locality
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STARSTON DESIGN GUIDELINES AND CODES

AECOM

FINAL REPORT

June 2021

Quality information

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Revision History

Revision	Revision date	Details	Name	Position
2	210617	Review	Auriel Gibson	Chair, Neighbourhood Plan Steering Group
1	210603	Review, edit	Ben Castell	Director
0	200602	Research, drawings	Stela Kontogianni	Urban Designer

Contents

Introduction

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1. Introduction

Through the Ministry of Housing, Communities and Local Government (MHCLG) Neighbourhood Planning Programme led by Locality, AECOM has been commissioned to provide design support to Starston Neighbourhood Plan Steering Group. This document provides expectations on design that will need to be taken account of in any development proposals that are brought forward in the area. It supports Neighbourhood Plan policies that aim to help maintain Starston's distinct rural character.

1.1. Purpose of this document

The National Planning Policy Framework (paragraphs 125 - 126) states that:

"*Plans should... 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 plans can play an important role in identifying the special qualities of each area and explaining how this should be reflected in development.*

To provide maximum clarity about design expectations at an early stage, plans ... should use visual tools such as design guides and codes. These provide a framework for creating distinctive places, with a consistent and high quality standard of design. However their level of detail and degree of prescription should be tailored to the circumstances in each place, and should allow a suitable degree of variety where this would be justified."

The Government is placing significant importance on the development of Design Codes in order to set standards for design upfront.

The main objective of this document is to develop design guidelines and codes for the Neighbourhood Plan, and to inform the design of future planning applications in Starston parish.

It is intended that the Design Guidelines and Codes become an integral part of the Neighbourhood Plan and be given weight in the planning process.

1.2. Process

The following steps were undertaken to produce this report:

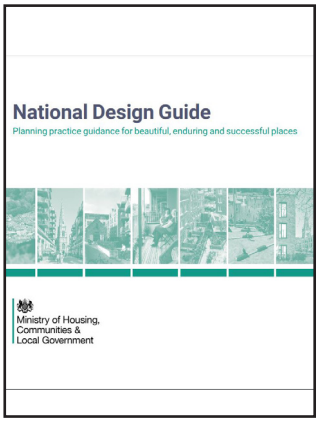
- Initial meeting between AECOM and the Starston Neighbourhood Planning Group and as this was during the national Covid 19 lockdown, a joint virtual 'site visit' was carried out via Microsoft Teams and Google Streetview;
- Review of relevant work undertaken to date by the Neighbourhood Planning Group, including work to identify character areas;
- Unaccompanied site visit to inform analysis;
- Preparation of design guidelines and codes to be used to inform the design of the Parish and future developments;
- Draft report with design guidelines and codes; and
- Final report.

1.3. Policy and design guidance

The following documents have informed this design code document.

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

National design guidance



National Design Guide

Ministry of Housing, Communities & Local Government, 2019

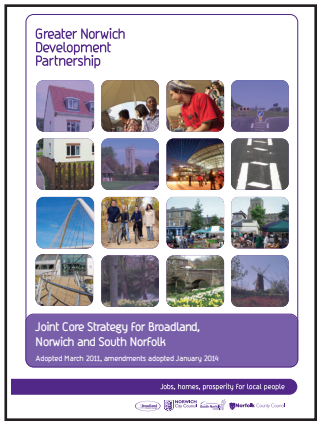
Building for a Healthy Life (BHL)

Homes England, 2020

National Model Design Code

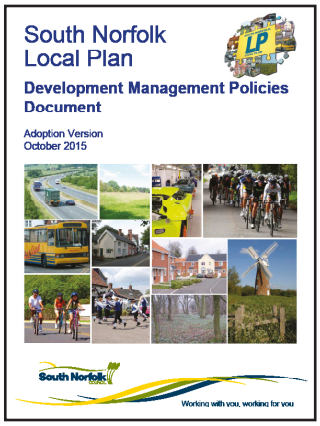
Ministry of Housing, Communities & Local Government, 2021

District-wide policy & design guidance



Joint Core Strategy for Broadland, Norwich and South Norfolk

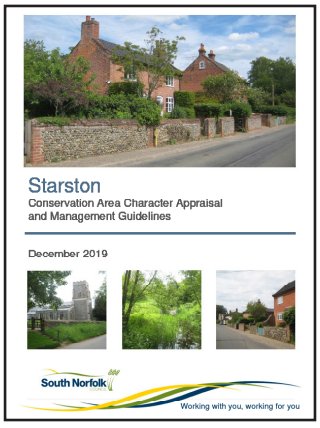
Greater Norwich Development Partnership, 2014



Development Management Policies Document

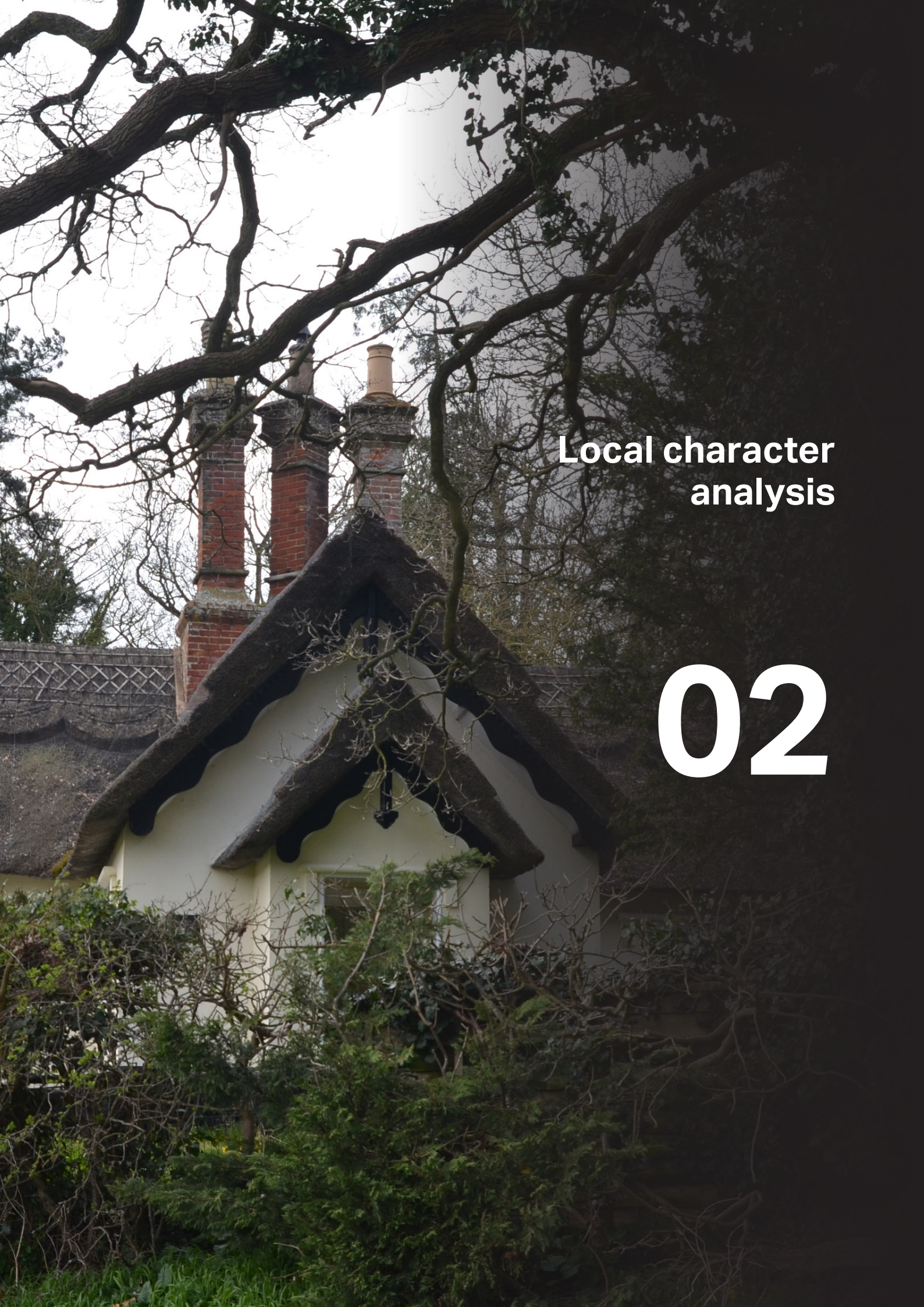
South Norfolk Local, 2015

Parish-wide policy & design guidance



Starston. Conservation Area Character Appraisal and Management Guidelines

2019



Local character analysis

02

2. Local character

This chapter presents an overview of the local context and character of the parish. These characteristics form the baseline that any future development in the village needs to take into consideration and respect.

2.1. Parish structure

The largest part of the village is agricultural areas and open fields containing dispersed housing with clusters along Wood Lane, Skinners Lane, Cross Road and Rushall Road.

The main village, the centre of which is part of the conservation area, has developed around the crossroads where the Beck is bridged. The Beck stream runs from west to east along The Street, whilst there are small ponds scattered around the parish.

Whilst the landscape is largely open, there are blocks of woodland, including ancient, and priority habitats scattered throughout the parish.

Undeveloped land along the Beck forms an important gap between the village and the town of Harleston.

Overall, the rural character of the parish and the openness of the landscape need to be preserved and enhanced by any new development.

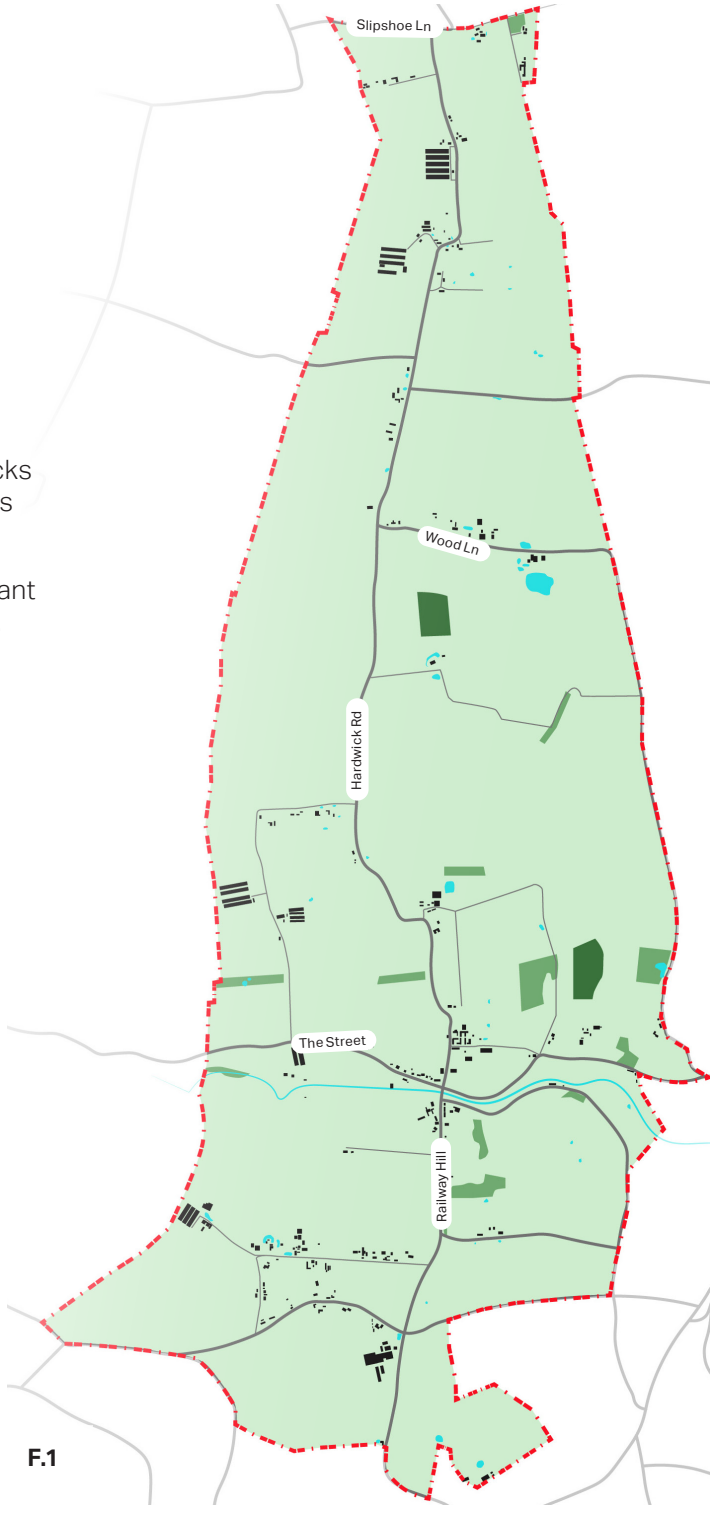


Figure 1: Starston village and parish structure.

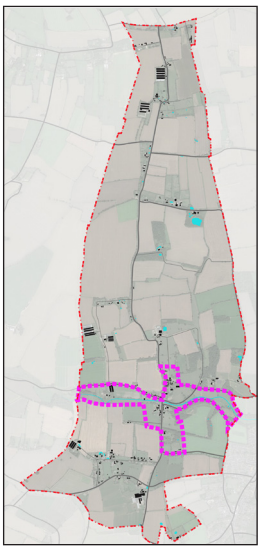
2.2. Character areas

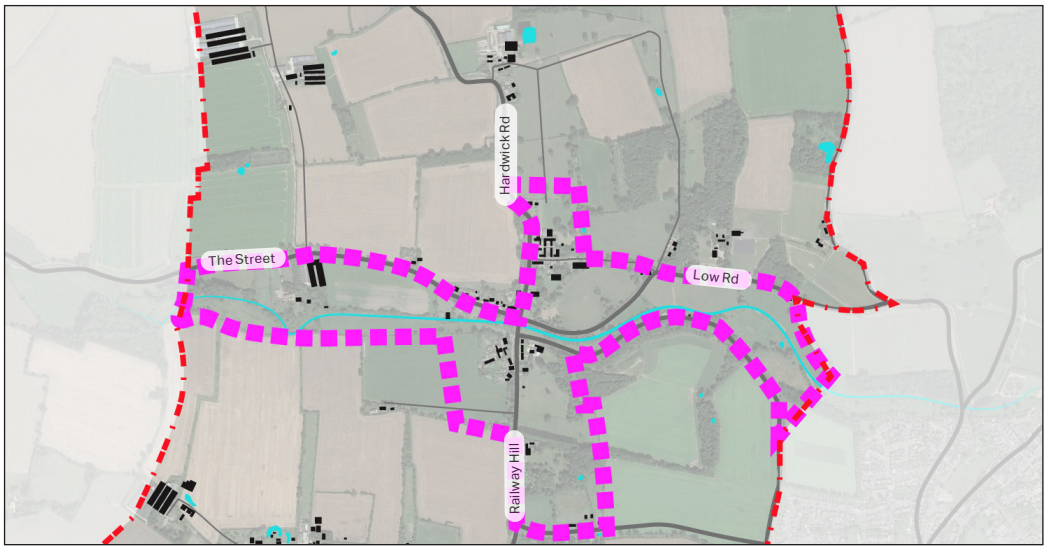
The Starston Neighbourhood Plan Steering Group has identified 5 distinct character areas within the parish. Those are:

- Historic village centre and the Beck valley;
- Cross Road and Rushall Road;
- Northern agricultural area;
- Central agricultural area; and
- Southern agricultural area.

The character areas are summarised in the tables below. Those that share broadly similar characteristics are combined for the purpose of this analysis. Therefore, the northern, central and southern agricultural areas are summarised in a single table.

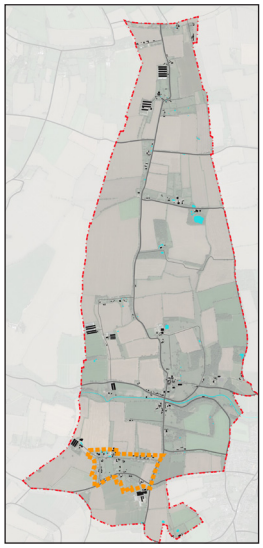
Historic village centre and the Beck valley

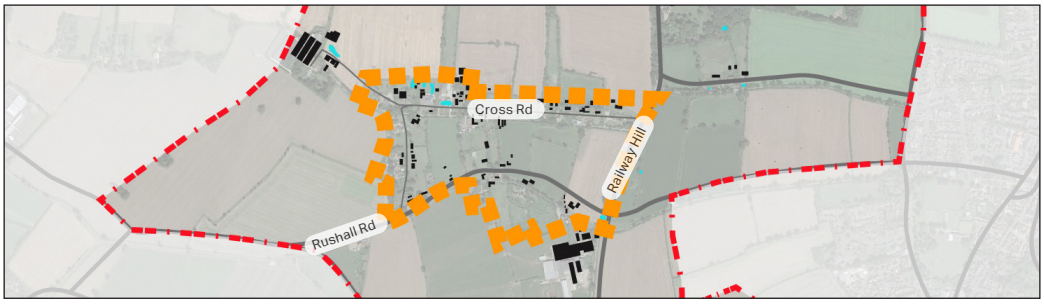




BUILDING GROUPING	There are 3 main clusters of buildings following a linear development along The Street, west of Church Hill, the northern end of Railway Hill and south end of Hardwick Road. The rest of the character area is characterised by open countryside and a significantly lower density including landmarks like St. Margaret's Church and Jubilee Hall, as well as a livestock unit and some dwellings.
BUILDING LINE	The building setbacks are inconsistent in this character area. The orientation of the buildings varies as well. This variety adds to the rural character of the village. In some cases, building front directly onto the street. The barns along the south end of Hardwick Road and the terraced housing along the east side of the northern end of Railway Hill illustrate this type of building line.
BOUNDARY TREATMENT	The majority of the building plots accommodate rich vegetation and plantation along their boundaries, again enhancing the rural character of the village. In cases where building frontages directly meet the street, rich vegetation is usually replaced by narrow green verges.
HEIGHTS & ROOFLINE	Building heights range between 2 and 2.5 storeys. The roofline is not continuous although where terraced housing appears the roofline shows continuity.
BUILDING TYPOLOGY	The majority of buildings are detached houses. However, there are also examples of terraced housing, semi-detached housing, bungalows and farmhouses converted into residential units.

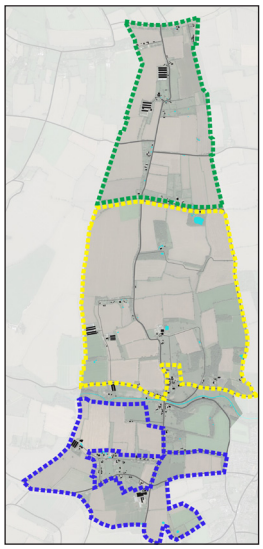
Cross Road and Rushall Road





BUILDING GROUPING	Buildings follow a linear development pattern along Cross Road, whilst the buildings along Rushall Road follow a meandering pattern due to the configuration of the road. Buildings are more spaced out than in the historic village centre, offering long-distance views into the surrounding countryside.
BUILDING LINE	Building setbacks are inconsistent. In general, the building façades are parallel to the street.
BOUNDARY TREATMENT	The majority of the building plots accommodate rich vegetation and plantation along the boundaries enhancing the rural character of the village.
HEIGHTS & ROOFLINE	Building heights range between 2 and 2.5 storeys. The roofline is not continuous due to the spacing and type of building groupings.
BUILDING TYPOLOGY	The majority of the buildings are detached houses.

Agricultural areas (North, Central & South)



BUILDING GROUPING	The buildings are generally scattered following a linear development pattern along Hardwick Road, Wood Lane, Skinners Lane, Starston Lane and Bunns Lane, all characterised by low density. Buildings have large gaps between them offering long-distance views to the surrounding open countryside.
BUILDING LINE	The building setbacks are inconsistent. In general, the building façades are parallel to the street network.
BOUNDARY TREATMENT	The majority of the building plots accommodate rich vegetation and plantation along the boundaries enhancing the rural character of the village. Active agricultural units are also surrounded by rich physical boundary treatments mitigating any negative visual impact from the street.
HEIGHTS & ROOFLINE	Building heights range between 2 and 2.5 storeys. The roofline is not continuous due to the spacing and type of building groupings.
BUILDING TYPOLOGY	The majority of the buildings are detached houses.

2.3. Architectural details and local vernacular

Starston grew an example of a Victorian estate village of cottages and farm houses. It is a village with rich local vernacular and a variety of architectural details that feature along the streets.

Roofs and chimneys: While many of the buildings may have been originally thatched, only one survives in the conservation area, the 19th century lodge on Low Road. There are examples in the conservation area of traditional red pantiles and a high proportion of black glazed clay pantiles. There is a high number of slate roofs, which include Station House, the Home Farm buildings, part of the Old Rectory and the chancel of the Church. Lead covers the nave roof of the Church and there are red tiles on the lychgate. Chimneys, which form an important part of the historic character, are relatively plain, mostly in red brick, with the taller double shafts to Home Farm Lodge and The Lodge being an exception.

Walls: Walls are generally red brick, flint or have a rendered finish. A more unusual finish can be seen at Hillside where the render has been impregnated by coloured glass to give an elegant effect. The church and Home Farm buildings are in flint with some weather-boarding introduced on the latter. Decorative barge boards are a particular feature of some buildings, for example Beck Hall, The Old Rectory and Home Farm Lodge. Brick parapets can be seen on several cottages along The Street and there is patterned brickwork at Streamlet Cottage.

There are several good examples of flint and brick boundary walls especially along The Street, many retaining traditional copings. Rendered buildings conceal either timber frames, such as at The Old Rectory, or clay lump, as can be seen at Pheasantry Cottage.

Vegetation: Green features contribute strongly to the rural character of the parish. Many dwellings are 'hidden' among the trees and vegetation and only a part of them can be clearly seen from the street. Large front gardens also reinforce this rural scene.

Figure 2: Positive examples of architectural details and materials.

Design guidelines and codes

03

3. Design guidelines and codes

This chapter presents specific design guidelines and codes for future development that consider the local character and can enhance local distinctiveness by ensuring that if development takes place, it is of good quality.

3.1. Placemaking

What designers and planners call 'placemaking' is about creating the physical conditions that residents and users find attractive and safe, with good levels of social interaction and layouts that are easily understood.

The placemaking principles set out in the following pages should be used to assess the design quality of future development in the village. These key principles should be considered in all cases of future development as they reflect positive place-making and draw on the principles set out in many national urban design best practice documents including Building for a Healthy Life, the National Design Guide and National Model Design Code, 2021.

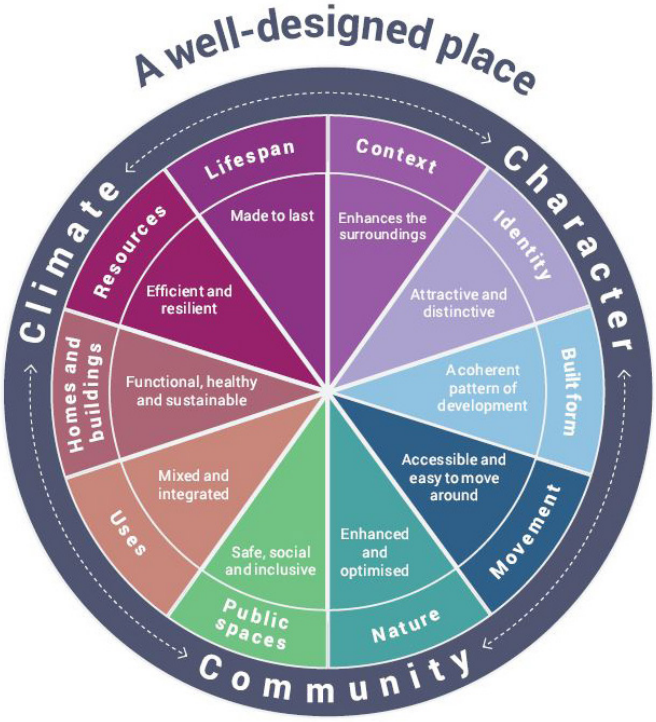
3.2. General principles

Any new development, which may include household extensions, in-fill development or small scale development, should not be viewed in isolation. Considerations of design and layout must be informed by the wider context, considering not only the immediate neighbouring buildings, but also the 'villagescape' and landscape of the wider area. The local pattern of streets and spaces, building traditions, materials and natural environment should all help to determine the character and identity of a development.

It is important with any proposal that full account is taken of the local context and that the new design embodies the 'sense of place' whilst also meeting the aspirations of people already living in that area.

As a first step, there are a number of design principles that should be present in any proposal. In particular, new development should:

- Respect the existing settlement pattern in order to preserve the character.
- Reinforce or enhance the established character of streets, greens and other spaces.
- Harmonise and enhance existing settlement in terms of physical form and architecture.
- Respect surrounding buildings in terms of scale, height, form and massing.
- Adopt contextually appropriate materials and details.
- Incorporate necessary services and drainage infrastructure without causing unacceptable harm to retained features.
- Ensure all components e.g. buildings, landscapes, parking and open space are well related to each other.



3.3. Design guidelines and codes for Starston

This section introduces a set of design principles that are of particular relevance to Starston parish.

These are based on the local character analysis, as well as on discussions with members of the Neighbourhood Plan Steering Group and the stated Vision for the parish.

Those guidelines and codes are organised under three themes:

A. STRATEGIC PRINCIPLES AND BEST DESIGN PRACTICE

B. BUILT FORM

C. ENVIRONMENT AND ENERGY EFFICIENCY

A. Strategic principles and best design practice

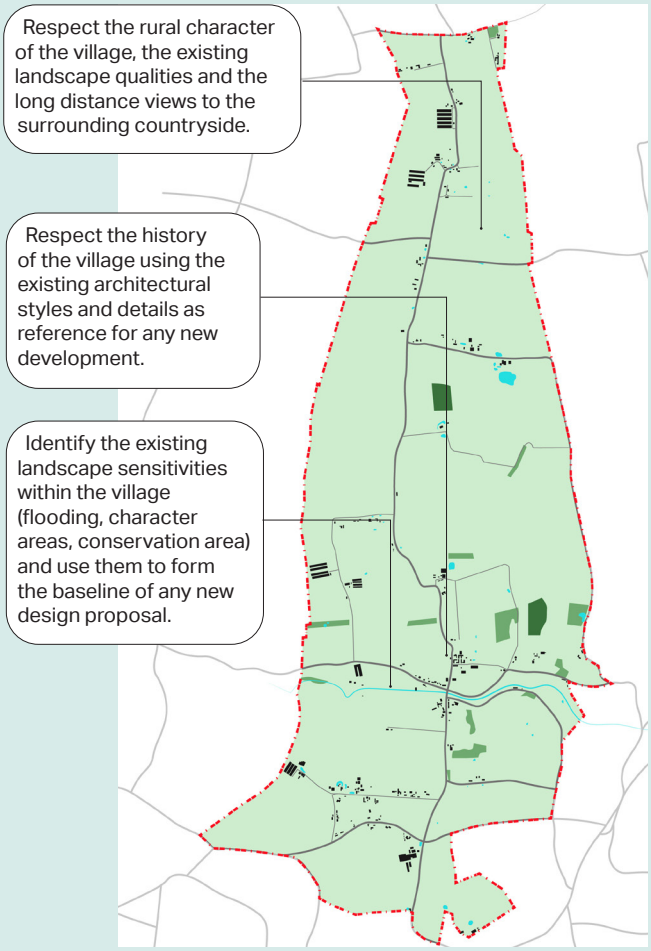
A.1 Consider the local context

Any proposal will need to demonstrate how it has been designed in response to the built, natural and social context. It must demonstrate an informed, professional appreciation of the existing local condition and explicitly state how that has informed design. This allows for a variety of design responses, including those illustrated in - but not restricted to - this document.

- New development must demonstrate an understanding of the landscape sensitivities and designations of the area. Conservation areas, areas that are susceptible to flooding, ancient woodlands and priority habitats should all be protected and respected in any new development.

- New development should respect the general rural character of the village as well as the character of each area within it, as analysed in Section 2.3. Thus, any new design, depending on its location, should be a good fit for the particular character area in terms of building scale, lines, physical boundary treatment, density and architectural style in order to preserve its unique characteristics.
- New development (whether infill or otherwise) should respect but not necessarily imitate older buildings.
- Any new development should respond to context, whilst also creating variety.

Figure 3: Any new development within the conservation area will need to respect the existing density, building scale and architectural details.
Figure 4: Any new development or building conversion within the agricultural areas will need to respect the lower density and building setbacks as well as the long-distance views to the countryside. The cottages on Hardwick Road set an example.



Strategic principles & best design practice

A.2 Enable wayfinding

In general, when places are well signposted, they are easier for the public to comprehend. It is easier for people to orientate themselves when the routes are direct, particularly for people with dementia and related cognitive and sensory challenges. Some guidelines for new development are:

- The number of highways signs, although often necessary, should be kept to a minimum to avoid detracting from the rural character. Their style should be sympathetic to the local context and avoid standing out.
- Signage elements and techniques should be appropriate to the character of the area and be a nice fit to the existing architectural style and details.
- Buildings can also play an important part in wayfinding. In particular, those that are located at corners, crossroads or along a main road could significantly contribute in navigation.
- Distinctive buildings in terms of scale, typology or architectural style can also act as landmark elements.
- Physical elements like an old sizeable tree can also act as a landmark element helping navigation.
- Signage can also help highlight existing footpaths, informal or formal, and cycle routes, encouraging people to use them more.

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Figure 5: The Lodge along Low Road is one of several buildings that contribute to the village's special character.
Figure 6: The active façades, building rotation and architectural details of the Home Farm Lodge on Church Hill mark it out as something of a local landmark.
Figure 7: Local example of signage posts and highways signs in the centre of the village. Any proposal should be sensitive to the local context in terms of scale, colours and font size.

Strategic principles & best design practice

A.3 Retain and improve the green network

It is the network of green spaces that most defines Starston's character. The open fields and countryside, the rich vegetation, the small ponds and the river, all are part of a green network that must be retained. Any new development should aim to enhance this network, not diminish it. Thus, some guidelines for new development are:

- Any new development should incorporate existing native trees and shrubs and must avoid unnecessary loss of flora. Any trees or woodland lost to new development must be replaced. Native trees and shrubs should be used to reinforce the more rural character of the area.
- Any new development should encourage rich vegetation as part of the boundary treatments in order to be a good fit in the surrounding rural context.
- Any new development should be offset by the road to leave room for trees, hedges and hedgerows. In the case where the building line needs to be closer to the street, to respond to the existing context, then, a narrow green verge could be proposed. Any form of green element can contribute to the enhancement of the green network.
- Open spaces should respond to local character and encourage civic pride, as exemplified by Glebe Meadow and the church yard.
- Any new development should be located within walking distance from existing landscapes and open spaces to maximise their use.

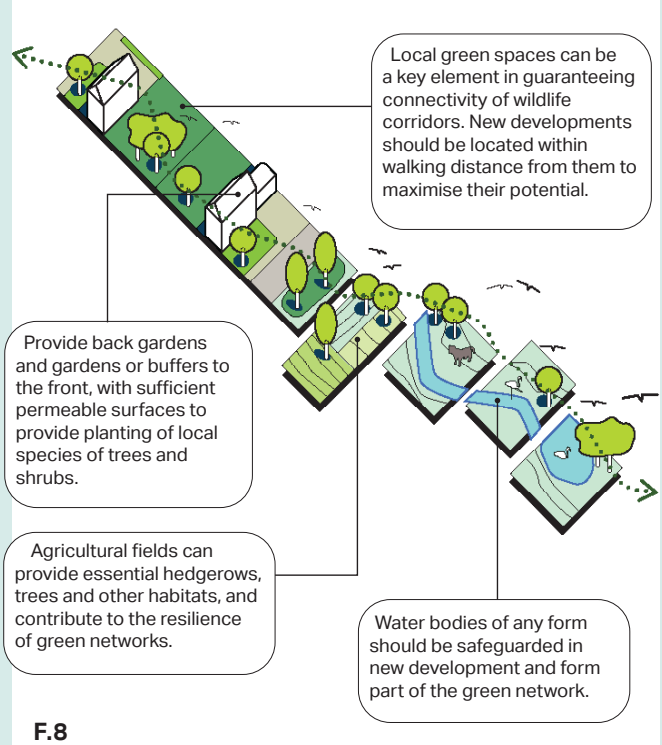

Figure 8: Diagram to illustrate some basic principles for the preservation and enhancement of the green network.
Figure 9: Physical boundary treatments in the form of trees, hedges, bushes and flowers enhance the wildlife corridors and hence, the natural environment.
Figure 10: The Beck in the centre of the village.

B. Built form

Particular attention must be paid to the layout, form, scale, materials and detailing.

B.1 Pattern of growth

Starston parish has a strong rural character which needs to be reflected and preserved in any new development.

The Neighbourhood Plan supports a limited amount of development, of up to two new dwellings per location, outside the existing settlement boundaries. The Plan sets out some criteria that such development must meet, including complying with this document.

- 1. Green infrastructure, of any form, should be protected and enhanced.
- 2. Front gardens should be delineated with soft landscape elements and vegetation. However, in cases where the building line faces directly onto the street, then green verges could be proposed instead.
- 3. Green gaps between properties should be preserved, whilst tall masonry walls should be avoided.
- 4. Good sized back gardens with views to the countryside should be provided.
- 5. Variety in building lines should be preserved where that is a feature of the street or lane.
- 6. Guided by the immediate context, new buildings would not be expected to exceed 2 storeys.

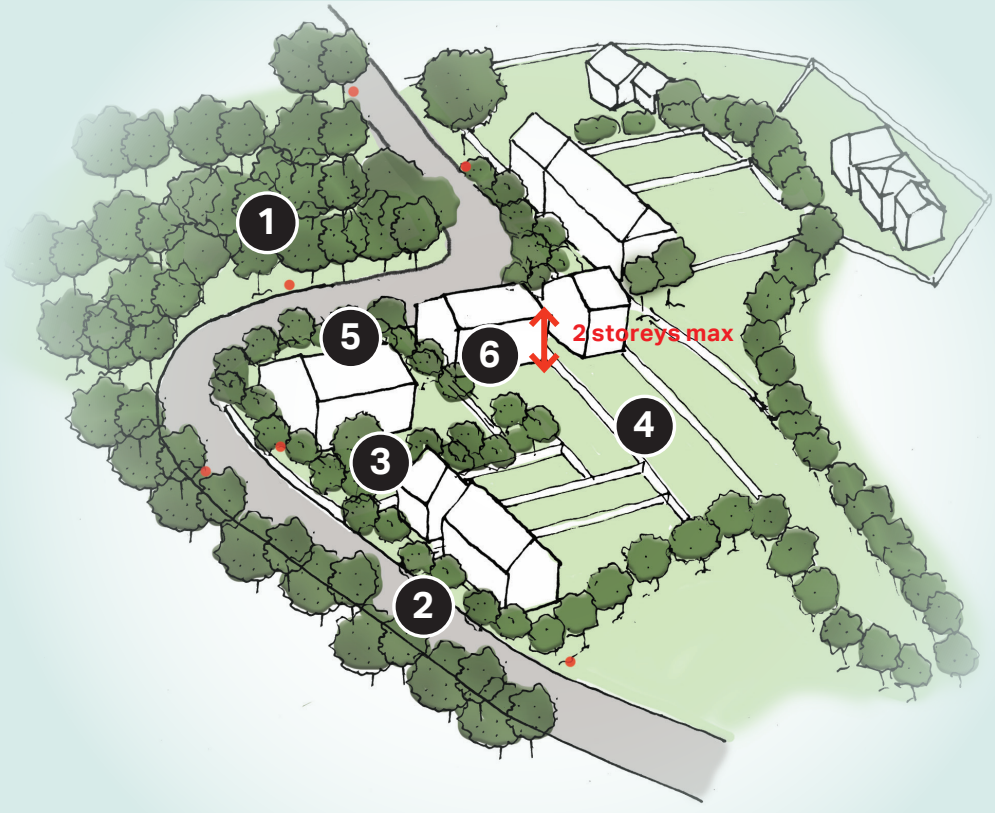

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Figure 11: Illustrative plan for a rural edge development highlighting design elements, related to the pattern and layout of buildings.

Built form

B.2 Building heights/roofline

The roofline in Starston is mainly varied due to the rural character of the village.

- Building heights should usually be up to 2 storeys to be a good fit in the surroundings.
- The scale and pitch of the roof must always be in proportion with the dimensions of the building itself.
- Monotonous building elevations shall be avoided, therefore subtle changes in roofline should be ensured during the design process. Roof shapes and pitches must however employ a restrained palette on a given building; overly complex roofs should be avoided.
- Locally traditional roof detailing elements such as roofing materials, edge treatments, and chimney styles shall be considered and implemented where possible in new development.
- Rooflines and profiles must reflect existing styles and patterns.
- Development of above two storeys shall only be permitted in exceptional circumstances.

B.3 Building scale and massing

It is assumed that any new housing will be small-scale infill, meaning that it needs to be designed with particular care.

- Infill development should complement the street scene and rural setting into which it will be inserted.
- Development does not need to mimic existing styles but its scale, massing and layout need to be in keeping.
- Scale and massing also need to be considered in relation to topography, views, vistas and landmarks.
- New building lines should be reasonably consistent along a street with existing buildings, depending on the current pattern.

Figure 12: Local example of a consistent roofline and linear arrangement of buildings.

Figure 13: Local example of an interrupted roofline due to the building typology and irregular setbacks from the street.

Built form

B.4 Building modifications and extensions

Extensions to dwellings can have a significant impact not only on the character and appearance of the building, but also on the street scene within which it sits.

A well-designed extension can enhance the appearance of its street, whereas an unsympathetic extension can have a harmful impact, create problems for neighbouring residents and affect the overall character of the area.

The Planning Portal[1] contains more detailed information on building modifications and extensions, setting out what is usually permitted without planning permission (permitted development) as well as what requires planning permission. Outside the conservation area, much development will be permitted. Some guidelines for new development are:

- Extensions must be appropriate to the scale, massing and design of the main building, and should complement both the streetscape and the rural setting.
- Alterations and extensions of historic buildings within a conservation area should preserve or enhance their character.
- Extensions are more likely to be successful if they do not exceed the height of the original or adjacent buildings. Two-storey extensions, where appropriate, should be constructed with a pitch sympathetic to that of the existing roof.
- The design, materials and architectural detailing of extensions should be high-quality and respond to the host building and the local character of the village.
- The impact on the space around the building should avoid overlooking, overshadowing or overbearing.

1. Planning Portal. https://www.planningportal.co.uk/info/200234/home_improvement_projects


F.14


F.15

Figure 14: Mulberry Barn, Starston: very sensitive extension of historic building.
Figure 15: A good local example of a building extension in the village where reclaimed soft Norfolk red bricks were used and laid in Flemish Bond as per the house.

Built form

B.5 Conversion of agricultural buildings

The redevelopment of farm buildings has been a feature in Starston, with some high quality conversions adding to the variety of housing.

- Avoid domestic add-ons such as chimneys, porches, satellite dishes, domestic external lighting and hanging baskets.
- Retain features characteristic of historic working buildings such as the openings, which should not be filled in, ventilation slots (often patterned) and any use-specific historic additions.
- New openings should generally be avoided, and kept to a minimum when necessary. They should never be planned in a regular or symmetrical pattern, as this is overly domestic.
- Avoid features such as dormer windows. If rooflights are used, they should be sited discreetly so as to not become a feature in the landscape.
- Where included, solar PV panels should integrate with the overall pitch, materials and feel of the roof.
- Existing brickwork should be reused or reclaimed. Consideration should be given to the material source and matching the colour, texture, size and bond of the existing brickwork.
- Courtyards should be surfaced in a material that reflects its rural setting. Farmyards should remain open and not be divided by fences or walls. Parking spaces should not be formally marked out.
- Boundary brick walls should be left intact, and not chopped through or reduced for access or to create visual splays.

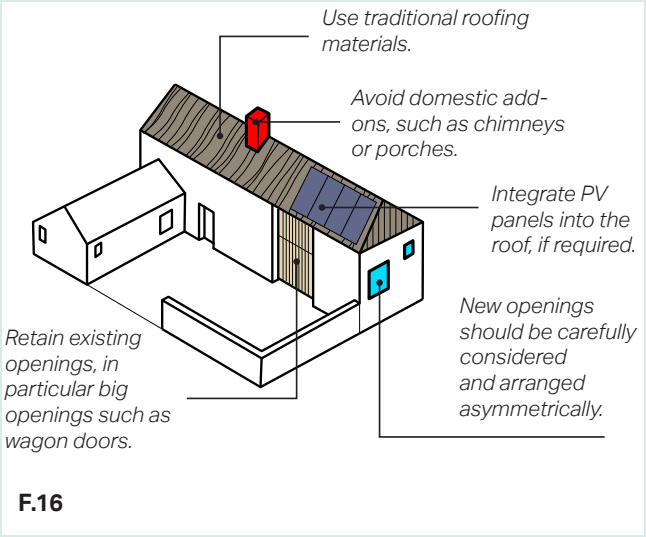

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Figure 16: Diagram to illustrate some design principles for the conversion of agricultural buildings.
Figure 17: Before and after of a barn conversion where the scale, heights, openings of the building have been retained and respected.

Built form

B.6 Building lines and boundary treatments

The way buildings sit in relation to the street can affect the feel and attractiveness of a development. Building lines should have subtle variations in the form of recesses and protrusions but should generally form a unified whole. Boundary treatments should reinforce the sense of continuity of the building line and help define the street.

A setback is the distance between the back of the lane and the building line. The size of the setback contributes to the overall character and sense of enclosure along a street. The setbacks of residential developments in rural areas, like Starston, can be deeper due to large front gardens.

- Maintain the soft grass verges and open frontages that characterise the settlements along rural roads and avoid creation of hard boundaries or surfaces which would impart a more urban character.
- Natural boundary treatments should reinforce the sense of continuity of the building line and help define the street, appropriate to the character of the area. They should be mainly continuous hedges and low walls, as appropriate, made of traditional materials found elsewhere in the parish. The use of either panel fencing or metal or concrete walls in these publicly visible boundaries should be avoided. Natural boundary treatments should still enable adequate natural surveillance.
- On streets outside the historic core, front gardens should be provided. Where this is not possible, green verges could be proposed instead.

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Figure 18: Local examples of regular and irregular building lines along The Street and Railway Hill (mapping: @parish online).
Figure 19: Linear building lines along the east side of Railway Hill
Figure 20: The building lines along the western end of The Street are less regular due to some variations in the building setbacks and rotations.

Built form

B.7 Materials and colour palette

The materials and architectural detailing used in the village should contribute to the historic character of the area and the historic vernacular.

- The materials used in new development should be of a high quality and reinforce local distinctiveness. Any development proposal should demonstrate that the palette of materials has been selected based on a solid knowledge of the local vernacular style and traditions.
- In new developments and renovations, locally sourced bricks or bricks that match the buildings in the surrounding area would be the most appropriate.
- Particular attention should be given to the bonding pattern, size, colour, and texture of bricks.
- Each building should be designed with the specific location in mind and its immediate surroundings.
- If door or window frames need to be replaced they should ideally be replaced with the original materials. However, if different materials are chosen then the window style should still remain the same (if original). The opportunity should be taken to reinstate traditional style windows where they have been unsympathetically replaced in the past.
- Careful consideration needs to be given to painting buildings to ensure the visual harmony of buildings in the village is retained.

F.21

Figure 21: Positive local examples for wall materials in Starston.

Built form

Flint with red brick dressing

Wooden window frame

Details of interest

Cream and beige render

Decorative bargeboards

Thatched roof

Porch with decorative bargeboard

Black weatherboarding

Low height flint walls

Pitched roof with grey clay tiles

Hipped roof

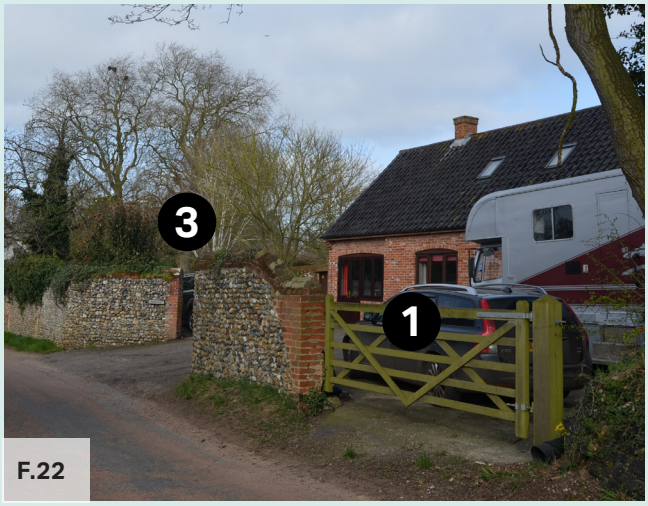
Soft landscape (trees, bushes, flowers)

Built form

B.8 Car parking

Car parking has to be carefully integrated into the rural character of the village.

- Car parking design should be combined with landscaping to minimise the presence of vehicles. Parking areas and driveways should be designed to minimise impervious surfaces, for example through the use of permeable paving.
- When placing parking at the front, the area should be designed to minimise visual impact and to blend with the existing streetscape and materials. The aim is to keep a sense of enclosure and to break the potential of a continuous area of car parking in front of the dwellings by means of hedging, planting, and use of differentiated quality paving materials.
- On-plot parking can be visually attractive when it is combined with high quality and well designed soft landscaping. This can be achieved by using elements such as hedges, trees, flower beds, low walls, and high quality paving materials between the private and public space.
- Hard standing and driveways must be constructed from porous materials to minimise surface water run-off.
- Where provided, garages must be designed either as free standing structures or as additive form to the main building. In both situations, it must complement and harmonise with the architectural style of the main building rather than forming a mismatched unit.



1. Front parking with part of the surface reserved for soft landscaping.
2. On-plot garage set back from the main building line.
3. Boundary hedges to screen vehicles and parking spaces.

Figure 22: Local example of on-plot front parking typology.
Figure 23: Local example of on-plot garage parking typology.

C. Environment and energy efficiency

This section elaborates on energy efficient technologies that could be incorporated in buildings.

C.1 Sustainable design

Starting from the design stage, there are strategies that can be incorporated to include technologies such as passive solar heating, cooling and energy efficient landscaping which are determined by local climate and site conditions. Figure 24 features an array of sustainable design features. Those on the left show the features that should be strongly encouraged in existing homes, while those on the right show additional features that new build homes should be encouraged to incorporate from the onset.

Drainage
Sustainable drainage solutions would be useful to resolve any flooding issues in the parish.

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

- Infiltration, which allows water to percolate into the ground and eventually restore groundwater.
- Attenuation and controlled release, which holds back the water and slowly releases it into the sewer network. Although the overall volume entering the sewer system is the same, the peak flow is reduced. This reduces the risk of sewers overflowing.

- Manage surface water as close to where it originates as possible.
- Reduce runoff rates by facilitating infiltration into the ground or by providing attenuation that stores water to help slow its flow down so that it does not overwhelm water courses or the sewer network.
- Integrate into development and improve amenity through early consideration in the development process and good design practices.

Permeable paving

Most built-up areas, including roads and driveways, increase impervious surfaces and reduce the capacity of the ground to absorb runoff water. This in turn increases the risks of surface water flooding.

Permeable paving offers a solution to maintain soil permeability while performing the function of conventional paving.

- Permeable paving can be used, where appropriate, on footpaths, green spaces, private access roads, driveways, and private areas within the individual development boundaries.
- The choice of permeable paving units must be made depending on the local context; the units may take the form of unbound gravel, clay pavers, or stone setts.
- Integrate into development and improve amenity through early consideration in the development process and good design practices.

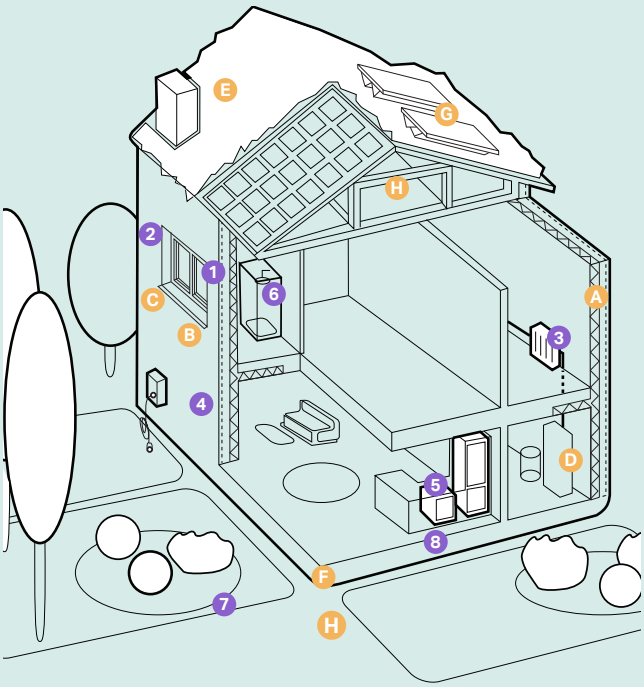
Storage and slow release

Rainwater harvesting refers to the systems allowing the capture and storage of rainwater as well as those enabling the reuse in-site of grey water. Simple storage solutions, such as water butts, can help provide significant attenuation.

If water is not reused, a slow release valve allows water from the storage to trickle out, recreating capacity for future rainfall events.

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

Environmental and energy efficiency



F.24

Existing homes

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

Additional features for new build homes

A. **High levels of airtightness**

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

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

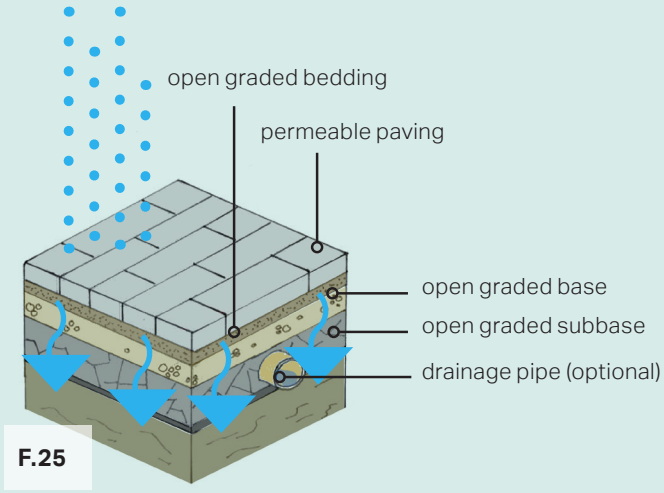
D. **More fresh air** with mechanical ventilation and heat recovery, and passive cooling

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

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

G. **Solar panels**

H. **Permeable paving**



F.25

F.26

F.27

Figure 24: Diagram illustrating some design principles for sustainable design.
Figure 25: Diagram illustrating the functioning of a soak away.
Figure 26: Permeable paving.
Figure 27: Example of unobtrusive water butts used for rainwater harvesting.

Environmental and energy efficiency

C.2 Renewable/low carbon energy

The use of renewable/low carbon energy solutions such as air and ground source heat pumps and solar panels are strongly encouraged.

The design and installation of solar panels should be done carefully considering potential implications within conservation areas. Preserving the character of the parish should be a priority.

On new builds:

- Design solar panel features from the start, forming part of the design concept. Some attractive options are solar shingles and photovoltaic slates.
- Use the solar panels as a material in their own right.

On retrofits:

- Analyse the proportions of the building and roof surface in order to identify the best location and sizing of panels.
- Consider introducing other tile or slate colours to create a composition with the solar panel materials.
- Conversely, aim to introduce contrast and boldness with proportion. There has been increased interest in black panels due to their more attractive appearance. Black solar panels with black mounting systems and frames can be an appealing alternative to blue panels.
- Carefully consider the location of solar panels on buildings within the conservation area. It might be appropriate to introduce solar panels to areas of the building that are more concealed in order to preserve the character and appearance of the conservation area.
- Solar panels can be added to listed buildings, but they need to be carefully sited and consent will be required.

Figure 28: Use of shingle-like solar panels on a slate roof, with the design and colour of the solar panels matching those of the adjacent slate tiles.

Figure 29: Integration of solar panels on the south-facing pane of the roof of a new house.

Environmental and energy efficiency

C.3 Wildlife friendly environment

Biodiversity and woodlands should be protected and enhanced where possible.

- Hedges, trees, road verges along roads as well as natural tree buffers should be protected when planning for new developments.
- Abrupt edges to development with little vegetation or landscape on the edge of the settlement should be avoided and, instead, a comprehensive landscape buffering should be encouraged.
- New developments and building extensions should aim to strengthen biodiversity and the natural environment.
- Ensure habitats are buffered. Widths of buffer zones should be wide enough and based on specific ecological function.
- New development proposals should include the creation of new habitats and wildlife corridors. This could be by aligning back and front gardens or installing bird boxes or bricks in walls. Wildlife corridors should be included to enable wildlife to travel to and from foraging areas and their dwelling areas.

Figure 30: Example of a bughouse located in an outdoor playground facility.
Figure 31: Example of a structure used as a frog habitat corridor located in an outdoor green space.

Environmental and energy efficiency

C.4 Servicing

With modern requirements for waste separation and recycling, the number and size of household bins has increased. This poses a problem with the aesthetics of the property.

- When dealing with waste storage, servicing arrangements and site conditions should be taken into account; in some cases waste management should be from the front of the building and in others, from the rear. It is recommended that bins are located away from areas used as amenity space.
- Create a specific enclosure of sufficient size for all the necessary bins.
- Bins should be placed as close to the dwelling's boundary and the public highway, such as against wall, fence or hedge.
- Refer to the materials palette to analyse what would be a complementary material.
- Add to the environmentally sustainable design by incorporating a green roof element to it.

Figure 32: Example showing an option for hiding oil tanks used for heating.

Checklist

04

4. Checklist

Because the design guidelines and codes above cannot cover all design eventualities, this section provides a number of questions based on established good practice against which the design proposal should be evaluated. The aim is to assess all proposals by objectively answering the questions below.

Those questions are organised in topics:

Green spaces, views and character
- 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?
- Has the impact on the landscape quality of the area been taken into account?

Buildings layout and grouping
- What are the typical groupings of buildings?
- Does the proposed development offer variety and texture to the townscape?
- 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?

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?

Building heights and roofline
- Have the proposals paid careful attention to height, form, massing, and scale?
- If a higher than average building is proposed, what would be the reason for making the development higher?
- 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?

Household extensions
- Does the proposed design respect the character of the area and the immediate neighbourhood, or does it have an adverse impact on neighbouring properties in relation to privacy, overbearing, or overshadowing impact?
- In case of side extension, does it retain important gaps within the street scene and avoid a 'terracing effect'?
- 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?

Building materials and surface treatment
- Does the proposed material harmonise with the local materials?
- Have the details of the windows, doors, eaves, and roof been addressed in the context of the overall design?
- Do the new proposed materials respect or enhance the existing area or adversely change its character?
- 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?

Architectural details and contemporary design
- If the proposal is within the conservation area, how are the characteristics reflected in the design?
- Does the proposal harmonise with the adjacent properties following the height, massing, and general proportions of adjacent buildings?
- Does the proposal maintain or enhance the existing landscape features?
- Is it possible to incorporate passive environmental design features such as larger roof overhangs,

Delivery

05

5. Delivery

The Design Guidelines and Codes will be a valuable tool in securing context-driven, high quality development in the parish of Starston.

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

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