

AECOM

locality
the power of community

Barkway and Nuthampstead

Design Codes and Guidance

Final report

March 2024

Delivering a better world

Quality information

Prepared by	Checked by	Approved by
Nicholas Pascalli	Ben Castell	Madeleine
Graduate Urban Designer	Director	Gohin
Holly MacMahon		
Graduate Urban Designer		
Tiernan Drasdo		
Graduate Town Planner		

Revision History

Issue no.	Issue date	Details	Issued by	Position
5	25/03/2024	Final report	Holly MacMahon	Graduate Urban Designer
4	22/03/2024	Locality review	Madeleine Gohin	Neighbourhood Planning Officer
3	02/02/2024	Report updates	Holly MacMahon	Graduate Urban Designer
2	15/01/2024	Review	Jacqueline Veater	Planning Consultant, Barkway Parish Council
1	09/01/2024	Draft report	Nicholas Pascalli Holly MacMahon	Graduate Urban Designer Graduate Urban Designer

This document has been prepared by AECOM Limited ("AECOM") in accordance with its contract with Locality (the "Client") and in accordance with generally accepted consultancy principles, the budget for fees and the terms of reference agreed between AECOM and the Client. Any information provided by third parties and referred to herein has not been checked or verified by AECOM, unless otherwise expressly stated in the document. AECOM shall have no liability to any third party that makes use of or relies upon this document.

Contents

1	1. Introduction	5	4	4. Design guidance and codes	39
	1.1 Purpose of the report	5		4.1 Introduction	39
	1.2 Process	5		4.2 Design guidance and codes	
	1.3 Area of study	7		4.2.1 Settlement patterns	40
	1.4 Planning policy and guidance	8		4.2.2 Movement network	44
				4.2.3 Built form and heritage	50
				4.2.4 Landscape and infrastructure	55
2	2. Context analysis	15	5	5. Applying the design codes	62
	2.1 Settlement patterns	15		5.1 Introduction	62
	2.2 Movement patterns	17		5.2 Nuthampstead	63
	2.3 Built form and heritage	19		5.2.1 Site analysis	63
	2.4 Landscape and infrastructure	26		5.2.2 Application of design codes	66
				5.3 Barkway	67
				5.3.1 Site analysis	67
				5.3.2 Application of design codes	70
				5.4 Checklist for new development	72
3	3. Character areas	29	6	6. Delivery	80
	3.1 Introduction	29		6.1 How to use this guide	80
	3.2 Barkway conservation area	30			
	3.3 Barkway edge development	33			
	3.4 Nuthampstead	35			
	3.5 Open countryside	37			

A photograph of a street scene in a village. The foreground shows a two-story house with a white-painted upper half and a red brick lower half. The house has a green door and a chimney. The street curves to the right, lined with other houses and parked cars. The sky is filled with dramatic, dark clouds, with a bright light source breaking through on the right side. A large, semi-transparent green circle is overlaid on the center of the image, containing the text 'Introduction' and '01' in white.

Introduction

01

1. Introduction

Through the Department for Levelling Up, Housing and Communities (DLUHC) Programme, led by Locality, AECOM was commissioned by Barkway Parish Council and Nuthampstead Parish Meeting to provide design support as part of the Neighbourhood Plan process.

1.1 Purpose of the report

This report aims to establish area-wide design guidelines and codes that aim to provide design guidance to ensure that any potential development within the Neighbourhood Area follows good design practice and contributes to a sustainable and thriving community.

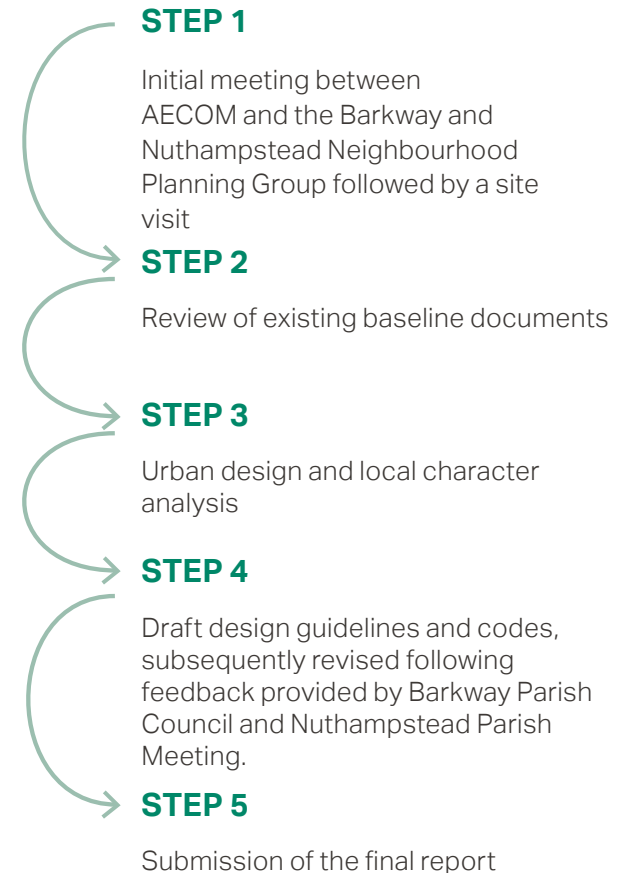
This report will provide particular focus to two sites in the parish. The first, and most significant in terms of scale, is the BK3 site in Barkway (land between Cambridge Road & Royston Road), which is allocated

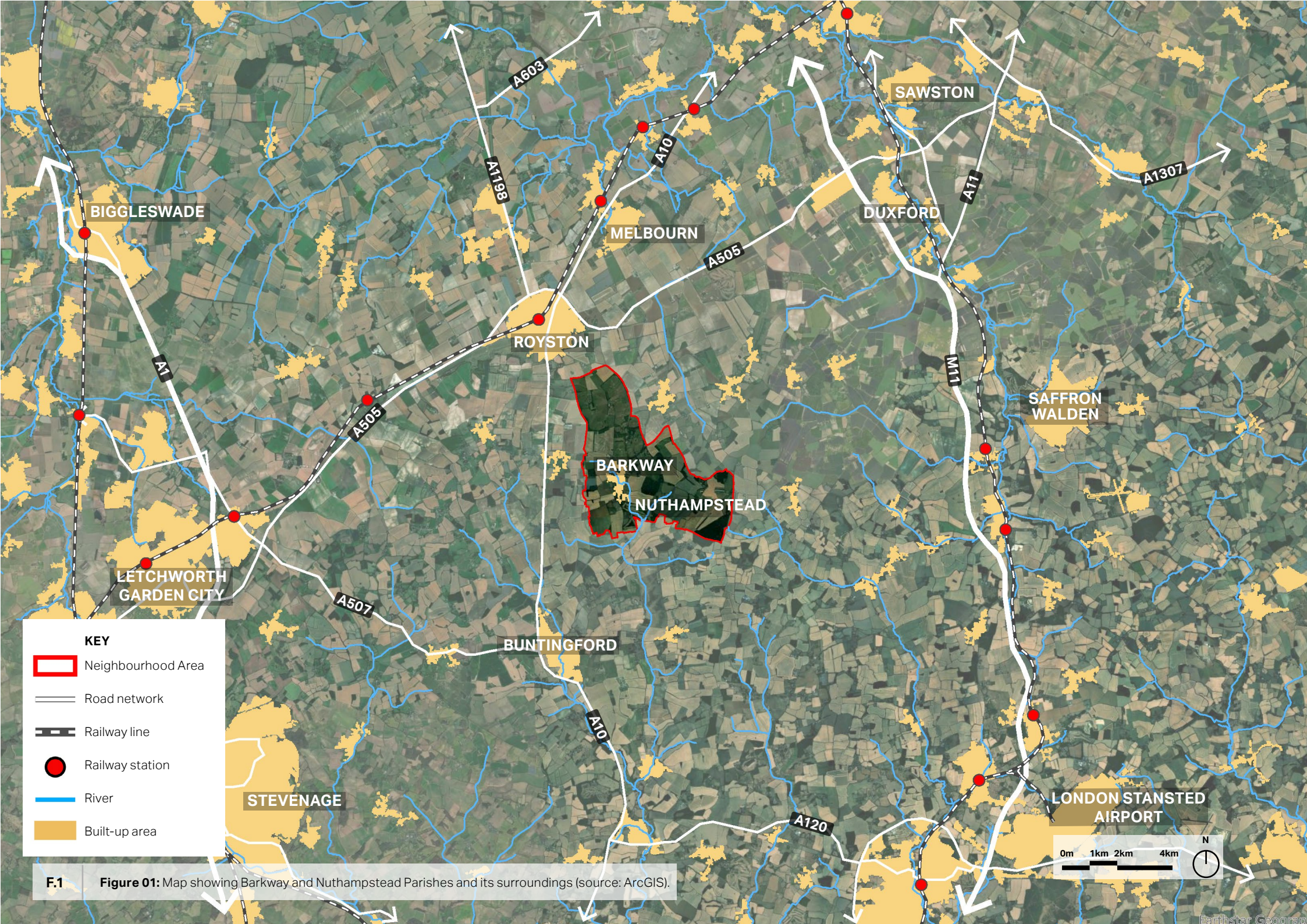
for at least 140 new homes in the North Hertfordshire Local Plan. The second is the smaller, currently vacant employment site in Nuthampstead. These design codes will seek to steer the design of development to ensure that the homes delivered through these sites are in keeping with the surrounding context and the distinct characters of the villages are maintained.

However, the design guidance and codes will be applicable to the wider Neighbourhood Area as well. Where the two settlements of Nuthampstead and Barkway differ, analysis will be separated for each accordingly.

1.2 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:





KEY

- Neighbourhood Area
- Road network
- Railway line
- Railway station
- River
- Built-up area

F.1 **Figure 01:** Map showing Barkway and Nuthampstead Parishes and its surroundings (source: ArcGIS).

0m 1km 2km 4km

N

1.3 Area of study

The Neighbourhood Area covers the two parishes of Barkway and Nuthampstead in the North Hertfordshire district of Hertfordshire. The Neighbourhood Area sits about four miles south-east of Royston, 15 miles south of the centre of Cambridge and 35 miles north of the centre of London. As of 2021, the population of the two parishes was 990 (849 in Barkway and 141 in Nuthampstead).

The village of Barkway constitutes the main settlement of the Neighbourhood Area, whilst the smaller village of Nuthampstead, which was previously a hamlet in the parish of Barkway, lies to the east.

The original settlement of Barkway is listed in the Domesday Book of 1086. It grew as a linear village following an old coaching route connecting Cambridge and London. The Conservation Area in the village is formed around the High Street and contains a number of listed buildings dating back to the 15th and 16th century with thatched roofs. Nuthampstead became its own civil parish in

1866 and remains a small linear settlement. There is outline planning consent for the proposed development site in Nuthampstead for a further 9 homes which is a considerable amount given the small number of dwellings currently located there.

Additionally, the Grade II registered park and garden 'Cokenach' – which contains several listed buildings, including one Grade II* – is located to the northeast of Barkway and Newsells Park, a country house and estate that lies to the north of the parish.

The Neighbourhood Area is served by buses that provide links northbound to Royston and southbound to Bishop's Stortford, from which London Stansted Airport can be reached. The A10, which replaced the old coaching road that the village is built around, is located just to the west of Barkway, providing links to Cambridge and London.

There is, however, no railway station in the two parishes; the nearest is in Royston, approximately 4 miles north-west of Barkway's centre. From here, Barkway and Nuthampstead are served by the

Great Northern Line which provides direct connections to London King's Cross, Brighton and Cambridge.



Figure 02: View of High Street which is part of the historic road network in the centre of Barkway.

1.4 Planning policy and guidance

This section summarises the relevant design policy and guidance produced at national and local levels which have informed this document. It specifies how the relevant policies and guidelines have been incorporated in the production of the design codes included in this document. Any application for new development should be familiar with those documents.

1.4.1 National Planning Policy and guidance

The following section summarises key relevant policy and guidance documents at the national level.

2023 - National Planning Policy Framework

DLUHC Department for Levelling Up, Housing and Communities

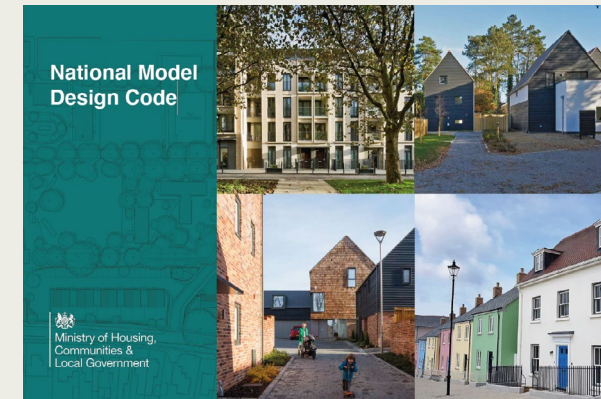
Development needs to consider national level planning policy guidance as set out in the National Planning Policy Framework (NPPF) and the National Planning Policy Guidance (NPPG). In particular, NPPF Chapter 12: Achieving well-designed places stresses the creation of high-quality buildings and places as being fundamental to what the planning and development process should achieve. It sets out a number of principles that planning policies and decisions should consider ensuring that new developments are well-designed and focus on quality.



2021 - National Model Design Code

DLUHC

This report provides detailed guidance on the production of design codes, guides and policies to promote successful design. It expands on 10 characteristics of good design set out in the National Design Guide. This guide should be used as reference for new development.



2020 - Building for a Healthy Life

Homes England

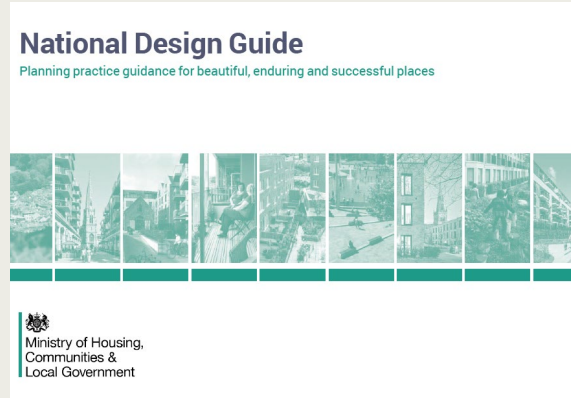
Building for a Healthy Life (BHL) is the new (2020) name for Building for Life, the government-endorsed industry standard for well-designed homes and neighbourhoods. The new name reflects the crucial role that the built environment has in promoting wellbeing. The BHL toolkit sets out principles to help guide discussions on planning applications and to help local planning authorities to assess the quality of proposed (and completed) developments, but can also provide useful prompts and questions for planning applicants to consider during the different stages of the design process.



2019 - National Design Guide

DLUHC

The National Design Guide (Department for Levelling Up, Housing and Communities, 2019) illustrates how well-designed places that are beautiful, enduring and successful can be achieved in practice.



2007 - Manual for Streets

Department for Transport

Development is expected to respond positively to the Manual for Streets, the Government's guidance on how to design, construct, adopt and maintain new and existing residential streets. It promotes streets and wider development that avoid car dominated layouts and place the needs of pedestrians and cyclists first.



1.4.2 Local planning policy context

The following section summarises key relevant policy and guidance documents at the local level.

2022 - North Hertfordshire Adopted Local Plan 2011-2031

North Hertfordshire District Council

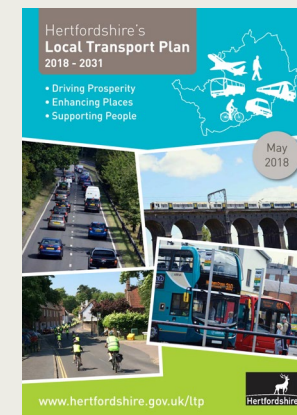
The North Hertfordshire Local Plan, adopted in 2022, sets out district wide policies, as well as more specific development policies and housing allocations for the parishes in the district. Policy SP2: Settlement Hierarchy and Spatial Distribution classifies Barkway as one of 5 villages in which higher levels of development are planned, with 208 homes allocated in Barkway across three development sites. Nuthampstead is identified as a Category C settlement, within which only limited additional development to meet community needs will be permitted.



2018 - Hertfordshire's Local Transport Plan 2018-2031

Hertfordshire County Council

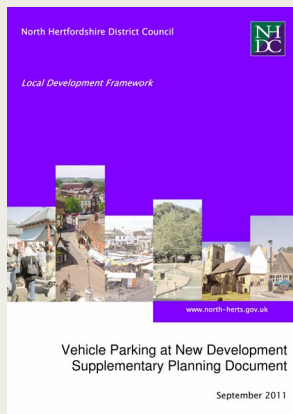
Hertfordshire's Local Transport Plan sets out county wide policies regarding transport within Hertfordshire with a focus on more sustainable transport networks including reducing traffic growth and improving walking, cycling and public transport in the county. The Local Transport Plan also outlines how transport will support any housing development proposed by the district/borough council's Local Plans.



2011 - Vehicle Parking at New Development Supplementary Planning Document

North Hertfordshire District Council

This Supplementary Planning Document provides guidance on parking provision for new developments and includes policies on the minimum dimensions and provision of different forms of residential parking spaces.



2011 - Design Supplementary Planning Document

North Hertfordshire District Council

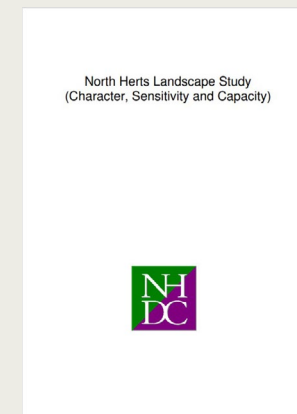
This Supplementary Planning Document supports the 2011 Local Plan for North Hertfordshire and sets out design principles and guidance which builds on policies in the Local Plan. These are district wide with brief, more focused design principles for the villages within the district. The relevant section for Barkway provides a succinct analysis of the history of the village, its built form, landmarks and views, massing and materials and sense of place; concluding with 3 main design principles.



2011 - North Hertfordshire Landscape Study (Character, Sensitivity and Capacity)

North Hertfordshire District Council

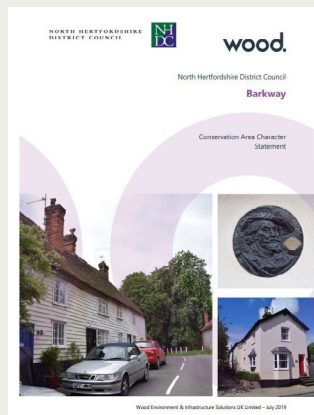
North Hertfordshire Landscape Study divides the district into different landscape character areas based on the distinctive characteristics of the natural landscape. The report evaluates the sensitivities, value and capacity to accommodate development for each landscape character and sets out guidelines. Relevant landscape character areas for Barkway and Nuthampstead are Barkway Plateau (LCA 230) and Nuthampstead (LCA 231).



2019 - Barkway Conservation Area Character Statement

North Hertfordshire District Council

Barkway Conservation Area was designated in 1970 by North Hertfordshire District Council and the Character Statement document details the characteristics, justification for its designation, the designated and non-designated heritage assets, key views within the conservation area and opportunities for improvement. There is also an appendix with the boundary of the conservation area alongside images of important features within the area.



This page has intentionally been left blank

Context analysis

02

2. Context analysis

This section outlines the broad physical, historic and contextual characteristics of the Neighbourhood Area

2.1 Settlement patterns

Barkway

The main settlement of the Neighbourhood Area is the village of Barkway. Developed to initially serve the old coach route that ran through the parish, the village has a clear linear settlement pattern.

Barkway grew in a linear fashion, following an old coaching route connecting Cambridge and London that now makes up the High Street. A number of traditional buildings with thatched roofs remain from the 15th and 16th century and are arranged in linear patterns along this main road. These older properties have little or no setback and have a strong presence within the streetscape.

More recent development has occurred in the northern part of the village, which comprises an ex-council estate built

between the 1950s and 1970s along Royston Road and Windmill Close that adjoins the two allocated sites of BK2 and BK3 in the Local Plan. Here there are a range of semi-detached bungalows and two-storey homes.

Just east of this is Birch Meadow, where a street of 12 newly developed homes (granted outline permission in 2017) lie. These consist of larger detached and semi-detached homes that feel distinct from the surrounding area.

Nonetheless, both parcels of development in the north of the village are similarly dispersed in a linear pattern, arranged in cul-de-sacs radiating from Royston Road and Cambridge Road.

Nuthampstead

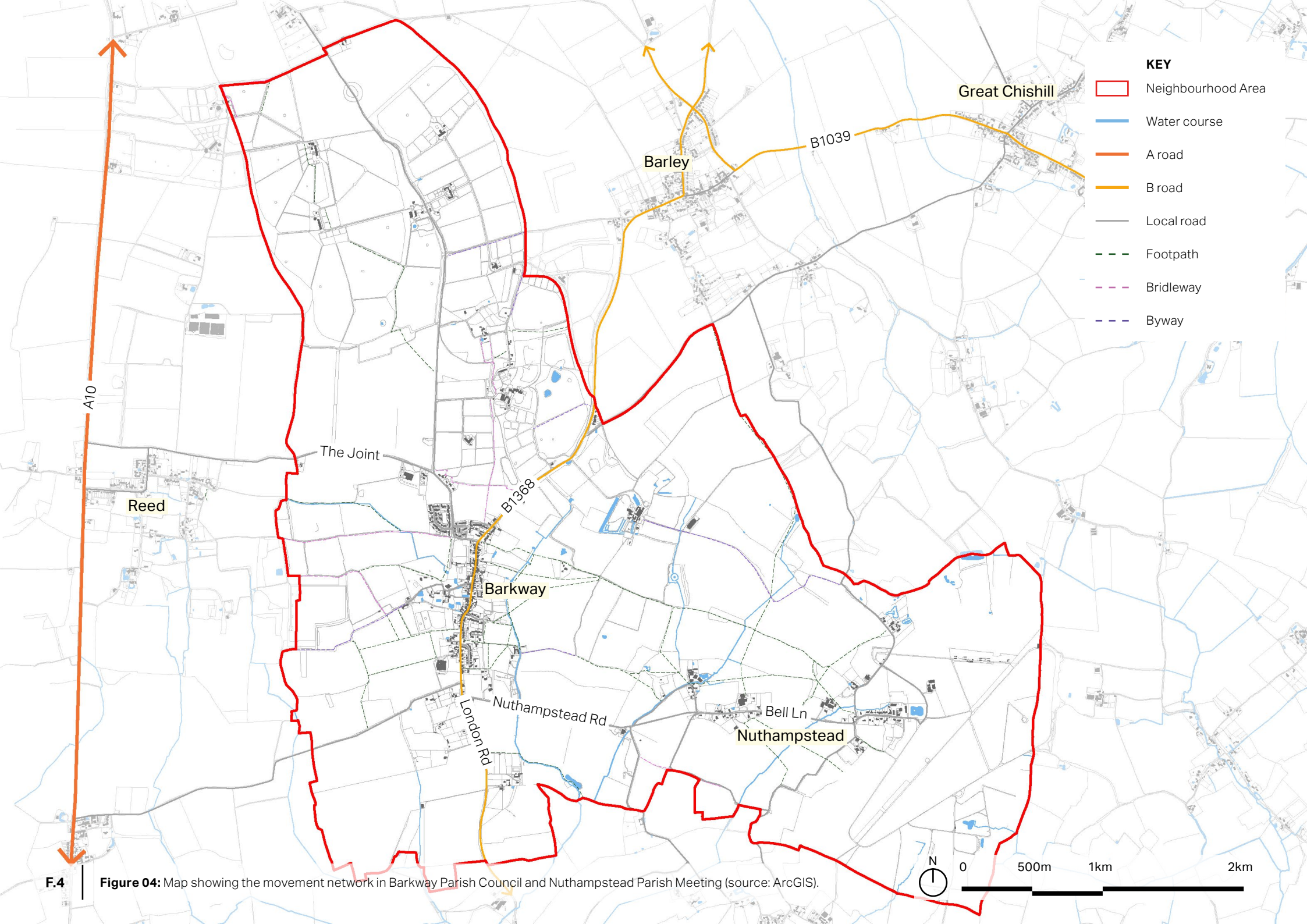
Nuthampstead also developed in a linear pattern. Three main sections of the built up area exist, with a range of homes scattered along Bell Lane; a similarly sized cluster further east on Park Farm Lane and a smaller cluster around Bury Farm to the west.

Buildings are arranged in an informal pattern reflecting the very rural character of the village. Roads are characterised by varied building lines with varying building setbacks and orientation, though in general buildings are set far back from the road providing front gardens and on-plot parking.

There are two employment sites, one within the residential development along Bell Lane and the other within the Park Farm Lane area.



Figure 03: View of linear development along Barkway's High Street.



- KEY**
- Neighbourhood Area
 - Water course
 - A road
 - B road
 - Local road
 - Footpath
 - Bridleway
 - Byway

F.4 | **Figure 04:** Map showing the movement network in Barkway Parish Council and Nuthampstead Parish Meeting (source: ArcGIS).

2.2 Movement patterns

Road network

The main road through Barkway is the High Street, which runs north–south through the Neighbourhood Areas as the B1368. This road continues north to the A505 providing links to Royston and Cambridge and south to the A10 for links to London. Nuthampstead can access the B1368 from Nuthampstead Road.

The older street network within the centre of Barkway is formed of the High Street and Church Lane, which are long, well-established roads. The newer street network serves 20th and 21st century expansion and consists of a range of cul-de-sacs splintering off the High Street as well as Royston Road and Cambridge Road in the northern part of the village.

Country roads form much of the remaining connecting road network. They have a rural character, being mostly narrow with grass verges and hedges on one or both sides.

Public transport

The Neighbourhood Area does not contain any train stations, although the nearest can be found in Royston, around 4 miles north west of Barkway's centre. Here, the Great Northern Line provides direct connections to London King's Cross, Brighton and Cambridge. The Neighbourhood Area is served by the number 18, 27 and 899 buses, though these are relatively infrequent and with no services in the evenings or on Sundays.

Public rights of way

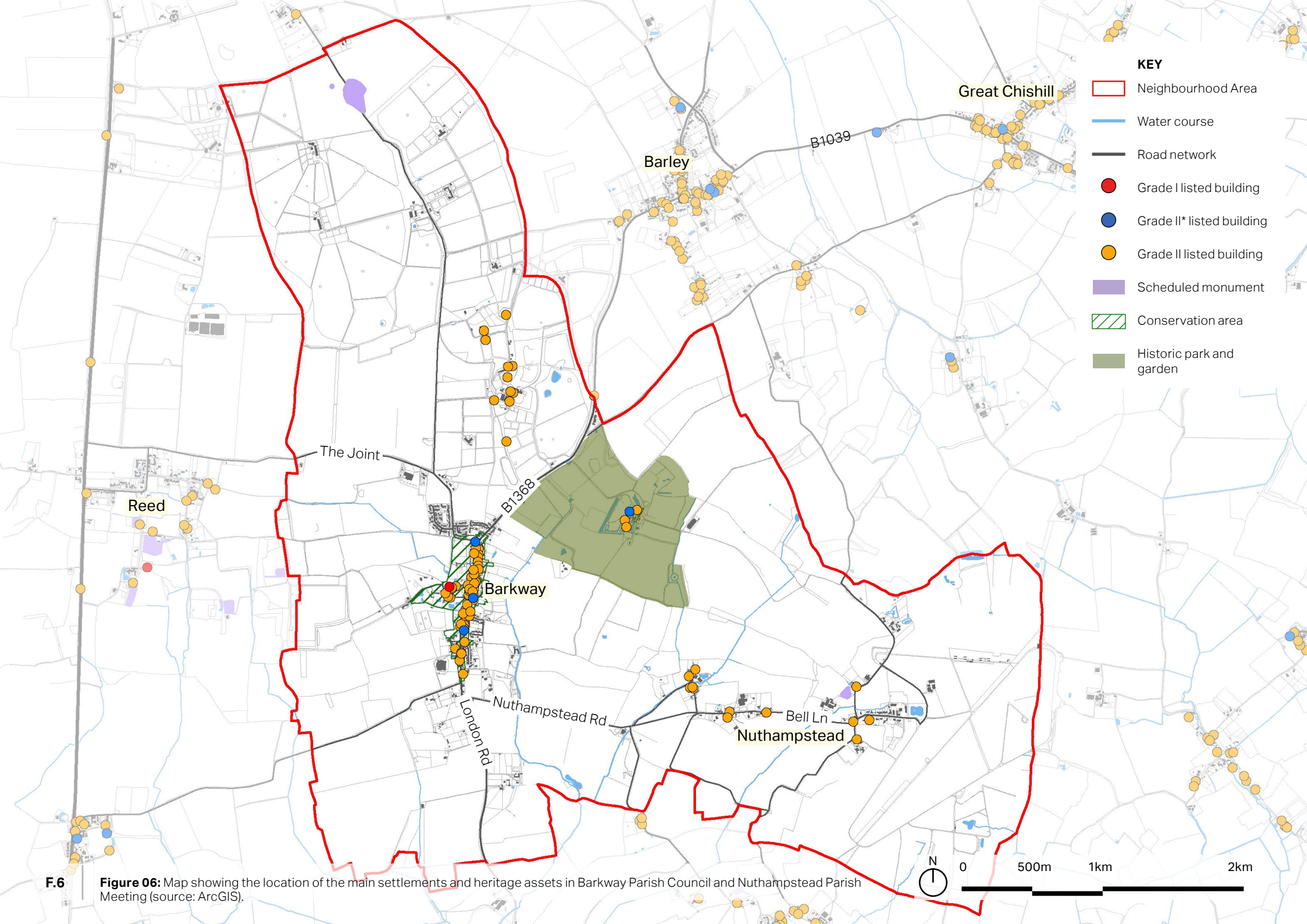
There is a network of footpaths in Barkway and Nuthampstead which form pedestrian routes through the two villages. Public rights of way also connect to nearby villages of Reed and Buckland and lead from Nuthampstead towards Anstey and Meesden. Footpaths play an important role in linking the two parishes, enabling the two areas to be traversed by active travel. There are also walking routes into the surrounding countryside, including the Hertfordshire Way, a 195 mile circular route around the county.

Cycle and horse riding routes

The 'Royston Circular Ride' runs through both parishes, as outlined by The Countryside Management Service. There are also 6 bridleways across the two parishes which cater for horse riders, with a path linking Barkway to the nearby village of Reed.



Figure 05: Walking route into the countryside surrounding Barkway.



F.6 **Figure 06:** Map showing the location of the main settlements and heritage assets in Barkway Parish Council and Nuthampstead Parish Meeting (source: ArcGIS).

2.3 Built form and heritage

Barkway

Heritage designations

The Barkway Conservation Area is designated around the oldest part of the village, stretching up the linear core of the village and westwards along Church Lane. The Church of St Mary was originally built in the 13th century and there are numerous domestic buildings dating from the 15th century arranged along High Street. The newer sections, including the cul-de-sacs shooting off of High Street and the ex-council estate towards the north of the village which adjoins the allocated BK2 and BK3 sites, lie outside of the Conservation Area.

The parish in its entirety contains many important listed buildings as well as the Grade II registered park and garden 'Cokenach' which is located to the northeast of Barkway.

There are 66 listed buildings and structures in Barkway Parish, including:

Grade I

- Church of St Mary Magdalene

Grade II*

- 2, High Street
- Cokenach House Including the Wing
- The Gables
- 93/95 and 97, High Street

A scheduled monument also lies towards the north of the parish.

An important part of the village's heritage is the historic coaching route from London to the North East. The village was a major stopping point for social gathering on this trading route with a market and many coaching inns lining the High Street. Typical architectural features such as arches can be seen on a few of these historic coaching inns now converted to residential properties.

There is also a milestone on the High Street, which is the last remaining of the 16 put on the route from Cambridge to Barkway and is thought to be the oldest surviving milestone in the UK.



F.8

Figure 08: Historic coaching inn entrance preserved within the Barkway Conservation Area.



F.7

Figure 07: Grade I listed Church of St Mary Magdalene in Barkway.

Another historic feature in the village is the Wagon Wash dating to the 17th century. This was built to wash farm wagons before traveling to market.

Built form

Within the Conservation Area, there are several medieval and early post-medieval timber-framed buildings in a variety of styles. Most of the timber-framed buildings have brick frontages that have been rendered and painted, generally white, but some with colouring. Brick building is more varied in a wide range of brick types and styles.

The majority of brick buildings are in red brick and there is a tendency towards relatively large sash windows. Roofs are in ceramic tile or slate. There are also a few examples of flint buildings with brick quoins through the Conservation Area. Significant examples of stone-building in Barkway is limited to the Church of St Mary Magdalene.

Many of the historic buildings along High Street are of one or one-and-a-half stories. More recent buildings are of two full stories

and a number have small gabled or hipped dormers for their attic stories.

Nuthampstead

Heritage designations

There are a further 12 Grade II Listed Buildings in Nuthampstead Parish. A scheduled monument (moated site, Little Cokenach) lies to the east of the parish.

Built form

Nuthampstead built form is similar to that seen in Barkway, with common use of red brick, lime render and thatch roofs. Farm and industrial building typologies also make up the built form and weatherboarding is used for both use these buildings and residential buildings - both black and white weatherboarding is characterful of the area. There are several outbuildings within residential plots which use clay tiles and unpainted oak.

Architectural details

Buildings across the parish, but in particular along the High Street in Barkway, feature

many architectural and material detailing. This gives the built form in Barkway an interesting and unique character.



Figure 09: Grade II* Wealden House in Barkway (93/95 and 97, High Street).



Figure 10: Historic Wagon Wash.

Building walls



Flint



Red brick



White render



Exposed timber framing



White weatherboarding



Grey/ natural coloured weatherboarding



Black weatherboarding



Red brick and render



Off-white render

Roof materials



Clay tiles



Thatch



Slate tiles

Roof form



Pitched



Cross-gabled roof



Hipped



Half hipped



Steep pitched roof



Pitched roof with stone coped gable end parapets



Cat slide



Mansard roof



Tall brick chimney stack



M-shaped roof

Boundary treatments



Red brick wall



Landscaped hedge



Hedges, trees and timber gate



Timber fence with hedges



Flint and brick wall

Porches



Gabled canopy porch with clay tiles



Pitched roof porch with columns and detailing



Doric porch



Pentice porch with slate roof



Clay tiled, pitched roof, enclosed porch with detailing

Fenestration



Sash windows



Bay windows



Eyebrow dormers



Gabled dormers

Architectural details



Paneled pargetting



Red brick dressing on flint walls



Gault brick window headers



Thatch roof ridge detailing

Architectural details



Diamond light-lead windows and ridge detailing on the roof



Exposed timber joists under jettied first floor



Dark brick criss-cross pattern on red brick walls



Light red colour fishscale band detailing on a dark clay tile roof



Exposed, black painted timber joists



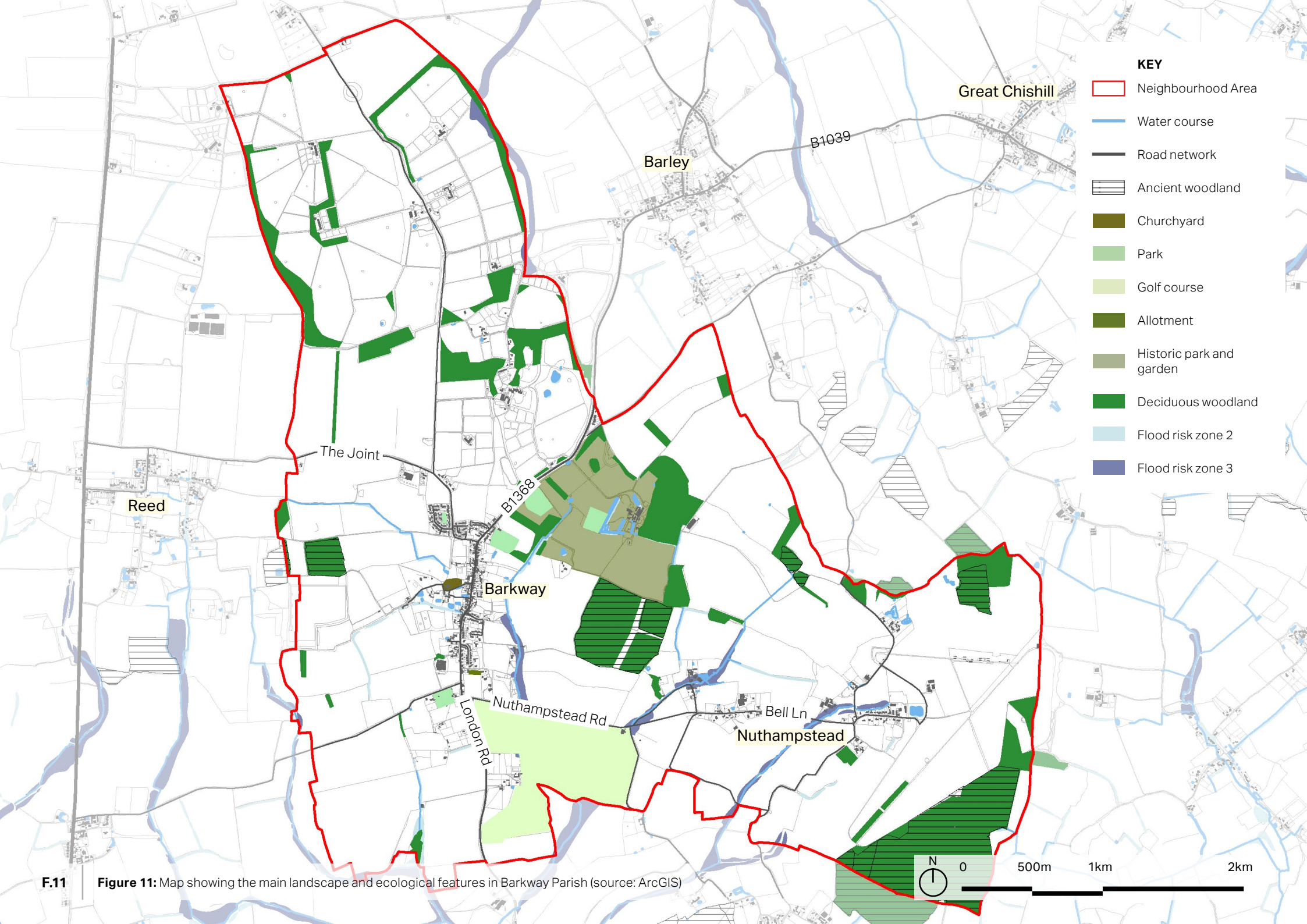
Brick dentil course under the roof eaves



Grey fishscale band on roof



Detailing under roof eaves



F.11 Figure 11: Map showing the main landscape and ecological features in Barkway Parish (source: ArcGIS)

2.4 Landscape and infrastructure

The North Hertfordshire Landscape Study categorises the landscape of the settlement of Barkway as the 'Barkway Plateau'. Key characteristics of the landscape include:

- Gently rolling landform
- Arable land use
- Regular pattern of field boundaries
- Ribbon development following B1368 London Road

The landscape within the Nuthampstead Parish is categorised distinct from Barkway and is referred to simply as 'Nuthampstead'. Key characteristics here include:

- Gently rolling landform
- Arable land use with extensive woodland cover
- Irregular pattern of field boundaries
- Dispersed scattered farmsteads

Designations

A small section of ancient woodland named Rokey Wood lies towards the west of Barkway Parish. Nuthampstead contains a larger amount of ancient woodland, namely Earls Wood, Oaks Bushes, Messops/ Sheepwash Groves and Scales Wood. The latter lies within the south-east corner of the Neighbourhood Area and consists of a large (71ha) ancient woodland originally of ash, maple and hazel, formerly part of a substantial area of wood pasture and has notably broad rides with species of rich calcareous grassland.

The River Quin passes through both parishes, with particular flood risk (zone 3) for some dwellings north of Bell Lane and Park Farm Lane in Nuthampstead.

There is a registered park and garden to the north-east of Barkway which is part of the Cokenach manor estate.

Local green spaces

The Local Plan does not designate any local green spaces. Barkway Chalk Pit, however, is identified as a Regionally Important Geological Site and Local Wildlife Site within the North Hertfordshire Greenspace Management Strategy. Moreover, important non-designated sites include Barkway Recreational Ground (with open space, football pitches and a playground) and the Cokenach Cricket Club.



Figure 12: Green space along the High Street

Street furniture and public realm

There are a couple of benches in the small green spaces in Barkway, though overall street furniture is limited.

There are a few features within the public realm such as signage which show the heritage of Barkway. This includes the historic milestone along the High Street.

Infrastructure

Properties in Nuthampstead are not on mains sewage and there are concerns about how the current sewage station in Barkway would cope with any further demand. Combined with the rural nature of the area there is an opportunity for collective sustainable off-grid electricity supply and sewage arrangements.



F.13

Figure 13: Last remaining milestone located on the High Street.



F.14

Figure 14: Barkway sign on the green space along the High Street.



F.15

Figure 15: Bench on the green space along the High Street.



Character areas

03

3. Character areas

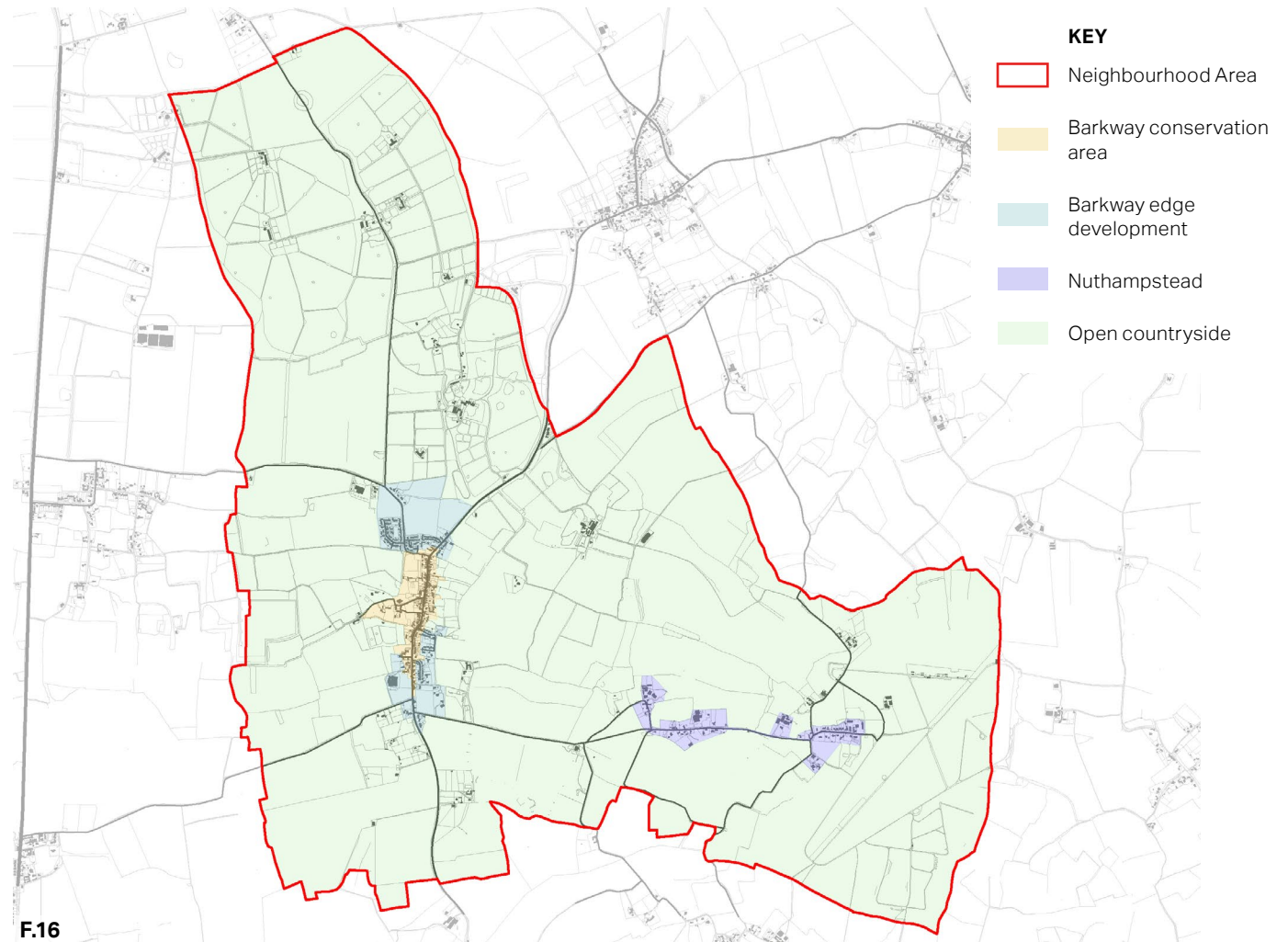
This chapter presents focused analysis of the character areas within the Barkway and Nuthampstead Neighbourhood Area.

3.1 Introduction

Within the Neighbourhood Area there are four character areas which have been identified:

- Barkway Conservation Area
- Barkway edge development
- Nuthampstead
- Open countryside

The boundaries for these areas are shown on the map opposite. This chapter builds on the overall analysis in the previous chapter and goes into more detailed analysis of the elements in each character area which are distinct from other parts of the parish.



F.16

Figure 16: Character areas in Barkway and Nuthampstead.

3.2 Barkway Conservation Area



The Barkway Conservation Area was designated in 1970 by North Hertfordshire District Council and covers most of the High Street as well as land to the west comprising Manor Farm, the Church of St Mary Magdalene, the Vicarage and Langham. The analysis presented here builds on the existing analysis found in the Barkway Conservation Area Appraisal (found here: <https://www.north-herts.gov.uk/conservation-areas-villages>).

Building typologies, materials and design

There are a range of building typologies within the Conservation Area including detached, semi-detached and short rows of terraces – mostly limited to three buildings long. The period and style of building varies with the oldest residential buildings on the High Street dating from the 15th century and the Church of St Mary originally built in the 13th century. In general, older buildings tend to be timber framed, though some have been faced in brick. Buildings from the 18th century onwards are mostly brick.

With exception of the Church of St Mary, Barkway Church of England First School and the chapel, buildings within the Conservation Area are all residential. There has been much residential conversion from shops and coach houses. Shop front windows and bridged upper stories, typical of coaching inns, can be seen in these converted residential properties. Additionally, modern houses along the High Street have referenced Barkway's coaching inn heritage through incorporation of bridged upper stories in their design.

The High Street in Barkway has a dynamic roof line, though building heights are generally restrained to 1-3 storeys in height, variations in roof style and pitch and tall brick chimney stacks create visual interest.

The most common materials are red brick, flint, render and some exposed timber framing with roofs a mixture of clay or slate tiles and thatch.



F.17

Figure 17: View of Barkway's High Street showing the varied and dynamic roof line.

Density, scale and massing

There is relatively high density along the High Street. Building gaps are small and the winding road limits long distance views. Buildings are mostly 1-2 storeys, with a few examples of 3 storeys or 2 storeys with attic rooms. The massing on the High Street is generally consistent, with Barkway House, a 7 bedroom detached dwelling, the only significantly larger plot and building.

On Church Lane plots are larger and much more spread out, creating a much lower density. Building gaps are larger, there is more tree cover and overall the area has a more rural feel, creating a good transition to the surrounding countryside. The Church of St Mary Magdalene dominates the area as a landmark feature. Otherwise, building heights are constrained to 1-2.5 storeys (rooms in the attic of 2 storey properties).

Building line and boundary treatment

The building line along the High Street is mostly consistent with buildings fronting directly onto the street. There are a few variations in the building line from the chapel, Barkway House and modern buildings. The most common boundary treatments are brick or brick and flint walls. Enclosure is an important part of the High Street, created through the consistent building line and infrequent building gaps. Some modern buildings which have setbacks and soft boundary treatments degrade enclosure levels. It is important for the character of the area to retain strong enclosure and use characterful boundary treatments.

Church Lane has a much more informal and inconsistent building line. Buildings are set back from the road in generous plots with large front gardens. However a good sense of enclosure is retained along Church Lane from the High Street by the high red brick and flint walls which line either side of the road. The high tree cover also increases the feeling of enclosure in this area.



Figure 18: Consistent building line and minimal building gaps of development along the High Street.



Figure 19: Walls and trees lining Church Lane.

Movement and parking

The character area comprise the main route through Barkway village, the High Street and Church Lane. The High Street (B1368) has two carriageways and is lined on both sides with pavement. In places there are grass verges separating the road from the pavement. Cars park on the street along the full stretch of the High Street, though many houses also have parking providing at the side or rear of properties.

Church Lane has a rural character, single carriageway with no road markings and no pavement. There is no street parking, with the larger plots accommodating parking needs in this area. As the lane travels further west from the High Street it becomes a dirt track and does not serve as a through road.

Views

The high enclosure of the High Street limits long views though there is a long view south along the High Street from the north wherein two large trees stand opposite from each other, framing the street as it travels away from the viewer. There are some glimpsed views of the Church from places in Barkway.

A full list of views can be found in the Barkway Conservation Area Appraisal document.



Figure 20: View out to the surrounding countryside through the coaching inn style arch of a property along the High Street.



Figure 21: View down the winding High Street of Barkway.



Figure 22: Glimpsed view of the Church tower from Barkway recreation ground.

3.3 Barkway edge development



Barkway edge development includes the northern part of the village consisting of Royston Road, Windmill Close, Cambridge Road, the BK3 allocated site; the southern end of the High Street which includes the Tally Ho pub and residential development off of the High Street to the east.

Building typologies, materials and design

This character area predominantly consists of modern development in the form of detached and semi-detached houses. There is some linear development along the southern end of the High Street, otherwise development is formed of cul-de-sacs. The period and style of the buildings are from the 20th-21st centuries, with examples typical to the time period, such as the 1960/70s bungalows on Townsend Close.

There are varying degrees to which modern development in this area has used characterful materials and architecture to Barkway. A mixture of flint, dark weatherboarding, red brick and use of agricultural style outbuildings is seen in the Highfield Grove 21st century development, showing consistency with the local material and architecture palette. Elsewhere, residential development shows little reference to Barkway's local character. Overall the most common material in this character area is brick. Repeated building design is seen across sections of

development, such as in the 21st century development on Birch Meadow which degrades the character of the village.

As well as residential buildings there is also community amenities including Barkway Village Hall and Barkway Social Club which both use dark weatherboarding and Barkway Sports Pavilion which uses brown weatherboarding.



Figure 23: Flint and brick 21st century development on High field Grove.

Density, scale and massing

Building heights are constrained to 1-2 storeys. There are areas of bungalow developments on Townsend Close and Burrs Lane. Massing varies in different areas of the character. 20th century development to the north has modest size plots and buildings with frequent terraces. 21st century development in this area is larger in scale. The small area of 21st century, Highfield Grove, has large plots and building scale. Density is lower than the High Street, though higher than the rural Church Lane area.

Building line and boundary treatment

Buildings have front gardens, often lack boundary treatment and have pavements with green verges. The building line is set back for all buildings in this character area. Front gardens and often on-plot parking is provided. Enclosure levels are generally lower than in the Conservation Area and there is a more open character.

Movement and parking

The main routes through the area include Royston Road, Cambridge Road and the southern stretch of the High Street. Royston Road has a rural character with no road markings and is lined with hedges. Cambridge Road and the southern stretch of the High Street are part of the B1368 which runs from nearby village Barley south to Puckeridge. Parking is provided on-plot.

There are a number of Public Rights of Way in this character area which lead out into the surrounding countryside.

Views

Long distance views over surrounding countryside are present from Royston Road, Cambridge Road, Nuthampstead Road and the back of residential properties to the east of the High Street.



F.24

Figure 24: Footpath out into the surrounding countryside.



F.25

Figure 25: View from Highfield Grove across to the surrounding countryside.

3.4 Nuthampstead



Nuthampstead is a small village to the east of Barkway consisting of mainly linear development along Bell Lane, Nuthampstead Road and Park Farm Lane. There is residential development, a pub, The Woodman Inn, Nuthampstead Airfield Museum, Bury Farm and two industrial sites.

Building typologies, materials and design

Building typologies include predominantly detached and semi-detached properties arranged in a linear development pattern.

Building style varies, though in general there are agricultural influences and a rural character as exemplified in the use of thatched roofs, weatherboarding and oak outbuildings.

There are examples of white and black weatherboarding, render and red brick. Roofs are thatch, clay or slate tiles.

Density, scale and massing

Density is low in this character area, buildings are spread out and arranged informally with varying orientation, setback distances and size. There are large building gaps and an overall open character. Building height is low, 1-2 storeys in height. Farm and industrial buildings have larger scales, but remain low in height.



F.26

Figure 26: Boundary treatment of high hedges, trees and wooden gate.



F.27

Figure 27: Bury Farm.

Building line and boundary treatment

The building line is set back from the road and houses have front gardens of varying sizes. Boundary treatments are predominantly natural, with high hedges and trees the most common. Often plots have long driveways and wooden gates.

Movement and parking

The main route through Nuthampstead is Bell Lane. All roads in the character area have a rural character without road markings. Through the unbuilt parts of Nuthampstead, roads are bordered by hedges or open field land with long distance views across the countryside. Parking is provided on-plot.

Views

There are many long distance views in this character area from across open countryside and towards ancient woodland to the north and south of the village.



Figure 28: Detached property with white weatherboarding and clay tiles.



Figure 30: Black weatherboarding on The Woodman Inn.

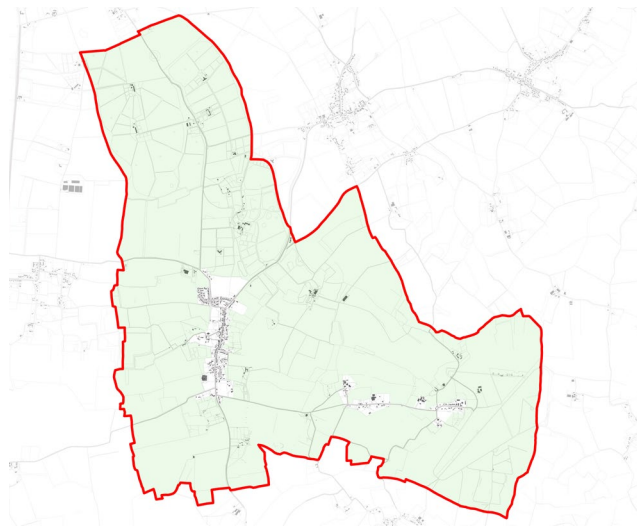


Figure 29: Thatched, rendered property with a large set back from the road and natural boundary treatments.



Figure 31: Red brick house in Nuthampstead.

3.5 Open countryside



Open countryside surrounds the settlements of Barkway and Nuthampstead and features mainly arable land, with some individual residential properties, farmsteads and also the Cokenach estate and registered park and garden.

Building typologies, materials and design

Buildings in this character area are predominantly agricultural. Individual residential properties tend to be detached. There is a strong rural character.

The vernacular comes from an agricultural style. There are M-shaped roof examples, dark weatherboarding and red brick.

Density, scale and massing

Density is very low in this area, given the predominance of open landscape. Building heights are constrained to 2 storeys. Agricultural building scale can be large but are low in height so do not affect the open landscape.

Building line and boundary treatment

Buildings are set back from the road with natural boundary treatments such as hedgerows, trees and other vegetation. Enclosure is low and building line and orientation varies.

Movement and parking

Roads through the open countryside have a rural character, lined either with open fields or hedgerows. Developments in this area have on-plot parking.

Views

Views in this area are long reaching across open countryside and towards the areas of ancient woodland.



Design guidance and codes

04

4. Design guidance and codes

This section sets out the principles that will influence the design of potential new development and inform the retrofit of existing properties in the Neighbourhood Area. Where possible, local images are used to exemplify the design guidelines and codes. Where these images are not available, best practice examples from elsewhere are used.

4.1 Introduction

The design guidelines and codes listed hereby are organised under four principles that are particularly relevant to Barkway and Nuthampstead Neighbourhood Area. They have been generated based on discussions with members of the Neighbourhood Plan Steering Group, the site visit, the area and character analysis included in Chapter 2 and Chapter 3 of this report and on good practice relevant to the physical context of the Neighbourhood Area. Some of these are more general and could be used as design guidance within the Neighbourhood Plan. Other elements that are more prescriptive or set out parameters form design codes.

The guidelines and codes developed in this part focus on residential developments. New housing development and modifications should not be viewed in isolation; rather, considerations of design and layout must be informed by the wider context. The local pattern of roads and spaces, building traditions, materials, and the natural environment should all help to determine the character and identity

of a development. It is important with any proposal that full account is taken of the local context and that the new design embodies the 'sense of place'.

Reference to context means using what is surrounding, shown in Chapter 2, as inspiration and influence. Sensibility to the context should by no means restrict architectural innovation; in fact, the solution could be a contemporary design that is in harmony with the surroundings. Proposals should also take account the individual characteristics of each settlement in the Parish and seek to enhance and reflect its distinctive features.

The main themes which design codes are grouped under are:

Settlement Pattern (SP)

Movement Network (MN)

Built Form (BF)

Landscape and Infrastructure (LI).

4.2 Design guidance and codes

4.2.1 Settlement pattern

SP 1. Sense of place

An understanding of the existing patterns of growth in Barkway and Nuthampstead is required for any new development. Any new development should adhere to the following principles:

- Development should be considered strategically at the settlement level and should not be designed in isolation;
- New development should take into account the existing variety of patterns of growth and propose design that sits sensitively within the existing character areas. For example, new development should study the surrounding patterns of the buildings lines, building setbacks and plot sizes and widths and make sure to incorporate similar qualities into new design;
- Where higher densities are deemed appropriate, an appropriate level of green coverage and vegetation should be in place to avoid an over-built character;
- Where it is an intrinsic part of local character, properties should be clustered in small pockets showing a variety of types. The use of a repeating type of dwelling along the entirety of the street should be avoided;
- New developments should have short blocks to provide a choice of well-overlooked pedestrian routes and maximise connectivity with the rest of the settlement;
- Existing and new vegetation should be integrated into the design;
- New development should have a compact form with distinct edges to enable a sympathetic transition between the built-up area and the countryside;
- New development must demonstrate a good understanding of the building orientation, building lines and building setbacks of the surrounding built environment and propose design that reflects the rural qualities of the area;
- In order to provide a sense of security and natural surveillance, the windowed front elevation of dwellings should face the street. Street-facing rear boundaries should be avoided;
- New development should respond to site specific micro-climates and sun paths and use these as key design drivers to increase the environmental comfort for building users, both internally and externally; and
- 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.

SP 2. Enclosure and building line

Enclosure refers to the relationship between public spaces and the buildings that surround them. A more cohesive and attractive urban form is achieved when this relationship is in a suitable proportion appropriate to the street character.

There are different levels of enclosure observed in Barkway and Nuthampstead. As identified in the Character Area Analysis (**Chapter 3**), the High Street in Barkway, for example, has a high enclosure level and Nuthampstead has lower enclosure levels. There are also differences in enclosure within character areas, where road junctions and green spaces provide more open spaces.

The following guidance should be considered to achieve the desired level of enclosure:

- The level of enclosure of a street should be proportionate to its hierarchy, for example, primary streets should generally have an open character while residential streets should have a more

enclosed character;

- In the case of building setback, façades should have an appropriate ratio between the width of the street and the building height;
- Narrow gaps between buildings must be avoided. Buildings should either be detached, semi-detached or properly attached;
- Trees, hedges and other landscaping features can help create a more enclosed streetscape and provide shading and protection from heat, wind, and rain. Street trees provide many benefits including improving biodiversity, reducing flood risk and providing shade;
- Careful positioning of walls, landscaping and paving can achieve visual continuity and well-defined open spaces to link buildings together and define public and private spaces; and
- In the case of terraced and adjoining buildings, it is recommended that a variety of plot widths, land use, building heights and facade depths should be

considered during the design process to create an attractive streetscape and break monotony.



Figure 32: High enclosure example on the High Street in Barkway Conservation Area where the building line fronts directly onto the pavement.

SP 3. Scale and density

It is important to achieve appropriate scale and density to maintain the existing character of Barkway and Nuthampstead. The following elements should be respected:

- Most structures in Barkway and Nuthampstead are one- or two-storeys in height, with a few three-storey buildings or two-storey buildings with attic rooms along the High Street in Barkway. New buildings and extensions should therefore be sympathetic in mass, height and scale to the existing context;
- The massing of new buildings must ensure a sufficient level of privacy, energy efficiency and access to natural light for their occupants and avoid overshadowing existing buildings. New buildings must not significantly compromise existing property views of open and green spaces;

- Variations in the roofline should reflect the informal and rural nature of Barkway and Nuthampstead, where rooflines show diversity in roof shapes, orientations and materials. The repetition of a standardised and uniform set of roof shapes and materials across a development should be avoided;
- The scale of the roof should always be in proportion with the dimensions of the building itself. The shape and orientation may be chosen to optimise lighting, energy use, solar gains and rainwater management;
- The scale and massing of buildings should also seek to maximise energy efficiency by reducing energy consumption and optimising passive solar gains;
- Variations in the roofline should reflect the existing variation in roof shapes, orientations and materials of the local vernacular. Roofs in Barkway and Nuthampstead are typically pitched,

with some hipped and half-hip examples. The use of thatch, clay tiles and slate tiles is widespread and these should be the main roofing material for new development; and

- Where appropriate, dormers, which are common features in both Barkway and Nuthampstead, may be used as design elements to add variety and interest to roofs.



Figure 33: Roofline along Barkway High Street of buildings from 1-3 storeys in height, all with pitched roofs but variations in pitch and dormer window additions create a dynamic roofline.

SP 4. Development edges

Barkway and Nuthampstead are surrounded by attractive areas of open countryside whose setting must be respected. Thus, some design guidelines on how rural development edges should be treated are:

- New development should incorporate existing native trees, shrubs and green/ecological assets into the design. Any unnecessary loss of flora should be avoided;
- Abrupt development edges with little vegetation or landscaping should be avoided. Edges should be planted with rich vegetation including native trees and hedgerows to create green buffers that provide a smooth transition from the built-up areas to the rural landscape; and
- Edges must be designed to link rather than segregate existing and new neighbourhoods. Therefore, green corridors should be proposed to provide additional pedestrian and cycle links that will improve connectivity between

neighbourhoods and contribute to the successful integration of any new development within the parish.



Figure 34: Development edges of Barkway are lined with trees to provide a buffer between the built up area and rural landscape.

4.2.2 Movement network

MN 1. New streets

It is essential that the design of any new streets both meets the technical highway requirements and incorporates the needs of pedestrians and cyclists. Some design guidelines for future development are:

- Streets should be designed to meet the needs of all users and should not compromise the needs of one over the other – drivers, pedestrians, cyclists and those with disabilities;
- Streets should be considered a 'place' to be and contribute to the local character of the Neighbourhood Area. Thus, a good understanding of the existing street typologies and characteristics, widths and enclosure is needed so that any new design or retrofits reflect the existing rurality;
- Development should integrate with existing networks in the Barkway and Nuthampstead Neighbourhood

Area, including all PROWs (footpaths, bridleways, byways etc) and enhance them;

- Streets should incorporate opportunities for landscaping, green infrastructure and sustainable drainage. This approach will enhance the rural character and environment of the parish as well as boost biodiversity;
- Parking should be well integrated in the design of, and not dominate, the public realm. For that reason, soft landscaping is suggested along the edges as well as the use of permeable paving materials. This will mitigate any visual impact, increase visual attractiveness and reduce impervious surfaces, refraction and heating;
- Parking areas should be overlooked by properties or other facilities to create a safe environment;
- All parking areas must be constructed from porous materials to minimise surface water run-off and help mitigate potential flooding;

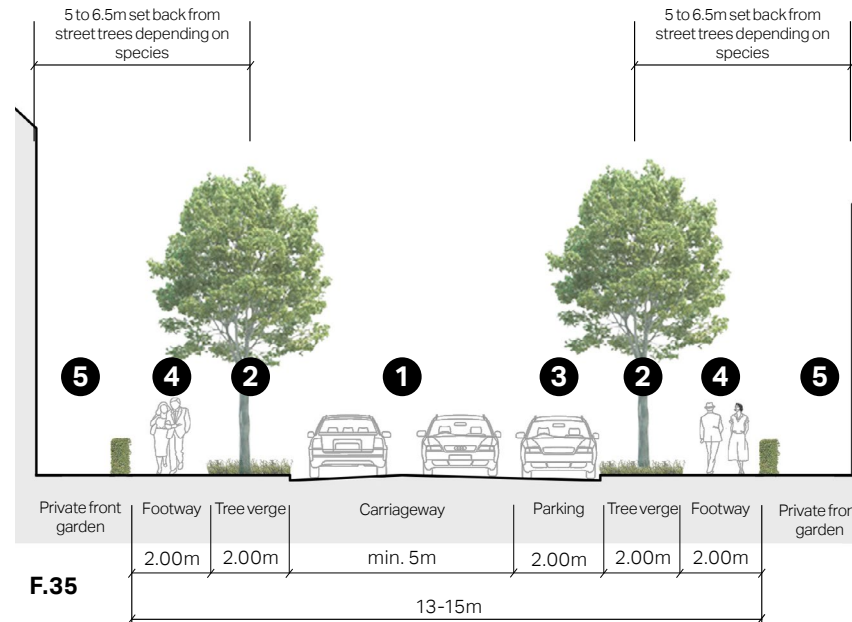
- Electric vehicles charging points, both for off-street and on-street parking, should be integrated into the design;
- Parking garages must not dominate the appearance of dwellings and must not reduce the provision of active frontage onto the street;
- Adequate provision should be made for bin storage, including areas for waste separation, holding and recycling;
- Adequate provision should be made for cycle parking, in public and private land; and
- Energy-efficient lighting schemes, where absolutely required, that do not affect biodiversity should be in place to promote safety in movements.

Any new streets within Barkway and Nuthampstead will either be secondary or tertiary streets and should adhere to the guidance on the following pages.

Secondary streets

Some guidelines for secondary streets are:

- Secondary streets provide access between primary streets and neighbourhoods. They should emphasise the human scale and be designed for lower traffic volumes compared to primary streets;
- Secondary streets should accommodate carriageways wide enough for two-way traffic and on-street parallel car parking bays. On-street parking may be on or accommodated on the street or inset into green verges;
- Carriageways should be designed to be shared between motor vehicles and cyclists. Vertical traffic calming features such as raised tables may be introduced at key locations such as junctions and pedestrian crossings; and
- Where possible, secondary streets should be tree-lined (with green verges) on both sides.



1. Shared carriageway (neighbourhood traffic). Traffic calming measures may be introduced at key locations if needed.
2. Green verge with medium trees. The latter are optional but would be positive additions.
3. Parking bay (may also be inset into verges).
4. Footway - utilities typically located underneath.
5. Residential frontage with boundary hedges and front gardens.

Figure 35: Cross-section to illustrate some guidelines for secondary streets.

Tertiary streets

Some guidelines for tertiary streets are:

- Tertiary streets have a strong residential character and provide direct access to residences from the secondary streets. They should be designed for low traffic volumes and low speeds, ideally 20mph;
- Carriageways should accommodate two-way traffic, cyclists and parking bays. These streets should also accommodate footways, with a 2m minimum width on both sides, and must be designed for cyclists to mix with motor vehicles. Traffic calming features such as raised tables can be used to prevent speeding;
- Tertiary streets should respond to the surrounding context. Within Barkway they should be formed with a high degree of built form enclosure, with consistent building lines and setbacks. However within Nuthampstead, which has a more rural character, a varied building line should be used; and

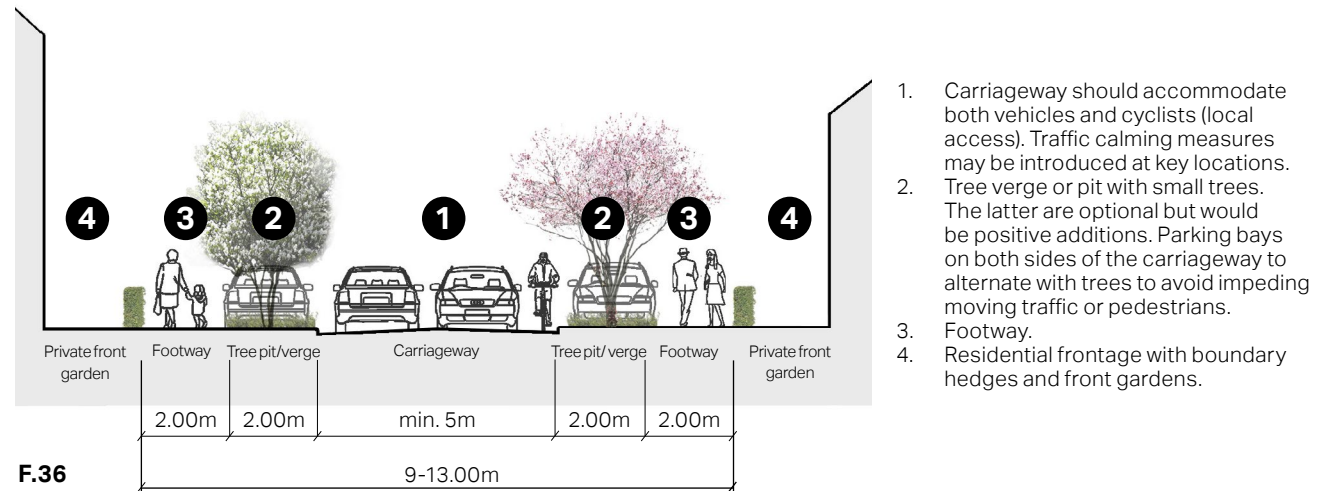


Figure 36: Cross-section to illustrate some guidelines for tertiary roads.

- Street trees should be provided with suitable gaps, wherever possible.

MN 2. Access, parking and utilities

Although the demand for private cars is expected to remain high in Barkway and Nuthampstead, properties must avoid over-providing parking and can take measures to integrate parking areas into the fabric of the villages. A good mix of parking typologies should be deployed, depending on, and influenced by location and market demand. The main considerations for parking are:

- When parking is placed at the front of properties, the area should be designed to minimise its visual impact and to blend in with the existing streetscape and materials. The aim is to keep a sense of enclosure and to break the potential of a continuous area of car parking in front of the dwellings by means of walls, hedging, planting, and use of quality paving materials;
- For family homes, cars should be placed at the front or side of the property;
- Parking areas and driveways should be designed to minimise impervious

surfaces through the use of permeable paving and soft landscaping;

- Garage structures, where required, should be designed to be subservient to the main building, for example with a setback from the main building line and a roof lower than that of the main building. The local agricultural heritage of the area can be referenced within the design, for example with use of materials such as weatherboarding;
- Cycle parking should be integrated into all new housing; and
- Long-term strategies to manage parking demand, such as cycling infrastructure and parking should also be explored.



Figure 37: Garages on Highfield Grove, with weatherboarding and timber.

A straightforward way to encourage cycling is to provide secured covered cycle parking within all new residential developments and consider new cycle parking near well-used amenities.

- For residential units, where there is no on-plot garage, covered and secured cycle parking should be provided within the domestic curtilage;
- Cycle storage must be provided at a convenient location with an easy access;
- When provided within the footprint of the dwelling or as a free-standing shed, cycle parking should be accessed by means of a door at least 900mm and the structure should be at least 2m deep;
- Parking should be secure, covered and it should be well integrated into the streetscape if it is allocated at the front of the house; and
- The use of planting and smaller trees alongside cycle parking can be used to mitigate any visual impact on adjacent spaces or buildings.

Cycling in public realm

- New development should promote cycling by providing more cycle routes and monitor the condition of the existing ones;
- Bicycle stands in the public realm should be sited in locations that are convenient and that benefit from adequate natural surveillance. They should be placed in locations that do not impede pedestrian mobility or kerbside activities; and
- The chosen materials must be appropriate to its surroundings and follow the dimensions as illustrated hereafter.

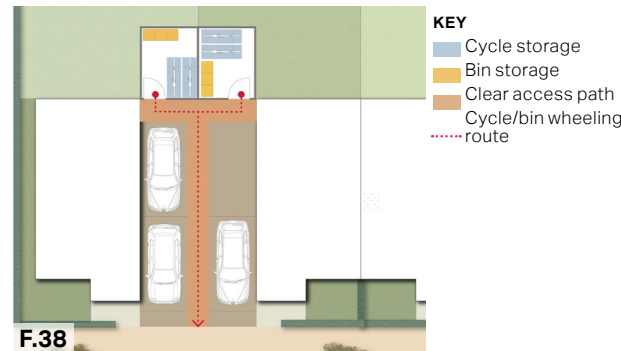
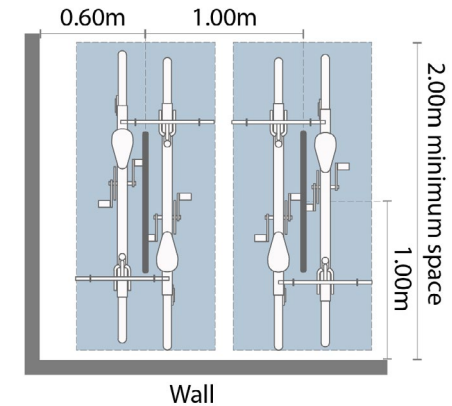


Figure 38: Indicative layout of a bicycle and bin storage area at the back of semi-detached properties



F.39

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



Figure 40: Example of cycle parking storage that fits sensitively within a rural environment

MN 3. Pedestrian and cycle network

This section offers guidance on the design of footpaths as well as the relationship between residential developments with pedestrian and cycle networks:

- Good connectivity is key to the promotion of walking and cycling. New development must therefore retain or provide direct and attractive footpaths between neighbouring streets and local facilities and amenities;
- Footpath networks must be in place before the first houses are occupied. Walking/cycle routes within new communities should be the primary network and first consideration, whilst roads should be secondary;
- Pedestrian and cycle links within residential areas should always be overlooked by properties to create natural surveillance and offer good sightlines;
- Design features such as gates to new developments or footpaths between high fences must be avoided;
- Cycle parking should be installed in both private or public spaces and next to amenities;
- Paving used along pedestrian and cycle links should, where possible, be permeable to help absorb surface water and mitigate flooding;
- Footpaths should be at least 2 metres wide. Shared lanes may be acceptable within residential streets, however they must be accompanied with appropriate traffic calming measures; and
- Strategically placed signage should offer guidance and help with navigation. The materials and design of the signage should be appropriate of the rural character of the parish.



Figure 41: Footpath integrated within residential development offering alternative walking and cycling routes, Great Kneighton, Cambridge

4.2.3 Built form

BF 1.Housing mix

It is the aspiration of the parish to ensure that there is a mix of housing types and a supply of social and affordable housing to cater for the needs of a wider group of people. Therefore, a mix of new housing could attract a wide group of people and boost the local economy. Some design guidelines for new development area:

- New development should propose a mix of housing to include a range of house types and sizes, both developer and self-built, to allow for a variety of options and bring balance to the population profile. The existing mix of housing in the parish, including detached, semi-detached, bungalows and terraced housing, should be enhanced;
- New development should avoid using only one housing typology along the street, as this creates monotonous elevations without visual interest and variations along the streetscape; and

- Affordable housing should be a priority in new development and its quality and architectural design should be of high standards to complement the local vernacular. In addition, they should be integrated into the layout to create tenure blind developments.



F.42

Figure 42: Semi-detached property in Barkway.



F.43

Figure 43: Detached property along Barkway High Street.

BF 2. Heritage assets

There are several elements of historic significance in the Neighbourhood Area which make a positive contribution to the character of the area. In particular, the listed buildings along Barkway High Street, the Grade I listed Church of St Mary Magdalene and the historic park and garden and Manor House of the Cokenach estate. Therefore the following guidelines apply:

- New development in proximity to designated and non-designated heritage assets must propose distinct boundaries in keeping with the local landscape setting in each case (e.g. tall hedgerows) to mitigate visual impact;
- New development in close proximity to a heritage asset must respect its significance and demonstrate how local distinctiveness is reinforced. For example, the new development should allow for a generous setback from the

asset and be of a massing and scale that is sensitive to the neighbouring structure. Views to that asset should also be maintained or created;

- New development should retain the existing open spaces, vegetation and trees within the conservation area to preserve the historic form and pattern of development in the parish;
- New development should propose architectural details and materials that reflect the surrounding heritage assets. This especially applies within the conservation area where the local vernacular is most present; and
- Any street furniture, signage or lighting should be sympathetic to the Conservation Area.



Figure 44: Grade I listed Church of St Mary Magdalene.



Figure 45: Grade II* listed building at the top of Barkway High Street.

BF 3. Materials and architectural details

Barkway and Nuthampstead has a rich built heritage that should be referenced in new development. New constructions and renovations should be respectful of the architectural styles and materials of surrounding buildings, whilst ensuring that a mix of styles are sympathetic to the local palette and vernacular. They should demonstrate an intelligent understanding of the historic building forms and details without resulting in low-quality imitations of past styles. Some design guidelines are:

- New development should reflect the high-quality local design references in both the natural and built environment and make a valuable contribution to the historic character of the Parish;
- New development should only use appropriate materials that match or complement the local vernacular;

- The choice of colour and finish of materials is an important design factor in anchoring buildings within the surrounding built environment and landscape. References to the local palette should therefore be made;
- The number and size of windows should be appropriate and within scale of the building façade;
- Where brick is used, bricks that match buildings in the surrounding area are preferred. Particular attention should be given to the bonding pattern, size, colour and texture of bricks; and
- The use of traditional, natural and preferably locally sourced materials is generally more appropriate than man-made synthetic, pre-coloured materials as they lack the variation on colour and texture found in natural materials.

Examples of appropriate, local materials are listed opposite and the material palette for the Neighbourhood Area is provided in more detail in Section 2.3.

Wall materials

The main traditional wall materials in Barkway and Nuthampstead are red brick, weatherboarding, render and flint with brick dressings.

Roof materials

Thatch, clay tiles and slate tiles are the most common forms of traditional roofing. The majority of traditional buildings have pitched roofs, while hip and gabled roofs are also in use. Some roofs incorporate dormers, usually hipped or gabled.

Fenestration materials

Houses in Barkway and Nuthampstead traditionally feature relatively large sash windows as well as side-opening casement windows. Ground floors may include bay or oriel windows, especially those converted from shop fronts.

Boundary treatment materials

Boundaries vary between character areas and include brick or flint walls, hedges and planting.

BF 4. Extensions, conversions and infill development

Extensions to dwellings can have a significant impact not only on the character and appearance of a building, but also on the street scene within which it sits. A well-designed extension can enhance the appearance of its immediate environment, whereas an unsympathetic extension can have a detrimental impact on the immediate environment, create problems for neighbouring residents and affect the overall character of the area poorly. Many household extensions are covered by permitted development rights, and so do not need planning permission.

Infill sites will vary in scale, context and location. Infilling can have significant impact on the character and appearance of the immediate built environment. Accordingly, there are a number of principles that residential extensions, conversions and infills ought to follow to maintain the local character:

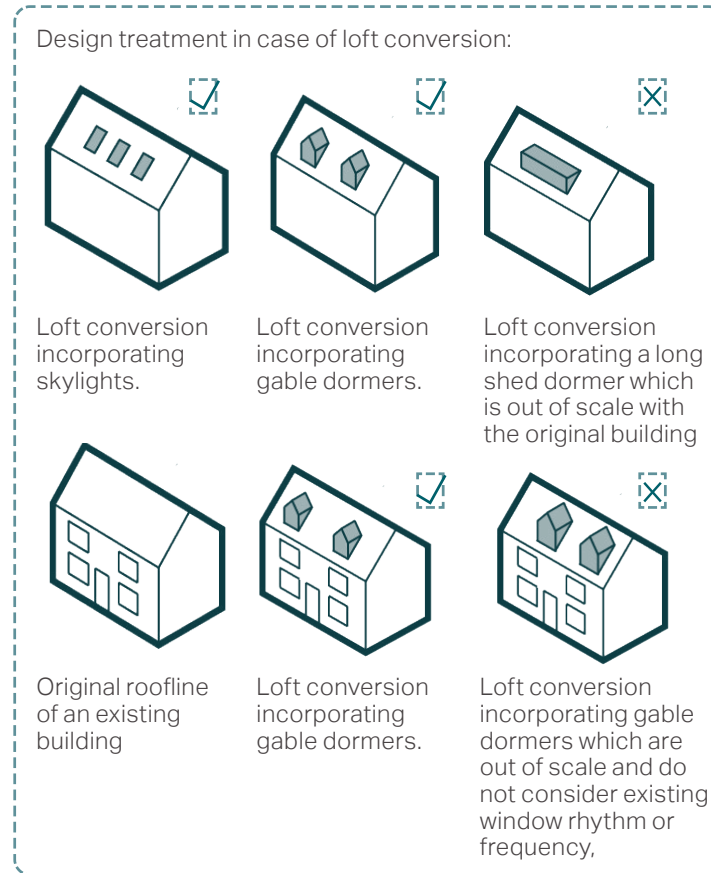
- The original building ought to remain the dominant element of the property, irrespective of the number of extensions. Extensions shall not overwhelm the building from any given point;
- Proposed extensions, conversions and/or infilling that wrap around the existing building and involve overly complicated roof forms should be avoided, whereas proposals that complement the streetscape by incorporating materials/colours that correspond to the immediate context of the building are encouraged;
- Proposed extensions, conversions and infilling ought to consider the materials, architectural styles, fenestration and building proportions in such a way that is compatible with the original building and the character of the adjacent built environment. Local building materials should be used as described in BF 3 and Section 2.3. Architectural details such as bridged upper storeys can be used to reference Barkway's coaching heritage;
- In case of side extensions, the new part may be set back from the front of the main building and retain the proportions of the original building. This is in order to reduce any visual impact of the articulation between existing and new structures. In case of rear extensions, the new part must not have a harmful effect on neighbouring properties in terms of overshadowing, overbearing or privacy;
- The use of traditional, natural and locally-sourced materials is generally more appropriate than man-made synthetic materials. The use of roofing which encourages moss growth is preferred;
- The pitch and form of the roof used on the building adds to its character and extensions shall respond to this where appropriate; and
- Any modifications should not reduce the number of parking spaces on the site.



Figure 47: Infill development on the High Street in flint with red brick dressing which references the nearby, older flint building.

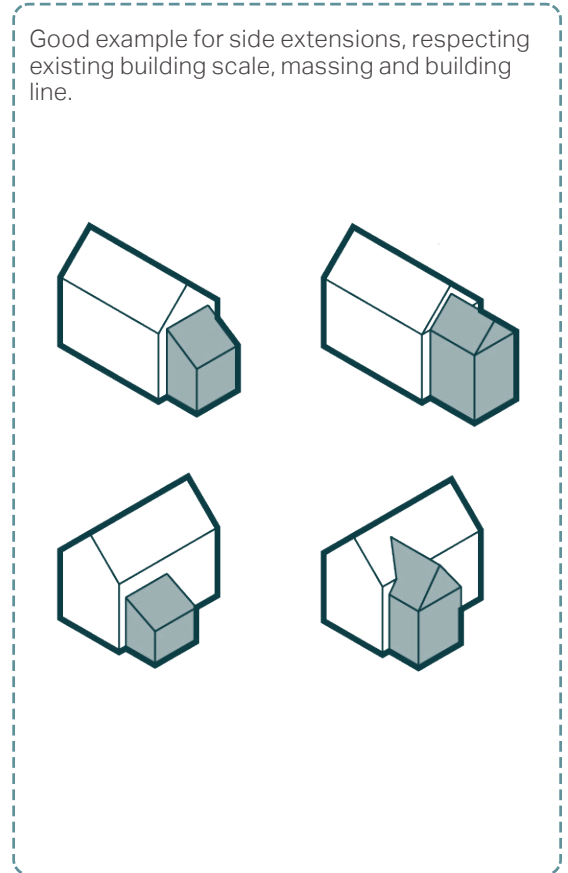


Figure 48: Infill development on the High Street with a bridged upper storey design, referencing the village's coaching Inn heritage.



F.46

Figure 46: Design treatments for building extensions



4.2.4 Landscape and infrastructure

LI 1. Biodiversity

Barkway and Nuthampstead has a number of habitats for plant and animals species which need to be protected in future development. Biodiversity net gain is also an ambition for the parish and therefore new development should contribute to existing green areas and encourage improved biodiversity by proposing new green links, habitats and spaces. Therefore, the following design guidance should be considered:

- Development should seek to achieve biodiversity net gain in accordance with government regulations and provide new habitats and wildlife corridors;
- Woodlands, hedges, trees and road verges should be protected and enhanced, where possible. Natural tree buffers should also be protected when planning for new development;

- A comprehensive landscape buffer should be implemented as the development edge to create a soft edge. Hard or abrupt edges with little vegetation or landscaping should be avoided;
- Align back gardens to ensure a continuous wildlife corridor;
- Ensure existing habitats are buffered based on specific ecological function; and,
- New development should show that it has considered opportunities to incorporate domestic-scale features to support wildlife in all buildings, such as bird boxes, bat roost and invertebrate boxes, bee bricks, bug-houses, hedgehog corridors, swift bricks or ponds.



F.49

Figure 49: Example of a swift brick under an eave.



F.50

Figure 50: Example of a hedgehog corridor within in a garden fence.

LI 2. Dark skies

Guidance for street lighting and dark skies is different for the separate character areas of the parishes.

- In the highly rural areas including Nuthampstead and open countryside it is very important to retain the dark skies. There is currently no street lighting in Nuthampstead and there should be no street lighting introduced with any new development;
- In the conservation area of Barkway there is currently no street lighting and dark skies should be retained in and around this area to preserve its character;
- There is street lighting on some of the 20th-21st century developments such as on Windmill Close and Periwinkle Close, though overall street lighting is not characteristic and should be avoided to preserve dark skies which across the Neighbourhood are important to

preserve biodiversity and the rural character. The removal of existing street lighting should be considered where more efficient, low-level lighting alternative solutions are available; and

- With exception of the more sensitive character areas - Nuthampstead, Barkway conservation area and the open countryside - where safety is an issue low-level lighting solutions can be applied, for example, outside schools. This includes lighting schemes that could be turned off when not needed ('part-night lighting').



F.51

Figure 51: Example of a low-level lighting solution outside Warwick police station. Photo by Robin Stott.

LI 3. Views and vistas

- New development should relate sensitively to views and vistas within the built environment as well as the surrounding landscape; and
- Any building extension or modification should not exceed the surrounding average building height or block any views towards important built landmarks and landscape features.



Figure 52: View to the north from Bell Lane industrial site in Nuthampstead.



Figure 54: View eastwards across countryside surrounding Barkway.



Figure 53: View eastwards from Cambridge Road to Cokenach Park and Garden.

LI 4. Flooding

Flood risk from rivers in Barkway and Nuthampstead correspond with the River Quin which passes through both parishes. There is particular flood risk for dwellings north of Bell Lane and Park Farm Lane in Nuthampstead and to the east of properties in Barkway. There are also flood risk areas from surface water which particularly affect the south of the High Street in Barkway.

Sustainable Drainage Systems (SuDS) cover 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. A number of overarching principles can 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 in areas that are not directly in an area of flood risk themselves, as they can help reduce downstream flood risk by storing water upstream;
- Some of the most effective SuDS are vegetated, using natural processes to slow and clean the water whilst increasing the biodiversity value of the

area;

- Best practice SuDS schemes link the water cycle to make the most efficient use of water resources by reusing surface water; and
- 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; and
- Attenuation and controlled release – holds back the water and slowly releases it into the sewer network.

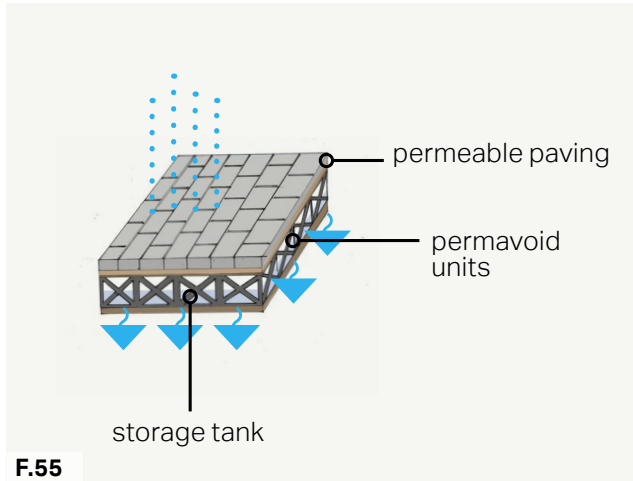


Figure 55: Diagram illustrating the functioning of a soak away with permavoid units.

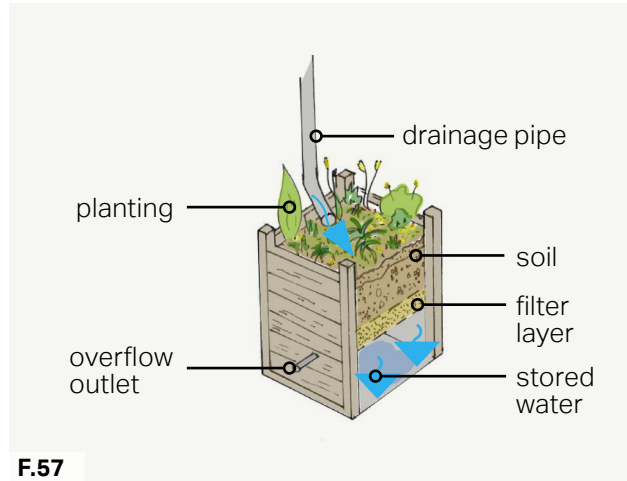


Figure 57: Diagram illustrating the functioning of a stormwater planter.

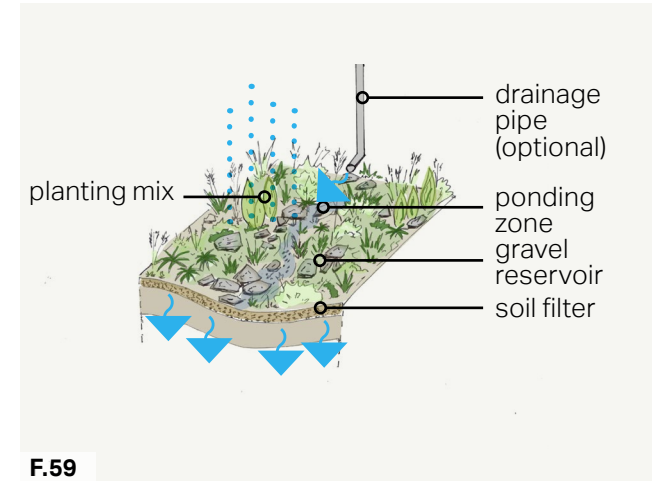


Figure 59: Diagram illustrating the functioning of a rain garden.

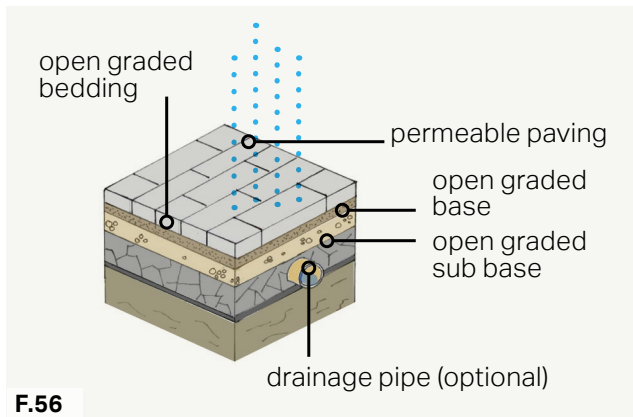


Figure 56: Diagram illustrating the construction of a permeable paving area.

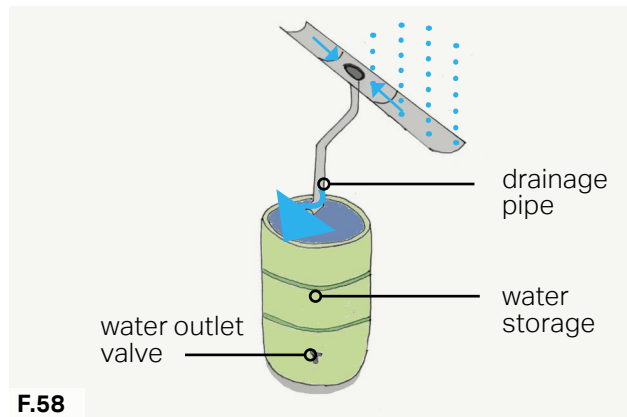


Figure 58: Diagram illustrating the functioning of a water butt.

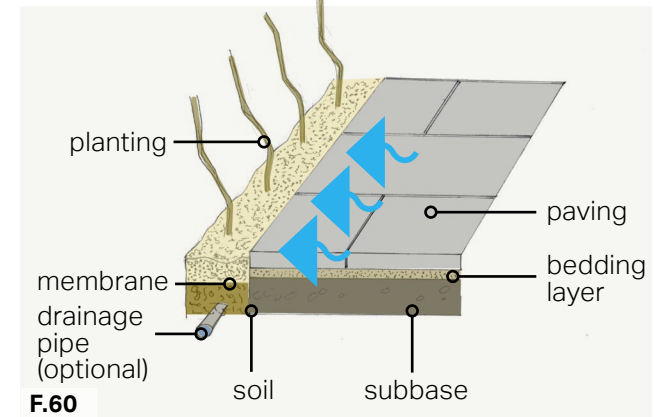


Figure 60: Diagram illustrating the construction of a soak away garden.

LI 5. Eco design and infrastructure

- New development should ensure all components (e.g. buildings, landscapes, access routes, parking and open space) are well-related to each other. For example, buildings should have open views towards green spaces, active frontages along the roads and be bordered with vegetation to create soft edges;
- New development should incorporate necessary services and drainage infrastructure without causing unacceptable or unnecessary harm to retained features;
- Given that properties in Nuthampstead are not on mains sewage and there are concerns about how the current sewage station in Barkway would cope with any further demand, new development should consider off-grid sewage solutions including pit latrines, greywater and blackwater management systems, septic tanks and composting

toilets. New development should also take the opportunity further to operate fully, sustainably off-grid. This includes use of off-grid heating solutions such as ground and air source heat pumps, biomass boilers or solar water heating and off-grid electricity which can be generated through use of solar panels, and/or a wind turbine and stored in batteries;

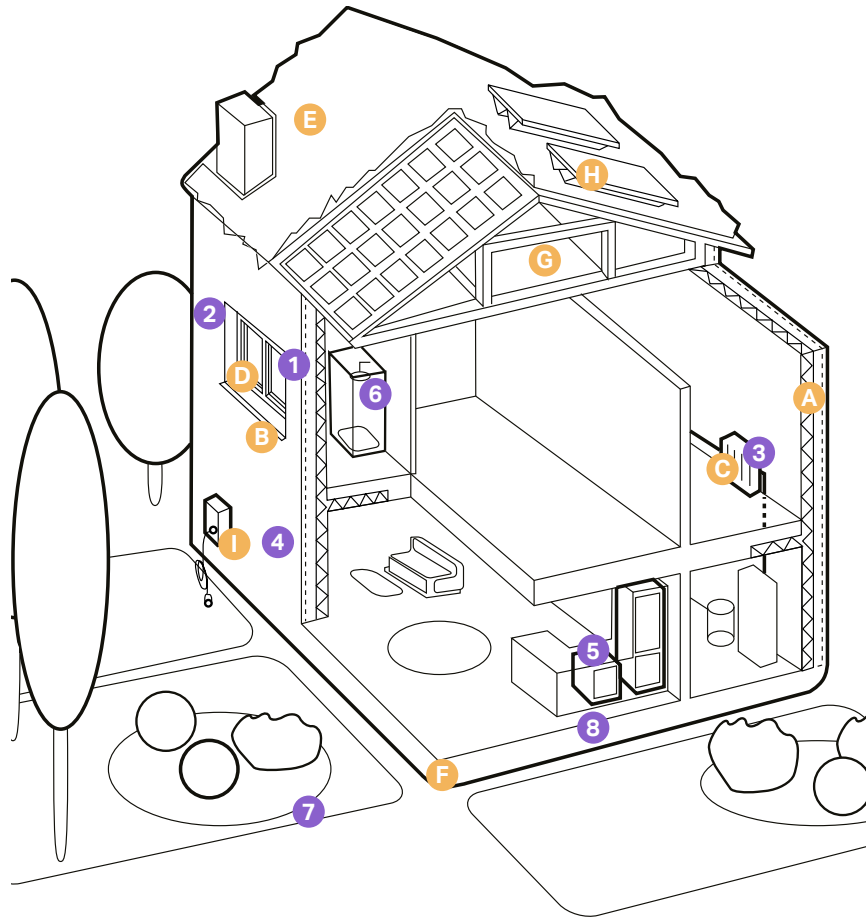
- Net Zero aims should be integrated, and development should adopt low energy and energy generative technologies within the development at the start of the design process. Nature positive and biodiversity net gains should be a priority as well;
- New development should adopt contextually appropriate materials and architectural details should be a guide to material specification;
- New development should demonstrate strong design rationale, quality material specification and good detailing

appropriate for the local climatic conditions of the Neighbourhood Area; and

- Building performance in terms of 'conservation of heat and fuel' over-and-above building regulations, should be a key design driver for new development.

The illustration overleaf sets out the an example of a low carbon home and further detailed guidance on designing net zero carbon buildings is also provided in the Essex Design Guide Net Zero Carbon Toolkit¹ which provides a design checklist in relation to energy efficiency, low carbon heating, renewable energy generation and embodied carbon.

¹ Net Zero Carbon Toolkit (October 2021): <https://www.cotswold.gov.uk/media/05cougdd/net-zero-carbon-toolkit.pdf>












F.61

Figure 61: Diagram showing low-carbon homes in both existing homes and new builds.

Existing homes

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

Additional features for new build homes

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



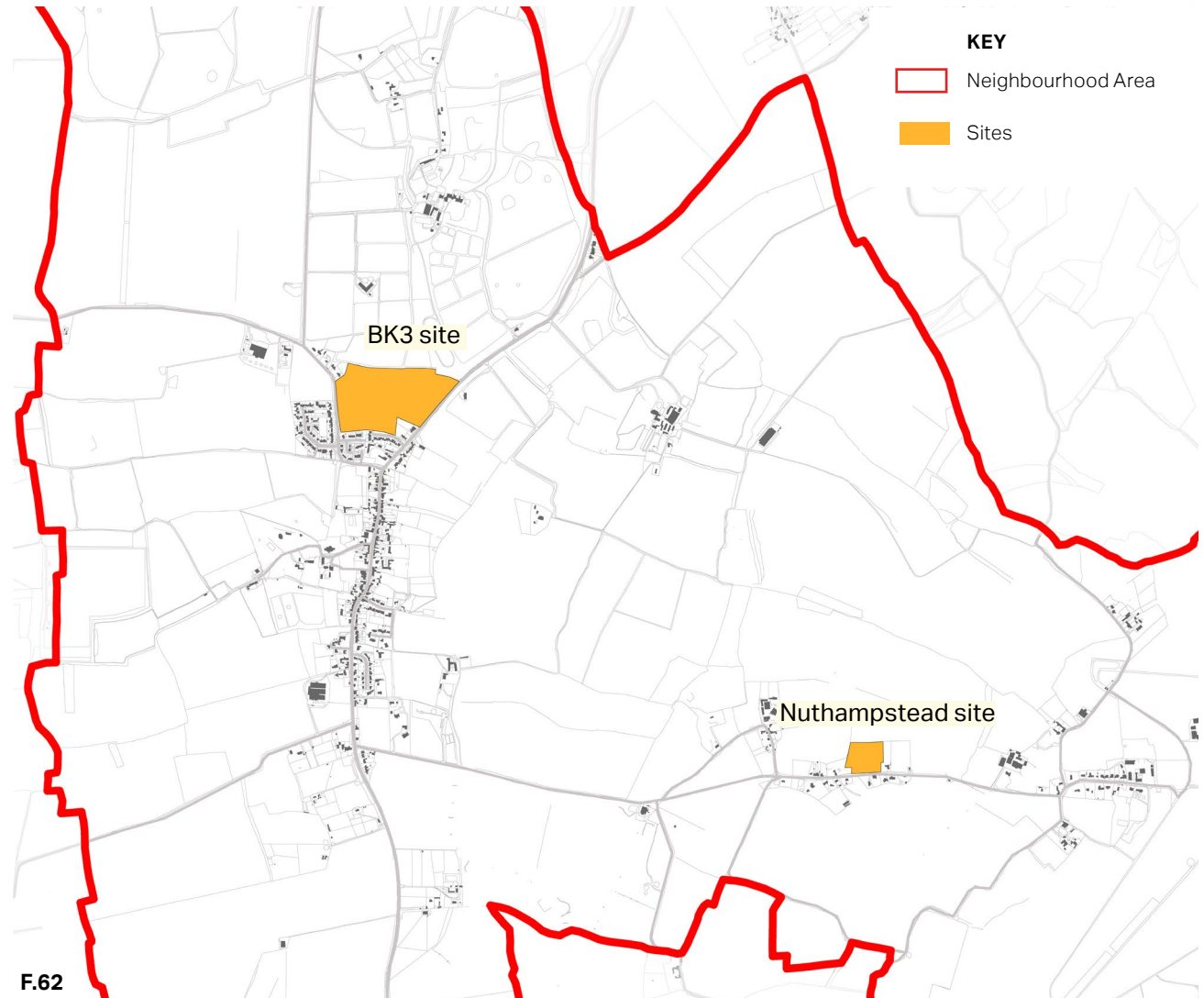
**Applying the design
guidelines and codes**

05

5. Applying the design guidelines and codes

5.1 Introduction

The aim of this study is to use analysis of Site BK3 in Barkway and Bell Lane industrial site in Nuthampstead to give more detailed and specific design guidance for these sites. The focus will be on the most relevant design codes for these areas, though all of the more general design guidelines set out in the previous chapter will also apply to these sites.



F.62

Figure 62: Sites in Barkway and Nuthampstead

5.2 Nuthampstead

5.2.1 Site analysis

The industrial site in Nuthampstead along Bell Lane, currently occupied by small businesses, has been identified for the development of 9 homes. The brownfield site is approximately 1.61ha in size. It is located within one of the residential development clusters in the centre of the village. The site neighbours single residential buildings in large plots on either side and backs onto field land to the north and part of the western boundary.

Natural constraints include a high level of tree cover around the site with trees lining the southern entrance from Bell Lane and both the eastern and western boundaries. Biodiversity is important to consider with the high number of animal habitats on and near the site including hedgehogs, swifts and bats. The site benefits from flat topography and, due to it being a brownfield site, little vegetation within the site. There are significant long distance views from the northern end of the site out into surrounding open countryside.

There are two main existing buildings on the site in the form of industrial units. There is a World War II bunker on site. Two residential plots border either side of the site, though there is a high tree cover existing which forms a buffer between the plots and the site and mitigates any overlooking or privacy issues.

There is low flood risk in the area, with some small areas of surface water flood risk zone 2. Existing infrastructure in the village is limited and houses are not on main sewage. There is an opportunity for houses on this to be sustainably off-grid, especially given the low number of homes expected to be built on the site.

There are two existing entrances to the site, both from Bell Lane. The wider entrance at the eastern side of the site is the main access point and the eastern entrance is smaller, likely to just serve one of the houses via a single lane.

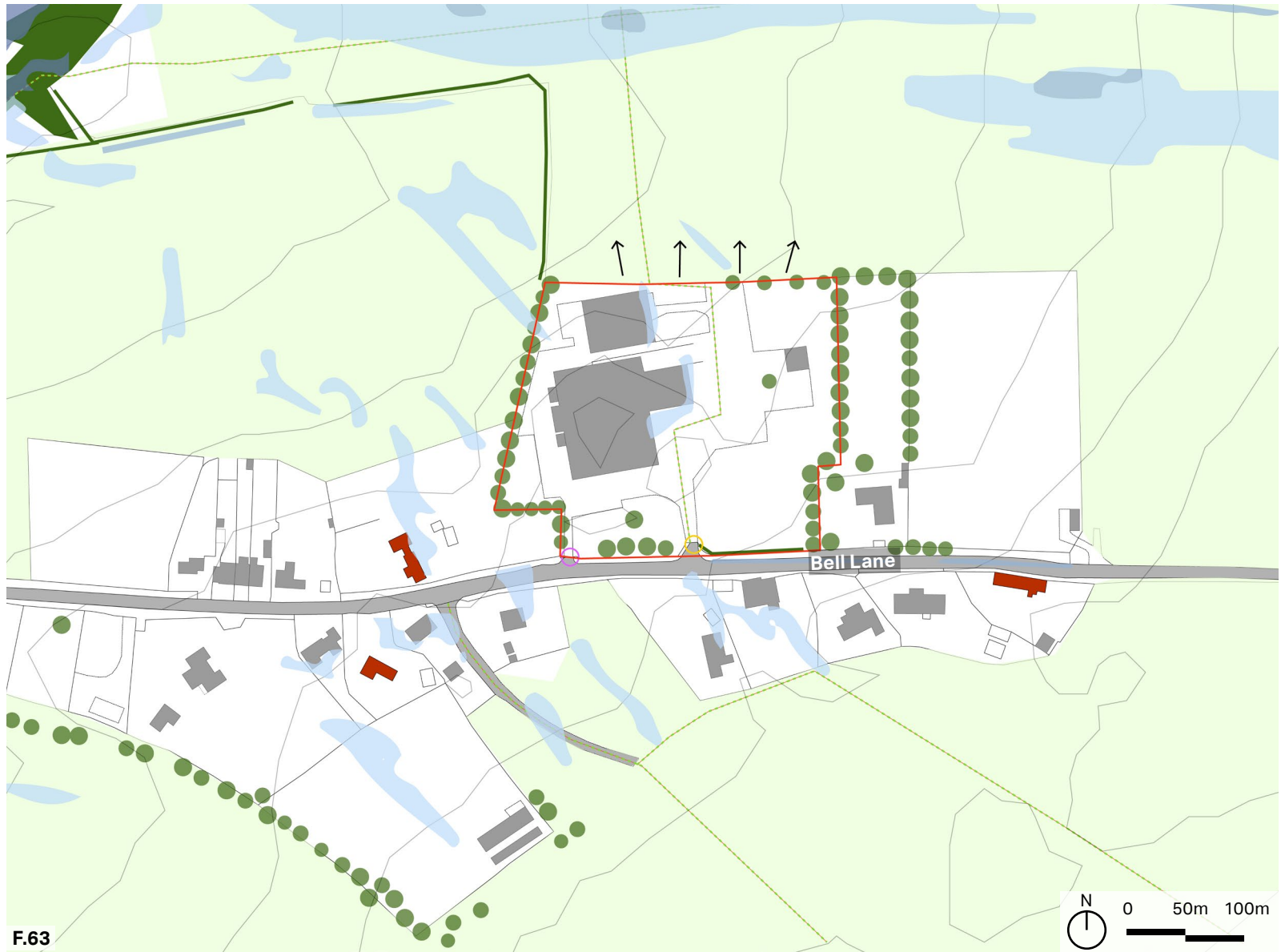
Green infrastructure near to the site is comprised of surrounding countryside, accessed through footpaths. There is a footpath running north south through the

site which leads out into the countryside and connects to another footpath. This route must be preserved and incorporated into the development of the site.

There are three Grade II listed buildings near to the site, one is the residential property immediately to the west. Any development should be sensitive to its setting and ensure there is a good amount of natural buffering between.

The neighbouring area is characterised by residential buildings on generous plots arranged informally with front gardens and varying orientation. Overall this presents a very rural character. Density and building heights are low, constrained to 1-2 storeys in height. Parking is on plot and outbuildings are sometimes used to store cars.

The detailed material palette for Nuthampstead character can be found in **Chapter 2**. Important features which contribute to the areas character and should inform the design of future development include agricultural influences, white or black weatherboarding, lime render and thatched roofs.



- KEY**
- Site boundary
 - Water course
 - Road network
 - Contour lines
 - Existing buildings
 - Grade II listed buildings
 - Fieldland
 - Woodland
 - Trees
 - Hedgerows
 - Footpath
 - Main site access point
 - Secondary site access point
 - Flood risk zone 2
 - Flood risk zone 3
 - Views

F.63

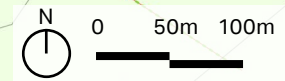


Figure 63: Site analysis of Nuthampstead site and the surrounding area (© Crown copyright and database rights 2023 Ordnance Survey 0100031673)



F.64

Figure 64: Site in Nuthampstead looking north across current hard surfaced area towards the surrounding countryside.



F.66

Figure 66: World War II bunker amongst the vegetation and trees on site.



F.68

Figure 68: Current industrial units on site.



F.65

Figure 65: Small area of green and trees at the entrance to the site.



F.67

Figure 67: The smaller western entrance to the site.



F.69

Figure 69: The larger main access point to the site at the eastern side of the site.

5.2.2 Applying the design codes

SP 1. Sense of place

- Use of building lines – informal, set back from the road, varying orientation to reflect rurality of the area.
- Use of a repeating type of dwelling should be avoided. Plots should be highly individual to fit with the surrounding character.

BF 2. Materials and architectural details

- Use of the existing material palette as described in Section 2.3. Agricultural influences would be appropriate for this site, including use of weatherboarding.

MN 1. New streets

- Informal and rural character is appropriate for the access roads to residential properties and should use permeable materials to aid in drainage as there are some surface water flood risks which should be considered.

MN 2. Access, parking and utilities

- Parking should be provided on-plot. Vegetation should be used to visually buffer parking spaces. Outbuildings such as those seen in the character area can be used as car parking areas.

MN 3. Pedestrian and cycle network

- There is a footpath through the middle of the site which must be preserved and incorporated into the development of the site. The footpath should be rural in character to reflect its connection from the village to open countryside.
- Given the lack of public transport in this area, new development should consider how it can improve the pedestrian and cycle network to facilitate active travel.

LI 1. Biodiversity

- Existing habitats should be protected and the trees around the site must be preserved. Habitats for wildlife should be provided within new homes through use of swift bricks in roofs, hedgehog corridors, bat boxes etc.

- Native hedges only should be used on the perimeter.

LI 2. Dark skies

- It is very important to preserve dark skies in Nuthampstead, as well as mitigate any impact on the apiary which is located on the neighbouring premises, and any form of street lighting should not be used on this site.

LI 3. Views and vistas

- Views out to the surrounding open countryside to the northern edge of the site should be utilised.
- Development at the northern edge should be sensitive to the open countryside with green buffer between the fieldland and built space. Building heights should remain low and below tree cover.

LI 5. Eco-design

- Lack of mains sewage and the rural character of the village presents opportunities for homes to incorporate eco-design features and be sustainably off-grid.

5.3 Barkway

5.3.1 Site analysis

The BK3 site in Barkway has been allocated for 140 homes in North Hertfordshire Local Plan (2011-2031). The site is on greenfield land and is approximately 9.5ha in size. It is located to the north of the village and neighbours existing 20th and 21st century residential development and the community facilities in Barkway consisting of the Barkway Village hall and Barkway social club.

Natural constraints include a gradually sloping terrain, with higher land to the north-west of the site. Hedgerows line the edges of the site with some mature trees and woodland areas at the eastern and northeastern boundaries. There is also a line of hedgerows north-south through the middle of the site.

There are no existing buildings on site. The site adjoins the back gardens of residential properties on Periwinkle Close as well as the plots of a residential property in the north

on Royston Road, the Village hall and social club. Properties on Royston Road overlook the western boundary of the site. The northern boundary of the site borders open countryside.

There is low flood risk in the area. The scale of the site relative to the existing village will place significantly increased demand on existing infrastructure. This includes the sewage system and road network. Particularly impacted roads will be those connecting the site to Barley, to Royston via the A10 and the High Street through Barkway.

There are two existing entrances to the site on the eastern and western edges. Tree cover provides a constraint for the location of access into the site on the east.

Existing green infrastructure nearby the site include the cricket ground, Cokenach registered park and garden, recreation ground, cemetery and small green open space off of Windmill Close.

There is a good network of Public Rights of Way around and through the site. There

is a bridleway north-south through the site and across the northern border. South of the site there are additional footpaths and byways. These existing routes are important to the community and in promoting active travel and would need to be preserved. There is potential to create additional pedestrian access into the site and integrate with the current network, subject to agreements with landowners.

There are listed buildings near to the site, in particular Cokenach park and garden to the east of the site and a Grade II* building on Royston Road just south of the site. New development must not negatively affect the setting of these heritage assets.

The neighbouring area is predominantly characterised by 20th - 21st century houses of 1-2 storeys in height.

Approximately 1.5ha of land to the south-west of the site has been identified as a reserve site for primary school education according to North Hertfordshire Local Plan.



- KEY**
- Site boundary
 - Water course
 - Road network
 - Contour lines
 - Sloping topography within site
 - Existing buildings
 - Grade II listed buildings
 - Grade II* listed buildings
 - Historic park and garden
 - Conservation area
 - Main roads impacted by development
 - Cricket club
 - Recreation ground
 - Cemetery
 - Green open space
 - Fieldland
 - Woodland
 - Trees within site
 - Hedgerows
 - Footpath
 - Bridleway
 - Byway
 - Existing property boundary with site
 - Potential site access point
 - Flood risk zone 2
 - Flood risk zone 3

F.70

Figure 70: Site analysis of Site BK3 and the surrounding area (© Crown copyright and database rights 2023 Ordnance Survey 0100031673).



F.71

Figure 71: View into the BK3 site from the existing eastern entrance.



F.73

Figure 73: Cambridge Road, running alongside the eastern boundary of the site with existing high hedges and treeline along the eastern site boundary.



F.75

Figure 75: Grade II* listed building at the corner of Royston Road and the High Street.



F.72

Figure 72: Barkway social club and plot behind which backs onto the site.



F.74

Figure 74: Eastern entrance to the BK3 site.

5.3.2 Applying the design codes

SP 1. Sense of place

- Use of a repeating type of dwelling should be avoided to reflect the historic character of Barkway which features a variety of typologies. The scale of the site in comparison to the existing village means creating a sense of place is especially important to retain the character of Barkway village.

SP 2. Enclosure and building line

- Consistent building line to reflect the consistent building lines in the rest of the character area.
- Building line set back from the road with front gardens and on-plot parking within the plot.
- Building line and orientation can be more informal towards the north of the site at the development edge to reflect the transition to the countryside.
- Enclosure can be lower to the north of the site at the development edge with

the countryside and can be higher to the south to reflect the higher enclosure levels within Barkway village.

SP 4. Development edges

- Existing hedges and trees around the perimeter of the site must be retained. There is a good level of existing green buffer between the site and the sensitive land of the historic park and garden which should be preserved and improved where possible.
- Native hedges and trees should be used on the northern edge to provide a green buffer between the site and countryside.

BF 1. Housing mix

- Opportunity, given the size of the site, to provide and contribute to a varied housing mix in the village.
- The existing 21st century developments such as Heathfield Grove and Birch Meadow provide relatively large houses. To improve housing mix, this site could provide smaller houses and affordable homes for first-time buyers.

BF 2. Materials and architectural details

- Site is a significant addition to the village and in close proximity to High Street and Conservation Area. Therefore, it is important for the built form to be sensitive and not degrade Barkway's distinctive character.
- Use of the existing local material palette as described in Section 2.3. This includes use of flint, weatherboarding, red brick, thatch, slate or clay tiles. Materials vary from building to building in historic areas of Barkway such as along the High Street and this contributes to the village's character, therefore, new development should reflect this with use of a variety of the materials within the local palette.
- One of the defining aspects of Barkway's built character is the variation in styles and use of architectural detailing. New development should draw on historical and vernacular features seen in the village (as detailed in Section 2.3) such as bridged upper stories, red brick dressings, roof tile and ridge detailing.

MN 2. Access, parking and utilities

- Parking should be provided on-plot. Vegetation should be used to visually buffer parking spaces.
- Consideration of contribution to traffic, especially through the High Street.

MN 3. Pedestrian and cycle network

- Bridleway which runs north–south through the site must be preserved and incorporated into the development.
- New pedestrian and cycle routes which link to the existing network should be proposed within the site to encourage active travel.

LI 1. Biodiversity

- There is a large area of woodland around the north-east perimeter of the site which will provide important habitats, likely to be affected by new development at this site. To mitigate impact, existing

trees must be preserved, habitats for wildlife should be provided within new homes through use of swift bricks in roofs, hedgehog corridors, bat boxes etc and green spaces with trees should be proposed within the site to encourage increased biodiversity.

- Native hedges only should be used on the perimeter.

LI 3. Views and vistas

- The massing and height of new houses need to take the gradually sloping topography of the site and higher ground at the north west of the site into consideration.
- Areas of open space should be included within the site to maintain continuity with the rural and open character.

LI 5. Eco-design

- Limitations of the existing sewage system present opportunities for homes to be sustainably off-grid and lessen demand on existing infrastructure.

5.4 Checklist for new development

Because the design guidelines and codes in this chapter cannot cover all design eventualities, this concluding section provides a number of questions based on established good practice against which the design proposal should be evaluated.

The checklist can be used to assess all proposals by objectively answering the questions below. Not all the questions will apply to every development. The relevant ones, however, should provide an assessment as to whether the design proposal has taken into account the context and provided an adequate design solution.

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



Figure 78: Flint and brick new build property in Barkway.



Figure 80: Modern detached house in Barkway using black weatherboarding.



Figure 79: Brick and weatherboarding modern building in Barkway using coach house style influence in its design.



Figure 81: Use of agricultural style outbuildings as garages with pitched roofs, weatherboarding and timber.

1

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.

2

Street grid and layout:

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

3

Local green spaces, views and character:

- What are the particular characteristics of this area which have been taken into account in the design; i.e. what are the landscape qualities of the area?
- Does the proposal maintain or enhance any identified views or views in general?
- How does the proposal affect the trees on or adjacent to the site?
- Can trees be used to provide natural shading from unwanted solar gain, i.e. deciduous trees to 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 tranquility of the area been fully considered?
- How does the proposal impact on existing views which are important to the area and how are these views incorporated in the design?
- Can any new views be created?
- Is there adequate amenity space for the development?
- Does the new development respect and enhance existing amenity space?

3 (continued)

Local green spaces, views and character:

- Have opportunities for enhancing existing amenity spaces been explored and do any proposals retain the green character of amenity space, i.e. no hard surfacing with exception of pedestrian access purposes, as required by local policy?
- 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?

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?

8

Household extensions:

- Does the proposed design respect the character of the area and the immediate neighbourhood, and does it have an adverse impact on neighbouring properties in relation to privacy, overbearing or overshadowing impact?
- Is the roof form of the extension appropriate to the original dwelling (considering angle of pitch)?
- Do the proposed materials match those of the existing dwelling?
- In case of side extensions, does it retain important gaps within the street scene and avoid a 'terracing effect'?
- Are there any proposed dormer roof extensions set within the roof slope?
- Does the proposed extension respond to the existing pattern of window and door openings?
- Is the side extension set back from the front of the house?
- Does the extension offer the opportunity to retrofit energy efficiency measures to the existing building?
- Can any materials be re-used in situ to reduce waste and embodied carbon?

9

Building materials and surface treatment:

- What is the distinctive material in the area?
- Does the proposed material harmonise with the local materials?
- Does the proposal use high-quality materials?
- Have the details of the windows, doors, eaves and roof details been addressed in the context of the overall design?
- 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 and 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?



Delivery

06

6. Delivery

6.1 How to use this guide

The Design Guidance and Codes will be a valuable tool in securing context driven, high-quality development in Barkway and Nuthampstead. They will be used in different ways by different actors in the planning and development process, as summarised in the table opposite.

A valuable way they can be used is as part of a process of co-design and involvement that takes account of local preferences and expectations of design quality. In this way the guidance and codes can help to facilitate conversations on the various topics that should help to align expectations and help understand the balancing of key issues. A design code alone will not automatically secure optimum design outcomes.

Actors	How they will use the design guidelines
Applicants, developers, & 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 Design 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.

About AECOM

AECOM is the world's trusted infrastructure consulting firm, delivering professional services throughout the project lifecycle — from planning, design and engineering to program and construction management. On projects spanning transportation, buildings, water, new energy and the environment, our public- and private-sector clients trust us to solve their most complex challenges. Our teams are driven by a common purpose to deliver a better world through our unrivaled technical expertise and innovation, a culture of equity, diversity and inclusion, and a commitment to environmental, social and governance priorities. AECOM is a *Fortune 500* firm and its Professional Services business had revenue of \$13.2 billion in fiscal year 2020. See how we are delivering sustainable legacies for generations to come at [aecom.com](https://www.aecom.com) and [@AECOM](https://twitter.com/AECOM).

