Acton

Design Guidelines and Codes
Final Report

March 2024

Delivering a better world

Quality information

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Revision History

Issue no.	Issue date	Details	Issued by	Position
4	14/03/2023	Updates following examination	Ben Castell	Director
3	03/08/2023	Updates following Reg 14 consultation	Ben Castell	Director
2	01/11/2022	Review	Madeleine Gohin	Locality
1	12/10/2022	Review	Eleanor Hutchins	Acton Neighbourhood Plan Steering Group
1	13/06/2022	Site visit, review	Ben Castell	Director
1	10/06/2022	Review	Giuseppe Verdone	Principal Urban Designer
0	10/06/2022	Research, drawings	Daniel Mather	Graduate Urban Designer

Contents

Introduction

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1. Introduction

Through the Department for Levelling Up, Housing and Communities (DLUHC) Programme led by Locality, AECOM was commissioned to provide design support to Acton Parish Council.

1.1 Introduction

As the National Planning Policy Framework (NPPF) (paragraph 126) notes, 'good design is a key aspect of sustainable development, creates better places in which to live and work and helps make development acceptable to communities'.

Research, such as for the Government's Commission for Architecture and the Built Environment (now part of the Design Council; see, for example, The Value of Good Design[1]) has shown that good design of buildings and places can improve health and well-being, increase civic pride and cultural activity, reduce crime and anti-social behaviour and reduce pollution.

This document provides an understanding of how good design can make future development as endearingly popular as the best of what has been done before.

Following an analysis of the Parish and good practice, those elements of good design are set out clearly as design principles which any development within Acton Parish should follow in order to comply with this Design Guidelines and Codes document.

1.2 Objectives

The NPPF 2021, paragraphs 127-128 states that:

'*Plans should, at the most appropriate level, set out a clear design vision and expectations, so that applicants have as much certainty as possible about what is likely to be acceptable. Design policies should be developed with local communities so they reflect local aspirations, and are grounded in an understanding and evaluation of each area's defining characteristics. Neighbourhood planning groups can play an important role in identifying the special qualities of each area and explaining how this should be reflected in development, both through their own plans and by engaging in the production of design policy, guidance and codes by local planning authorities and developers…*'

1. https://www.designcouncil.org.uk/sites/default/files/asset/document/the-value-of-good-design.pdf

'To provide maximum clarity about design expectations at an early stage, all local planning authorities should prepare design guides or codes consistent with the principles set out in the National Design Guide and National Model Design Code, and which reflect local character and design preferences. Design guides and codes provide a local framework for creating beautiful and distinctive places with a consistent and high quality standard of design. Their geographic coverage, level of detail and degree of prescription should be tailored to the circumstances and scale of change in each place, and should allow a suitable degree of variety.'

The Government is placing significant importance on the development of design codes in order to set standards for design upfront and provide firm guidance on how sites should be developed.

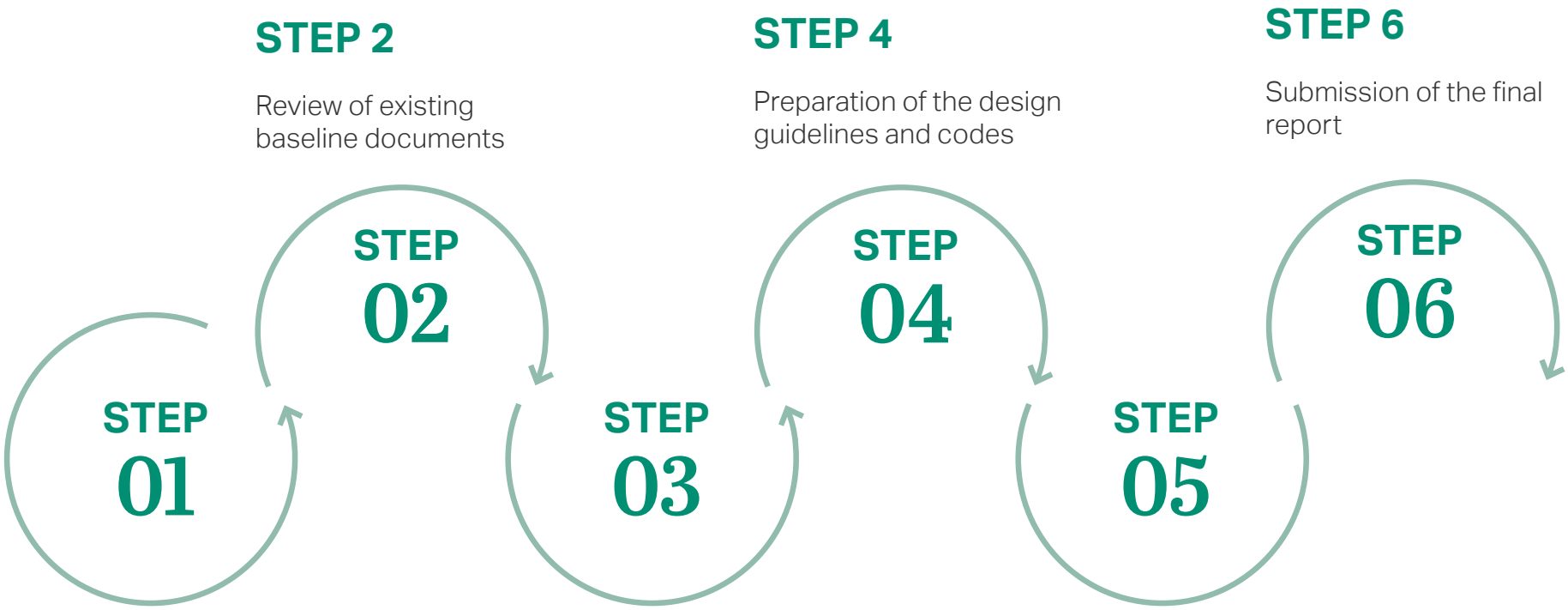
The general design guidance and codes will inform the design of homes which come forward on these sites as well as through any speculative proposals.

Thus, this Design Guidelines and Codes report will provide an additional and more detailed framework to make sure any design proposal contributes to a distinctive place with a consistent and high quality standard of design.

These Design Guidelines and Codes become an integral part of the Neighbourhood Plan and must be given due weight in the planning process.

1.3 Process

The following steps were undertaken to produce this report:



STEP 1

Initial meeting between AECOM and the Acton Neighbourhood Planning Group followed by a site visit

STEP 2

Review of existing baseline documents

STEP 3

Urban design and local character analysis

STEP 4

Preparation of the design guidelines and codes

STEP 5

Draft report with the design guidelines and codes issued to Acton Neighbourhood Planning Group

STEP 6

Submission of the final report

1.4 Key national and local reference documents

The following documents have informed this document. These guidelines have been produced at national, district and parish level.

Any new development application should be familiar with these documents and make explicit reference to how each of them is taken into account in the design proposals.

NATIONAL LEVEL

2023 - National Planning Policy Framework

DLUHC

The National Planning Policy Framework sets out the Government's planning policies for England and how these should be applied. It provides a framework within which locally-prepared plans for housing and other development can be produced.

2021 - National Model Design Code

DLUHC

This report provides detailed guidance on the production of design codes, guides and policies to promote successful design. It expands on 10 characteristics of good design set out in the National Design Guide.

2020 - Building for a Healthy Life

Homes England

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

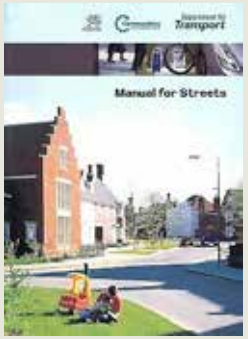
NATIONAL LEVEL

2019 - National Design Guide
DLUHC

The National Design Guide illustrates how well-designed places that are beautiful, enduring and successful can be achieved in practice.

2007 - Manual for Streets
Department for Transport

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



DISTRICT LEVEL

ADOPTED PLANS AND GUIDANCE

2023 - Babergh and Mid Suffolk Joint Local Plan - Part 1

Babergh and Mid Suffolk District Councils

Part 1 of the Joint Local Plan for districts of Babergh and Mid Suffolk covers the period from 2018 to 2037 and was adopted in November 2023. Part 1 covers vision, objectives, strategic policies and development management policies. The spatial distribution of new housing and housing requirement figures for neighbourhood plans will be covered in the forthcoming part 2.

2022 - Suffolk Design: Streets Guide

Suffolk County Council

The Streets Guide is a guidance document designed to assist the delivery of well-designed places in line with the National Design Guide as well as the National Model Design Code. The Streets Guide will be used by Suffolk County Council's highway engineers, drainage engineers and Public Rights of Way officers in responding to planning applications. Developers should use the guide, the Design Management Process and Design Checklist throughout the design and construction processes.

1.5 Introduction to Acton Parish

Acton is a rural village and civil parish located in Suffolk. The parish also includes the hamlet of Newman's Green and bisects Cuckoo Tye. The nearest town is Sudbury which is just over 5km south of Acton. Other larger settlements in the wider area include Ipswich, Colchester and Bury St Edmunds.

The A134 is located just outside the parish boundary and provides connections to Bury St Edmunds and Colchester. The route also provides connections to Sudbury, Braintree and Ipswich. Distance to the A134 from the main settlement of Acton is about 1.5 miles along a C class road.

The nearest railway station, in Sudbury, has hourly departures going towards Marks Tey. Here passengers can board connecting trains towards Colchester, Ipswich and London Liverpool Street.

In terms of more localised public transport, there are hourly daytime buses from Monday to Saturday. These stop on the High Street and provide routes to both Sudbury and Bury St Edmunds.

Within the parish, the oldest building is the All Saints Church, which is Grade I listed. Other amenities include: a village hall, a Costcutter convenience store, The Crown pub and Acton Primary School.

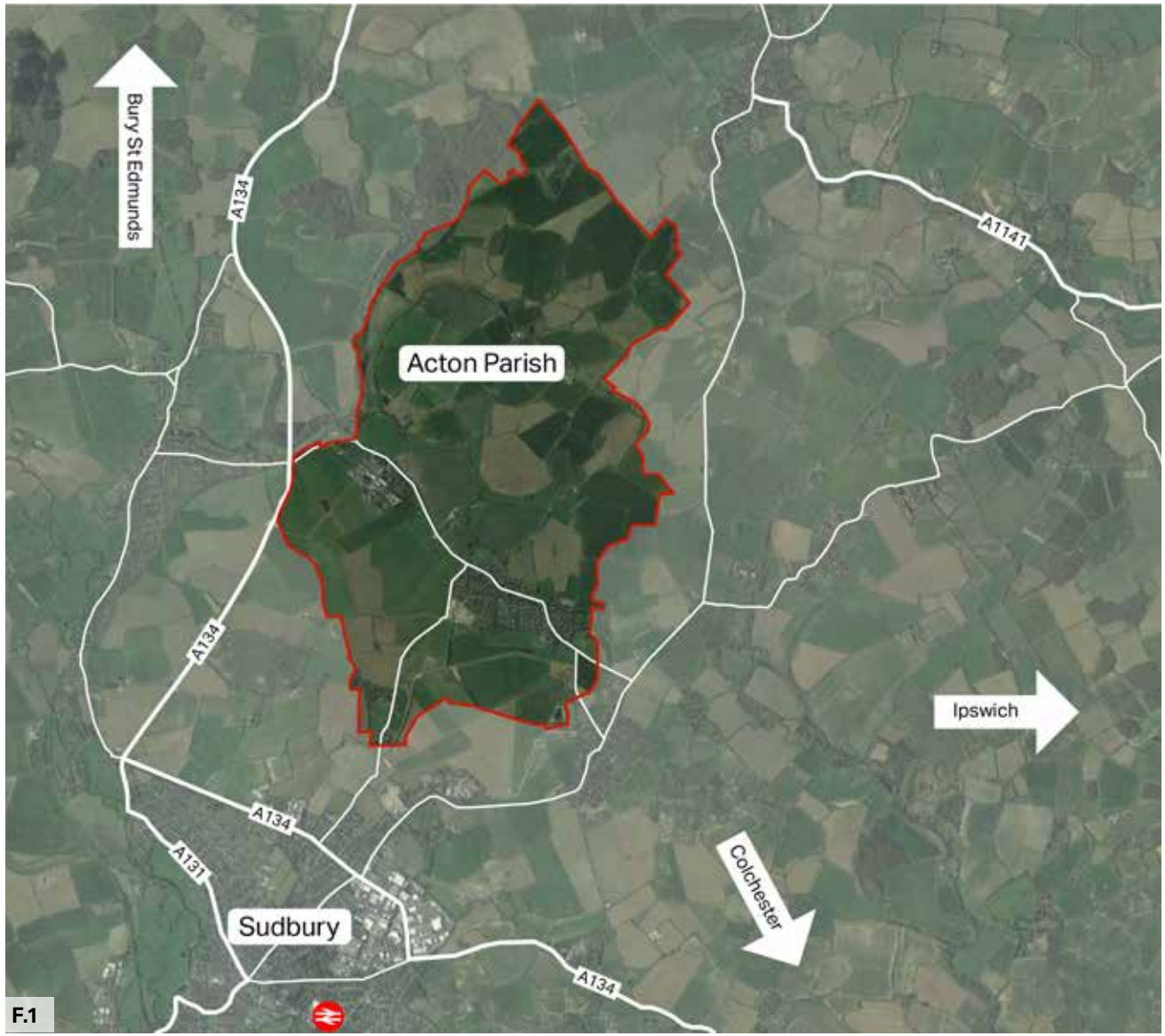


Figure 01: Acton Village Context Map.

Neighbourhood Area Context Analysis

02

2. Neighbourhood Area Context

This chapter describes the local context and key characteristics of Acton Parish related to heritage, built environment, streetscape, views, landscape and topography.

2.1 Area description

The Parish landscape is characterised by a mosaic of regular and small fields linked with blocks of ancient woodland.

The area has a network of winding lanes and paths often associated with hedges that, together with the rolling countryside, can give a feeling of intimacy as well as providing some wider rural views.

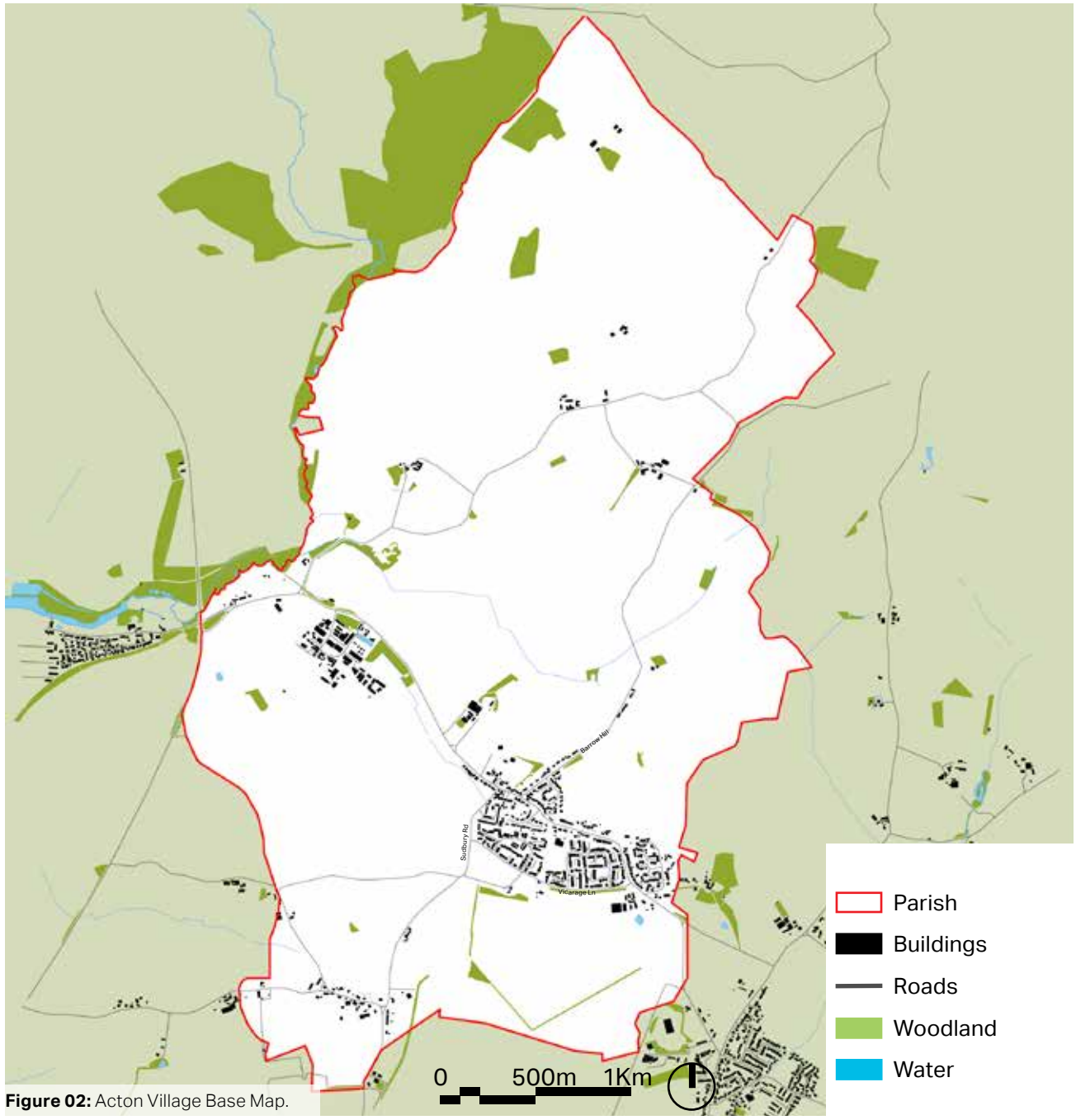


Figure 02: Acton Village Base Map.

2.2 Heritage

Acton is a Parish which is rich in historic buildings, the oldest of which is the All Saints Church which was initially constructed in the 12th century. The church has a historically significant bronze of Sir Robert de Bures, which is said to be the finest medieval memorial brass in the world. It also displays a bomb that was dropped by a zeppelin in World War 1.

As well as the church, there are over 15 other Grade II listed buildings scattered throughout the parish. The majority of these are along the High Street. There are also notable heritage features around the parish such as the cluster of buildings and boundary walls using cobbled stone facings, including the old schoolhouse.

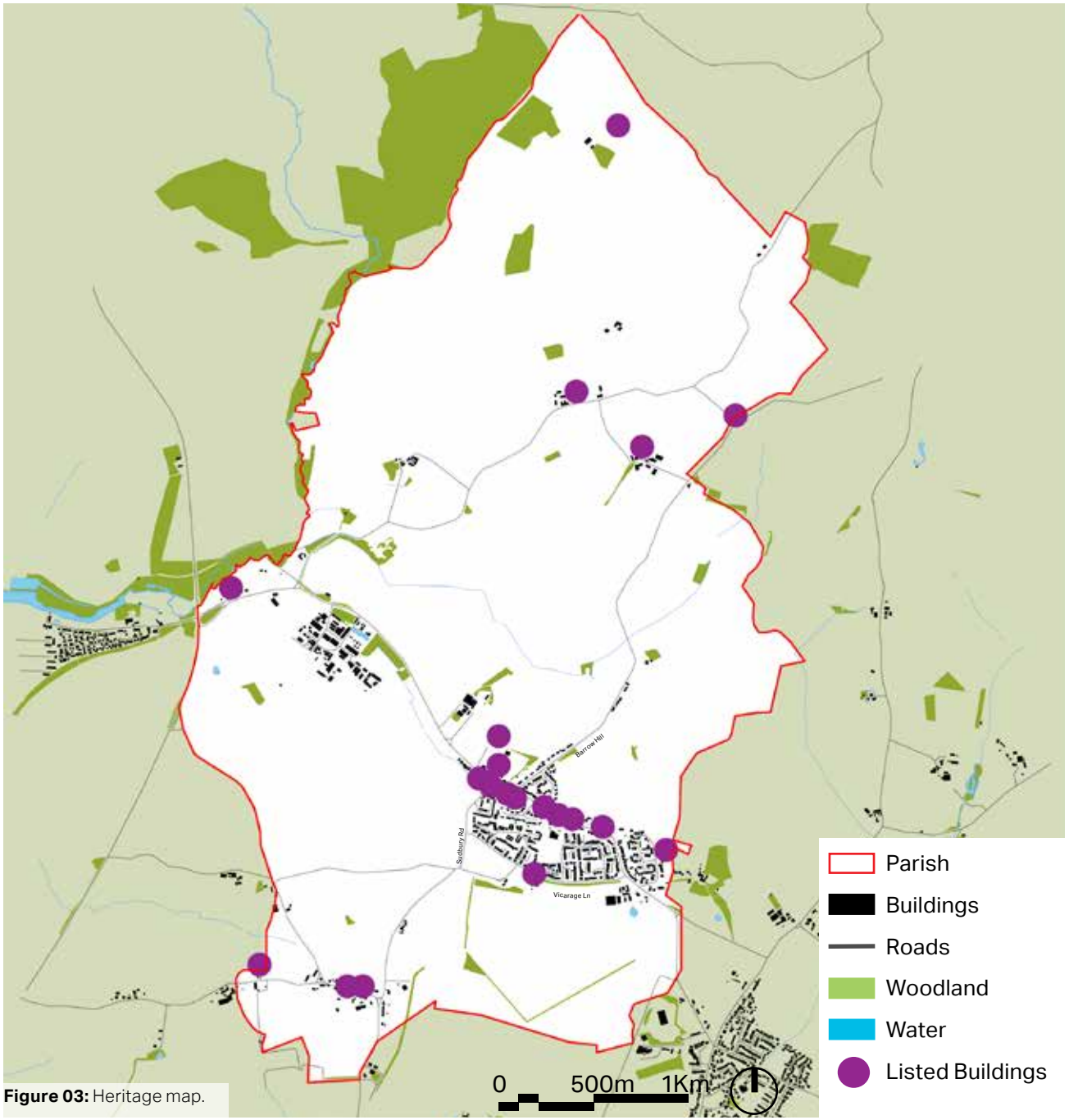


Figure 03: Heritage map.

Acton's historic spine has a mix of architectural styles of mostly 18th and 19th century origin, together with a significant number of adapted medieval buildings. A selection of Grade I and II listed buildings are shown here.

Crown Inn

Church of All Saints

Sunflower Cottage and Lilac Cottage

1-3, Sudbury Road

Puddledock Garden

Figure 04: Listed Buildings in Acton village

2.3 Environment and landscape

Acton as a village is set in a landscape that has a relatively flat or gently undulating topography, which makes it an ideal location for farming. The settlement is surrounded by fields which are used and have been used for arable farming for centuries.

These fields often have a boundary defined by trees and hedgerows which is positive in terms of enhancing local wildlife. Furthermore, there are areas of deciduous woodland scattered throughout the parish.

In recent years, the Parish Council and volunteers have established an active nature reserve, Acton Wildlife.

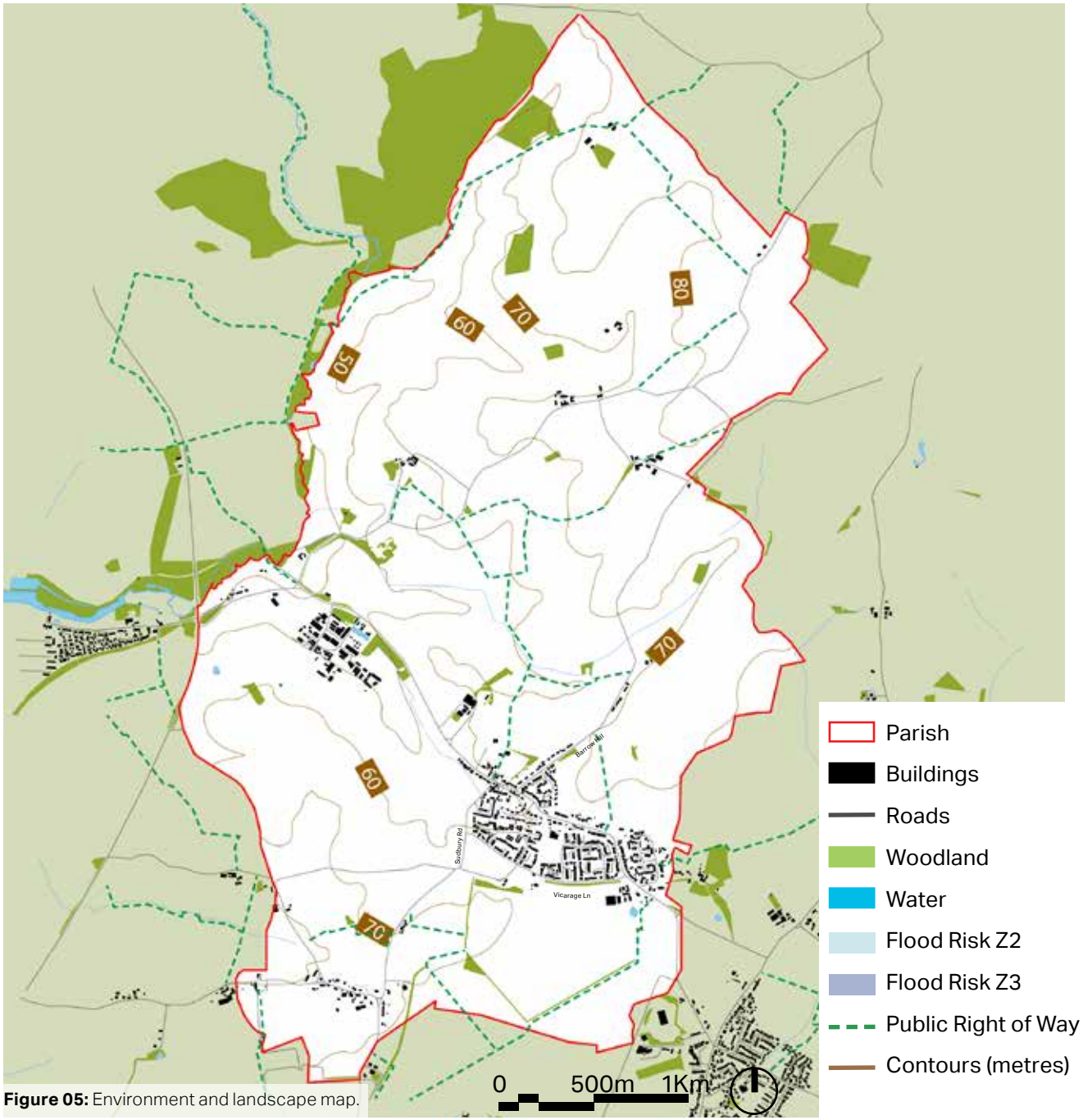


Figure 05: Environment and landscape map.

2.4 Settlement pattern and urban form

Over time the village has grown from the historic spine of the High Street, first along Barrow Hill and then with a large post-War development to the south. This development, based around cul-de-sacs, changed the pattern of the village. The 20th Century development has quiet and safe residential streets, linked by a network of pedestrian footpaths.

In the 21st Century, development of mixed typologies has, for the first time, taken place to the south of Tamage Road.

As shown in figure 06, the building typologies are a mix of older detached buildings and the newer developments are typically made up of semi detached and terraced typologies. As well as this, there are one and two storey industrial buildings and other farm buildings in the wider parts of the parish.

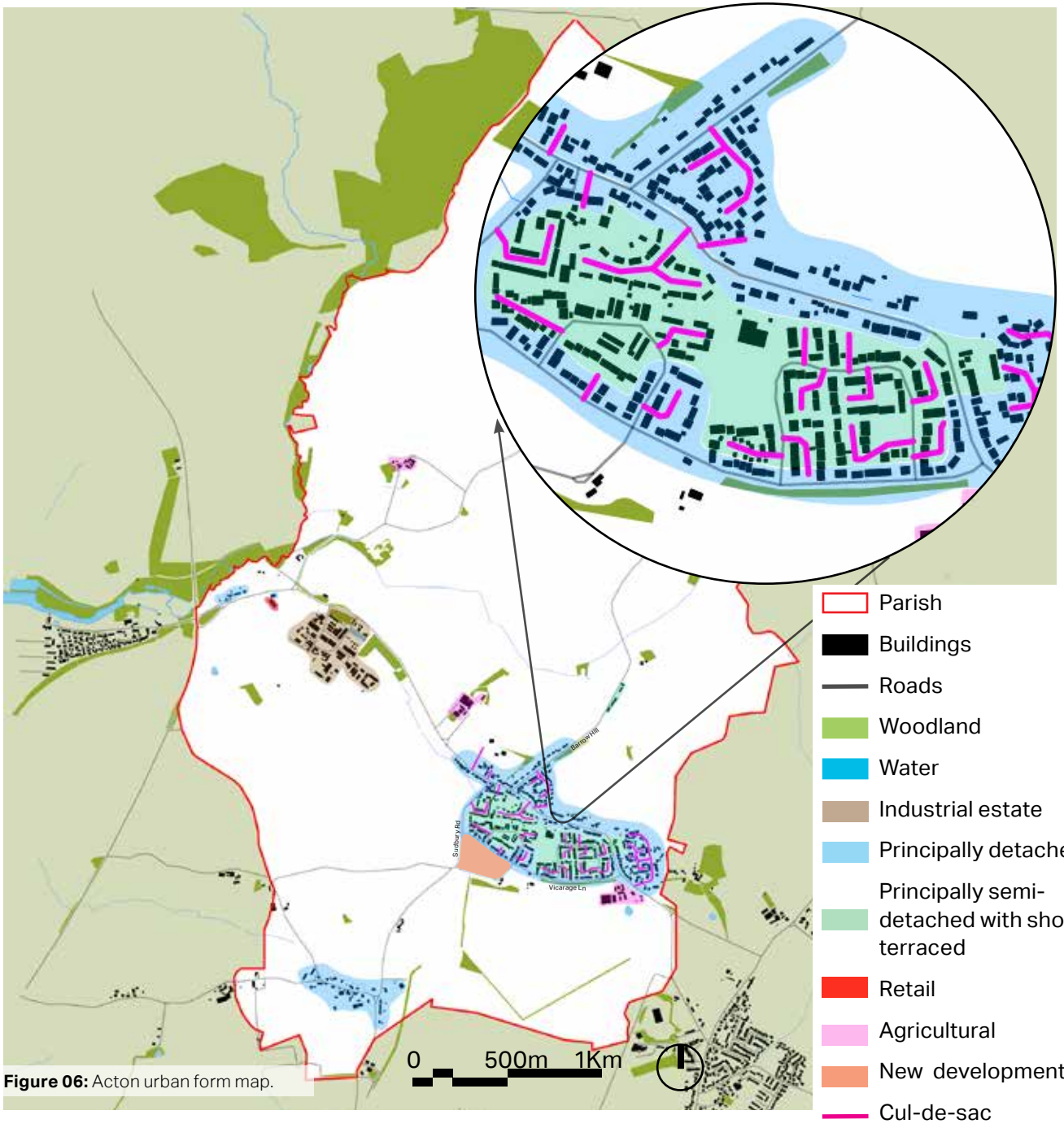


Figure 06: Acton urban form map.

2.5 Extant planning permissions

A new residential development on ''The Barn Owl Field' to the north east of the settlement of Acton has been granted. The site is adjacent to the allotments and the wildlife reserve. It also abuts a public right of way.

The scheme (DC/17/02751) proposes the provision of up to 100 new dwelling units including the provision of 40 affordable homes. The scheme only has outline planning permission and this has been the case since early 2017. **(Please note this permission has now expired)**

Figure 07 shows the application red line boundary.

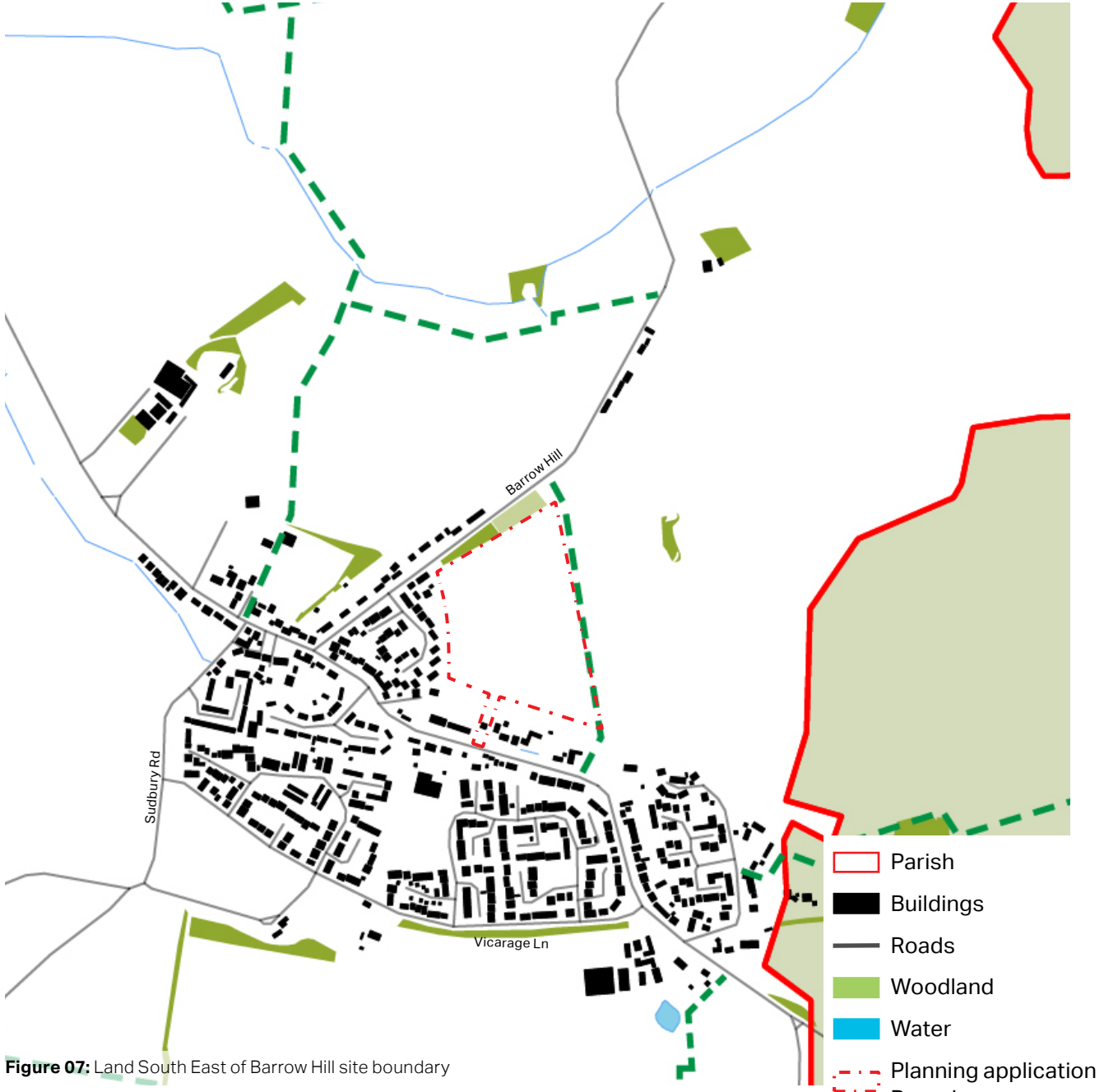


Figure 07: Land South East of Barrow Hill site boundary

Design guidelines & codes

03

3. Design guidelines and codes

3.1 Acton Parish design guidelines and codes

This section introduces a set of design principles that are specific to Acton Parish. These are based on:

- Baseline analysis of the area in Chapter 2;
- Understanding national design documents such as National Design Guide, National Model Design Code and Building for Healthy Life documents which informed the principles and design codes; and
- Discussion with members of the Neighbourhood Plan Steering Group, informed by wider engagement.

The character areas and their attributes can help understand the nature of the design codes in the Neighbourhood Area, to identify challenges and specific issues common to a number of locations that the design codes need to target.

The character areas used in this report are indicative and based on the baseline analysis in Chapter 2, the site visit and are informed by:

- How the village has developed historically. What is its position in the landscape, and how this should influence any future growth?
- The factors that make the area distinctive and different from others. What are the vernacular features of architecture in the area and what are the most frequent building typologies?
- How green and blue infrastructure (including open spaces, vegetation and water features) contribute to the area and how these, and other aspects of value, should be subject to protection.
- How the street pattern, the street scene, the walking and cycling networks and the traffic and parking provision affect the perception of the different areas.
- The typical plot type in each area. How many levels do residential buildings display and what is the average density of dwellings in the area?

3.2 Character areas

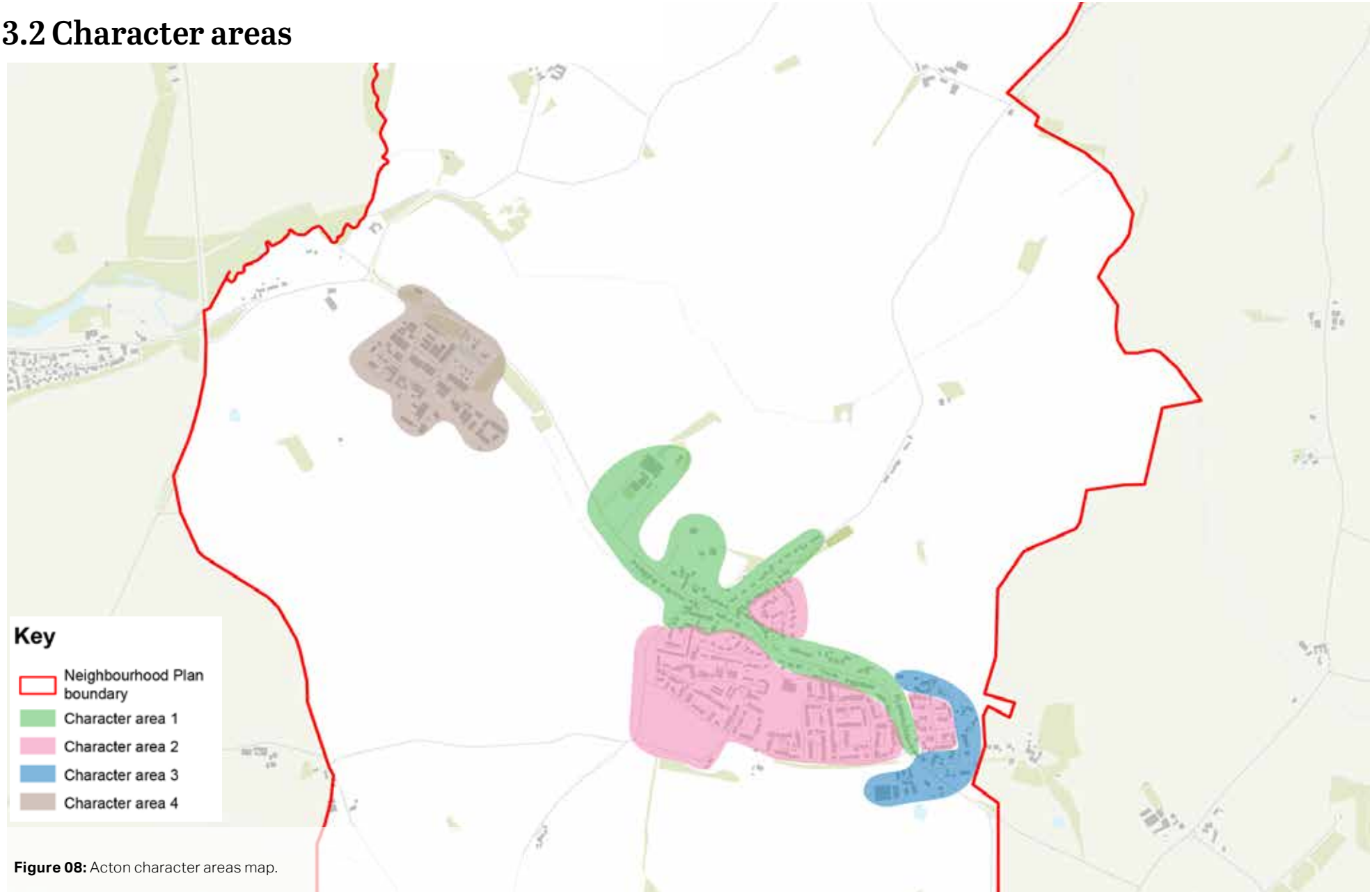


Figure 08: Acton character areas map.

Character area 1

The area contains a large proportion of listed and historic buildings. Dwellings are predominantly detached, semi-detached and terraced along the High Street. They present traditional building forms, contributing positively to the character of Acton.

Character area 2

This character area contains three areas of post-war suburban development with cul-de-sacs, green spaces and pedestrian footpaths.

Character area 3

The area is characterised by traditional, mainly detached, houses on the rural fringe of the village.

Character area 4

The overarching character of this area is created through the varied forms and sizes of the business park units, all designed within typical parameters of scale.

3.3 The design themes

This section sets out best practice examples from Acton, demonstrating how the existing context can serve as a reference point and an inspiration for new development that is sensitive to the existing place.

Reference to existing character does not, however, rule against contemporary approaches to design, but it does require a more nuanced and sensitive design approach to avoid inappropriate design solutions. The elements that are more general are what we mean by design guidance. Other elements that are more prescriptive or set out parameters are the design codes.

Based on the National Design Guide, this guidance is divided into 8 sections, shown on this page and the next, each one with a different number of subsections. Each section and subsection is numbered (e.g MO.01) to facilitate its reading and consultation.

Theme	Code	Title
Movement	**MO.01**	Connectivity
	MO.02	Orientation
	MO.03	Inclusive streets
	MO.04	Car parking
	MO.05	Cycle & refuse storage
Landscape, nature and open space	**LA.01**	Green networks
	LA.02	Green spaces and the community
	LA.03	SuDS
	LA.04	Surface treatments
	LA.05	Biodiversity
	LA.06	Street Planting
	LA.07	New woodland
Built form	**BF.01**	Density
	BF.02	Types and forms
	BF.03	Height
	BF.04	Building line
Identity	**ID.01**	Local character
	ID.02	Legibility and views

Public Space	**PS.01**	General Street
	PS.02	Rural / Edge Lane
	PS.03	Secured by design
Homes & buildings	**HB.01**	Define front and back gardens
	HB.02	Extensions and conversion
	HB.03	Architectural details, materials and colour palette
Energy & sustainability	**SU.01**	Low carbon
	SU.02	Insulation
	SU.03	Solar panels
	SU.04	Green roofs
Employment	**EM.01**	Context and location
	EM.02	Frontages
	EM.03	Access, yards, servicing and parking
	EM.04	Amenity spaces and adjacencies
	EM.05	Architecture
	EM.06	Sustainability in employment buildings

Code: MO.01 Connectivity

Links to the countryside & natural spaces

The Neighbourhood Area boasts high quality natural habitats where woodland coexists with river/ditches (Acton Wood being the most notable and some dispersed small patches of woods near Acton Hall and Barrow Hill Farm), permeating the fringes of the settlement and influencing much of the character further into the built-up area.

The woods and the topography of the area provide an excellent variety in the natural landscape.

Actions:

- Create links with the countryside. In edge locations, consider connecting all streets to the network of public pathways and rights of way.
- Consider rivers and watercourses as part of a network of natural spaces to reverse the effects of biodiversity fragmentation.
- Retain approach routes and the perception of the natural landscape when approaching the settlement, keeping the gradual transition from open spaces to built areas.
- All cycle routes should be in accordance with LTN1/20 standards.

Make use of the landscape

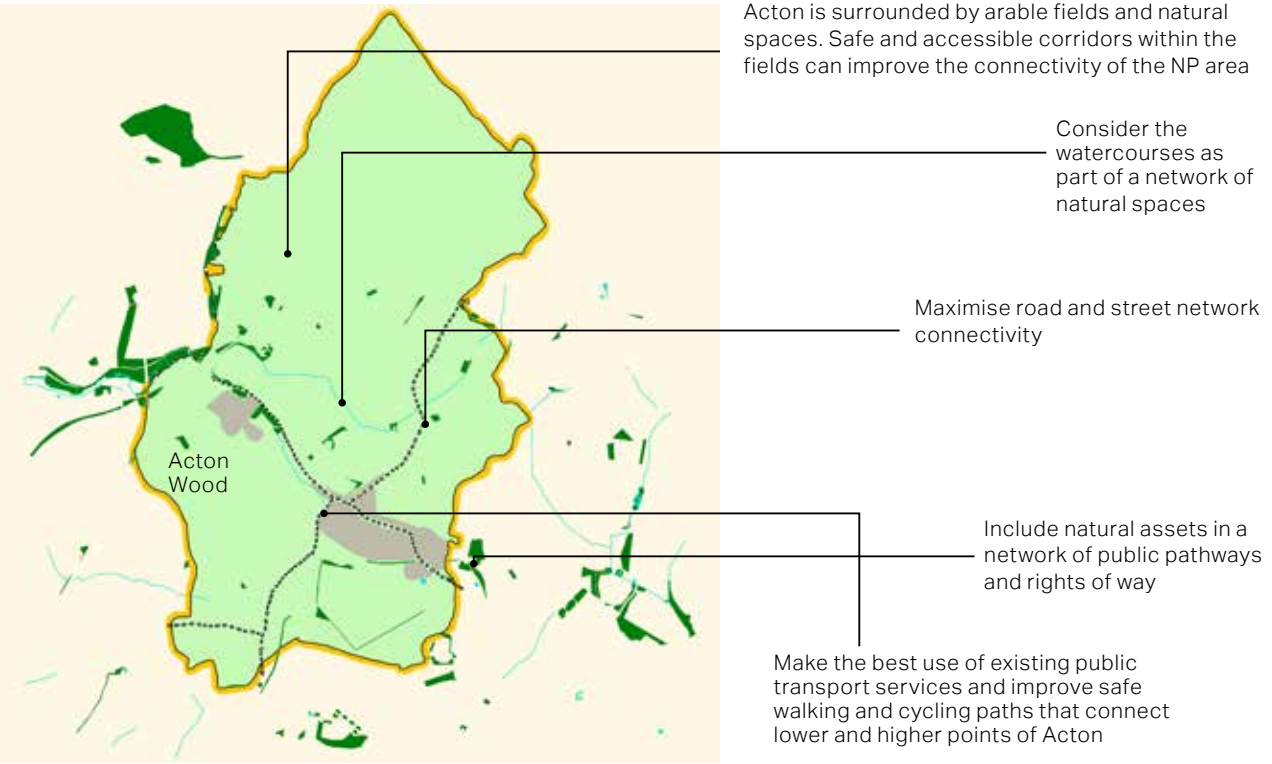
Actions:

- Promote safe accessible paths & corridors within agricultural fields and forest with the potential to connect rural settlements to their hinterland.

New developments

Actions:

- Make the best use of existing public transport services and improve safe walking and cycling paths.
- Locate development where the need to travel will be minimised.
- Limit any significant impacts from and to the development of the highways and transportation network.
- Maximise road and street network connectivity.



Code: MO.02 Orientation

Wayfinding

A way of making walking and cycling easier is to ensure that routes are direct as well as memorable.

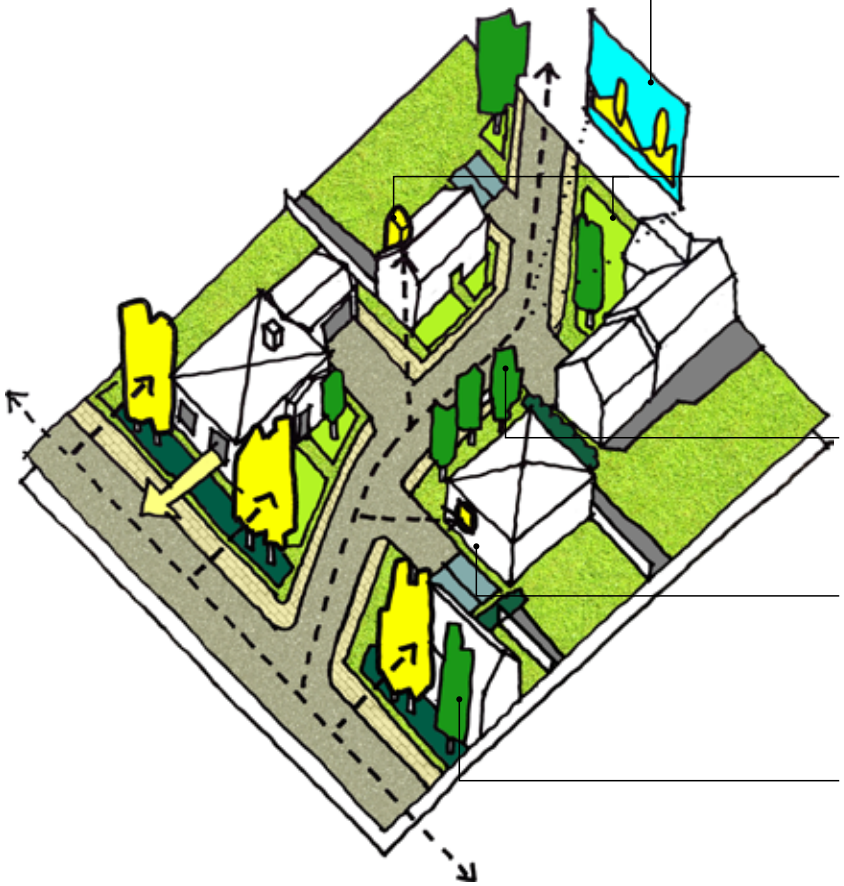
Actions:

- Create places that have a clear identity and that are easy to navigate.
- Local landmark buildings or distinct building features -such as towers, chimneys, or porches- and clear, direct routes can help with legibility. Clear signage should be placed at key nodes and arrival points to aid orientation.
- Use landscape and feature trees as both wayfinding aids and as elements that provide enclosure and attractiveness to the street. Trees can be a great design tool to mark the access to new developments and distinct parts of an area.

Serial vision

Actions:

- Subtle variations in alignment and small setbacks of buildings can have a powerful effect of discovery and drama when moving through a development.
- This effect can be achieved through delivering schemes that allow free movement from one place to another, movement to the enclosed space of a square or courtyard where people meet, and to the focal point where people go to.
- This process can be described as the interplay between sequences of focal buildings and building features, landmarks and vistas.



Code: MO.03 Inclusive streets

Pavement widths

Actions:

- A clear width of 2m allows two wheelchairs to pass one another comfortably. This should be regarded as the minimum under normal circumstances.

Gradients

Actions:

- Recommendations vary somewhat across guidelines but, under normal circumstances, a figure of 2.5 per cent (1 in 40) should be regarded as the maximum acceptable. Where possible, it is preferable to have a crossfall between 1 and 2 per cent.

Surfaces

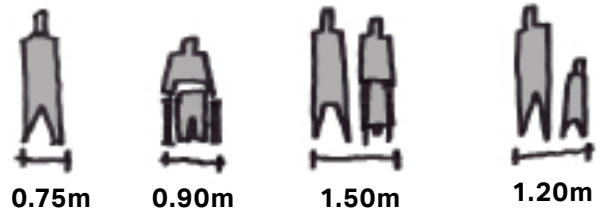
Actions:

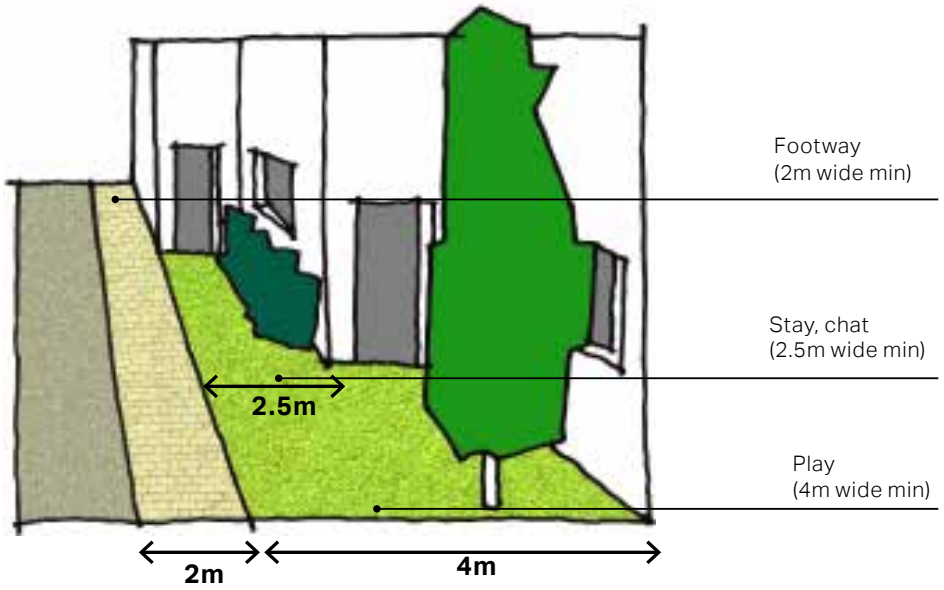
- Uneven surfaces and gaps between paving slabs can cause problems for people using sticks and crutches, visually impaired cane users and wheelchair users. Joints between pavers should be as small as possible.
- When small paving bricks (paviours) are used, care should be taken to ensure that they are evenly laid; any unevenness can cause problems for some wheelchair users and some visually impaired cane users. Cobblestones should not be used.

Colours

Actions:

- Use colour / tonal contrasted marking to identify street furniture, railing or boarding around street works, scaffolding, and tactile paving surfaces. The main purpose of using contrasted marking is to help partially sighted people avoid obstacles that they might walk into or trip over.





Pavement widths

The footway and pedestrian areas provide for a range of functions which can include browsing, pausing, socialising and play

Code: MO.04 Car parking

Car parking design should be safe and should not undermine the quality and amenity of the streets. In residential developments, parking should be provided on plot, either in garages, car ports or on the plot to the side or to the front, without jeopardising the space allocated to a garden. Generally, on-street parking should be considered only for visitors and near public open spaces, and kept at a minimum. Generally, parking courtyards and flat-over-garages are not allowed in residential areas.

Parking, including for cycles, should be in accordance with the Suffolk Guidance for Parking 2019 (or any successor document).

On-plot parking

Actions:

- On plot parking can be either in garages or car ports and/or on the driveway. If parking is proposed at the driveway, it is preferable to place it at the side of the building to minimize the presence of cars on the street.
- Driveway parking at the front of the building will only be allowed if it is combined with high quality and well designed soft landscaping.

On-plot garages / car ports

Actions:

- Garages should preferably be designed in forms linked to the main building, rather than free-standing structures. In both situations, they should reflect the architectural style of the main building.
- Garages should be in line or recessed from the main building line, and not dominate the street.
- Integrate bicycle parking and/or waste storage into garages.

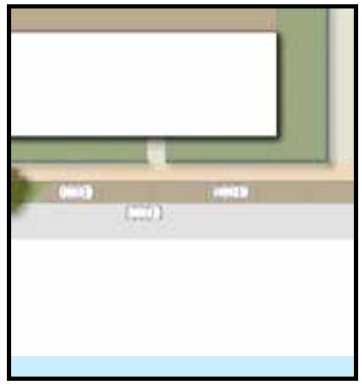
On-plot parking on driveway

On-plot parking in garage

On-street parking adjacent public open space

High Street. On-plot parking on driveway

Lambert Drive. On-plot parking in garage



Lambert Dr. On-street parking should be limited to public open space locations

Code: MO.05 Cycle & refuse storage

Bicycles

Actions:

- A straightforward way to encourage cycling is to provide secured spaces for bicycles within all new residential developments and publicly available cycle parking racks in the public realm.
- Any introduction of cycle parking should be in accordance with the Suffolk Guidance for Parking 2019 (or any successor document).
- Access from the street to rear gardens should be provided via secured gates. Bulky bike storage on front gardens should be avoided.

Refuse bins

With modern requirements for waste separation and recycling, the number of household bins that need to be stored has generally increased. It is important that these are accommodated in ways that allow convenient access, and without increasing street clutter or harming the appearance of new buildings.

Actions:

- Bin storage and presentation locations are required by the LHA and should be located on-plot and outside of the public highway where they may present an obstruction to highway users.
- It is normally advisable to have access to the back garden from the street with a secured door. It is also recommended to have direct exit to the back garden via the kitchen. A paved section of the garden can be located nearby and hold the required bins so they can take the organic waste generated in the kitchen and be taken out to the front of the property for collection.
- There are several solutions to minimise the presence of wheelie bins on the garden, by using screening or planting to conceal them.

Provide racking spaces where need is identified

Provide secured storage space for bikes within the domestic curtilage

Access gate to back gardens, that provides a clear route for refuse bins to be moved from back gardens to the front of the property for collection

Positive example on how to conceal the presence of bins in back gardens

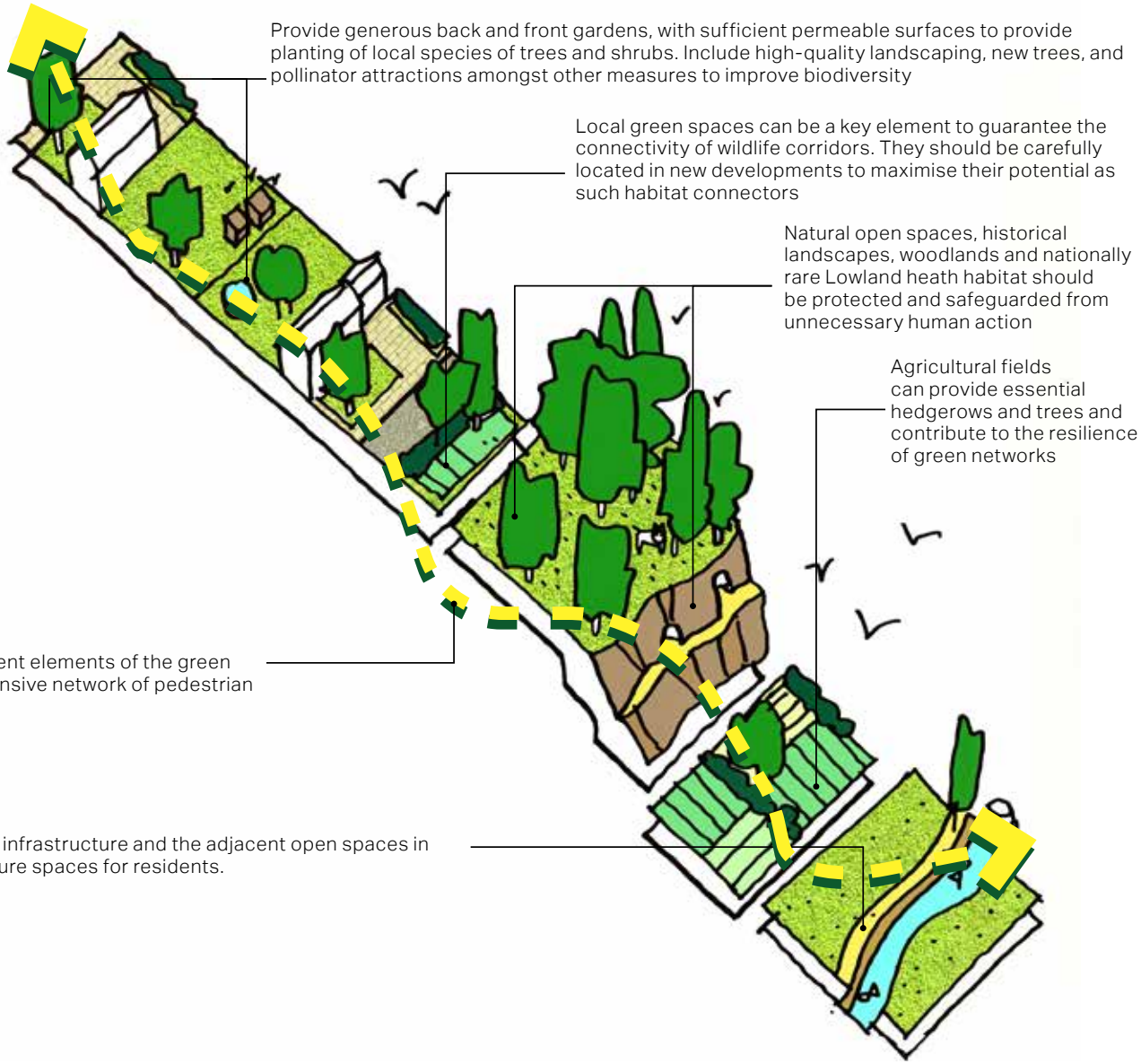
Code: LA.01 Green networks

Green networks

Green networks, corridors and linkages are widely seen as a key mechanism for reversing the effects of fragmentation on biodiversity. They also deliver a range of other social and environmental benefits, including enhancement of local landscape character, and greater opportunities for public access and recreational use.

Actions:

- Provide a connected network of private and public green spaces that includes generous and vegetated back and front gardens, public green spaces, fields and natural open spaces.



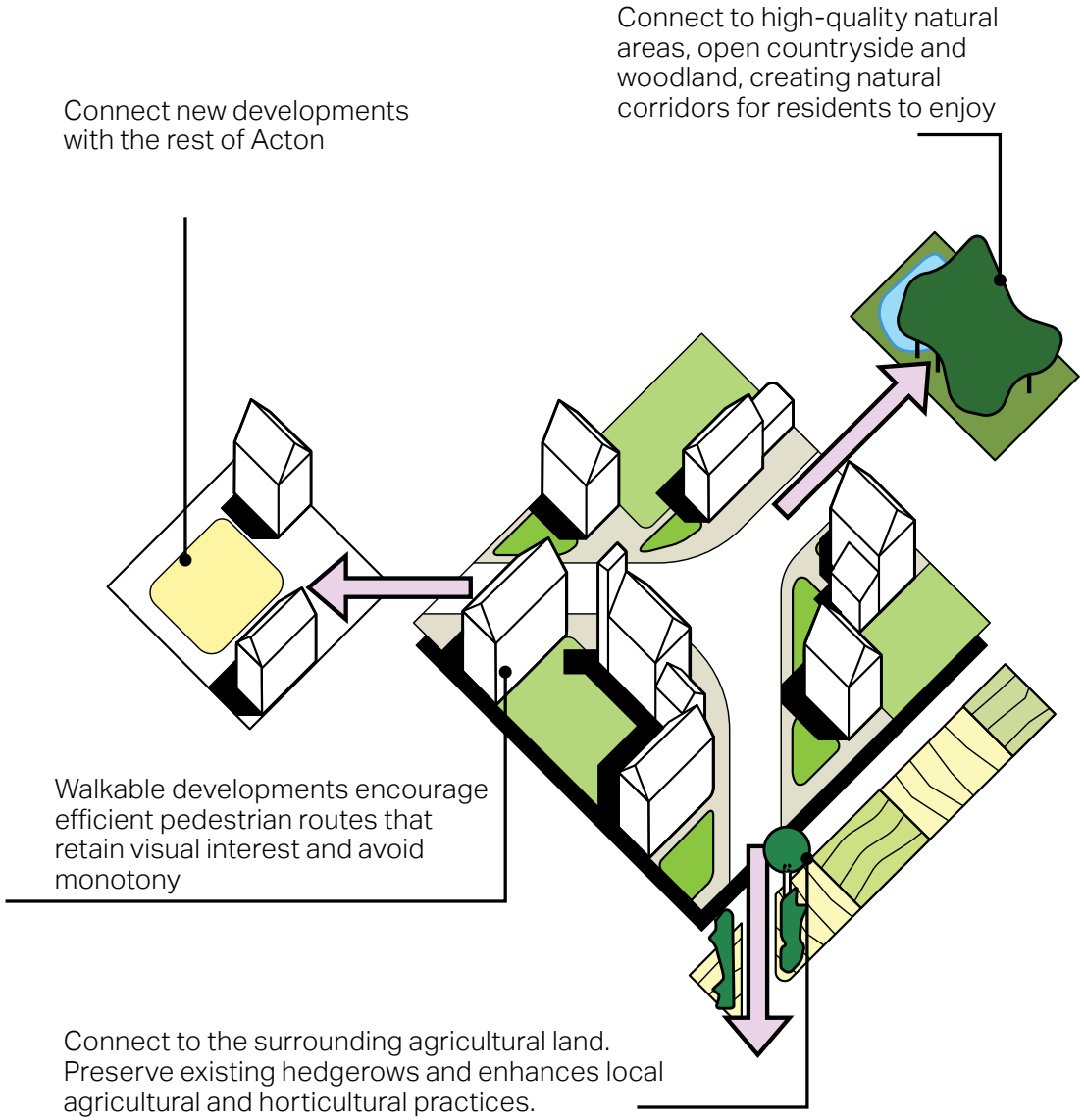
Code: LA.02 Green spaces and the community

Careful attention must be paid to the 'functionality' of green spaces. Existing community uses must not be prejudiced by any new development.

There is a variety of green spaces in Acton with different characters, uses, and scale. This creates a system within the parish where each green space serves a particular purpose and all together secure a connected green network within each village and between them.

Actions:

- Offer a variety of spaces that can host a diverse range of activities and accommodate different users.
- Be promoted for events and activities that encourage people to associate with their neighbourhood and engender civic pride.
- Be well maintained and monitored to maximise community safety.
- Be well-connected with green links to promote active lifestyles.



Code: LA.03 SuDS

Sustainable Urban Drainage Systems

Sustainable urban drainage systems or SuDS are designed to reduce the rate of rainwater run-off from new development, mitigating the risk of flooding elsewhere whilst delivering benefits for biodiversity, water quality and amenity.

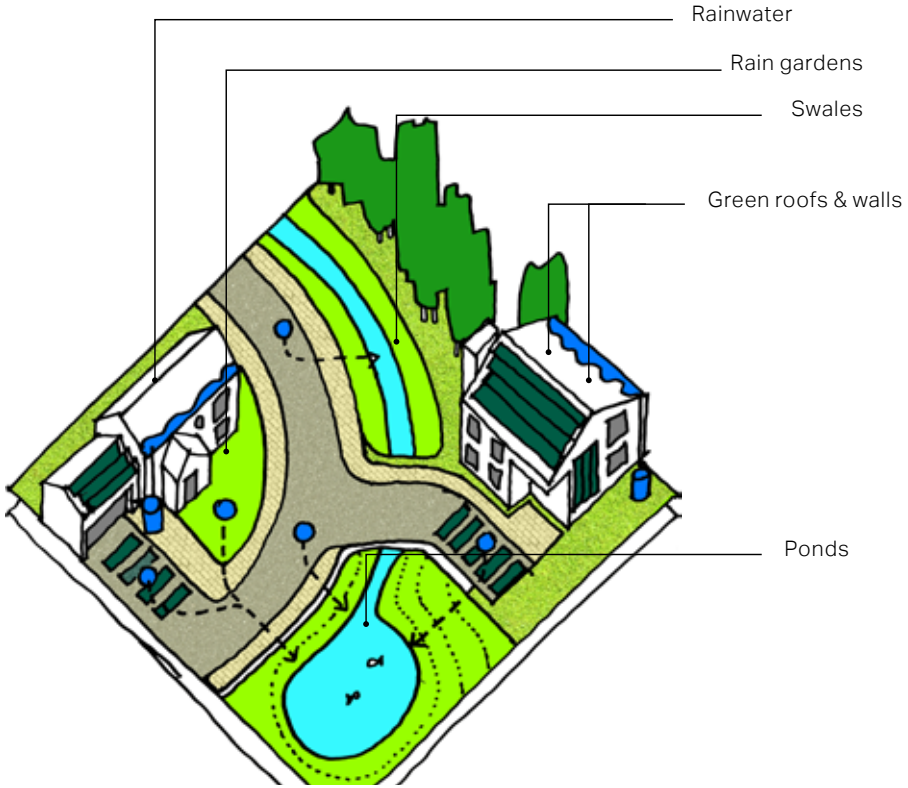
Developers should be aware there is a natural water course that links several smaller ponds through the village and the Queensway flood ditch before flowing east via the 'Sheep Field'. Related floods occur in low areas of Sudbury Road.

Ideally water from any new development needs to be captured and not discharged into the water course. Where this is not possible schemes need to follow the hierarchy set out as follows in decreasing preference of measures, by which water is:

- Allowed to infiltrate into the ground.
- Attenuated for gradual release to a water body.
- Released into a water sewer, highway drain, or another drainage system.
- Released into a combined sewer.

Actions:

- The approach to each site will depend on its density, the position of watercourses, the ground conditions including permeability, contamination and the sensitivity of groundwater receptors.
- SuDS need to be considered early in the design process to ensure efficient integration with other aspects of design such as public open space, biodiversity provision, and highways so as to minimise the land needed.
- Multi-functional SuDS need to be prioritised allowing for attenuation features which can also be used for biodiversity and recreation.
- The types of roadside swales that Suffolk County County will adopt are set out in Suffolk Design: Streets Guide.



Code: LA.04 Surface treatments

Paved areas and surface treatments are a major element within most developments, and their design has a significant impact on the overall appearance, quality and success of a scheme.

The choice of pavement and its degree of permeability to the soil below is key in successful surface water management. Paving materials should be robust, aesthetically attractive and with good weathering properties to make a sustainable and attractive street scape.

Road paving

Block paving is generally recommended as road surface material that can permeate to the soil below, over tarmac. In all cases, large unbroken areas of a particular surface material should be avoided, and areas can be broken up successfully using materials of a similar colour but with different textures. Tarmac with added porosity can be a successful alternative. Note that Suffolk County Council will not adopt permeable paving.

Pavements

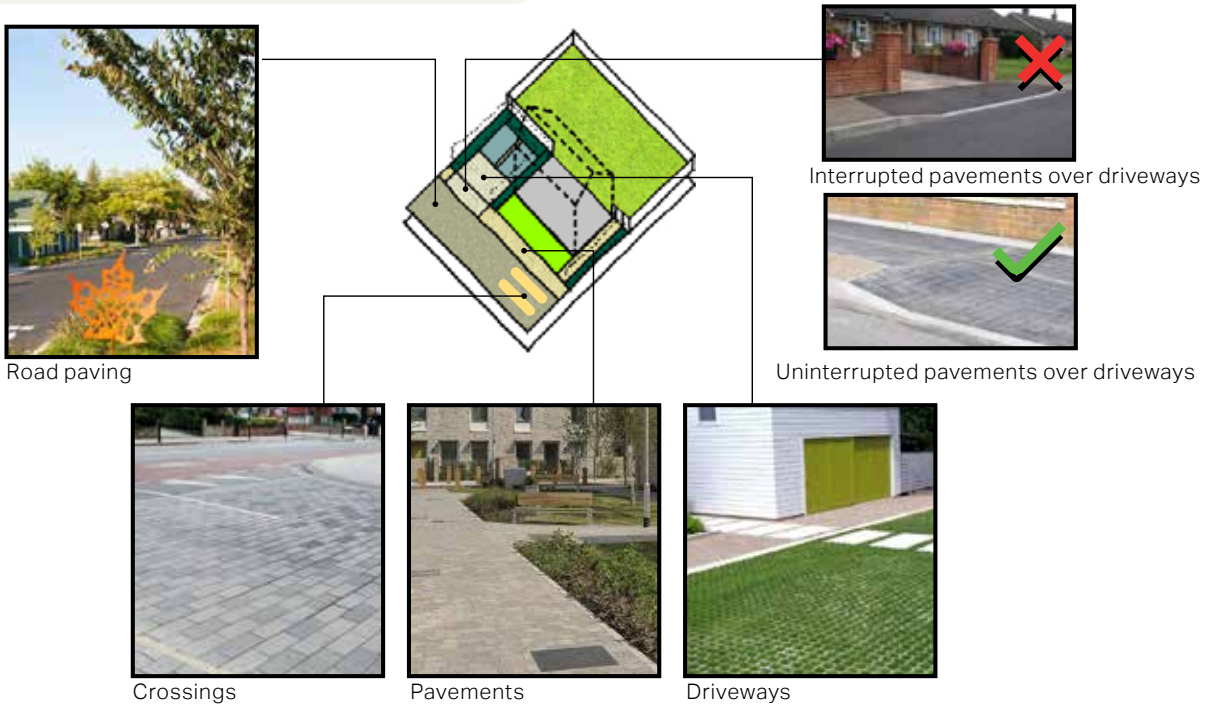
High quality materials such as stone, brick or block paving can all constitute good options for pavements. Tarmac pavements are generally the most economical option but are monotonous and make wayfinding more difficult, repairs patches create dissonant streetscapes, in addition to their reduced permeability. The laying pattern and materials used can make a significant contribution to the overall appearance, quality and success of a scheme.

Driveways

Prioritise bigger portions of green within the pavement rather than a very granular paving pattern.

Pavements over driveways

Pavement patterns should prevail over the driveway access. To guarantee a coherent street and a continuous walkable path, kerbs should not invade the pavement.



Sustainable urban drainage systems

Any proposed hard surfacing design will need to take into consideration the need for an underlying system to deal with water run-off, as any hard landscaping will impact the management water run off and affect the capacity of the drainage system.

Code: LA.05 Biodiversity

Back and front gardens, together with public green open spaces and surrounding fields play a key role in supporting biodiversity in built-up areas. They have the potential to create habitat mosaics and enable wildlife corridors, often linking up with parks, tracks, rivers, churchyards and hedgerows. Acton is rich in biodiversity, including many Priority Species of flora and fauna, and also includes five County Wildlife Sites and a Site of Special Scientific Interest. The parish is home to several kinds of orchid as well as many protected species including great crested newts, bats, water voles, badgers, otters and a variety of reptiles. Users can follow these steps to foster wildlife and habitat creation in their community.

Actions:

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

Create habitats for wildlife, such as bird and bee boxes

Incorporate water and wildlife friendly ponds in gardens

Acton Wildlife is an exemplary biodiversity project

Allotments can have positive impact on the landscape and community

Code: LA.06 Street planting

The use of native species should be favoured to avoid the impact of invasive species on the biodiversity of local habitat and to retain the existing rural environment.

Flower beds, bushes and shrubs

Normally planted within the curtilage boundary, ornamental species add interest and colour to their surroundings and become an identity and expressive feature of each dwelling. The use of native species should be favoured to avoid the impact of invasive species on the biodiversity of local habitat.

Hedges

Hedgerows are normally used to mark property limits, they should also be planted in front of bare boundary walls to ease their visual presence. They ideally should be used to conceal on-plot car parking and driveways within curtilages.

Trees

Trees can be used to mark reference points and as feature elements in the streetscape. When planted at intersections and key locations, they improve privacy whilst enhancing the wayfinding and distinctiveness of the area. These tend to be within property curtilages.

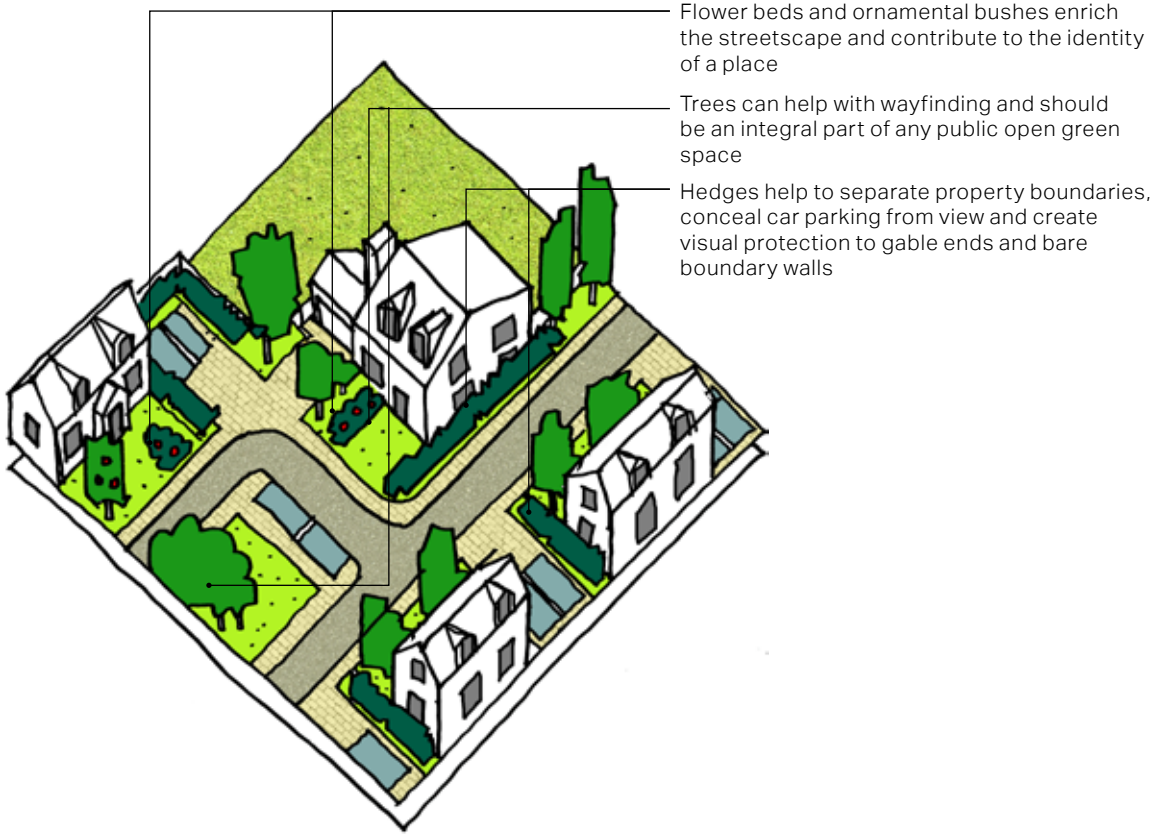
Trees should also be present in any public open space, green or play area to generate environmental and wildlife benefits.

Planting standards

The British Standard 5837: 2012 'Trees in relation to construction- Recommendations' should be the reference document when considering new and existing trees on proposed development sites.

Actions:

- Existing trees should be retained as much as possible.
- The success of tree planting is more likely to be achieved when it has been carefully planned to work in conjunction with all parts of the new development, parking, buildings, street lights, etc.



Code: LA.07 New woodland

Planting a single tree has benefits for people, wildlife and the environment. Those benefits vastly increase when planting a whole woodland. New woodlands can help increase biodiversity, provide shelter, prevent soil erosion, and reduce flooding.

Actions:

- Encourage the planting of native broadleaf trees. Trees should be UK sourced and grown, and the seed origin should be fully traceable.

Location:

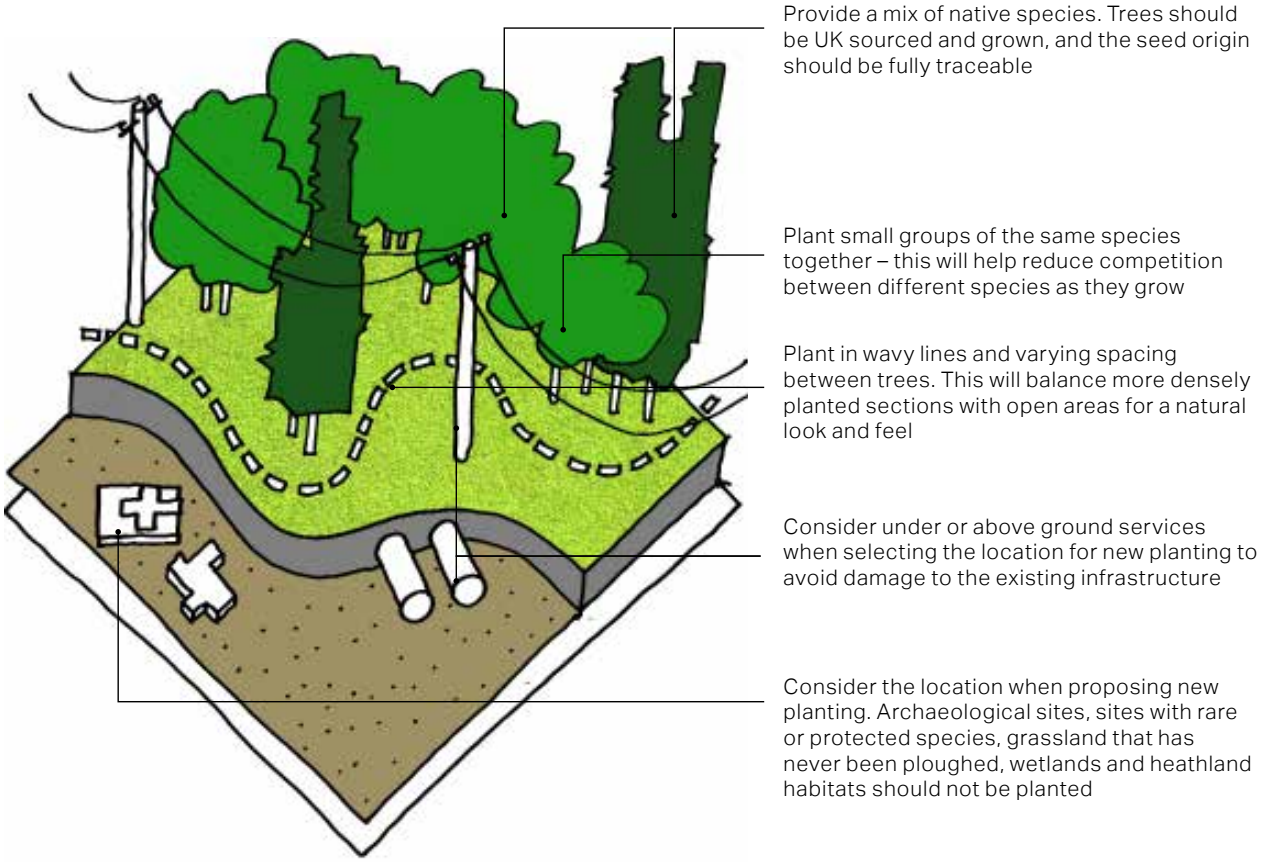
- Consider the planting location carefully. Archaeological sites, sites with rare or protected species, grassland that has never been ploughed, wetlands and heathland habitats should not be planted. Select tree species that are suitable for the soil conditions of the area.
- Be aware of any under or above ground services and design planting accordingly. Provide sufficient buffer to existing infrastructure.
- Consider the final size and spread of the trees and the use of the site as the trees grow. Avoid planting under existing trees, as shade and lack of water will seriously restrict growth. Allow plenty of distance from existing hedges as they could swamp the growth of new trees.

Species:

- If the area to plant is large, consider using a mix of native species. UK forests and woods are under pressure from pollution, climate change, pests and diseases. Including a broad range of native tree species will make the new wood more resilient to these pressures and attract different species of wildlife.

Spacing:

- Plant in wavy lines and varying spacing between trees. This will balance more densely planted sections with open areas for a natural look and fee.



Code: BF.01 Density

Density is the key indicator of how compact a development or place will be and how intensively it will be developed. Different density measures result in more compact or more open development, and therefore have a huge impact on the character of a place.

This section identifies the density ranges of exemplar locations within each character area, to understand how local variations in density result in different identities within the neighbourhood plan area.

Density in this section is measured in dwellings per hectare (dw/ha).

These density ranges can be used as reference for new developments, to facilitate the assessment of the level of compactness and the degree of built areas vs open spaces required in relation to the desired resulting character.

Density in new developments should take into consideration the density ranges of the surrounding areas, and suggest a density measure that is appropriate to them.

Larger development sites
Residential density: 25-30 dw/ha

Character area 1
Residential density: 5-10 dw/ha

Character area 2
Residential density: 20-25 dw/ha

Character area 3
Residential density: 15-20 dw/ha

Character area 4
Primarily commercial warehouse units

Code: BF.02 Types and forms

Housing type refers to the size, purpose and arrangement of housing. Residences constitute the majority of the buildings in an area, and they have a huge impact on the character of a place.

The following section identifies the most frequent housing types in each of the character areas.

These types can be used as reference for new developments, to assess the appropriateness of suggested types in relation to the existing types in the neighbourhood plan area.

Character area 1
Primarily detached and semi-detached dwellings.

Character area 2
Primarily terraced and semi-detached dwellings.

Character area 3
Primarily semi-detached/detached dwellings.

Character area 4
Primarily commercial warehouse units

Types proposed in new developments should take into consideration the typologies of surrounding areas, being considerate with building types in the vicinity.

Larger development sites
Type: Detached, semi-detached and terraced

Code: BF.03 Height

The following section identifies the prevailing heights for buildings in the neighbourhood area.

These typical heights can be used as reference for new developments, to assess the appropriateness of suggested types in relation to the existing types in the neighbourhood plan area.

Character area 1
Max residential Storeys: 2

Character area 2
Max residential Storeys: 2

Character area 3
Max residential Storeys: 2

Character area 4
Max Industrial units storeys: 1-2

Most residential buildings tend to be 2 storeys across the built area, buildings in the countryside tend to be of a lower profile.

Any development over two storeys will need to be justified and will be contested as it has the potential to significantly impact the built character of the Parish.

This tension between new intrusive development and existing dwellings should be avoided.

Larger development sites
Max residential Storeys: 2 storeys

Code: BF.04 Building line

Building line

The way buildings sit in relation to the street can affect the feel of a development.

Actions:

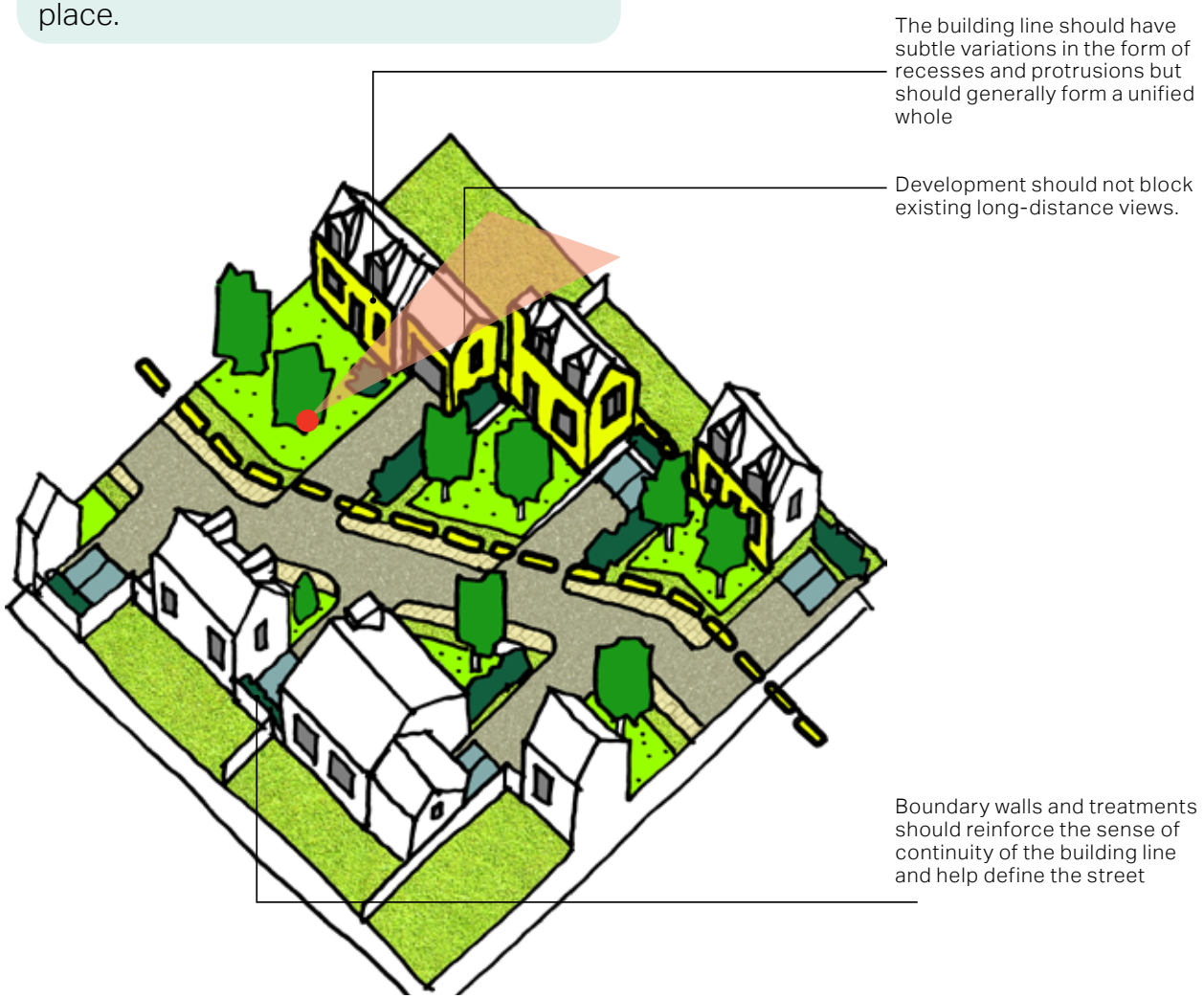
- The building line should have subtle variations in the form of recesses and protrusions but should generally form a unified whole.
- Building line gaps reinforcing long distance views should be retained;
- Boundary treatments should reinforce the sense of continuity of the building line and help define the street, appropriate to the rural character of the area.
- Boundary treatments should not impair natural surveillance.

Setbacks

A setback is the distance between the back of the pavement and the building line. The size of the setback contributes to the overall character and sense of enclosure along a street.

Actions:

- A coherent street frontage should be achieved by coordinating the setback between buildings and the street. Large differences in setbacks for adjacent properties should be discouraged as they do not contribute to the overall streetscape or the cohesiveness of a place.



Code: ID.01 Local character

Roof profile & materials

Creating variety in the roof line is a significant aspect of designing attractive places. There are certain elements that serve as guidelines in achieving a good variety of roofs:

- Scale of the roof should always be in proportion with the dimensions of the building itself.
- Monotonous building elevations should be avoided, with subtle changes in roof line being promoted during the design process.
- Local traditional roof detailing elements should be considered and implemented where possible.
- Dormers can be used as a design element to add variety and interest to roofs.
- Pitched, hipped and gable roof are local traditional roof types.
- The predominant material used for roofing is clay tile and natural slate. Pitches tend to have a considerable slope.

Wall materials

- Render: rendering and stucco over brick can be found in the area. The local rendering tones are white, ochre, pink and light pastels.
- Stone: Even if limited to cottages, and not very prevalent in the area, stone is used in some historic areas of Acton.
- Brick: Locally, the clays are predominantly rich hues of reds and orange, burnt headers are also characteristic. New development using brick should use a hue that is specific to the area.
- Wooden framing: Wooden frames are used in historic buildings of medieval origin, exposed in many cases and infilled with painted or rendered brick.

Image above shows positive examples of roofscape articulations

Image above shows positive examples of roofscape articulations

Windows & openings

Windows are the 'eyes' of a building and are crucial to its character.

Actions:

- A limited range of traditional window patterns are characteristic of traditional houses in the area and provide appropriate models where a period effect is sought or required.
- Where possible, timber windows should be selected over uPVC alternatives; they can allow a finer profile to be achieved and if they are maintained properly they tend to be more durable.
- Aluminium windows can also offer a much greater range of design possibilities than uPVC alternatives, however these should not be considered as best option when choosing what material windows are made from.
- It is important that for good internal lighting the default position is for large windows on new development.
- In general traditional styled windows look best when painted white; although other colours are welcomed as they add interest to the street scene.
- Cills and lintels frame a window and they should be designed with care. Timber lintels are the simplest form, characteristic of vernacular construction in timber-frame or brick areas.
- Ground floor windows can be larger and deeper than upper floor windows, as they add more animation to the streetscape.
- Windows on both facades of a corner building are encouraged, they add architectural interest to the building and have a positive impact on the streetscape.

Images above show typical windows and openings in the area

Special features

- It is important that the detailing and architectural elements used in new developments are of a high quality and reinforce the local character of Acton.
- Architectural detailing shall typically display elements that equate to those on existing traditional buildings which provide interest, scale and texture to form and elevations.

Dormers & bay-windows

- A dormer is a roofed structure, often containing a window, that projects vertically beyond the plane of a pitched roof. Dormer windows can be found in Acton.
- Bay-windows are frequently displayed as part of the dwelling in Acton and can be used as local feature elements that add interest to facades.

Chimneys

- Traditionally, buildings display simply-shaped brick chimneys. New buildings should make use of accent and feature elements such as chimneys to generate visual interest in the roof line and the streetscape.

Images above show special architectural features in the area, such as dormers, bay-windows and chimneys

Code: ID.02 Legibility and views

Gaps

Actions:

- Narrow gaps between buildings should be avoided, generous gaps between buildings contribute to the general feel of openness of the area.

Views

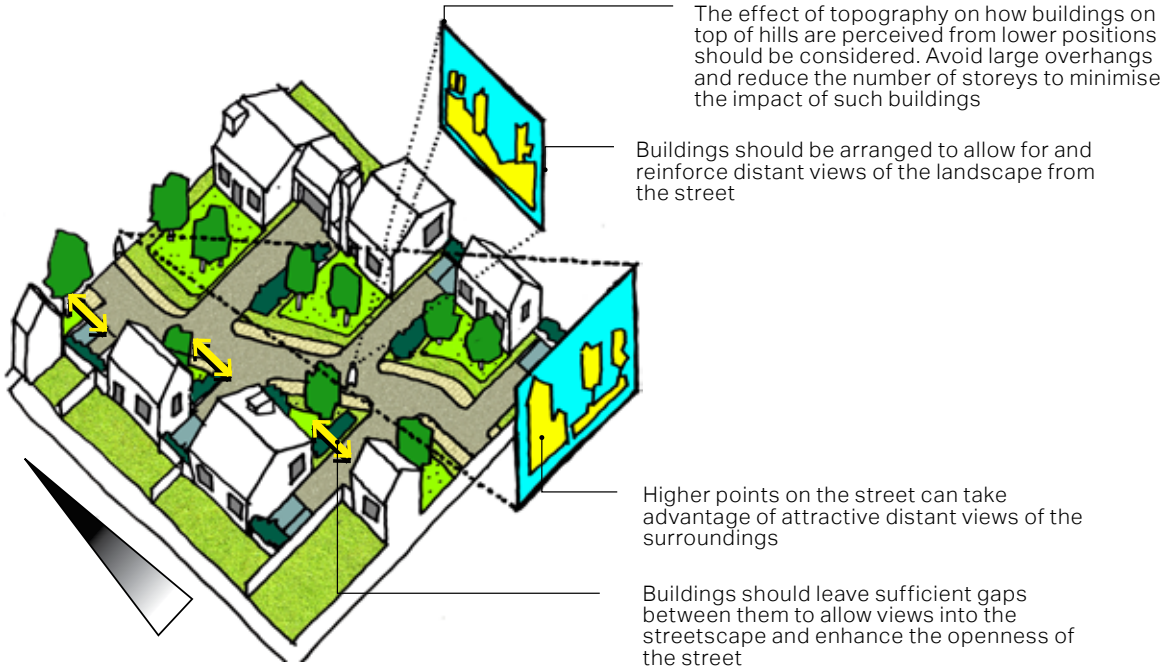
Actions:

- Consider the sequence of views and the appreciation of the view as one moves through the street scene. Consider where are the most likely viewpoints for key views and plan the arrangement of buildings, tree planting and open spaces accordingly.
- Buildings should be designed and arranged to reinforce views of existing landmarks and the open countryside through appropriate scale, mass and separation.
- Planting, particularly of trees with the potential of growing large, should be carefully planned so they don't obstruct views of key assets to the village.
- Buildings should be well set back, in alignment with the rest of the village to preserve existing viewing corridors.

Topography

Actions:

- Consider the effect of topography on the possibility on perceiving distant views. Hilltop positions can have attractive views towards the distant surroundings. However, be conscious of the effect of development on the landscape context of the settlement.
- Consider the impact of buildings on higher topographic levels and take measures to counteract the perception of the overwhelming bulk of buildings on top of hills from lower viewpoints. Consider breaking the mass and roof line of such buildings and consider limiting the number of storeys.

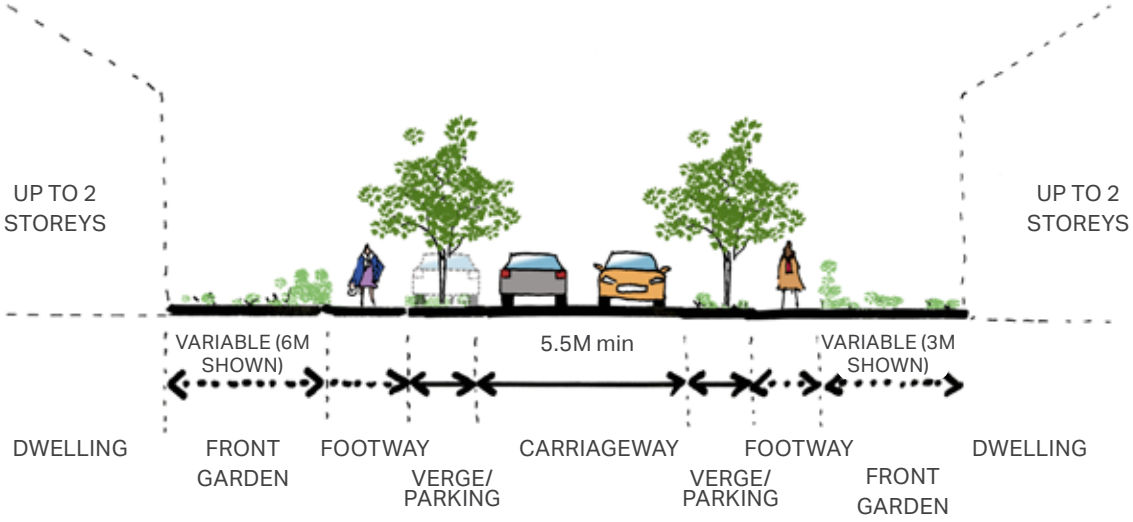


Code: PS.01 General Street

The general street type will be the prevalent street across new development. This street type is aligned to the Suffolk Design: Streets Guide guidance on secondary carriageways.

Actions:

- Where applicable and practical, speed limits should be 20mph with low traffic volumes and low speed and include design elements for traffic calming e.g. minimising the corner kerb radius, raised tables, horizontal deflection, and the like.
- Carriageways should accommodate two-way traffic and parking bays should be designed for cyclists to mix safely with motor vehicles.
- Front gardens should be well planted to create an attractive environment.
- Preferably, locate parking to the side of the property to mitigate the impact of cars on the streetscape.
- If cars are parked at the front at least 50% of the frontage should be landscaped and with a property boundary treatment.
- If terraced dwellings are used front parking courts are acceptable as long as car groupings are broken up (max 6 cars), and there is a high quality material and landscape treatment.
- It is preferable to have trees on streets as these help to mitigate climate change. If this is not possible, front gardens should be deep enough to host trees.
- Avoid using cul-de-sac solutions; instead use street furniture (e.g. bollards) to stop vehicle circulation whilst allowing other movement types.



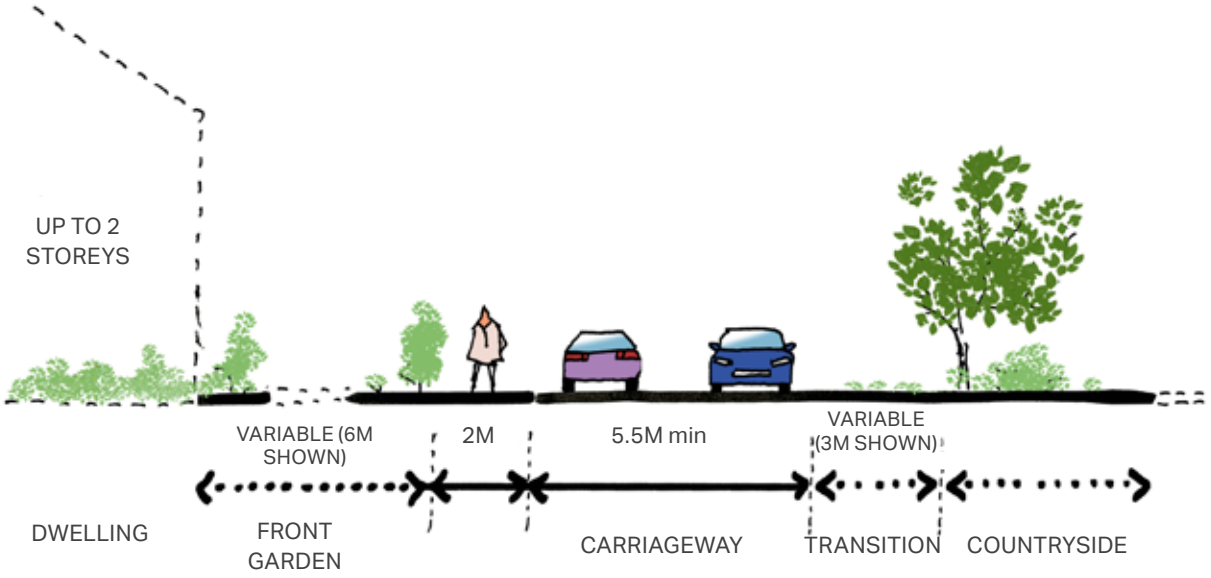
Code: PS.02 Rural / Edge Lane

Rural/ edge lanes are used where the village meets the countryside or woodland areas and a positive transition is required. This street type is aligned to the Suffolk Design: Streets Guide guidance on tertiary carriageways.

Actions:

- Design speeds must be 15mph or less, to create a quieter environment.
- These lanes can gently meander, softening the presence of the street, providing interest and evolving views whilst helping with orientation.
- Circulation is usually in the form of a shared lane between 6 and 8m hosting all modes of transport (i.e. pedestrian, cycling and motor vehicles) and no footways.
- Providing a planting buffer and landscaping between the edge of the carriageway and the countryside in order to: protect countryside areas, provide transition and control pedestrian accessibility where required. The use of hedgerows where edge lanes face onto agricultural land is particularly encouraged.

- Connect the edge lane to paths and other public right of ways where possible and the general movement network.
- The lane width can vary to discourage speeding and introduce a more informal and intimate character. Variations in paving materials and textures are used instead of kerbs or road markings.
- Swales and rain gardens could also be added into the landscaping to address any flood issue.



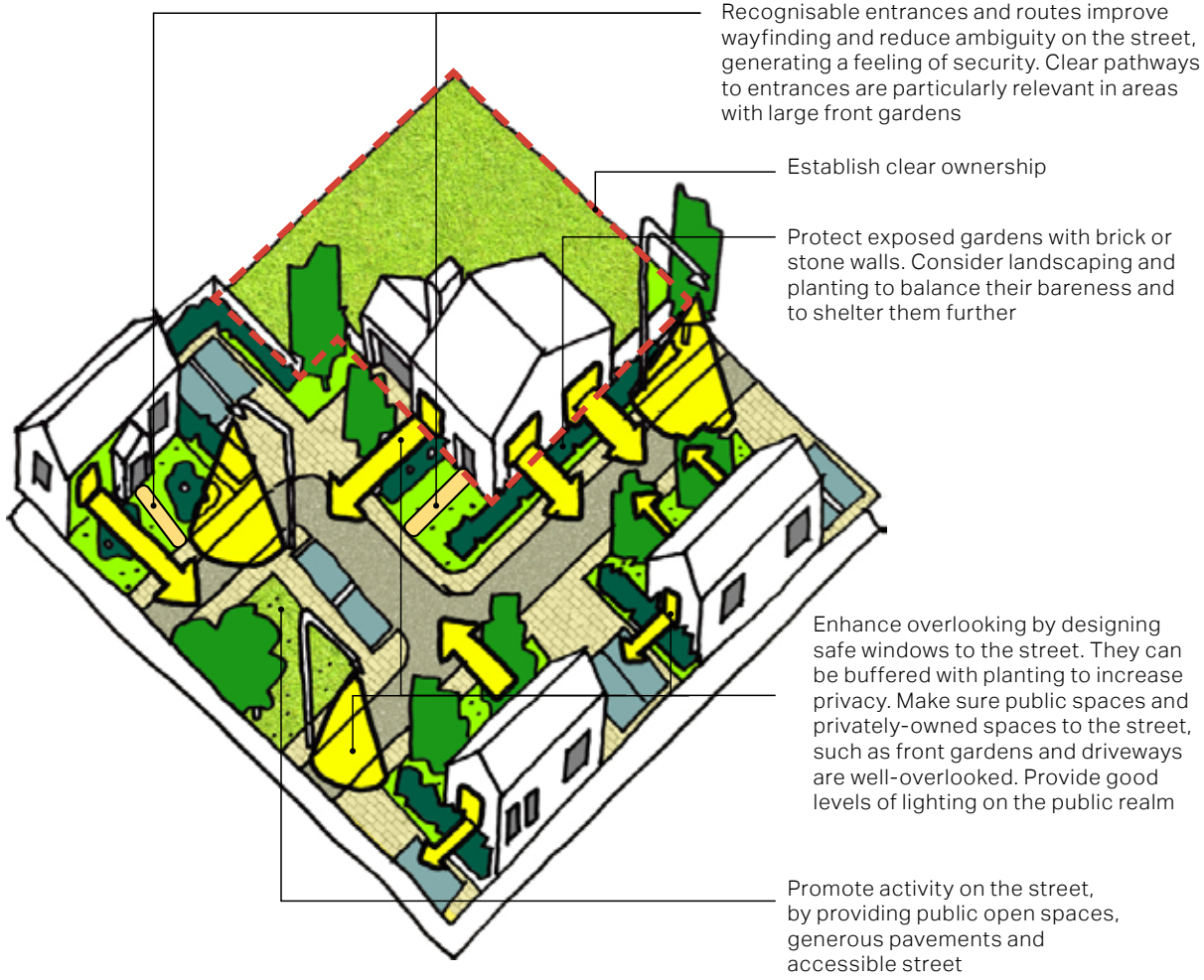
Code: PS.03 Secured by design

Safe and lively spaces

- Designing out crime and designing community safety is essential to the creation of successful, safe and attractive developments. The following guidelines are in line with the latest manual endorsed by the police 'Secured by Design Homes 2019'.

Actions:

- Access and movement: design places with well-defined routes, spaces and entrances that provide for convenient movement without compromising security.
- Structure: design places that are structured and easy to read, so that different uses do not cause conflict.
- Activity: design places where the level of human activity is appropriate to the location and creates a reduced risk of crime and a sense of safety at all times.
- Surveillance: design places where all publicly and privately-owned open spaces (such as front gardens and driveways) are overlooked. Provide adequate levels of street lighting.
- Ownership: design places that promote a sense of ownership, respect, territorial responsibility and community-compromising well defined dwelling boundaries;
- Physical protection: design places that include necessary, well-designed security features, such as boundary walls and party fences.
- Management and maintenance: design places that are designed with ease of management and maintenance in mind, to discourage crime in the present and the future.

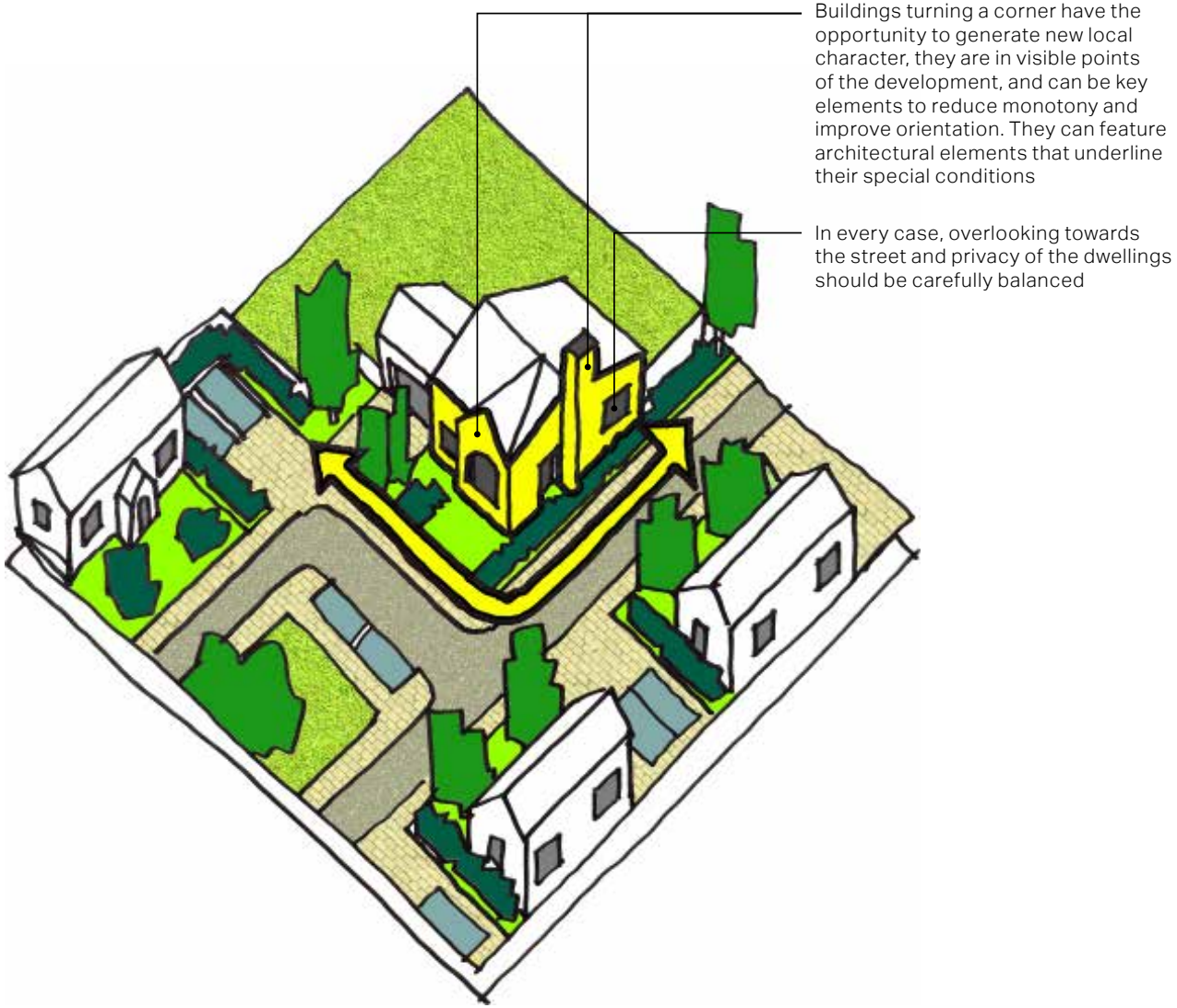


Buildings turning a corner

Streets with active frontages provide visual attractiveness and enhance the streetscape, but also provide high levels of natural surveillance.

Actions:

- Animate both facades on a corner buildings with doors and/or windows. Exposed, blank gable end buildings with no windows fronting the public realm should be avoided.
- Consider decorative architectural feature elements for these building types, given their prominence and their ability to create local character.
- As well as relating carefully to existing heritage features, landmark buildings should also be innovative and interesting. They should promote good architecture and ensure that places are distinct, recognisable and memorable.
- In any case, privacy measures should be taken into account from the early design stage. Issues such as overlooking from streets, private and communal gardens should all be considered. Setback from the street, front garden landscaping and detailed architectural design should help in balancing privacy to front living spaces with the need for overlooking of the street.



Code: HB.01 Define front and back gardens

Gardens

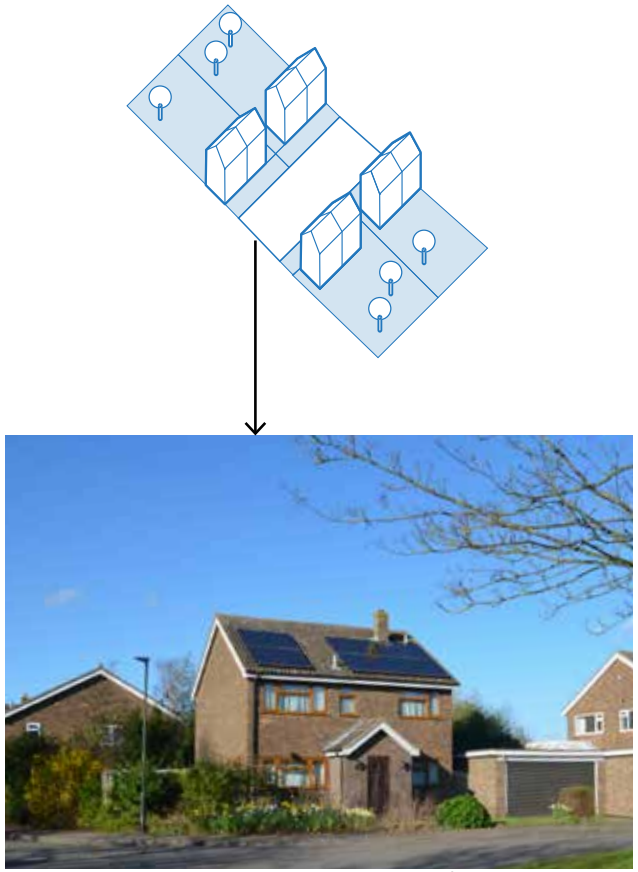
The ratio of garden space to built form within the overall plot is important to ensure that the sense of openness and green space within the village is maintained.

There are differing garden dimensions across Acton. In the High Street front gardens tend to be larger and the front and back gardens are similar in size. In the main settlement area front gardens tend to be smaller with larger back gardens and in the outlying hamlets/ greens there is great variety.

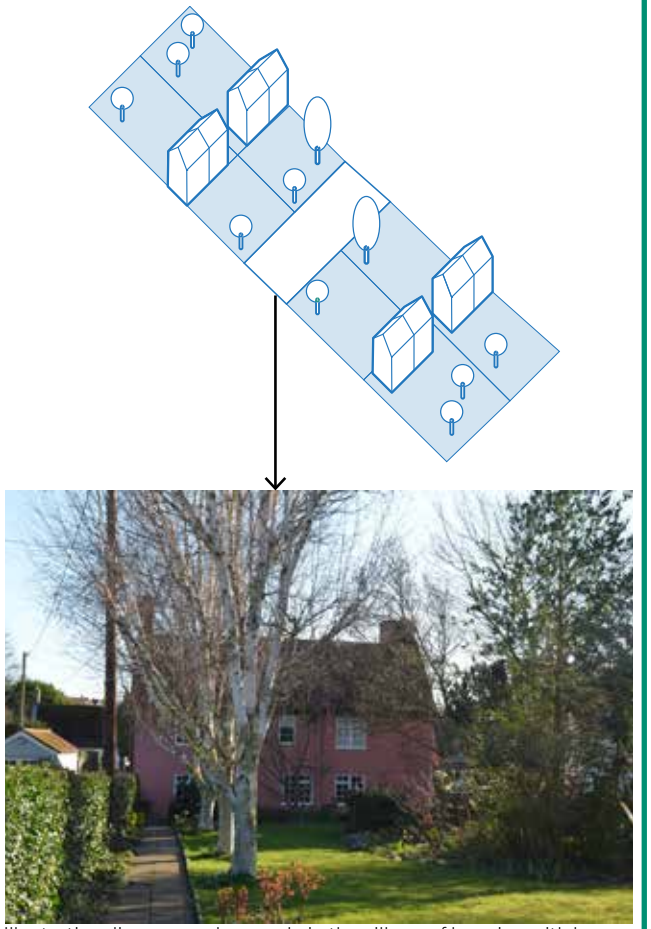
Planting

Actions:

- The British Standard 5837: 2012 'Trees in relation to construction- Recommendations' should be the reference document when considering new and existing trees on proposed development sites.
- Existing important trees lines should be retained as much as possible, in order to reinforce the areas character.



Illustrative diagram and example in the Village of housing with proportional smaller front gardens and larger back gardens.



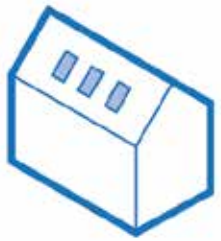
Illustrative diagram and example in the village of housing with large front gardens. .

Code: HB.02 Extensions and conversion

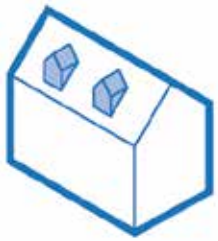
There are a number of principles that residential extensions and conversions should follow to maintain character:

- The original building should remain the dominant element of the property regardless of the scale or number of extensions. The newly built extension should not overwhelm the building from any given viewpoint;
- Extensions should not result in a significant loss to the private amenity area of the dwelling;
- Designs that wrap around the existing building and involve overly complicated roof forms should be avoided; and
- The pitch and form of the roof used on the building adds to its character and extensions should respond to this where appropriate.
- Extensions should consider the materials, architectural features, window sizes and proportions of the existing building and respect these elements to design an extension that matches and complements the existing building;
- In the case of side extensions, the new part should be set back from the front of the main building and retain the proportions of the original building. This is

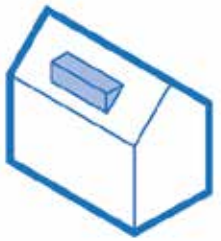
Design treatment in case of loft conversion:



Loft conversion incorporating skylights.



Loft conversion incorporating gable dormers.



Loft conversion incorporating a long shed dormer which is out of scale with the original building.

Original roofline of an existing building.

Loft conversion incorporating gable dormers.

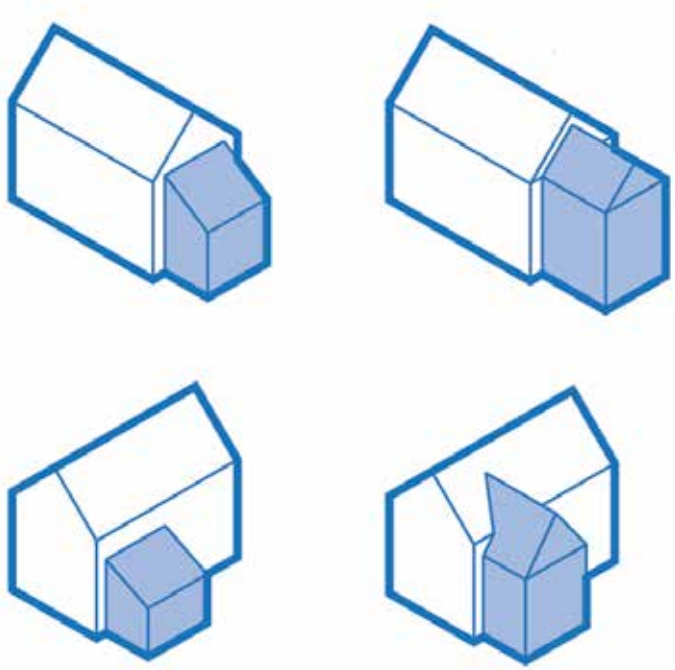
Loft conversion incorporating gable dormers which are out of scale and do not consider existing window rhythm or frequency

in order to reduce any visual impact of the join between existing and new;

- In the case of rear extensions, the new part should not have a harmful effect on neighbouring properties in terms of overshadowing, overlooking or privacy issues;
- Some household extensions are covered by permitted development rights, and so do not need planning permission. These rights do not apply in certain locations such as Conservation Areas.
- Any housing conversions should respect and preserve the building's original form and character; and
- Where possible, reuse as much of the original materials as possible, or alternatively, use like-for-like materials. Any new materials should be sustainable and be used on less prominent building parts.

Check the latest guidance here: https://www.planningportal.co.uk/info/200130/common projects/17/extensions.

Good example for side and rear extensions, respecting existing building scale, massing and building line.



Code: HB.03 Architectural details, materials and colour palette

Acton has a rich vernacular which constitutes its architectural character and identity. Architectural details can be split into four categories. They are roofs, facades, ground materials and property boundary.

Roof materials and colour palette

Pitched roofs are the predominant roof types in Acton.

The materials seen throughout Acton include slate roofs, thatched roofs and plain red or pantiled roofs. In addition, the roofs tend to be steep pitched with brick or stone chimneys. The colour palette is generally darker colours such as grey, brown or red.

In the case of side extensions, the new part should be set back from the front of the main building and retain the proportions of the original building. This is in order to reduce any visual impact of the joint between existing and new.

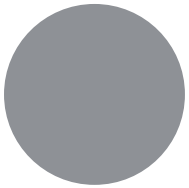
Slate roof

Thatch roof

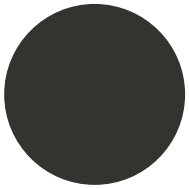
Red-brown pantile roof

Dark pantile roof

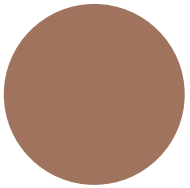
Materials



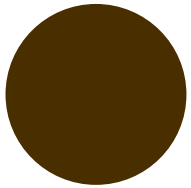
Grey



Dark grey



Red-brown



Dark brown

Colours

Facade materials and colour palette

Facades contribute to Acton's character through their materials and colour palette. Red brick can be seen throughout the village along with some grey brick and also dark weatherboarding.

Rendered timber-framed, brick buildings and cobbled facing walls are also part of Acton are also part of Acton's architectural character and the colour palette in particular consists of pink, white, off-white and yellow.

Pink painted render

White painted render

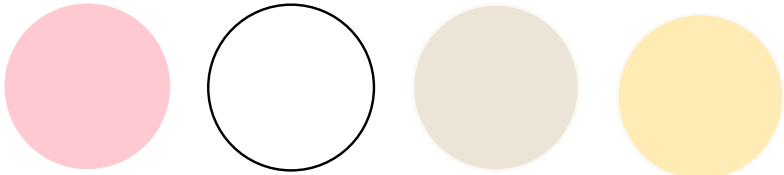
Muted yellow painted render

Grey brick

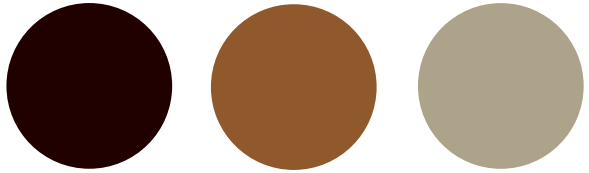
Dark Weatherboarding

Red brick

Materials



Pink *White and off-white* *Buff* *Muted yellow*



Red brick *Grey stone/ brick*

Colours

Property boundary materials and colour

palette

The dominant boundary treatment of Acton is hedges and vegetation, with many examples of neat and well-maintained hedgerows the village.

Other boundary treatments include low walls.

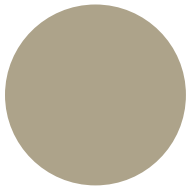
The colour palette of boundary treatment is predominantly green with greys, browns and buff colours that are also seen in areas of the village.

Timber fencing

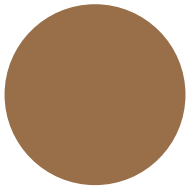
Low bricks wall

Hedgerows

Materials

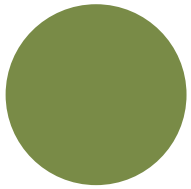


Grey/ brown



Brown

Buff



Green

Colours

Code: SU.01 Low carbon

High Performance Residential Buildings

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

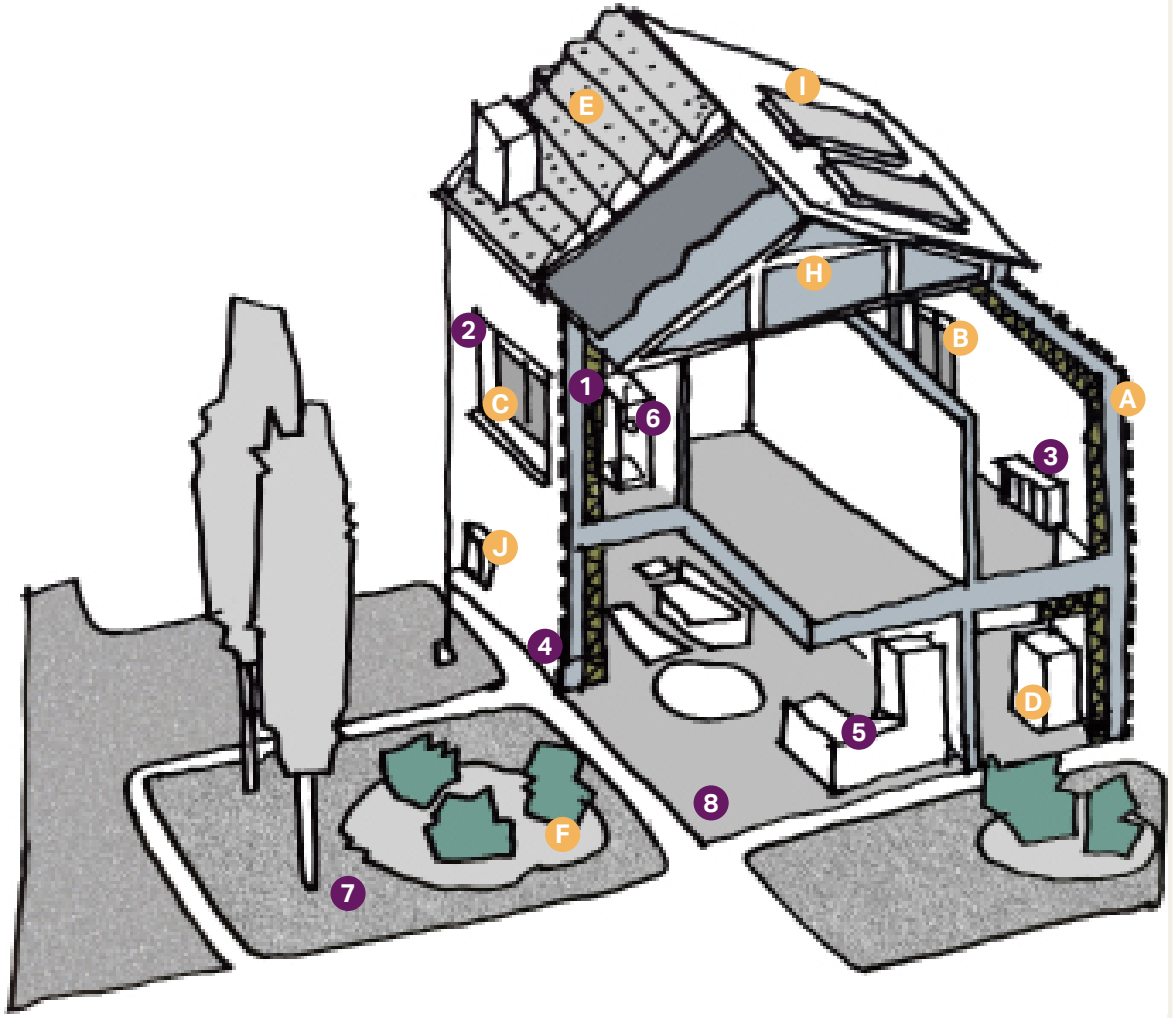
The aim of these interventions is to reduce home overall energy use as cost effectively as the circumstances allow for. Whereas, the final step towards a high performance building would consist of other on-site measures towards renewable energy systems.

Existing homes

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

New build homes

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



Code: SU.02 Insulation

Thermal mass

Thermal mass describes the ability of a material to absorb, store and release heat energy. Thermal mass can be used to even-out variations in internal and external conditions, absorbing heat as temperatures rise and releasing it as they fall. Thermal mass can be used to store high thermal loads by absorbing heat introduced by external conditions, such as solar radiation, or by internal sources such as appliances and lighting, to be released when conditions are cooler. This can be beneficial both during the summer and the winter.

Actions:

- Provide thermal storage in construction elements, such as a trombe wall placed in front of a south-facing window or concrete floor slabs, that will absorb solar radiation and then slowly re-release it into the enclosed space.
- Use mass combined with suitable ventilation strategies.

Insulation

Actions:

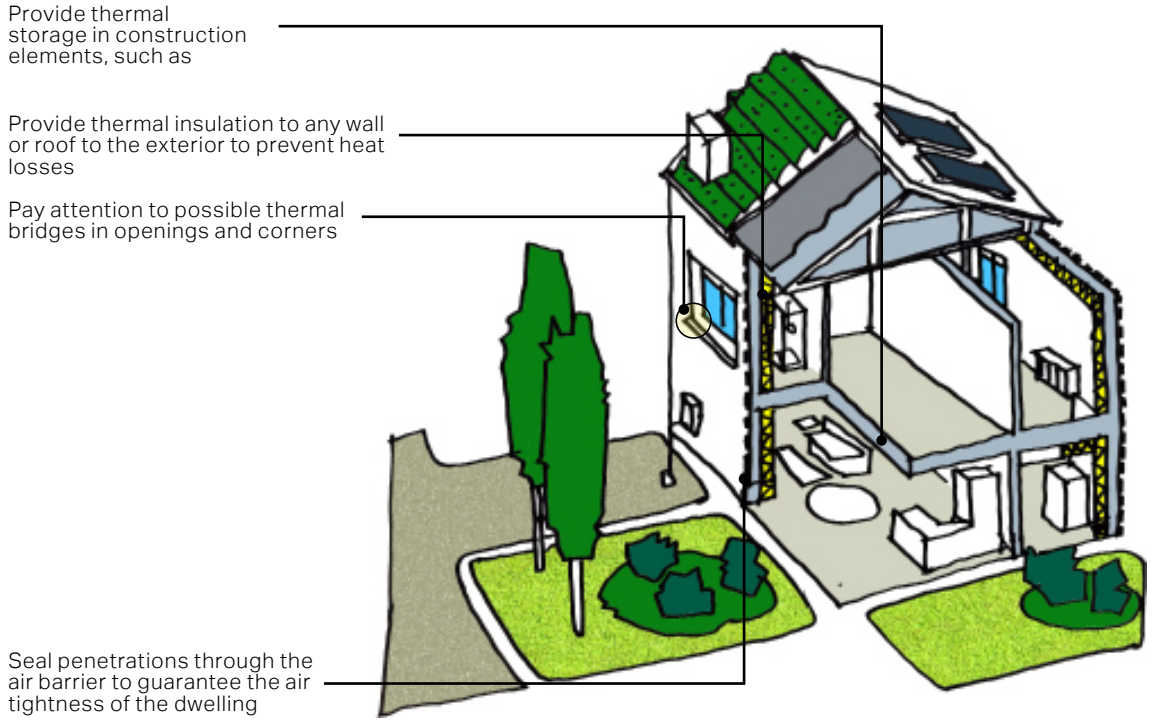
- Provide thermal insulation to any wall or roof to the exterior to prevent heat losses. Pay particular attention to heat bridges around corners and openings in the design stage.
- Provide acoustic insulation to prevent the transmission of sound between active (i.e: living room) and passive spaces (i.e: bedroom).
- Provide fire insulation and electrical insulation to prevent the passage of fire between spaces or components and to contain and separate electrical conductors.

Air tightness

Airtight constructions help reduce heat loss, improving comfort and protecting the building fabric. Airtightness is achieved by sealing a building to reduce infiltration – which is sometimes called uncontrolled ventilation. Simplicity is key in airtightness design. The fewer junctions, the simpler and more efficient the airtightness design will be.

Actions:

- Form an airtightness layer in the floor, walls and roof.
- Seal the doors, windows and rooflights (if applicable) to the adjacent walls or roof.
- Link the interfaces between walls and floor and between walls and roof, including around the perimeter of any intermediate floor.
- Seal penetrations through the air barrier.



Code: SU.03 Solar panels

New houses should incorporate solar panels in their roof design, they should follow this general design guide as appropriate.

Colour & contrast

- The colour and finish of solar panels and how they reflect light should be chosen to fit in with the building or surroundings. The majority of crystalline and thin film panels are dark blue or black; within these shades are a variety of finishes and tones to help make the panels unobtrusive.

Frames

- Panels without frames, or black-framed panels, should be used where framed panels would detract from the building.

Size and style

- Consider the style of the building and, if possible, position the solar PV panels so they are in proportion to the building and its features. For example, they can resemble roofing elements such as roof lights or windows.
- The way in which panels are laid out in relation to one another can make a huge difference to the appearance of the system – favour symmetrical arrangements.
- Consider how the installation relates to the shape of the roof or building. If possible, covering the whole roof or one of its gables is often advisable.

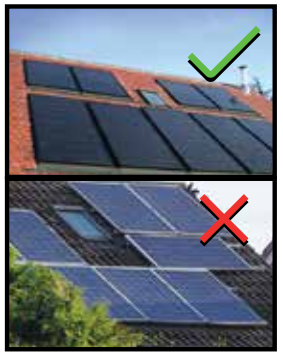
Surroundings

- Choose plant and tree types and locations so that plants will not grow to shade areas on the property or on neighbouring properties where solar energy systems are installed.
- Solar PV on adjacent houses of the same type may look out of place if the approaches are very different. Consider using similar components to fit with the prevalent panel style in the area.

Select a colour and finish that matches the surroundings

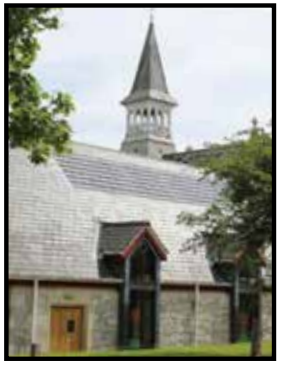
Consider frameless panels

Proportions of the panels should reflect the language of the building and its elements



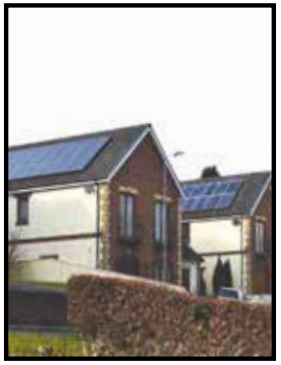
Favour symmetrical arrangements

Often, covering a whole side of a roof is the best way to relate to its general shape



Plant trees that do not overshadow the panels

Restrict overshadowing from neighbouring properties onto the panels



Maintain a consistent look with neighbouring properties

Code: SU.04 Green roofs

Sunlight orientation & overshadowing

- Sunlight, orientation and overshadowing from surrounding buildings have to be taken into account. Care must be taken to ensure that the plants receive sufficient but not excessive sunlight to grow.

Wind exposure

- Wind speed and exposure varies according to building height, orientation and location. The plants, soils and supporting structures must be able to withstand these forces. The plants and structure must be anchored so they cannot detach from the building and cause damage. The soils should be contained so the wind cannot blow them away.

Services

- Green roofs and walls need water, power and drainage for maintenance. Care must be taken to keep roots and leaves out of the drainage system, and this should be factored into design and maintenance. There should be points where the drainage system can be inspected and cleaned out regularly.

Power use

- Green roofs and walls should be designed to minimise power use, at that effect, consider the orientation of the roof and walls, and the access to natural light. Where possible, use gravity and not pumps for watering systems.

Installation

- Green walls should be separated from the building elevations, so there is no moisture transfer to the wall.

Existing buildings and parapets

- Some roof parapets can lead to ponding and pooling of water. If the building has parapets, ensure that there is good drainage The fitting of high-water alarm systems should be considered if there is no clear overflow path.

Orientate green roofs and walls to optimal sunlight radiation and minimise the effect of overshadowing

Protect green roofs and walls from excessive wind levels, in this case the sloping site assists in the protection of the roof

Favour ease of maintenance and accessibility to the green roof

Green roofs and walls should minimise power use and do not need to be heavily engineered solutions. Climbing plant species such as vines are a traditional way of achieving the same effects

Code. EM.01 Context and location

Context, including topography and visual impact, will influence the siting, massing, form and height of commercial development. In general, some design guidelines to well integrate them in the context are:

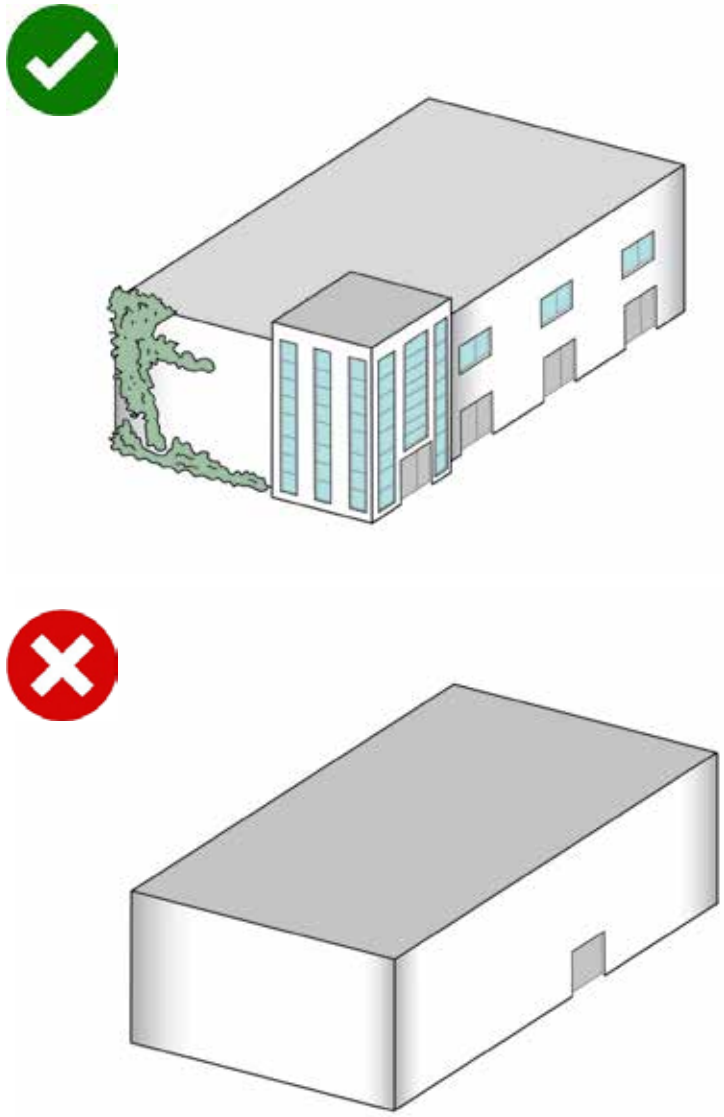
- Existing tree belts and hedgerows can be important features around which to structure the layout of new development. Their retention can be essential in locations where industrial development can be seen from distant public viewpoints and the existing landscape setting needs to be protected or enhanced. Retained features should be suitably protected during the construction period.
- Planting can be used to help improve the relationship of the building with the street, to soften the visual impact of the building and also the parking and servicing areas which can often be large areas of hard landscaping. Smaller buildings can also be wrapped around larger buildings to help soften their visual impact. Alternatively, buildings can be designed to celebrate or sit comfortably in their setting.
- Landscaped areas should also provide places for workers to sit and enjoy, where possible, and to provide shade.
- Trees and new woodland should be incorporated into development early in the design process in larger sites, ensuring adequate space around them can be achieved.
- New development will be sympathetic to its rural setting;
- The appearance of 'big box' buildings from various viewpoints must be considered and they should not be located in visually prominent or intrusive positions such as high points or within sensitive view corridors.

Local example of planting used to help improve the relationship of the buildings with the street.

Code: EM.02 Frontages

The siting and design of new buildings should maximise surveillance along streets, car parks and pedestrian routes. Therefore, some design guidelines for new development are:

- Buildings should be sited to allow windows and entrances to overlook streets and other pedestrian routes within or adjacent to the site.
- New industrial and commercial plots will be expected to front buildings onto the public realm and to enclose 'private' external spaces such as yards and car parks, behind them.
- Particular care should be taken with 'big box' structures which typically have limited active frontages. The use of windows, materials (such as green walls) and architectural detailing can be used to add interest to what might otherwise be large, blank façades, and locate entrances, glass façades, cafeterias, offices or signage along the street frontage. Any windows should face the street and public areas.



Frontages - even 'big boxes' should have a public face to present.

Code: EM.03 Access, yards, servicing and parking

Design of future employment sites should consider:

- Locate landscaped parking and servicing areas to the rear or side where possible to avoid these areas dominating the street scene and/or the plot.
- Provide a dedicated pedestrian entrance directly from the street and segregate servicing and pedestrian routes.
- Take advantage of sites with access from multiple sides to separate access.
- Consider shared yard to optimise space on smaller sites.
- Incorporate sufficient space for HGV turning circles within the site to prevent HGV manoeuvring on highways.
- Consider provision of shared HGV parking for units that only require occasional HGV access.
- Integrate parking within buildings and away from the street edge and separate yard-space, employee parking and visitor parking.
- Charging points for electric cars should be provided.
- Avoid using visually distinct sources of illumination that result in disproportionate signage and intrusive to the countryside, such as internally-illuminated box signs and totem pole.
- Trees in parking areas will need high quality underground provision for roots to grow in order for them to survive and flourish.

Parking screened to the side, servicing to the rear.

Code: EM.04 Amenity space and adjacencies

Landscaped areas should also provide places for workers to sit and enjoy, where possible, and to provide shade. Some guidelines to consider are:

- Create well designed public spaces and meeting places, avoid creating new low quality green space at the edge of an employment or industrial site.
- Orient industrial and residential units to minimise overlooking of yard space.
- Incorporate acoustic mitigation measures such as winter gardens, high-quality windows and mechanical ventilation, triple glazing and walls into residential blocks.
- Use ancillary uses and landscaping to provide a buffer between residential and employment or industrial uses such as parking or cycle storage.

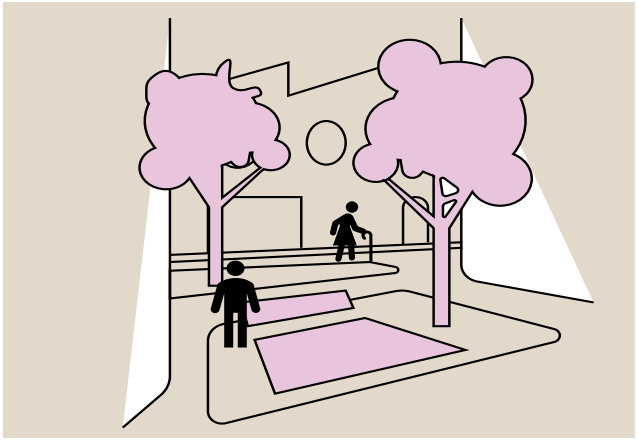


Diagram showing public spaces integrated within the employment site.

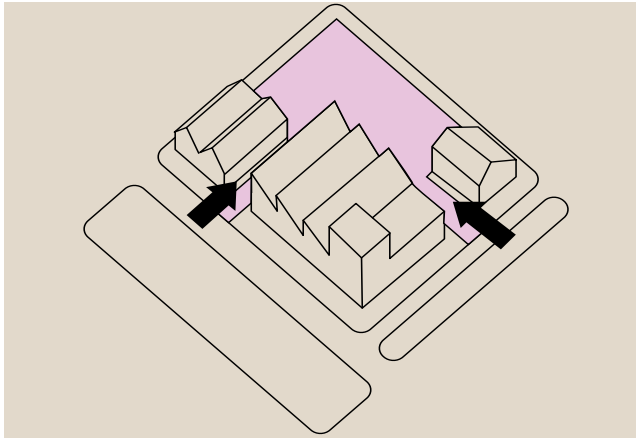


Diagram showing a favoured site with access from multiple sides to separate access points.

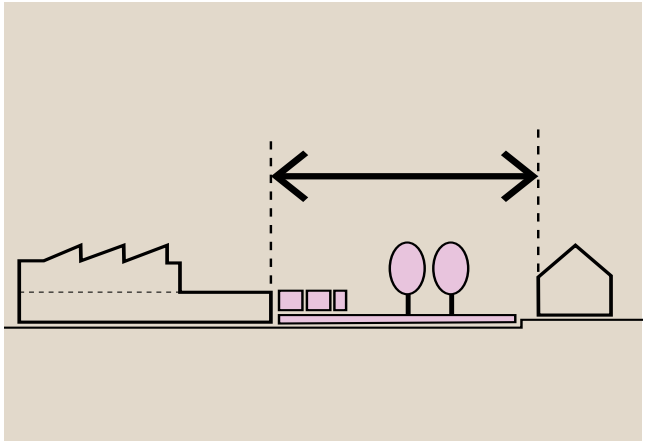


Diagram showing the use of ancillary uses and landscaping to provide a buffer between residential and employment/industrial uses.

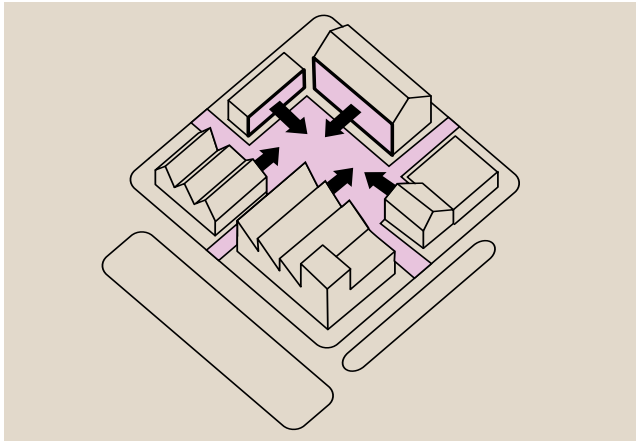


Diagram showing shared yards to optimise operation space on smaller sites.

Code. EM.05 Architecture

New buildings should be of high quality, contemporary design, appropriate for the use and context. The design of any building, even the simplest industrial shed, should always make some positive visual contribution to its environment. Local materials can be used on larger or non-domestic buildings – such as red non-domestic development brick, render, timber or clay tiles.

Contemporary and innovative architecture that subtly references local character is encouraged. The visual impact of colours and finishes of wall and roof cladding materials should be considered in relation to the background and context of the building.

The impact of new buildings on neighbouring properties in terms of their effect on sunlight and on daylight should be minimised. The use of out-of-hours night time lighting should be minimised, which also benefits wildlife such as bats. Where lighting is required for security and/or community safety, downward directed, vandal resistant, energy efficient light units should be installed. Increased light pollution from car park and security lighting may cause disturbance to the local community. Lighting should not be placed next to wildlife habitats or where the light columns would appear above a prominent topographical ridge line.

The headquarters of furniture manufacturer Vitra, in Germany, demonstrate that striking architecture and strong landscape can sit proudly in a sensitive environment. The building shown is a showroom.

Code: EM.06 Sustainability in employment buildings

New development should incorporate sustainable building design through measures to minimise the need for energy and water consumption, encourage recycling, minimise waste, and use sustainable construction methods.

Some design guidelines for new development are:

- As well as considering energy efficiency and building fabric from the outset, new buildings offer the potential to include solar panels as sources of renewable energy for heating and electricity, and green roofs offer multiple benefits such as absorption of rainwater, insulation, wildlife habitat, mitigating the heat island effect and providing an aesthetically pleasing landscape.
- New industrial or commercial development should also encourage travel by sustainable modes of transport – on foot, by bike or by public transport. Whilst industrial sites have not traditionally been very accessible by these modes, new sites will need to respond to the climate emergency. A reduction in car use can be achieved by:
- Providing convenient, short, direct routes to the main entrances;
- Ensuring the development is directly served by adequate public transport services;
- Providing secure covered cycle stores near entrances and adjacent to overlooking windows;
- Providing changing and showering facilities for cyclists;
- Providing on- and off-site cycleways to enable connection to the area's wider cycle network;
- Providing green infrastructure – in particular the use of appropriate tree species to improve local air quality;
- Improving customer care in terms of delivery of goods and services to assist non-car users;
- Using commuter planning measures to reward car sharing, car pools for employees, cycling, walking and the use of public transport;
- Providing electric vehicle recharging infrastructure within car parks and for commercial vehicles (where appropriate);
- Preparing staff travel plans.

Positive example of large industrial building with integrated solar panels on the roof

3.4 Applying the design codes

This section indicates the character areas in which each code is particularly relevant. It also includes a fifth category, showing which codes are to be applied on any large development sites of more than 10 homes.

Character Area 1

Character Area 2

Character Area 3

Character Area 4

LD Large development sites

x Design code particularly applicable to character area

\- Design code less applicable to character area

		1	2	3	4	LD
MO.01	Connectivity	-	-	-	-	x
MO.02	Orientation	-	-	-	-	x
MO.03	Inclusive streets	x	x	x	-	x
MO.04	Car parking	x	x	x	-	x
MO.05	Cycle & refuse storage	-	-	-	-	x
LA.01	Green networks	x	x	x	-	x
LA.02	Green spaces	x	x	x	-	x
LA.03	SuDS	-	-	-	-	x
LA.04	Surface treatments	x	x	x	-	x
LA.05	Biodiversity	x	x	x	-	x
LA.06	Street planting	x	x	x	-	x
LA.07	New woodland	-	-	-	-	x
BF.01	Density	x	x	x	-	x
BF.02	Types and forms	x	x	x	-	x
BF.03	Height	x	x	x	-	x
BF.04	Building line	x	x	x	-	x
ID.01	Local character	x	x	x	x	x
ID.02	Legibility and views	x	x	x	x	x
ID.03	Architecture	x	x	x	x	x

		1	2	3	4	LD
PS.01	General Street	-	-	-	-	x
PS.02	Rural / Edge Lane	-	-	-	-	x
PS.03	Secured by design	x	x	x	-	x
HB.01	Define front and back gardens	x	x	x	-	x
HB.02	Extensions and conversion	x	x	x	-	x
HB.03	Architectural details, materials and colour palette	x	x	x	x	x
SU.01	Low carbon	x	x	x	-	x
SU.02	Insulation	x	x	x	-	x
SU.03	Solar panels	x	x	x	-	x
SU.04	Green roofs	x	x	x	-	x
EM.01	Context and location	-	-	-	x	-
EM.02	Frontages	-	-	-	x	-
EM.03	Access, yards, servicing and parking	-	-	-	x	-
EM.04	Amenity spaces and adjacencies	-	-	-	x	-
EM.05	Architecture	-	-	-	x	-
EM.06	Sustainability in employment buildings	-	-	-	x	-

3.5 Checklist

Because the design guidance and codes in this document cannot cover all design eventualities, this chapter provides a number of questions based on established good practice against which the design proposal should be evaluated. 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 considered 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 guidance for new development'. Following these ideas and principles, several questions are listed for more specific topics on the following pages.

The Check List should be thoroughly applied at both outline and reserved matter stages of an application.

1

General design guidelines for new development:

- Integrate with existing paths, streets, circulation networks and patterns of activity;
- Reinforce or enhance the character of streets, greens, and other spaces;
- Relate well to local topography and landscape features, including prominent ridge lines and long-distance views;
- Reflect, respect, and reinforce local architecture and historic distinctiveness;
- Retain and incorporate important existing features into the development;
- Respect surrounding buildings in terms of scale, height, form and massing;
- Adopt contextually appropriate materials and details;
- Provide adequate open space for the development in terms of both quantity and quality;
- Incorporate necessary services and drainage infrastructure without causing unacceptable harm to retained features;
- Ensure all components e.g. buildings, landscapes, access routes, parking and open space are well related to each other;
- Positively integrate energy efficient technologies;
- Make sufficient provision for sustainable waste management (including facilities for kerbside collection, waste separation, and minimisation where appropriate) without adverse impact on the street scene, the local landscape or the amenities of neighbours;
- Ensure that places are designed with management, maintenance and the upkeep of utilities in mind; and
- Seek to implement passive environmental design principles by, firstly, considering how the site layout can optimise beneficial solar gain and reduce energy demands (e.g. insulation), before specification of energy efficient building services and finally incorporate renewable energy sources.

2

Street grid and layout:

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

3

Local green spaces, views & character:

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

3 (continued)

Local green spaces, views & character:

- Have opportunities for enhancing existing amenity spaces been explored?
- Will any communal amenity space be created? If so, how this will be used by the new owners and how will it be managed?
- Is there an 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 hamlets?
- 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?

5 (continued)

Buildings layout and grouping:

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

6

Building line and boundary treatment:

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

7

Building heights and roofline:

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

8

Household extensions:

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

9

Building materials & surface treatment:

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

9

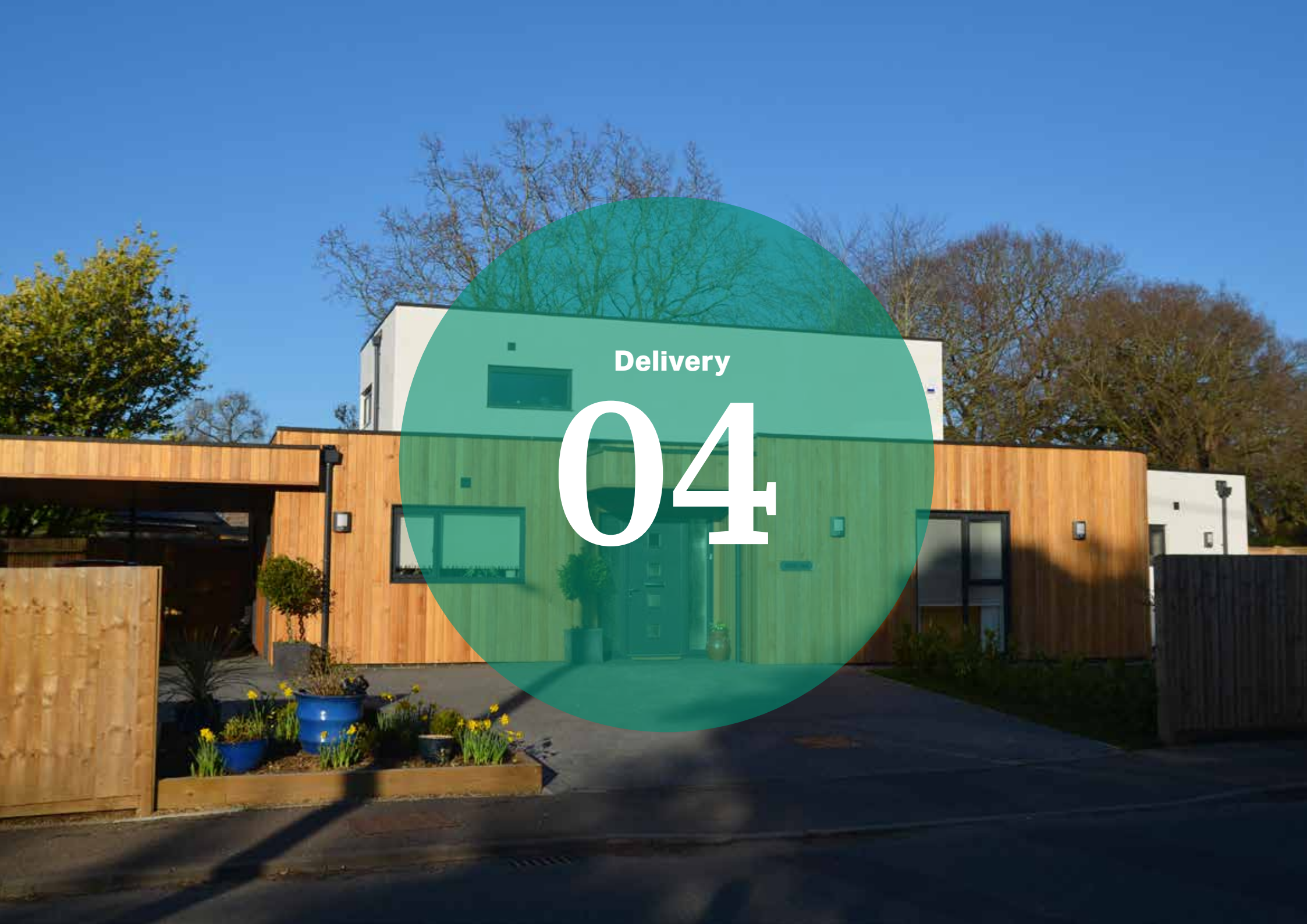
Building materials & surface treatment:

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

10

Car parking:

- What parking solutions have been considered?
- Are the car spaces located and arranged in a way that is not dominant or detrimental to the sense of place?
- Has planting been considered to soften the presence of cars?
- Does the proposed car parking compromise the amenity of adjoining properties?
- Have the needs of wheelchair users been considered?
- Can electric vehicle charging points be provided?
- Can secure cycle storage be provided at an individual building level or through a central/ communal facility where appropriate?
- If covered car ports or cycle storage is included, can it incorporate roof mounted photovoltaic panels or a biodiverse roof in its design?


Delivery
04

4. Delivery

The Design Guidelines & Codes will be a valuable tool in securing context-driven, high quality development in Acton. 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 have regard to 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 they have regard to Design Guidelines.
Community organisations	As a tool to promote community-backed development and to inform comments on planning applications.
Statutory consultees	As a reference point when commenting on planning applications.

Table 01: delivery

About AECOM

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

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