AECOM

DESIGN GUIDANCE AND CODES

Redbourn

locality
the power of community

DRAFT REPORT | August 2021

DRAFT REPORT

Quality information

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Revision History

Revision	Revision date	Details	Name	Position
5	240821	Review	Ben Castell	Director
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3	300621	Review	Vicky Kidd	Redbourn Parish council
2	140621	Review	Mark Hughes	Director
1	140621	Research, site visit, drawings	Hoorieh Morshedi	Graduate Urban Designer

Contents

01 Introduction

1. Introduction

Through the Ministry of Housing, Communities and Local Government (MHCLG) Neighbourhood Planning Programme led by Locality, AECOM has been commissioned to provide design support to Redbourn Parish Council. The Steering Group is making good progress in the production of its Neighbourhood Plan and has requested professional advice on the preparation of a design code for future development within the village. In particular, this document includes design codes for the five character areas covering the built up part of the village.

1.1 Objectives

The main objective of this report is to provide a bespoke design code and guidelines that future developments within the neighbourhood plan area must follow in order to respond to Redbourn's special character.

1.2 Process

Following an inception meeting, AECOM and the members of Redbourn Parish Council carried out a high-level assessment of the village. The following steps were agreed with the group to produce this report:

1. Initial meeting to discuss brief between AECOM and Redbourn Neighbourhood planning Group. As this was during the national Covid 19 lockdown, a joint virtual site visit was carried out via Teams
2. Urban design and local character analysis
3. Preparation of the design principles, guidelines and codes to be used to inform the design of the Parish and future developments
4. Draft report with design guidelines and codes
5. Submission of a final report

1.3 Area of study

Redbourn is a village in the western part of Hertfordshire County, England. It is within the local authority of St Albans City and District Council (SADC).

The village is located three miles from Harpenden, four miles from St Albans and five miles from Hemel Hempstead.

The village has a rural atmosphere and is bordered by M1 to the west, A5183 to the north, east and south.

Redbourn High Street is the main street in the village which follows the line of the straight Roman road of Watling Street and Redbourn Road.

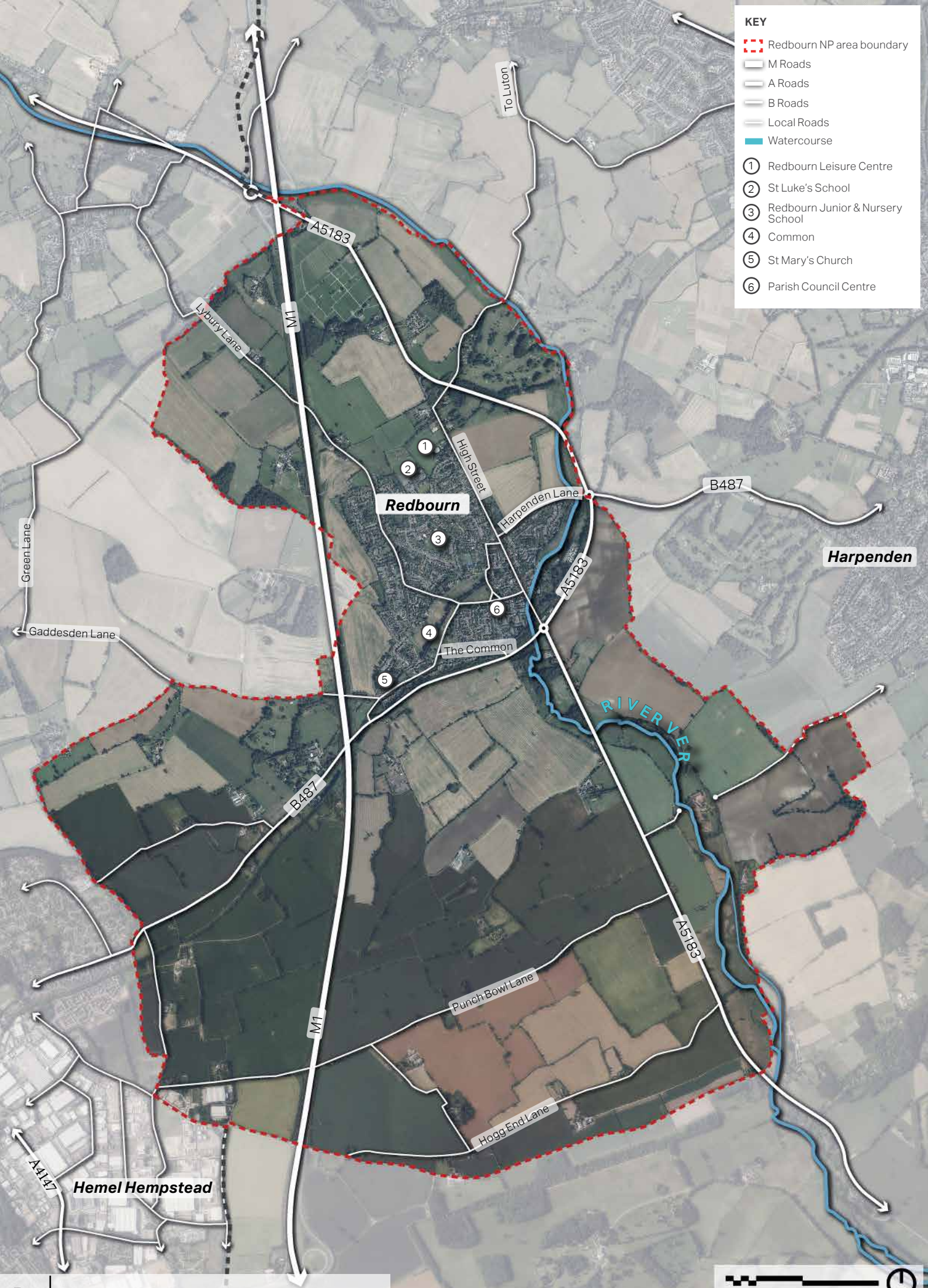
There are significant listed buildings within the Redbourn Conservation Area with St Mary's Church a Grade I listed building situated on Hemel Hempstead Road.

The River Ver is a 17 mile long chalk stream that runs trhough the neighbourhood plan area and village of Redbourn, finally joining the River Colne at Bricket Wood.

Various woodlands, green and open spaces around the village give a rural atmosphere to the village. Redbourn Common is at the heart of the village and includes a cricket club and play area.

A wide variety of facilities can be found in the village such as the Parish Council Centre, Redbourn Village Hall, St Luke's School, Redbourn Primary School and Redbourn Leisure Centre (See Figure 01). The latter provides activities and facilities for sports clubs such as football, bowls, cricket, dance, gymnastics, netball and fitness.

The population of Redbourn was 5,344 accrding to the 2011 census.



F.1 | **Figure 01:** The Neighbourhood Plan Area in context

02 Policy and design guidance review

2. Policy and design guidance review

This section summarises the relevant design policy, guidance and evidence base produced at national, district and parish level which have informed this design code. It specifies how the relevant policies and guidelines have been incorporated in the production of the design codes included in this document. Any new development application should be familiar with those documents. **Appendix A** also provides a detailed review of the key planning policies.

National Design Guidance

2019

National Design Guide - Ministry of Housing, Communities and Local Government

The National Design Guide sets out the government's ten priorities for well-designed places and illustrates how well-designed places can be achieved in practice. The ten characteristics identified include: context, identity, built form, movement, nature, public spaces, uses, homes and buildings, resources and lifespan. The Guide also reinforces the National Planning Policy Framework's objective in creating high quality buildings and places. The document forms part of the government's planning practice guidance.

2020

Building for a Healthy Life - Homes England

Building for a Healthy Life updates England's most widely known and most widely used design tool for creating places that are better for people and nature. The document sets out 12 considerations for creating integrated neighbourhoods, distinctive places and streets for all. While it is not part of national policy, it is recognised as best practice guidance in assessing the design quality of developments.

2021

National Model Design Code - Ministry of Housing, Communities and Local Government

The National Model Design Code provides guidance on the production of design codes, guides and policies to promote well-designed places. It sets out the key design parameters that need to be considered when producing design guides and recommends methodology for capturing and reflecting views of the local community.

02

Key Local Policy Documents

1994

City and District of St Albans District Local Plan Review 1994 (Saved Policies) - St Albans City and District Council

The key document of the adopted Local Plan for St Albans City and District is the saved policies of the District Local Plan Review 1994. Appendix A presents a detailed review highlighting the key policies relevant to design codes in this document.

The Council is currently preparing a new Local Plan 2020-2038, after its withdrawal of the draft Local Plan 2018 submitted to the Secretary of State in November 2020. It is expected that the emerging Local Plan will be adopted at the end of 2023.

1998

Design and Layout of New Housing Design Advice Leaflet No.1 (Supplementary Planning Document) - St Albans City and District Council

Building on the District Local Plan Review, the document expands on the design policies and urban design concepts of the local planning policy framework, in particular Policy 70 of the District Local Plan. The topics covered include massing and layout, roads and footpath, parking and garaging, landscape, privacy between dwellings, orientation, amenity space, defensible space, open space and materials.

2009

Extensions in Residential Areas: A Design Guide (Design Advice Leaflet No.2) (Supplementary Planning Document) - St Albans City and District Council

The document provides design guidance in relation to household extensions, particularly on scale character, compatibility and surroundings. It also considers the cumulative effect on street character.

Parking Standards

2002

Revised Parking Policies and Standards - St Albans City and District Council

The document sets out the revised parking standards in St Albans. Redbourn falls within the Zone 1 area where the Council will encourage developments to meet current standards but may accept schemes slightly below the standards. For general housing, the maximum car parking standards is set out in Policy 40 of the District Local Plan (see Appendix A) and 1 l/t cycle parking space per unit is expected if no garage or shed are provided.

2011

Roads in Hertfordshire: A Design Guide - Hertfordshire County Council

The document sets out the street design guidelines and parking standards (including vehicles, motorcycle and cycle) in Hertfordshire, particularly in relation to dimensions and design principles. It should be noted that parking standards are set by each Local Planning Authority.

02

Key Local Evidence Base Documents

2005

Hertfordshire Landscape Character Area Statements St Albans District (Hertfordshire Landscape Character Assessment)

The assessment evaluates and classifies landscape character areas in Hertfordshire based on work undertaken between 2000 and 2005. Area 94-97 of the assessment covers areas around Redbourn and identifies key distinctive landscape features, their visual and sensory perceptions and visual impacts,

Online

Building Futures Sustainable Design Toolkit

Produced by councils across Hertfordshire, the Sustainable Design Toolkit sets out potential and up-to-date design measures in encouraging planning applicants to improve sustainability of their developments (https://www.hertfordshire.gov.uk/microsites/building-futures/building-futures.aspx).

2011

Redbourn Conservation Area Character Statement - St Albans City and District Council

The Conservation Area Character Assessment for Redbourn assesses the area's history, architectural, historic and landscape character. In particular, three character areas are identified in Redbourn, namely Church End, the Common and the High Street. A list of locally listed buildings and significant views are also identified.

03 Area analysis

3. Area analysis

This chapter describes the local context and key characteristics of Redbourn Village related to wider context, landscape character, mobility, green and blue infrastructure, housing, topography and views, heritage and character areas.

3.1 Analysis

It is important that all design proposals are based on an understanding of the context and this should be set out in planning applications. Context refers to the current, and sometimes future condition at a number of scales including: the site, adjacent buildings, spaces and routes, and the wider village and countryside. On the following pages the village context is elaborated in detail.

1 WC. Wider context

3.1.1 Wider context (WC)

Redbourn is surrounded by Green Belt, with Luton, Hemel Hempstead, Harpenden and St Albans situated to the north, south west, north east and south east, respectively.

The Thameslink train route runs through the neighbouring settlements of St Albans, Harpenden and Luton to the east of the village and the West Midlands Trains runs through Hemel Hempstead to the southwest of the village.

Harpenden Railway Station is the closest rail link for the village ,where the Thameslink links Harpenden to St Pancras International. This provides a good opportunity for people in the village to commute to central London.

The area has blue infrastructure running from north to south such as the River Lea, River Ver and River Bulbourne. The River Ver runs through Redbourn Village and adds to the natural setting of the area.

The Green Belt, existing settlements, River Ver, major road networks and railway stations within the wider area are shown for context in Figure 02.

F.2 **Figure 02:** Wider area context map

2 LC. Landscape character

3.1.2 Landscape character (LC)

Redbourn is a predominantly rural parish. The Hertfordshire Landscape Character Area Statements[1] identify three landscape character areas around Redbourn Village, as shown in Figure 03 and further elaborated upon below.

The bedrock geology is predominantly chalk around the village. This is overlaid by clay-with-flint on the plateau areas, undifferentiated solid rock in the dry valleys and some clay with sand and gravel in the lower dry valley west of Redbourn.

The topography is flat to the north of Redbourn with a dry valley to the south, followed by another flat area where Great Revel Farm is situated.

The south and east of the village are located within Flood Zones 2 and 3 which affects a notable portion of the Redbourn Conservation Area.

1. Hertfordshire Landscape Character Area Statements, St Albans District 2000-2005.

Area 94.

Buncefield Plateau:

An undulating, linear plateau confined to the west by Hemel Hempstead. The M1 motorway dominates the plateau's length and industrial development at Buncefield strongly influences the character of the area. It is crossed by dry valleys creating an undulating topography.

Area 95.

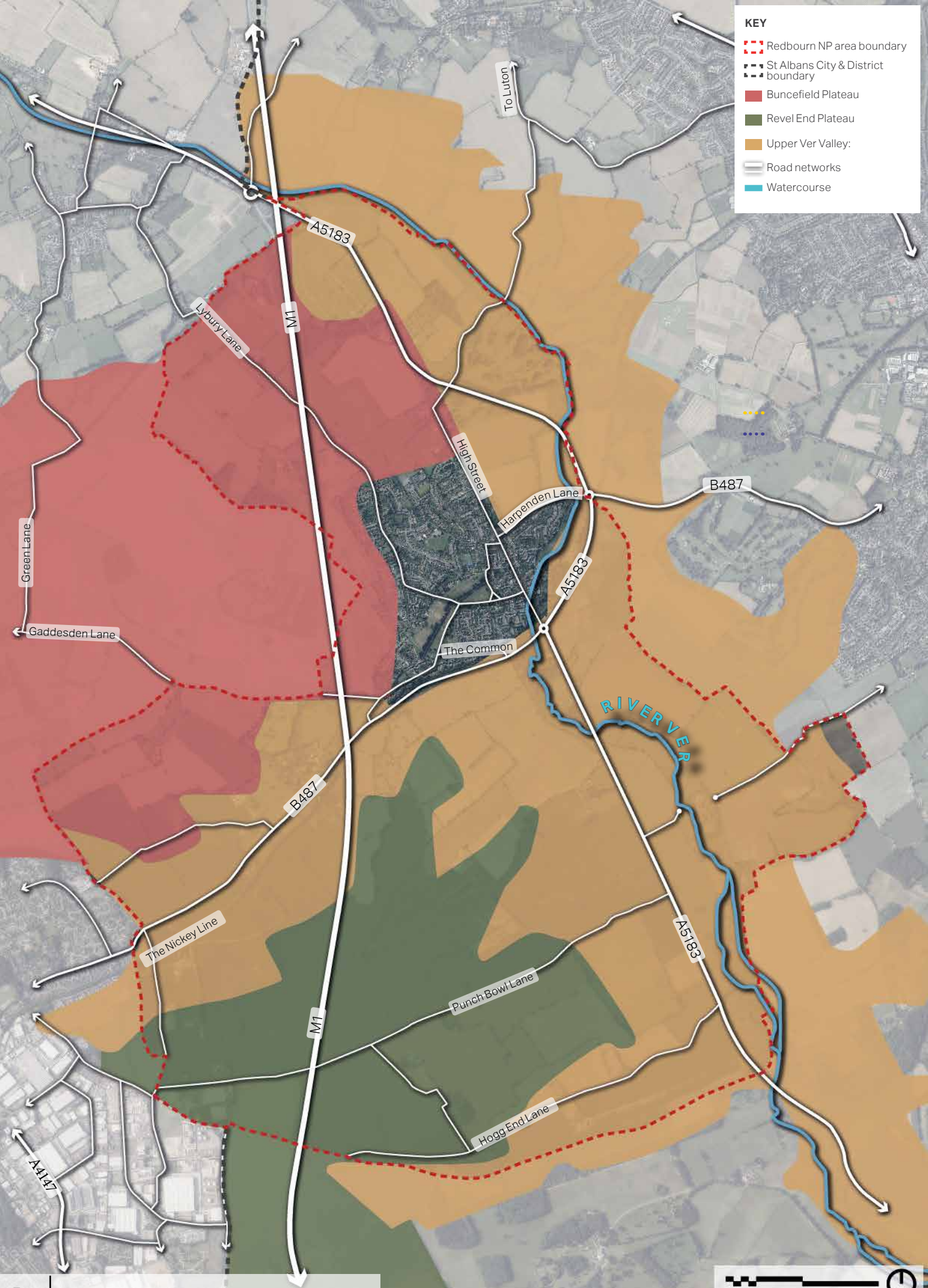
Revel End Plateau:

An area of gently undulating upland with a discontinuous field pattern bordering the M1 corridor. Surrounding gentle slopes define the character area boundary. Arable farmland and isolated patches of pasture linked to the farmsteads are the predominant land uses.

Area 96.

Upper Ver Valley:

This character area borders the Parish to the north, east and south. It contains the disused railway line, now the Nickey Line footpath and cycle way. The area is a broad open river valley with gentle slopes and long views. The character area also includes large arable fields.



F.3 **Figure 03:** Landscape character in Redbourn Village

3 MO. Mobility

3.1.3 Mobility (MO)

Redbourn is a very well connected village. Strategic links are provided by the M1 and A5183. The only B road running through the village is B487. These road networks make the village attractive to commuters, although the closest railway station is 2.5 mile away from the village centre (The Common). The High Street is the main road running through Redbourn.

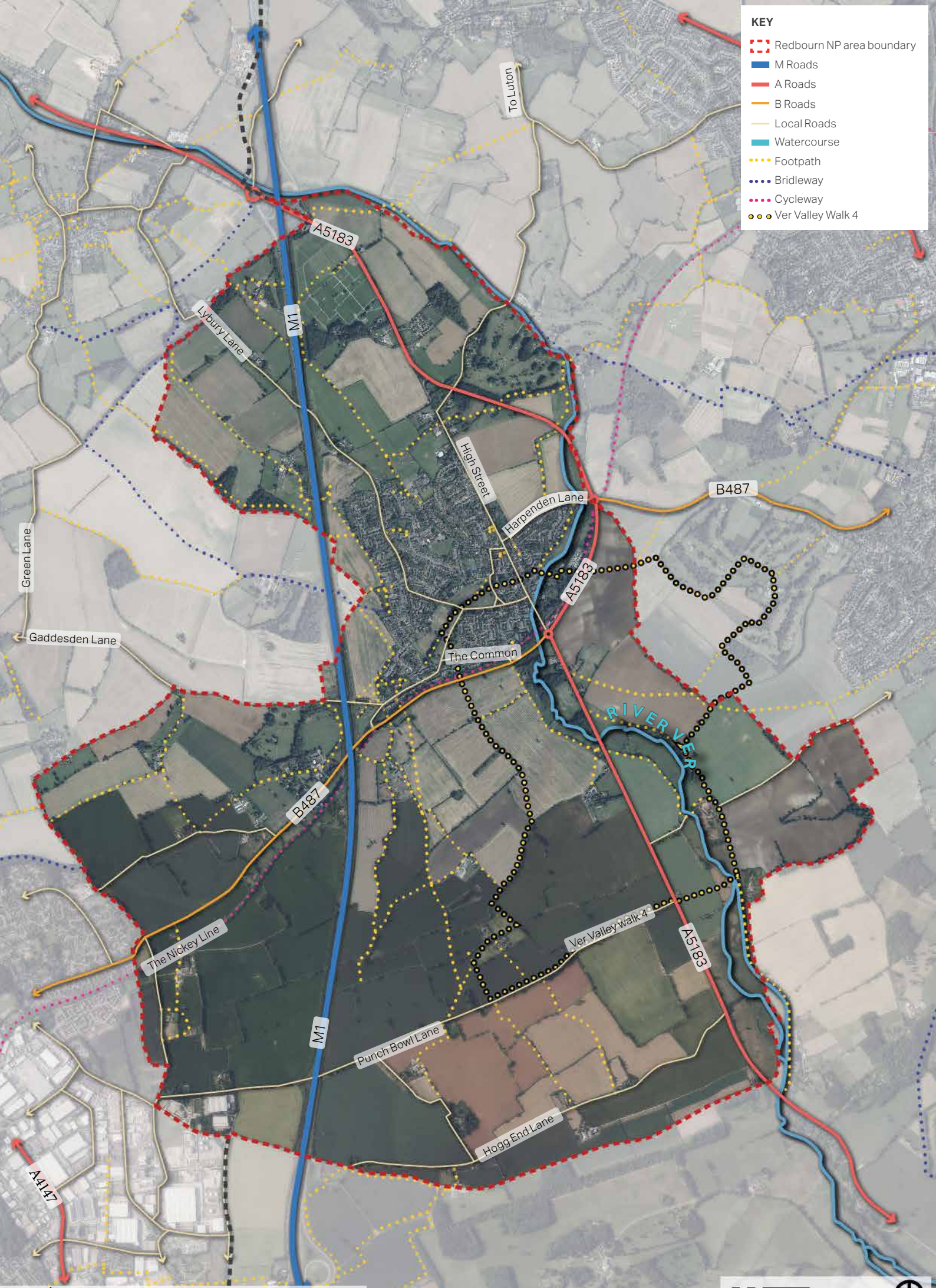
The walking environment within the village is generally good with a wide variety of footpaths running from the village to the countryside. The Nickey Line, previously the location of former railway line link Harpenden and Hemel Hempstead via Redbourn, is well used by cyclist and pedestrians.and is part of the National Cycle Network 57. The Nickey Line is well used by children to walk and cycle to Roundwood Park Secondary School in Harpenden.

The network of pedestrian and cycle ways, promoting healthy lifestyles within the area, can be viewed in Figure 07.

Figure 04:
Harpenden Road connects to B487

Figure 05:
A view of The High Street, the main road that runs through Redbourn

Figure 06:
Brooke End, a local road to the south of the village



F.7 | **Figure 07:** Mobility and Public Rights of Way map

4 GB. Green and blue infrastructure

3.1.4 Green and blue infrastructure (GB)

Redbourn lies on the chalky, western upland area of Hertfordshire close to the shallow, glaciated valley of the River Ver. The River Ver is a 28km long chalk stream and is a tributary of the River Colne. Historically, the river was a major contributor to local industries.

The village is abutted by open countryside and Green Belt, which rises away from the River Ver and gives a rural character to the area.

The name of the village is taken from River Red (reedy stream or reedy bourne). It is one of only two chalk stream tributaries of the River Ver and runs just over half a mile long as an open river.

The Common is the most important green space in the village and contains as avenue of lime trees crossing the Common from Church End to Lamb Lane. To the south of the Common are a number of willow trees.

There are golf courses to the east of the Redbourn NP area with scattered woodlands within the parish and surrounding area. There are three areas

Figure 08:
A view to The Common, a significant green space at the heart of Redbourn

Figure 09:
River Red, tributary of River Ver

Figure 10:
A view toward Cumberland Gardens

of Ancient Woodlands found within the parish, such as Northfield Spring (See Figure 14) in the north of the parish and unnamed areas in the north west.

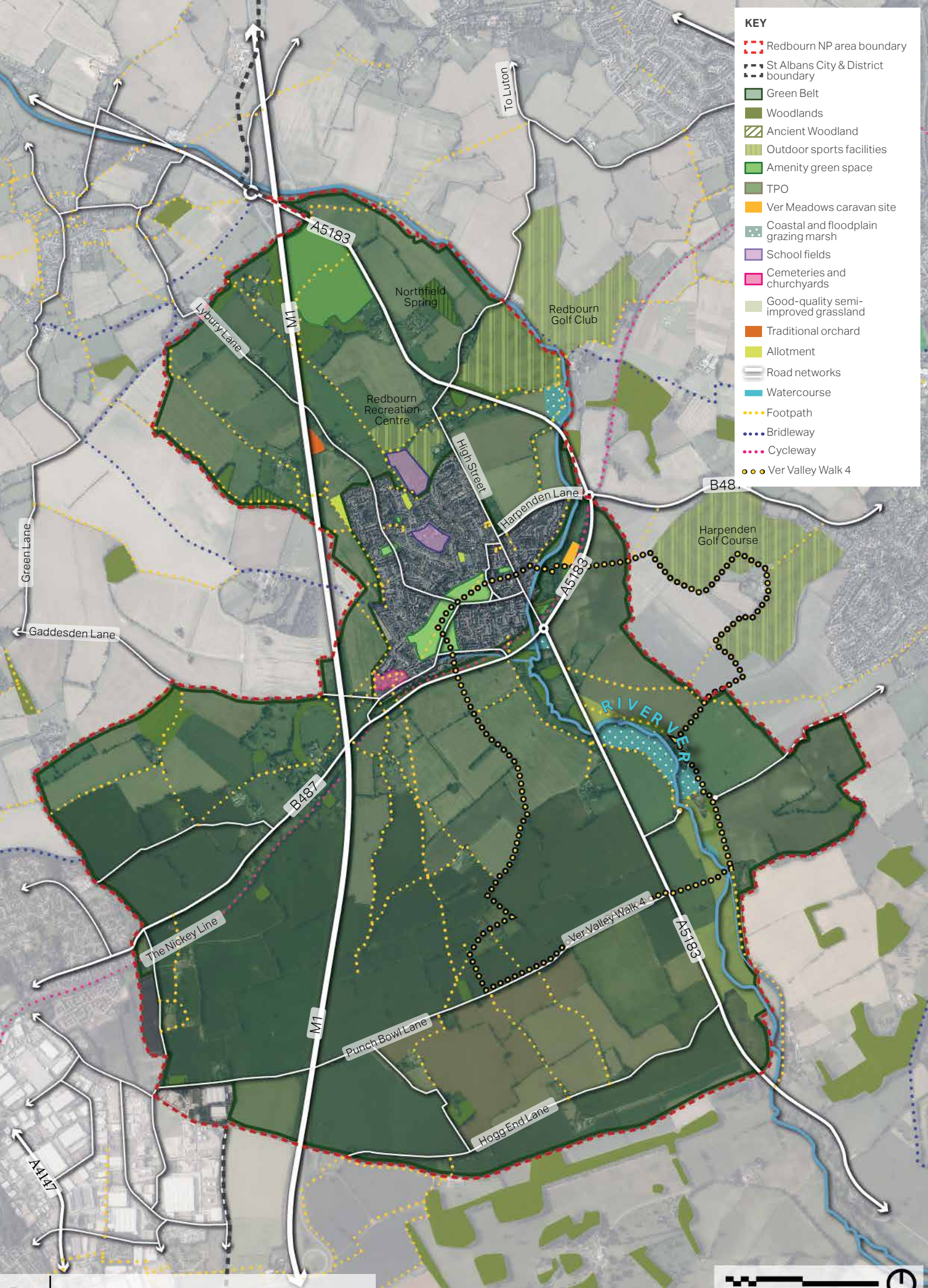
Hertfordshire County Showground is situated to the north of the NP area boundary. In addition, there are a number of Tree Preservation Orders including a group on the eastern edge of the conservation area and one to the north of the village just below Redbourn Golf Club.

Other green infrastructure of note within the built up area include allotments, a traditional orchard, and amenity spaces which give a sense of openness and add interest to Redbourn.

Figure 11:
The middle footpath through The Common with line of trees on either sides

Figure 12:
Welcome Tree on St Mary's churchyard

Figure 13:
Ridgedown, a green space on Lybury Lane



F.14 | **Figure 14:** Green infrastructure in Redbourn village

5 HO. Housing

3.1.5 Housing (HO)

Redbourn contains a variety of housing typologies ranging from detached houses and semi-detached houses, which are the predominant housing types, to terraced houses and bungalows. The are some flats found also along the High Street.

The majority of housing on the High Street, consisting mostly of semi-detached terraced houses and some flats, was built in nineteenth century and contribute to the local characterof the area.

There are a small group of 1830's almshouses, neo-vernacular houses and modest bungalows around the Common. Some attractive cottages framing the entrance of St Mary's churchyard can be found in Church End.

A substantial expansion of the village occurred to the north and east after the Second World War.


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Figure 15:
Red House, a detached house built with rubbed brick dressing on High Street

Figure 16:
Bungalow with shed dormer on Harpenden Lane

Figure 17:
Terraced houses with painted brick


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Figure 18:
A white rendered cottage on The Common

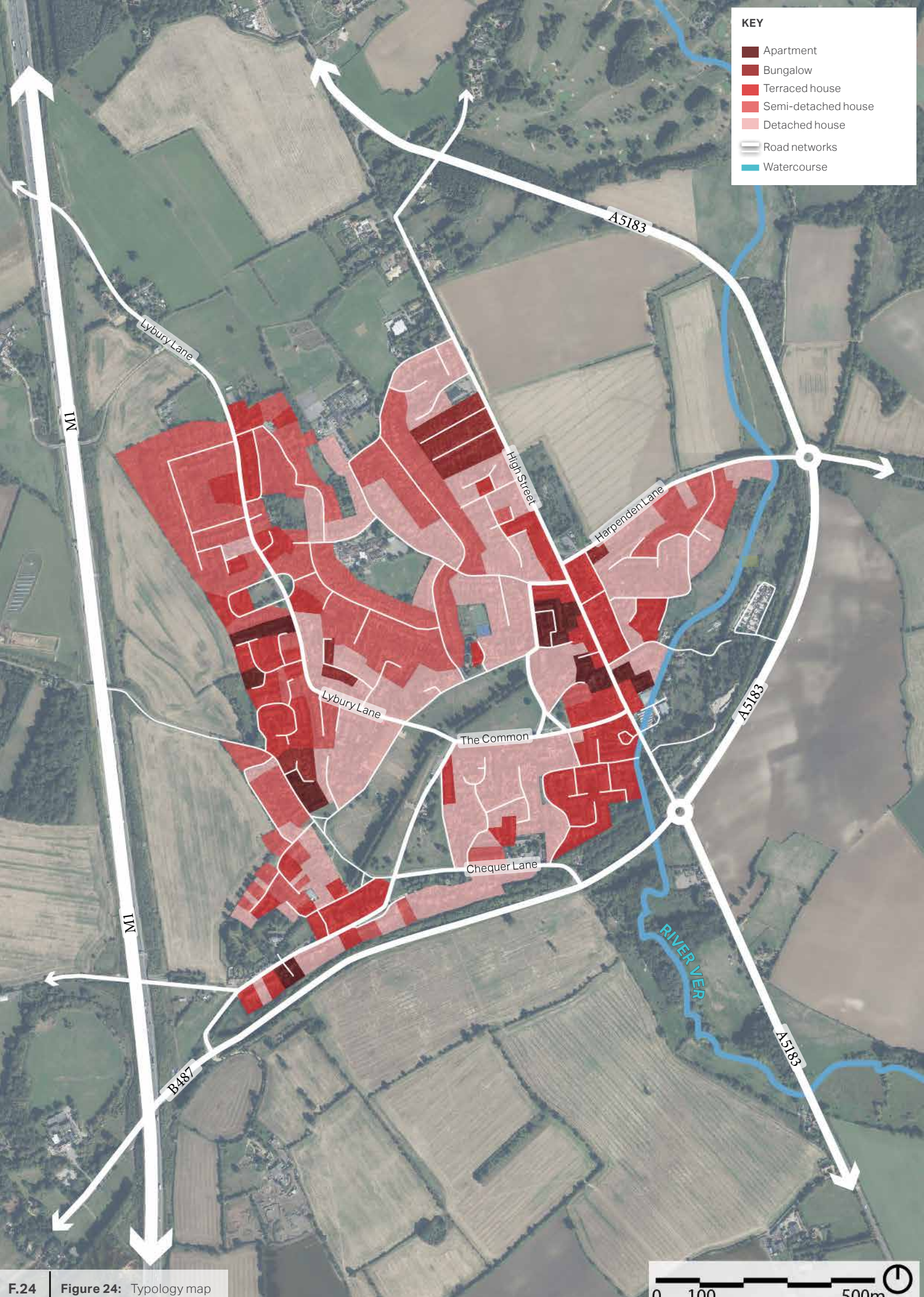
Figure 19:
Cumberland House, a 17th Georgian mansion on Lamb Lane

Figure 20:
1960s terraced houses built in Span Housing style on The Park with adequate front garden

Figure 21:
Bungalows on Harpenden Lane

Figure 22:
Family house on Lynsey Close with adequate front garden

Figure 23:
Tudor detached house with gabled roof



F.24 | **Figure 24:** Typology map


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Figure 25:
Two-storey detached house with hung tile and hipped roof on Bettespol Meadows

Figure 26:
A detached house with deep front garden on Crouch Hall Lane

Figure 27:
Two-storey houses with well-kept front garden

Figure 28:
An Edwardian family house with dark brown brick in North Redbourn

Figure 29:
Semi-detached houses on The Common

Figure 30:
A rendered cottage on The Common

6 TO. Topography and views

3.1.6 Topography and views (TO)

There are some significant views into the village and towards the countryside, shown on Figure 34 and as follows:

- From either end of the High Street but especially from the north end;
- From Hempstead Road with St Mary's Church in the foreground;
- From the public footpath north of the playing fields near Bylands Farm; and
- From most locations on the common. The centre of the common offers views of the surrounding farmlands and woodland behind the built-up edge as well as across it.

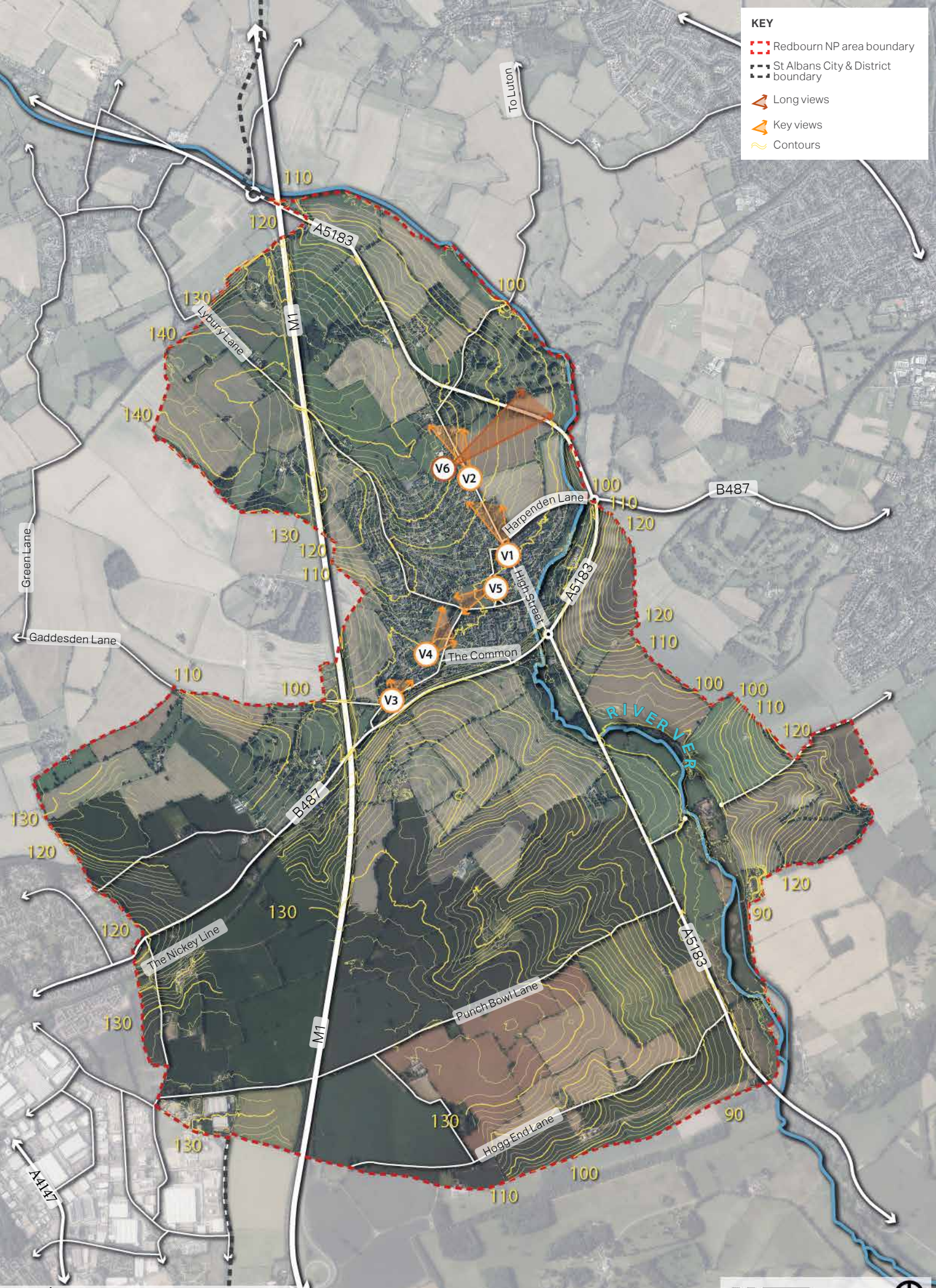
To the south and east, the village is screened by trees on the former railway embankment (The Nickey Line), and by a recently built by-pass. Limited distance views of the village can be found from its rural setting[1].

Figure 31:
The view from Harpenden Road toward north east. The view is screened somehwat by long hedgerows and trees along the road

Figure 32:
A view to The Common

Figure 33:
A view toward a farm next to Bylands Farm from Blackhorse Lane

1. Conservation Area Character Statement for Redbourn, 2011



F.34 | **Figure 34:** Topography and views map

7 HE. Heritage

3.1.7 Heritage (HE)

Redbourn has a significant amount of heritage assets. The Aubreys camp (Listed Entry Number: 1003520) is an Iron Age sheduled monument located to the waest of the M1. The Redbourn Conservation Area was designated in 1969 and extended in 2001. In addition, a significant number of listed buildings are located within the Conservation Area such as:

- St Mary's Church (LEN: 1295584), a Grade I listed building, was built around 1100 with flint rubble with stone and brick dressings. Low pitched lead roofs and chancel with steep plain tile roof are other important features.
- Cumberland House (LEN: 1102901) is a suburban Grade II* two-storey house built in 1745 with red brick and slate hipped roof.
- The Priory (LEN: 1295534) is a Grade II* listed building located on High Street. It is a large building, now offices built in 18th century with dark red brick with red brick vertical banding, gauged red brick segmental window heads and dressings.
- Silk Mill House is the village museum (LEN: 1103640) and is a Grade II listed building situated on South Common. The two-storey house built in early-mid 19 century with Purplish brick in Flemish bond. Welsh slate roof with brick stacks used for the roofing. The Portico is

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Figure 35:
Parish Church of St Mary's, a Grade I listed building on Hemel Hempstead Road

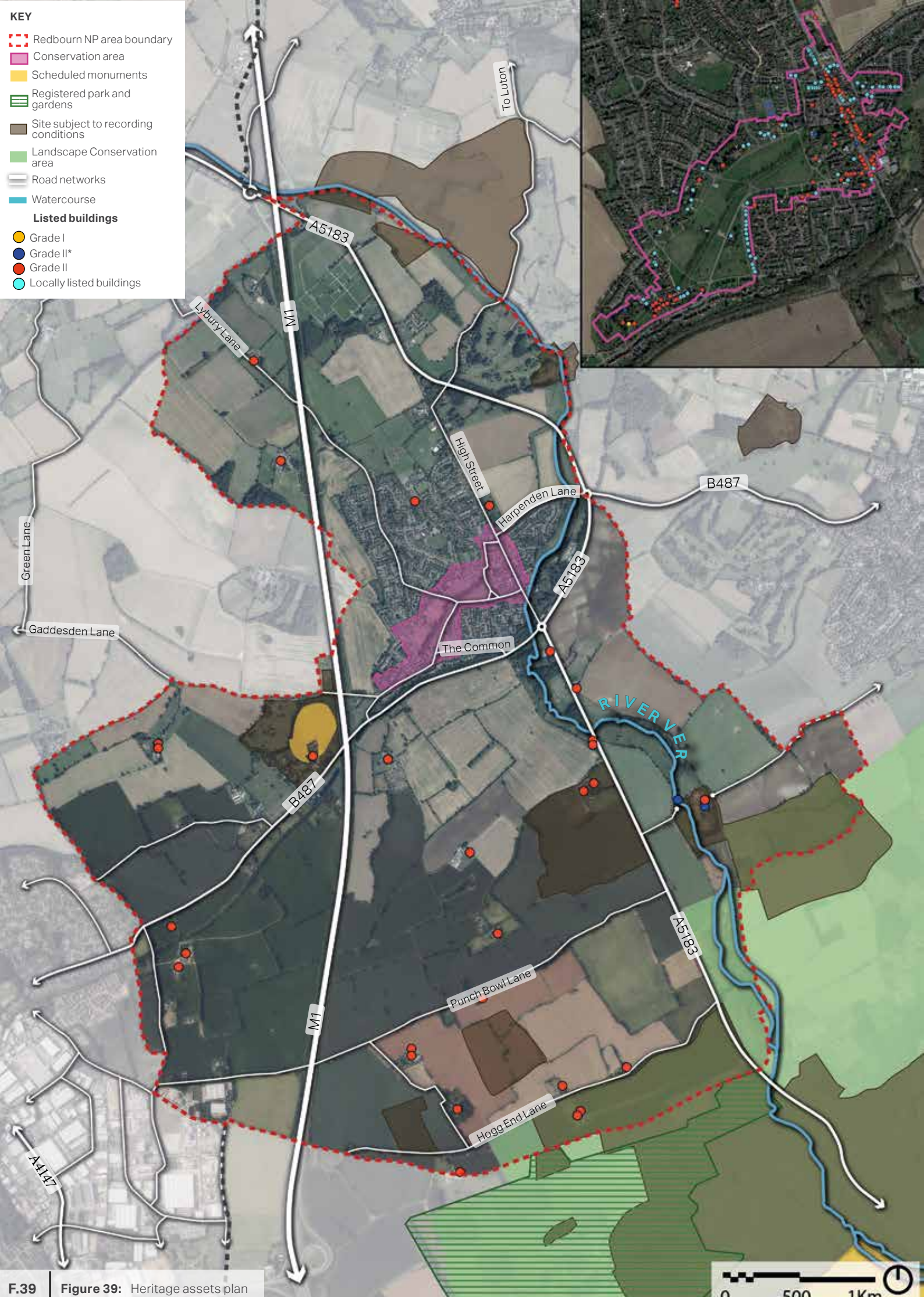
Figure 36:
Cumberland House, a Grade II* listed building on Lamb Lane

Figure 37:
The Priory, a Grade II* listed building with Tuscan wood porch on High Street

located in proximity of Silk Mill House. The Portico was originally the doorway of Redbourn House, a grand mansion which once stood in the High Street. Redbourn House was demolished in 1955, but the doorway re-erected and remained for over 60 years.

Other heritage assets in the area are the Registered Park and Gardens to the south of the Neighbourhood Plan boundary and a number of locally listed buildings, as shown in Figure 39.

Figure 38:
Silk Mill House, the village museum and the Portico located on South Common



F.39 | **Figure 39:** Heritage assets plan

8 CA. Character areas

3.1.8 Character areas (CA)

Following on from the analysis set out above, this part of the report focuses on the different character areas within Redbourn Neighbourhood Plan Area. These different areas are characterised by (among other things) variations in street pattern, car parking arrangements, layout of buildings, rooflines/ building heights, public realm and landscape setting.

While some of the character areas are clearly defined and have very fixed boundaries, there is often overlap and an element of mixing. Future development needs to take into account in any design proposals the elements consistent or distinctively occuring within each character area.

Five character areas identified within Redbourn Neighbourhood Plan Area are shown on Figure 40.

As noted above, development proposals will need to understand the context of thr built and natural environement and demonstrate how their designs have responded to the character area. The descriptions of the character areas are included on the following pages.

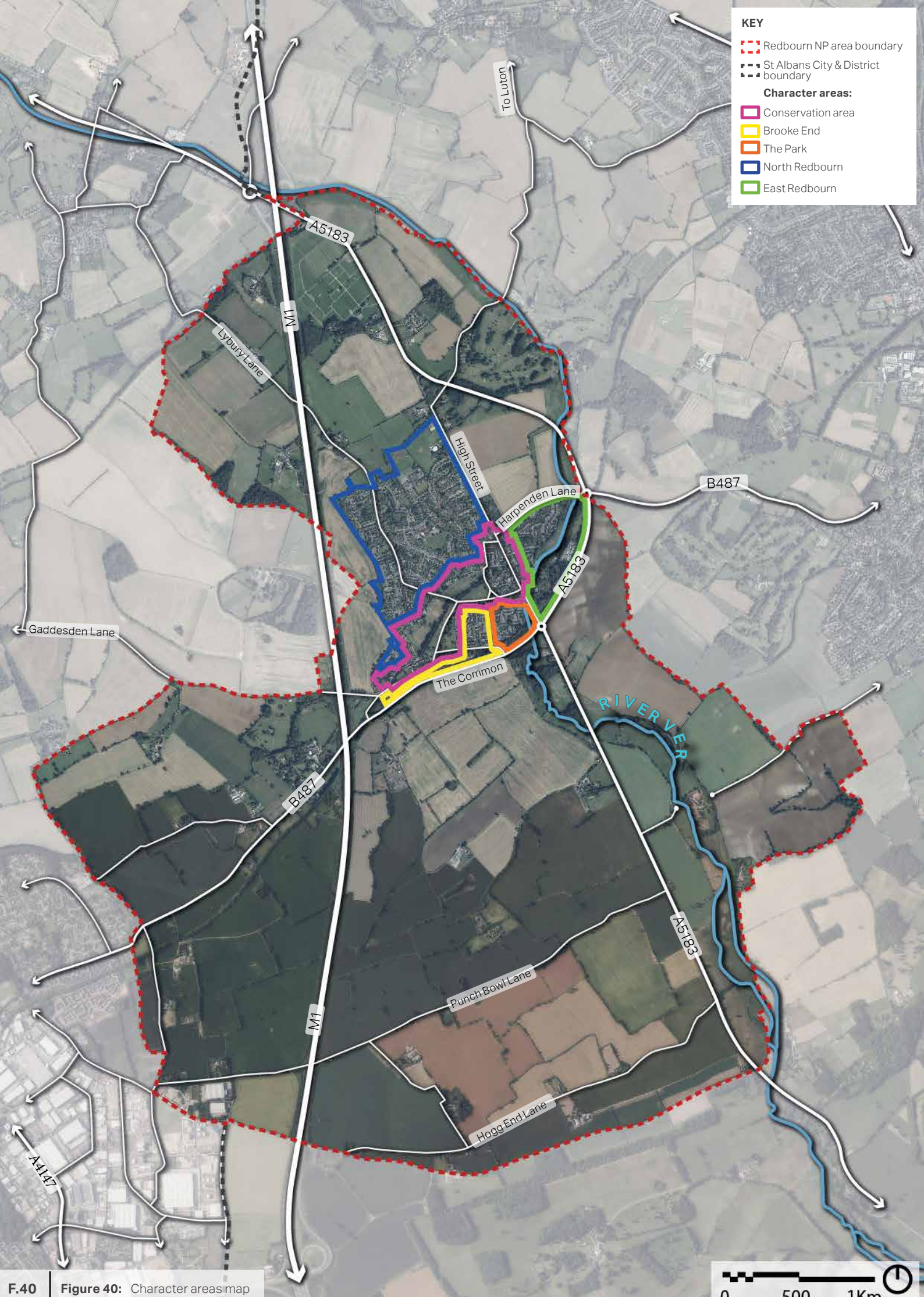
1 Conservation area

2 Brooke End

3 The Park

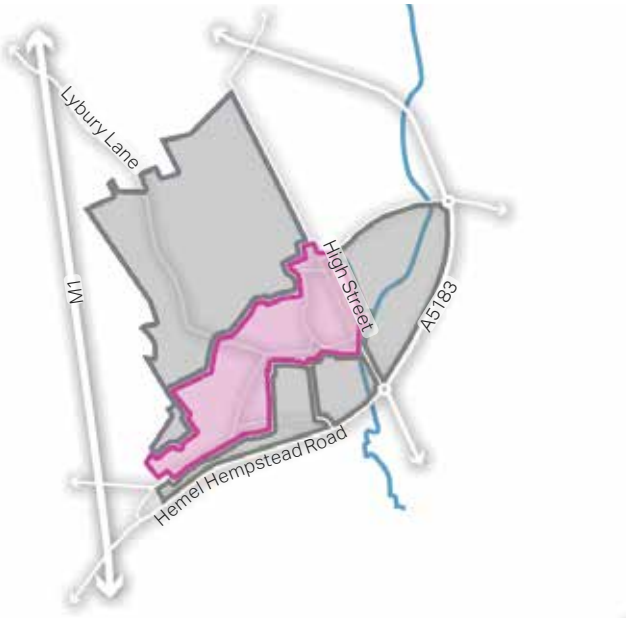
4 North Redbourn

5 East Redbourn



F.40 | **Figure 40:** Character areas map

1 Character area 1: Conservation Area



Land Use	This contains the most mixes of uses of the character areas with retail, commercial, services, health and hospitality uses found here, along with an element of residential uses.
Pattern Of Development	The Conservation Area consists of The High Street, Church End and the Common. Church End is the most attractive part of the Conservation Area with a group of brick fronted cottages framing the entrance to St Mary's Churchyard. The High Street is the principal shopping frontage, its straight form formed from the Roman road of Watling Street. The Common is an impressively large open space dominated by avenues of lime trees from Church End to Cumberland House.
Building Line/Plot Arrangement	Buildings on the High Street largely front onto the pavement and follow the road layout. The Red House and the Priory differ and dominate at a larger scale to their neighbours, the rest of the buildings are of the same scale.
Boundary Treatment	Some properties on the High Street have original railings or low walls enclosing front areas with all shop entrances and windows facing directly onto the public footpath to maximise engagement with pedestrians, creating an inviting and active frontage. The rear yards and gardens are bounded by high walls, some of which are listed which need to be preserved. Most of the buildings on The Common have hedges, low walls, or fences to front gardens providing rural forms of boundary treatment.
Heights & Roofline	The High Street appearance is consistent in terms of height with majority of buildings being two storeys. The Red House, the Priory and No. 65 High Street are the only three storey Georgian buildings within this character area.
Public Realm	St Mary's Church is a significant landmark built with flint and rubble walls. The churchyard plays an important role in the public realm fronting to Hemel Hempstead Road. The use of brickwork ad some half timbered buildings are prominent in this area. A large area of grass crossed by avenue of lime trees on the Common and presence of mature tress provide an attractive space. The Cumberland Garden is a quiet secluded walled garden which was previously part of Cumberland House.

High Street

Figure 41:
A view to High Street

Figure 42:
Red House with Georgian façade

Figure 43:
Thrived shops and retail along High Street

Figure 44:
Fire Station and Library at the junction of Harpenden Lane and the High Street

Figure 45:
Bull Inn, a 15th century building with yellow render

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Church End

Figure 46:
A view towards Church End

Figure 47:
Semi-detached houses on Ben Austins

Figure 48:
Parish Church of St Mary's

Figure 49:
A building with painted brick façade


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The Common

Figure 50:
The row of terraced houses along East Common

Figure 51:
Large green space in the Common near the Memorial

Figure 52:
The line of trees on both sides of the footpath in the middle of the Common

Figure 53:
Detached house with red brick and hipped roof

Figure 54:
Terraced house salong The Common


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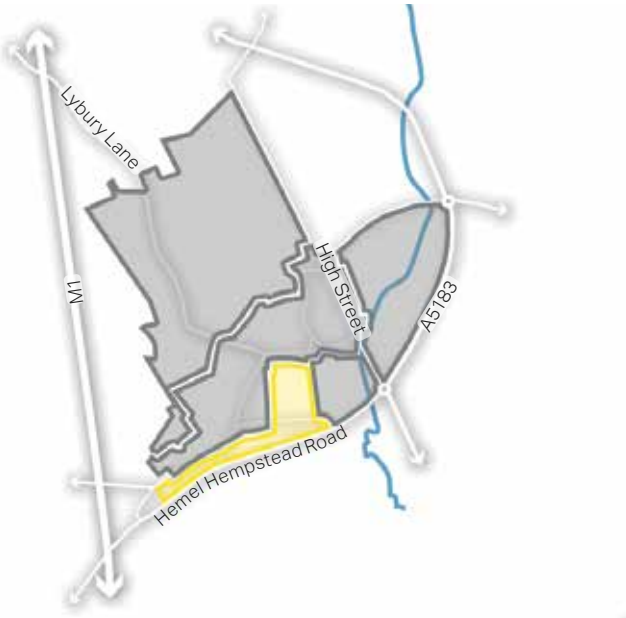
2 Character area 2: Brooke End



Land Use	The majority of the character area is residential with some leisure and service uses such as Redbourn Museum and St Mattews Care Home.
Pattern Of Development	The area includes two parts, development along the linear Hemel Hempstead Road and part of Chequer Lane adjacent to The Nickey Line; and development around Brooke End- a meandering road with cul-de-sacs branching off it. The majority of buildings are detached, with larger plot sizes along Hemel Hempstead Road and smaller plot sizes on Brooke End.
Building Line/Plot Arrangement	There are few variations in building setbacks and building orientation throughout the character area. There is a sense of unity and coherence in terms of the built form, even where there are variations in style or size, simply because of the consistency of the building line. The building line follows the linear Hemel Hempstead and Chequer Lane with subtle variations and follows the meandering form of Brooke End to the east of the character area.
Boundary Treatment	Most houses have good-sized front gardens with low brick walls, hedges, planting and lawns.
Heights & Roofline	The average buildings heights is 2 storeys. The roofline varies across the character area, with the most common type being open gable and hipped roofs. Chimneys are also commonly found in this character area.
Public Realm	There are some significant views from Hemel Hempstead Road of St Mary's Church in the foreground. Also some important hedge and tree groups can be found on this road adding interest to the public realm. The Red River, a tributary of River Ver, flows through part of the Common at The Moor where it passes through Weeping Willows and several established trees.

Figure 55:
The properties set back along Hemel Hempstead Road

Figure 56:
The continuous building line along Brooke End

Figure 57:
A view toward rendered detached house on Brooke End

Figure 58:
Weeping Willows along the River Red at The Moor on Chequer Lane

Figure 59:
Red River and attractive environment along Chequer Lane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3 Character area 3: The Park

Land Use	The area is mostly residential with small areas of services and education uses.
Pattern Of Development	The majority of the buildings in this character area are built in the Span Housing Style with most of them being 1960s terraced houses. The main road is The Park connecting The Common to Chequer Lane. This road is meandering with some secondary roads at right angles.
Building Line/Plot Arrangement	Building lines follow the road layouts and the building set back varies depending on the location of the properties which creates interesting views. Some of the front gardens have adequate width and others have paved front gardens in use as on-plot parking.
Boundary Treatment	The front gardens of the terraced houses have very limited boundary treatments, with a small number of hedges present along some of the properties. The front gardens relate closely to pedestrian paths which creates minimal separation between the public and private spaces and a sense of shared environment. A mix of decorative fences and brick walls enclose the rear of the buildings, which can be viewed from communal gardens.
Heights & Roofline	Buildings have a modern design style with mono pitch roofs. The majority of properties are 2 storey buildings which create a monotonous streetscape within the character area.
Public Realm	There are large integrated landscaped communal gardens at the back of terraced houses. This open space is used by children to play and residents for social events. Footpaths cross the communal gardens.

Figure 60:
Terraced yellow brick house with hung tiles with spacious communal gardens

Figure 61:
High wall with decorative fences at the back of properties

Figure 62:
Two storey terraced houses with flat roofs

Figure 63:
Footpath along the green space at the heart of The Park


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4 Character area 4: North Redbourn

Land Use	This character area makes up almost half of Redbourn towards the north. The area consists of education, religion, leisure facilities and residential uses.
Pattern Of Development	Considerable development has taken place to the north of the Common since the Second World War. This character area is bounded by Green Belt to the north, east and west. The majority of the buildings are located within permeable blocks with a variety of typologies but predominantly detached and semi-detached homes.
Building Line/Plot Arrangement	Although mostly consistent there are small variations in building set back throughout the area. Most buildings are set back with front gardens separated from pavement by low brick walls and/or hedges.
Boundary Treatment	Most of houses have good-sized front and back gardens with houses on streets such as Snatchup, Crouch Hall Lane and Bettespol Meadows having more spacious gardens. Low brick walls, planting and lawns are the most common types of boundary treatment. A recurring feature of the permeable streets in this area are the green verges alongside the pavement. Trees and other vegetation can also be found adjacent to the roads.
Heights & Roofline	Building heights are mostly 2 storeys with some bungalows. The rooflines vary and include gabled, hipped and half hipped roofs. Chimneys are very common in this character area and dormer projections are very rare when compared to other character areas.
Public Realm	There are some public facilities at Redbourn Primary School, St. Lukes Foundation school's open spaces, Hill Top Park, Flamsteadbury Park, Ridgedown green space and two allotment sites, all of which provide public realm amenity for residents.

Figure 64:
The properties along Dunstable Road

Figure 65:
Semi-detached house along Blackhorse Lane

Figure 66:
A wide variety of footpath and twittens along the properties add interest to the village and encourage sustainable transport mode

Figure 67:
The configuration of road, footway and green verges provide an accessible and welcoming place on Bettespol Meadows

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5 Character area 5: East Redbourn

Land Use	The area includes industrial, retail, services and residential uses.
Pattern Of Development	East Redbourn is a triangle area bounded by A5183 to the south, Harpenden Lane to the north and the High Street to the west. Ver Meadows Caravan Site is situated to the south east. The River Ver passes through this character area and along the green space to the east which forms more than half the area. The most common building typologies are detached houses to the east and north and terraced houses along the High Street.
Building Line/Plot Arrangement	The main road is Crown Street which is a meandering street with some small tertiary roads stemming from it. The building line adjacent to High Street follows the linear pattern, while other buildings follow the meandering pattern of the roads. Apart from the buildings along the High Street which are of small grain, most other buildings have larger plots.
Boundary Treatment	There are large front and back gardens within the character area apart from on the High Street which have smaller proportion of mostly rear gardens. Low brick wall, fences and hedges are the most common boundary treatment type in the area. Green verges along Crown Street create separation between public and private spaces.
Heights & Roofline	The average building heights are 2 storeys. The roofline varies across the character area, the most common being the open gable, hipped and half hipped roofs. Chimneys are also commonly found in this character area.
Public Realm	This character area benefits from a large open space forming more than half of the area, but with limited footpath access points. The Nickey Line, a well-used cycle way and footpath separated from A5183 by a line of trees and hedgerows on both sides, is located to the south and runs inide the A5183.

Figure 68:
Gertrude Peak Place, a care home on High Street

Figure 69:
Ribbon development consisting mainly of bungalows along Harpenden Lane

Figure 70:
A view to the Fire Station at the junction of Dunstable Road and Harpenden Lane

Figure 71:
A view to Cumberland Gardens

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04 Design guidelines and codes

4. Design guidelines & codes

The aim of this chapter is to ensure that future development within the village is well designed and built to last. It intends to show how the distinctive features within the village can be enhanced by creating high quality places, thriving communities and prosperous places to live. The following pages introduce a set of design principles for Redbourn.

4.1 Introduction

New development, at any scale, should not be viewed in isolation, but considerations of design and layout must be informed by the wider context and respond to each character area.

The general design principles that will look at the pattern of streets and spaces, building traditions, materials and the natural environment should all respond to the character and identity of each character area recognising that new building technologies are capable of delivering acceptable built forms and may sometimes be more efficient.

It is important that the new design embodies the 'sense of place' and also meets the aspirations of people already living in that area, maintaining a harmony between any new development and the surroundings.

The set of design principles shown on the following pages are specific to Redbourn and are based on the analysis of the character areas and discussions with members of the Neighbourhood Plan Steering Group.

1 SL. Settlement layout

2 SM. Safe movement

3 BU. Buildings

4 RH. Regeneration of the High Street

5 LC. Respecting the local character

6 SU. Sustainability

How do the design principles relate to each character area?

This table links the design principles to the different character areas in the parish, which are introduced in the next section. The aim of the design codes is to specify the design actions that explain how to achieve the design principles.

Key:

\+ This design principle does relate to this character area

\- This design principle does not relate to this character area

Applicable design principles		Related character area				
SL	**Settlement layout**	**1**	**2**	**3**	**4**	**5**
SL01	Pattern of developments	+	+	+	+	+
SL 02	Layout and grain	+	+	+	+	+
SM	**Safe movement**					
SM 01	Interconnected street network	-	+	+	+	+
SM 02	Pedestrian and cycle paths connectivity	+	+	+	+	+
SM 03	Parking typologies	-	+	+	+	+
SM 04	Cycle parking	+	+	+	+	+
SM 05	Legibility and signage	+	+	+	+	+
BU	**Buildings**					
Bu 01	Houses for a lifetime	+	+	+	+	+
Bu 02	Scale form and massing	+	+	+	+	+
Bu 03	Building proportion	+	+	+	+	+
Bu 04	Aspect and orientation	+	+	+	+	+
Bu 05	Enclosure	+	+	+	+	+
Bu 06	Boundary treatment	+	+	+	+	+
Bu 07	Building line and setback	+	+	+	+	+
Bu 08	Roofline	+	+	+	+	+
Bu 09	Corner buildings	+	+	+	+	+
Bu 10	Active frontage	+	-	-	+	-
Bu 11	Well defined public and private space	+	+	+	+	+
Bu 12	Extension and alteration	-	+	+	+	+
RH	**Regeneration of the High Street**					
RH 01	Traffic calming	+	-	-	-	-
RH 02	Parking	+	-	-	-	-
RH 03	Mix of use	+	-	-	-	-
RH 04	Public realm	+	+	-	-	-
RH 05	Shop fronts	+	-	-	-	-
LC	**Respecting the local character**					
LC 01	Landscape and green space	-	+	+	+	+
LC 02	Landmarks and views	+	+	+	-	+
LC 03	Architectural details	+	+	+	+	+
LC 04	Materials and colour palette	+	+	+	+	+
LC 05	Street lighting/ night skies	-	+	+	+	+
SU	**Sustainability**					
SU 01	Energy efficient housing and production	+	+	+	+	+
SU 02	Biodiversity	-	+	+	+	+
SU 03	Sustainable drainage	+	-	-	-	+
SU 04	Permeable pavements	+	+	+	+	+
SU 05	Storage and slow release	-	+	+	+	+
SU 06	Bioretention systems	-	+	+	+	+

4.2 Settlement layout (SL)

Future developments should be sympathetic to the local character and history, and establish or maintain a strong sense of place.

The relationship between different components of settlement should be carefully designed. Of those important elements within settlement layout, the pattern of developments and layout and grain need to be taken into account. These are elaborated in more detail on the following pages.

SL 01. Pattern of developments

SL 02. Layout and grain

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Figure 72:
The row of two-storey buildings on Dunstable Road

Figure 73:
Detached house on Brooke End

Figure 74:
Properties along Church End with open gable roof

SL 01. Pattern of development

The settlement of Redbourn dates back to at least Saxon times. Church End was probably the earliest settlement with St Mary's Church being built around 1100 replacing an earlier Saxon Church.

Over the years, the village expanded around the historic core and the conservation area including the High Street, Church End and The Common. The High Street follows the line of the Roman Watling Street. In late sixteen/ seventeen centuries the High Street was lined with coaching inns and shops as a consequence of the passing trade as one of the main roads to the Midlands. A northworthy number of these timber framed buildings remain behind later Georgian brick façades. During the Georgian period the village prospered.

A branch of the Midland Railway line was constructed - skirting Redbourn to the south - from Hemel Hempstead to Harpenden with a station at Redbourn, the station however was closed in 1979.

Significant housing development took place to the north of the Common since the Second World War. After this period the village suffered from traffic issues due to increase of road haulage. The village was relieved from this traffic after the construction of M1 and the eastern by-pass. The construction of the embankment and bridges had a significant effect on the village appearance similar to that of the construction of the M1 in 1959.

The following principles should be taken into account in any future developments

- Any future developments should reflect the local context ensuring that it makes a positive contribution to the existing built form;
- To ensure a good fit between new and old it is important that any new development seeks to conserve and enhance the character of the existing settlement in terms of urban form as well as character; and
- Developments affecting the transitional edges between a settlement and countryside should be softened by landscaping to complement the character of the adjacent or surrounding countryside.

SL 02. Layout & grain

Understanding and appreciating the local historic environment and the different character areas can help to ensure that potential new development is properly integrated with the existing settlement and does not result in the loss of local distinctiveness.

- Developments should respect the historic locally distinctive grain with mix of form, layout and size;
- Siting and layout of new developments must be sympathetic to the specific character areas and must respect the historic heritage of the village; and
- Developments which are high density and do not reflect the current grain of each character area should be avoided unless they are identified on a site for a different design approach. Proposals need to consider existing density and the relationship between buildings and plot sizes.

Figure 75:
Small grain on High Street

Figure 76:
Medium grain in The Park Character Area

Figure 77:
Large grain on Nicholls Close in North Redbourn Character Area

2 SM. Safe movement

4.3 Safe movement (SM)

Safe movement looks at how to create safe, attractive and convenient connections around Redbourn and to the wider area utilising sustainable modes of transport where possible.

Walking and cycling should be encouraged to support growth, limit the negative impacts of traffic congestion on the roads and create direct and memorable routes.

In addition, public transport should be used to support active travel and provide improved links between places.

SM 01. Interconnected street network

SM 02. Pedestrian and cycle paths connectivity

SM 03. Parking typologies

SM 04. Cycle parking

SM 05. Legibility and signage

SM 01. Interconnected Streets

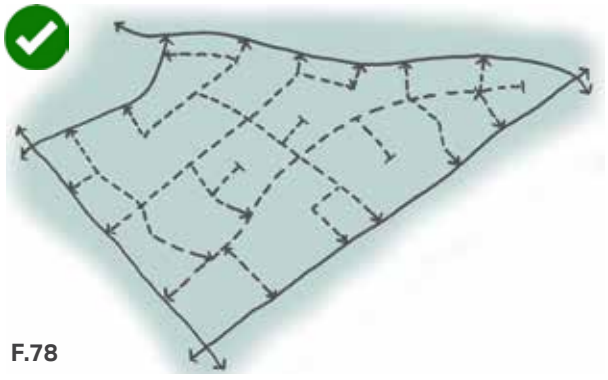
Streets should be connected with each other and different travel options and routes should be considered. Good practice favours a generally connected street layout that makes it easier to travel by foot, cycle, and public transport. A more connected pattern creates a 'walkable neighbourhood', a place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

The street network in Redbourn is reflective of its historic development with The High Street aligning with the Roman Watling Street as principal route which connect the village to surrounding settlements. Residential roads with cul-de-sacs branch of the High Street into mostly residential neighbourhoods.

The street network contributes to the village's informal character and must be preserved in the design of future roads and retrofit of existing ones.

The following principles must therefore be taken into account:

- New roads, if required, must meet the technical highways requirements as well as be considered a 'space' to be used by all, not just motor vehicles. It is essential for new developments to have roads designed for the needs of pedestrians and cyclists. Existing roads must be retrofitted for the same purpose and to discourage speeding;
- Proposed routes are to be laid out in a permeable pattern, allowing for multiple connections and choice of routes, particularly on foot. Any cul-de-sacs should be relatively short and provide onward pedestrian links; and



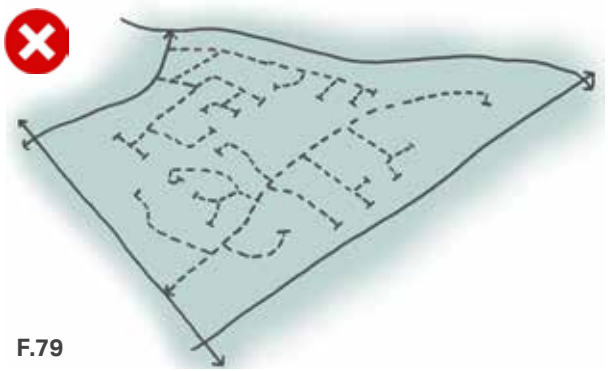


Figure 78:
A connected layout, with some cul-de-sacs, balances sustainability and security aims in a walkable neighbourhood.

Figure 79:
A layout dominated by cul-de-sacs encourages reliance on the car for even local journeys.

SM. Safe movement

- Proposals shall have regards to the existing relationship between buildings and the street or other surrounding open spaces and how the siting and position of any new buildings can positively respond to this;
- There should be a clear hierarchy of streets to facilitate different levels of activity. Streets should incorporate opportunities for landscaping, green infrastructure and sustainable drainage; and
- The design of the street network should respond to the topography and natural desire lines of the area.

Figure 80:
The main road around the Common

Figure 81:
Totton Mews, a good example of interconnected road benefiting from from a well landscaped space

Figure 82:
Mansdale Road with green verge and footway

SM 02. Pedestrian and cycle paths connectivity

Following the railway line closure in Redbourn the trackbed was converted to a footpath and cycle lane which is known as The Nickey Line (See Figure 85). This is a seven mile long path opened in 1985 as a footpath and cycleway. The Nickey Line links Harpenden, Redbourn and Hemel Hempstead.

The Ver Valley Walk 4 to the south of Redbourn is a circular path starting tfrom the Cricket Clubhouse on the Common (See route on Figure 07).

The following are the principles for interconnected streets, pedestrian/ cycle paths:

- New streets should be considered a space to be used by all, not only vehicles. Therefore, it is essential that street design priorities the needs of pedestrians, cyclists and public transport users. The pedestrian and cycle path can be connected or circular depends on any future site; and
- Proposing short and walkable distances which are usually defined to be within a 10 minute walk or a 5 mile trip by bike. If the design proposal calls for a new street or cycle/pedestrian link, it must connect destinations and origins providing multiple access points where possible.


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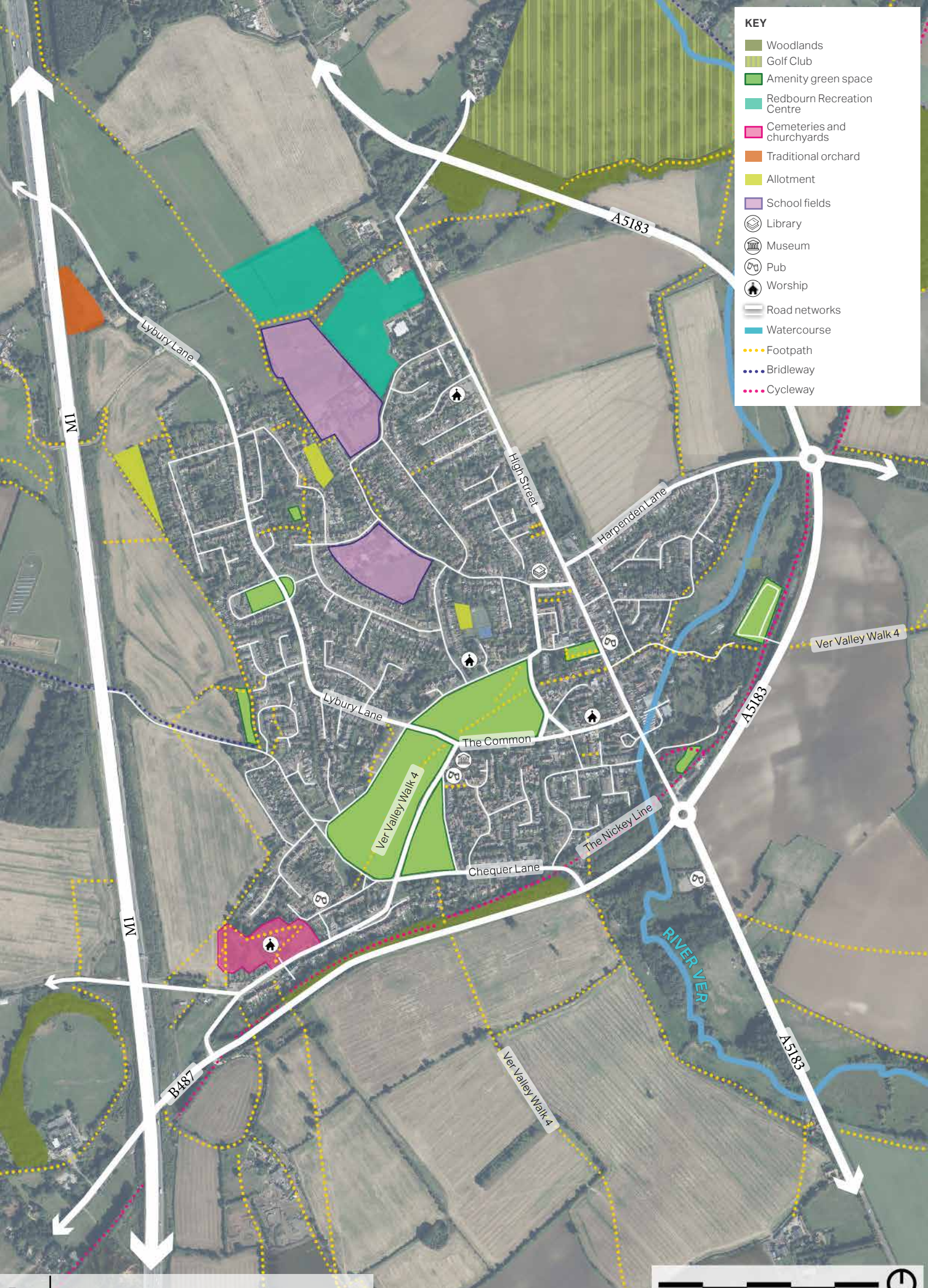
Figure 83:
An example of footpath with hedgerows on both sides

Figure 84:
A twittens in North Redbourn Character Area with view



F.85 | **Figure 85:** Pedestrian and cycle paths connectivity

SM 03. Parking typologies

Parking areas are a necessity of modern development. However, they do not need to be unsightly or dominate views towards houses. Parking provision should be undertaken as an exercise of placemaking.

- When placing parking at the front of a property, the area should be designed to minimise visual impact and to blend with the existing streetscape and materials. The aim is to keep a sense of enclosure and to break the potential of a continuous area of car parking in front of the dwellings. This can be achieved by means of walls, hedging, planting, and the use of quality paving materials;
- When needed, residential car parking can be translated into a mix of on-plot side, front, garage, and courtyard parking, and complemented by on-street parking;
- For family homes, cars should be placed at the side (preferably) or front of the property. For small pockets of housing, a rear court is acceptable;
- The provision of tandem parking encourages on-street parking. Where on-plot parking space is limited, tandem parking is acceptable, but should be avoided in areas which offer general access, e.g. parking courts;
- Car parking design should be combined with landscaping to minimise the presence of vehicles; and
- Parking areas and driveways should be designed to improve impervious surfaces, for example, through the use of permeable paving.

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Figure 86:
On-street parking along Church End

Figure 87:
On-plot car parking on Dunstable Road

SM. Safe movement

On-plot parking

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

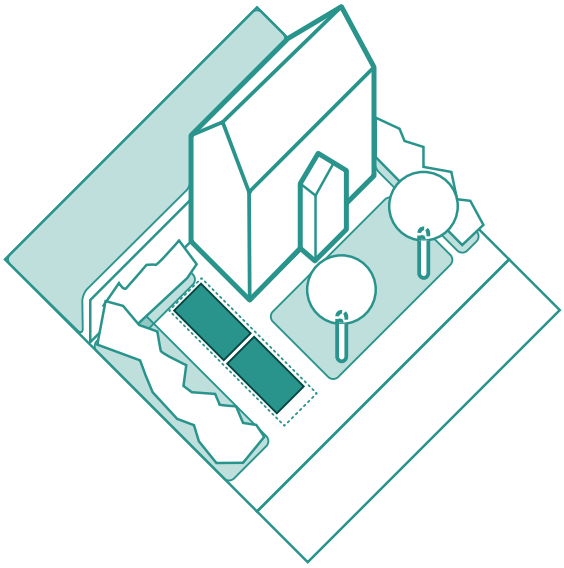

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Figure 88:
Diagram showing on-plot parking

Figure 89:
An example of on-plot parking in North Redbourn Character Area

On-plot parking with garages

- Where provided, garages must be designed either as free standing structures or as additive form to the main building. In both situations, it must complement and harmonise with the architectural style of the main building rather than forming a mismatched unit;
- Often, garages can be used as a design element to create a link between buildings and ensuring continuity of the building façade. However, it should be understood that garages are not prominent elements and they must be designed accordingly;
- It should be noted that many garages are not used for storing vehicles, and so may not be the best use of space; and
- Considerations must be given to the integration of bicycle parking and/or waste storage into garages.

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Figure 90:
Diagram showing on-plot parking with garage

Figure 91:
An example of on-plot parking with garage on The Common

Rear parking courtyard

- Rear parking courtyards must be overlooked by neighbouring properties;
- Access to the parking courtyards should be through archways where possible to ensure the continuity of the street frontage;
- Parking bays must be arranged into clusters with groups of 4 spaces as a maximum. Parking clusters should be interspersed with trees and soft landscaping to provide shade, visual interest and to reduce both heat island effects; and
- Public and private spaces should be very clearly defined to avoid confusion and necessary design mitigations should be applied for maximum safety such as gates or barriers.

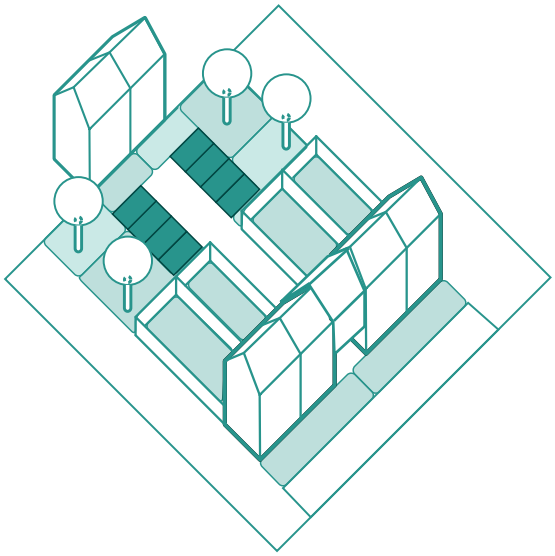

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Figure 92:
An overlooked rear parking courtyard

Figure 93:
The example of parking courtyard on Crown Street

On-street parking

- On-street parking must be designed to avoid impeding the flow of pedestrians, cyclists, and other vehicles, and can serve a useful informal traffic calming function.
- On low-traffic residential streets or lanes that are shared between vehicles and pedestrians, parking bays can be clearly marked using changes in paving materials instead of road markings.
- Opportunities must be created for new public car parking spaces to include electric vehicle charging points. Given the move towards electric vehicles, the associated infrastructure must not hinder pedestrian movement and should be designed to reduce visual clutter as much as possible. In addition, every opportunity must be taken to integrate charging technologies into the fabric of road and street furniture in the public and private realm.

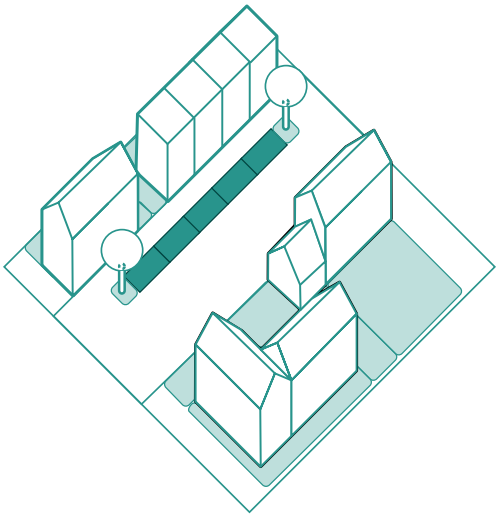

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Figure 94:
Diagram showing the on-street parking

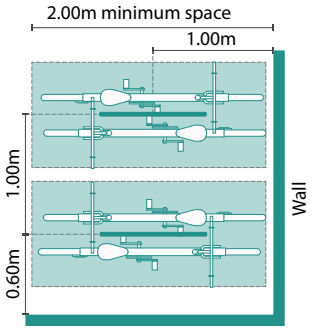
Figure 95:
Inset on-street parking with electric vehicle charging points

SM 04. Cycle parking

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

Houses without garages

- For residential units, where there is no on-plot garage, covered and secured cycle parking should be provided within the domestic curtilage;
- Cycle storage should be provided at a convenient location with an easy access;
- When provided within the footprint of the dwelling or as free standing shed, cycle parking should be accessed by means of a door at least 1300mm 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.



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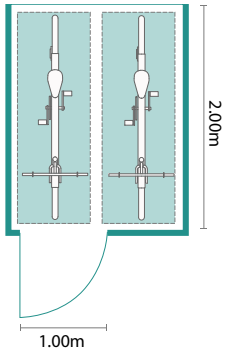

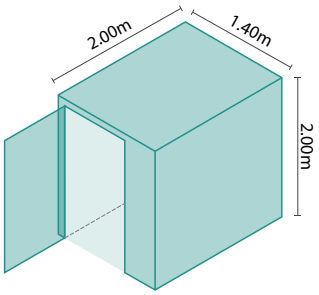

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Figure 96:
Sheffield cycle stands for visitors and cycle parking illustration.

Figure 97:
Secure covered cycle store for two cycle storage illustration

Houses with garages

- The minimum garage size should be 7mx3m to allow space for cycle storage;
- Where possible cycle parking should be accessed from the front of the building either in a specially constructed enclosure or easily accessible garage;
- The design of any enclosure should integrate well with the surroundings;
- The bike should be removed easily without having to move the vehicle. New development should promote cycling by providing more cycle routes and monitor the condition of the existing ones; and
- In the cases of apartments, cycle parking should be allocated at the basement or ground floor.

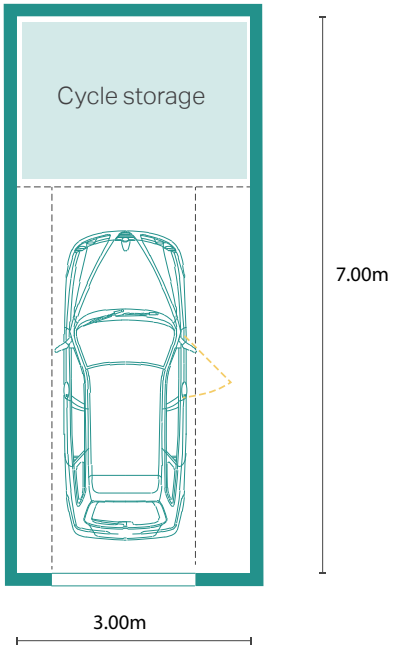

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Figure 98:
Indicative layout of a garage with a cycle storage area

SM 05. Legibility and signage

A legible and well signposted place is easier for the public to understand as people can orient themselves with visual landmarks and direct routes. Being able to navigate around a place makes people feel safer as well as offering a more pleasant living environment that functions well. Singage is an important element for Redbourn local character.

- Redbourn should use a variety of identifiable landmarks, gateways and focal points such as listed buildings located on the High Street and the significant green space like the Common to create visual links and establish a clear hierarchy between places;

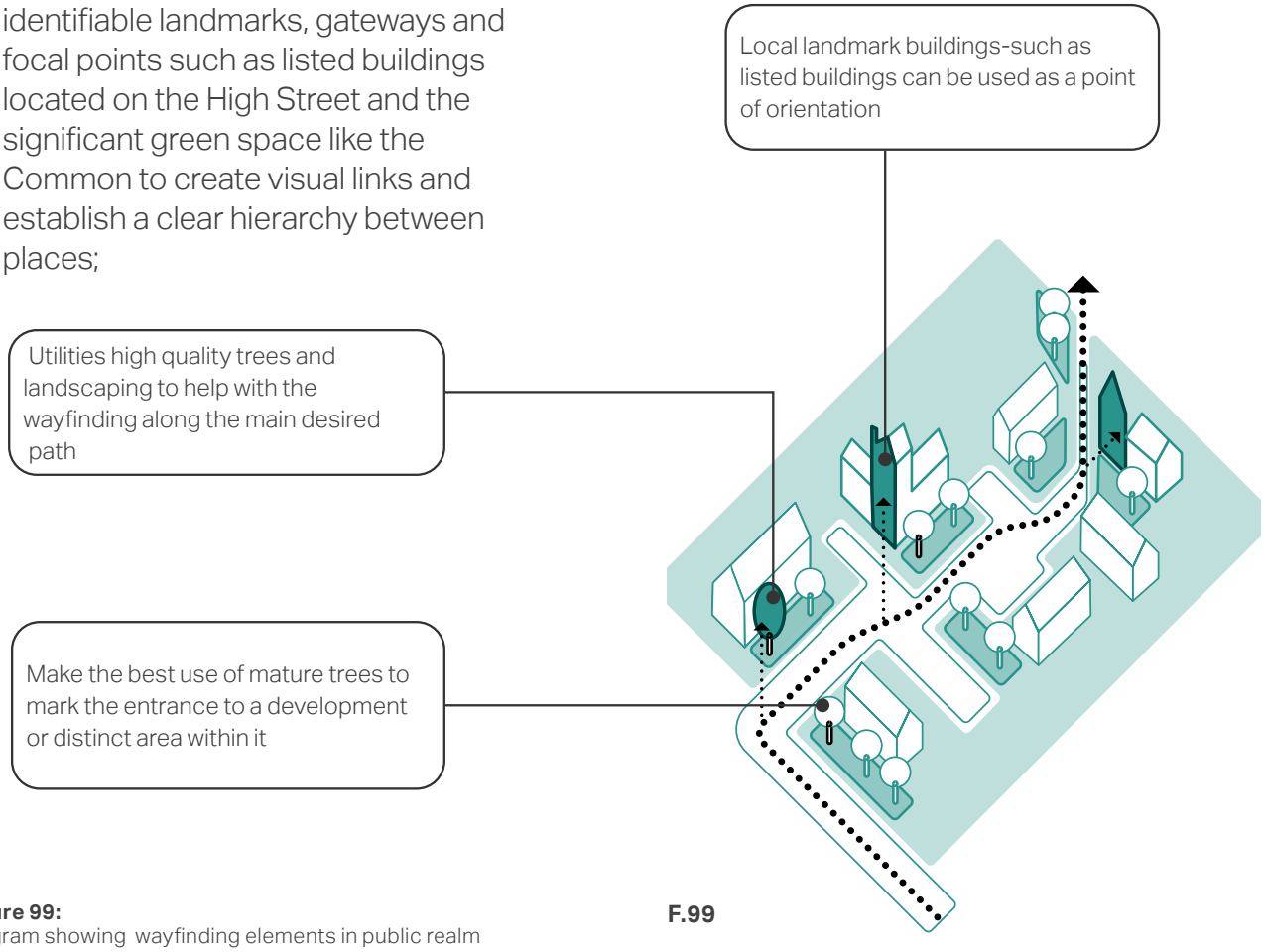

Figure 99:
Diagram showing wayfinding elements in public realm

- The village should be complemented by distinctive architectural elements around gateways and nodes;
- New developments should be designed around a series of nodal points focusing on the relationship with the existing character areas as well as the surrounding landscape;
- Wayfinding must be clearly established throughout the village, particularly along pedestrian and cycle routes and should be designed to complement and not clutter the public realm: and
- New signage design must be easy to read. Elements likes languages, fonts, text sizes, colours and symbols should be clear and concise, and avoid confusion.
- Box signs should generally be avoided and signwritten fascias preferred.

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Figure 100:
Redbourn Village sign on the Common

Figure 101:
The view to Fire Station from Harpenden Lane helps legibility in Redbourn

Figure 102:
The Priory as a three storey building actsention as a landmark on High Street increasing orientation

4.4 Buildings (BU)

New developments should encourage different housing types to reflect different size, type and tenure of housing needs for a range of people including but not limited to families with children, older people, people with disabilities, travelers, people who rent their home and people wishing to commission or build their own home.

Development must seek to provide housing with standard design principles, innovative housing solutions and have appropriate levels of space within the dwellings.

BU 01. Lifetime homes

BU 02. Scale form and massing

BU 03. Building proportion

BU 04. Aspect & orientation

BU 05. Enclosure

BU 06. Boundary treatment

BU. Buildings

BU 07. Building line & setback

BU 08. Roofline

BU 09. Corner buildings

BU 10. Active frontage

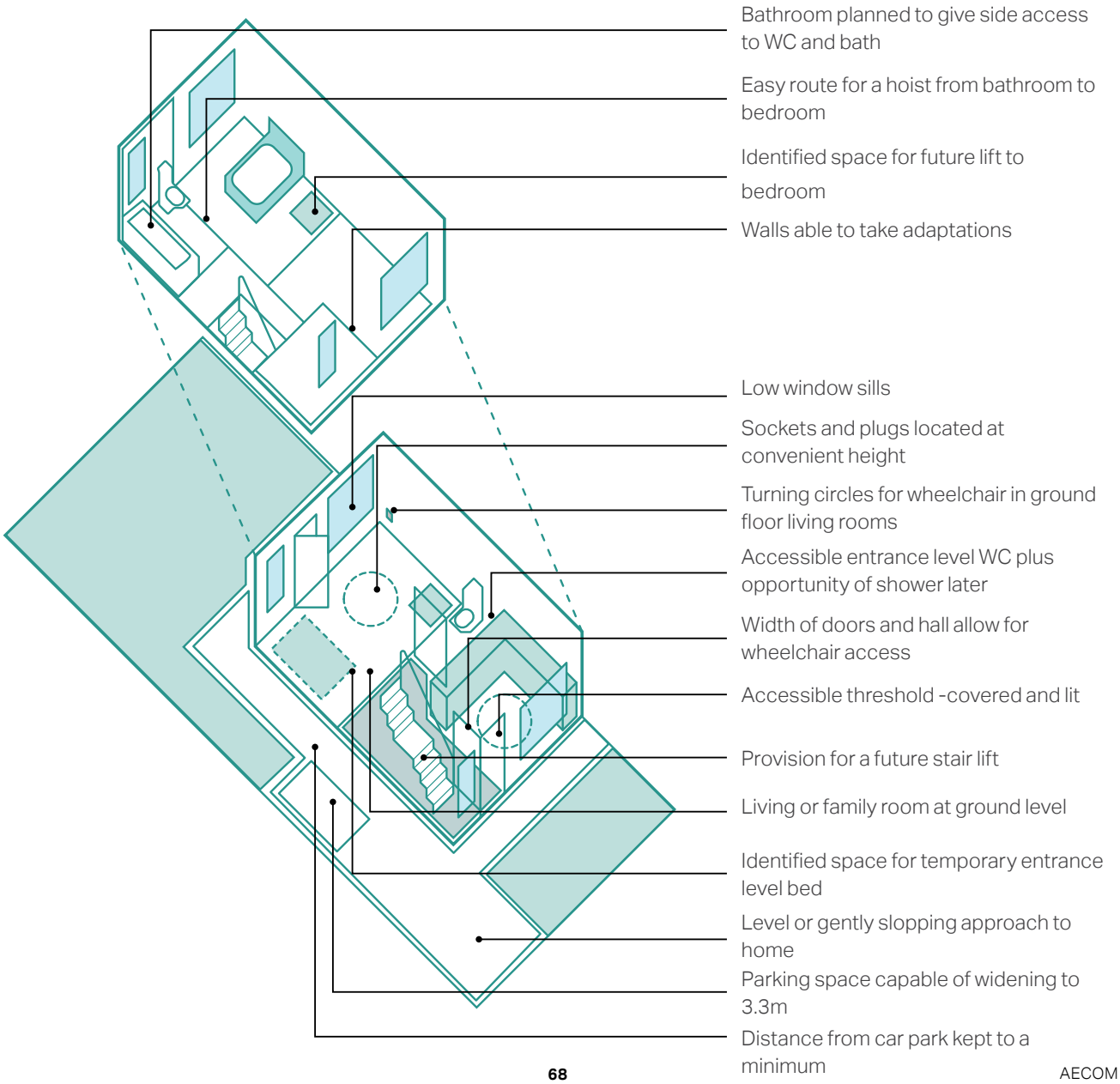
BU 11. Well defined public & private space

BU 12. Extension & alteration

BU 01. Lifetime homes

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

The diagram on this page illustrates the main principles of inclusivity, accessibility, adaptability and sustainability.



BU 02. Scale, form and massing

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

Building heights within Redbourn are very consistent, with the majority of the buildings being two-storey.

- The scale and massing of new buildings should be consistent with the form and massing of neighbouring properties;
- New developments should seek to respond to the surrounding context by using similar configurations with a modern interpretation. Buildings and developments that do not respect the existing village form should be avoided;
- The height of new buildings should respond to the surrounding context and should not be over-bearing or dominant in the existing street scene; and
- Development within Redbourn should be of a scale and design to reinforce the locally distinctive character of each character area.

Figure 103:
Mix of one-storey and two-storey properties along Harpenden Lane

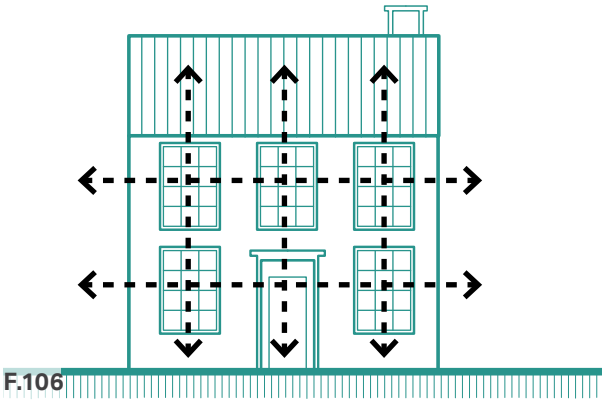
Figure 104:
Two-storey family house with timber frame on Church End

Figure 105:
Varied elevations on Brooke End

BU 03. Building proportion

The relationship between the building and its elements can provide visual interest and enhance the local character.

- The proportions of a building's elements should be related to each other as well as the scale and proportion of the building;
- The proportions should be dictated by and respond to the type of activity proposed as well as the composition of the existing streetscape;
- The front elevation of the buildings must be arranged in an orderly way to avoid creating cluttered façades; and
- Features such as windows, doors and solid walls should create vertical and horizontal rhythms along the façade providing variety.



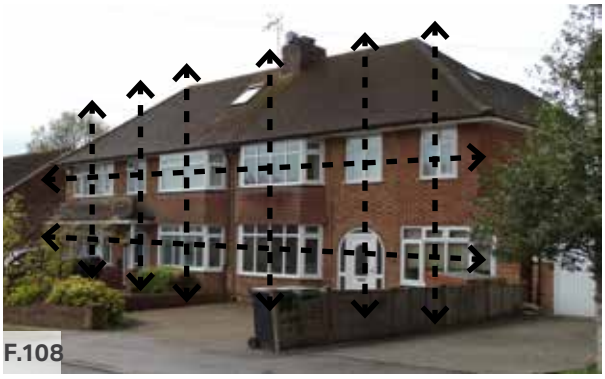


Figure 106:
Elevation showing typical building proportion in a detached house.

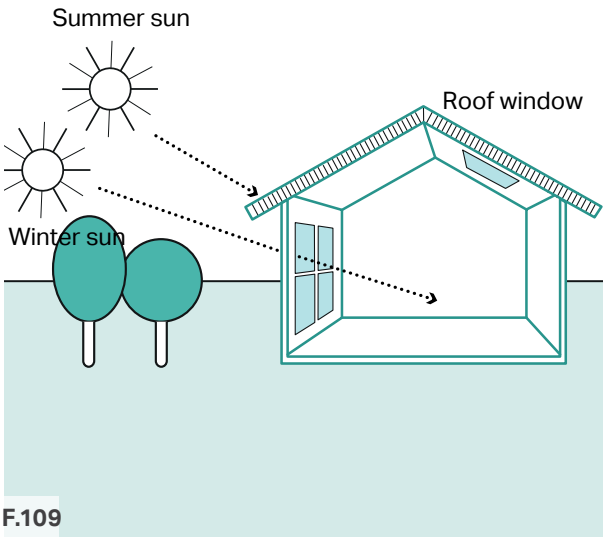
Figure 107:
An example of vertical and horizontal rhythms on Harpenden Lane

Figure 108:
Building proportions on Bettespol Meadows

BU 04. Aspect and orientation

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

- One of the main glazed elevations should be within 30° due south to benefit from solar heat gain. Any north-facing façades might have a similar proportion of window to wall area to minimise heat loss on this cooler side (See Figure 109).
- If houses are not aligned east-west, rear wings could be included so that some of the property benefits from solar passive gain (See Figure 110).
- Homes should be designed to avoid overheating through optimisation of glazed areas, natural ventilation strategies including high- and low- level openings, longer roof overhangs deep window reveals and external louvers/ shutters to provide shading in hotter summer months (See Figure 109).
- North facing single aspect units should be avoided or mitigated with the use of reflective light or roof windows.



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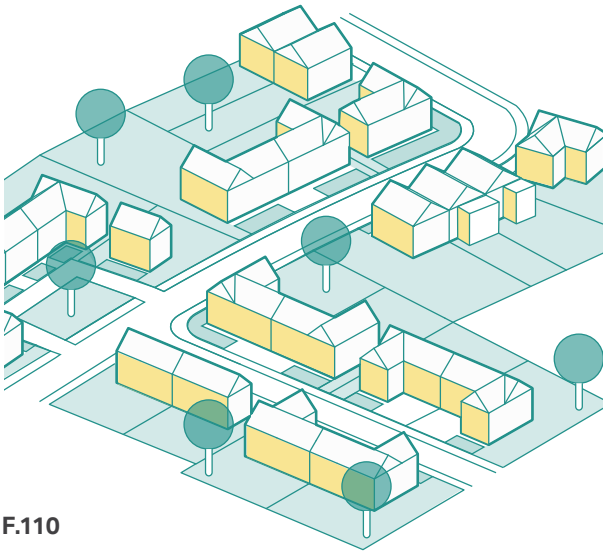

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Figure 109:
The use of roof window, pitch roof, location and size of windows in favour of maximising solar gain

Figure 110:
Elevations that would benefit from passive solar gain

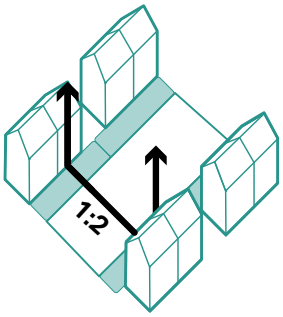
BU 05. Enclosure

Enclosure is the relationship between public spaces and the buildings or other features that surround them. A more cohesive and attractive urban form is achieved where this relationship is in proportion.

The enclosure ratio varied in the village with The Park being more enclosed due to having small front and back gardens. High Street is set back along pavement and normally without front gardens, providing an average of 1:3 enclosure ratio. However, the Common is less enclosed due to the semi-improved neutral grassland and scattered planted trees and avenue of Limes (See opposite Figures).

The following principles serve as general guidelines that should be considered to achieve a satisfactory sense of enclosure:

- Façades should have an appropriate ratio between the width of the street and the building height;



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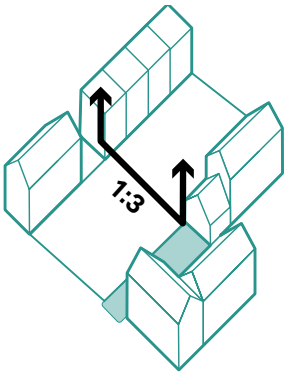

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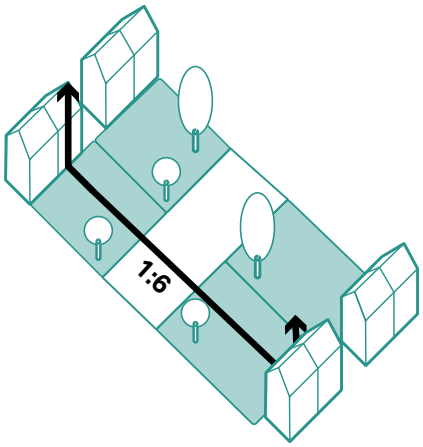

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Figure 111:
Enclosure ratio on Church End is about 1:2

Figure 112:
The enclosure ratio on The High Street is typically 1:3

Figure 113:
Enclosure ratio on The Common is more than 1:6

- Buildings should be designed to turn corners and terminate views;
- Narrow gaps between buildings must be avoided, they should be either detached/semi-detached or properly linked;
- Building lines should run parallel to the back of the pavement;
- In places with lower density, the sense of enclosure is provided from the use of natural elements such as trees and hedges; and
- In the case of terraced buildings, it is recommended that a variety of plot widths, and façade alignments should be considered during the design process to create an attractive villagescape.

Figure 114:
An example of enclosure ratio of 1:2 on Church End

Figure 115:
Enclosure ratio of 1:3 on High Street

Figure 116:
Enclosure ratio more than 1:6 on The Common

BU 06. Boundary treatment

Boundary treatments, such as hedges, low walls and fences should be included in design proposals to clearly distinguish public and private spaces.

- High walls and fences or railings should be avoided in the conservation area;
- Boundary treatments should reflect locally distinctive forms and materials, consisting of predominance of red brick low wall and wooden fence but also occasional use of flint for boundary walls; or hedgerows, trees or wooden fence;
- Development shall identify existing boundary treatments in the context of the site and consider appropriate boundaries for new development to ensure integration with existing context;
- Existing boundary trees and hedgerow should be retained and should be reinforced with native species; and
- Boundary treatments should use locally distinctive traditional materials or hedging comprising native species.

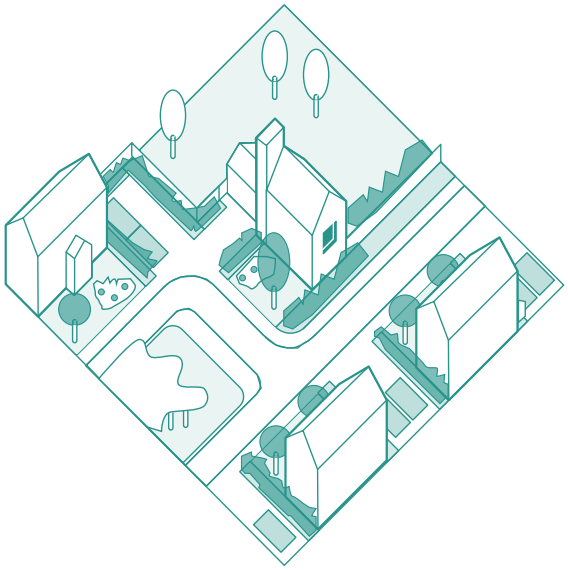

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Figure 117:
Diagram showing the boundary treatment such as low wall and hedges in front of houses

Figure 118:
Hedges and small green verge as boundary treatment in North Redbourn


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Figure 119:
Low wall as boundary treatment on Bettespol Meadows

Figure 120:
An example of tall hedges on either sides of the road in North Redbourn Character Area

Figure 121:
Low wall built by flint as boundary treatment on Crouch Hall Lane

Figure 122:
Well-kept hedges on Snatchup

BU 07. Building line and setback

The use of continuous building lines and setback distances contribute to the overall character of the area and the sense of enclosure of the streets and public spaces. Continuous building lines with a minimum gap create a strong distinction between public and private spaces, and provide definition to the public realm. Where buildings are more generously set back from the carriageway, the threshold spaces should be well landscaped.

- To ensure sufficient street enclosure private front threshold should have a modest depth and accommodate a small garden or area for plantation;
- Low to medium densities in residential areas can vary setbacks in order to respond to the landscape context and the more open character of the area; and
- Front gardens can be much deeper where the topography requires or to respond to the existing character area. It also helps to create a softer transition between countryside, green spaces and built environment.


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Figure 123:
High Street set back from the pavement with continuous building line without front gardens

Figure 124:
Consistent building line with adequate front garden on Flamsteadbury Lane

Figure 125:
Various setbacks along the Common

BU 08. Roofline

Traditional buildings within the village are unified by their simplicity of form, with gables and pitched roofs, which combined with variations in the height of eaves and ridges levels and the number of storeys, make an important contribution to defining the character of the area.

- Varied rooflines can help to create a more visually appealing and distinctive villagescape;
- The scale of the roof should be in proportion with the dimensions of the building with subtle changes in the roofline to avoid monotonous elevations; and
- Rooflines should respect the view corridors and not obstruct them. Topography and existing landmarks should be considered when designing new development.

Figure 126:
The roofline variation on Ridgedown

Figure 127:
Roofline on The Park

Figure 128:
The roofline with gabled dormers on Nicholls Close

BU 09. Corner buildings

An important villagescape principle is for buildings to satisfactorily address the corner. Where corner sites are visually prominent buildings should define the corner architecturally.

- Buildings should have multiple entrances if possible and two active frontages should be created by incorporating prominent entrances and windows;
- On corners which are less visually prominent, such as within the lower density residential areas, continuous built frontage should address the corner by using a series of linked dwellings where possible; and
- When a terraced, detached or semi-detached house faces out onto the corner, the buildings should have the main entrance and habitable room windows facing both sides to create activity, and should overlook the street. This building can also be taller or have a distinctive architectural element to ensure a greater presence.

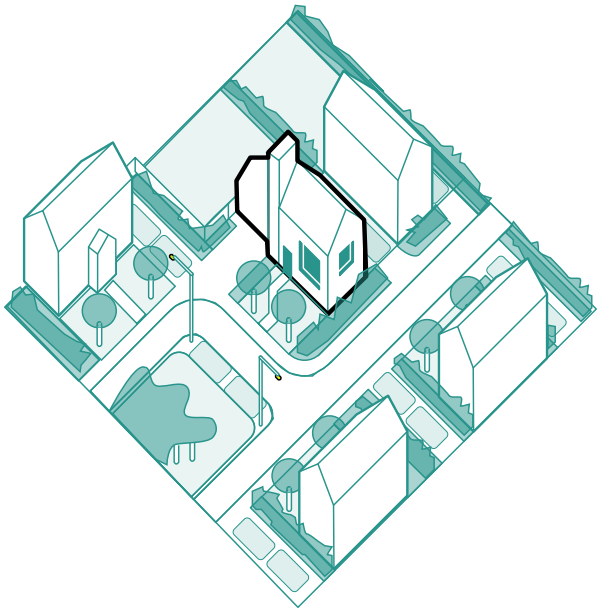

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Figure 129:
Diagram showing a corner building with two active frontages

Figure 130:
A corner building on the High Street with two entrances

BU 10. Active frontage

Active frontages bring life and vitality to streets and public spaces.

- Introducing regular doors, windows, front gardens and front parking, providing it does not dominate, can stimulate activity and social interactions;
- Narrow frontages with a vertical rhythm can create a more attractive and interesting streetscape, while articulation on façades and use of bays and porches can create a welcoming feeling; and
- Exposed blank façades facing the public realm must be avoided. They should normally be fully fenestrated.

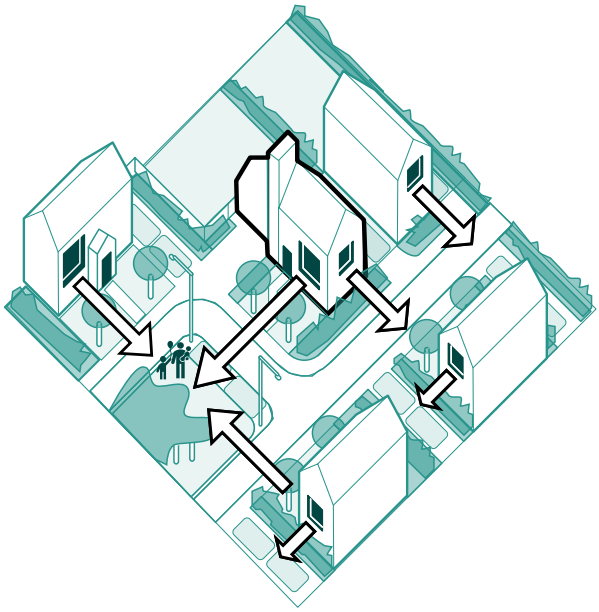

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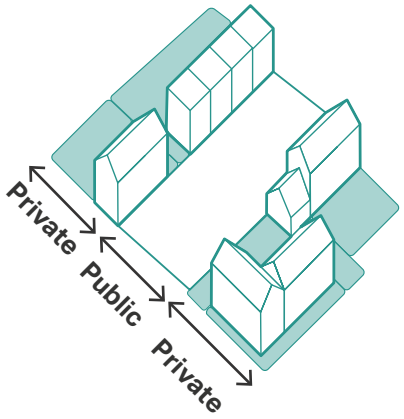
Figure 131:
Active frontages with a well-supervised public realm.

Figure 132:
An example of active frontage with regular fenestrations and front gardens on the Common

BU 11. Well defined public and private space

- Setbacks from the street and front garden landscaping, together with more detailed architectural design should seek to balance privacy for front living rooms with natural surveillance of the streets, and the need for street enclosure;
- The privacy distance between the backs of the properties should be a minimum of 20m. When this is not possible, the layout should be a back to-side arrangement, or use single-aspect buildings (north facing single aspect units should be avoided due to restricted lie amenity) to avoid creating overlooking issues;
- Appropriate boundary treatments including low walls, hedges and railings must be incorporated into design proposals to clearly distinguish public and private space; and



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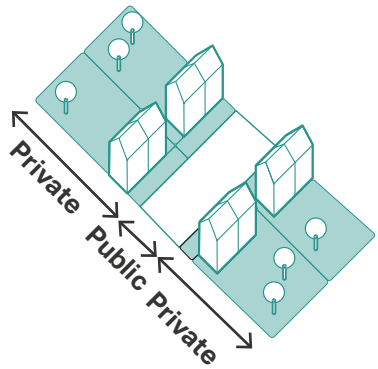

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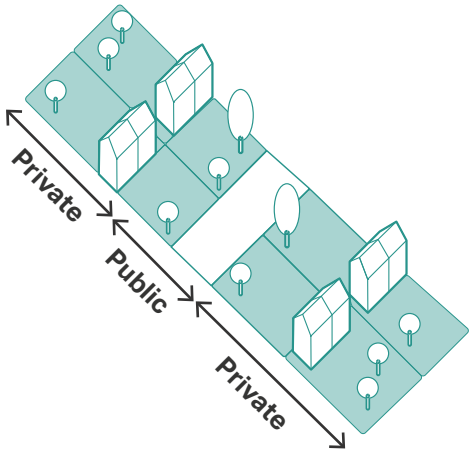

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Figure 133:
Public and private spaces on the High Street

Figure 134:
Public and private spaces on Snatchup

Figure 135:
Public and private spaces on Crouch Hall Lane

- Private open amenity space is important to wellbeing and is, in the form of back gardens, also part of the character of Redbourn. All new houses will be expected to have usable outside amenity space, with the exception of the village centre character area where more compact building typologies, such as the mews house, may be appropriate.

Figure 136:
Well defined spaces on High Street

Figure 137:
Public and private spaces on Snatchup

Figure 138:
Public and private spaces in front of a bungalow

BU 12. Extension and alteration

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

Many household extensions are covered by permitted development rights, meaning that they do not need planning permission. There are exceptions, though, that will be relevant here, such as conservation areas. Check the latest guidance here: https://www.planningportal.co.uk/info/200130/common_projects/17/extensions.

- The character of the existing building, along with its scale, form, materials and details should be taken into consideration when preparing proposals for alterations and/or extensions;
- External extensions should respect or enhance the visual appearance of the original buildings and the character of the wider street scene;
- Extensions should be subordinate in term of scale and form and shall not be visually dominant or taller than the existing building;
- Extensions should be recessed or in line with the existing building façade and shall use lower ridge and eaves levels to ensure that the length and width of the extension are less than the dimensions of the original building;
- Extensions should be designed using materials and details to match the existing building or alternately use contrasting materials and details with a contemporary design approach. However, in either case extensions should create a harmonious composition overall and a strong degree of unity with the original building;
- Extensions should safeguard the privacy and daylight amenity of neighbouring properties;
- Extensions should retain on-site parking capacity and a viable garden area to meet the needs of future occupiers; and
- Extensions of existing buildings should help to reduce carbon emission by complying with high energy efficiency standards and utilising low energy design.

Front extensions

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

The extension can project maximum 2 metres beyond the front façade and will not cover more than 50% of the front elevation.

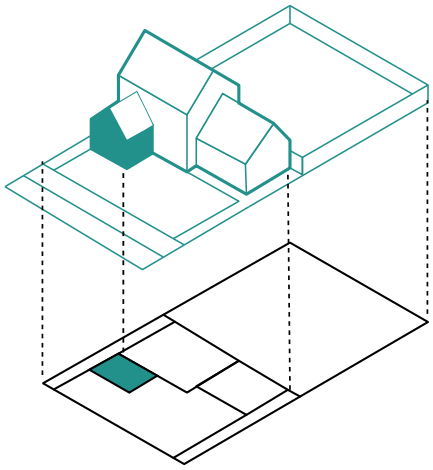

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Figure 139:
An example diagram of a front extension

Figure 140:
A good example of front extension on Dunstable Road

Figure 141:
A bad example of front extension

Rear extensions

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

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

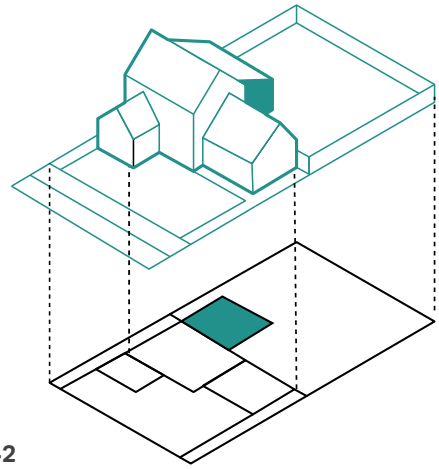

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Figure 142:
An example diagram of a rear extension

Figure 143:
A good example of rear extension

Figure 144:
A bad example of rear extension on Lords Meadow

Side extensions

Side extensions are a popular way to extend a building to create extra living space. However, if poorly designed they can negatively affect the appearance of the street scene, disrupting the rhythm of spaces between buildings. Single-storey and double storey side extensions should be set back from the main building and complement the materials and detailing of those on the original building, particularly along the street elevation. The roof of the extension should harmonise with that of the original building; flat roofs should be avoided. Side windows should also be avoided unless it can be demonstrated that they would not result in overlooking of neighbouring properties.

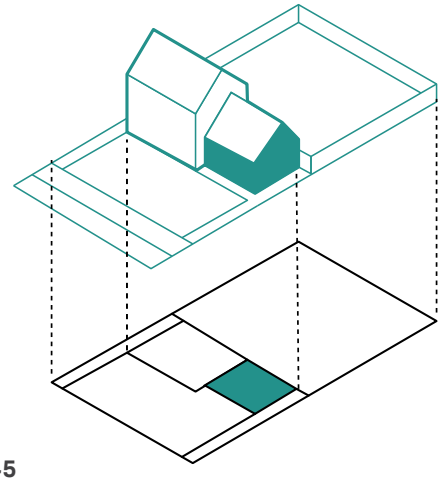

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Figure 145:
An example diagram of a side extension

Figure 146:
A good example of side extension in Redbourn

Figure 147:
A bad example of side extension on Long Cutt

4.5 Regeneration of the High Street (RH)

In order to improve Redbourn High Street, different actions need to be taken to account to rebalanced of the functions of High Street. The guidance and codes in this regard are traffic calming measures, parking, mix of uses, public realm and shop fronts.

The following pages elaborate these guidance and codes and which will bring benefits to residents and businesses in the very heart of their community.

RH 01. Traffic calming

RH 02. Parking

RH 03. Mix of use

RH 04. Public realm

RH 05. Shop fronts

RH01. Traffic calming

Traffic calming uses physical design and other measures to improve safety for everyone. It aims to encourage safer, more responsible driving and potentially reduce traffic flow. Paving materials in all traffic calming measures should contribute to the character of an area as a place to be read as a coherent whole.

Speed bumps / humps and cushions

There are traffic calming devices that use vertical deflection to slow vehicle traffic to improve safety conditions.

Speed tables

A speed table is long flat-topped speed humps that slow vehicles more gradually than humps and provide safer conditions.

Raised pedestrian crossing

Raised pedestrian crossings act as speed tables, often situated at intersections.


F.148


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F.150

Figure 148:
Pedestrian crossing on the High Street

Figure 149:
An example of raised pedestrian crossing with a plateau in Hemel Hempstead

Figure 150:
Use of stone blocks of different colours in Hemel Hempstead

RH 02. Parking

Car parking should generally be accommodated on the street or rear of shops. On-street parking should form part of the active street scene. Parking bays should be clearly demarcated within the town centre. Pedestrian crossing points and places for street trees / planters and street furniture should be incorporated to break up the parking area visually.

Servicing and utilities

Refuse storage, service areas, and utilities must be located close to the shops. Utility and meter boxes should be located away from the street frontages to minimise unnecessary clutter and detract from the visual appeal of street frontage.

Delivery or servicing should be carried out during non-peak hours or out of trade hours to avoid cluttering the street during trading hours.

Public transport

Public transport should be easily accessible. The location and design of bus stops should be integrated well within the public realm. Pavements should be wide enough to accommodate bus stops.

Public parking

Public parking will help to ease the parking issue in the village centre. High Street becomes very congested during peak hours and public parking can contribute positively to that. Time limited parking could also be a measure to increase customer churn in the village centre.


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Figure 151:
Perpendicular on-street parking High Street

Figure 152:
Parallel on-street car parking on High Street

RH 03. Mix of use (community facilities)

Redbourn has a number of social and community facilities that contribute to the character of the village such as St Mary's Church, the Parish Centre (the main community facility), the Village Hall, the Cricket Club, Redbourn Village Museum, four play areas, three allotment sites, Redbourn Recreation Centre, Church of St John Fisher and Hollybush and the Cricketers pubs. Some of these facilities are located on High Street or in the close vicinity of and offer a high level of engagement for local people.

- Existing and proposed social and community infrastructures shall respond to the main place making principles identified in each character area as well as be sympathetic with the existing architectural style;
- Public houses represent a social focal point for communities and community activities and form part of the character and charm of the village;
- Similarly, places of worship like chapels, vestries and mission halls shall be carefully designed as part of the specific character area where they are located;

Figure 153:
St Mary's Church on Hemel Hempstead Road

Figure 154:
Redbourn Parish Centre at the junction of The Park and The Common

Figure 155:
Roman Catholic Church of St John Fisher in North Redbourn on Dunstable Road

- Changing the function of shops and retails to residential use should be prevented;
- In terms of parking provision, they shall not create additional congestion in the area and avoid parking dominance, whilst ideas of sharing parking areas with existing facilities in the village settlement should be considered (See Appendix A); and
- Signage and wayfinding must be used to highlight options for sustainable transport modes, promoting walking and cycling. This would potentially increase movement and activity in the streets enhancing natural surveillance and therefore, minimising any possibility of antisocial behaviour.

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Figure 156:
Signage and wayfinding support sustainable transport modes

Figure 157:
Shepherds Row, a footpath linking Lamb Lane to High Street

RH 04. Public realm

- The public realm is physically, visually and culturally accessible to the public and is vital to the quality and identity of Redbourn;
- Well-connected public spaces of high quality are essential because they create informal meeting places and venues, as well as offer a place to rest, gather and organise community events;
- The public realm within the village centre should be coordinated to strengthen local distinctiveness, enhance user-friendliness and aid wayfinding;
- Active frontage adds to the vitality and vibrancy of the streets and public realm and enhances the user experience of the village centre. Design guidelines seek to create an active commercial centre by promoting a vibrant street scene; and
- High level of natural surveillance should be provided to create vibrancy and vitality along High Street in both upper floors and shopfronts. Use of larger well-proportioned windows or floor to ceiling windows on the ground floors help achieve adequate overlooking. The above floor fenestration should be well proportioned and aligned with the ground floors.

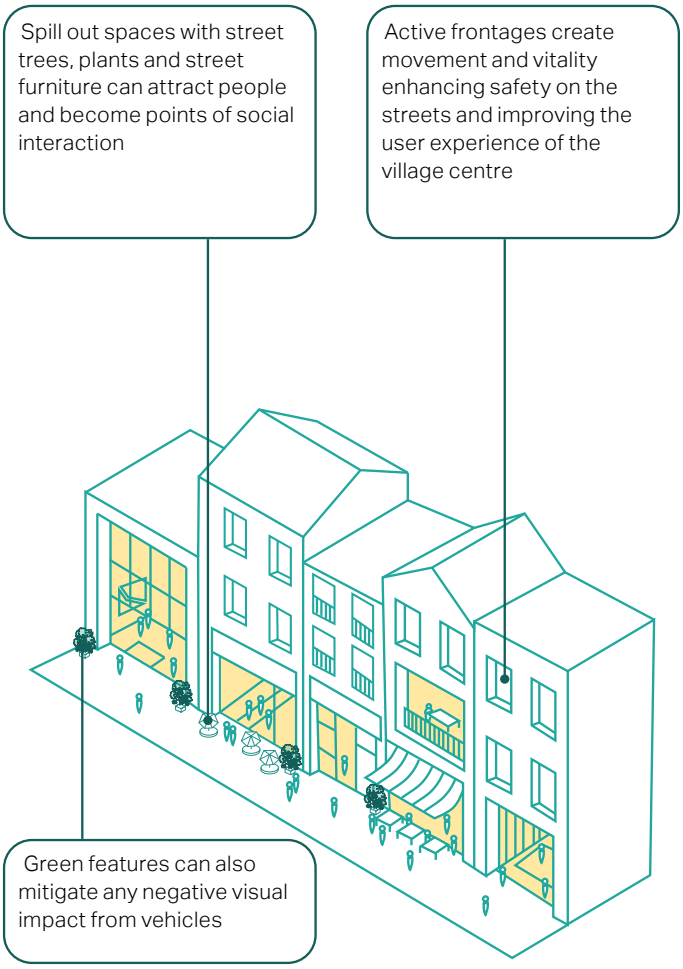

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Figure 158:
Diagram to illustrate some of the design guidance related to village centre development

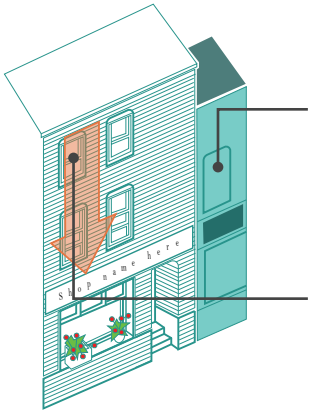
- Pavement width on High Street should be of comfortable widths for pedestrians especially for those with disabilities, as well as wide enough to create active frontages with spaces for spill out seating and display areas for shops, cafes and restaurants. Pavements widths should be at least 2m at key points along High Street;
- Street furniture should be well organised to avoid clutter and encourage pedestrian flow; and
- Furthermore, pedestrian flow and access to cycle stands should be facilitated. For that reason, new railings should be avoided to create the feeling of a more shared space, whilst traffic calming measures (See RH01) could be used instead to monitor traffic speed and protect pedestrians from vehicles. Street clutter should be avoided at all times.

Figure 159:
Public realm along Harpenden Lane

Figure 160:
Wooden bench with armset

RH 05. Shop fronts

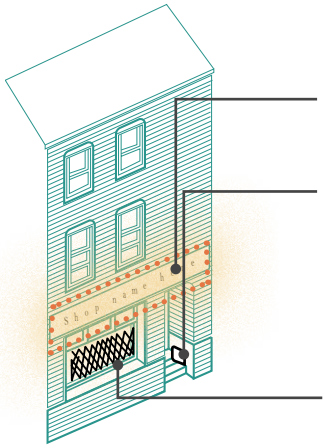
- The fascia is the most important area of a shopfront for advertising the business. Maintain the signage within the established proportions and confines of the fascia board. Large box signs or additional flat boards should be avoided as they create disproportionate depth and height.
- Box signs should generally be avoided and signwritten fascias preferred;
- The most appropriate signage at fascia level is individual letters applied or painted directly onto the fascia board;
- Hanging signs should be appropriately sized in relation to the building and street but should not dominate the pavement space and only use appropriate materials and shapes;
- Hanging signs should be held by slender, well-designed brackets using a high quality material;
- In the case of corporate brands, these should be sensitive to the existing context, size, scale, use of materials and textures from the local vernacular of the area;
- Avoid using visually distinct sources of illumination that result in disproportionate signage, such as internally-illuminated box signs; and



Character & Design

Integrate the shop front with the surrounding streetscape. Consider adjacent buildings and typical details in the area

Incorporate the overall proportion, form, and scale of the building's upper floors into the design of the shop front

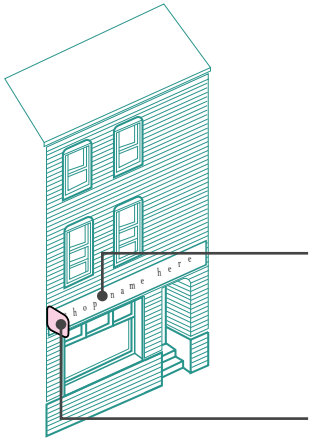


Lighting & Safety

Avoid using internally-illuminated box signs

Conceal alarms from the shop front façade and integrate them in the design

Avoid using external roller shutters and grilles. Favour the use of internal open grilles which cover only the glazed part of the shop front



Signage

Avoid unnecessary visual clutter

Signage should not be placed on upper floors

Use the fascia as the predominant position for signage

Hanging signs should be in proportion to the building and street and should not dominate pavements

- Avoid using external roller shutters and grilles. Favour the use of internal open grilles which cover only the glazed part of the shop front.

Good examples of shop front design

Stall riser

- A stall riser should be incorporated into the design for the full width of the shopfront, except for the door opening. The height of the stall riser should be between 0.3m and 1m.

Materials

- Window frames, doors, pilasters and fascias should be of timber construction with a painted finish and not a stained finish.

Panelling

- Any timber panelling used in doors, stall risers, pilasters or other elements of the shop front should comprise a constructional timber panel and should not comprise the application of timber beading to a flat timber surface.

Fascia

- The shop front design should include a full-width projecting fascia. The fascia should consist of a surrounding frame, creating an area for a shop-sign. Fascia with lettering of between 250mm and 300mm will read well from street level and from across the road; the size of the fascia is defined by the building typology or detailing, the font size should be proportionate to the fascia.

Lighting

- If lighting is incorporated into the design of the shop front, then it should comprise projecting light to create external illumination of the shop sign area.

Shutters

- If shutters and shutter boxes are incorporated into the design, then they should be placed internally, behind the shop front. When in an open position, shutters should not block the shop window opening.

Fascia should be projected with full width with shop sign lettering

Window frames, doors, pilasters and fascia should be of timber construction with paint finish and not stain finish instead of other inappropriate materials

F.161

Timber framing should be used as panelling for doors, windows, stall risers and other elements of shop front instead of metal material. Use of plastic or constructional timber should be avoided

F.162

Fascia should be projected full width with shop sign lettering between 250-300mm to read well. A hierarchy of lettering enhances the readability and effectiveness of the signage

Display should be organised to promote visual connection to the interior of the shop

Stall risers must be designed to full width of shop front and the height must be between 0.3-1.0m. Stall risers must be of timber or metal

Timber framing should be used as panelling for doors, windows, stall risers and other elements of shop front. Use of plastic or constructional timber should be avoided

Window frames, doors, pilasters and fascia should be of timber construction with paint finish and not stain finish

Figure 161:
An example of existing shop front in Redbourn

Figure 162:
A good example of shop front design

5 LC. Respecting the local character

4.6 Respecting the local character (LC)

A place's character can be made up of many different elements which come together to create a unique sense of place. Any proposal will need to respect the existing context as well as create attractive and resilient places that contribute positively to the villagescape, views and landscape setting of Redbourn.

These design principles describe the elements that contribute to Redbourn's character and new development should pay particular attention to the layout, form, scale, materials and detailing.

LC 01. Landscape & green spaces

LC 02. Landmarks and views

LC 03. Architectural details

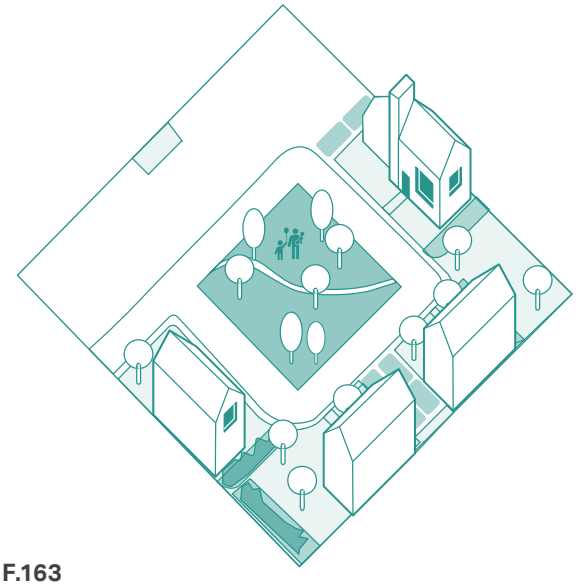
LC 04. Materials and colour palette

LC 05. Street lighting / dark skies

LC 01. Landscape and green spaces

Redbourn has a good network of footpaths and wide range of green spaces (See Figure 164). Future open spaces should be planned considering the following principles:

- Design new open space to incorporate existing landscape features to create an informal park with opportunities for natural play and recreation;
- Planting should be used to soften the mass of the built form. For example, a 'semi-natural' strip of planting of around 50 metres would be adequate for 2 rows of trees with a woodland footpath between;
- Green buffers can be a satisfactory transition between old and new neighbourhoods. This could take the form of a 'semi-natural' woodland strip, as above, or more formal open space like playing fields including those belonging to schools;
- The Common is the most important green space in the village and all existing good quality woodland, hedgerows, trees and shrubs should be retained within the layout of the parks and enhanced with improved management;
- New trees, grassland and shrubs should be planted to supplement existing vegetation;
- Active frontages are to face onto green spaces;
- Allotments or other community garden facilities should be provided where appropriate; and
- Allow for flexible use of the space allowing temporary uses to fluctuate with a changing programme of events and use.



F.163

Figure 163:
Green space at the heart of a development

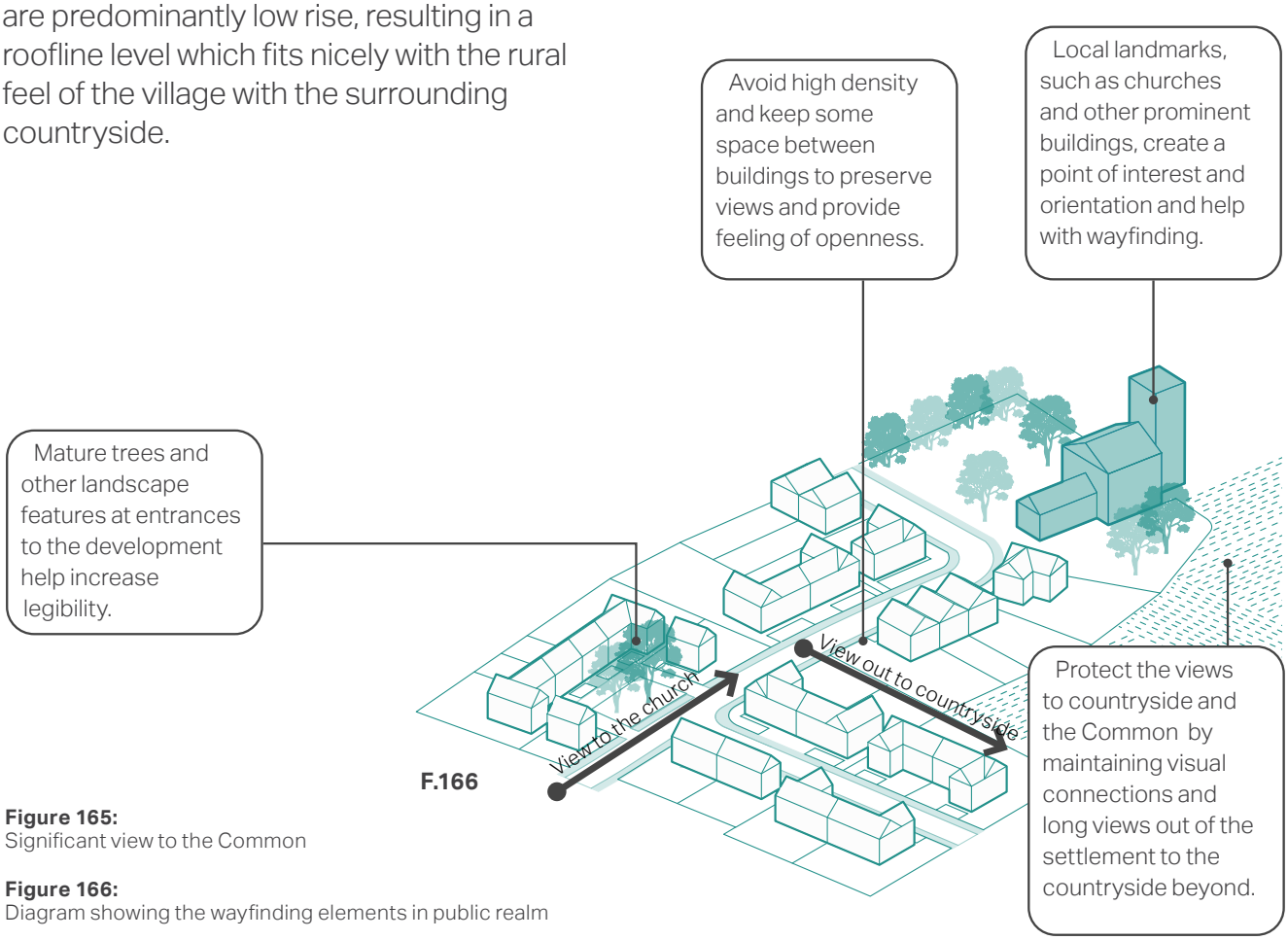
Note: In addition to the typology of green spaces included on this map, Parish is proposing that some of these be designated as Local Green Spaces, and the Neighbourhood Plan should be referred to for further information.

Figure 164: Existing green spaces map

LC02. Landmarks and views

One of the most important characteristics of Redbourn is the significant number of listed buildings that act as landmarks. The other important feature of the village is the long distance views across the Common and other open fields around the settlement which slope away from the River Ver. These cherished landmarks (see Figure 170) and views need to be preserved in order to protect the identity and true sense of this place. Buildings in the parish are predominantly low rise, resulting in a roofline level which fits nicely with the rural feel of the village with the surrounding countryside.

F.165



F.166

Figure 165:
Significant view to the Common

Figure 166:
Diagram showing the wayfinding elements in public realm

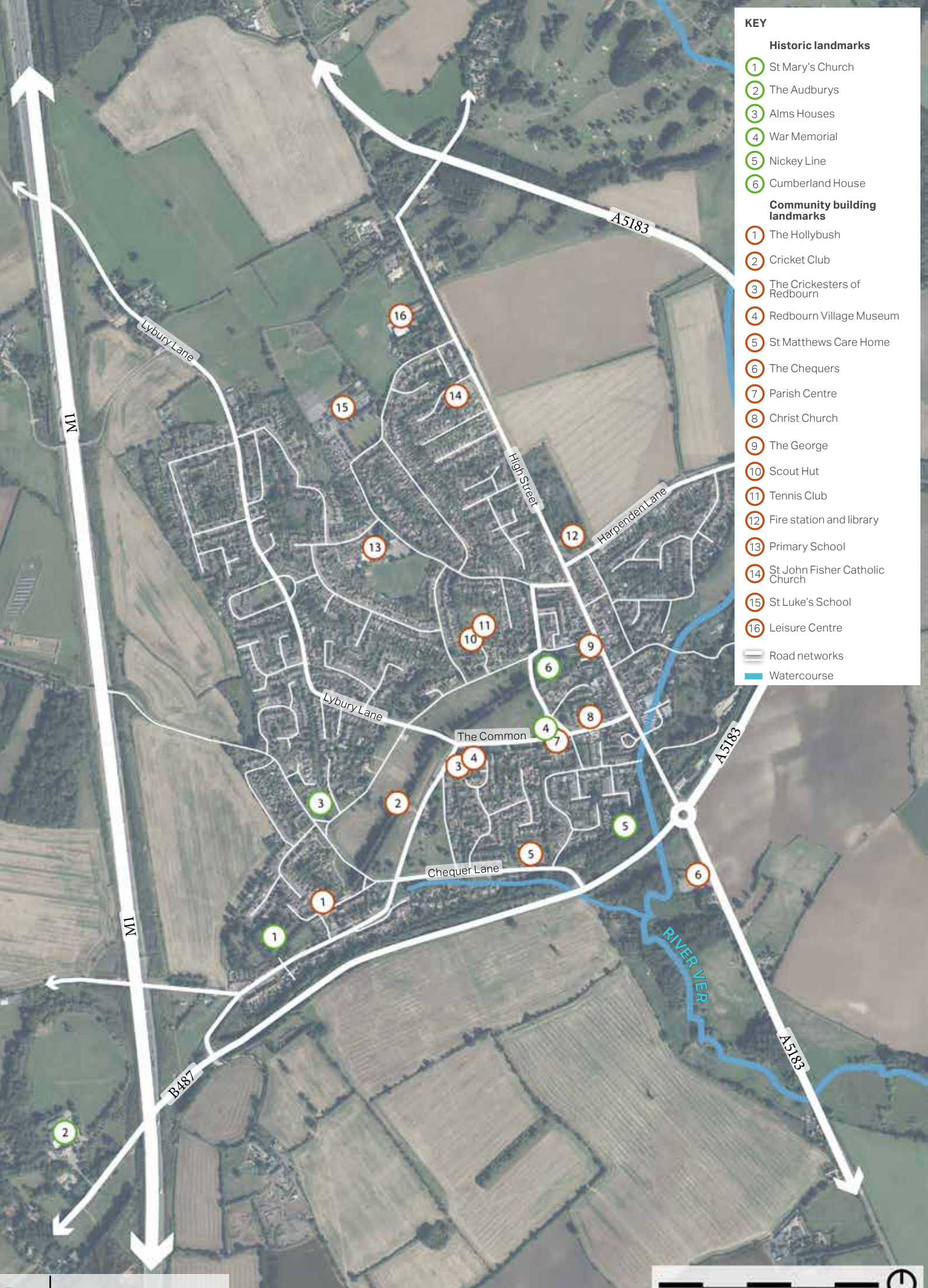
Therefore, new developments or any change in the built environment must comply with the following principles:

- Any new developments should respect the existing landmarks. New developments should include some landmark buildings to improve legibility and provide varying features to create articulation which allows visual interest;
- New buildings should be designed with a number of different features that can potentially become a landmark, such as projecting bays, large window openings, expressive roof forms and taller elements;
- To provide articulation and a welcoming feeling, building façades should have occasional projections such as bays and porches;
- Creating short-distance views broken by buildings, trees or landmarks to create memorable routes and places, and easily intelligible links between places. New developments should be oriented to maximise the opportunities for memorable views and visual connectivity;

Figure 167:
St Mary's Church as a significant landmark on Hemel Hempstead Road

Figure 168:
Redbourn Museum is located in Silk Mill House

Figure 169:
Cumberland House, a suburban house on the Common



F.170 | **Figure 170:** Landmarks map

- New development proposals should not be visually intrusive. This should be achieved through appropriate scaling and design, including landscape screening, where appropriate;
- As noted above, existing views and vistas should be actively considered when preparing new development proposals. Where possible, new developments should seek to retain existing and frame new views and vistas towards the wider countryside;
- Where appropriate, future development proposals should incorporate landscape and built features to create landmarks, helping with legibility;
- New development proposals should maintain visual connections to the surrounding landscape and long views out of the settlement. Development density should allow for spaces between buildings to preserve views of countryside beyond and maintain the perceived openness of the settlement;
- Respect any designations and constraints related to the surrounding countryside and aim to preserve long distance views;

Figure 171:
View to the Portico on South Common adjacent to Silk Mill House

Figure 172:
A view to the clock as a feature on the High Street

Figure 173:
A view to Fire Station as a well-known landmark

- Include 'soft' edges to shield buildings and ease the transition between the countryside and the urban area;
- Preserve uninterrupted views and vistas looking into and out of the village in all directions especially preserving the views and countryside gaps from Redbourn to Hemel Hempstead; Redbourn to Harpenden; and Redbourn to St Albans;
- Protect views and vistas along the Common in multiple directions.

Figure 174:
Weeping Willows along the River Red at The Moor on Chequer Lane

Figure 175:
East Common Play Area between Chequer Lane and west Common

LC 03. Architectural details

New developments or any change to the built environment must be able to demonstrate a sympathetic response to the existing character and architectural details found in the village.

This section showcases some local building details which should be considered as positive examples to inform the design guidelines.

The village contains various architectural styles and forms, ranging from timber-framed cottages, substantial mansions to terraced houses in Span Housing style.

New development in Redbourn must preserve the existing character not only within the conservation area but also within clsoe proximity of the area. There are many elements that contribute to the local character of the village and these should be respected when new development comes forward.

Figure 176:
Flint rubble with stone and brick dressing on St Mary's Church

Figure 177:
A cottage with thatched roof in Conservation Area on Flamsteadbury Lane

Figure 178:
Georgian architecture is dominant on the High Street

LC. Respecting the local character


F.179


F.180


F.181


F.182


F.183


F.184

Figure 179:
Span housings on The Park with the mix of yellow brick and brown hung tile and casement window

Figure 180:
A mix of yellow brick and white weatherboarding on a semi-detached house

Figure 181:
The modern detached house with well-kept front garden

Figure 182:
An Edwardian detached house with hung red tile and decorative porch on Brooke End

Figure 183:
A cottage on Miller Close finished with pebble dash

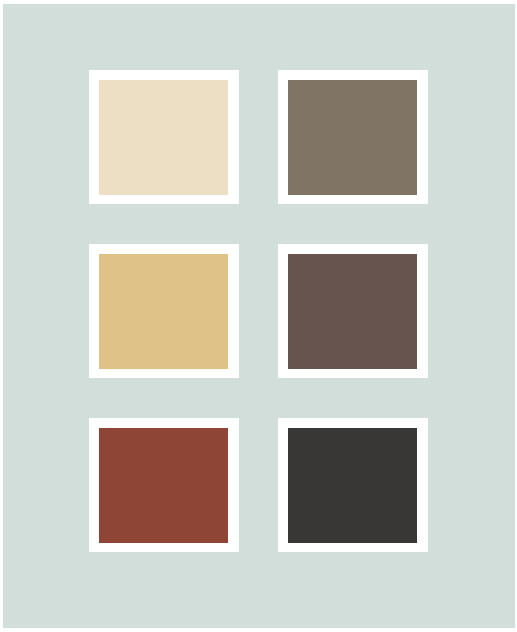
Figure 184:
Terraced houses on The Park with red brick and white weatherboarding

LC 04. Materials and colour palette

The diverse style and architectural from of buildings give an informal shape to the village especially around the common. Red brick and clay tiles are often used in properties. Render and plain clay tile are materials predominant on older houses, along with Welsh Slate used on 19th century buildings.

The Red House and Priory used 18th century warm red brick, both are examples of fine Georgian brickwork. Decorative brick façade with chequerwork patterns or bands of vitrified brick give a distinctive black and red effect.

Colour palette



Wall

Warm red brick

Painted brickwork

Yellow render and details of interest

Mix of painted brick and timber

Knapped flint

Mix of timber and red brick

LC. Respecting the local character

Roof

Gabled dormer

Open gabled roof

Shed dormer

Roof of plain tile and chimney

Plain clay tile

Slate

Details

brick details around window

porch

Details of interest

LC 05. Street lighting / dark skies

The 'dark skies' character of the countryside should be protected. Dark skies benefit both people and wildlife.

Any new development should minimise impact on existing 'dark skies' within settlements and reduce light pollution that disrupts the natural habitat and human health.

The following guidelines aim to ensure there is enough consideration given at the design stage:

- Street lighting should be avoided within areas of public realm, in line with existing settlement character;
- Ensure that lighting schemes will not cause unacceptable levels of light pollution, particularly in intrinsically dark areas. These can be areas very close to the countryside or where dark skies are enjoyed;
- Consider lighting schemes that could be turned off when not needed ('part-night lighting') to reduce any potential adverse effects; i.e. when a business is closed or, in outdoor areas, switching off at quiet times between midnight and 5am or 6am. Planning conditions could potentially be used to enforce this;
- Impact on sensitive wildlife receptors throughout the year, or at particular times (e.g. on migration routes), may be

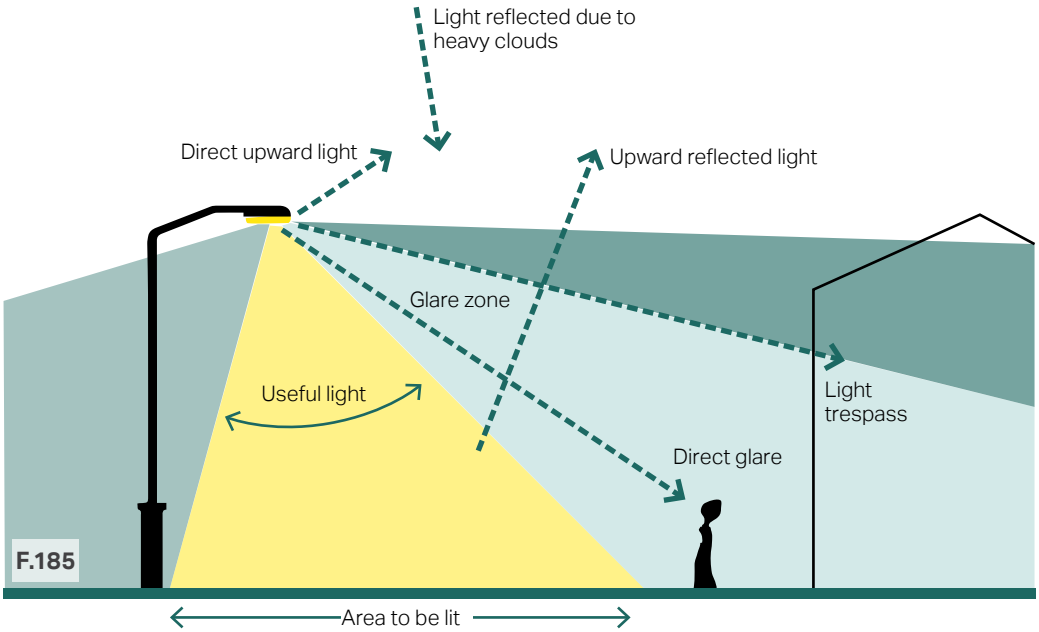


Figure 185:
Diagram to illustrate the different components of light pollution and what 'good' lighting means

mitigated by the design of the lighting or by turning it off or down at sensitive times;

- Glare should be avoided, particularly for safety reasons. This is the uncomfortable brightness of a light source due to the excessive contrast between bright and dark areas in the field of view. Consequently, the perceived glare depends on the brightness of the background against which it is viewed. It is affected by the quantity and directional attributes of the source. Where appropriate, lighting schemes could include 'dimming' to lower the level of lighting (e.g. during periods of reduced use of an area, when higher lighting levels are not needed);
- The needs of particular individuals or groups should be considered, where appropriate (e.g. the safety of pedestrians and cyclists);
- Foot/cycle path light should be introduced sensitively and in harmony with surrounding rural landscape. Light fittings such as solar cat's-eye lighting, reflective paint and ground-based lighting could be introduced. Full-height lighting should be avoided;
- Any new developments and house extensions designs should encourage to use natural light sources.

Figure 186:
The significant view to the Common and big sky

Figure 187:
Church End and smaller proportion of sky due to the higher enclosure ratio

Figure 188:
Big sky on the Common

6 SU. Sustainability

4.7 Sustainability (SU)

New developments should encourage and support innovative and proactive approaches to design and opportunities to deliver decentralised energy systems powered by a renewable or low carbon source and associated infrastructure, including community-led initiatives.

New developments must strive for good quality design that meets climatic targets for CO2 emissions and that can be constructed sustainably maximising opportunities for recycling.

This section introduces energy efficient technologies and strategies that could be incorporated in buildings, landscapes and neighbourhoods.

SU 01. Energy efficient housing & production

SU 02. Biodiversity

SU 03. Sustainable drainage

SU 04. Permeable pavements

SU 05. Storage and slow release

SU 06. Bioretention systems

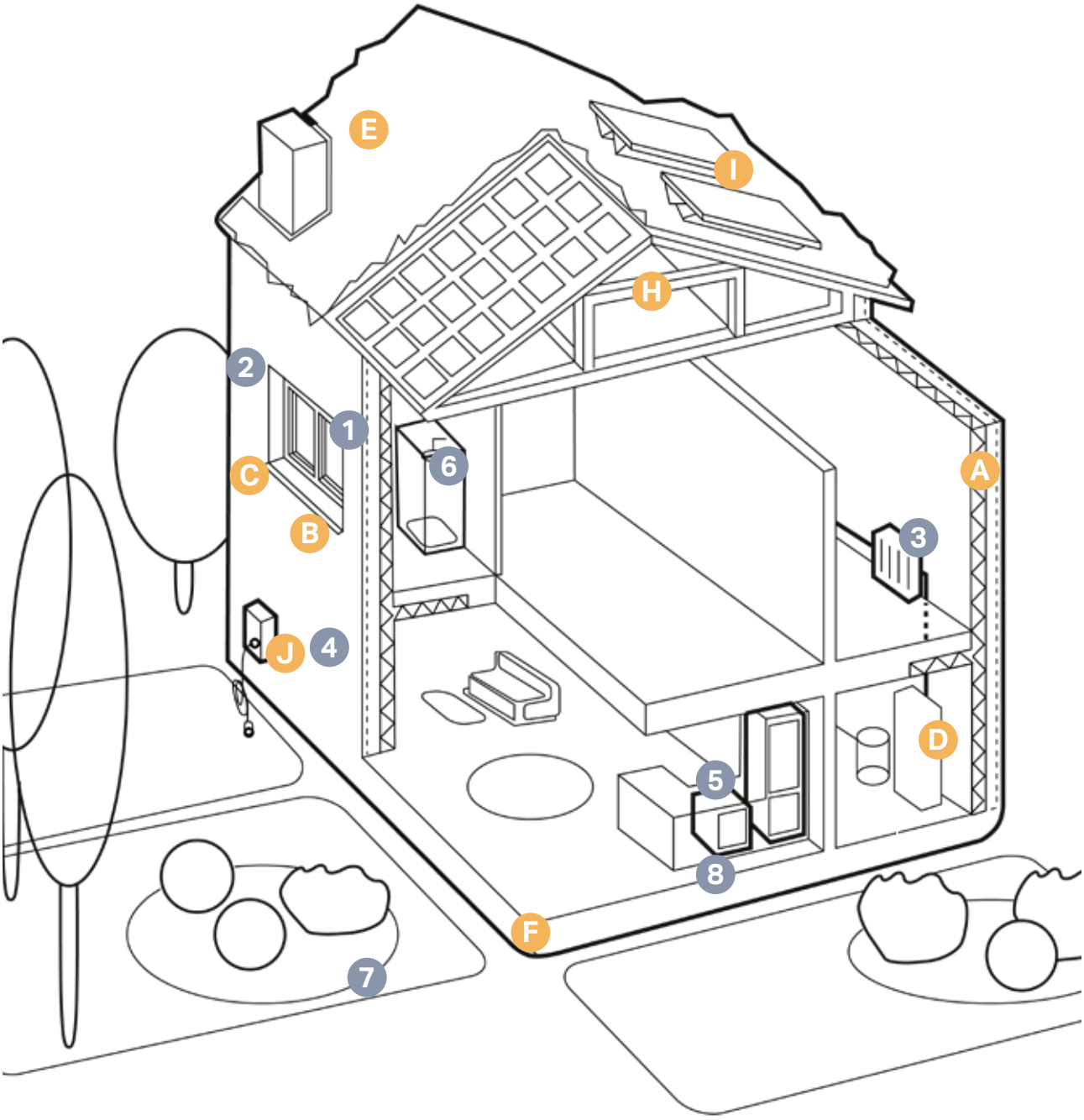
SU 01. Energy efficient housing and energy production

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

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

It must be noted that eco design principles do not prescribe to a particular architectural style and can be adapted to fit a wide variety of built characters. A wide range of solutions is also available to retrofit existing buildings, included listed properties, to improve their energy efficiency[1].

1. Historic England. https://historicengland.org.uk/advice/technical-advice/energy-efficiency-and-historic-buildings/



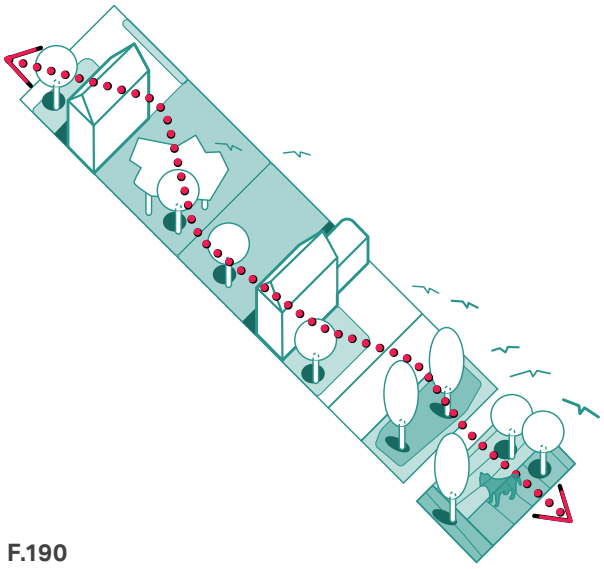
F.189

Figure 189:
Diagram showing low-carbon homes in both existing and new build conditions.

SU 02. Biodiversity

Redbourn has a rich and varied landscape character. There are many natural features and assets, such as trees, woodlands, hedgerows, verges, front and back gardens and also various habitat and species (See Figure 192). They all contribute to provide habitats for biodiversity to flourish. Therefore, any new development or any change to the built environment should:

- Protect and enhance designated habitats to the south of NP area around the banks of the River Ver. These include grassland and coastal grazing marshes. Ensure habitats are buffered. Widths of buffer zones should be wide enough and based on specific ecological function;
- Protect woodlands, the Common, hedges, lime and other trees and road verges, where possible. Natural tree buffers should also be protected when planning for new developments;
- Avoid abrupt edges to development with little vegetation or landscape on the edge of the settlement and, instead, aim for a comprehensive landscape buffering;
- Include the creation of new habitats and wildlife corridors in the schemes. This could be by aligning back and front gardens or installing bird boxes or bricks in walls; and
- Propose wildlife corridors in the surrounding countryside by proposing new green links and improving the existing ones. This will enable wildlife to travel to and from foraging areas and their dwelling areas.



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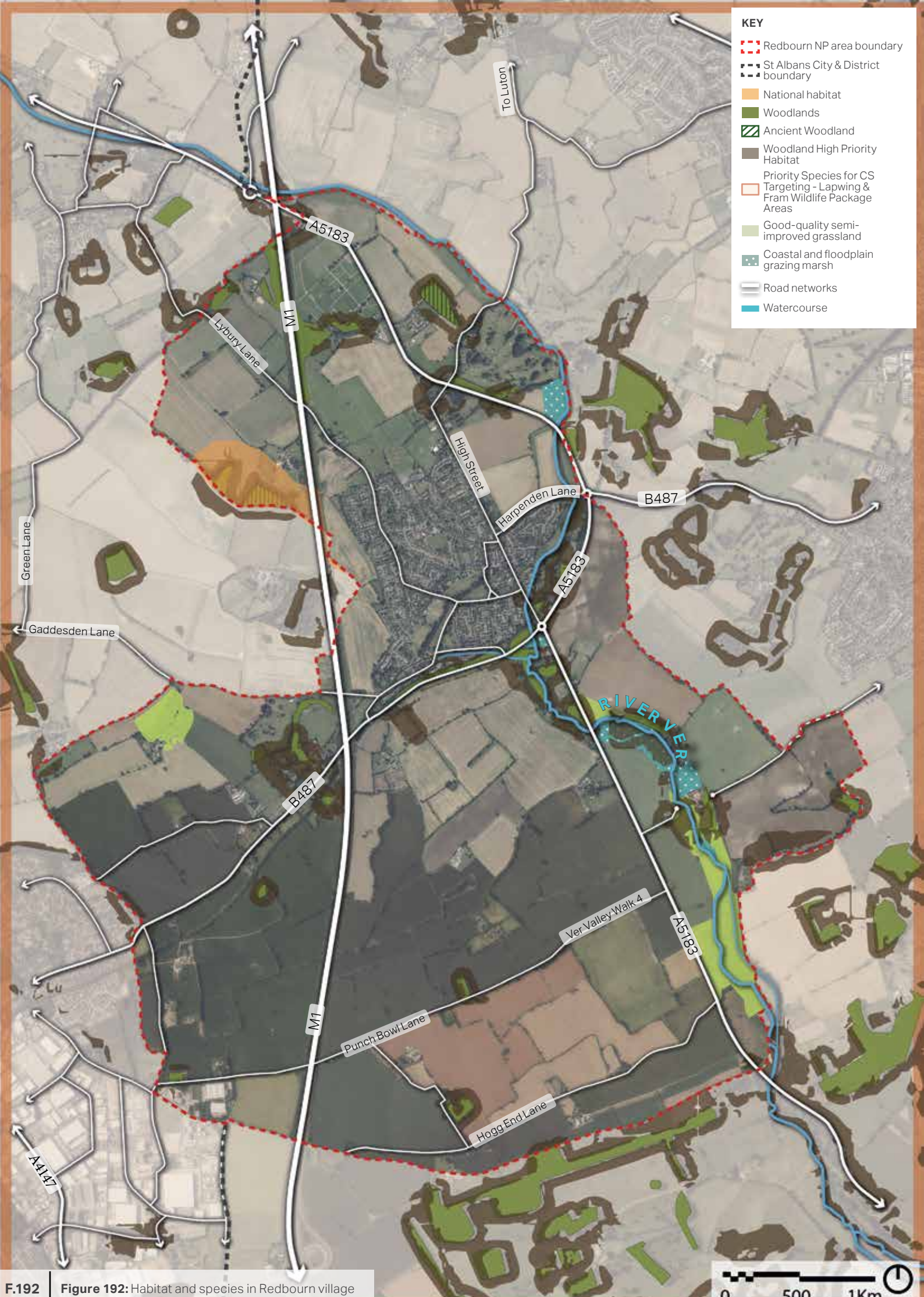
F.191

Figure 190:
Diagram to highlight the importance of creating wildlife corridors

Figure 191:
A bug hotel at St Mary's Church



F.192 | **Figure 192:** Habitat and species in Redbourn village

SU 03. Sustainable drainage (SuDS)

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

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

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

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

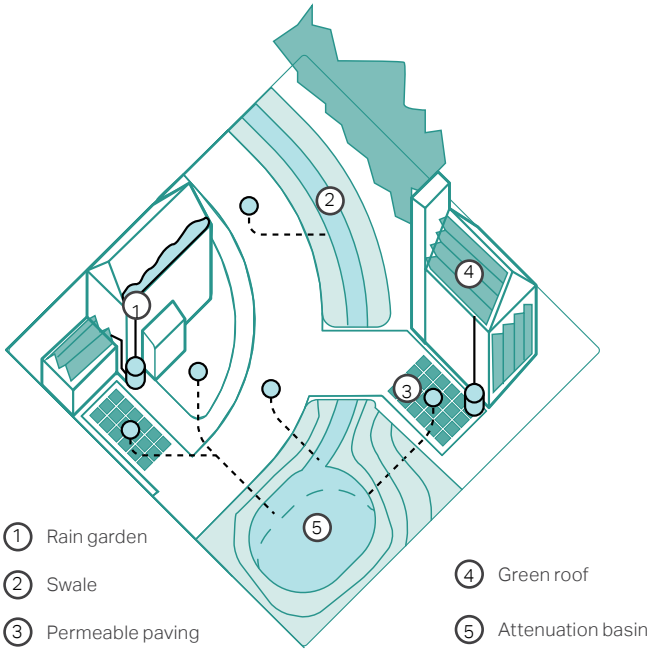


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Figure 193:
Diagram showing the best use of harvesting water systems rain garden, swales, permeable paving, green roofs

Figure 194:
Examples of SuDS designed as a public amenity and fully integrated into the design of the public realm, Sweden

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:

- Reduce runoff rates by facilitating infiltration into the ground or by providing attenuation that stores water to help slow its flow down so that it does not overwhelm water courses or the sewer network;
- 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.

SU 04. Permeable pavements

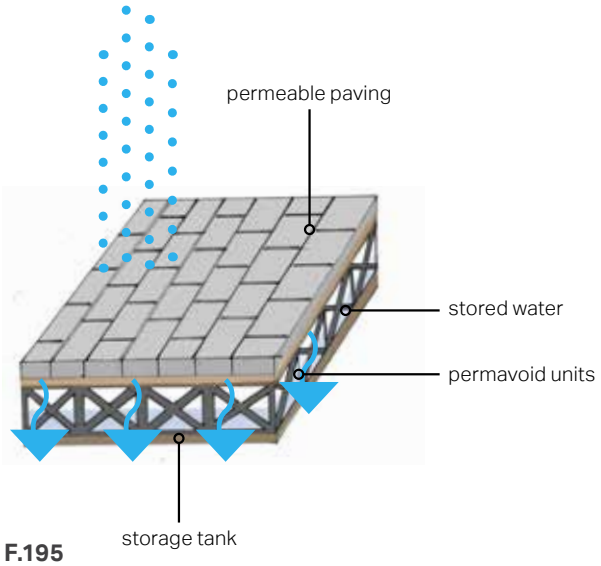
Most built-up areas have hard surfaced roads, footpaths and driveways which are impervious surfaces and reduce the capacity of the ground to absorb runoff water. This, in turn, increases the risks of surface water flooding. Permeable pavements offer a solution to maintain soil permeability while performing the function of conventional paving. The choice of paving in public areas should also have reference to public safety, so some materials may not be appropriate and, therefore, permeable paving might be more difficult to install. In domestic properties, there may be greater scope for the use of permeable surfaces on driveways and footpaths. The choice of permeable paving units should be made with reference to the local context. In Redbourn, therefore, permeable paving may take the form of unbound gravel, clay pavers, or stone setts.

Permeable paving can be used where appropriate on footpaths, public squares, private access roads, driveways, and private areas within individual development boundaries. In addition, permeable pavement must also accord with the folowing acts, regulations, standards and guidelines:

- Flood and Water Management Act 2010, Schedule 3;[1]

1 Great Britain (2010). Flood and Water Management Act, Schedule 3. Available at: http://www.legislation.gov.uk/ukpga/2010/29/schedule/3

- The Building Regulations Part H – Drainage and Waste Disposal;[2]
- Town and Country Planning (General Permitted Development) (England) Order 2015;[3]
- Sustainable Drainage Systems - non-statutory technical standards for sustainable drainage systems;[4]
- The SuDS Manual (C753);[5]
- BS 8582:2013 Code of practice for surface water management for development sites;[6]
- BS 7533-13:2009 Pavements constructed with clay, natural stone or concrete pavers;[7] and
- Guidance on the Permeable Surfacing of Front Gardens.[8]



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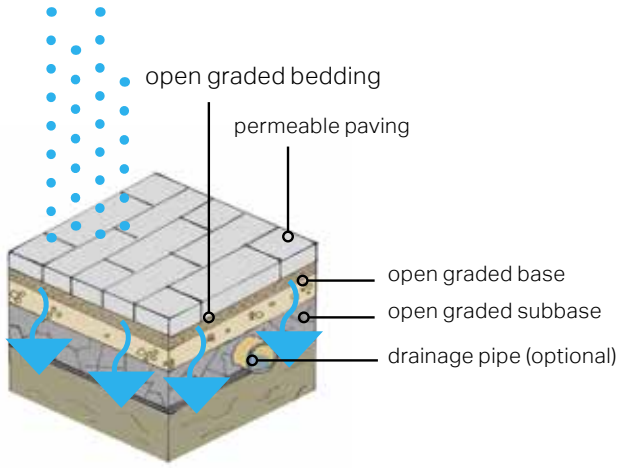


F.196

Figure 195:
Diagram illustrating the functioning of a soak away

Figure 196:
Diagram illustrating the functioning of a soak away

2 Great Britain (2010). The Building Regulations Part H – Drainage and Waste Disposal. Available at: https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/442889/BR_PDF_AD_H_2015.pdf

3 Great Britain (2015). Town and Country Planning (General Permitted Development) (England) Order 2015. Available at: http://www.legislation.gov.uk/uksi/2015/596/pdfs/uksi_20150596_en.pdf

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

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

6 British Standards Institution (2013). BS 8582:2013 Code of practice for surface water management for development sites. Available at: https://shop.bsigroup.com/ProductDetail/?pid=000000000030253266

7 British Standards Institution (2009). BS 7533-13:2009 Pavements constructed with clay, natural stone or concrete pavers. Available at: https://shop.bsigroup.com/ProductDetail/?pid=000000000030159352

8 Great Britain. Ministry of Housing, Communities & Local Government (2008). Guidance on the Permeable Surfacing of Front Gardens. Available at: https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/7728/pavingfrontgardens.pdf

SU 05. Storage and slow release

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

Simple storage solutions, such as water butts, can help provide significant attenuation. To be able to continue to provide benefits, there has to be some headroom within the storage solution. If water is not reused, a slow release valve allows water from the storage to trickle out, recreating capacity for future rainfall events.

New digital technologies that predict rainfall events can enable stored water to be released when the sewer has greatest capacity to accept it.

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

Therefore, some design recommendations would be to:

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

Figure 197:
Examples of water butts used for rainwater harvesting in Reach, Cambridgeshire

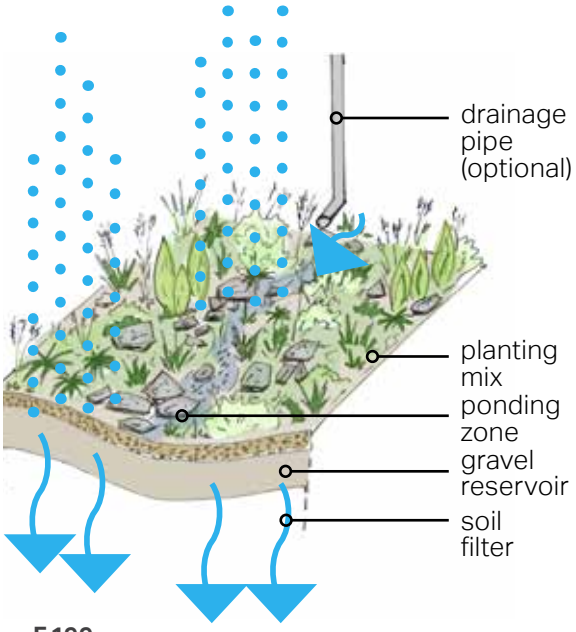
Figure 198:
Examples of water butts used for rainwater harvesting in Reach, Cambridgeshire

SU 06. Bioretention systems

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

- They must be designed to sit cohesively with the surrounding landscape, reflecting the natural character of the Parish. Vegetation must reflect that of the surrounding environment; and
- They can be used at varying scales, from small-scale rain gardens serving individual properties, to long green-blue corridors incorporating bio-retention swales, tree pits and mini-wetlands, serving roads or extensive built-up areas.

These planted spaces are designed to enable water to infiltrate into the ground. Cutting of downpipes and enabling roof water to flow into rain gardens can significantly reduce the runoff into the sewer system. The UK Rain Garden Design Guidelines provides more detailed guidance on their feasibility and suggests planting to help improve water quality as well as attract biodiversity.[1]



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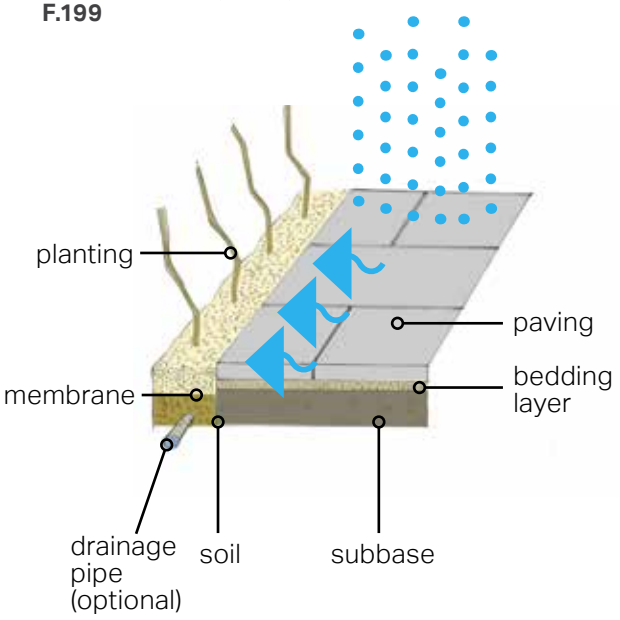

F.200

Figure 199:
Diagram illustrating the functioning of a rain garden

Figure 200:
Diagram illustrating the functioning of a soak away garden

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

05 General questions

5. General questions

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

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

The aim is 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 on the following pages.

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;
- 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;
- Positively integrate energy efficient technologies;
- 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 & character:

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

3

Local green spaces, views & character:

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

4

Gateway and access features:

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

5

Buildings layout and grouping:

- What are the typical groupings of buildings?
- How have the existing groupings been reflected in the proposal?
- Are proposed groups of buildings offering variety and texture to the townscape?
- What effect would the proposal have on the streetscape?
- Does the proposal maintain the character of dwelling clusters stemming from the main road?
- Does the proposal overlook any adjacent properties or gardens? How is this mitigated?
- Subject to topography and the clustering of existing buildings, are new buildings oriented to incorporate passive solar design principles, with, for example, one of the main glazed elevations within 30° due south, whilst also minimising overheating risk?
- Can buildings with complementary energy profiles be clustered together such that a communal low carbon energy source could be used to supply multiple buildings that might require energy at different times of day or night? This is to reduce peak loads. And/or can waste heat from one building be extracted to provide cooling to that building as well as heat to another building?

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 & 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?
- 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?

06 Delivery

6. Delivery

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

Actors	How They Will Use the Design Guidelines
Applicants, developers, & landowners	As a guide to community and Local Planning Authority expectations on design, allowing a degree of certainty – they will be expected to follow the Guidelines as planning consent is sought.
Local Planning Authority	As a reference point, embedded in policy, against which to assess planning applications. The Design Guidelines 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 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.

Appendix

Policy review

Appendix. Policy review

This section notes the existing and emerging planning policy context and highlights the key policies relevant to the design codes included in this document. It should be read in conjunction with the Chapter 2 Policy Review of this Report.

The adopted Local Plan for Redbourn currently consists of saved policies of the City and District of St Albans District Local Plan Review 1994 and adopted Supplementary Planning Documents (SPD), including two design advice leaflets (see Chapter 2 Policy Review).

St Albans District and City Council is currently re-preparing its new Local Plan which will set out the spatial strategy, site allocations and development management policies for the District up to 2038. While the Council has published and submitted a draft Local Plan to the Secretary of State in March 2019, the draft Local Plan 2018 has been withdrawn in November 2020. The emerging Local Plan is expected to be published for Regulation 18 Consultation in January/February 2022 and for adoption by the end of 2023. Once adopted, it will replace the saved policies of the District Local Plan Review 1994.

In addition, St Albans District and City Council is also currently working with neighbouring authorities to prepare the South West Hertfordshire Joint Strategic Plan which will consider growth challenges in the wider area to 2050. The emerging Joint Strategic Plan is expected to be adopted in 2024.

City and District of St Albans District Local Plan Review 1994 (saved policies)

The adopted policies of relevance to the Design Codes are:

Policy 5 New Housing Development in Specified Settlements identifies Redbourn as a specified settlement where housing densities on development sites will generally be lower than in villages. Development proposals are required to be compatible with the maintenance and enhancement of the settlement's character. Backland development will be refused in principle unless complying with policies 69 and 70.

Policies 39-49 Parking Standards require development proposals to provide off-street parking in accordance with the respective criteria based on land uses. In relation to residential development, the provision standards are:

DWELLING SIZE (BEDROOMS)		NUMBER OF SPACES REQUIRED PER DWELLING		
		ALLOCATED[1]	UNALLOCATED[2]	TOTAL
1 (including bedsits)	either[3]	0	1.5	1.5
	or	1	0.5	1.5
2	either[3]	0	2	2
	or	1	1	2
	or	2	0.5	2.5
3		2	0.5	2.5
4 or more		3	0.5	3.5

Policy 69 General Design and Layout requires all development to have high standards of design taking into account the surrounding context and materials.

Policy 70 Design and Layout of New Housing requires developments to have regard to its setting and character. It also requires new development buildings to create safe, attractive spaces of human scale and cater for a range of needs. The policy also sets out a recommended distance between facing windows to the rear of the dwellings:

- Window to window distance: 27 metres

- Permanent rear boundary screen: 1.8 metres high

The policy also sets out a range of design objectives in relation to privacy, orientation, amenity space, defensible space and materials. It requires developments with more than 30 dwellings to provide toddlers play area on the basis of 3 sq metres for each five 2 or more bedroom dwellings. Developments of more than 100 dwellings are also required to provide appropriate public open space.

Policy 72 Extensions in Residential Areas sets out a list of design factors that should be considered in building extensions, including:

- Scale and Character

- Compatibility with original building

- Space around the building

- Parking provision

- Impact on adjoining property

- Cumulative effect on street character

- Recommended dimensions for extensions

Policy 74 Landscaping and Tree Preservation seeks to retain the existing landscaping in St Albans and encourage the provision of new landscaping, including screen planting and wildlife corridors.

Policy 85 Development in Conservation Areas requires development proposals in Conservation Areas to enhance or preserve the appearance of the Conservation and achieve a high standard of design, taking into of the existing building line, surrounding form and density, materials, window to wall ratios, height, roofscape and skyline, street frontage, trees, as well as street furniture and materials.

Policy 86 Buildings of Special Architectural or Historic Interest and Policy 87 Locally Listed Buildings seek to preserve the architectural or historic interest of listed and locally listed buildings.

Policy 104 Landscape Conservation seeks to preserve and enhance the quality of landscape throughout the District. Development proposals are normally required to pay regard to the setting, design and external appearance of an area and provide landscape improvements.

Policy 106 Nature Conservation seeks to protect the special conservation interests of identified sites.

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