Scotforth Rural

Neighbourhood Plan
Design Guide and Codes

Revised report
November 2024

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Quality information

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Revision History

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Contents

Introduction

01

1. Introduction

The aim of this Neighbourhood Plan Design Guide and Codes is to empower the local community to influence the design quality and character of development in their neighbourhood area and to help to deliver beautiful, sustainable development that is well designed and meets the needs and aspirations of local people.

1.1 Background

The Scotforth Rural Design Guide and Codes shall ensure that any infill housing development fits within the existing pattern of the settlements in the neighbourhood area. There are currently 152 homes in the neighbourhood area (NA) in 3 main clusters, these range in type from more traditional properties to more modern style in the 1990s. The rest are scattered houses and farmsteads. Development in the parish is linear, with no cul-de-sac development. The properties are mostly stone built, with a mix of render and stone. There are four working farms as well as lot of barn conversions.

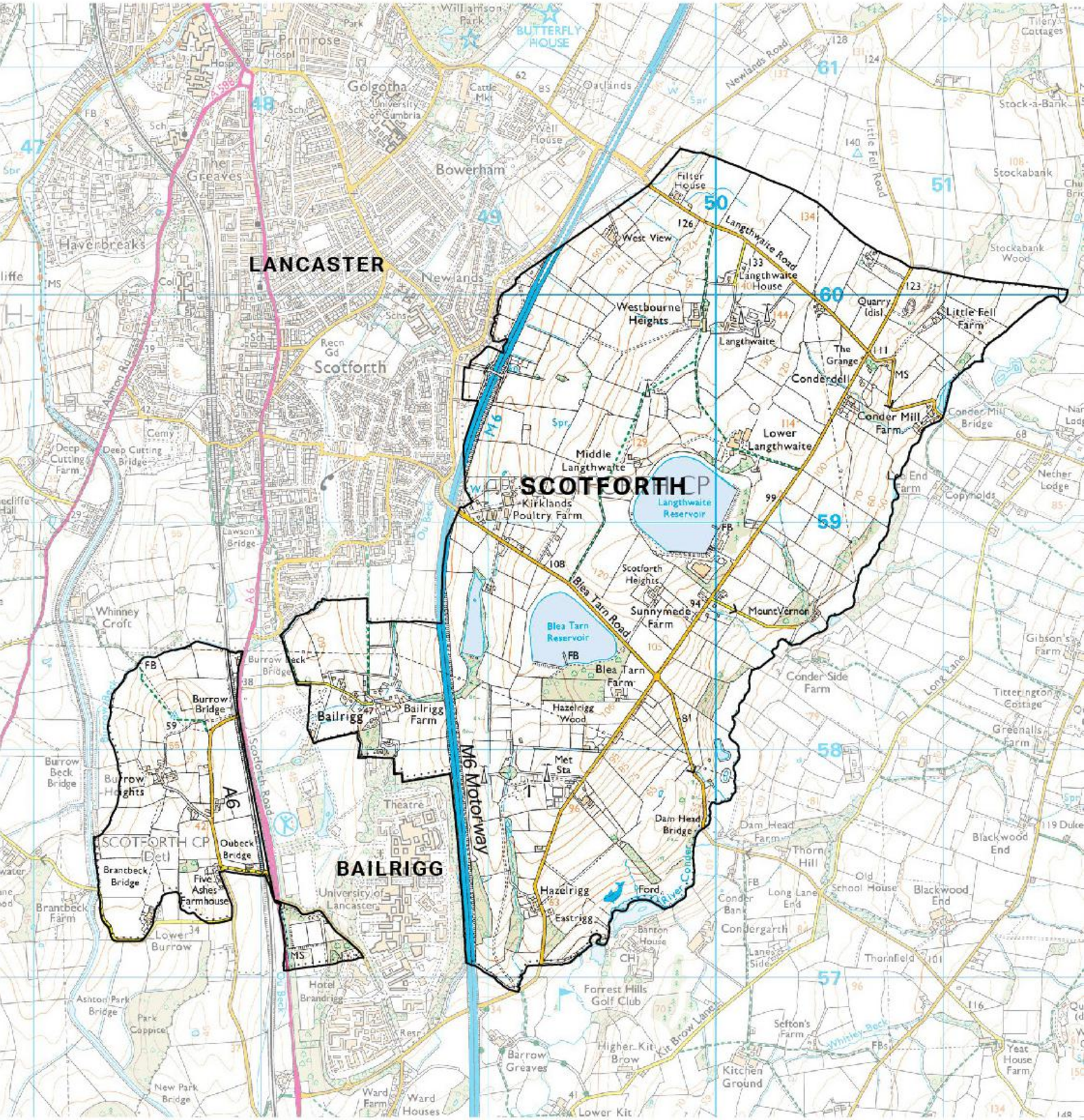
The NA itself does not have any services or facilities. It is surrounded by countryside which isn't very accessible, although there are four PROW which join across various lanes. Traffic is a major problem in the parish with the A6, the main arterial road, being badly congested resulting in some minor roads becoming 'rat runs' at peak time. There is some flooding within and downstream of the parish and 5 listed buildings.

Figure 01: View of the open landscape from Bailrigg Lane

The district Local Plan proposal for 3,500 homes, predominantly within a new Garden Village, would require substantial greenfield development as opposed to minor infilling within existing settlement patterns. It has been agreed with Lancaster City Council that the NDP detailed design code should apply to the latter. However, it was also agreed that whilst the NDP design code need not cover design in the Garden Village or large greenfield sites more generally, the underlying design principles (section 3.1) would be relevant to the Lancaster South Area Action Plan (LSAAP) and major greenfield development.

This report has three main sections:

- **Section 1** introduces the neighbourhood area and the aims of this document.
- **Section 2** analyses features of the Neighbourhood area, including landscape, movement and built form.
- **Section 3** sets out the design principles and detailed design codes for small scale development.



F.2 | **Figure 02:** Neighbourhood area boundary

1.2 Vision

The following draft vision is an extract from the Neighbourhood Plan and includes two design-related objectives out of the four total objectives.

The Vision for the Scotforth Rural Neighbourhood Plan is to ensure the rural heritage and character of the parish are sustained for the existing areas of settlement. The Plan policies will significantly influence and shape all small infill (typically 1-2 dwellings), conversions, and any large-scale developments made possible by significant enhancements in infrastructure in the area, including those proposed in the Local Plan for Lancaster District.

- *Objective 2: To protect and enhance the area's distinctive rural landscape character and buildings, and in particular the small settlements of Burrow Heights and Lower Burrow.*
- *Objective 3: To promote sustainable designs in all new development and conversions so that buildings are climate resilient and capable of responding to extreme weather events and particularly risks of flooding in the area, and to support Lancaster City Council's net zero objectives.*

Figure 03: View of the open landscape in proximity of the Langthwaite Reservoir

1.3 Aims & objectives of the design guide and codes

To guide design on infill and rounding off sites within the existing settlements and ensure any new housing development fits in with existing patterns.

- Understand the rural context and place characteristics
- Assess the built character and identity of existing rural development
- Set out overarching design principles for the rural neighbourhood area
- Set out design codes to inform new, small-scale development within existing patterns of settlement

Potential users	How they will use the design guidelines
Applicants, developers, and landowners	As a guide to community and Local Planning Authority expectations on design, allowing a degree of certainty – they will be expected to follow the guidelines as planning consent is sought.
Local Planning Authority	As a reference point, embedded in policy, against which to assess planning applications. The design guidelines should be discussed with applicants during any pre-application discussions.
Parish Council or Neighbourhood Plan steering group	As a guide when commenting on planning applications, ensuring that the design guidelines are complied with.
Local community groups and local residents	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: Potential users

1.4 Planning policy & background

Lancaster District Local Plan documents, Strategic Policies & Land Allocations DPD and reviewed Development Management DPD, were adopted by the Council in July 2020.

The Council has also been preparing the Lancaster South Area Action Plan (LSAAP). Work on developing the evidence base for the Area Action Plan was paused in June 2023, following the announcement about the Housing Infrastructure Fund (HIF).

The City Council intends to continue preparing a Climate Emergency Review (CER) of Adopted Local Plan Documents. This will be a partial review of the Strategic Policies & Land Allocations DPD and the Development Management DPD. The Council aims, if found sound and legally compliant by an inspector, to adopt the reviewed documents.

From September 2023, the Council will commence the process of preparing a full review of the Strategic Policies and Land Allocations DPD and Development Management DPD.

Local Policy & Guidance	Date
Local Plan for Lancaster District – Part One: Strategic Policies and Land Allocations DPD	July 2020
Local Plan for Lancaster District – Part Two: Review of the Development Management DPD	July 2020
A Landscape Strategy for Lancashire – Landscape Character Assessment	2000

Table 02: Table of key local policy documents

1.5 The Neighbourhood Plan

When formally 'made' by the Council, the policies and allocations within Neighbourhood Plans become part of the Development Plan for the area and are used in the determination of planning applications.

The purpose of the neighbourhood plan is to support Scotforth Parish Council in its objective of seeking to:

- Promote the rural communities and landscape;
- Campaign for improvements to and maintenance of amenities, highways and the environment; and
- Make representations on behalf of the community regarding planning proposals and developments.

1.6 Consultation & engagement

The Parish Council had a meeting with LPA on 16th November 2023 where it was agreed the group would develop Design Codes for the existing settlements to ensure any new house within these settlements fits in with existing patterns. They will also develop 10-20 higher level Design Principles in the NDP that the AAP would work within.

A community consultation event was held for the first draft neighbourhood plan (24th April 2023). The update to the neighbourhood plan that this document has informed will be taken to consultation with further draft policy updates prior to referendum.

Neighbourhood Area Context Analysis

02

2. Neighbourhood Area Context Analysis

2.1 The neighbourhood area

Scotforth neighbourhood area aligns to the historic civil parish in the City of Lancaster district, Lancashire. It does not include the suburb Scotforth, part of the Lancaster settlement area, but is further south, comprising areas to the west, north and north-east of Lancaster University. It is a largely rural area.

Scotforth has an area of 645.86 hectares (1,596 acres). In the 2011 census the population was recorded as 321. The area now has a population of 320 residents (2021 census).

Lancaster University is excluded from the southern part of the parish, outside the neighbourhood area.

2.1.1 Settlement character overview

The neighbourhood area includes 152 homes with 3 clusters, namely the main hamlet of Bailrigg, and Burrow Heights and Lower Burrow to in the western part of the area and more scattered farms and dwellings to the east of the M6. The area is served by 5 rural lanes, plus 24 new houses on the Hala Carr housing estate which are within the neighbourhood area boundary although part of the Lancaster conurbation.

Development in the neighbourhood area is linear and properties are mostly stone built. There are isolated farms and many barn conversions.

The neighbourhood area itself does not have any services or facilities but is adjacent to Lancaster. Also, the University of Lancaster has a range of amenities including shops and a post office that are conveniently close to the hamlet of Bailrigg.

F.4

Figure 04: Scotforth sign on Langthwaite Road


F.5

Figure 05: View of the main hamlet of the area on Bailrigg Lane

2.1.2 Movement

Roads in the area are predominantly rural, reflecting its tranquil character. The only exceptions are the A6, that connects to Lancaster, and the M6. Traffic is perceived as a major problem in the area with the A6, the main arterial road, being the main source of congestion, which in turn causes some of the rural lanes to become 'rat runs' at peak times. Despite being mostly rural, the general movement pattern connects to Lancaster, which is the closest city.

There are four PROW in the area, but pedestrian and cycle movement occur on-road as the low volumes of traffic along the rural lanes allow it. There is one formalised cycle lane branching off Bailrigg Lane connecting to The University of Lancaster.

Bus services run along the A6, and despite not stopping in the neighbourhood area, they are still accessible from the University of Lancaster. One of these bus services provides a connection to London.

The rail line crosses the neighbourhood area to the west. The closest train station is Lancaster.

Figure 06: Pedestrian and cycle lane connecting to the University of Lancaster

Figure 07: View of the M6 from Blea Tarn Road

Figure 08: Little Fell Lane

2.2 Landscape character, topography & views

There are two reservoirs in the NA. Blea Tarn Reservoir was constructed 1896-1901. Langthwaite Reservoir was constructed in 1935, and United Utilities began work in 2018 on the construction of a floating solar farm on its surface. There is recurrent flooding on many of the NA's rural lanes.

The area includes a series of viewpoints, where benches have been placed. Views to the neighbouring Forest of Bowland National Landscape are available from Little Fell Lane, while views over Scotforth and Lancaster are available from the drumlin top of Burrow Heights.

2.2.1 A Landscape Strategy for Lancashire – Landscape Character Assessment (LCC, 2000)

Three key landscape areas are identified in the Landscape Strategy for Lancashire – Landscape Character Assessment (LCC, 2000):

Area 7c Langthwaite Ridge

This gritstone outcrop forms a prominent rounded ridge which forms a southern extension to the Docker-Kellet-Lancaster Drumlin Field. It separates the city of Lancaster and developed coastal drumlin landscape from the rural landscapes of the Bowland Fells. It is distinguished from the adjacent drumlin field by its smooth rounded form. It is typical of a farmed ridge with a rich mosaic of pasture, woodland and parkland. It forms a setting for the city of Lancaster and scattered built development takes advantage of views from the ridge. It provides suitable location for reservoirs and communication masts which stand out against the skyline. Mixed woodlands are a feature of this area, associated with the Quernmore estate and the reservoirs. The largest block is Knots Wood, managed by Forest Enterprise.

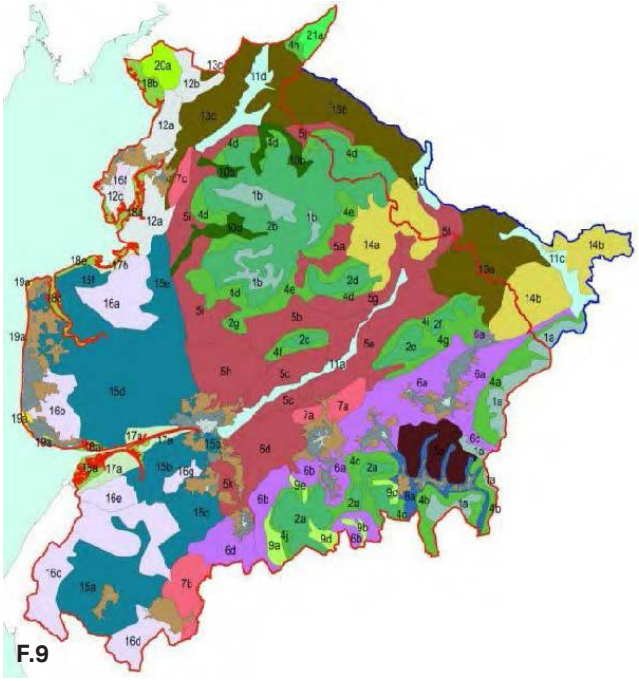


Figure 09: Lancashire Landscape Character Areas and Types

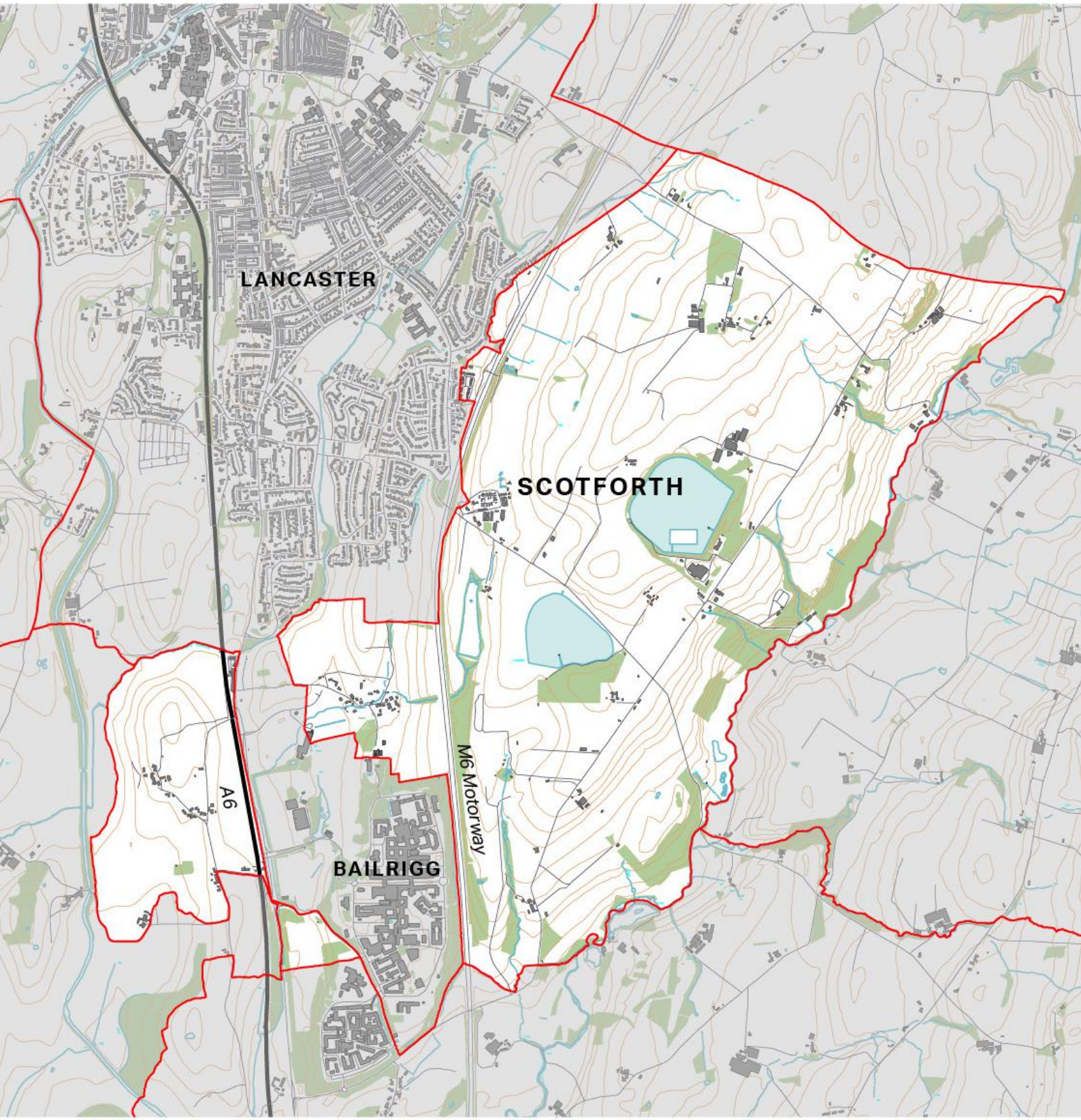
Area 13c Docker-Kellet- Lancaster

This drumlin field has a distinctive north-east, south-west grain and runs Lancaster from the edge of Lancaster northwards into Cumbria. The area is underlain by limestone and is distinguished by large scale undulating hills of pasture, some formed from glacial till and others which are outcrops of limestone, or reef knolls. These are particularly evident around Over and Nether Kellet where the limestone is exposed; significantly by the extensive quarries where limestone extraction is ongoing. The smooth rolling scenery is emphasised by the network of stone walls. Greater variety of texture is provided by the isolated areas of moorland which protrude from the field, for example at Docker Moor, and the River Lune.

Figure 10: View of one of the reservoirs in the Neighbourhood area

Area 12a Carnforth-Galgate

The Low Coastal Drumlins, on or near which Lancaster and Morecambe Cockerham are built, extend along the coast behind Morecambe Bay from Cockerham in the south to Carnforth in the north. This landscape supports an extremely high proportion of built development including the large settlements of Lancaster and Morecambe and recent built development along the A6. The Low Coastal Drumlins provide a convenient transport corridor; the Lancaster Canal, M6, A6 and mainline railway run side-by-side in a north-south orientation. The canal, which weaves through the drumlins, is an important reminder of the area's industrial heritage; a branch emerges into the Lune at Glasson Dock. To the west of Cockerham settlement is sparse and dominated by scattered large scale farmsteads in contrast to the towns and large villages further north. Fields are largely of post medieval pattern, however there are areas of older enclosure and settlement, notably at Cockersand Abbey. The drumlins provide elevated points from which there are views over the salt marshes to Morecambe Bay. Near Thurnham there is a significant are a of mossland lying between the drumlins, allowing long distant views towards the coast. Traditional farmsteads and older settlement cores are built of stone but the modern development is often built using red brick. Buildings on top of the drumlin hills are particularly visible. Woodland is limited to small plantations, woods associated with former estates and rarely, fragments of ancient woodland in unusual hilltop or hillside settings.



F.11 **Figure 11:** Plan showing topography and natural environment areas in the neighbourhood area

Figure 12: View of the Forest of Bowland National Landscape from Little Fell Lane

Figure 13: View of the landscape from Blea Tarn Road

2.3 Built form and character

There is a range of rural building types - including traditional and modern houses, and scattered houses and farmsteads. Development layout in the NA is linear, along lanes, and no cul-de-sacs. The properties are mostly stone built, with a mix of render and stone. There are four working farms as well as lot of barn conversions.

Layout	Development in the NA is linear, with no cul-de-sac development.
Building types	There are numerous working farms as well as lot of barn conversions. The rest are scattered houses and farmsteads
Plot Boundaries	Walls, hedges, railings.
Development periods	Range in style from traditional properties to more modern style in the 1990s.
Building materials	The properties are mostly stone built, with a mix of render and stone. A few pebble dash elevations can also be observed. Slate roofs.
Building height, form & massing	Buildings are generally 1 - 2.5 storeys high, with the exception of the student accommodation on the A6 which is 4 storey high.

Table 03: Characterisation study

Figure 14: Converted barn with traditional stone elevations and slate roof

Figure 15: Cottage of mix of stone and neutral render

House types	Number	%
Whole house or bungalow: Detached	73	55.7
Whole house or bungalow: Semi-detached	39	29.8
Whole house or bungalow: Terraced (including end-terrace)	14	10.7
Flat, maisonette or apartment: Purpose-built block of flats or tenement	1	0.8
Flat, maisonette or apartment: Part of a converted or shared house (including bed-sits)	3	2.3
Flat, maisonette or apartment: In a commercial building	0	0.0
Caravan or other mobile or temporary structure	1	0.8

Table 04: Existing house types (source: 2011 Census - these numbers exclude the 24 houses at Hala Carr housing estate).

F.16

Figure 16: Stone and slate detached house

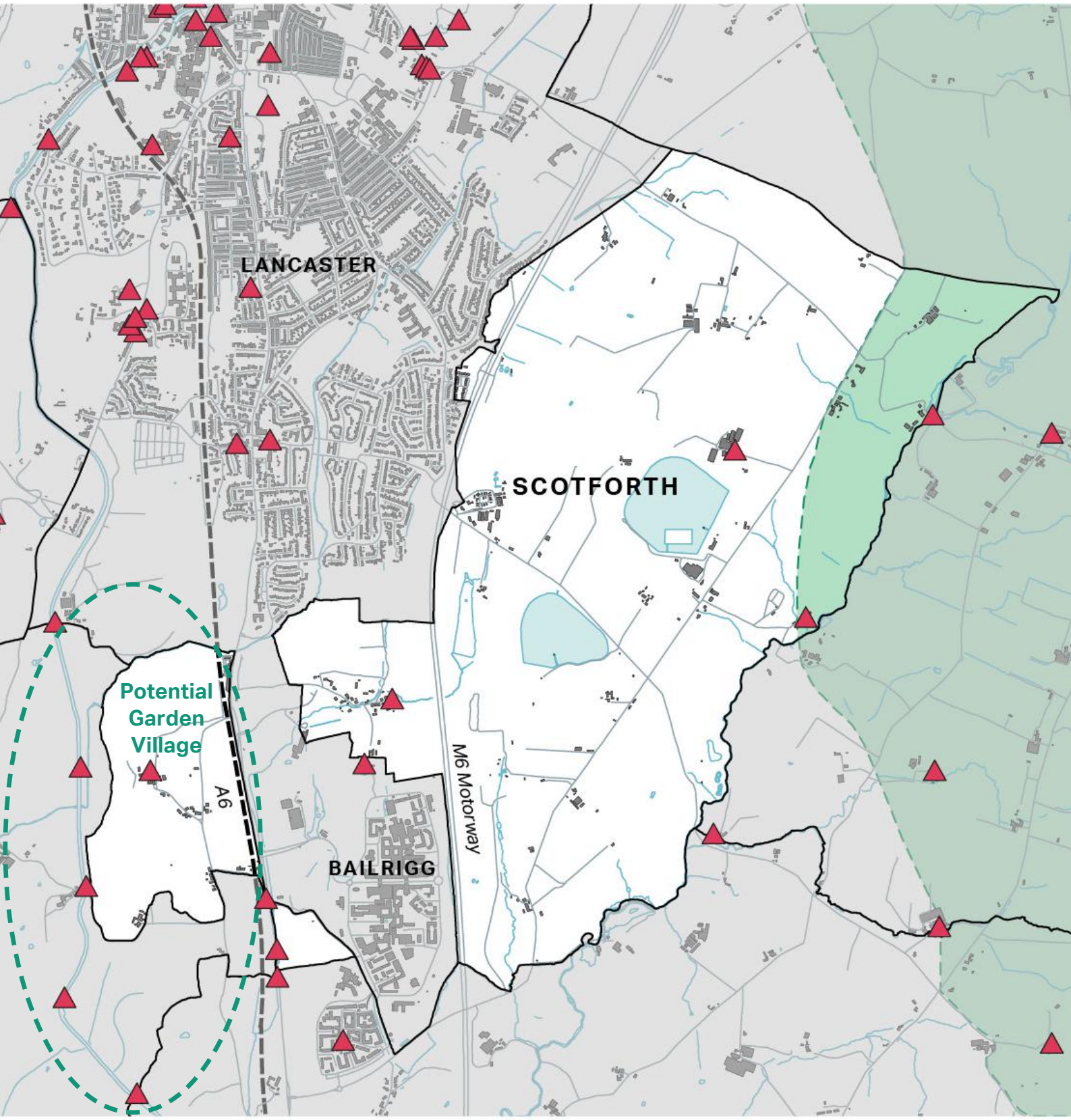

F.17

Figure 17: Re-built barn as dwelling using original stone and slate

2.4 Summary development constraints & opportunities

- Small scale development character: boundaries, materials and architectural detailing need to be reflective of the character of the area.
- Lack of infrastructure & facilities – there are no pavements in the area. The rural and tranquil character of the area should allow pedestrians to walk on roads without significant danger, however safety could be improved and connectivity could be increased for walking and cycling.
- Need for blue infrastructure as part of developments to address flood risk and drainage issues.
- The Forest of Bowland Area of Outstanding Beauty overlaps the eastern fringe of the neighbourhood area and covers a further extensive area to the east.
- There are five listed buildings in Scotforth: four houses and a bridge over the River Conder. All are Grade II listed buildings.
- Garden Village – The design principles within the Bailrigg Garden Village Masterplan will gain status should the South Lancaster Area Action Plan be restarted.
- Urban extension - An outline planning application for 644 houses, village hall and community facilities has been refused planning permission in December 2023. This proposal would have covered around 39 hectares of land between South Lancaster and Bailrigg.
- Lancaster University in the southern part of the NA has been excluded from the boundary.
- The A6 public transport corridor (policy T4 in the Local Plan) can help to address traffic congestion which is perceived as an issue.
- The area is covered by the Suitable Wind Energy Areas policy in the Local Plan.
- Potential areas of separations around Lower Burrow and Burrow Heights.

Figure 18: Bailrigg Farmhouse, Grade II Listed Building



F.19 | **Figure 19:** Statutory designations and policy constraints

Potential Bailrigg Garden Village

The site of the Bailrigg Garden Village (BGV) is to the south of Lancaster between the edge of the city and Galgate, the overall ambition of the BGV is to create a new distinct settlement that meets all housing needs and provides opportunities for business creation and growth, creating an environment to live and work which allows both people and wildlife to thrive. Other key ambitions within the masterplan include innovative environmental improvements and sustainable water management, along with improved sustainable travel options and connectivity to the city and surrounding settlements.

The garden village and major housing developments are proposals within Lancaster City Council's Local Plan. The parish council are clear they wish to see any developments respect and reflect the rural character of the area.
Accordingly, the parish council favour a garden village approach to any necessary expansion.

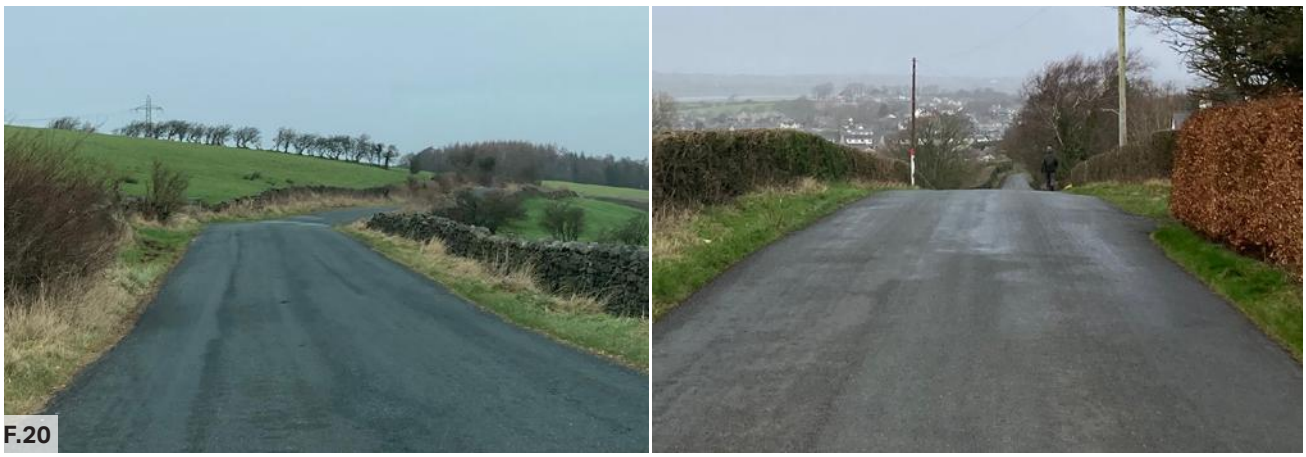


Figure 20: Roads in the area have no pavements. Pictures of Littlefell Lane.

Figure 21: Concept of Area of Separation incorporating blue and green infrastructure as per Garden Village Masterplan

Design Principles & Codes

03

3. Design Principles & Codes

3.1 Design Principles

Whilst this report focuses on design codes for small scale development within existing settlements, the parish council have recognised that design codes are also required for potential substantial developments envisaged in the Local Plan such as the Garden Village or large greenfield sites more generally. All design codes should conform to the following design principles, many of which were also proposed in the garden village masterplan.

The guidance in this report applies to development that requires planning permission, and can be split into the following types:

- Mandatory Code - Expressed as MUST (principles that are requirements).
- Non-mandatory guidance - Expressed as SHOULD (principles that are strongly encouraged).
- Non-mandatory guidance - Expressed as COULD (principles that are suggestions).

Development should:

1. Reflect the rural character of traditional settlements and protect surrounding landscape character.
2. Maintain character, identity, linear pattern and separation for existing settlements.
3. Protect drumlin tops to maintain the character of the landscape and connect with paths to promote access.
4. Protect and enhance the unique landscape character of the wet valley areas and the canal corridor.
5. Promote active travel and sustainable modes of transport through new cycle lanes, footpaths and bus routes and traffic calming measures. Any large developments should have strong interconnectivity with neighbouring settlements.
6. Any large scale development should facilitate improved infrastructure for adjacent existing settlements where reasonable.
7. Design-in sustainable drainage strategies to manage water flows and storage and reduce flood risk.
8. Plant new woodland areas and protect and maintain existing woodland and hedgerows to maximise ecological and water management value.
9. Ensure agricultural land remains coherent (not fragmented).

3.2 Small scale housing development

Definition of small scale development: Lancaster Local Plan describes developments of 10 dwellings or less as small schemes. However, developments of 10 or more dwellings are described nationally as major developments. Therefore, up to and including 9 dwellings will be considered small scale development. Infill sites between existing dwellings on a street are sometimes referred to as "gap sites". Likewise, development to the rear of existing properties is sometimes referred to as 'backland development' (although not supported by the code) and development on the edge of a settlement is sometimes referred to as 'rounding off'.

Other definitions: Infill housing development is not defined in the Lancaster Local Plan but typically refers to residential development occurring within the boundary of a settlement, within an existing developed context, utilising vacant or underutilised sites. The amount of development will depend on the size of the available land. Infill sites do not usually require the demolition of existing homes however there may be infrastructure that needs to be relocated as part of the development, such as garages. Small scale new access infrastructure may be required but this will generally be taken from an existing street or access point.


F.22

Figure 22: Characterful buildings along Bailrigg Lane

Aim: The parish council have need of a design code to ensure any small scale housing development fits in with the existing pattern of the settlements in the neighbourhood area. The code therefore covers predominantly infill within settlements, but also rounding off or development on the edge of a settlement as well as stand-alone properties where houses are scattered along the existing rural roads.

Figure 23: Stone and slate building on Hazelrigg Lane

The following design codes will cover these topics:

- Boundaries and car parking
- Materials
- Architecture & appearance
- Context response
- Rural character
- Public realm
- Landscape
- Views & screening
- Habitat & biodiversity
- Community & Involvement
- Density and scale
- Building height and position
- Building typologies

3.3 Design Codes for small scale housing development

The following design principles apply to any small scale housing development within the Neighbourhood area and will ensure that small scale development is well designed and contributes to the existing rural settlement character.

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Figure 24: Traditional stone wall boundary

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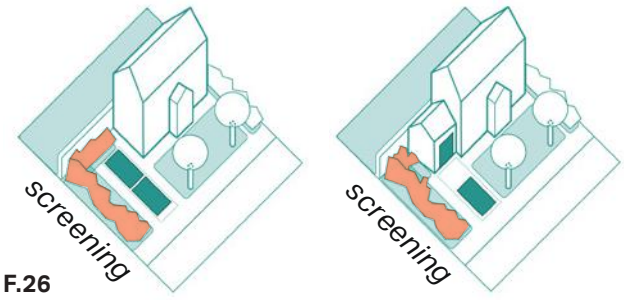
Figure 25: Garage at Bailrigg Farmhouse



F.26

Figure 26: Boundary treatments should screen on plot car parking

Boundaries and car parking

- Where developments relate to main lanes within settlements then hedgerows or stone wall boundaries should define the site frontage (subject to any existing hedgerows to retain).
- Plot boundary treatments must be provided to define public and private space and add to the definition and sense of ownership along streets. Boundaries of low stone walls should be used on primary access streets (closed board fence should not face public spaces).
- Plots should utilise front boundary treatments of native hedgerows or low stone walls to the public areas (especially rear or side boundaries which must not be close board fence).
- Requirements for parking should not undermine the attractiveness of the street scene. Boundary treatments or trees should screen on plot car parking.
- Garages can also be included in the design, as long as they don't negatively impact on the streetscene.
- Garages and outbuildings should be set behind the building line and no more than double in length where facing the street.
- Refuse bins, wherever possible, should not be visible from the street or be enclosed in a shelter that reflects the materials and character of the house

Materials

- Materials and style of home should be responsive to local character in conception with consideration for local styles and the materials, namely stone elevations and slate roofs.
- A mix of elevation materials is allowed as long as stone is predominant (>50%) and facades visually match the traditional character of Scotforth.
- Innovation in materials and construction techniques may be appropriate if achieving considerable sustainability credentials but must be attractive and sympathetic to local styles.

Architecture & appearance

- Sympathetic styles of architecture should be presented when facing existing traditional properties.
- Buildings should include traditional architectural features such as lintels, architraves and quoins.
- Stone used for quoins should preferably be unrefined and have a "rustic" appearance to harmonise with the rural character of the hamlets.

Figure 27: Stone elevations and slate roofs reflect the traditional character of Scotforth

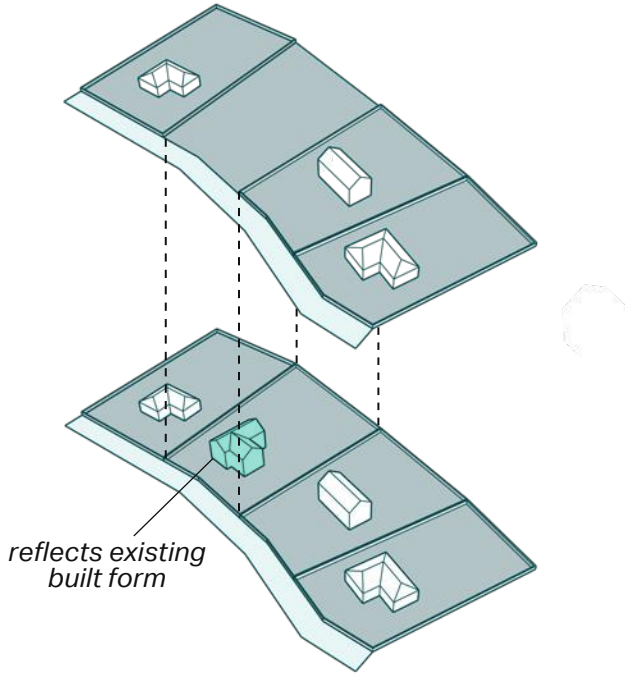
Figure 28: Stone quoins are a traditional feature in the Neighbourhood area. See figure 14 for example of mix of stone and render/pebbledash

Context response

- Dwellings should respect the topography and drainage pattern of the site, respecting the landform and aligning routes and paths on comfortable gradients where possible.
- On-site drainage should ensure that water does not run off into the road.
- New development within hamlets and along existing rural lanes should front onto the road and not be set back or disengage with the street scene, in order to reflect local character.

Rural character

- The development pattern should be laid out informally overall but with some gradation from more formal to less formal spaces (and/or changes in density) to create variety and interest.
- Solar panels are encouraged for new properties and acceptable for existing properties, as long as they are sensitive to the rural character of the area.
- New development should include variety in its design (for example, varied roof forms). Repetitive designs are not recommended as they could impact the rural character of the hamlets.
- New development should contribute to the rural character of the settlement. Standardised suburban street designs without local character are not appropriate.



F.29

Figure 29: Infill development should occur along the main lane to reflect local character

F.30

Figure 30: Variety in roof forms

F.31

Figure 31: Solar panels on a detached house on Bailrigg Lane

Public realm

- Stone paving, gravel or other permeable materials should be considered to improve the visual appeal of public spaces; large expanses of tarmac undermine public spaces and the rural feel of many new developments.
- New development should preserve existing footpaths and cycleways.
- Green verges are a feature of the area and should be preserved to keep the rural look of Scotforth; however, measures to improve the safety of pedestrians should be considered.

Figure 33: Large tarmac areas have a detrimental impact on the rural character of the area

Figure 32: Gravel can be used in public realm, for example for footpaths

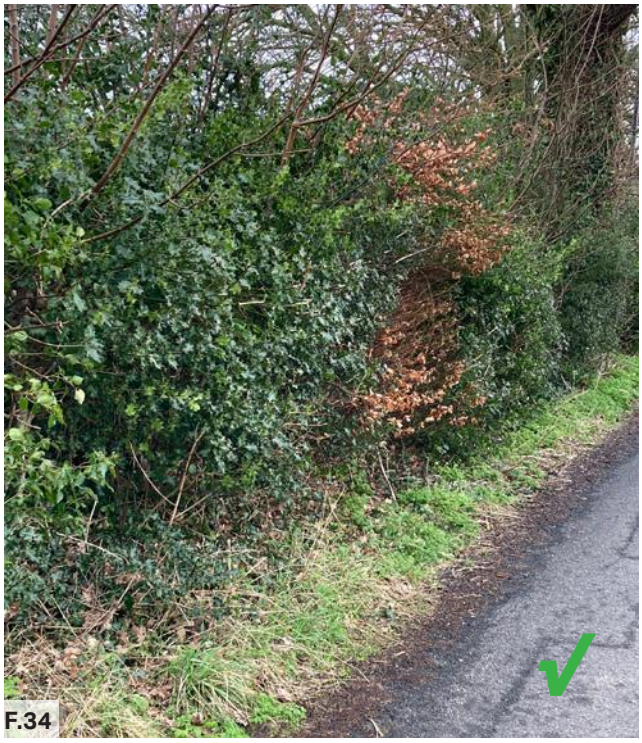


Figure 34: Green verge with hedgerow along Bailrigg Lane

Landscaping

- Retain existing trees and hedgerows, unless dying, on the site within verges and in open spaces within the layout of new development. Replace removed items on 3:1 ratio where possible..
- Include generous offsets to boundary vegetation such as native hedgerows and provide additional planting on sensitive landscape edges – screen planting may be required on some sites and should be designed in conjunction with results of any landscape and visual impact surveys.
- The location of SuDS features will naturally be determined by topography (working towards the lower end of the site) and must be outside of the key flood risk areas.

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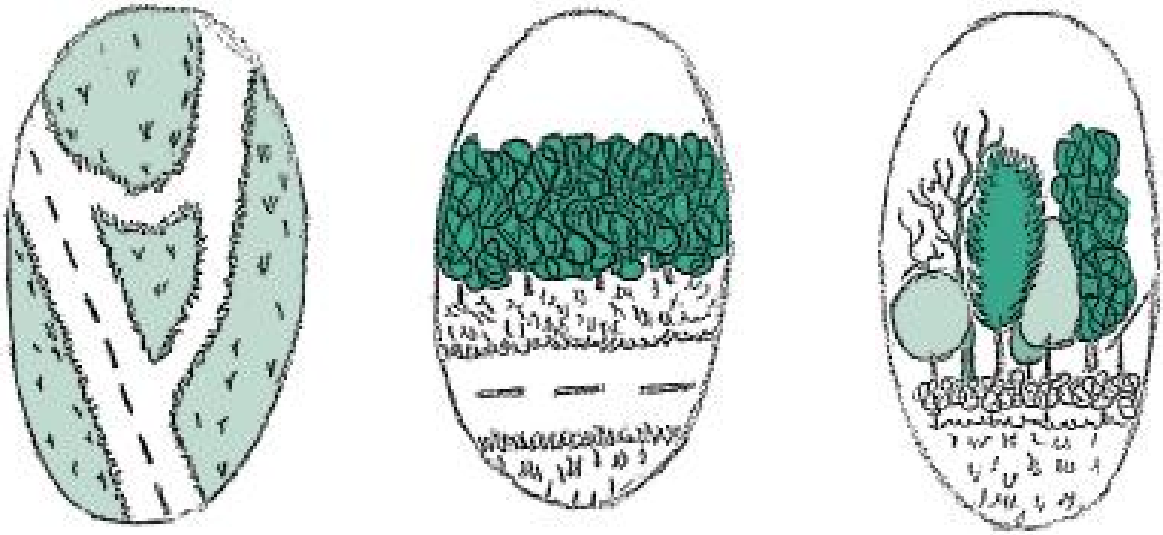
Figure 35: Hedgerows, green verges and mature trees contribute to the rural character of the area and should be preserved



GREEN VERGES *NATIVE HEDGEROWS* *MATURE TREES*

F.36

Figure 36: Green verges, hedgerows and mature trees are an essential feature of the area

Views & screening

- The appearance, massing and scale of development should be filtered and broken-up by green infrastructure such as open spaces, trees, hedges and planting.
- Although a combination of different elevation materials is allowed, these shouldn't impact the overall look of the settlement as well as views of the settlement from the surroundings; when using render, bright and highly visually impacting colours are not recommended.
- Satellite dishes and aerials should not be visible from the street or the visual effect should be kept to a minimum.

Habitat & biodiversity

- Green infrastructure elements should be combined to form a multi-functional green network. Existing and new planting should knit together within this network at a range of scales, with minimal breaks to create connected habitats and routes for wildlife.
- If new developments include new trees and hedgerows, native species should be prioritised. However, climate change is pushing native trees to the limit of what genetically they can cope with. Thus, non-native trees that can cope with these new conditions can be planted as well, as long as they provide similar habitats for native species.

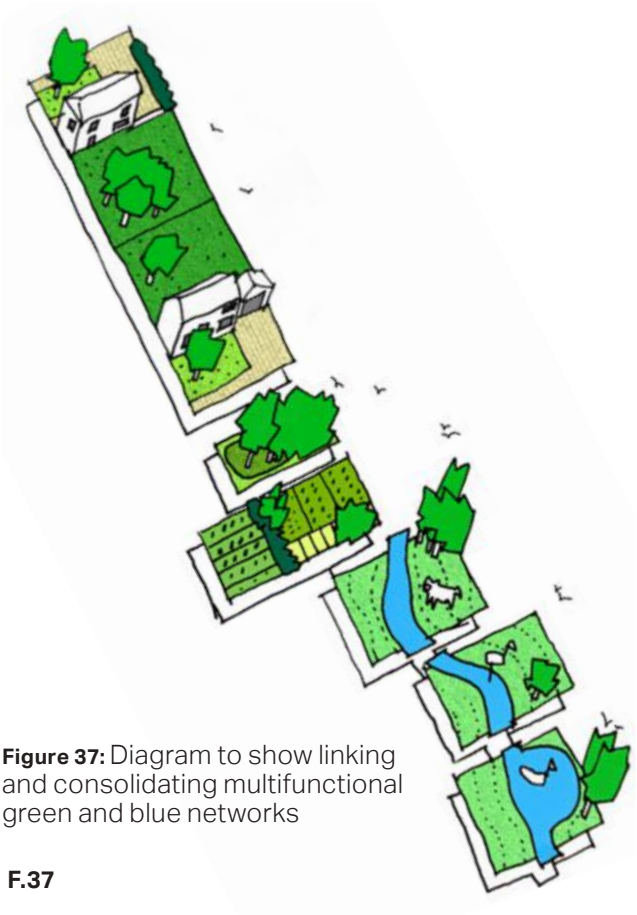


Figure 37: Diagram to show linking and consolidating multifunctional green and blue networks

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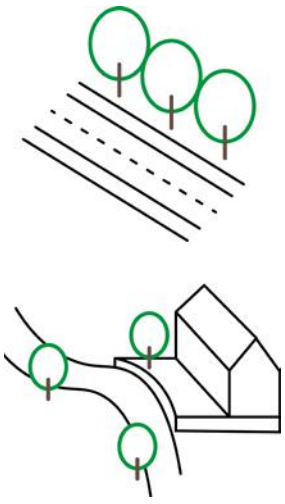

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Figure 38: Trees can be included along streets or within curtilage

Community & Involvement

- Providing new community services and facilities can be considered as long as the tranquil and rural feel of Scotforth is not impacted.
- Local community should be consulted during the design process of new development.
- Whenever a new development occurs the opportunity should be taken to explore whether solutions to existing issues identified by the local community can be incorporated into the scheme, with incremental costs being covered by the beneficiaries, for example shared water treatment plant or improved drainage.

Density and scale

- The density of the settlements in the area is low, around 7 – 8 DpH. Any new development of higher density must be reflective of the existing built form and character of the area.
- Developments must be designed in a neighbourly way to respect existing development plots or buildings adjacent to the site. They must provide suitable offsets to prevent overlooking of private space and be of a comparable built form and scale so as not to overwhelm existing buildings or compromise existing good character.

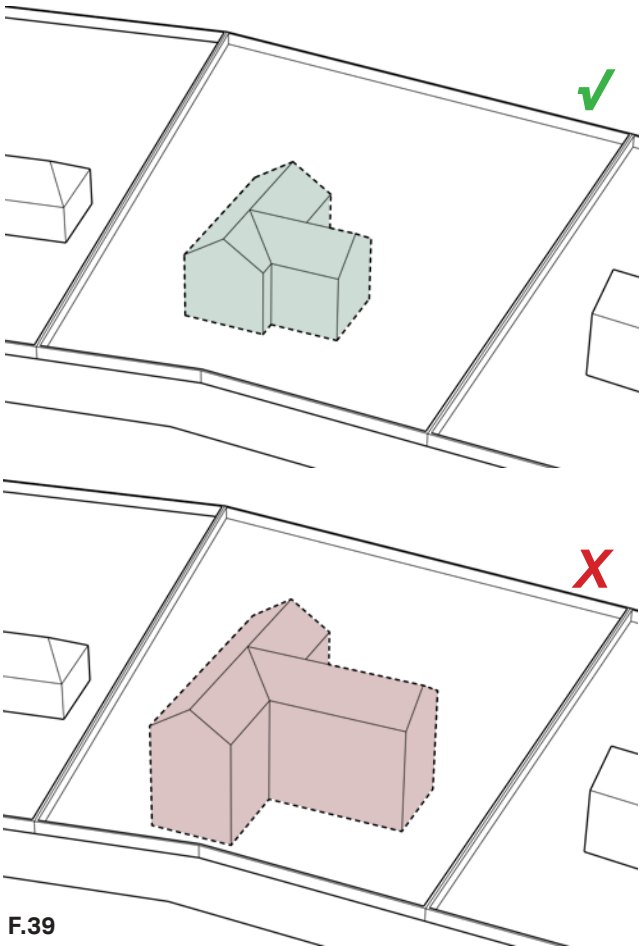

Figure 39: Appropriate and inappropriate infill development scale. If development has a higher density (includes more dwellings) it should be reflective of the existing built form.

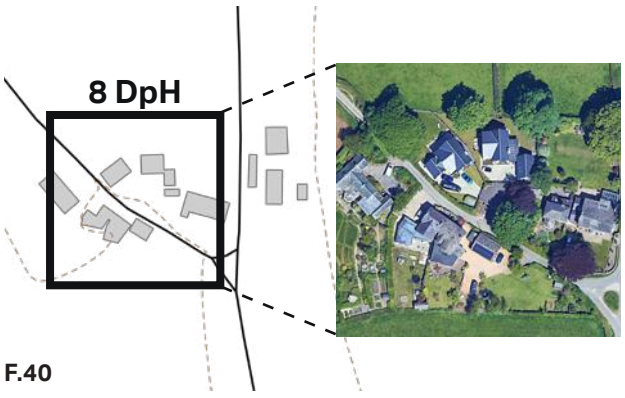

Figure 40: Density study in Burrow Heights

Building height and position

- Buildings heights may vary from 1.5 – 2 storeys with a varied roofscape that helps to break up the appearance of development.
- Building position and landscape features should define the streets and spaces between them, not the other way around. In other words, buildings should not all be offset in a standardised way from the edge of the street that they face.

Building typologies

- Building types that refer to the semi-rural working building vernacular such as cottages; farmsteads; barns and rural housing clusters should inform house type design.

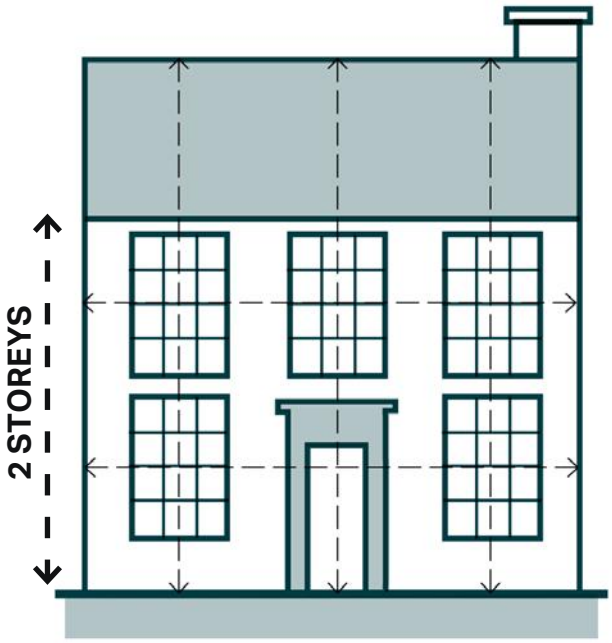

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Figure 42: New buildings shouldn't exceed 2 storeys

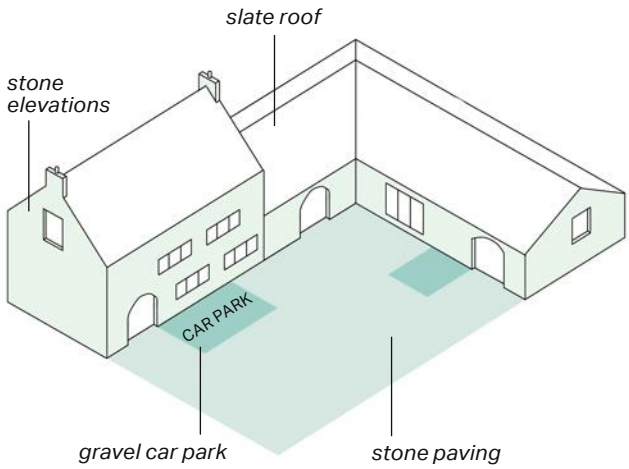

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Figure 41: Farmsteads reflect the character of the area

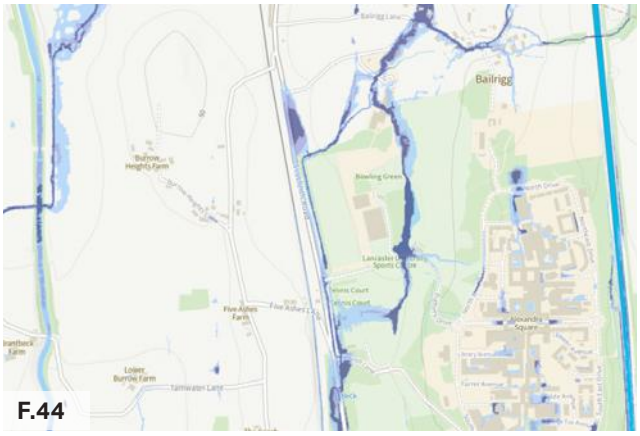
F.43

Figure 43: Converted barn in Lower Burrow

3.4 Design Codes for Innovative Sustainable Design

Climate change is a growing issue that needs to be addressed worldwide, however to do so each community must make an individual contribution by promoting good practices in their neighbourhood areas that will have a cumulative impact. The following codes explore a series of design solutions that will make Scotforth more sustainable and a contributor to global measures to fight against climate change. The use of innovative design to make new development more sustainable is accepted provided it is justified on sustainability and is still recognised as consistent with the existing rural build form. The codes focus on four main topics, namely:

- Resilience to Climate Change
- Assessing Alternative Energy Sources
- Electric Vehicle charging
- Energy efficiency measures towards Net-Zero carbon



Resilience to Climate Change

All new development should work to moderate extremes of temperature, wind, humidity, local flooding and pollution in the neighbourhood area:

- Areas of the neighbourhood area are at risk of flooding from watercourses and surface water. Avoid siting homes in high risk flood areas and mitigate increased risk of storms/ flooding with sustainable drainage systems. These reduce the amount and rate at which surface water reaches sewers/watercourses. Often, the most sustainable option is collecting this water for reuse, having the added benefit of reducing pressure on valuable water sources;
- Plant trees as part of every development, wherever possible, for habitat, biodiversity and amenity;
- Eco-systems cannot adapt as fast as the climate is changing leading to loss of biodiversity. Protecting and enhancing local watercourses and green infrastructure can combat this. Aim to increase ecology through biodiversity net-gain (BNG) in major developments;
- Use street trees and planting to moderate and improve micro-climate for streets and spaces; and
- Minimise land consumption in the neighbourhood area, as it is a main driver of climate change and has a major impact on natural resources, including; soil, nutrients, plants and animals.

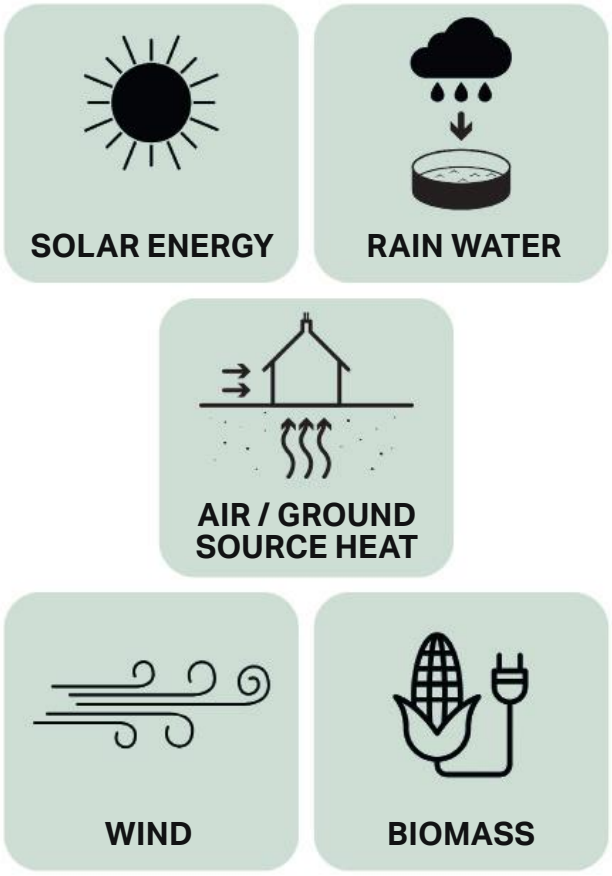
Figure 44: Extract of the EA map of surface water flood risk

Figure 45: Example of innovative design solutions incorporated at Burrow Heights Lane, including heat pumps and solar generation and storage

Assessing Alternative Energy Sources

All new development should assess alternative energy sources and the assessment must include (but not limited to):

- Assess impact of solar orientation of streets and buildings. Aim to increase the number of buildings on site that are oriented within 30' of south (both main fenestration and roof plane) for solar gain, solar energy (solar panels) and natural daylighting;
- Assess whether ground conditions can accommodate loops for ground source heat and space for air source heat pump units; and
- Assess whether a microgeneration wind turbine is more beneficial than an air source heat pump, if a property is detached and installation if feasible.



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F.46

Figure 46: Carefully angled solar panels that harness every moment of the sun

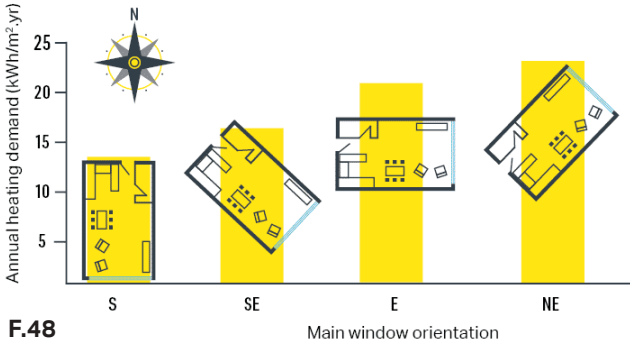

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Figure 47: Key alternative natural energy sources

Figure 48: Building orientation influences the annual heating demand

Electric Vehicle charging

Current transition to electric vehicle technology and ownership comes with related issues that must be addressed by new development. The assessment must address:

- Ensure charging points are convenient by being close to homes or on plot parking;
- Incorporate charging points under cover within car ports and garages wherever reasonable and possible;
- Integrate car parking sensitively within the streetscene. For example, parking set behind the building line or front of plot spaces lined with native hedgerow planting;
- Consider visitor parking / charging needs, and provide wherever reasonable and possible;
- Identify existing unallocated / on-street parking areas and feasibility (endorsed by relevant statutory authority) to provide electric charging infrastructure not linked to the home where charging cannot be accommodated on the development site;
- Provide secure, serviced communal parking areas for higher density homes; and
- For public parking, integrate charging infrastructure sensitively within streets and spaces, for example, by aligning with green infrastructure and street furniture.

F.49

Figure 49: Home electric vehicles charging point

F.50

Figure 50: Public electric vehicles charging points

Energy efficiency measures towards Net-Zero carbon

By default, new development should adopt a fabric first approach to attain higher standards of insulation and energy conservation.

- Reducing energy demand further by employing passive design principles for homes is desirable and can make some forms of development more acceptable to the community (window orientation, solar gain, solar shading, increased insulation, ventilation with heat-recovery);
- Maximise on-site renewable energy generation (solar, ground source, air source and wind driven); and
- Consider building form and thermal efficiency: point-block/ terraced / semi-detached / detached all have different energy efficiency profiles. This must be balanced with local design preference and character considerations to ease acceptance for development.

Figure 51: Air source heat pump unit

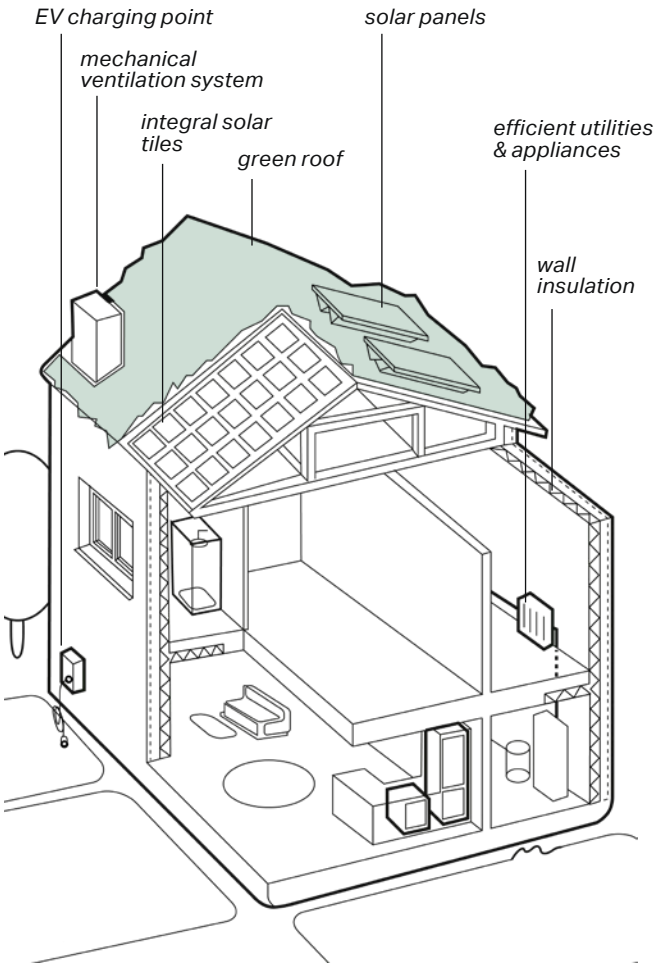

Figure 52: Cut-through diagram of an energy efficient home and its features

Figure 53: Air source heat pump housing covers the unit and harmonises with the building aesthetic

Appendix

04

4. Checklist

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

1

General design considerations for new development:

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

2

Street grid and layout:

- Does it favour accessibility and connectivity? If not, why?
- 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?

3

Local green spaces, views & character:

- 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 maintained or enhanced?
- 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?
- Have opportunities for enhancing existing amenity spaces been explored?

3

Local green spaces, views & character:

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

4

Gateway and access features:

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

5

Buildings layout and grouping:

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

6

Building line and boundary treatment:

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

7

Building heights and roofline:

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

8

Household extensions:

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

9

Building materials & surface treatment:

- What is the distinctive material in the area?
- Does the proposed material harmonise with the local materials?
- Does the proposal use high-quality materials?
- Have the details of the windows, doors, eaves and roof details been addressed in the context of the overall design?
- Does the new proposed materials respect or enhance the existing area or adversely change its character?
- Are recycled materials, or those with high recycled content proposed?
- Has the embodied carbon of the materials been considered and are there options which can reduce the embodied carbon of the design? For example, wood structures and concrete alternatives.
- Can the proposed materials be locally and/or responsibly sourced? E.g. FSC timber, or certified under BES 6001, ISO 14001 Environmental Management Systems?

10

Car parking:

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

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