Renhold

Design Guidance & Codes For the Neighbourhood Plan

June 2024

Delivering a better world

Quality information

Prepared by	Checked by	Approved by
Daniel Mather	Nick Beedie	Nick Beedie
Consultant Urban Designer	Associate Director	Associate Director

Revision History

Issue no.	Issue date	Details	Issued by	Position	Comments received	Comments from / approved by	Position
1	13/05/2024	V1	Nick Beedie	Associate Director	29/05/2024	Amanda Quince	Renhold NPWG
2	10/06/2024	V2	Daniel Mather	Consultant Urban Designer	18/06/2024	Amanda Quince	Renhold NPWG
3	27/06/2024	V3	Nick Beedie	Associate Director	08/07/2024	Amanda Quince	Renhold NPWG
4	10/07/2024	V4	Nick Beedie	Associate Director	--	Amanda Quince	Renhold NPWG

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.


AECOM
END
Delivering a better world

Contents

Introduction

01

1. Introduction

The aim of the Neighbourhood Plan design guide and codes is to empower the community to influence the design quality and character of development in their local area and to deliver attractive, sustainable development that meets the needs and aspirations of local people.

1.1 Purpose of the document

This Design Guide and Codes document is a part of the Neighbourhood Development Plan for Renhold.

The design guidance and codes will influence the character and design of new development including any potential local plan allocations, or additional speculative development within the plan period.

Key objectives of the document:

- Define the context and character of the neighbourhood area.
- Assess the character and identity of existing settlements.
- Set design principles and codes to inform new residential development.

1.1.1 What are design guides and codes?

Design guides and codes provide a local framework for creating beautiful and distinctive places with a consistent and high-quality standard of design. Their geographic coverage, level of detail and degree of prescription should be tailored to the circumstances and scale of change in each place and should allow a suitable degree of variety. (NPPF, Dec. 2023)

A **design code** is a set of simple, concise, illustrated design requirements that are visual and numerical wherever possible to provide specific, detailed parameters for the physical development of a site or area. (NMDC, 2021)

Figure 01: The centre of Green End.

Figure 02: Ravensden Road.

1.2 The vision

Renhold's Neighbourhood Plan vision aims to protect and improve the countryside setting, the community, and the landscape within which it sits. It has been developed around three key themes, which are:

Countryside: 'To preserve the distinctive character of our Parish, in particular the agricultural and parkland landscape that comprises the green gaps between the historic Ends and our newer developments, whilst also maintaining our structural separation from the Bedford urban area.'

Community: 'To ensure that the needs and aspirations of residents of the Parish are reflected in the provision of appropriate community facilities and infrastructure that promote, sustain and enhance social cohesion.'

Connectivity: 'To enhance the natural environment and biodiversity of the Parish and to amplify the benefits of this by connecting more people to nature through the creation of better, safer and more sustainable access to it.'

1.3 Document structure

1. **Introduction**

Vision and policy context

2. **Context analysis**

Area-wide analysis including, topography, settlement pattern and green gaps.

3. **Identity: Character study**

Addresing the Rural settlements and Urban extension, including design principles.

4. **Built-form: Design Guidelines and Codes**

What 'good' looks like for the Rural settlements and Urban extensions.

5. **Sustainability, Nature & Resources: Guidelines and Codes**

Covering Active travel, Passive design, Green and blue infrastructure and ecology..

6. **Checklist**

Checklist of design considerations for assessing new developments.

Figure 03: The 10 characteristics of well designed places from the National Design Guide.

This document structure relates back to key topics from the 10 characteristics of well-designed places and guidance from the National Model Design Code on the process to produce codes: Analysis – Vision - Code.

1.4 Planning Policy context

This section outlines the national and local planning policy and guidance documents that have informed, and should be read in conjunction with, this design guide.

National level

1.4.1 National Planning Policy Framework (revised 2023)

The National Planning Policy Framework (NPPF) outlines the Government's overarching economic, environmental and social planning policies for England. The policies within the NPPF apply to the preparation of Local and Neighbourhood Plan areas, and act as a framework against which decisions are made on planning applications.

The NPPF states that a key objective of the planning system is to contribute to the achievement of sustainable development, which will be achieved with reference to three overarching objectives. The parts of the NPPF which are of particular relevance to this Design Code are:

- Part 2: Achieving sustainable development
- Part 8: Promoting healthy and safe communities
- Part 12: Achieving well-designed places
- Part 16: Conserving and enhancing the historic environment

Part 12: The planning and development process should achieve well-designed places that stress the creation of high-quality buildings and an enriched environment. 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.

The NPPF notes that 'development that is not well designed should be refused, especially where it fails to reflect local design policies and government guidance on design, taking into account any local design guidance and supplementary planning documents such as design guides and codes'.

1.4.2 National Design Guide (2019) & National Model Design Code (NMDC) (2021)

These companion documents set out characteristics of well-designed places. They support the ambitions of the NPPF to utilise the planning and development process in the creation of high-quality places. The National Design Guide states that 'specific, detailed and measurable criteria for good design are most appropriately set at the local level'. The guides are expected to be used by local authorities, applicants and local communities to establish further design codes (such as this) and guides that can deliver this in line with local preferences.

1.4.3 Building for a Healthy Life (2020)

Building for a Healthy Life (BHL) is the Government-endorsed industry

standard for well-designed homes and neighbourhoods. 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.

BHL is supported by Streets for a Healthy Life, which demonstrates what can be achieved in creating streets as places for people.

Local level

1.4.4 Bedford Borough Council Local Plan 2030 (2020)

Bedford Borough Council has prepared a local plan that sets out how much growth there should be in the borough in coming years (housing, jobs and associated infrastructure) and where it should take place. The Bedford Borough Local Plan 2030 was adopted by Full Council on 15 January 2020. The Neighbourhood Plan and Design Codes, once 'made', will be part of the Local Plan and as such there is a requirement for conformity between the two.

1.4.5 The Neighbourhood Development Plan

The policies and allocations within the Neighbourhood Development Plan will be afforded material consideration in the determination of planning applications once it has passed a local referendum and been formally 'made' and following inspection. This Design Guide and Codes document provides both an evidence base for design related policies and further instructions on how to apply them. The Design Codes themselves may be an appendix to the plan or inserted directly within it.

1.4.6 Bedford Borough Design Guide: Settlements and Streets (2023)

This guide provides an over-arching appraisal and analysis of residential building design across the borough and supports the application of several design related policies in the development plan by providing principles based on the analysis.

These principles set out the considerations that should be addressed when residential development is proposed in the borough. There is no one character that threads through the whole borough and the analysis and principles cover a wide range of design issues as a result. Not all of the principles will apply in all situations, but they will provide suitable 'sign posts' for developers on what will be expected from future residential development in different areas.

1.5 About this design guide and codes

This document will be a valuable tool in securing context-driven, high-quality development. It will be used by various groups involved in planning and development (Table 01) but this document will be most effective when used as a basis for engagement, actively involving local communities, to address local preferences and expectations of design quality. A Design Guide and Codes alone will not automatically secure the best design outcomes, but it will help to prevent poor design by establishing clear expectations and requirements.

Groups	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 Guidelines and Codes as planning consent is sought.
Local Planning Authority	As a reference point, embedded in policy, against which to assess planning applications. The Design Guidelines and Codes should be discussed with applicants during any pre-application discussions.
Parish Council	As a guide when commenting on planning applications, ensuring that the Design Guidelines and Codes are complied with.
Community organisations	As a tool to promote community-backed development and to inform comments on planning applications.
Statutory consultees	As a reference point when commenting on planning applications.

Table 01: Who will use this design guide.

1.5.1 Coverage & scope

The design guide and codes covers the whole neighbourhood area of Renhold (see figures 4 and 8).

The design topics covered in this design document do not seek to replicate other local or national guidance. This guide highlights local character and issues, setting out guidelines and codes for the design of new developments within the specific context of Renhold.

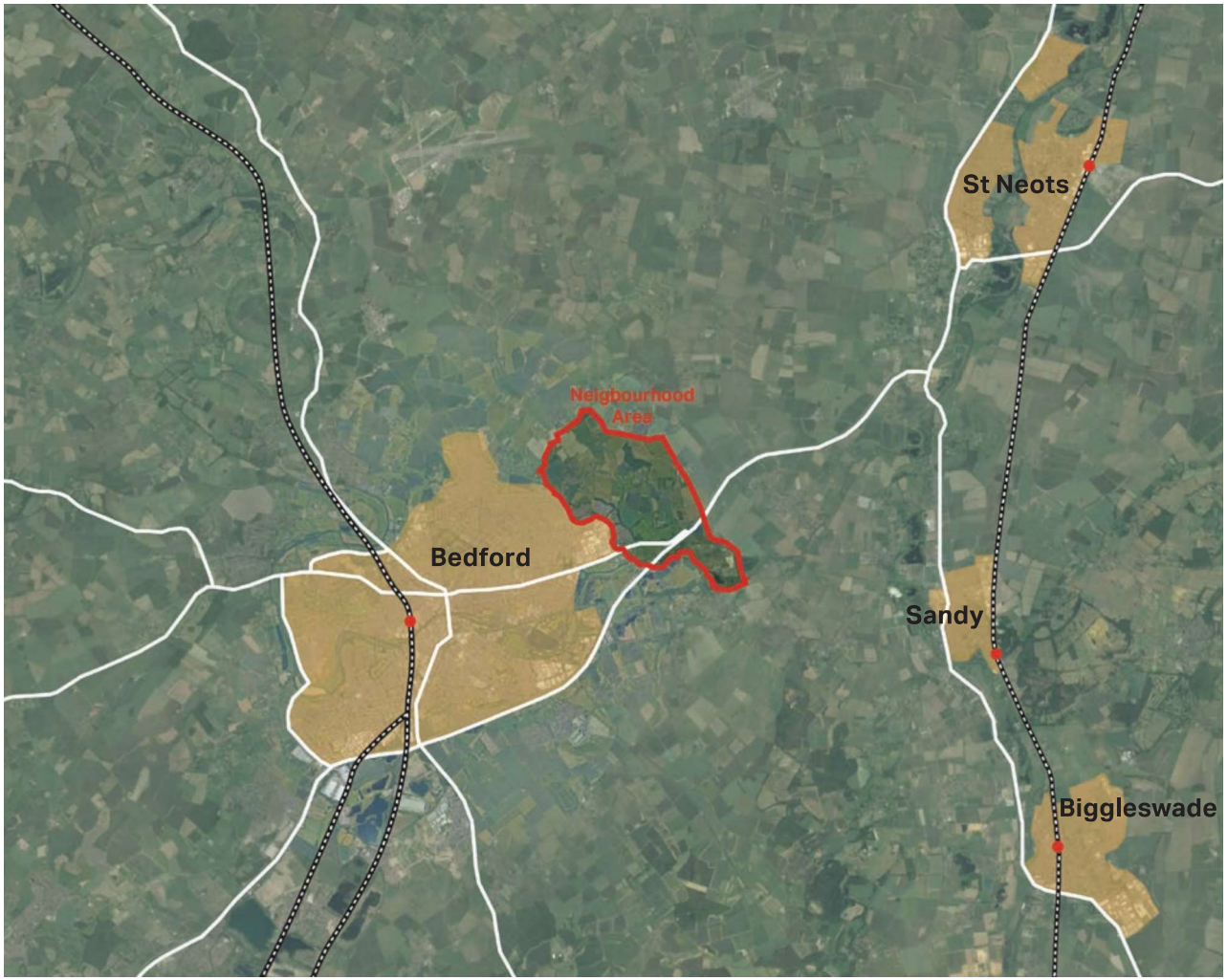


Figure 04: Neighbourhood Area and its surrounding context.

1.5.2 How 'the codes' are written

The following types of instruction are included in 'the guidance and codes'.

Codes

Requirements (often quantifiable) that the designer can apply with confidence that they will be acceptable for the specific place. Example wording - 'must' or 'will'.

Guidance

Desirables and/or necessities that will help achieve good design but which may have several ways of fulfilling, or be dependent on multiple factors. Example wording – 'should' or 'could'.

Expected process

Requirements that are not a design outcome but are steps that applicants will need to take and evidence whilst preparing their planning application. Example wording – 'will provide'.

Exceptions to the guidance and code

Successesful designs involve simple solutions at the appropriate scale, but in a building, street or settlement these are layered up significantly to achieve a balance of desirable qualities. Therefore flexibility is required to prioritise and balance issues.

Some flexibility may be required to allow for forms of high quality design that 'raise the bar' in terms of beauty, innovation or sustainability.

Figure 06: Example of how vegetation is integrated into the street scene.

Figure 05: All Saints Church graveyard and car parking.

Figure 07: Renhold Village Hall and grass-land open space.

1.6 Consultation and engagement

Following an inception meeting and a site visit with members of the Neighbourhood Plan Group, the following steps were followed to produce this report.

INCEPTION

Feb 2024

Site meeting with AECOM and the Neighbourhood Plan Group followed by a site walk, looking at local character and new developments.

BASELINE

March 2024

Review of existing documents including NP draft policy, local plan policy and guidance and maps.

CHARACTER ANALYSIS

March 2024

Sense of place and local character analysis, reviewing important local features and characteristics to address in the design codes.

DESIGN CODES

April 2024

Preparation of the design codes, written guidelines illustrated with diagrams and local examples.

REVIEW

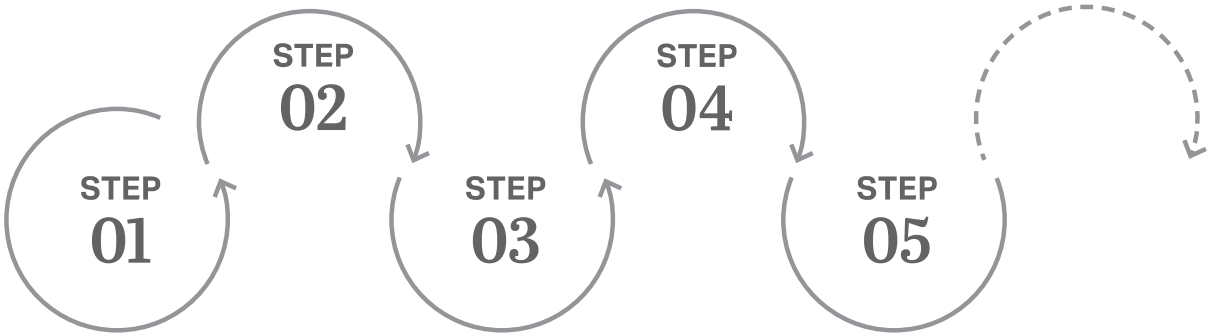
May 2024

Draft design codes document shared with the NP group to review and provide comments.

NEXT STEPS

July 2024

Adoption of the Design Guide and Codes as part of the 'made' Neighbourhood Plan will follow further consultation.



Context

02

2. Context

This section covers analysis of the whole neighbourhood area, focusing on topics such as heritage, rural character, landscape features, settlement pattern and movement.

2.1 Location

Renhold neighbourhood area aligns with Renhold civil parish which partly abuts the River Great Ouse to its north, in the Borough of Bedford, Bedfordshire. It is 4 miles (6.5 km) east-north-east of Bedford town centre. It abuts the urban area of Bedford and forms part of its rural hinterland, on the land rising to the north of Bedford.

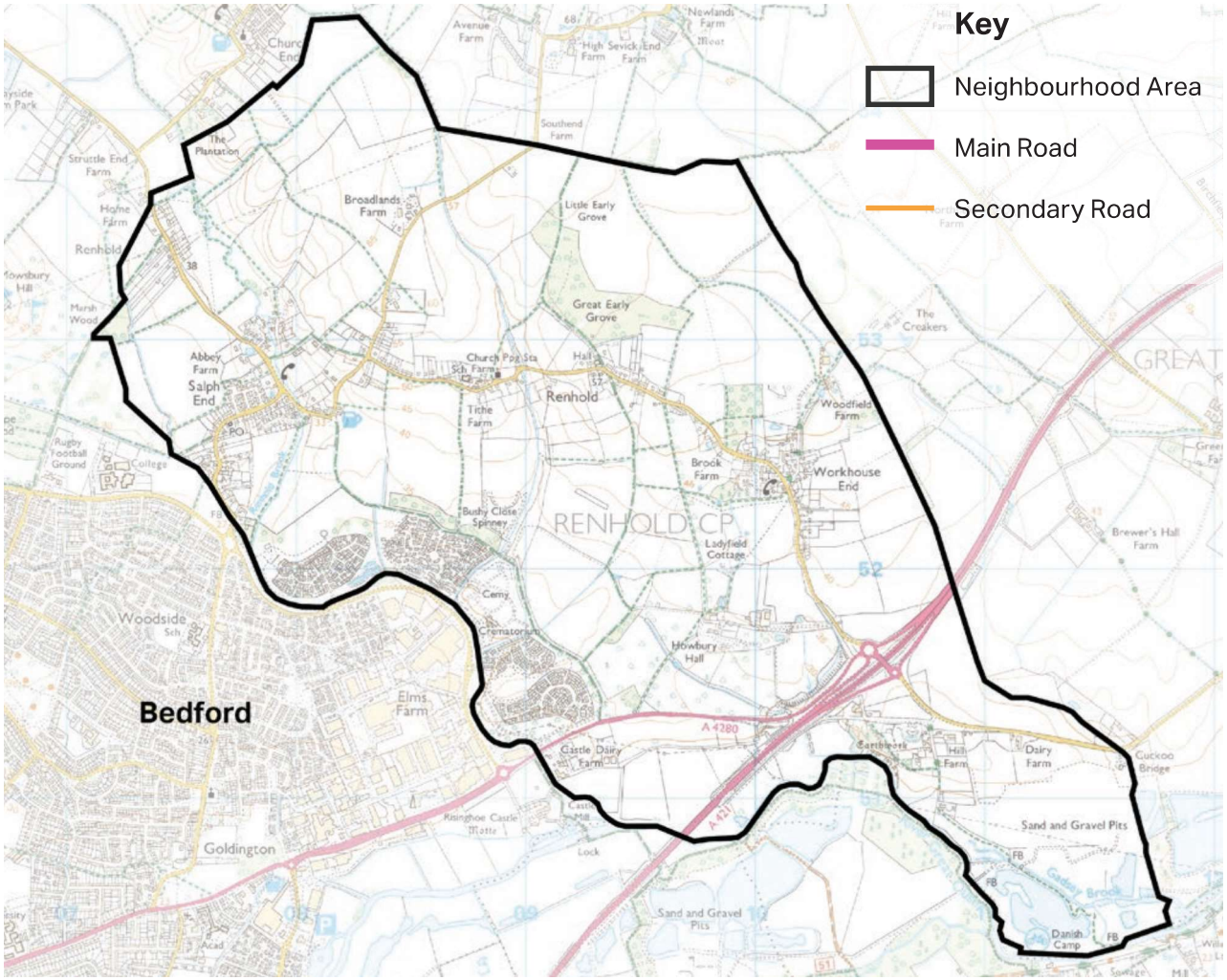


Figure 08: Map showing Renhold parish and its surrounding context.

2.2 Neighbourhood area

The neighbourhood area is 885 Ha. The population is 3,434 people. It includes several Rural settlements, known as Ends locally (Salph End and Green End being the largest and most defined hamlets). There is more recent urban extension development on the fringe of Bedford itself also.

2.2.1 History and growth

Renhold has a variety of architectural styles spanning several historical periods, including locally distinctive cottages and farmsteads, mid-C20 ribbon development and later small scale C20/ C21 infill.

Heritage assets

Renhold is an area that is rich in history, boasting 34 listed buildings. Significant historic assets include:

Grade 1 listed All Saints Church and the Renhold Ring (the Ruins of Renhold Castle) which is designated as a Scheduled Monument.

Howbury Hall country house in the south of the area is Grade 2 listed. It was rebuilt in 1849, after a fire and remains a private home.

Highlight box

Howbury Hall was used as a military camp during WW1, and also home to a Voluntary Aid Detachment hospital. After war was declared, Cecil Polhill offered the use of Howbury Hall to the Red Cross Society as a Relief Hospital.

The Polhill Arms pub shares the name of the family who commissioned the rebuilding of Howbury Hall in 1849, following a fire.

Figure 09: Bungalow estate in Salph End.

Figure 10: Recent infill on Woodfield Lane.

2.2.2 Character types

Rural

This includes small predominantly agricultural land use and some isolated houses, and farmsteads, surrounded by extensive countryside. Includes a 'green gap' to Bedford and gaps between the Ends. Development is generally not permitted or encouraged in rural countryside.

Rural settlements

The Ends have been the focus of ribbon development in the past. Salph End and Green End have defined settlement boundaries. They are the largest Ends and have a more clustered shape due to offshoots. The remaining Ends (Church, Top, Water and Ravensden Road) consist of homes and buildings that are 1-2 storeys tall and include a mix of locally distinctive and later styles in a mostly linear pattern.

Urban Extension to Bedford

This planned series of more recent Urban extensions is made up of three housing areas; Cranbourne Gardens, The Spires and Aspire. They form a series of three 'pods' of development, each with one main access from Norse Road. An accessible network of parkland landscape divides each cluster from the other and provides a buffer to Norse Road. All fall within the Bedford Urban Area Boundary and are designed as higher density developments with a more urban pattern of streets and spaces.

2.3 Landscape

Landscape character

Renhold Clay Farmland character area is an area of clayland lying immediately to the north of Bedford itself. Much of the land surrounding the settlements is agricultural which helps create a rural character to the neighbourhood area.

Topography and views

The change in geology and topography marking the valley of the River Great Ouse defines the east and west edges of the area with boundaries following roads broadly marking the transition to valley gravel. To the south, the boundary is the urban edge of Bedford and, to the north, roads broadly marking the change in land cover and topography to the comparatively level and unsettled Thurleigh Clay Farmland (1D) form the boundary. A key aspect is the 'ascent' out of Bedford with steep hills marking the southern edge of this landscape character area. The topography of the area means that there are several long distance viewing corridors looking towards the surrounding countryside.

Flood risk

Renhold Brook and a good number of drainage ditches run through the neighbourhood area. The Internal Drainage Board designates the Brook and key ditches as critical drainage waterways and maintains their free flow which reduces the risk of significant flooding to the low lying grasslands adjacent to the River Great Ouse.

The level of the land varies from 25 metres to 65 metres within the parish. The lower lying areas that are of a clay soil type are sometimes subject to surface water flooding.

Figure 11: Arable farmland rising to the north of Salph End.

Figure 12: View down towards Bedford from Church End.

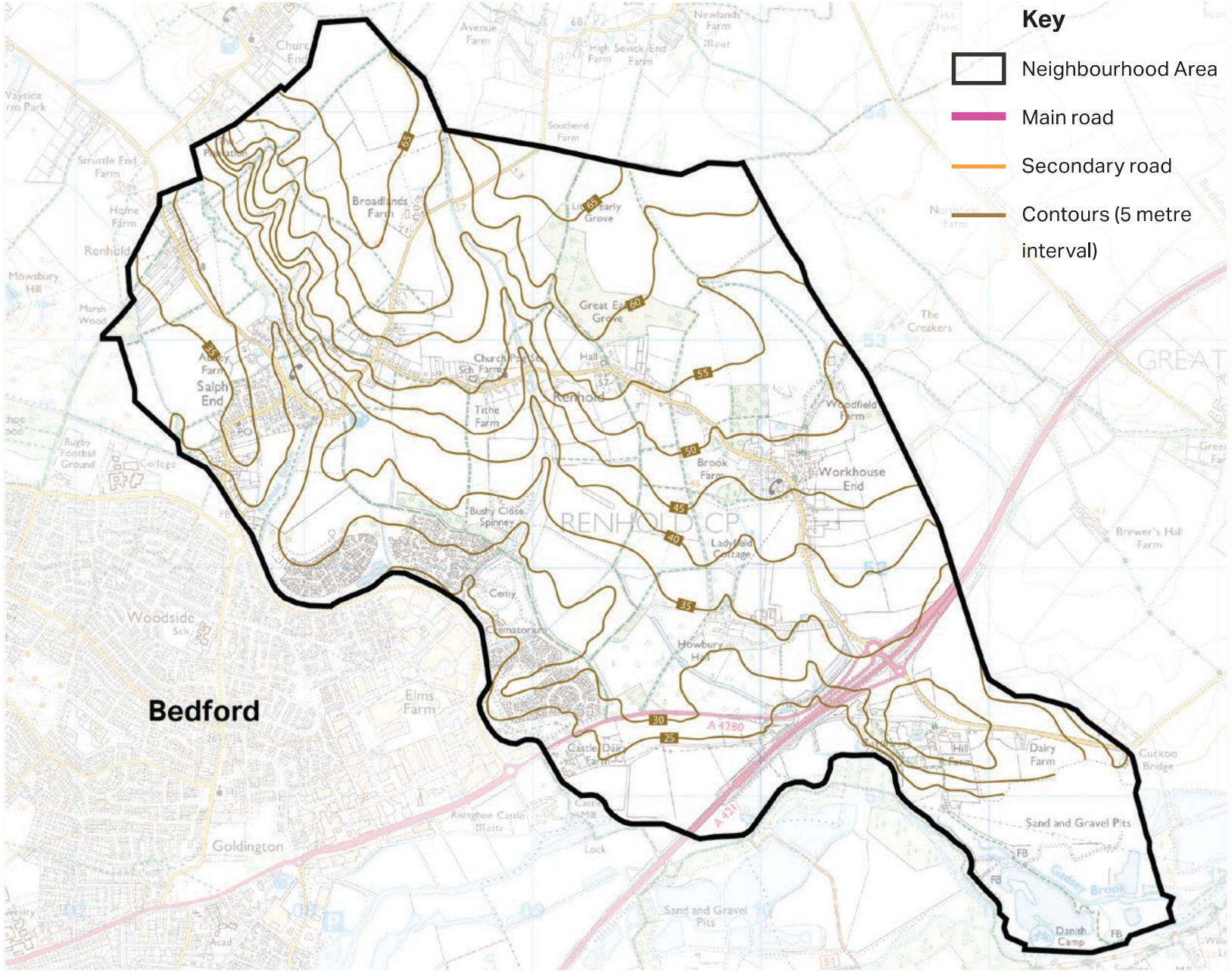


Figure 13: Renhold topography map.

2.4 Settlement pattern

Overview

Renhold neighbourhood area is made up of 6 small settlements (Ends) in the northern part of the parish, as well as an urban extension from the north eastern edge of Bedford along Norse Road comprising 3 modern housing developments.

These Rural Ends and settlements are as follows:

- Water End (rural)
- Green End (largely SPA)
- Top End (rural)
- Church End (rural)
- Salph End (largely SPA)
- Ravensden Road (rural)

A key characteristic is that the settlements are divided by 'green gaps' which are open and undeveloped, provide clear views into the surrounding countryside, maintaining a rural feel context to the Ends (Fig. 17).

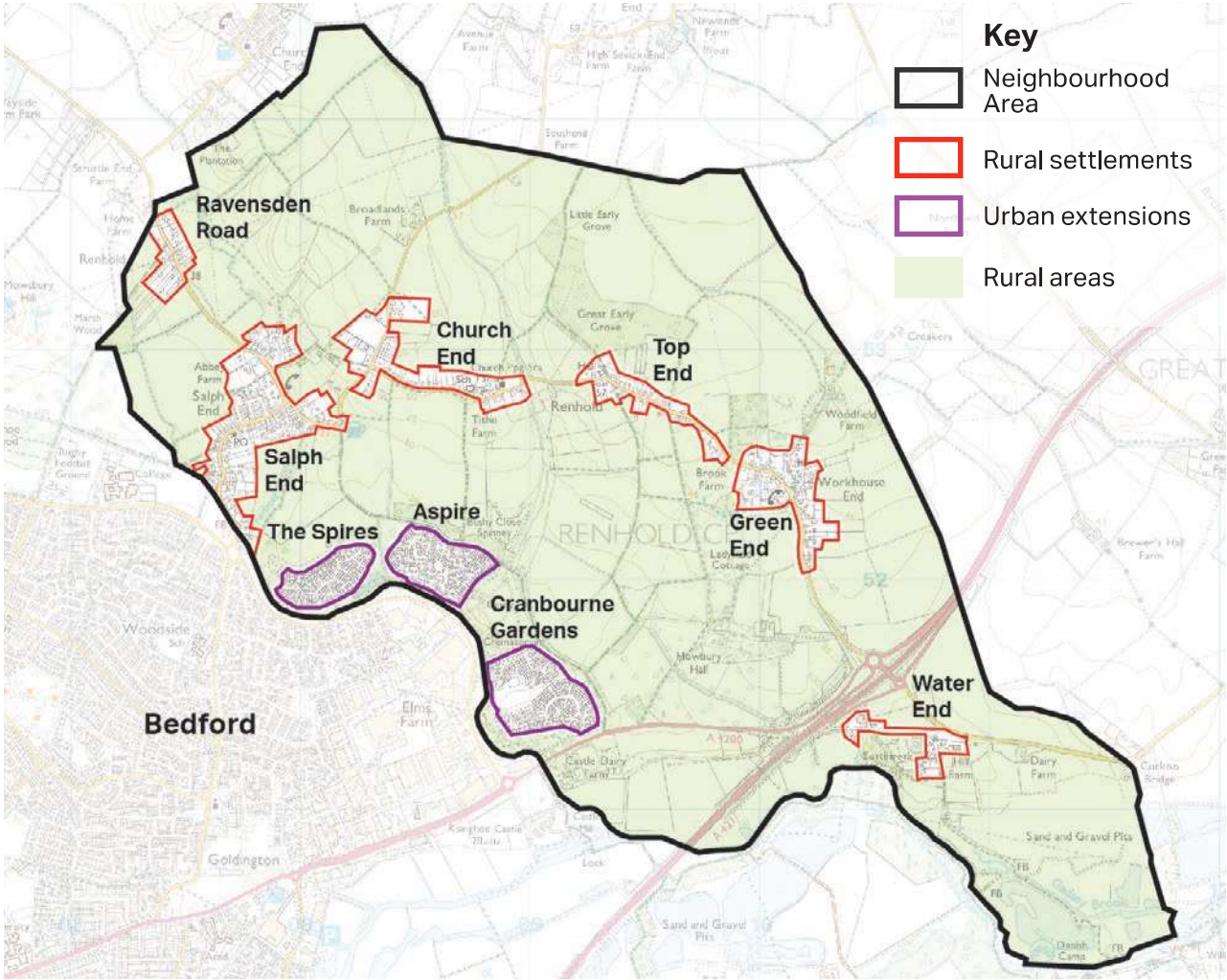


Figure 14: Map showing the location of the Ends.

Layout and density

Except for a few small cul-de-sac developments, the Ends are predominantly linear settlements following the routes that run from Norse Road, Ravensden and Wilden to the St Neots Road junction. The single main route through each area means they have a relatively 'shallow' depth – limited alternative routes and back lanes (except for pedestrians). The typically low building density, irregular layout, variety of low rise buildings and gaps between buildings and settlements all contribute to the sense of place.

In contrast, the more modern urban extension developments on the edge of Bedford have a more uniform perimeter block pattern with a tighter grid of streets, greater sense of enclosure, giving it a suburban character overall.

Streetscape

The typical street scene in Renhold (Ravensden Road, Church End, Top End, Green End) is a rural one and enhances the character of the area as such. The presence of soft boundary treatments, hedgerows, verges and trees in the streetscape all contribute. It is not uncommon for there to be narrow pavements and only having pavement on one side of the road in the neighbourhood area.

Highlight box

- It is important that any future developments respect the scale and features of the typical rural street scene. This can be achieved by building scale and set back and integrating grass verges and other vegetation.

Figure 15: Linear development in the parish.

Figure 16: Cul-de-sac development in Salph End.

Green infrastructure

Development is not extensive across the area and mature planting screens settle most of 'the Ends' within the landscape. Often plots are well-spaced out along the main routes to allow for views towards green space. The green and spacious character and connection to the countryside are two aspects of the area that the local community cherish. There are significant open spaces between each of the Ends and along the north eastern edge of Bedford.

Landmarks and legibility

With the main routes, distinctive places and green gaps for views along the way, it is also made simple to navigate by the distinctive local landmarks.

The Polhill Arms country pub (on corner at Salph End), All Saints Church (Church End), the three pairs of St Margaret's Cottages (Top End) and 'The Green' (Green End) are local landmarks that help wayfinding. The thatched cottages scattered along the main routes are distinctive features of Renhold that add to its rural charm.

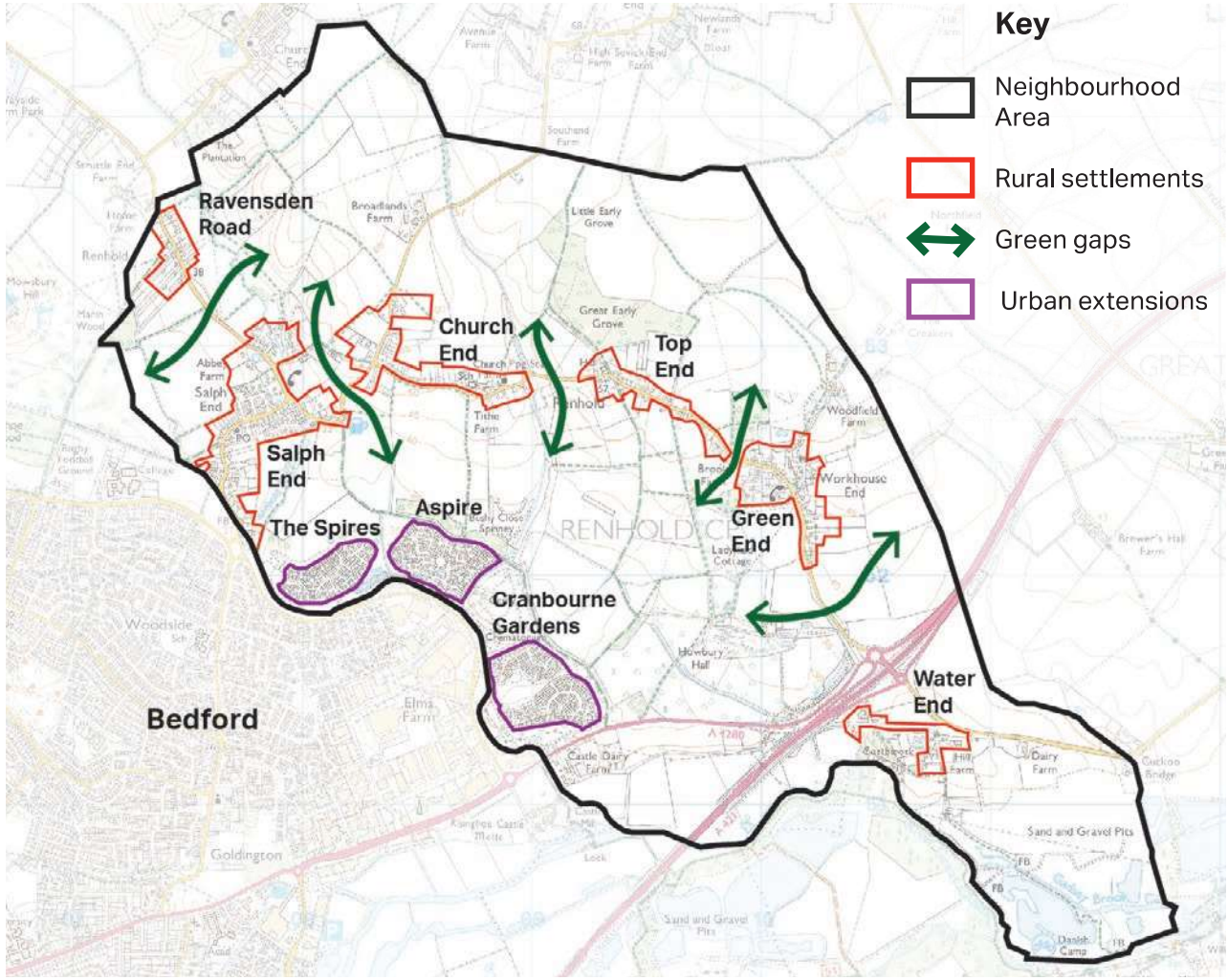


Figure 17: Map showing the location of the Ends and the green gaps.

Community infrastructure

The following community facilities are within the neighbourhood area; War Memorial, Sports Ground, Renhold Chapel, Renhold Village Hall, The Polhill Arms (pub), Renhold V.C. Primary School, All Saints Church (& meeting rooms) and Oakwood Stores. Bedford Crematorium is located on Norse Road.

Public transport

There is a limited bus service to Bedford from Renhold. As such private vehicles are an important part of rural life to access wider facilities and services. However, Green End is also just 4 miles from Bedford Railway Station, with train services to London, Brighton, Corby, and Bletchley.

Active travel and recreational routes

Public footpaths and right of ways serve the neighbourhood area, providing the local community with good access to the countryside and interconnectivity between the Ends and the newer development in the south. Renhold Circular Walk connects to and around many of the older and newer settlements.

Figure 18: All Saints Church, which is a well used community facility.

Figure 19: Bus stop within the parish.

Figure 20: Public footpath opposite the school linking Church End with the newer developments.

Context: Key takeaways

Area types

There are two key area types – the 'Rural settlements' of Renhold (the Ends), and the Urban extensions to Bedford. Although part of Renhold, it is relevant to note that the Urban extensions fall within the Bedford Urban Policy Area boundary.

Landscape character

There are several elevated views to consider such as: Top End to Church End, the ridge line from the Village Hall across to Ravensden, from the woods down to the church and from Ravensden Road across to Thurleigh, and up from Hookhams Lane to Brook Lane. Please see section on views in the Green Infrastructure Plan for detail.

Settlement pattern

The hamlets, or Ends in local terms, form a dispersed village, like 'beads on a string' with each part having a slightly different character and quality and assets such as community infrastructure that serve the whole community.

The Urban extensions are also connected to each other by footways, and to both Bedford and the Rural settlements.

Green gaps

The Green Gaps help to maintain a distinct sense of place when moving between each of the Ends, and their identity is an important feature to the local community.

Figure 21: Green Gap on Wilden Road.

Identity

03

3. Identity

This section describes Renhold's 'sense of place', characterises the Rural settlements and Urban extensions, and provides area-specific design principles that focus on design priorities for tackling issues and achieving the neighbourhood plan vision.

Figure 22: Village sign in Green End

Renhold's varied 'sense of place'

Renhold's 'sense of place' - its identity and character - comes from its communities (new and old), activities (such as farming and rural enterprise), and the various settlements. This includes the Ends that are embedded within the rural hinterland, and the Urban extensions that are closely related to Bedford.

In the rural villages the rate of change has been relatively slow with small infill developments over the last 75 years. This means that they have not been overwhelmed with change with the green gaps and the character of the Ends still intact.

A mixture of typical building types and settlement characteristics have arisen, been changed and adapted over time. The Ends' continued physical distinction from each other keeps each place unique in terms of identity but they are also functionally integrated through shared facilties and footpaths.

Larger scale new places like the Urban extensions to Bedford had to create their own new identity, which is more urban in location and conception. These places look different from the rural villages, but are equally important to address. Both the rural and urban places are closely connected, physically by footpaths, and functionally by neighbourhod area/ parish boundaries. The communities are separate but overlapping, different but together in the common aim to enhance their respective places using good design.

There is no denying that the area as a whole has experienced significant population growth from the three Urban extensions over the past 20 years and that this has had a major impact on the area as detailed in the Draft Neighbourhood Plan. It is important that the scale and rate of any growth is sensitive to the existing scale of the place, and considers the existing communities and their identities.

3.1 Rural settlements

3.1.1 Clustered villages

There are two settlement policy areas where the most growth has occurred. These are Green End and Salph End, both are somewhat contrasting in character, presenting the more modern and traditional characters respectively.

Green End

Green End is a historic rural settlement which includes a number of attractive white render/thatched cottages with several located around the small 'village green'. A mixed range of red brick homes of various ages and styles including bungalows and traditional style modern homes are situated around these on Woodfield Lane and Green End. Becher Close has added an offshoot with more modern housing. Grass verges, hedgerows and trees are strong defining elements of the streetscape of this 'End'.

Figure 23: Central green in Green End.

Salph End

Salph End has more modern properties on its main routes than Green End, notably Hookhams Lane. Offshoot development, such as Home Close, Brickfield Close, Brook Lane, Green Lane and Brookside, takes the shape of a loop street, or cul-de-sac. Several older cottages sit outside of the settlement boundary on Wilden and Ravensden Roads, as do the Polhill Arms,a traditional country pub and Abbey Farm which is an historic listed building.

Figure 24: Linear street scene in the centre of Salph End.

3.1.2 Linear Rural settlements

Between and beyond these two defined settlements, are several other Ends, all small Rural settlements which have developed in a linear fashion to the east and west.

West of Green End, along the edge of the same hilltop are Top End and Church End:

Top End

This rural settlement includes a variety of architectural styles and types of homes, both traditional and more modern. This includes 2 storey large detached homes, St Margaret's cottages (semi-detached) and modern bungalows. A couple of thatched cottages peak over hedgerows at either end. A variety of building materials are found including red pantiles on roofs, red brick/ yellow brick, some white render and black painted timber cladding on outbuildings.

Church End

This rural settlement is focused at the All Saints Church and includes several historic barns and houses arranged in a loose linear pattern close by. This extends further west along Church End with more modern 2 storey homes. The mostly single-sided development gives open views to the south towards Bedford. Development wraps around onto Wilden Road as far as the modern village hall.

Figure 25: Narrow street scene in Top End.

Figure 26: Terraced cottages in Church End.

Figure 27: Terraced cottages in Church End.

On opposite sides of the parish are the final two Ends:

Water End

This rural and isolated area is on rising land overlooking a bend in the River Great Ouse. A small number of rural houses and farmsteads are loosely set apart. Properties include red brick and dark timber cladded barn conversions and white render cottages with pantile roofs. The A421 forms a barrier to the western side of this End.

Figure 29: Hill Farm in Water End.

Ravensden Road

This rural settlement follows Ravensden Road and generally has a single plot depth, sometimes with long plots. The building line is interspersed with vegetation and the building line varies with, most homes set back but some run with increasing setbacks, giving much longer front gardens. There is a mix of properties from traditional farmstead, modern black barn inspired homes, late C20 semi-detached and large detached individual homes

Figure 28: Ravensden Road housing.

Rural settlements

Issues & opportunties

- Maintaining the rural character of the settlements, roads and lanes.

- Resisting street lighting to maintain dark skies, with careful consideration of lighting on properties also important.

- Some uncharacteristic plot boundary treatments on new homes.

- Design quality of individual homes that add to the mixed character of the area.

- Potential 'ribbon development' going unchecked and coalescing the Ends.

- Formalising the 'green gaps' between all of the settlements in policy.

- Increasing connectivity between settlements with active travel routes.

- Delivery of community infrastructure.

- Improved public transport facilities and services to neighbouring areas.

Rural settlements

Area-specific design principles

Any new development must consider the following design principles to ensure the amenity and rural character of the Rural settlements are maintained and enhanced. New development should:

1. **Complement** the existing mix of attractive traditional and modern homes and bungalows in the Rural settlements.
2. **Harmonise** with the natural landscape and avoid any detrimental impact on the rural character of the neighbourhood area – use of native planting is required, landscaping to retain natural habitats and wildlife corridors, and provision of usable areas of green space.
3. **Reflect** the scale and massing of neighbouring buildings and buildings within the wider context/ streetscene. New buildings shouldn't exceed 2 storeys and should not be overbearing on surrounding properties.
4. **Promote dark skies** - Development, including homes and streets, should be designed to minimise light spill/ pollution to comply with dark skies policy and retain the rural/ semi-rural settlement characters.
5. **Preserve the 'green gaps' between settlements** - The locations of the green gaps are indicated on Figure 17. These should be defined as a spatial policy in the Neighbourhood Plan.
6. **Innovative Design** - Development with a unique appearance that is innovative and delivers sustainability benefits, such as zero-carbon, and is attractive and well-designed can positively add to the overall mix of styles within this rural area.

Figure 30: View of sympathetic extension to traditonal thatched cottage

3.2 Urban extensions

Three Urban extensions on the fringe of Bedford complete the settlement pattern within the otherwise rural neighbourhood area. These areas are important to the identity of the neighbourhood area, but are also part of the Bedford Urban Area.

Each area forms a part of a planned extension to Bedford which has an overall identity that is more urban in conception, with a denser pattern of streets and spaces. The rate of development and comprehensive plan (although lacking in schools and facilities) contrasts to the incrementally growing Rural settlements.

The planned nature of the developments and their short timeline of delivery means that each phase of growth has a relatively consistent appearance and a repeated selection of specific house types used to build it. There are some difference between phases of the developments, and some changes in materials across parts of the development which seem arbitrary and uneven. The denser clusters of urban development only work in tandem with the swathes of walkable, attractive parkland landscape encircling each.

The Spires: Langlands Road / Maskell Drive

This development has a density of circa 30 dwellings per hectare, Buildings are set close to the back of pavement in the range of 0.5m – 1.5m. Multi-tone yellow brickwork is common, with red brick is used in patches across the development. 2 – 2.5 storey is the general building height, with some 3 and 1.5 storey in mews courts. Shared surfaces and consistent materials are used for some streets, edge lanes and key public spaces.

Figure 31: Denser suburban housing in the Aspires development.

Aspire: Markham Rise / Primrose Fields

More attached buildings give a density of 35-40 dwellings per hectare. Many homes have small front gardens up to 3m long. Multi-tone yellow brick, or red brick is common. There are some formal layout of buildings and spaces including the arrival 'circus'. 2 to 2.5 storeys is the general building height, with some 3 and 1.5 storeys. Block paving is used for carriageways and footways in more busy/ formal spaces or low-key quieter spaces.

Figure 32: Small surfaced recreation and play area in front of homes on the corner of Primrose Fields.

Cranbourne Gardens: Asgard and Thor Drives

This development has two distinct sub-areas, with a green park at its heart. It has a net density of circa 30-35 dwellings per hectare. It Is predominantly detached homes with small front gardens. Tonal red brick on ground-floor and putty coloured render to upper storeys is common, as is wholly red or yellow brick homes. 1.5 – 2 storeys is the general building height. There are street trees planted in street verges and block paving used at junctions.

Figure 33: Green space integrated into the recent developments.

Urban extensions

Issues & opportunties:

- No shops or services are provided in the centre of the developments.

- Parking on streets and pavements. results in a car dominated street-scene

- Home extensions, roofspace and garage conversions are a mish-mash of styles that can lead to over-development.

- The style and quality of extensions is mixed and results in a mish-mash of styles which undermines the orignal harmony of the materials selected.

- Blank gable ends on buildings face some streets and capture views.

- There is a lack of tree planting in some areas, particularly along streets

- There is both pleasing coherence, and bland consistency across different parts of the developments.

Urban extensions

Area-specific design principles

New development, including house extensions or conversions must consider the following design principles to ensure the amenity and architectural character of the Urban extensions are maintained and enhanced. New development should:

1. **Complement** the existing range of forms and materials of well-designed house types in the Urban extensions without over developing individual homes, gardens, plots, and parking areas.
2. **Harmonise** with the surrounding parkland landscapes and avoid detrimental impact on the wider rural and urban context. Use of native planting is required, landscaping to retain natural habitats and wildlife corridors, and provision of usable areas of green space.
3. **Reflect** the scale and massing of neighbouring buildings and spaces within layout and streetscene. New buildings and building extensions/ conversions must not exceed 2.5 storeys and should not be overbearing on surrounding properties.
4. **Preserve the 'green gaps' between the Urban extensions and the Rural settlements** - The locations (not extents) are indicated on Figure 17. These should be defined as a spatial policy in the Neighbourhood Plan.
5. **Innovative Design** - Development and conversions/ extensions with a sympathetic appearance that are innovative and deliver sustainability benefits are welcome. They must be well-designed sensitivelyso as not to compromise the to architeural style within each urban extension area.

Figure 34: Attractive traditional brick townhouse with extensive solar panel array on the roof.

Built form

04

4. Built Form: Design Guidance and Codes

This section includes examples of what good design in the neighbourhood area looks like and design guidance and codes on; scale, massing, typologies, materials, boundary treatments and parking.

This section looks at a series of topics relating to built form, addressing both of the key character area types within the neighbourhood area:

- Rural settlements; and
- Urban extensions

Examples are provided for each setting and whilst separate guidelines and codes are not duplicated for each the Context and Identity sections of this report inform how they must be applied differently in the two area types.

Figure 35: Thatched cottage with eye-brow dormers is an example of the rural settlement heritage.

Figure 36: Townhouses fit the urban extension character.

4.1 Design response: Reflecting local character

The community wants to encourage developers to make direct links to local character but not necessarily reproduce it completely.

This approach is flexible to allow a variety of solutions but will require different responses within the two distinct character area types of Rural settlements and the Urban extensions.

Figure 37: Characterful dwellings on Asgard Drive

Design Principles

Designs for homes and buildings must be attractive, innovative and sustainable - but stylistically they can be modern, traditional or pastiche if done authentically.

All parts of the Neighbourhood Area will benefit from development that seeks to harmonise and not to undermine the character, particularly with more modest building types and uses that should aim to be 'backdrop architecture'.

The following guidance sets out a selection of design principles to help with this:

- Sympathetic approaches to architecture and character features should be presented when development is located in the context of existing heritage assets, including locally listed properties and features, and local landmarks.
- Encouraging developers to make clear links to elements of character and built form in new development, without having to copy the past.
- Recreating traditional styles and building details authentically is acceptable if it respects the style, proportions and materials of traditional precedents.
- Appearing to copy traditional building styles using cheap 'bolt-on' elements is not a suitably authentic design response.
- Reinterpreting traditional building types in an up to date way, using up to date building technology and materials is a suitable approach.
- Extensions and conversions should seek to harmonise with the host building and be mindful of neighbouring amenity so as not to overcrowd or overshadow plots or homes.

‘What Good Looks Like’

Appearance, holistically, is not simply materials and details but built form considerations such as scale and massing, as well as broader elements of layout including street scene, setback, boundary treatments and parking. All of these elements contribute to the underlying character and identity of buildings and places.

Figure 38: Original cottages (above) and replica cottages (below) are both authentically detailed.

Example replica traditional cottages

St. Margaret’s cottages in the Ends have been used as a design precedent to inform a successful design for a new house that copies the traditional details.

Figure 39: A variety of modern renovations and new build homes which interpret the area’s rural heritage. The bottom right example is a more innovative design that respects the rural scale and nestles within the landscape setting.

Example of sympathetic modern and innovative rural design approaches

Dark painted timber is used throughout the Rural settlements area on houses, garages and outbuildings. This pays homage to the traditional arable farming built form.

4.1.1 Building typologies

The neighbourhood area includes a broad variety of house types which reflect their location and the period in which they were built.

The two key character-area types have a specific type, scale and style of housing that should be respected - see the two following photographic studies.

Rural settlements

Across the Rural settlements there are detached cottages, terraced cottages, barns/ barn-conversions, semi-detached houses and detached bungalows. Out-buildings including stores and garages are also common.

Figure 42: Pebble dash cottage

Figure 44: Outbuilding (garage)

Figure 41: Barn conversion.

Figure 43: Farmhouse

Figure 40: Terraced cottage

Urban extensions

In the clearly defined Urban extensions there are townhouses, terraced-houses, detached houses, semi-detached houses, mews houses and small apartment blocks. Garages are also common.

Figure 46: 2.5 - 3 storey townhouses

Figure 48: Wide-fronted detached house

Figure 49: Semi-detached homes

Figure 47: Mews homes on shared-surface court

Figure 45: Red-brick apartment buildings

Guidance and codes

- The Urban extensions contain types like attached townhouses, urban terraces, apartments, mews houses and flats over garages. These types of buildings are generally not suitable for the Rural settlements due to their relationship to the nearby urban context of Bedford.

4.1.2 Building height, scale and massing

The general approach to building heights, scale and massing is distinct between the Rural settlements and the Urban extensions.

Rural settlements

Within the Rural settlements of the neighbourhood area, building heights are typically 1.5 - 2 storeys, allowing trees and other vegetation to form a backdrop to development. Bungalows can also be found scattered throughout the Ends, however they are most prominant in Salph End (Brickfield Road and Home Close).

Urban extensions

Within the Urban extensions there is a wider range of building heights found of between 1.5 - 3 storeys. Typically properties are 2 - 2.5 storeys. Examples of 3 storeys are generally either small apartment blocks or homes at key gateways to development such as Marshall Drive.

Figure 50: Eye-brow dormer peeks above hedgerow in Green End

Figure 51: Three storey buildings form a gateway to the development on Maskell Drive

Guidance and codes

- The height of new buildings should respect the heights of adjacent buildings on the road or street, and predominant building heights across the settlement area.
- The scale of buildings can also be considered in relation to the scale of the road, street or space that it relates to. For example, in the Urban extensions a slightly taller building may provide definition and enclosure to the streetscene at a key gateway. Conversely, at the rural settlement edge a 1.5 storey home would be less imposing within the wider rural landscape setting.

4.2 Architecture, materials and details

The approaches to architectural style, including roofscape, materials and details are distinct between the Rural settlements and the Urban extensions. In the Rural settlements there is a mix of approaches depending on period and in the Urban extensions there is less variation with only subtle distinctions between phases due to the relatively short timeline of building.

4.2.1 Roofscapes and fenestration

The approaches to roofscapes and fenestration is distinct between the Rural settlements and the Urban extensions.

Rural settlements

There are a range of roof styles with grey plain tiles and red pantiles being common materials, as well as examples of steeply pitched thatched cottages. The mixed building types mean fluctuating rooflines and pitches between plots, with gaps and punctuated by chimney stacks.

Tall chimney stacks are a prominent feature on some historic properties in the Ends.

Earlier period properties tend to have portrait windows that allow deeper penetration of daylight into rooms. Later properties may have windows arranged in landscape format that frame views of the landscape.

Figure 53: Half-gables create depth and interest

Figure 52: Traditional pitched roof with chimney stacks

Figure 54: Examples of entrances, roofs and windows in the Rural settlements

Urban extensions

The roofscape of the Urban extensions is generally pitched roofs of 35' to 45' where there is accommodation in the roofspace. Dormer windows are quite common. Chimneys are found on the ends of runs of terraces and on larger homes also.

There are various materials and styles used for windows and doors in this area such as sash, casement, dual aspect, wall dormer and bow windows, and flat canopy and pitched porch roofs or enclosures. Some windows have additional brick detailing above such as shallow arches and soldier-courses.

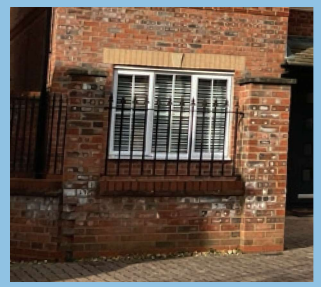
Urban extensions

Fenestration

Symmetrical arrangement

Modern sash windows

Bay window



Soldier course lintel with keystone

Entrances

Simple canopy

Open timber porch

Roof materials

Slates

Brick detailing

Hipped roof

Figure 55: Examples of entrances, roofs and windows in the Urban extensions

Guidance and codes

- Roof forms should be designed to create interest and complement the existing roofscape. Features such as half-gables, dormer windows, and chimneys are welcomed.
- Depth and shadow in facade design is welcomed. Low-eves, porches (inset and protruding) can all contribute to creating a sheltered and welcoming entrances to homes.
- The fenestration of new homes should respect and take inspiration from high quality, characterful examples in the surrounding area. Windows must be designed to function for pleasing aesthetics, solar gain, and daylighting.
- Poor quality, mis-matched UPVC window frames should be avoided in new development.
- Large box dormer extensions should be avoided in denser areas and where the character of the original building would be compromised.

4.2.2 Materials and details

The pattern of materials and details is distinct between the Rural settlements and the Urban extensions. There is more recognisable consistency and repeated use of the same materials in the Urban extensions. Although there is greater range in the Rural settlements, there is still a core palette that is desirable to respond to.

Rural settlements

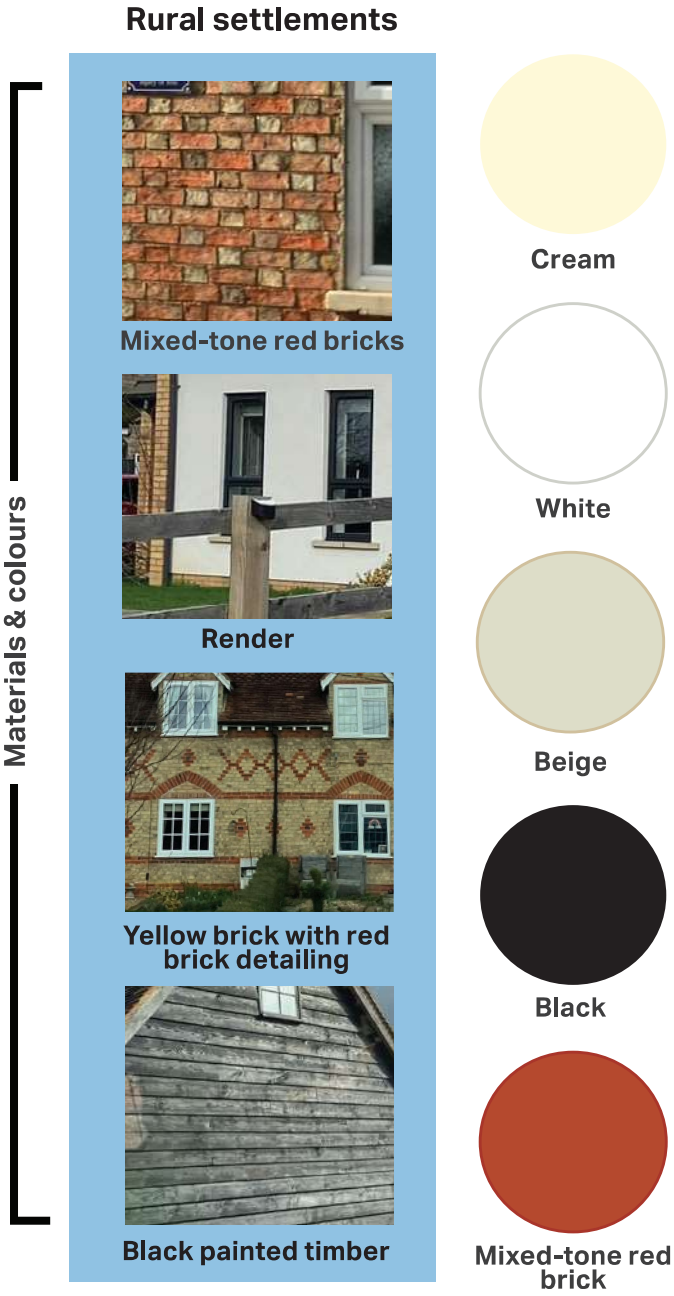
Overall there is a varied mix of materials and details across the Rural settlements based on periods of development.

Red brick buildings are characteristic across the settlement areas, mixed with rendered and painted buildings, some yellow brick buildings and timber clad barn style buildings and timber clad upper floors.

There are also examples of decorative brickwork throughout the area. One such example of this is on the cottages in Top End.

Typical details include;

- contrasting brick courses, geometric patterns, soldier courses and shallow arches
- Keystones, corbels and quoins
- Stone sills and lintels



Urban extensions

Consistent use of yellow brick across several of the Urban extensions are broken up by patches of red-brick buildings and some render on uper storeys of buildings in Asgard and Thor Drives.

Overall there is a relatively consistent and somewhat homogeneous application of colour and materials across large areas

This is often broken up with large areas of contrasting brick buildings or a cluster buildings creating a contrast within a street.

There are many examples of a variety of simple decorative brick detailing throughout the area.

Typical details include;

- contrasting brick courses, geometric patterns, soldier courses and shallow arches
- Keystones, corbels and quoins
- Stone sills and lintels

Urban extensions

Materials & colours

Yellow brick

Render

Red brick

Contrasting brick

Beige

Black (rails, doors)

Mixed-tone red brick

Yellow

Guidance and codes

- The materials and appearance of new development should be responsive to the mixed rural settlement setting or more consistent urban extension setting in conception, with consideration for existing styles, materials and details.
- Proposed materials of extensions and conversions should harmonise with or complement the original building with the same high quality and characteristic materials that are used in the area.
- Recycled sustainable materials and modern methods of construction may be required to deliver innovative design solutions.
- Colours for painted elements used in new development should harmonise with the rural landscape context and settlement context dependent on the area. Muted tones will sit best on landscape edges. Black painted timber is also characteristic.

4.3 Plot boundaries & setback

The front of plot boundaries and setback of homes clearly varies between the Rural settlements and the Urban extensions. In the Rural settlement homes tend to be set back behind front gardens and in the Urban extensions the space to the front of dwellings is significantly reduced.

Figure 57: Image showing the mature hedges and planting that define plots, giving a green character to rural roads

Rural settlements

Hedgerows and grass verges are characteristic across the neighbourhood area. Vegetation in the Rural settlements is generally well established reinforcing the pleasant rural streetscenes and providing privacy to residents.

Building setbacks on plots vary greatly throughout the Rural settlements - commonly ranging from 6 -12m.

Exceptions include several historic rural buildings, for example, the barns in Church End which are up to the grass verge. This creates a distinct level of enclosure here.

Where buildings are set back, boundary treatments provide the definition to the streetscene and include rural boundary types such as:

- Native hedgerows, hedges and planting
- Timber fence and gates, stock-proof and picket fence
- Low brick walls with piers

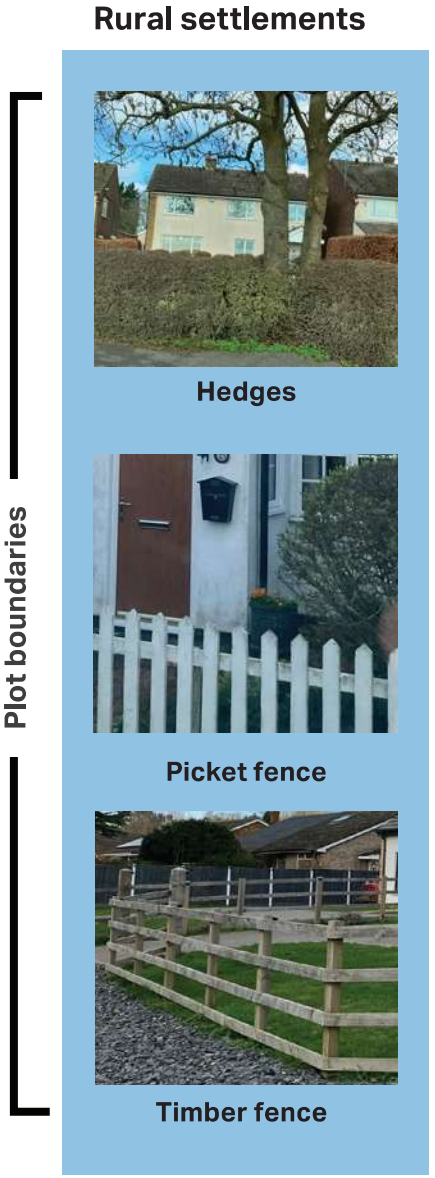


Figure 56: Examples of boundary treatments in the Rural settlements

Urban extensions

Some narrow verges with tree planting are included on streets. Building setbacks on plots are generally quite short, commonly ranging from 0.5m to 3m.

Where buildings are set back, boundary treatments provide some defensible space to the street. They typically include the following:

- Hedges
- Black painted iron railings
- Low brick walls with piers (with or without railings and hedgerow)

Figure 59: A highly contrasting urban space defined by buildings set close to the back of the street.

Urban extensions

Plot boundaries

Low walls wih piers and rails

Hedges / shrub planting

Side-boundary wall

Figure 58: Examples of boundary treatments in the Urban extensions

Guidance and codes

- New developments should provide a sufficient setback to allow for a front garden, planted buffer, or hard landscaped privacy strip in character with adjacent dwellings.
- Where development occurs on the key roads then characteristic boundary treatments should define the plot line, clearly demarcating public and private space.
- Existing hedgerows, trees and walls should, wherever possible, be retained, at appropriate height, to contribute to the characterof the street scene.
- New hedges and landscaping should be planted to maintain the continuity of existing green infrastructure.
- Closeboarded fencing should be avoided where facing the public realm.

4.4 Parking & cycle storage

The required parking solutions and issues vary between the more spacious Rural settlements and the tighter knit Urban extensions. There is generally space to provide parking on plot in the Rural settlements and less desire to park on roads overnight. Within the Urban extensions there is parking provision on plot and in parking courtyards but it is common for residents to park on street and on pavements in front of homes.

Rural settlements

Cars are a necessity for rural communities with limited public transport options. However, parking does not need to be unsightly or dominate the frontages of properties. The practicality of parking provision should not undermine the rual character.

Due to the low density nature of the neighbourhood area (excluding the Urban extension) on-plot car parking is common. Given that future development is likely to be predominantly smaller scale infill, it is expected that this will continue as the main approach.

Good examples of on-plot parking minimise visual impact on the streetscape by using position, boundary treatments and vegetation to screen the parking areas and by placing vehicles to the front, side or rear, depending on plot size, building type and whether the dwelling faces a main street.

Figure 61: Example of side of plot parking with characterful carports and hedges that screen parking.

Figure 60: Example of front on-plot parking where a good boundary treatment defines the plot.

Urban extensions

Sufficient parking areas are a necessity of urban developments with observed issues with on street / pavement parking. However, they do not need to be unsightly or dominate the streetscene. The practicality of parking provision should not undermine the street character.

Due to the medium density nature of the Urban extensions on-plot car parking and parking courts are common. Given that future development is likely to be predominantly household extensions or conversions of garages it is important that existing off-street parking capacity is maintained.

Accommodating convenient, secure cycle parking is important to encourage active travel and modal shift for shorter journeys to nearby facilities and services.

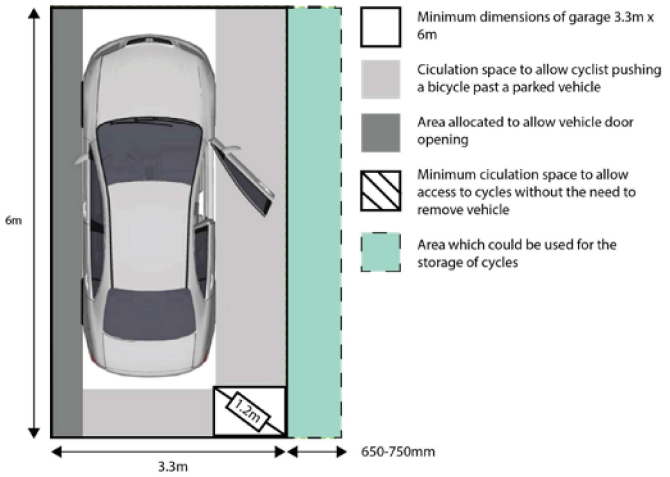


Figure 62: Best practice dimensions for garages including space for cycle storage.

Guidance and codes

- Front parking to main roads / streets must provide sufficient front boundary definition. This is usually possible with larger plots or wider plots.
- Terraces that face a main street should not have front parking, but should utilise a small parking court to the side or rear.
- A front shared parking court solution may be acceptable where the area is sufficiently enclosed, as in a farmstead style development with multiple dwellings.
- Parking court must have sufficient boundary enclosure, be overlooked by homes and use high-quality materials and landscaping (not blank unsafe spaces).
- Car ports are prefered to garages in new development, to ensure proper usage as parking spaces.

4.5 Household extensions and conversions

Many household extensions are covered by permitted development rights, meaning that they do not need to obtain planning permission, although there are exceptions.

In general, extensions should be designed to an appropriate scale and be secondary to the original building. Extensions and conversions should consider the materials, architectural features and proportions of the original building and be designed to complement these existing elements.

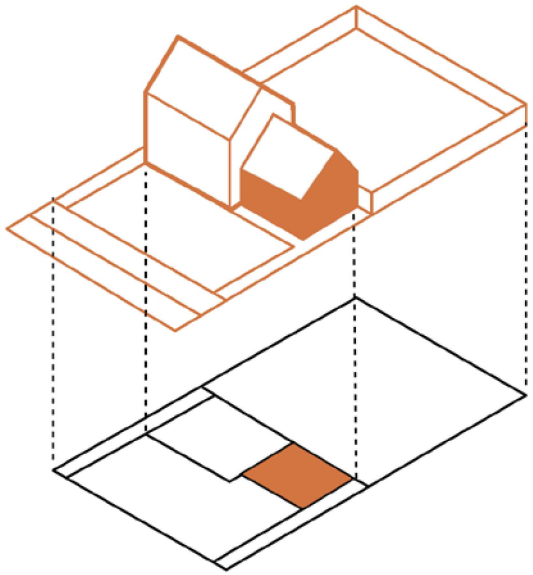


Figure 63: Diagram of single storey side extension that is subordinate to the main building, with a matching roof pitch,

Guidance and codes

- The character of the existing building, along with its scale, form, materials and details should be taken into consideration when preparing proposals for alterations or extensions.
- Extensions and conversions should not undermine the visual appearance of the original buildings and the character of the area.
- Extensions should be subordinate in term of scale and form and shall not be visually dominant or taller than the existing building, using lower ridge and eaves levels in the case of two-storey extensions.
- Extensions should generally be recessed from or in line with the original building line.
- Extensions should safeguard the privacy and daylight amenity of neighbouring properties along with intervening vegetation to aid integration.
- Extensions should retain on-site parking capacity and a viable garden area to meet the needs of future occupiers.
- Extensions and conversions of existing buildings should help to reduce carbon emission by complying with high energy efficiency standards and utilising low energy design.
- New windows should not overlook neighbouring properties gardens

4.6 Integrating sustainable technology

Energy and water efficiency encompass energy efficient appliances and lighting with commercially available renewable energy systems.

Incorporation of heat pumps (air and ground source), photo voltaic panels (or shingles) and electric vehicle charging points is greatly encouraged.

Existing homes

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

Existing & new build homes

A. **High levels of airtightness**

B. **Triple glazed windows and external shading** especially on south and west faces

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

D. **More fresh air** with mechanical ventilation and heat recovery, and passive cooling

E. **Water management and cooling** more ambitious water efficiency standards, green roofs and reflective walls

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

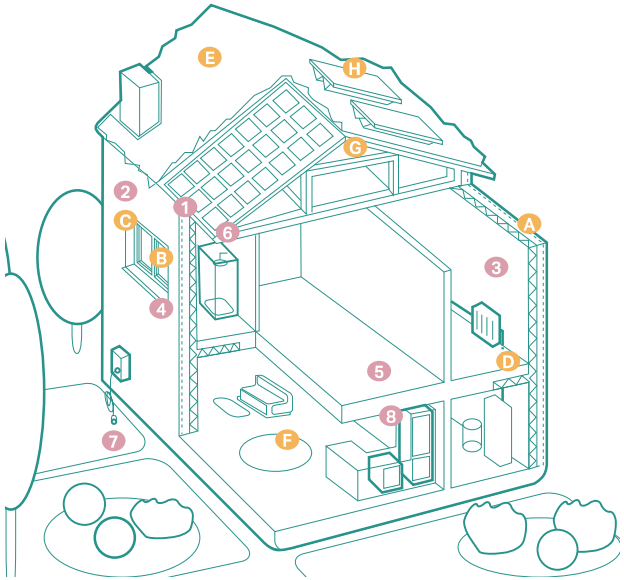
G. **Construction and site planning** timber frames, sustainable transport options (such as cycling)

H. **Solar panels**

Figure 64: Diagram showing low-carbon homes in both existing and new build conditions.

Guidance and codes

- Integration of technology that is externally mounted on buildings or installed within should be considered in terms of location positioning, colour, scale or, potential screening where possible, to blend in with the character of dwellings.



Sustainability, Nature & Resources

05

5. Sustainability, Nature & Resources: Guidance and Codes

This section focuses on sustainable approaches to development, encouraging active travel, passive design layout design principles and integrating green and blue infrastructure with new development. This is imperative to both limit our contribution to global warming and adapt to climate change extremes.

5.1 Active travel

Increasing the number of residents walking and cycling around the neighbourhood, and connecting to public transport is important for improving health and reducing emissions from private vehicles.

Renhold is served by a good number of public footpaths which provide links between the various settlement areas as well as the countryside. Preserving and adding to these is important when trying to encourage active travel and healthy recreation.

There is currently a lack of cycle lanes in the neighbourhood area, however some footpaths do allow people to cycle between the settlement areas safely. Secure cycle parking with easy access is important in helping to encourage active travel.

Guidance and codes

- New developments should facilitate outward connections by linking to Public Right of Ways.
- New developments should consider wayfinding elements such as signage and legibility to improve pedestrian mobility. Opportunities should be taken to connect to surrounding path networks.

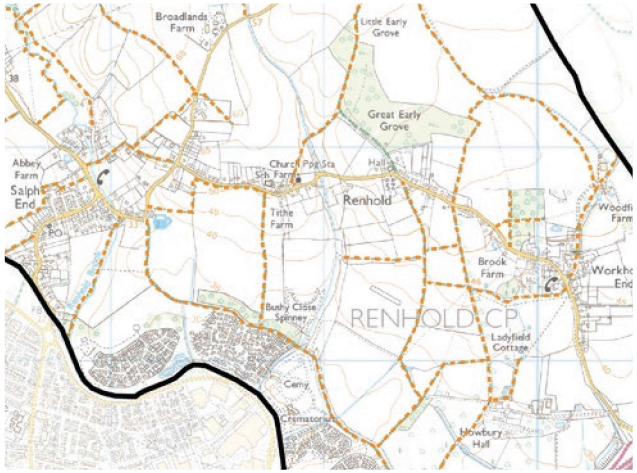


Figure 65: Extract of Renhold puiblic right of way map showing the existing links between settlements

5.2 Passive design opportunities

5.2.1 Layout and building orientation

Ideally, main facades should be orientated along an east/west axis within 30 degrees of due south to derive maximum benefit from solar gain during the winter months. Conversely, solar shading features may need to be considered in Summer.

Passive House

Passive House standard includes taking the surrounding environment into account when designing a building but are so well constructed, insulated and ventilated that they retain heat from the sun and the activities of their occupants, requiring very little additional heating or cooling, minimising their carbon footprint.

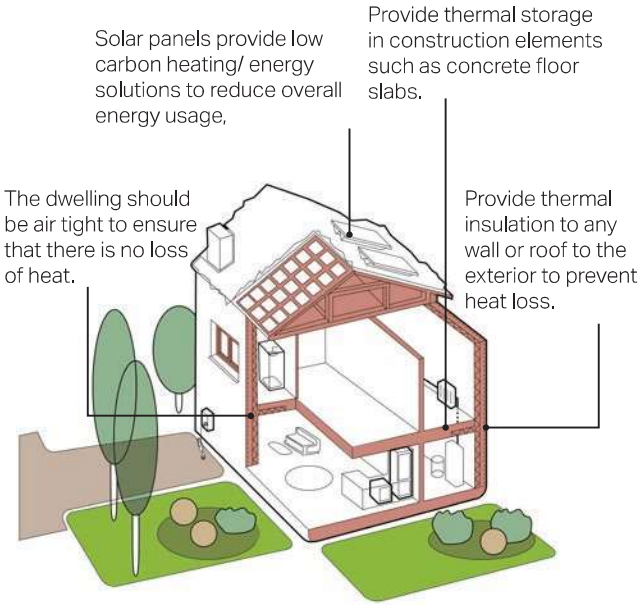


Figure 66: Diagram illustrating some aspects of the building fabric to be considered.

Guidance and codes

- Primarily orientate buildings to maximise solar gain in winter, subject to the site conditions and creating characterful development.
- Orientate and angle roofscapes to achieve viable gains from photo-voltaics.
- All new development should consider its siting and landscaping to moderate wind and temperature extremes within the settlements.

5.3 Trees and planting

The abundance of trees is one of the parish's greatest assets. They provide shading and cooling, absorb carbon dioxide, act as habitats and green links for species, reduce air pollution and assist water attenuation and humidity regulation. Alongside the abundance of grass verges, trees and other vegetation help create a rural character to the streetscape as well as framing views towards the surrounding countryside.

In addition to this, integrating green space into new development helps alleviate stress and anxiety, alleviates with recovery from ill-health and creates a sense of positive mental health and well-being.

Guidance and codes

- Existing mature trees and hedges should be preserved, incorporating them into new landscape design and using them as accents and landmarks, where appropriate.
- New trees should be added to strengthen vistas, focal points and movement corridors, while retaining clear visibility into and out of amenity spaces. They should, however, not block the key viewing corridors that the green gaps provide.
- Plant street trees in street verges or on plot as part of new developments to moderate and improve micro-climate for flora and fauna, biodiversity, buildings, streets and spaces, and for visual amenity and mental health.
- Plant trees on exposed sites, or sites at the edge of settlements for screening purposes and to settle development into the landscape.
- Plant native species hedgerows and trees for habitat and biodiversity benefit.

Figure 67: Mature woodland screening Abbey Farm.

Figure 68: Grass verges and planting integrated into the boundary treatments.

5.4 Drainage and Blue Infrastructure

Sustainable drainage systems (SuDS) cover a range of approaches to managing surface water in a more sustainable way to reduce flood risk and improve water quality whilst improving amenity benefits.

The Renhold Brook, which cuts through Salph End and runs along the southern boundary of the neighbourhood area, presents a medium degree of flood risk according to the EA map of flood risk from rivers and sea for planning.

Sustainable drainage systems

SuDS work by reducing the amount and rate at which surface water reaches a waterway or combined sewer system. Usually, the most sustainable option is collecting this water for reuse, for example in a water butt or rainwater harvesting system.

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

Guidance and codes

- Development must not cumulatively exacerbate local flooding issues for neighbouring properties or compromise amenity.
- New homes should include Sustainable Drainage Systems (SuDS) to help address surface water runoff.
- New homes should demonstrate how rainwater will be stored and reused as grey water to reduce demand on mains supplies.
- Use of permeable paving and surfaces should be considered for areas of hardstanding.

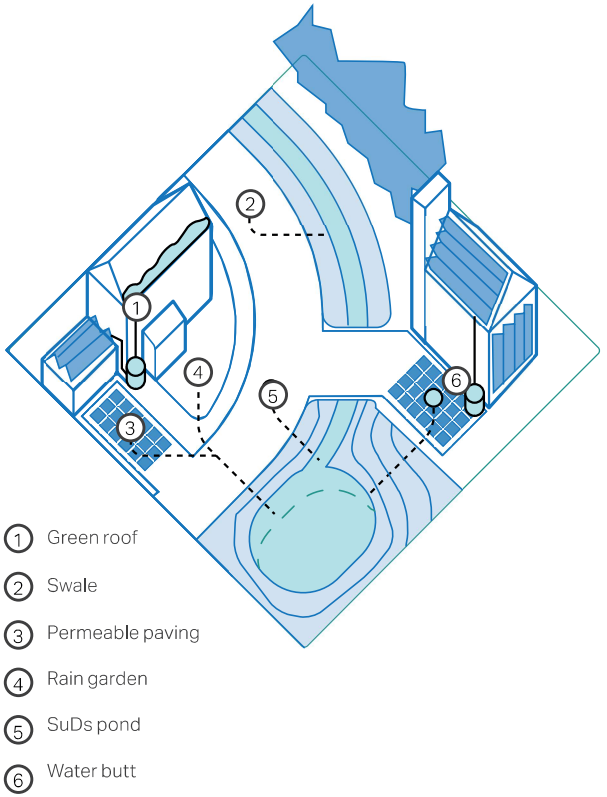


Figure 69: Diagram showing a variety of rainwater harvesting systems.

5.5 Habitat and biodiversity

Biodiversity and habitats are both hugely valuable on a global scale but also in the context of somewhere like Renhold. The local community actively supports the protection and promotion of biodiversity.

Guidance and codes

- Retaining grass verges, hedgerows, woodland and green boundary treatments helps maintain and improve habitats as well as wildlife corridors.
- Abrupt edges to development with little vegetation or landscape on the edge of the settlement should be avoided.
- Native planting should be encouraged to link and extend habitats for local wildlife.
- Wildlife provision e.g. bat, swift, house martins, boxes, hedgehog highways, wildlife corridors that links existing woodland areas together with natural hedge and grassland environments should be provided.
- Watercourse improvements to biodiversity and stream health and creation of safe access to stream-side environment for residents are encouraged.
- The Renhold Dark Skies policy must be adhered to.

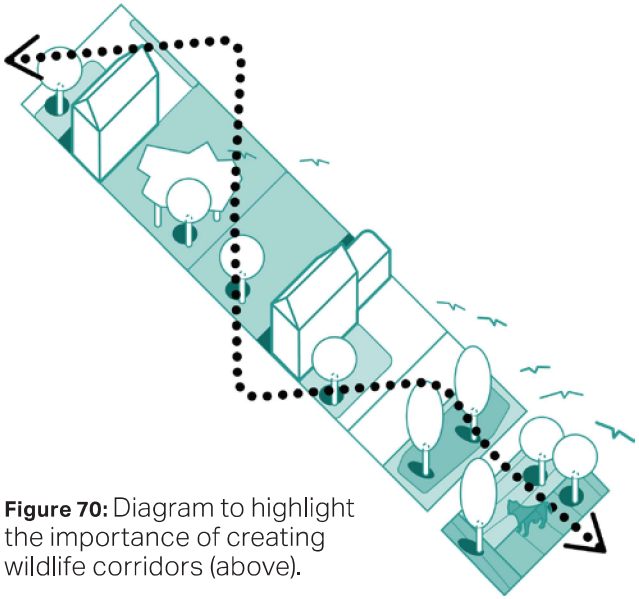


Figure 70: Diagram to highlight the importance of creating wildlife corridors (above).

Figure 71: Examples of a bughouse decorating rear gardens or public green spaces.

Figure 72: Examples of a frog habitat decorating rear gardens or public green spaces.

Checklist

06

6. Checklist

This section sets out a general list of design considerations by topic for use as a quick reference guide in design workshops and discussions.

1

General design considerations for new development:

- Does new development integrate with existing paths, roads, circulation networks and patterns of activity to allow accessibility and connectivity?
- Is there an opportunity to reinforce or enhance the established settlement character of streets, greens, and other spaces?
- Does the proposal harmonise with and enhance the existing settlement in terms of physical form, architecture and land use?
- Does the proposal relate well to local topography and landscape features, including prominent ridge lines and long-distance views?
- How can the local architecture and historic distinctiveness be reflected, respected, and reinforced?
- Have important existing features been retained and incorporated into the development?
- Have surrounding buildings been respected in terms of scale, height, form and massing? Are all components e.g. buildings, landscapes, access routes, parking and open space well related to each other?
- Does the proposal make sufficient provision for sustainable waste management (including facilities for kerbside collection, waste separation, and minimisation) without adverse impact on the street scene, the local landscape or the amenities of neighbours?
- Has management, maintenance and the upkeep of utilities been considered by the proposal?
- Is there an opportunity to implement passive environmental design principles (for example, site layout being optimised for beneficial solar gain, techniques to reduce energy demands and the incorporation of renewable energy sources)?
- Does the proposal adopt contextually appropriate materials and details?
- Does the proposal incorporate necessary services and drainage infrastructure without causing unacceptable harm to retained features?

2

Road grid and layout:

- Does it favour accessibility and connectivity? If not, why?
- What are the essential characteristics of the existing road 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 (continues over page)

Local green spaces, views & character:

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

3

Local green spaces, views & character:

- Have opportunities for enhancing existing amenity spaces been explored?
- Will any communal amenity space be created? If so, how will this be used by the new owners and how will it be managed?
- Is there opportunity to increase the local area's 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?

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 or a combination of both?

5 (continues over page)

Buildings layout and grouping:

- What are the typical groupings of buildings?
- How have the existing groupings been reflected in the proposal?
- Are proposed groups of buildings offering variety and texture to the villagescape/streetscape?
- 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

Buildings layout and grouping:

- Subject to topography and the clustering of existing buildings, are new buildings orientated 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 roof-line:

- What are the characteristics of the roof-line?
- 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 avoid 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'?
- Does the proposed extension respond to the existing pattern of window and door openings?
- Does the extension lead to a loss of on-plot car parking?
- 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?
- Does the proposed design/alteration respect the character, scale and form of the host property?
- Are any proposed dormer roof extensions appropriately designed and sited within the roof slope to avoid the host dwelling becoming out of proportion?

9 (continues over page)

Building materials & surface treatment:

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

9

Building materials & surface treatment:

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

10

Car parking:

- What parking solutions have been considered?
- Are the car spaces located and arranged in a way that is not dominant or detrimental to the sense of place or streetscene?
- Has planting been considered to soften the presence of cars/hard-surfaced car parking areas?
- 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/incorporated?
- 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 bio-diverse roof in its design?

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 unrivalled 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 and @AECOM.

aecom.com

Printed on recycled paper.

©2021 AECOM. All Rights Reserved.