve a useful informal traffic calming function. They must however be designed to avoid impeding the flow of pedestrians, cyclists, and other vehicles.
- 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.

- Opportunities must be created for new public car parking spaces to include electric vehicle charging points. Given the move towards electric vehicles, every opportunity must be taken to integrate charging infrastructure into the fabric of street furniture within public and private spaces.
- Parking over dropped kerbs and pavements can be discouraged with strategically placed soft landscaping, trees, street furniture, or boulders.
 Bollards, "no parking" signs, and yellow kerbside lines should only be used as a last resort because they add visual clutter and distract from the rural character.
- 1. On-street parking bays. To be inset between kerb extensions in the case of inset bays.
- Pavement. Additional green verge if street width permits in the case of inset bays.
- 3. Planted kerb extensions width to be sufficient to fully shelter parking bay. Tree planting used to define car parking spaces
- 4. Boundary hedges.

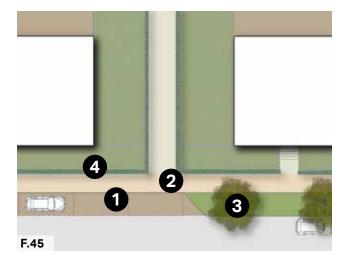


Figure 45: Illustrative diagram showing an indicative layout of on-street inset parking

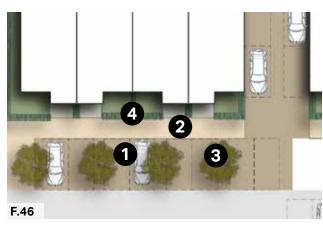


Figure 46: Illustrative diagram showing an indicative layout of on-street perpendicular echelon parking

DC.03.4 Cycle parking

A straightforward way to encourage cycling is to provide secured covered cycle parking within residential developments and publicly available cycle parking in the public realm.

Houses without garages

- For residential units, where there is no on-plot garage, covered and secured cycle parking should be provided within the domestic curtilage.
- Cycle storage should be provided at a convenient location with an easy access.
- When provided within the dwelling footprint or as a free-standing shed, cycle parking should be accessed by a door of at least 1300mm and the structure should be at least 2m deep.
- Parking should be secure, covered and well-integrated into the streetscape if it is allocated at the front of the house.

 The use of planting and smaller trees alongside cycle parking can be used to mitigate any visual impact on adjacent spaces or buildings.

Houses with garages

- The minimum garage size should be 7 metres by 3 metres to allow space for cycle storage.
- Where possible, cycle parking should be accessed from the front of the building either in a specially constructed enclosure or easily accessible garage.
- The design of any enclosure should integrate well with the surroundings.
- The bike should be removed easily without having to move the vehicle.
 New developments should promote cycling by providing more cycle routes and monitor the condition of the existing ones.
- Charging facilities for e-cycles should be considered.

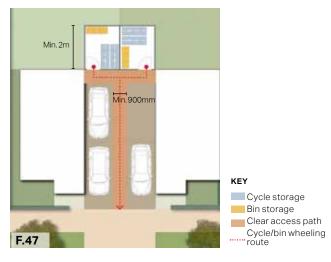


Figure 47: Illustrative layout of a bicycle and bin storage area at the back of semi-detached properties

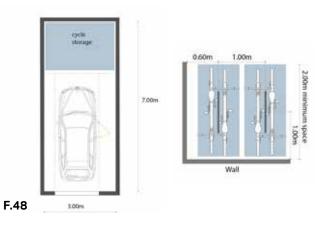


Figure 48: Illustrative layout of a garage with a cycle storage area (left), and illustrative layout for Sheffield cycle stands for visitors (right)

DC.03.5 Legibility and wayfinding

When places are well signposted, they are easier for the public to comprehend. It is easier for people to orientate themselves when the routes are direct, particularly for people with dementia and related cognitive and sensory challenges. Some guidance for improving legibility and wayfinding around North Wootton include:

- A familiar and recognisable environment makes it easier for people to find their way around. Obvious and unambiguous features should be incorporated into designs of future development.
- Buildings which are located at corners, crossroads or along a main road could play a significant role in navigation.
- At a local level, landmark elements could be a distinctive house, public art, or even an old and sizeable tree.

- New signage design should be easy to read. Elements like languages, fonts, text sizes, colours and symbols should be clear and concise, and avoid confusion.
- Signage can also help highlight existing and newly proposed footpaths and cycle lanes, encouraging people to use them more.
- Signage should be strategically located to signalise gateways and access points, creating connections with important places and destinations.
- Signage elements and techniques should be appropriate to the character of the area and be a nice fit to the existing architectural style and details.



Figure 49: Local landmarks such as this memorial can assist legibility by creating memorable routes, especially at junctions



Figure 50: Clear dedicated signposting encourages journeys beyond North Wootton to be made by sustainable modes

DC.04 Sustainability

Development and their retrofit in North Wootton should incorporate and support innovative and proactive approaches to design and opportunities to deliver decentralised energy systems powered by a renewable or low carbon source.

They should strive for good quality design that meets low or zero-carbon targets for CO2 emissions that can be constructed sustainably, maximising opportunities for recycling.

This sections introduces energy efficient technologies and strategies that could be incorporated in individual buildings and landscapes around the parish.



Figure 51: A recently renovated property with solar panels



Figure 52: Pervious surfacing materials enable water infiltration and reduce the risk of flooding

DC.04.1 Energy efficient housing and energy production

Energy efficient homes combine energy efficient construction, appliances and lighting with commercially available renewable energy systems such as solar water heating, solar panels, and ground/air-source heat pumps.

The aim of these interventions is to reduce overall energy use in the home, as cost effectively as possible.

It should be noted that sustainable design principles do not prescribe particular architecture styles and can be adapted to fit a wide variety of dwellings. A wide range of solutions is also available to retrofit existing buildings, including heritage buildings, to improve their energy efficiency.

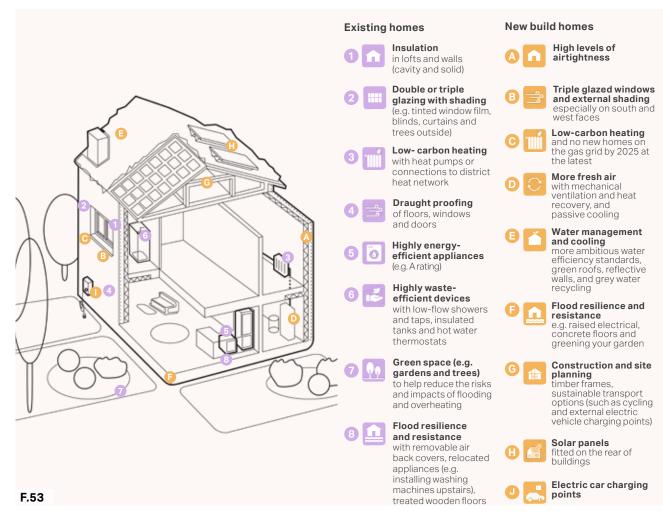


Figure 53: Diagram showing low-carbon homes in both existing and new build conditions

DC.04.2 Sustainable drainage systems (SuDs)

North Wootton has some areas within flood risk zones where excess surface water will need to be managed sustainably. SuDS covers a range of approaches to manage surface water in a sustainable way to reduce flood risk and improve water quality and the overall urban environment.

SuDs work by reducing the amount and rate at which surface water reaches a waterway or combined sewer system. Usually, the most sustainable option is collecting this water for reuse, for example in a water butt or rainwater harvesting system, as this has the added benefit of reducing pressure on important water sources. A number of overarching principles can, however, be applied:

- Manage surface water as close to where it originates as possible.
- Reduce runoff rates by facilitating infiltration into the ground or by providing attenuation that stores water

to help slow its flow so that it does not overwhelm water courses or the sewer network.

- Improve water quality by filtering pollutants to help avoid environmental contamination.
- Form a 'SuDS train' of two or three different surface water management approaches.
- Integrate into development and improve amenity through early consideration in the development process and good design practices.
- SuDS are often as important as areas that are not directly in an area of flood risk themselves, as they can help reduce downstream flood risk by storing water upstream.
- Some of the most effective SuDS are vegetated, using natural processes

- to slow and clean the water whilst increasing the biodiversity value of the area.
- Best practice SuDS schemes link the water cycle to make the most efficient use of water resources by reusing surface water.
- SuDS must be designed sensitively to augment the landscape and provide biodiversity and amenity benefits.

Typically, the most sustainable option is the collection of surface water to reuse, for example, in a water butt or rainwater harvesting system, as these have the added benefit of reducing pressure on important water sources. Where reuse is not possible, two alternative approaches using SuDS include:

- Infiltration allows water to percolate into the ground and eventually help restore groundwater.
- Attenuation and controlled release holds back the water and slowly releases it into the sewer network.

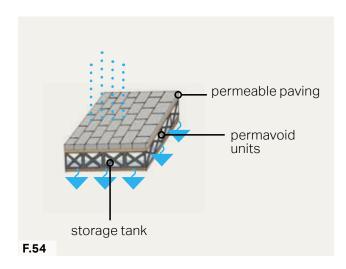


Figure 54: Diagram illustrating the functioning of a soak away with permavoid units

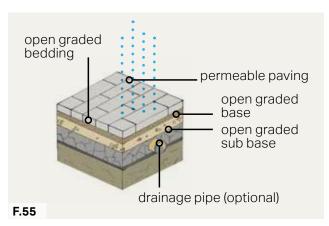


Figure 55: Diagram illustrating the construction of a permeable paving area

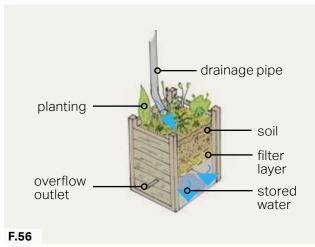


Figure 56: Diagram illustrating the functioning of a stormwater

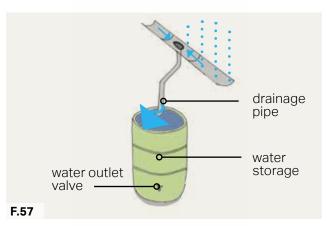
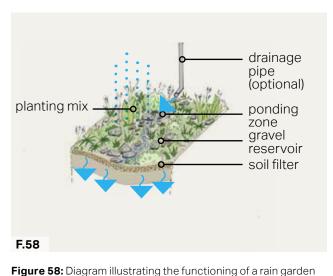


Figure 57: Diagram illustrating the functioning of a water butt



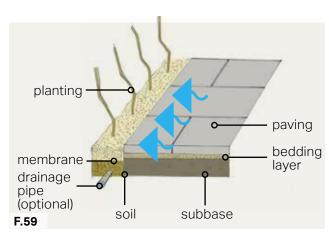


Figure 59: Diagram illustrating the construction of a soak away garden

General design guidelines for new development:

- Integrate with existing paths, streets, circulation networks and patterns of activity;
- Reinforce or enhance the established settlement character of streets, greens, and other spaces;
- Harmonise and enhance existing settlement in terms of physical form, architecture and land use;
- Relate well to local topography and landscape features, including prominent ridge lines and long-distance views;
- Reflect, respect, and reinforce local architecture and historic distinctiveness:
- Retain and incorporate important existing features into the development;

- Respect surrounding buildings in terms of scale, height, form and massing;
- Adopt contextually appropriate materials and details;
- Provide adequate open space for the development in terms of both quantity and quality;
- Incorporate necessary services and drainage infrastructure without causing unacceptable harm to retained features;
- Ensure all components e.g. buildings, landscapes, access routes, parking and open space are well related to each other;
- Positively integrate energy efficient technologies;

- Make sufficient provision for sustainable waste management (including facilities for kerbside collection, waste separation, and minimisation where appropriate) without adverse impact on the street scene, the local landscape or the amenities of neighbours;
- Ensure that places are designed with management, maintenance and the upkeep of utilities in mind; and
- 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.

3

Street grid and layout:

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

Local green spaces, views & character:

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

- In rural locations, has the impact of the development on the tranquillity of the area been fully considered?
- How does the proposal impact on existing views which are important to the area and how are these views incorporated in the design?
- How does the proposal impact on existing views which are important to the area and how are these views incorporated in the design?
- Can any new views be created?
- Is there adequate amenity space for the development?
- Does the new development respect and enhance existing amenity space?

3 (continued)

Local green spaces, views & character:

- Have opportunities for enhancing existing amenity spaces been explored?
- Will any communal amenity space be created? If so, how this will be used by the new owners and how will it be managed?
- Is there opportunity to increase the local area biodiversity?
- Can green space be used for natural flood prevention e.g. permeable landscaping, swales etc.?
- Can water bodies be used to provide evaporative cooling?
- Is there space to consider a ground source heat pump array, either horizontal ground loop or borehole (if excavation is required)?

4

Gateway and access features:

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

5

Building layout and grouping:

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

$\mathbf{5}$ (continued)

Building layout and grouping:

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

6

Building line and boundary treatment:

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

7

Building heights and roofline:

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

Household extensions:

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

- Does the proposed extension respond to the existing pattern of window and door openings?
- Is the side extension set back from the front of the house?
- Does the extension offer the opportunity to retrofit energy efficiency measures to the existing building?
- Can any materials be re-used on site to reduce waste and embodied carbon?

9

Building materials & surface treatment:

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

9 (continued)

Building materials & surface treatment:

- Has the embodied carbon of the materials been considered and are there options which can reduce the embodied carbon of the design?
 For example, wood structures and concrete alternatives.
- Can the proposed materials be locally and/or responsibly sourced?
 E.g. FSC timber, or certified under
 BES 6001, ISO 14001 Environmental Management Systems?

10

Car parking:

- What parking solutions have been considered?
- Are the car spaces located and arranged in a way that is not dominant or detrimental to the sense of place?
- Has planting been considered to soften the presence of cars?
- Does the proposed car parking compromise the amenity of adjoining properties?
- Have the needs of wheelchair users been considered?
- Can electric vehicle charging points be provided?

- Can secure cycle storage be provided at an individual building level or through a central/ communal facility where appropriate?
- If covered car ports or cycle storage is included, can it incorporate roof mounted photovoltaic panels or a biodiverse roof in its design?

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