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# Rickman’s Green Village Phase 1

Design and Access Statement

Revision P03
07 November 2022

## Notes

The designs shown within this report are sketch only and subject to design development. Unless stated otherwise, the designs shown are subject to detailed site survey, investigations, and legal definition, the CDM Regulations, and the comments and/or approval of the various relevant Local Authority Officers, Statutory Undertakers, Fire Officers, Engineers and the like. They are copyright, project specific and confidential and no part is to be used or copied in any way without the express prior consent of HLM Architects.

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**Rickman's Green Village Phase 1**
RIBA Workstages 2 - Design & Access Statement

**Document Revision:** P03

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**On behalf of Artemis Land and Agriculture Ltd**

**Signed:** via email

**Print name:** Amy Paterson

**Position:** Principal Planner, DLBP

**Date:** 07.11.2022

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## Contents

A summary of the project and its context within the larger Crouchlands Farm landholding.

# 00 Introduction

# Executive Summary

HLM Architects was appointed by Artemis Land and Agriculture in 2021 to develop a detailed planning application for Phase 1 of Rickman's Green Village.

Rickman's Green Village will constitute a new village of a high-quality, well-planned, sustainable form of development. The development will provide up to 600 homes (including 30% affordable homes) to the east and west of Rickman's Lane, focused around a new village hub, including the opportunity for education provision.

The full planning application for Phase 1 is for the erection of 108 dwellings (Use Class C3), and associated access and street network, footpaths, open spaces, plant, landscaping and site infrastructure.

Rickman's Green Village will be of the highest quality design that respects and enhances the existing character of the surrounding area. The proposal makes use of the existing agricultural field pattern to ensure the rural character of the site is maintained, as well as protecting existing woodland and hedgerows.

A linear green corridor through the centre of the development will join Phase 1 with the other areas of housing (subject to a separate outline application), along with play and public open spaces, and commercial elements. The areas of housing will also be connected by secondary recreation routes positioned throughout the site, linking to destinations to the east and west and the surrounding area.

The proposal will also retain all existing woodland and incorporates enhanced green buffers to screen the proposal from external viewpoints, and maintain the rural character of the settlement.

The new homes have been designed with an agricultural feel, taking cues from properties in the nearby villages. The farmhouse, barn and farm workers' terrace house types proposed are distinctly rural in their character and appearance.

# Location

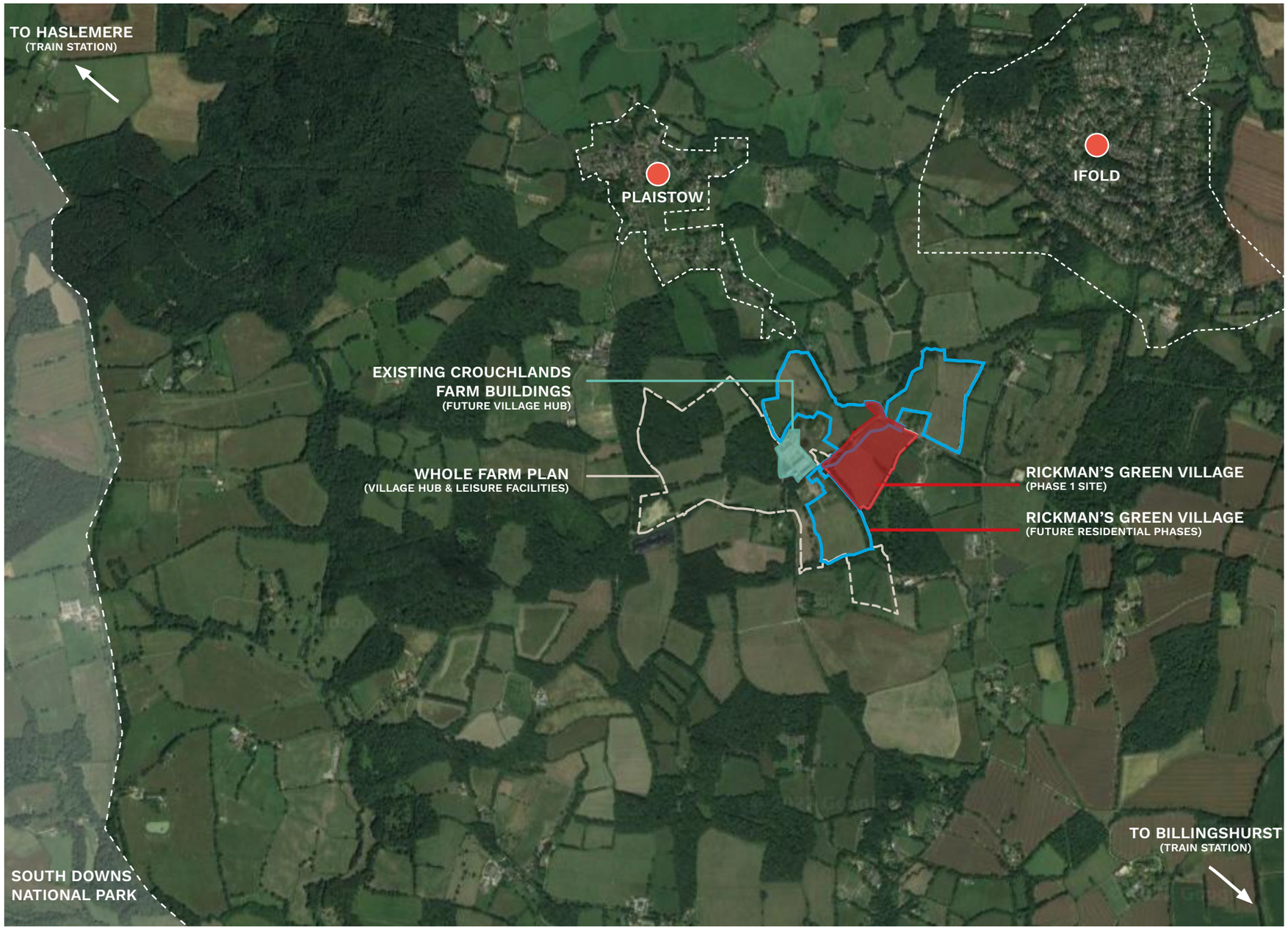
Crouchlands Farm is located to the north of Chichester District and is approximately 194 hectares in size. The farm comprises agricultural buildings with associated hard standing, open fields in agricultural use as improved pasture fields (grazed and / or used for silage production), and areas of woodland.

Proposals for Rickman's Green Village are prepared as two separate planning applications:

- a full planning application for 108 homes (as Phase 1 of the masterplan); and
- an outline planning application for up to 492 homes with education provision.

The homes and potential school land comprising Rickman's Green Village will be situated on just 8% of Crouchlands Farm.

The Village will also benefit from a ready-made village hub in the centre of the Farm ('Whole Farm Plan'), providing employment, retail, leisure and education opportunities and facilities which will support the housing and local rural economy.




**Site Context**
Satellite View


LEGEND

- Residential application boundary (33.6 Ha)
- Wider land ownership boundary
- Whole Farm Plan boundary
- Development area (Phase 1)
- Development area (Phase 2)
- Primary access point
- Secondary access point
- Public open space
- Sports provision
- Potential location of Primary School, Special Educational Needs (SEN) & Early Years (EY) provision
- Public Right of Way
- Contour lines (1 metre)
- Existing buildings
- Play area (LEAP/LAP)
- Potential location for surface water attenuation
- Existing underground power cable easement
- Access to existing underground power cable for maintenance purposes
- Primary street (indicative route)
- Secondary street (indicative route)
- Ecotone boundary (bat protection corridor)
- 10m offset to ecotone boundary (gardens/ curtilage to dwellings. No new homes in this zone)
- Ancient Woodland
- Existing vegetation

REFERENCES

1. Potential location of primary Site access from Rickman's Lane serving both the development areas at Streeter's Farm to the north and Crouchland's Farm
2. Potential location of secondary access point to the wider masterplan
3. Area of open space accommodating existing retained trees and hedgerows within broad green corridors
4. Potential location for a 2 Form Entry (2FE) primary school with provision for Special Education Needs (SEN) and an Early Years Centre
5. Alignment of Public Right of Way (PRoW) retained between development parcels
6. Potential link through to the PRoW to the north of the Site
7. Potential location of community uses / play

**Residential land parcels (indicative):**

| Ref | Area |
|---|---|
| R1 | 0.45 |
| R2 | 1.15 |
| R3 | 2.00 |
| R4 | 1.75 |
| R5 | 1.20 |
| R6 | 2.40 |
| R7 | 1.20 |
| R8 | 1.55 |
| R9 | 1.05 |
| R10 | 0.75 |
| Net Developable Area (NDA) | **13.50 Ha** |

**Total dwellings:**

Up to 520 at an indicative average density of 39 dwellings-per-hectare based upon the above total NDA figure

**Non Residential Uses**

Education Use - 2.47 hectare land parcel
- 2.40 Ha for 2-Form Entry Primary School (2FE)
- 0.07 Ha for Special Educational Needs (SEN) and Early Years (EY) centre provision

0 100m

ARTEMIS

Royal HaskoningDHV
Enhancing Society Together

DLBP

Carter Jonas

PROJECT TITLE

ARTEMIS LAND AND AGRICULTURE
RICKMANS GREEN VILLAGE

DRAWING TITLE

FRAMEWORK MASTERPLAN & WHOLE FARM PLAN (OPTION A - WITH SCHOOL)

| | | | |
|---|---|---|---|
| **ISSUED BY** | London | T: 020 7016 0720 | |
| **DATE** | 25.10.22 | **DRAWN** | MH |
| **SCALE@A1** | 1:2,500 | **CHECKED** | JC |
| **STATUS** | Planning | **APPROVED** | JC |

DWG. NO. J0040996_022_V10

No dimensions are to be scaled from this drawing.
All dimensions are to be checked on site.
Area measurements for indicative purposes only.



Source: Ordnance Survey

**Outline Planning Application**
**Framework Masterplan (Option A)**
Carter Jonas

This chapter outlines the methodology and structure of this document, whilst also situating it within the socio-economic and political context of the district.

# 01 Background

## Purpose

The document has been created to explain the design principles and concepts behind the full planning application for Phase 1 Rickman's Green Village, and how the proposals respond to considerations around access and development.

## Document Structure

The document has been presented in 3 parts, as follows:

**Character**

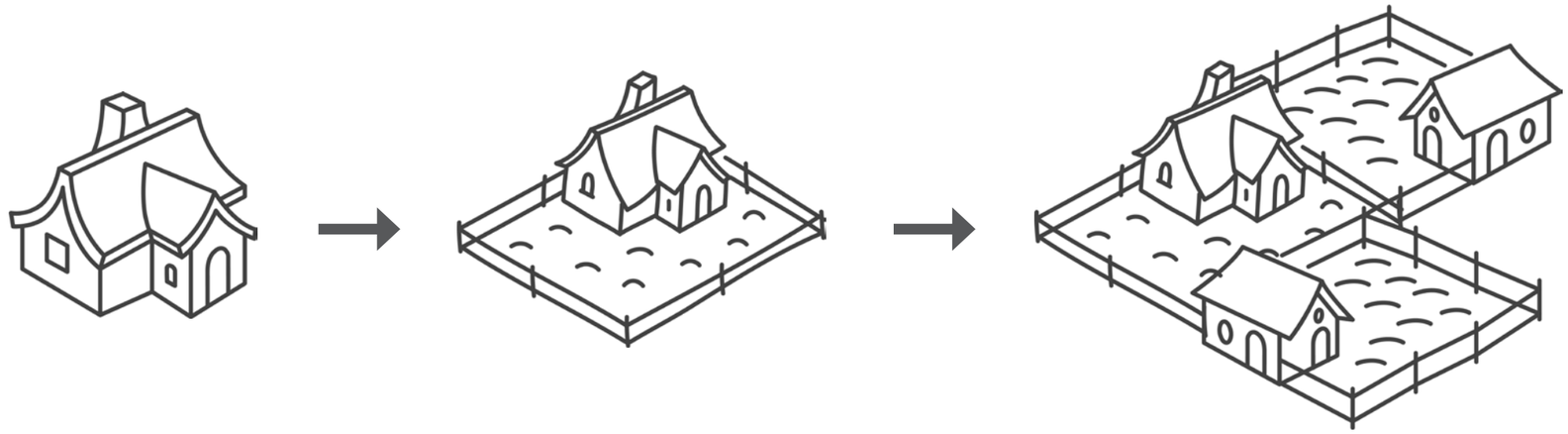
Local and landscape character is identified through local analysis of both architecture and landscape. The chapter then details the design steps taken to produce both the housing types and landscape aspects of Phase 1 of Rickman's Green Village, which create this desired character.

**Site Application**

This identifies a site access strategy which determines the application of the character concepts on site in response to constraints and characteristics identified. It also provides design evolution studies for the site layout plan, which demonstrate an enhanced perception of character through the interaction of houses and landscaping.

**Proposal**

The culmination of all previous work presented as a final design proposal. This includes a finalised movement and access strategy.



(A) CHARACTER (B) APPLICATION (C) PROPOSAL

### Current Housing Need & the Council's Five Year Housing Land Supply

All recent appeal decisions that have considered five year housing land supply in Chichester District since November 2021 have concluded that the Council cannot demonstrate a five year housing land supply. Rickman's Green Village can therefore contribute to addressing this current shortfall.

### Future Housing Need

Chichester District Council has an agreed total housing need of over 12,000 dwellings until 2035 (the Local Plan period). Progress on the Council's emerging Local Plan has been hampered by infrastructure constraints in the south of the district, so the Council is now considering whether its housing needs could be accommodated in the north of the district.

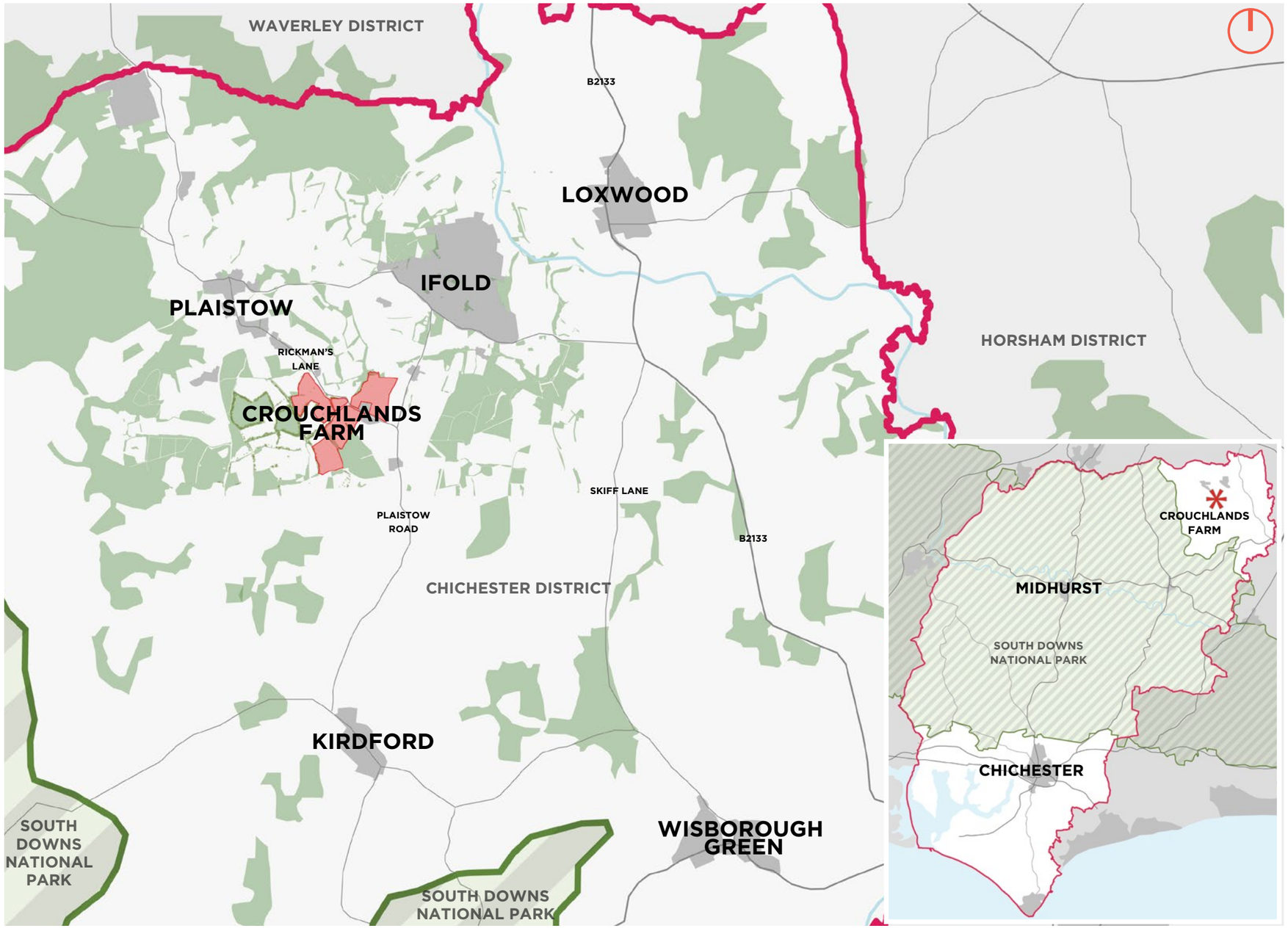
Crouchlands Farm has been identified within the Chichester District Council's Housing and Economic Land Availability Assessment ("HELAA") as being suitable for the delivery of up to 600 dwellings (as well as commercial and tourism uses). Up to 180 will be sold or rented at lower than market value for young local people, professionals and key workers, helping them to get on to the housing ladder.

Rickman's Green Village will therefore help the Council bridge the gap between current provision and clearly identified housing need.

## Key

- **Wider Masterplan Site** Up to 600 homes
- **Chichester District Boundary**
- **Existing settlements**
- **Primary road network**
- **Rivers**
- **South Downs National Park**
- **Existing areas of woodland**

**Crouchlands Farm position within the District**
Diagram by Carter Jonas



There are a good range of facilities in the villages surrounding Crouchlands Farm, some within a 20 minute walk.

The village of Plaistow is located within a 20 minute walk and a 5 minute cycle northwest of the site. Within the village, facilities include: Plaistow and Kirdford Primary School, Plaistow Post Office & Stores, Plaistow playground and The Sun Inn public house.

The village of Ifold is located within a 30 minute walk and a 8 minute cycle north-east of the site. Within the village, facilities include: Kelsey Hall, Little Acorns Preschool, Ifold Stores and Craig's Coffee Cup Cafe.

The village of Loxwood is located within a 15 minute cycle north-east of the site. Within the village, facilities include: Loxwood Post Office, Loxwood Medical Centre, Loxwood Primary School, North Hall, John Murray Butcher, The Onslow Arms public house and Loxwood Recreation Ground.

The facilities within Plaistow and Ifold lie within a 1.5 km radius of the Site, and include foodstores, post office, village hall, playground and a primary school. Loxwood lies within a 3 km radius of the Site and includes a GP surgery and recreation ground.

The Site is therefore well served by facilities typically used on a day-to-day or weekly basis by future residents.

## Key

**Land in client's ownership**

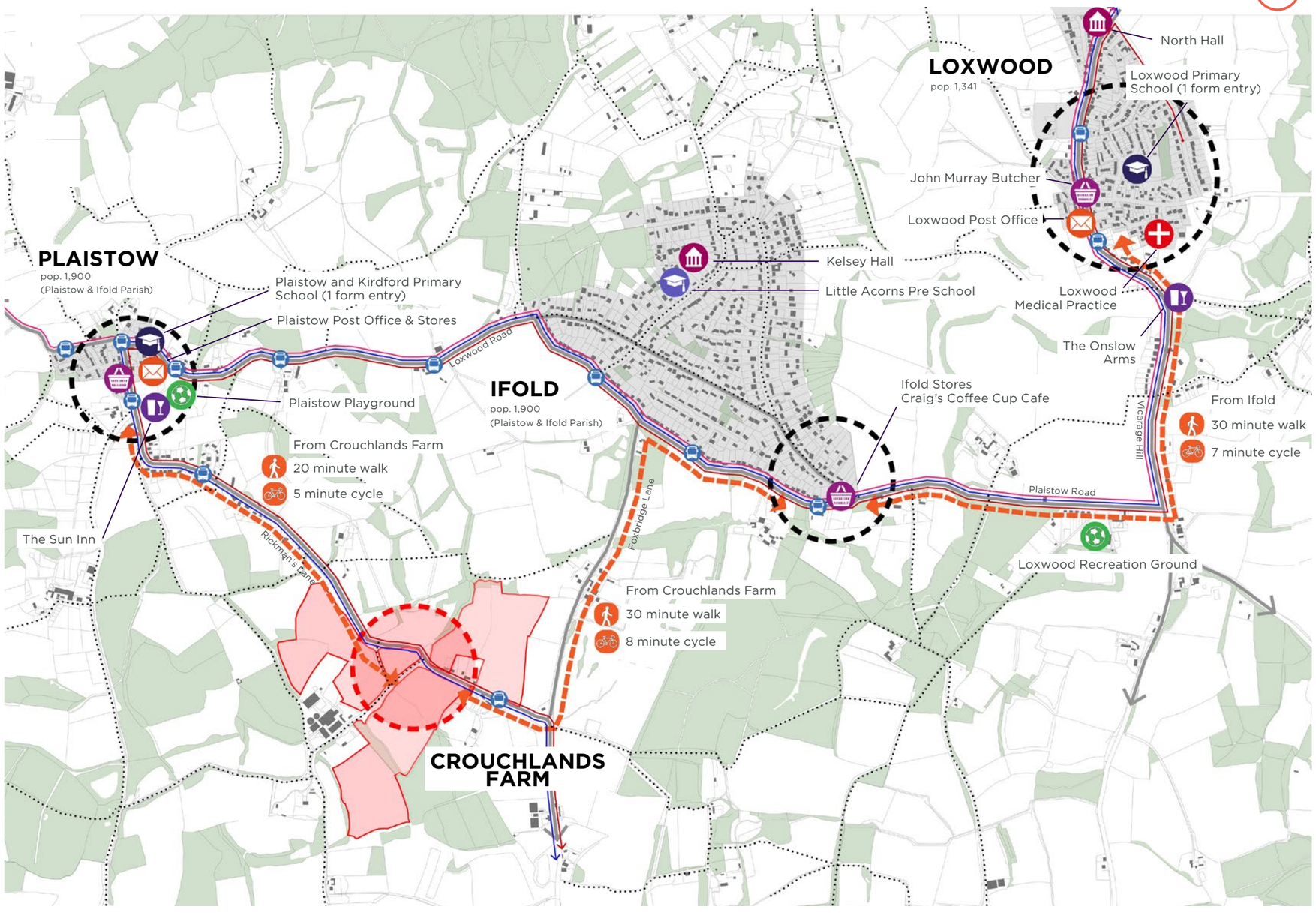
**Public Rights of Way**

**Main routes between settlements**

**Bus routes:**
- 64: Loxwood - Horsham
- 69: Alford - Worthing
- 42: Cranleigh - Guildford

**Facilities:**
- Community Hall
- Primary School
- Local shop
- Post Office
- Medical centre
- Recreation ground
- Pub
- Pre-school

**Crouchlands Farm context**
Diagram by Carter Jonas



**The Development Plan relevant to the planning application consists of the:**

- Chichester Local Plan (2015);
- West Sussex Waste Local Plan (2014); and
- West Sussex and South Downs Joint Minerals Plan (2018).

**The Local Plan policies relevant to the proposal are considered to be:**

- Policy 1: Presumption in Favour of Sustainable Development;
- Policy 2: Development Strategy and Settlement Hierarchy;
- Policy 3: The Economy and Employment Provision;
- Policy 4: Housing Provision;
- Policy 8: Transport and Accessibility;
- Policy 25: Development in the North of the Plan Area;
- Policy 33: New Residential Development;
- Policy 34: Affordable Housing;
- Policy 39: Transport, Accessibility and Parking;
- Policy 40: Sustainable Design and Construction;
- Policy 42: Flood Risk and Management;
- Policy 45: Development in the Countryside;
- Policy 47: Heritage and Design;
- Policy 48: Natural Environment;
- Policy 49: Biodiversity;
- Policy 52: Green Infrastructure; and
- Policy 54: Open Space, Sport and Recreation.

**Policy M9 of the West Sussex and South Downs Joint Minerals Plan is also relevant to the proposal.**

### Material consideration - National Planning Policy Framework

The National Planning Policy Framework (2021) ("the Framework") is a material consideration of significant weight.

### Material consideration - Interim Position Statement

The Council introduced an Interim Position Statement for Housing Development in November 2020. The Statement is not part of the development plan, and carries very limited weight. A legal opinion by Jenny Wigley QC at Landmark Chambers regarding the Interim Position Statement supported a recent appeal at Earnley Concourse (APP/L3815/W/20/3255383, 30 May 2022). The conclusion of this is that the document carries very limited weight, and that:

*...the IPS has no status other than being a document drawing together some potentially relevant development plan policy criteria. To the extent it were relied on as introducing new development management criteria, it would be unlawful and liable to be quashed for the reasons set out above. Given its lack of status, it cannot and does not alter the exercise that has to be carried out in terms of assessing the weight to be accorded to development plan policies. Any conflict with its criteria cannot by itself elevate any adverse effect to being one which significantly and demonstrably outweighs the benefits of the proposal.*

The legal opinion has not been challenged by the Council.

An Inspector concluded in appeal decision APP/L3815/W/20/3255383, 30 May 2022 that the Interim Position Statement is (our emphasis added):

*At best, a material consideration of very limited weight meaning that any conflict also carries very limited weight.*

Similarly, an Inspector concluded in appeal decision APP/L3815/W/22/3291160, 19 August 2022 that:

*I have given it [the Interim Position Statement] limited weight in terms of any new policy that it introduces, as relevant regulations and procedures relating to new policy formulation were not followed.*

Any conflict with the Interim Position Statement therefore carries very limited weight. Any conflict with the criteria would not result in planning permission being refused, as there are numerous and compelling public benefits which outweigh this conflict.

Regardless of this, the application is supported by an Interim Position Statement Briefing, which is a validation requirement of the Council, and this sets out how the proposal complies with the criteria.

### Material consideration - Emerging Local Plan

Chichester District Council is currently undertaking a Local Plan Review which will shape where new development will go in the Chichester District up to 2035. The Preferred Approach version of the plan was published in December 2018 and consulted on between 13 December 2018 and 7 February 2019. It is understood that the updated Local Plan Review will be published in winter 2022, with adoption to follow in 2023. The emerging Local Plan weight can therefore be afforded limited weight, but it is still a material consideration.

The potential for developable Housing and Economic Land Availability Assessment sites, including land at Crouchlands Farm, to deliver housing is being considered as part of this process and as part of the Sustainability Appraisal of reasonable alternatives. The applicant, Artemis Land and Agriculture Ltd, has presented details of Rickman's Green Village to the Council's Planning Policy Officers with the view to include the site as an allocated site within the emerging Local Plan.

To assist the Council in allocating Rickman's Green Village within its emerging Local Plan, indicative wording for a new policy is proposed as follows:

*Crouchlands Farm, as shown on the Policies Map, is allocated for a high-quality, well-planned and sustainable new rural settlement.*

*The Crouchlands Farm Whole Farm Plan - a mix of employment, retail, leisure and education uses - will form a ready-made centre of a traditional rural village. Up to 600 homes (including 30% affordable homes) will also be provided alongside this village centre, to facilitate a selfcontainment while providing a reason for people who do not live there to come there. The layout will maximise opportunities for sustainable travel to and within the new village, all in a landscaped setting.*

*Development proposals shall include:*

*Amount and type of development:*

- *up to 3,760 sq m of employment floorspace, including office and research and development accommodation;*
- *up to 1,720 sq m of retail floorspace;*
- *up to 7,745 sq m of leisure floorspace and visitor accommodation;*
- a new primary school;
- a new country park; and
- up to 600 new homes (including 30% affordable homes) of a village-street type, ie. adjoining each other, some set close to the road, others set back, the odd detached house in its own plot as an exception, of mixed size and tenure to include affordable housing.

Site masterplanning principles:

- a main vehicular access to the site from Rickman's Lane;
- well-connected internal road layouts comprising a network of village streets, lanes, paths and courts, which deliver areas of distinct character and allow good accessibility for pedestrian, cycle and bridleway connections within the site and to the wider area;
- a landscape-led masterplan where new trees, hedges and fields form the backbone and backdrop to the buildings, while feeding into a network of green infrastructure to mitigate the visual, biodiversity and heritage impacts of the development;
- housing of two storeys in height, with some two-and-a-half (two plus dormer);
- every house to have a garden, some larger, some smaller, to suit different needs and desires;
- utilisation of renewable, low carbon and decentralised energy schemes;
- utilisation of modular or other modern methods of construction;
- suitable SuDs and flood risk management;
- appropriate habitat mitigation and creation; and
- the integration of existing historic and landscape features into the development.

### Other

Crouchlands Farm, as a whole, spans across Kirdford Parish and Plaistow and Ifold Parish, but the application boundary for Rickman's Green Village falls solely within the Parish of Plaistow and Ifold. The Plaistow and Ifold Neighbourhood Plan has been withdrawn.

**Public Consultation**

At the core of the applicant's values and standards is a belief that any development plans at the Site must be subject to public consultation.

As such, the following consultation activity has been undertaken with regards to Rickman's Green Village:

- Notification letters to West Sussex County Council councillors, Chichester District Council councillors, local ward councillors;
- Two public consultation events with local residents at Crouchlands Farm on 12 July, and 4 October 2022;
- An informative Rickman's Green Village website which was first launched on 12 July and updated with new information prior to both consultation events; and
- A presentation to Plaistow and Ifold Parish Council and residents on 13 July.

The applicant also sought advice through pre-application discussions with West Sussex County Council regarding highways and education, through discussions with senior members of the Chichester District Council Planning Policy Team, an Environmental Impact Assessment Scoping Request (ref 22/01754/EIA) and pre-application discussion with Chichester District Council (ref 22/01224/PRELM).

In addition to this, there has been extensive public consultation undertaken with regards to the Whole Farm Plan (application ref 22/01735/FULEIA), and further details of this can be found in the Statement of Community Involvement for that application. As a result of extensive public consultation, the masterplan has evolved throughout this process, responding to both local residents feedback and feedback provided from District Council councillors and local ward councillors.


1.


2.


3.

**1. Second public consultation (October 2022)**

**2. Second public consultation (October 2022)**

**3. First public consultation (July 2022)**

# (A) CHARACTER

Through both historic and architectural analysis of the immediate and then wider context, a distinct landscape and architectural style is determined combining both agricultural and village characteristics.

# 02 Local Context - Architecture

# Existing Site Plan & Character


**Existing Plan**
Context Diagram

## Typologies

The site sits in close proximity to Plaistow and Ifold villages as well as being part of Crouchlands Farm. Rickman's Green Village should therefore seek to respond to the rural village character of the surrounding area, but also take cues from the agricultural vernacular of its setting within the farm.

### Residential

The immediate local context represents a low density approach to housing, as it lies within a transitional area between the village centre and open farmland.

### Farm

The farm traditionally has a centre, consisting of various agricultural buildings such as barns, stables and stores. The centre is densely populated, but is surrounded by open fields.

### Neighbouring Residences

Streeters Cottage

Redlands Farm Site

Rickman's Lane

Streeters Farmhouse

### Agricultural Centre

Crouchlands - Barn

Crouchlands - Shelter and Barn

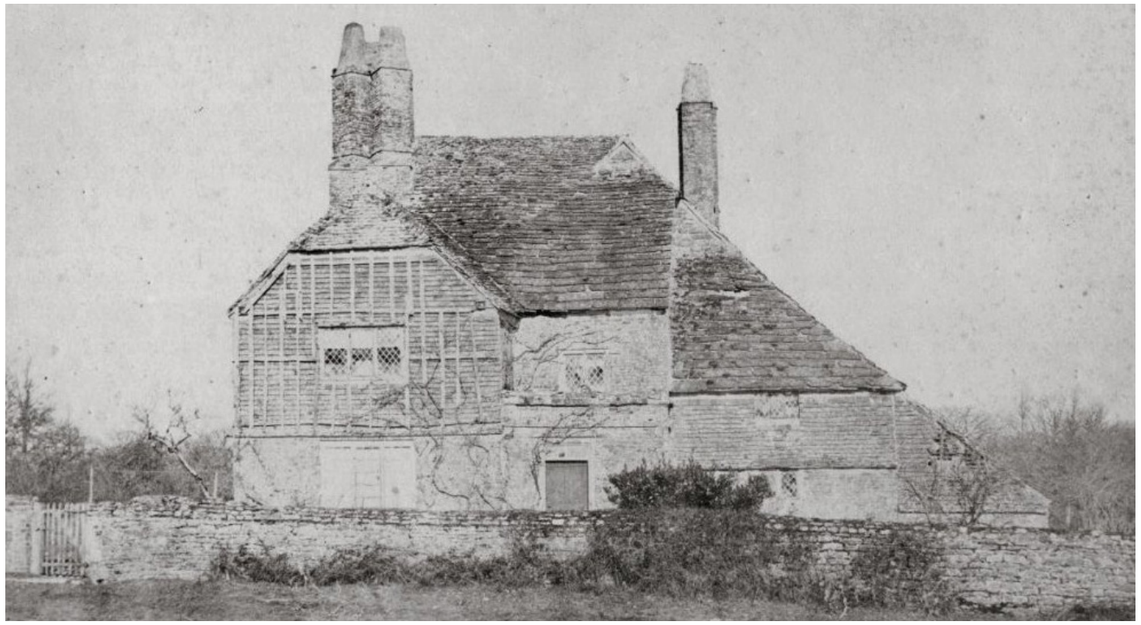
## Heritage

Crouchland was the historic family seat of the Strudwick family from the early 16th century until the late 18th century, as part of their vast 1750 acre land holdings - the largest agricultural family land ownership in England at the time.

Henry Strudwick built the family home in 1652, which is now Grade II listed and lies west of the Rickman's Green Village site. The family and the estate provided much of the timber used for shipbuilding for the British Navy throughout the same period. As industry shifted during the industrial revolution, timber merchants became involved in the glass industry by ways of fuel. This family followed similar patterns and have close links to glass making.

Both timber and glass are at the heart of the history of Crouchlands Farm and could become part of the architectural palette of Rickman's Green Village.

**Grade II Listed Crouchland House**



**c. 1880**
Trevor Strudwick

**2003**
Historic England

# Surrounding Villages

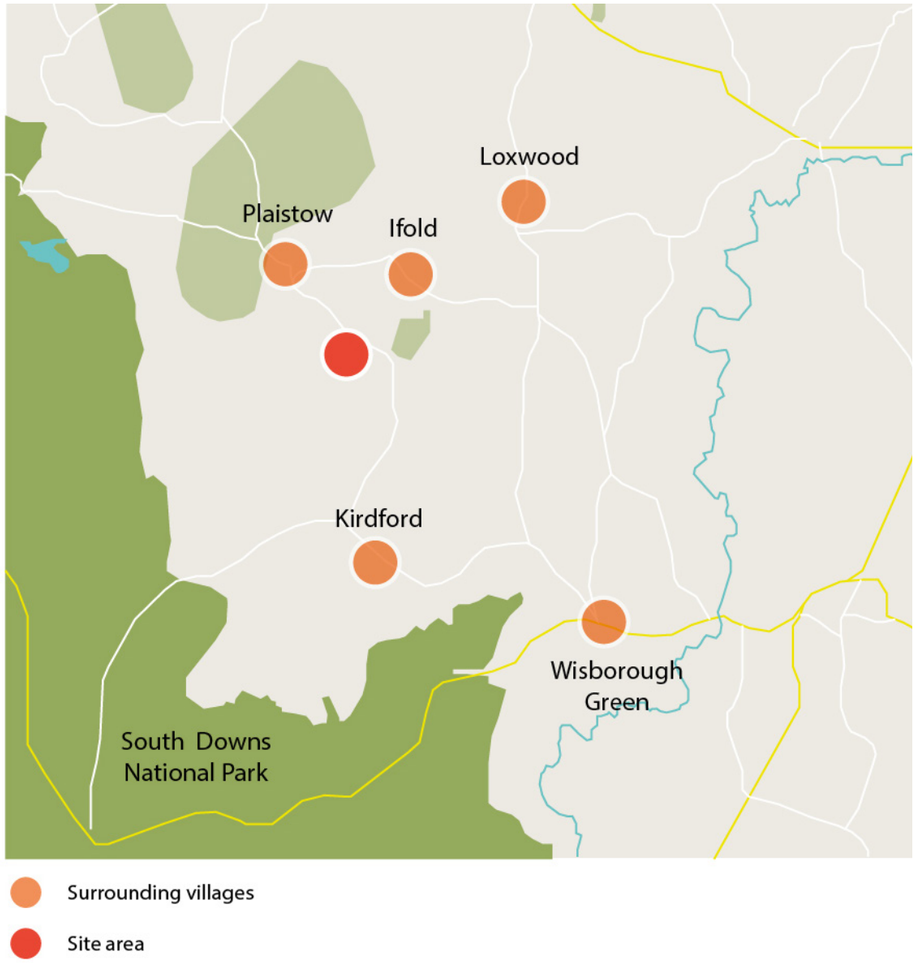
## Village Characteristics

There are many more villages and hamlets in close proximity to the site. Some of these villages have recently been expanded which helps to generate an understanding of the characteristics which sustain a successful village.

The adjacent diagrams demonstrate the basic structure of these villages and hamlets, showcasing the composition of built form, green spaces and road networks across the settlement.

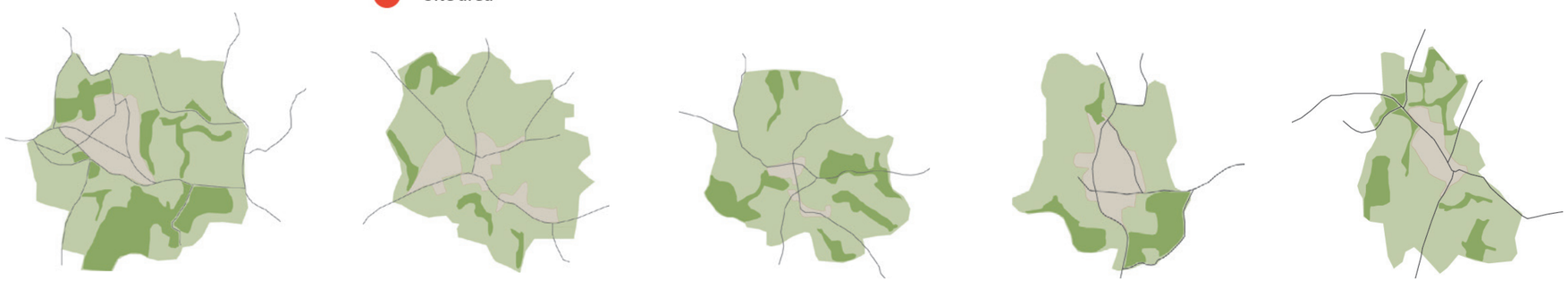
**Headline findings**

- Most homes in these villages are generously sized, mostly detached or semi-detached with two storeys.
- Many homes in the villages are a mix between historic and new build. With the newly built homes taking architectural inspiration from the historic vernacular found in the village.
- All villages and hamlets are surrounded by various green space including fields, farmland and woods.
- Main vehicular trajectories typically link the village from north to south and east to west with the local centre being located at the convergence of routes.
- Larger amenity spaces such as parks are typically located within the residential areas of the settlement although many are closely related to the peripheries of the local centre.




Key

- Built form
- Green space
- Road network



## Character Overview

This page summaries the key architectural findings when analysing the character of the surrounding villages and hamlets. It is key to understand the local vernacular so that the proposal compliments the surrounding characteristics.

### Roof-scape

Gable and hip roofs are commonly used with the addition of dormer roofs in key areas along the roof-scape. The gable roof have a rather steep roof pitch.

### Height

There are a mix of one and two storey dwellings. However, the vast majority are two storeys.

### Fenestration

Bay windows are commonly seen throughout the area. When there is a dormer roof a small window is usually paired with it. Windows are typically made up of several windowpanes.

### Architectural details

Many dwellings feature chimneys alongside a decorative entrance/ porch. Decorative strips of brick or tile are commonly seen between and around windows.

### Material palette

Red brick and brown bricks, buff stone, vertical tiles and dark weatherboard make up the typical material palette of the surrounding areas.

### Roof-scape

Ifold

Plaistow

### Fenestration

Kirdford

Plaistow

### Details

Ifold


Wisborough Green

### Material palette

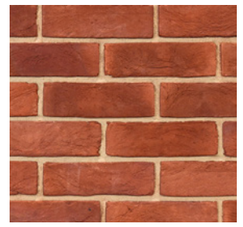
Plaistow

Loxwood

### Material palette

Buff Brick (stone originally)

Dark / Light Weatherboard



Red Brick

Grey Slate

Clay Tile

# Surrounding Villages

## Building Typologies

The local area has a distinct architectural character, which can be separated into the following categories.

**Farmhouse**

Low density dwelling, found on the periphery of the village - surrounded by land.

**Cottage**

Plaistow village character introduces a further housing typology. These are smaller dwellings, usually found in a terrace.

**Agriculture**

Collection of buildings, arranged in an informal pattern. Main feature is the barn - a large, simple building volume with asymmetric openings.


**Plaistow Village**
Typology analysis

# Surrounding Villages

## Streetscape Character

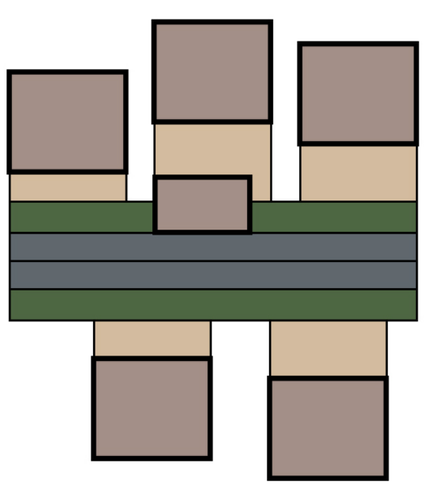
Understanding the existing street typologies to help define principles for the creation of new streets at Crouchlands Farm.

These diagrams analyse the relationships between the building and roads in the surrounding villages.

## Conclusions:

- Buildings are not aligned to the street
- Most dwellings have generous front gardens
- Pavements are not always used, green verges are often used instead
- Wider roads for primary streets, narrower roads for secondary streets
- Generous green verges separating the buildings from the road

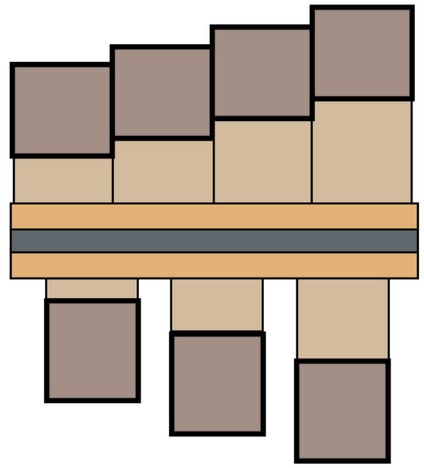
### Primary



Plaistow


Plaistow

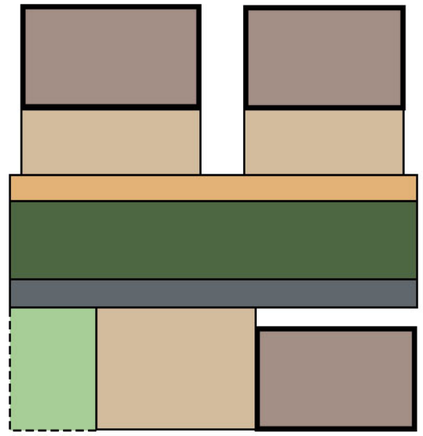
### Secondary



Wisborough Green

Wisborough Green

### Secondary



Loxwood


Loxwood

## Key

- Building
- Front / back garden
- Green space
- Green verge
- Road
- Pavement

## Plaistow and Ifold Village Design Statement (August 2020)

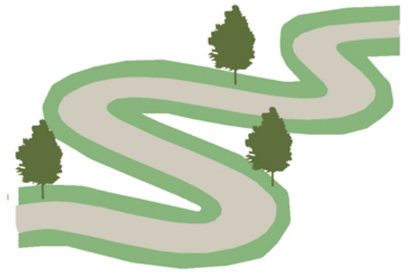
Although not an adopted policy document, the Plaistow and Ifold Village Design Statement has been used as guidance for the design of Rickman's Green Village. Phase 1

The Design Statement sets out the importance of understanding the existing settlement pattern, architectural styles and landscape environmental character of the area. This document illustrates methods of applying these design principles in the design of new developments within the village in order to preserve its unique identity.

Some of the key themes of the Plaistow and Ifold Village Design Statement include:

- Understanding village character areas
- Important strategic views
- Respecting existing mature trees and vegetation
- Importance of generous green space that contributes towards the rural and tranquil characteristics of the area
- High quality new developments
- Boundary treatments between properties and roads
- Landscape and street design
- Typically appropriate design approaches for the village
- Carefully considered parking requirements.

Whilst the application site and the wider Crouchlands Farm landholding fall outside the area that this document influences, it nevertheless provides a useful reference point for understanding the aspirations in the nearby settlements and is therefore useful for shaping the development at Rickman's Green Village.



**Green verges**

Green verges should be used to separate buildings from the road. Formal pavements should only be used where absolutely necessary for safety or access. Boundaries should also feature softened vegetation fronts.

**Scale**

Dwellings should be a comparable size with existing developments. 3 storey buildings and dormer windows at the second floor are unlikely to be accepted.

**Materiality**

All materials should be consistent with the local material palette.

**Density**

New developments should match the existing density of the local area.

**Character**

The architectural style of new developments should reference the local vernacular and carefully consider the surrounding area context.

**Distances**

New developments should provide generous distances between dwellings. Dwellings should be separated by large amounts of green space.

# Agricultural Character

In addition to the village character of the surrounding area, it is also important to recognise the agricultural character of the surrounding farmland, both in terms of the architectural characteristics of the buildings as well as the development pattern and arrangement of individual buildings within a farm.

**Farmstead Clusters**

English Heritage has determined 8 different forms of farmstead clusters. These groupings of buildings show variety in material, form and orientation.

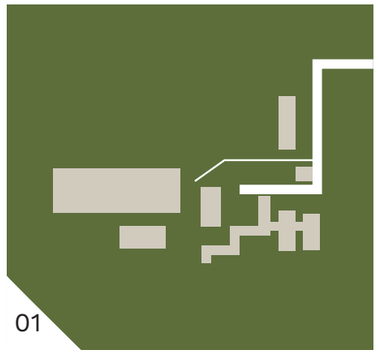
They consist of a focal farmhouse, be that a singular or group of house(s), and a number of ancillary buildings of different scales.

**Farms of West Sussex**

The English Heritage study featured farmstead clusters from across England. However, in order to fully contextualise the analysis for this site, we undertook a separate small study in to the farms in West Sussex only.

These examples identify dense clusters within a wider, open landscape. The materiality varies between timber, stone and brick. The majority of the buildings follow the barn typology, but a distinct house (or singular house entity) is found amongst every cluster of barns.


01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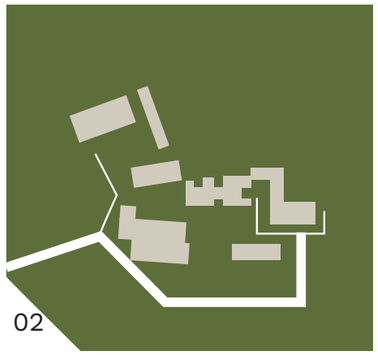
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03


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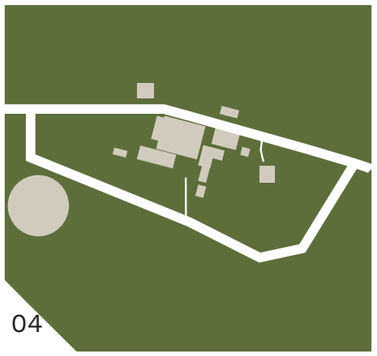
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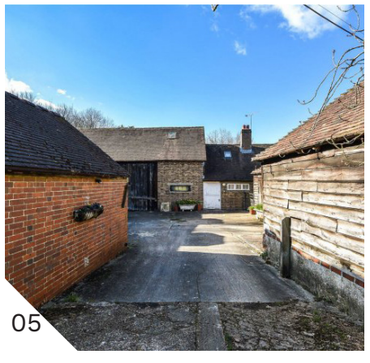
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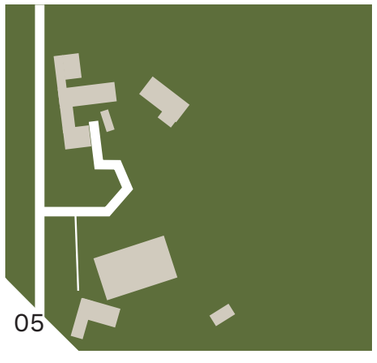
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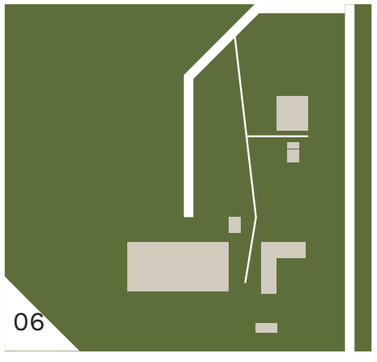
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## Key

| | |
|---|---|
| **01** | **Hope Farm, Billingshurst** |
| **02** | **Bobbolds Farm, Milland** |
| **03** | **Coombes Farm, Lancing** |
| **04** | **Washbrooks Farm, Hurstpierpoint** |
| **05** | **West Riddens Farm, Ansty** |
| **06** | **Sky Park Farm, Petersfield** |

# Building Typologies

**Housing Typologies**

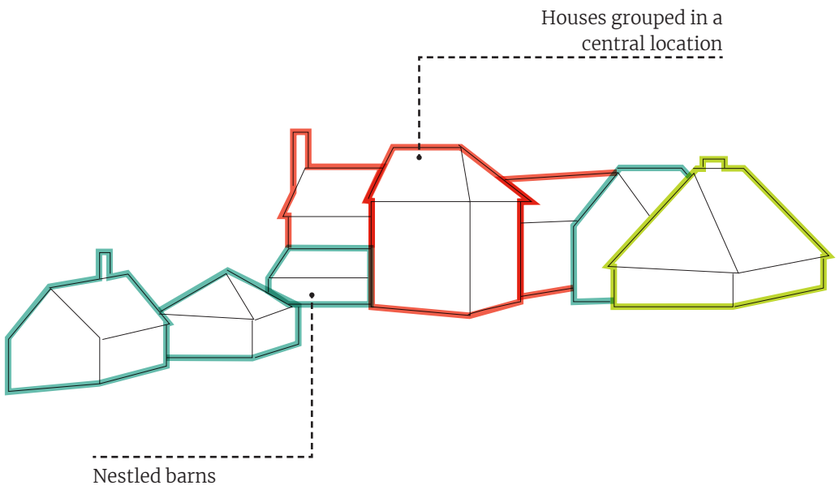
Local village and farmstead studies have identified the following distinct building typologies:

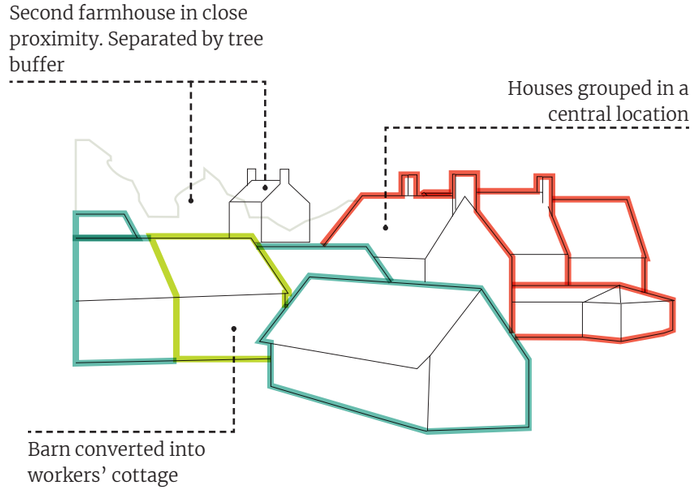
- Larger rural houses (Farmhouse)
- Smaller cottages (Farm Workers' Terrace)
- Barn

The diagrams to the right establish that there is not an even spread of each typology, and application on site should reflect this.

Key

- **Barn**
- **Farmhouse**
- **Farm Workers' Terrace**



# Character Summary - Key Design Drivers

Through the local character analysis, we have identified a range of elements and features that are typical of this part of West Sussex. This page sets out a summary of those elements that have been selected as key influences and design drivers for the proposals for Phase 1 of Rickman's Green Village.

**The Farmhouse**

**The Barn**

**The Farm Workers' Terrace**

## Village Setting

**Masterplanning:**
Lanes & Green Streets
Informal Building Lines

**Building Typologies:**
Cottages

**Built Form:**
Variable Roofscape
Dormers

**Materiality:**
Brick + Tile + Slate

## Agricultural & Rural Setting

**Masterplanning:**
Farmstead Cluster
Mix of Building Fronts & Backs

**Building Typologies:**
Farmhouse + Barn

**Built Form:**
Simple Building Volumes
Exaggerated Openings

**Materiality:**
Metal + Timber

Early in the design process, key landscape features were determined due to the character of the area. This chapter explores the possible elements for integration in the later site plan.

# 03 Local Context - Landscape

**Landscape Analysis**

The landscape strategy has been designed in conjunction with the LVIA, as an iterative process, with the Proposed Development areas carefully sited to retain the existing landscape pattern and to mitigate predicted landscape and visual effects.

The LVIA scooping process has confirmed that the proposed development site is relatively well contained from wider view largely because of the extensive network of woodlands, trees and hedgerows which enclose the site. Analysis suggest that the site will only be visible from more local PROW's which cross the site and those just north of the site. The site will also be visible from limited sections of Foxbridge Lane and Rickman's Lane where this pass close to the site.

The existing Crouchlands Farm access track which combines as a PROW aligns on one of the highest parts of the site from which there are striking views northwards. The track is lined by thick hedgerows and mature trees most of which will be retained to form the core of a new development linear green. A small valley falls away from the track before rising again towards the northern boundaries of the site. A number of distinctive drainage ditches and water course cross the site with a notable confluence in this valley. These ditches catch surface water from fields and woodlands to the west of the site, flowing onwards to the east and will therefore need to be retained and integrated within the development proposals to become the outfall routes for all the proposed developments SUD's drainage.

The existing farm complex steps northwards from the access lane into the valley with the larger cattle barns sitting relatively low in the landscape. To the north east of the farm the existing wetland/pond creates a strong and positive landscape feature at the interface between farm and proposed development. The lanes/tracks to the west of the farm combine PROW with daily farm activity. Proposals to create a Rural Enterprise Centre reusing existing barns north of the access lane with a Rural Food and Retail Hub by providing a cluster of new buildings to the south create an opportunity for the farm to become an integrated part of the vision, linked visually and physically, within the infrastructure landscape strategy for the development as a whole.

Views to the south across the adjacent fields are not so extensive because the surrounding woodland and trees create a strong enclosing feature and therefore a slightly more intimate character.

The northern boundaries of the proposed development along with the higher land in the centre of the site are visible in a number of views looking south from the PROW's running east and west to the north of the site.

The hedgerows and mature trees on and around the site are an important part of local landscape character to be positively integrated into the development proposals. The ancient woodland areas are protected by a minimum 15m wide buffer zone and significant bat foraging routes along these woodlands and other mature hedgerows will require a 30m buffer zone overall. Less significant bat foraging routes require a 10m wide buffer zone. These zones will become important "Ecotone" corridors which will need to be protected from development impacts (people, pets and lighting etc) whilst at the same time recognising their potential to become areas of dramatic outlook and habitat creation.

Crouchland House is a grade II listed building to the east of the proposed development - protecting its setting along with that of the north south historic drove immediately to its east will inform landscape strategy along the western boundary of the proposed development with the objective of mitigating impacts overtime.

Therefore, the overall landscape objectives of the landscape layout are to:

- Conserve and enhance the nationally important biodiversity of the ancient woodlands within and surrounding the Site, incorporating a 30m buffer zone and low light corridors for bats.
- Protect the historic landscape pattern – in order to maintain a sense of the characteristic irregular small-scale mosaic of pasture and woodland and to screen the proposed development in views from the wider landscape.
- Safeguard the rural character and landscape setting of the PROW on and near the site and provide safe vehicular access, with minimal damage to the characteristic enclosed character of local roads.
- Protect and enhance the existing network of drainage ditches and streams integrating SUDs features as positive new riparian and wetland habitats as key structuring landscape features.
- Create a high-quality environment, with an orderly, functional character inspired by traditional village forms and which enhances the existing degraded quality of the Crouchlands Farm site and provides a safe, attractive environment.
- Use the existing and new landscape infrastructure in order to integrate the new village masterplan & phase 1 into its landscape context creating a strong and contemporary identity. Recognising at the same time that the change in character in localised views is an opportunity to create a positive new contribution to the pattern of settlement in the local landscape.

# Landscape Analysis

GENERAL

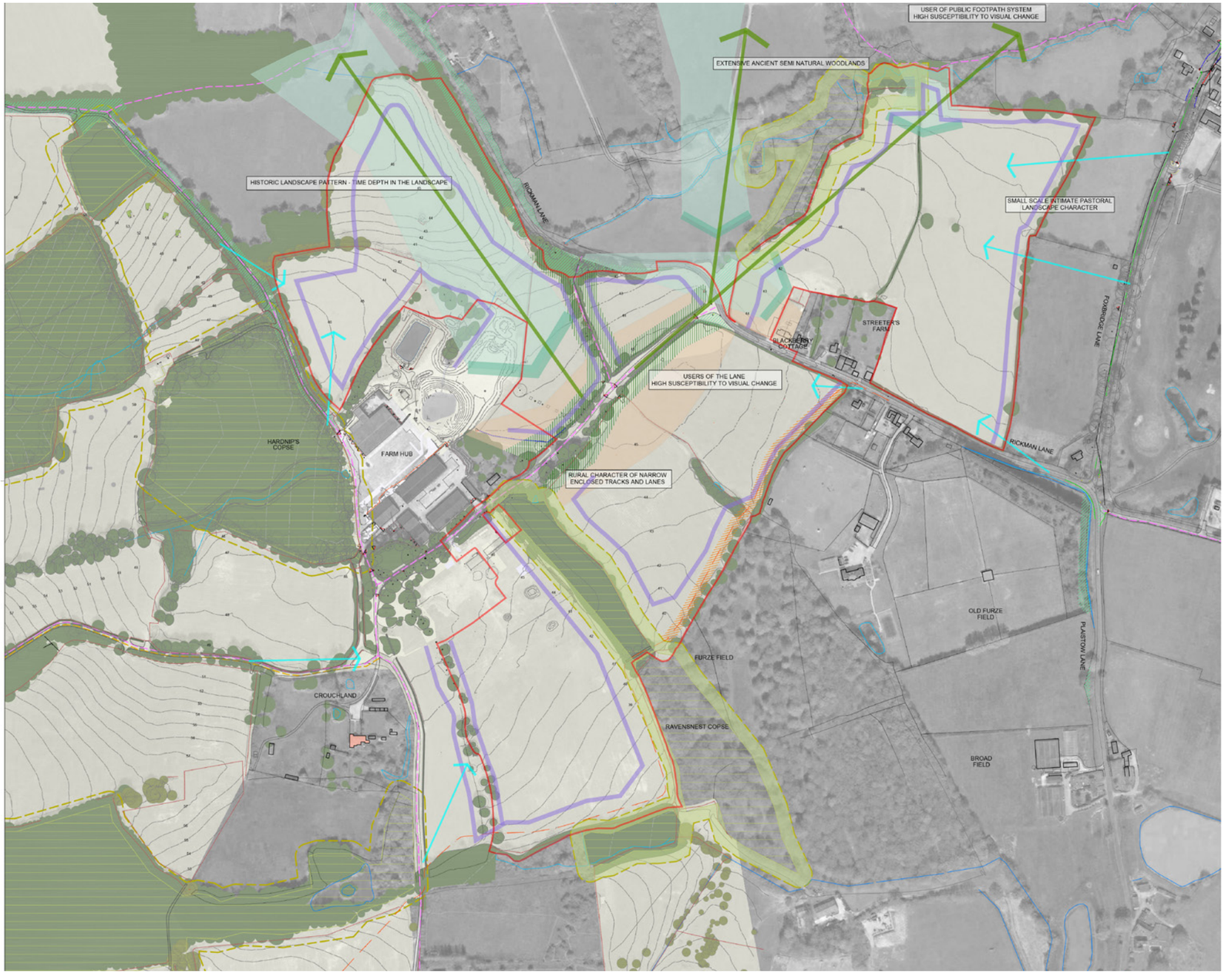
- Application boundary

EXISTING FEATURES

- Buildings
- Listed buildings
- Contour - 1 m interval
- Drainage ditches
- OS lines
- Woodland & trees
- Hedge
- Public footpath
- Public byway
- Open access land
- Fences and gates
- Access routes
- Concrete
- Underground service

ANALYSIS

- Easement
- Ecotone lines
- Ancient woodland
- Ancient woodland buffer zones
- Protect the settings of the historic lane
- Visually sensitive higher ground
- Visually sensitive view corridors towards the site
- Attractive longer distant landscape views from the lane
- Other sensitive views of the site



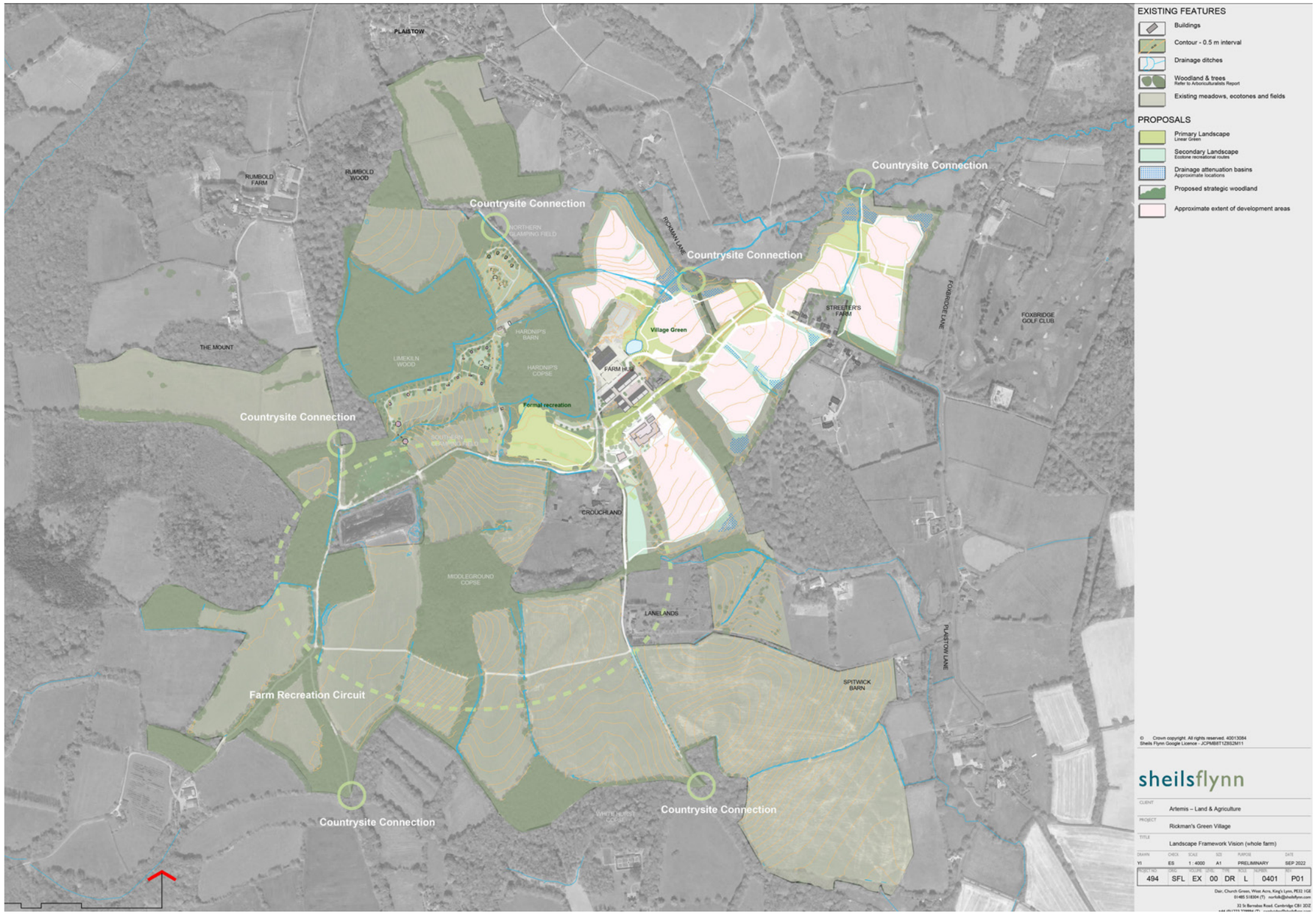

**Landscape Analysis**
SheilsFlynn

# Landscape Framework Vision (Whole Farm)

### A New Linear Green

A new access route into the southern part of Proposed Development off Rickman's Lane would be sited approximately 20m to the south of the existing farm access with a similar new junction diagonally opposite closer to Streeters Farm serving the northern part of the proposed development. These routes have been aligned to conserve existing trees and would be bordered by new native woodland planting and lined by new specimen trees. The existing farm access track would continue as a working farm access route and a public right of way. Visibility splay requirements at the new junctions necessitate the removal of part of the existing hedgerows creating a more open feel to Rickman's Lane with a mix of meadow amenity grass, backed by new hedgerows, and would become one of a sequence of irregular small 'greens' that are characteristic of the roads and tracks throughout the settled Low Weald landscape. This will be the gateway to the Proposed Development via a linear green stretching south to a new formal open space offering a link to the wider farm and northwards to a destination open space on the boundary of the development creating opportunities for wider access to the countryside via the local PROW network.

The linear green, as a landscape feature, is inspired by traditional linear greens of other settlements locally and will become the focus for circulation in the Proposed Development with vehicular and pedestrian routes crisscrossing to link the masterplan. The linear green will also provide a landscape framework integrated with the wider masterplan and urban design strategies with the woodlands and trees along it sometimes screening the development; whilst in other key locations and gateways, the new development will be visible in controlled views which recognise the change in local character to that of a traditionally inspired village as a positive new contribution to the local landscape.



# Landscape Framework Vision (Masterplan)


EXISTING FEATURES

- Buildings
- Contour - 0.5 m interval
- Drainage ditches
- Woodland & trees
  Refer to Arboriculturalists Report
- Existing meadows, ecotones and fields

PROPOSALS

- Primary Landscape
  Linear Green
- Secondary Landscape
  Ecotone recreational routes
- Drainage attenuation basins
  Approximate locations
- Play
- Allotments
- Proposed strategic woodland
- Approximate extent of development areas

# Landscape Framework Vision (Masterplan)

### Landscape Destinations

The linear green will link 3 key destinations;

### Central Village Green

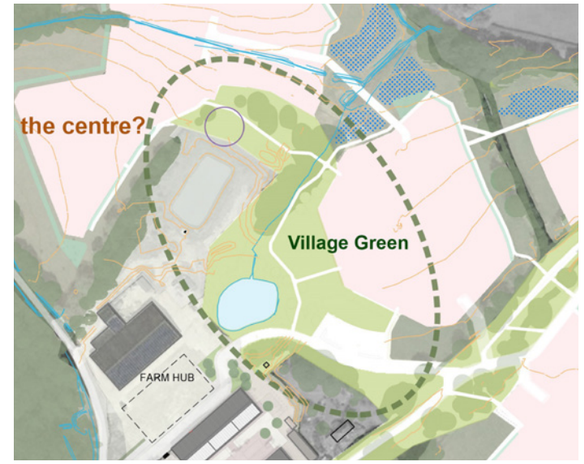
The circular site of the former biogas plant tank is now a wetland depression, which would be the focus for a new village green which comprises extensive meadow, framed by informal groups of trees and with a positive development frontage creating a strong sense of village focus. This central green will link the new development on its northern side with the existing farm complex to the south. Farm operations would be concentrated in the existing Crouchlands Farm site. The open brownfield site to the south of the existing cattle barn is earmarked for a potential future barn and the whole of this farm operations area would be integrated within a more enclosed context. The existing farm track and PROW to the west of the farm complex would continue to be used as the principal access for stock and machinery, with neat, functional surfacing and fencing. The existing barns in the Site are earmarked to become the Rural Enterprise Centre along with a Rural Food & Retail Centre just south of the existing farm access track. Car parking for this complex would be alongside the access route to the north east of the barns and also within the courtyard that they enclose. The access route and car parking would be separated from the operational farm hub and link with circulation within the wider development proposals.

### Southern Open Space

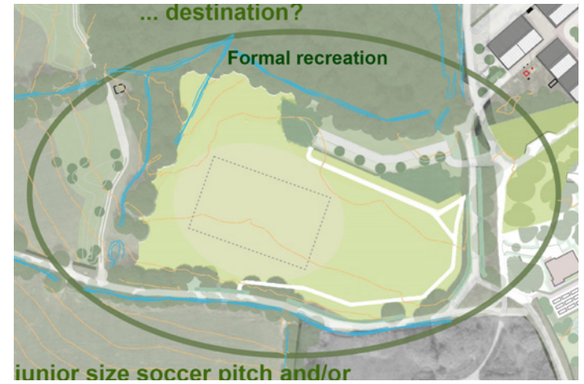
A more formal open space will be established at the southern end of the linear green in the pasture just west of the farm complex and immediately north of the original Crouchlands Farm (house). This area is envisaged as a gateway to the wider farm whilst also having sufficient space capable of providing for a range of activities such as a cricket or junior football pitch. This will otherwise be a low-key space with perimeter meadows and hedgerows managed and maintained so as to retain the existing character of the surrounding landscape. New footpath connections will be made around the edges of the pasture linking to the existing PROW network and with the potential future carpark on the southern edge of Hardnips Copse which will serve the potential glamping site.

### Northern Open Space

Devised as a mitigating landscape buffer zone to the north of the Proposed Development this will be a multifunctional open space offering opportunities for informal activity as well as play space and allotments. Drainage attenuation will be integrated to create a variety of swales and seasonally wet ponds adding visual focus and biodiversity value. This space will also function as a hub in terms of recreational footpaths linking through the various new landscape corridors in the northern development area whilst also offering an opportunity to connect onward to the existing PROW which runs along the northern site boundary.




Village Green

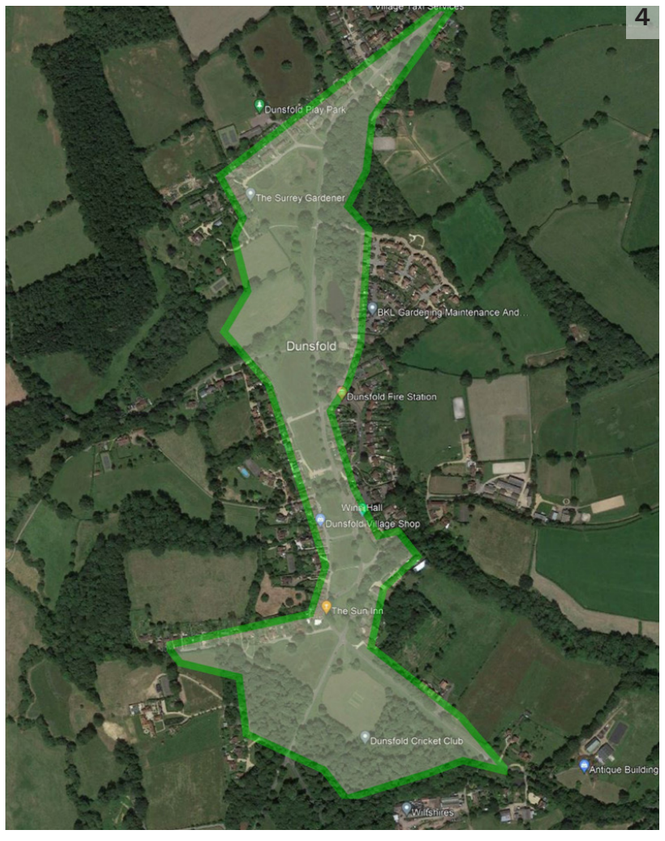



Southern Open Space


Northern Open Space

## Local Linear Green Precedents






**1. Cranleigh**

**2. Shamley Green**

**3. Brockham**

**4. Dunsfold**

**5. Ripley**

**6. Chiddingfold**

# Ecotones & Screening Woodlands

**Integrating drainage & development edge recreational routes**

The extensive network of ancient semi-natural woodlands and mature hedgerows will be protected by a 30m wide "Ecotone" buffer and all components of the Proposed Development should be sited beyond this zone to ensure that there is no damage to the root protection zones of veteran and ancient woodland trees and to protect bat movement corridors. Other mature tree lines and hedgerows are protected by a similar 10m wide buffer zone.

Around the edges of the Proposed Development area these buffer zones create opportunities to establish new native woodlands integrated with the LVIA strategy to screen and enclose the development in longer views as well as enhancing biodiversity. To the north and west of the Proposed Development these woodlands would transition through a scrubby zone to meet the development boundaries as a thick hedgerow. This would be a secure line with fencing to prevent residents and domestic animals from intruding as well as helping prevent light spill.

Elsewhere in the masterplan these "Ecotones" create attractive opportunities for the new development to front onto these extensive landscape corridors. In these situations the masterplan envisages that a 4m wide (minimum) recreation route would mark the edge of the ecotone. Development drainage would be collected in swales which will also align along these recreation routes linking onwards to attenuation ponds, these ponds and swales along with associated "ha-ha" style retaining walls and parkland fencing will help create a distinctive and attractive means of enjoying the rich landscape of the ecotones whilst also preventing access. The drainage swales and attenuation areas will be seasonally wet and will therefore create a variety of opportunities to establish new habitats and add to biodiversity. On the development side of these recreational routes the masterplan anticipates that a thick native hedgerow will define garden plots to further prevent any light spill or other domestic activities from impacting the ecotones. The "ecotone" recreational routes will become an integral part of the identity of the Proposed Development as there will be multiple connections into the new residential areas and therefore a wide variety of opportunities for circular walking routes will be established linking back to the main village greens and destination open spaces.

# Open Space and Play Parameters

### Public Rights of Way within the Masterplan

The concept for the Proposed Development accepts that the PROW which shares the existing farm access routes will, in the future, have a different character as it will be part of the linear green at the centre of the new village. Elsewhere however the landscape strategy will be to screen the development areas from extensive view and this will also apply to the north/south historic drove to the west of the existing farm. To the north new woodland will, over time, screen the development and enclose the PROW. To the south adjacent to Grade II listed Crouchland House and outbuildings there is a distinctive narrow pasture alongside the PROW/drove which will be managed as a new orchard with new woodland and tree planting along its eastern boundary combining to close down any views to buildings within Rickman's Green Village beyond. However, the central part of this route will continue to share day to day traffic of the working farm and the farm complex itself will remain open to views.

### Open Space and Play Strategy

| LPA - Open Space Typologies (colour codes - will also shown on the plans) | Masterplan (2.4 people per household, 530 houses, total 1272 people) | |
|---|---|---|
| | Area required (ha) | Area currently available (ha) |
| Allotments | 0.3816 | 0.4073 |
| Amenity Open Space | 0.636 | 1.6852 |
| Natural/Semi-Natural Green Space | 1.272 | 1.4138 |
| Parks, Sport and Recreation Grounds | 2.0352 | 1.865 |
| *Outdoor Sport* | | |
| *Park and Recreation Ground* | | |
| Play Space | 0.1908 | 0.222 |
| **TOTAL** | 4.5156 | 5.5933 |
| | | |
| Estimated Drainage attenuation and swales | | 2.254 |

# (B) SITE APPLICATION

# 04 Site Appraisal

# Existing Site Plan

# Site Photos and Views









## Key

- Rickman's Lane
- Farm Access Road
- Vehicular access point
- Public Right of Way
- Bus stop (64: Loxwood - Horsham)
- Site boundary

## Landscape

The landscape strategy has been designed in conjunction with the LVIA, as an iterative process, with the Proposed Development areas carefully sited to retain the existing landscape pattern and to mitigate predicted landscape and visual effects.

## Topography

The site slopes from the centre of the north of the site down to both the most easterly corner and the most southerly corner. The vertical difference between the highest and lowest points of the site is approximately 6m - this occurs over 200m, meaning a gradient of 1 in 33.

1 Potential views to higher land towards Plaistow from the lane and public right of way currently used as the access way to Crouchlands Farm

2 Potential long views in and out of the site to the north from the lane and public right of way currently used as the access way to Crouchlands Farm

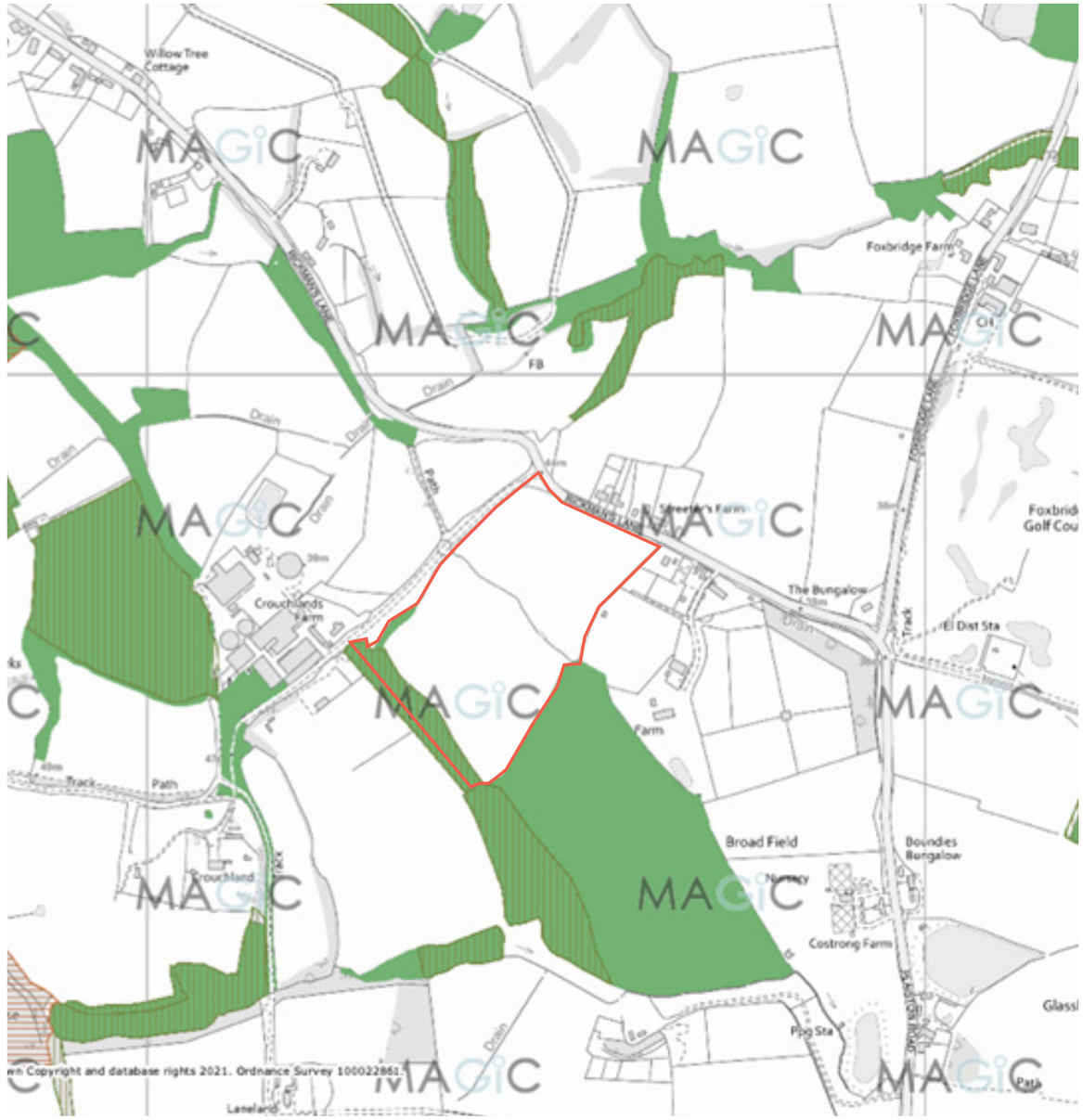

**Site topography**
Arrows indicate direction of downward slope

## Arboriculture

The image to the right illustrates the location of ancient woodland and protected habitat. The site is constrained by dense woodland to the south and south west.

## Ecology

Bat surveys and an ecological lighting survey have been undertaken in relation to the proposal. The findings of this work have resulted in the inclusion of 10 - 30 metre green buffers along key bat flight paths, and enhanced ecotone buffers to the remainder of the site to manage the effects of the proposal on protected European nature conservation sites.





30m buffer

10m buffer

**Legend**

**Ancient Woodland (England)**

- Ancient and Semi-Natural Woodland
- Ancient Replanted Woodland

Priority Habitat Inventory - Deciduous Woodland (England)

Woodpasture and Parkland BAP Priority Habitat (England)

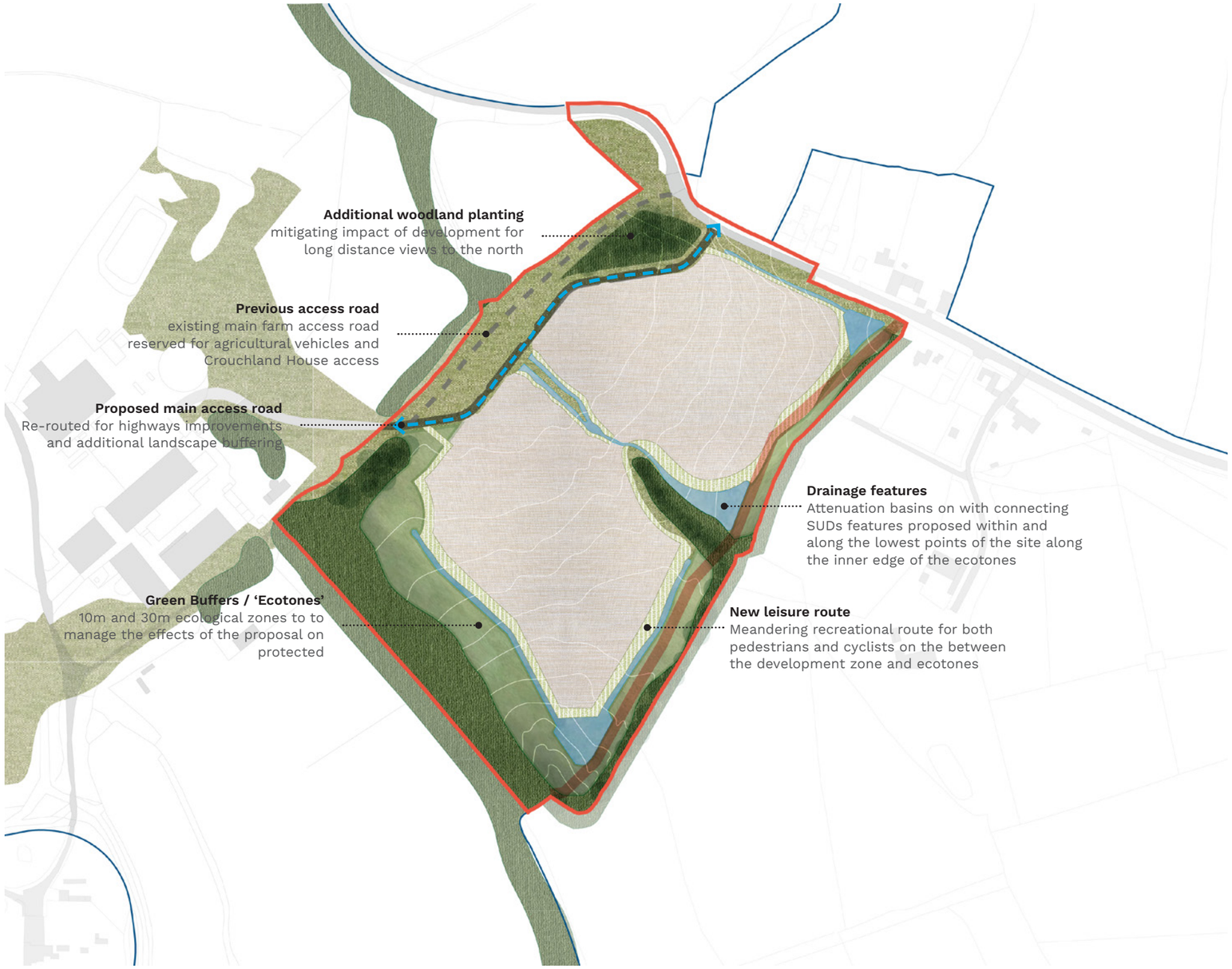
## Utilities

An existing SSE underground power cable runs along the eastern boundary of the Phase 1 site. The cable requires a 3m easement zone either side of it as well as clear access from the farm access road.

There is also an overhead power line running diagonally across the site from the north-eastern corner to the south-western one. The cables are approximately 10m above ground level and may require diversion as part of construction works.

# Developable Site Area

The developable area (i.e. extent of housing plots and road infrastructure) for Phase 1 is a direct response to the existing site features and constraints as well as any related mitigation measures.




## Key

- **Developable area**
- **Grassland**
- **Green Buffers ('Ecotone')**
- **Indicative attenuation ponds and SUDs**
- **Woodland**
- **Leisure route (pedestrians & cyclists)**
- **Re-routed main farm access road**
- **Previous access road - reserved for specific uses**
- **Phase 1 site boundary**
- **Overall ownership boundary**
- **SSE easement zone**

This chapter demonstrates exercises undertaken to apply the previously determined character to the site, working within its highlighted constraints.

# 05 Design Evolution

# Site Layout


1 | Cluster Layout

**Design (1)**

- 125 homes
- Primarily clusters of homes
- Organic / informal arrangement

**Areas to improve**

- Ecotones not integrated - developable area to be reduced
- Vehicular movement should be simplified

2 | Street Layout

**Design (2)**

- 125 homes
- Higher density due to reduced developable area
- More formal / traditional streetscape
- Improved connectivity for vehicles

**Areas to improve**

- Too suburban and formal
- Additional landscaping required

3 | Green Spine Sketch

**Design (3)**

- 108 homes
- Density reduced to reflect a character-led approach
- More organic village character
- Additional green infrastructure and landscape features - zone for allotments and play space added in central green corridor (SE-NW), as well as ‘village green street’ (NE-SW) and additional connections to peripheral recreational route

**Areas to improve**

- Lanes require additional ‘softening’

## Further development of Site Layout 03

**Movement & Access**

- Closer look at street hierarchies
- Improving connectivity with recreational routes
- Additional green infrastructure

### Key

- Farmstead cluster
- Junction with main farm access road
- Main farm access road
- Primary street (Phase 1)
- Lanes
- Phase 1 boundary
- Overall ownership boundary

## Further development of Site Layout 03: Ecotone Sensitivities

**Lighting**

Light spill from the egress of internal lighting, particularly from 1st floor windows, can potentially travel laterally towards the dark zone (ecotones) and could negatively impact light sensitive ecology if not properly mitigated by design. However, this effect is naturally diminished by distance. Therefore, a reasonable offset of the façades is required within the design in order to preserve the darkness of designated habitats for the benefit of light sensitive ecology.

Building frontages are pushed back from the edge of the development zone to ensure any light egress is managed within the development zone and the ecotones remain sufficiently dark for ecology to thrive. With good practice lighting design implemented in combination with a 10m lighting buffer zone from the façades, light spill will be diminished to a level which is known to preserve the quality of the surrounding habitat. Where a 10m offset is not achievable, any potential impact of lighting can be further mitigated by other best practice lighting design measures. Examples include the use of baffled low glare downlights instead of typical bare lamp pendant lights in the rooms facing the dark zones. In addition, landscape mitigations such as including a low fence, wall or hedge separating the garden from the dark zone can be effective in constraining any low-level lateral light spill at ground level to within the boundary of the development zone.

Key

- Ecotone
- Attenuation ponds and SUDs features
- Leisure route
- Housing edge
- Transitional buffer zone
- Phase 1 boundary
- Overall ownership boundary

## Further development of Site Layout 03

**Animating Edges**

- Ensuring sufficient activity along key routes through and around the development

Key

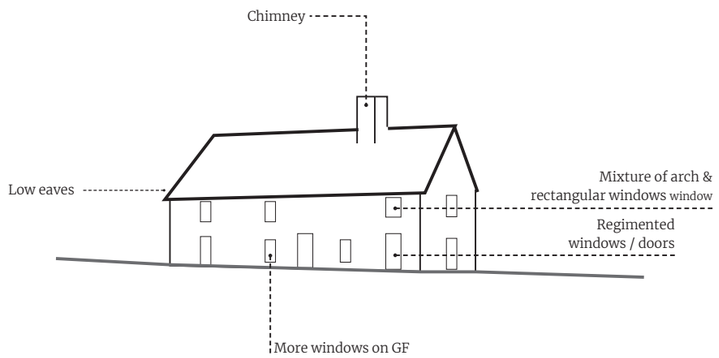
- Leisure route
- Housing edge
- Key frontages
- Phase 1 boundary
- Overall ownership boundary

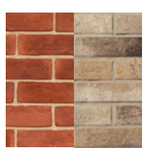
# Building Typologies - Farmhouse

When analysing the vernacular architecture of the local farms, the farmhouse itself is the core of every farm, with several outbuildings surrounding it. The traditional farmhouse tends to be rectangular in shape, consisting of a gable roof with a chimney. Fenestration is typically regular and symmetric across the main façades.

This page sets out some of the key design principles that can be taken from the analysis of the farmhouse. These principles will be reinterpreted to our house types in a contemporary way.

## Traditional



| Red / Buff brick



| White render

| Red clay roof tiles

### Material palette

## Contemporary

### Key features:

- Simple volume with highlight elements
- Openings closer to eaves
- Brick detailing around windows
- Verticality expressed with openings and detailing alignment
- Feature gable end
- Simple porch design
- Keeping the colour/material pallet consistent and simple
- Use of larger windows for a more contemporary design

| Red / Buff brick

| Clay/Slate roof tiles

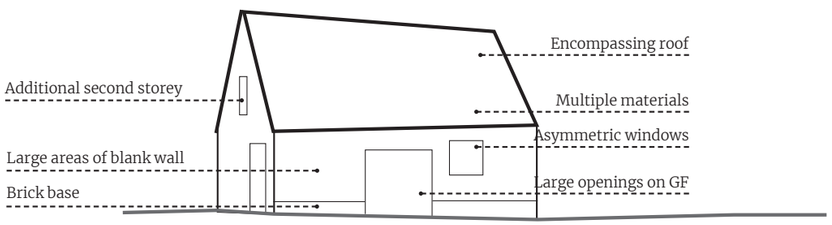
### Material palette

# Building Typologies - Barn

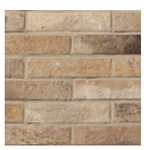
When analysing the vernacular architecture of the local farms, it is evident that the barn is a key characteristic. The traditional barn tends to be rectangular in shape and features a number of materials.

This page sets out some of the key design principles that can be taken from the analysis of the barn. These principles will be reinterpreted to our house types in a contemporary way.

## Traditional




| Light / Dark weatherboard



| Buff brick

| Clay/Slate roof tiles

### Material palette

## Contemporary

### Key features:

- Simple forms with steeper pitch roof
- Irregular rhythm established through asymmetrical fenestration
- Timber as main material used for massing
- Timber is accented with either metal or masonry detailing
- Feature elements include larger glazing and barn doors
- Change in colour of cladding for repeating volumes
- Single extended volume
- Oversized openings on the ground floor

| Light / Dark weatherboard

| Buff brick

| Zinc (grey / colour)

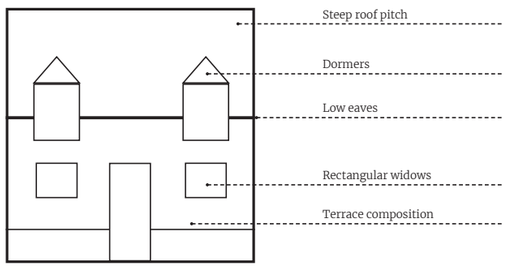
### Material palette

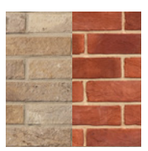
# Building Typologies - Farm Workers' Terrace

When analysing the vernacular architecture of the local farms, the farm workers' terrace is a typical building seen within the farmstead. The traditional farm workers' terrace consists of a high pitched roof with low eaves and dormers.

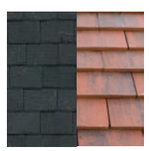
This page sets out some of the key design principles that can be taken from the analysis of the workers' terrace. These principles will be reinterpreted to our house types in a contemporary way.

**Traditional**



| Buff / Red brick



| Clay/Slate roof tiles

**Material palette**

**Contemporary**

**Key features:**

- Contemporary dormer windows
- Organisation in a terrace formation
- Front to back roof with potential changes in pitch along the terrace
- Brick as the primary material
- Draws parallels with farmhouse typology
- More regimented elevations than barn typology
- Standardised volumes/floor layouts
- Highlight elements include dormer windows and brick detail

| Buff / Red brick

| Clay/Slate roof tiles

| Dark grey / green metal accents

**Material palette**

**Original Expression of the Typologies**

**Barn**

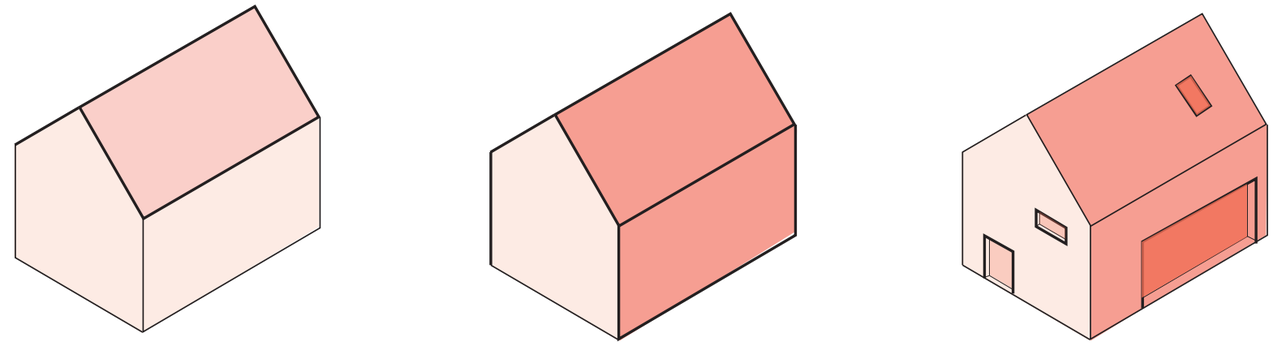
The barn typology consists of a prominent gable end and the long façades / roof wrapped in a complementary material.

**Rural House**

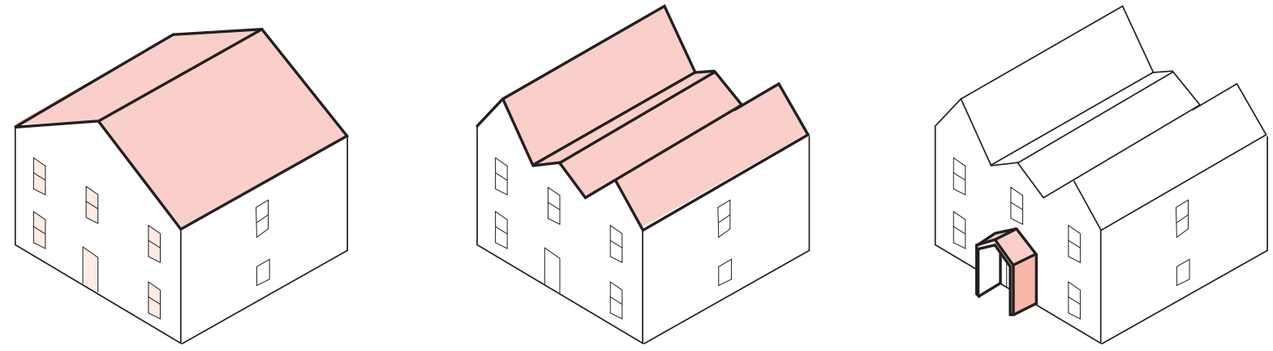
This typology focuses on alignment and rhythm in fenestration. Materiality varies dependent upon surroundings.

**Farm Workers' Terrace**

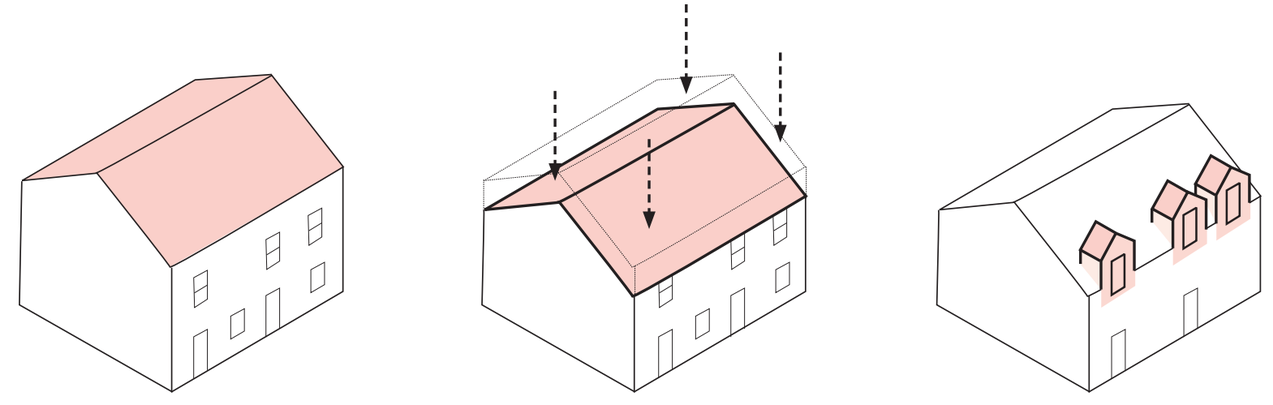
This typology typically has a lower elevation - resembles a 1-storey house, however the roof line is punctured by a dormer window to use 'loft' space.



**01**
Barn



**02**
Farmhouse



**03**
Farm Workers' Terrace

**Design (1)**

+
Contemporary form (barn / farmhouse)
Variation in height
Simple material application

-
Awkward form (cottage)
Uncharacteristic roof (farmhouse)
Rooflights - ecological constraint
No brick in material palette

**Design (2)**

+
Contemporary form (barn / cottage)
Variation in height
Material palette reflects context
Chimney adds character

-
Form is too traditional (farmhouse)
Chimney is aesthetic - to be omitted unless function identified
Add-on porch (farmhouse)
Material palette colour is limited

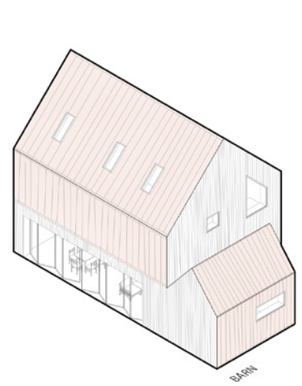
**Design (3)**

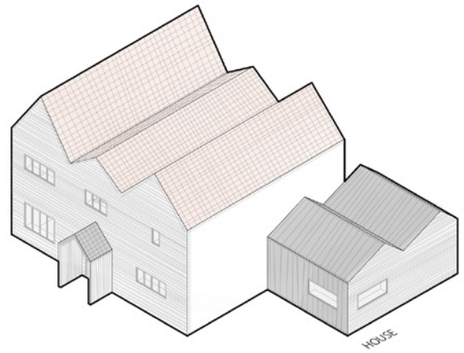
+
Material palette reflects context (including colour)
Variation in height
Contemporary forms

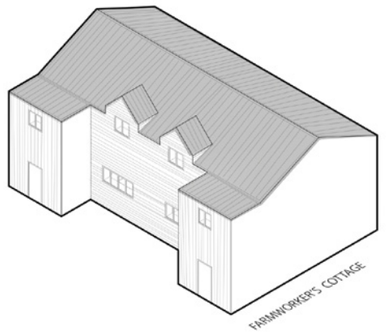
-
Roof pitch is shallow (farmhouse)
Opportunity to re-introduce 'chimney' element as a lantern to bring light into the centre of the plan

**Barn** | **Farmhouse** | **Cottage**

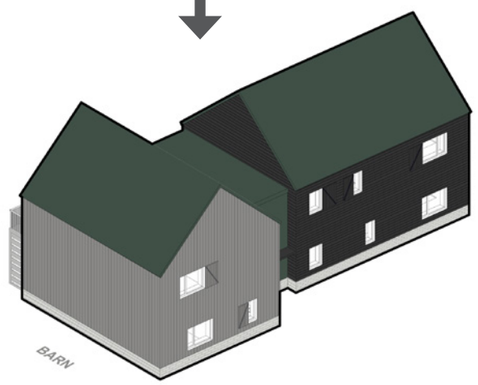
**(1)**

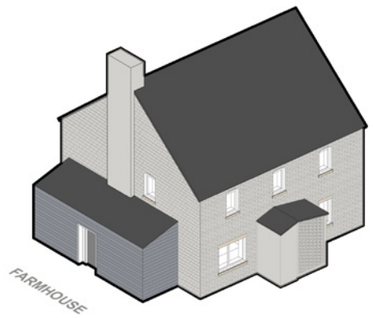


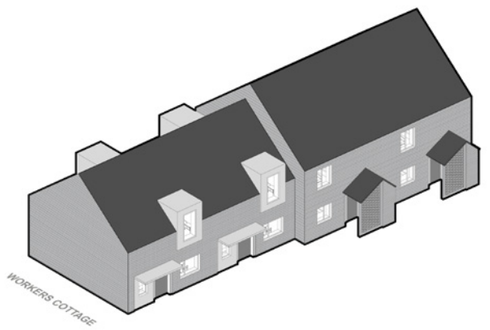



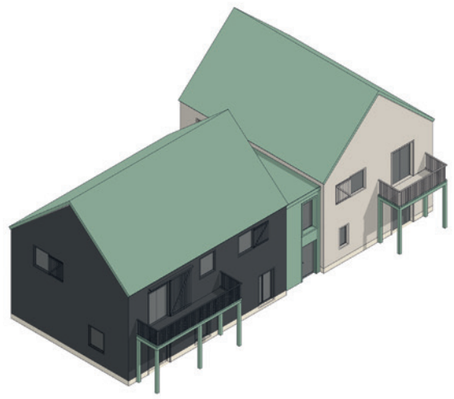

**(2)**

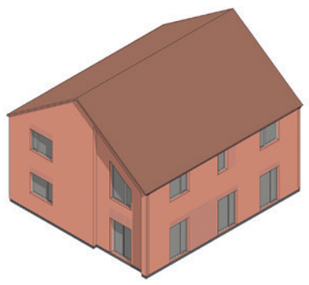


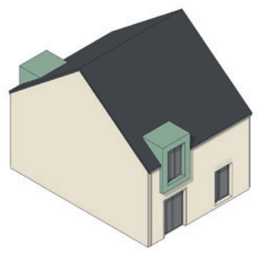




**(3)**







Green routes, links and spaces are a key driver to create a place for community interaction. In addition to recreational activity, properties also face onto these spaces rather than towards the vehicular routes.

The original concept at the outset was to use the green corridors to connect farmstead clusters and produce a green spine that led people through the site.

This evolved to into two major elements within the masterplan - the central green corridor along the boundary of the two fields constituting Phase 1 and the leisure routes which loop around the site, acting as a buffer between the developable area and sensitive ecological zones. Where possible, properties front onto these green spaces rather than the vehicular access routes.

## Key

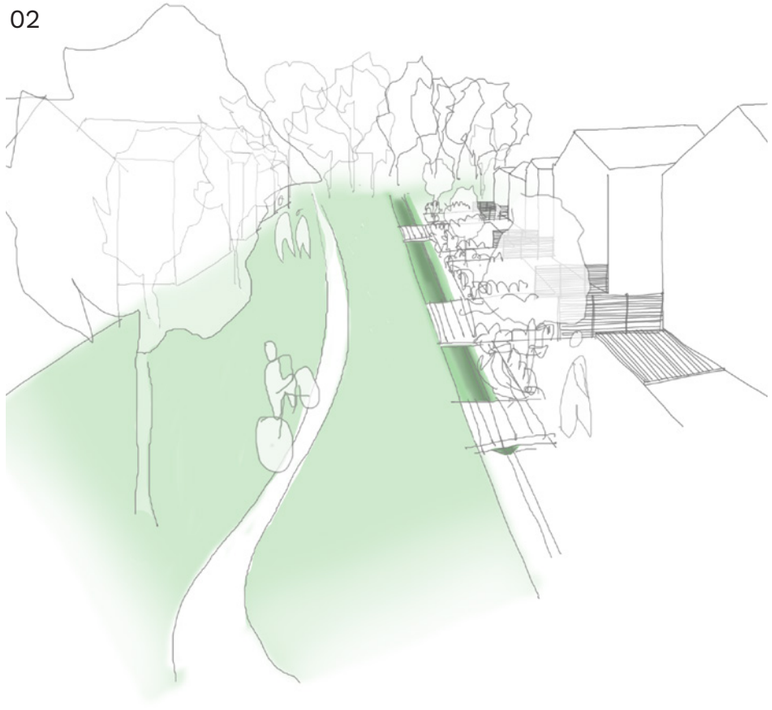
**01** **Central Green Corridor Concept Sketch**

**02** **Boundary Leisure Route Concept Sketch**

**03** **Character Zone Sketch Elevations**

01

02



03

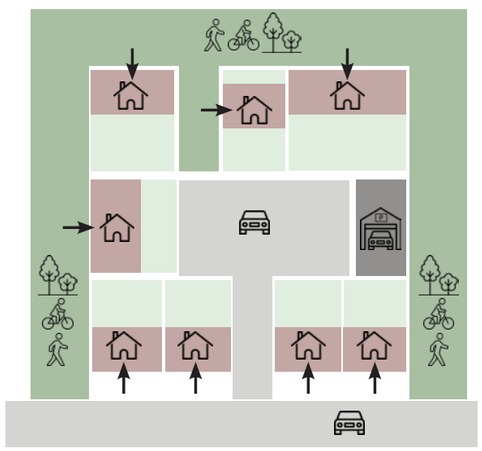
Leisure Edge

Traditional Street

Apartments and Play Space

# Exploring the Farmstead Cluster

- Majority of homes front onto green links / spaces and leisure routes
- Pedestrian and cyclist movement is priority
- Vehicular routes are secondary
- Cluster features a mixture of property fronts, sites and backs - achieving the rural character as well as improved security and overlooking

# (C) PROPOSAL

# (C) PROPOSAL

the culmination of the previous chapters, this documents the finalised design and explains key decisions with regard to access, movement and landscaping.

# 06 Architectural Design Proposals

Illustrative Masterplan

# Green Infrastructure

**Green Infrastructure**

The green infrastructure is crucial to the character of Rickman's Green Village. It responds to the surroundings whilst helping to create areas that promote community interaction.

For more detailed information on the landscape proposals please see Chapter 07.


## Key

- **Green Pockets**
- **Gateway Green**
- **Leisure route**
  Recreational route for pedestrians and cyclists
- **Allotments**
- **Playground**
- **Woodland**
- **Ecotone**

# Street Hierarchy & Typologies

### Main Farm Access Road

The main access road linking Rickman's Lane with Crouchlands Farm and the wider Rickman's Green Village. The access road in the adjacent plan is shown in its proposed new alignment with the existing access road converted into a public footpath. Dashed line beyond red line boundary represents a potential future connection into the village centre.

### Central Village Street

Primary street within Phase 1 that loops through the development and connects to the Main Farm Access Road in two locations. The street features street trees and generous planting alongside rain gardens and on-street parking spaces.

### Farmstead Cluster

A shared surface lane looping around a central green space with trees, planting and parking addressed by a mixture of fronts, sides and backs of properties arranged in an organic and informal manner as in a typical farmstead. This has been designed to allow vehicular access for all types of vehicle, including refuse and emergency services.

### Lanes

Shared surface lanes providing vehicular access (all types) to properties as well as access to both on plot and on street parking spaces.

### Leisure Route

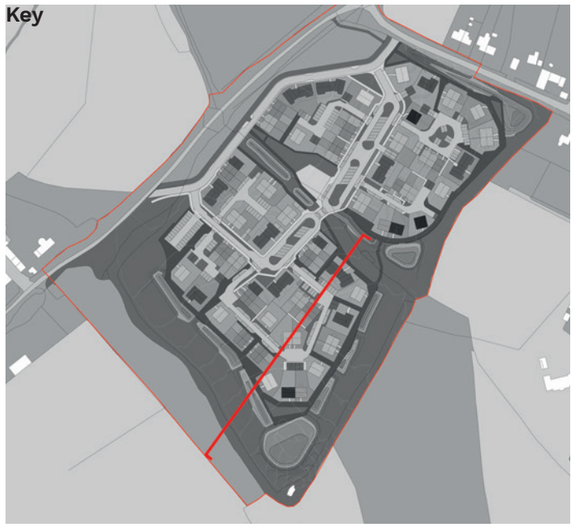
Primary recreational route for both pedestrians and cyclists as well as primary access for properties fronting onto it. A meandering route connecting into other public footpaths around the site as well as into the lanes within the development via numerous green links between properties.

## Key

- **Main Farm Access Road**
  Connecting the Village to Rickman's Lane
- **Central Village Street (Phase 1)**
  Primary street for vehicular, cycle and pedestrian access
- **Farmstead Cluster**
  Local vehicular access for parking and servicing
- **Lanes**
  Local vehicular access for parking and servicing
- **Leisure Route**
  Recreational route for pedestrians and cyclists

# Street Sections

Key



Section A-A

Ecotone

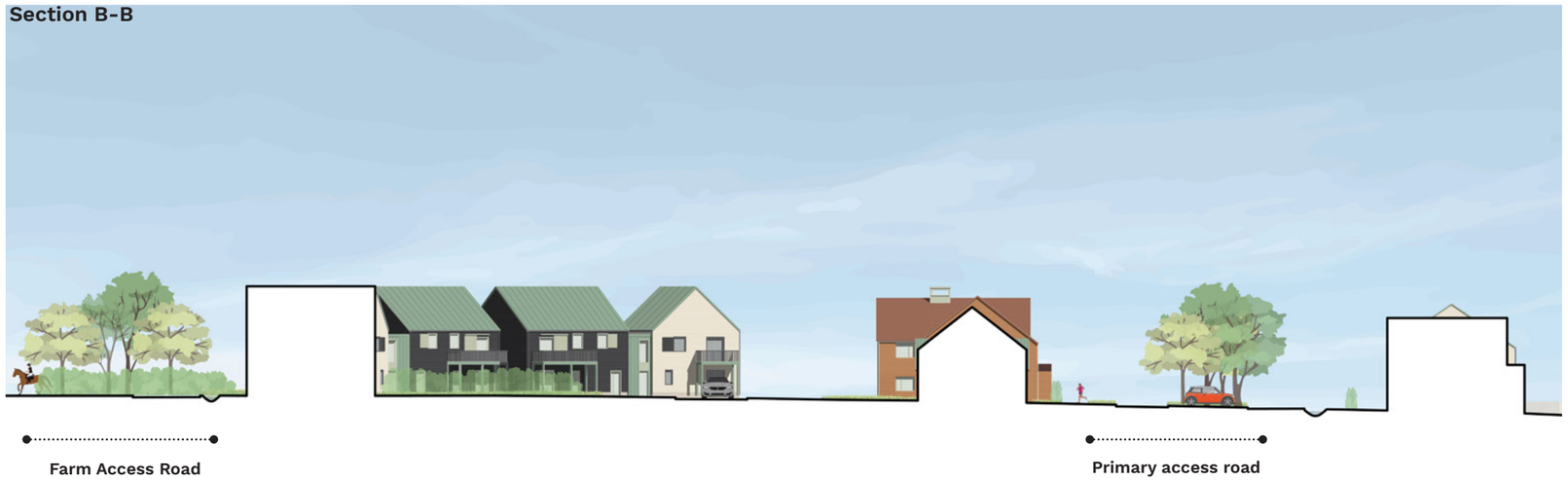
Key

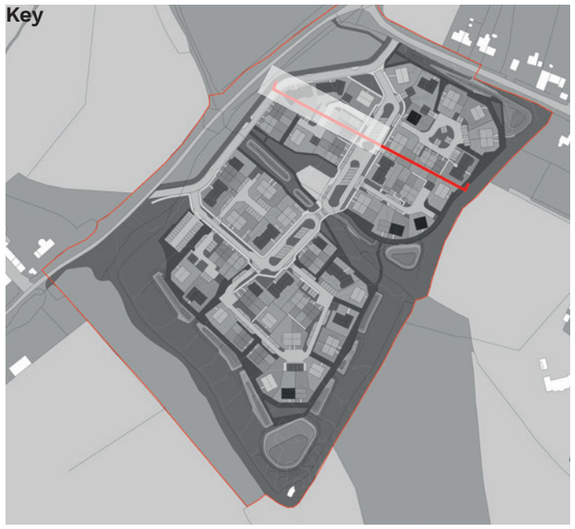
Section C-C

Rickman's lane

Farmstead cluster

# Street Sections


# Housing Layout

**108 homes in total, including 30% affordable**


## Key

- **Type A1/A2 (Barn)**
  2no. 1B2P & 2no. 2B4P apartments (private/affordable)
- **Type B (Cottage)**
  2B4P terrace (private)
- **Type C (Cottage)**
  2B4P terrace (affordable)
- **Type D (Cottage)**
  3B4P terrace (affordable)
- **Type E (Cottage)**
  3B4P terrace (private)
- **Type F1/F2 (Barn)**
  3B5P semi-detached (private)
- **Type G (Barn)**
  3B6P semi-detached (private)
- **Type H (Farmhouse)**
  3B6P detached (private)
- **Type I (Cottage)**
  4B6P terrace (affordable)
- **Type J (Farmhouse)**
  4B7P semi-detached (private)
- **Type K (Farmhouse)**
  4B8P detached (private)
- **Type L (Farmhouse)**
  5B10P detached (private)
- **Type M (Farmhouse)**
  5B10P detached (private)

| Development Schedule | | | |
|---|---|---|---|
| Project: | Rickman's Green Village Phase 1 | Client: | Artemis Land & Agriculture |
| Project No: | 12-1455-01 | Date: | 29/09/2022 |

| House Type | Typology | Character Type | Occupancy | Unit No. | GIA (sqm) | Tenure |
|---|---|---|---|---|---|---|
| A1 | Apartment | Barn | 2x 1B2P<br>2x 2B4P | 5 | 59<br>72 | Private / affordable |
| A2 | Apartment | Barn | 2x 1B2P<br>2x 2B4P | 3 | 59<br>72 | Private / affordable |
| B | Terrace | Cottage | 2B4P | 17 | 92 | Private |
| C | Terrace | Cottage | 2B4P | 4 | 88 | Affordable |
| D | Terrace | Cottage | 3B4P | 5 | 103 | Affordable |
| E | Terrace | Cottage | 3B4P | 8 | 108 | Private |
| F1 | Semi-detached | Barn | 3B5P | 9 | 122 | Private |
| F2 | Semi-detached | Barn | 3B5P | 9 | 122 | Private |
| G | Semi-detached | Farmhouse | 3B6P | 2 | 131 | Private |
| H | Detached | Farmhouse | 3B6P | 2 | 147 | Private |
| I | Terrace | Cottage | 4B6P | 3 | 117 | Affordable |
| J | Detached | Farmhouse | 4B7P | 3 | 152 | Private |
| K | Detached | Farmhouse | 4B8P | 9 | 167 | Private |
| L | Detached | Farmhouse | 5B10P | 3 | 212 | Private |
| M | Detached | Farmhouse | 5B10P | 2 | 209 | Private |

| Unit Schedule | | | | |
|---|---|---|---|---|
| **Occupancy** | **Tenure** | **Occupancy** | **GIA (sqm)** | **GIA (sqft)** |
| 1B2P | Affordable | 10 | 590 | 6,351 |
| | Private | 6 | 354 | 3,810 |
| 2B4P | Affordable | 14 | 1,008 | 10,850 |
| | Private | 24 | 1,996 | 21,485 |
| 3B4P | Affordable | 5 | 515 | 5,543 |
| | Private | 8 | 864 | 9,300 |
| 3B5P | Private | 18 | 2,196 | 23,638 |
| 3B6P | Private | 4 | 556 | 5,985 |
| 4B6P | Affordable | 3 | 351 | 3,778 |
| 4B7P | Private | 2 | 304 | 3,272 |
| 4B8P | Private | 8 | 1,336 | 14,381 |
| 5B10P | Private | 6 | 1,054 | 11,345 |
| **TOTAL** | | **108** | **11,124** | **119,739** |

| | | |
|---|---|---|
| **TOTAL Affordable & Low Cost** | 32 | 30% |
| **TOTAL Private** | 76 | 70% |

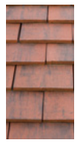
| Affordable & Low Cost Unit Schedule | | | |
|---|---|---|---|
| **Occupancy** | **Occupancy** | **Unit %** | **Policy %*** |
| 1 Bed | 10 | 31% | 32.5% |
| 2 Bed | 14 | 44% | 45% |
| 3 Bed | 5 | 16% | 17.5% |
| 4+ Bed | 3 | 9% | 5% |

*As the proposals do not currently differentiate between affordable and low cost tenures, the policy percentage is taken as an average of the two figures.

| Private Unit Schedule | | | |
|---|---|---|---|
| **Occupancy** | **Occupancy** | **Unit %** | **Policy %*** |
| 1 Bed | 6 | 8% | 6% |
| 2 Bed | 24 | 32% | 32% |
| 3 Bed | 30 | 39% | 39% |
| 4+ Bed | 16 | 21% | 23% |

# Materials Plan

| Red / Buff brick



| Clay roof tiles

| Light weatherboard

| Green zinc roof

| Dark weatherboard

| Green zinc roof

| Buff brick

| Slate roof tiles

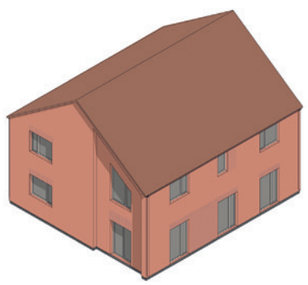
## Key

**Red tile roof + red brick**

**Green zinc roof + light weatherboard**

**Green zinc roof + dark weatherboard**

**Slate roof + buff brick**

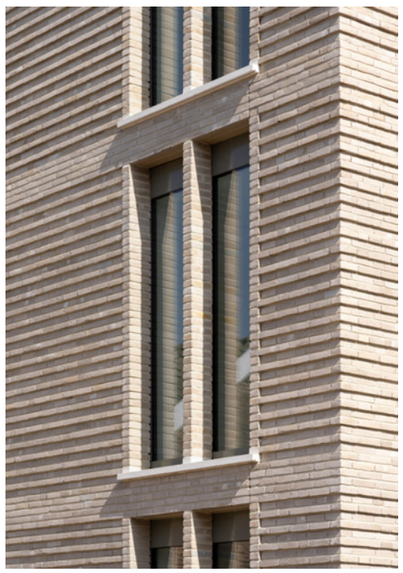


**Farmhouse**
Features include:

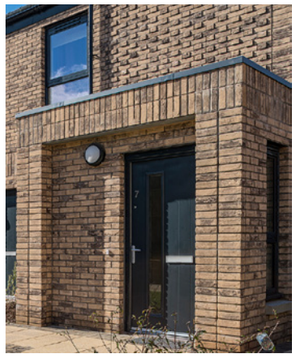
The main elements explored throughout the farmhouse typology includes recessed stretcher brick bond and brick porch detail. The stretcher bond allows the windows to be framed, highlighting the verticality of the façades and providing texture to blank sections of external walls whilst the brick porch helps to frame the entrance by recessing the front door and extruding the frame around the recess.

This selection of elements helps to establish a more robust character of the farmhouse typology through detailing that is contemporary yet delivers a sense of tradition.

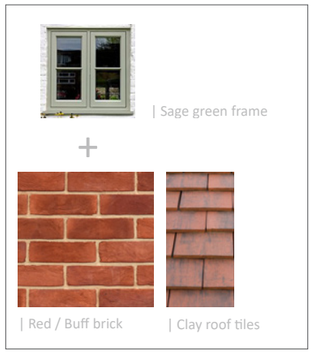
RECESSED STRETCHER BRICK BOND



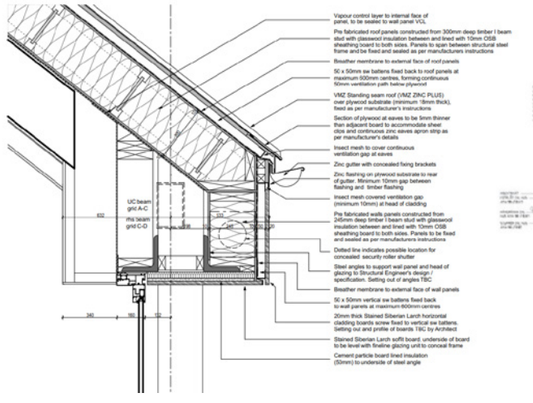
BRICK PORCH DETAIL

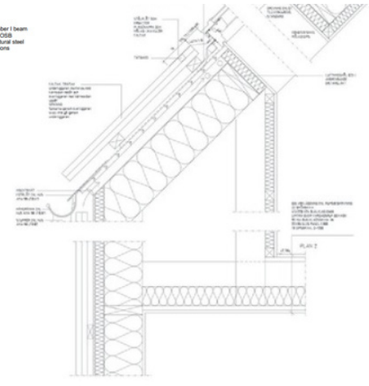



MATERIAL PALETTE

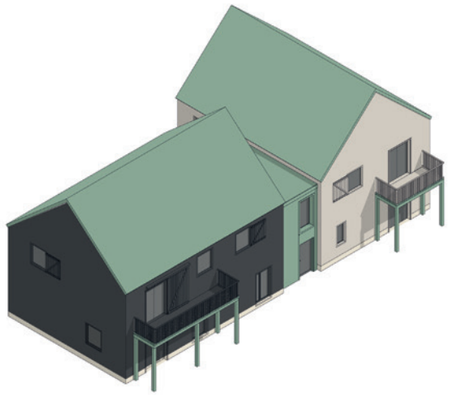



GUTTER DETAIL





# Material & Detail Palette



**Barn**

Features include:

The barn has a wider selection of available elements for detailing the façade. These include gutters, barn doors, shutters and brick plinth on the base. There are 3 gutter examples which explore different links to the façade - box gutter (visible but elegant solution that compliments the roof, can be same material), hidden gutter ( the cleanest of the options, but potentially the most expensive) and traditional gutter on a L - bracket (the most common option making the elevations more busy).

The large barn door that sits on a rail is a feature element. It is used on larger glazed openings as shading and design detail. The shutter are of a traditional design, sitting on a hinge allowing to be closed for shading purposes.

MATERIAL PALETTE

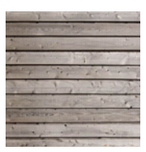
| Metal balcony frame

| Sage green frame

| Dark weatherboard

| Green zinc roof

| Dark grey frame

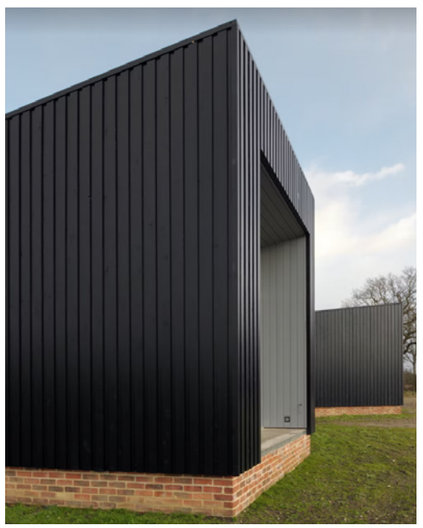


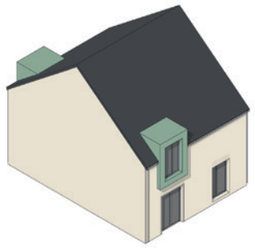
| Light weatherboard

| Green zinc roof

GUTTER DETAIL OPTIONS

BARN DOORS/SHUTTERS AND PLINTH





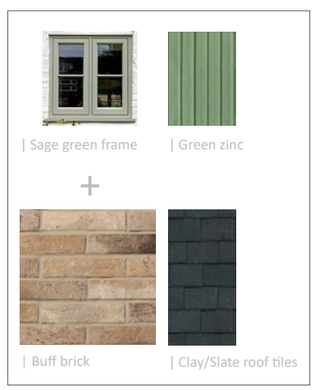
**Farm Workers' Terrace**

Features include:

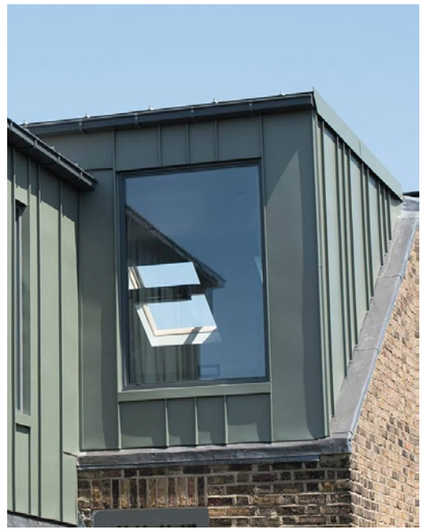
The Farm Workers' Terrace has two highlight details which include dormer window and a L-shaped porch. The dormer window matches the roof material (green zinc) and sits mid-eave. Box gutter is used on the sides of the dormer for drainage to make the elevation more elegant. The porch is also finished in zinc allowing to continue the same material down to the ground floor and provided consistency in the material pallet.

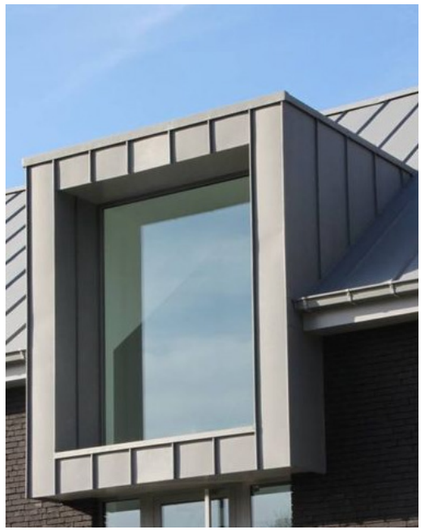
Soldier course of brick is used above openings on both front and back elevations. This ties the cottage with the farmhouse typology through the type and pattern of brick.

MATERIAL PALETTE

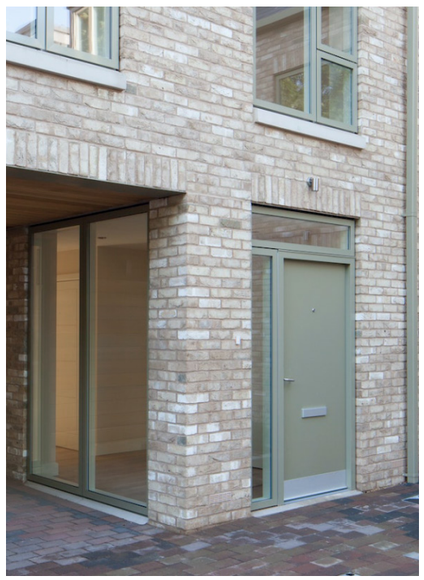



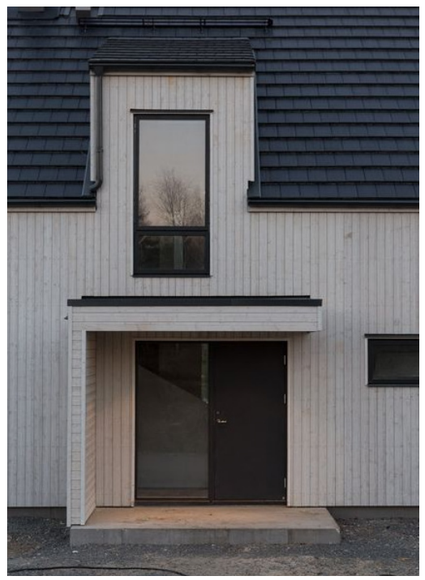

DORMER FINISH AND MATERIAL





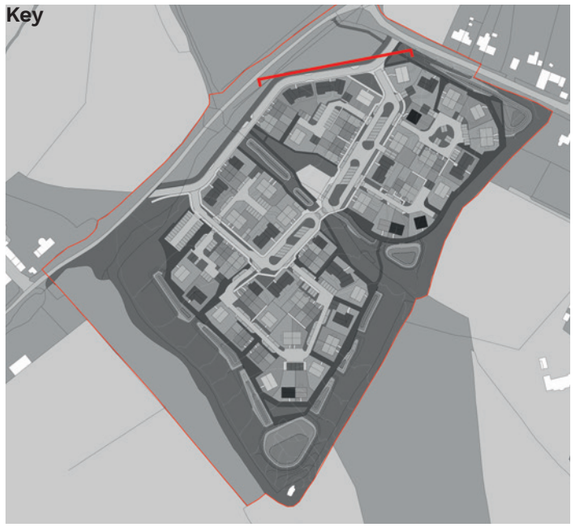
SOLDIER COURSE AND PORCH DETAIL





# Streetscape Elevations

Key



Elevation 01

Primary access street

View from farm access road

Key

Elevation 02

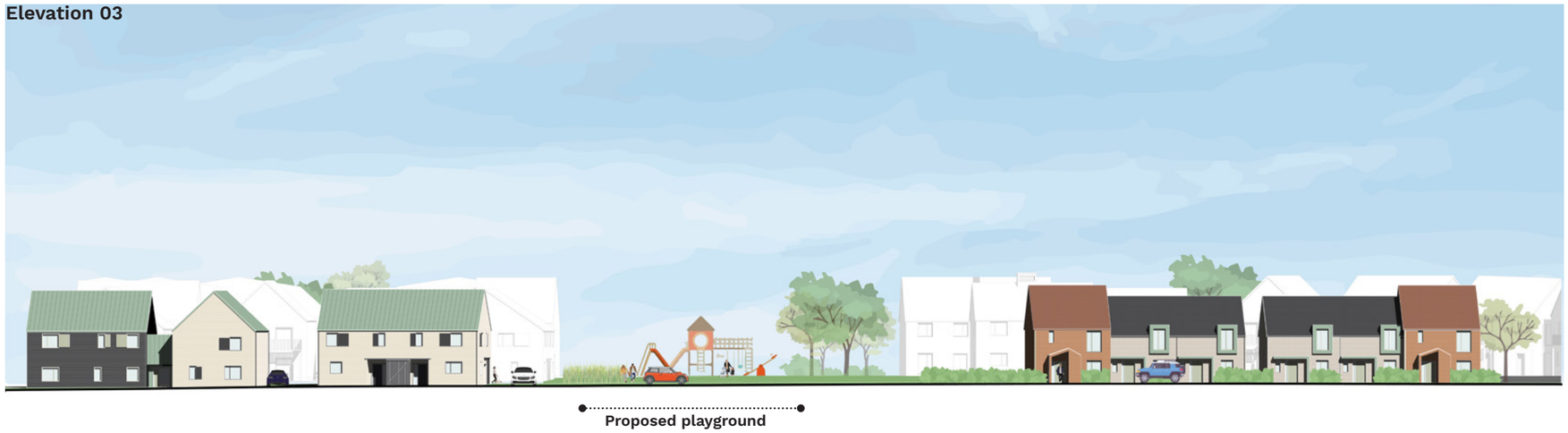
Proposed attenuation basin

Farmstead cluster

# Streetscape Elevations

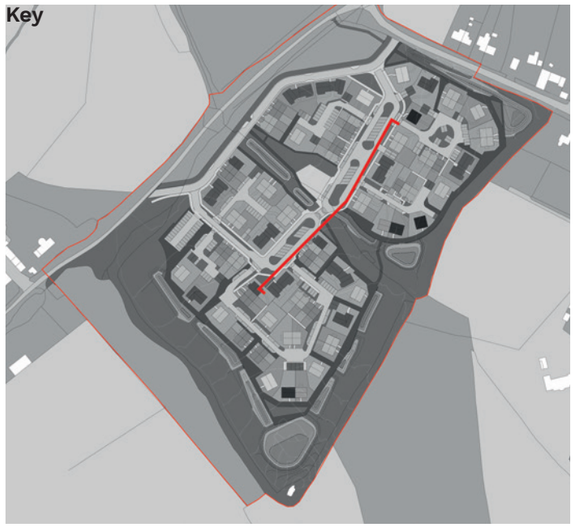
Key

Elevation 03



Proposed playground

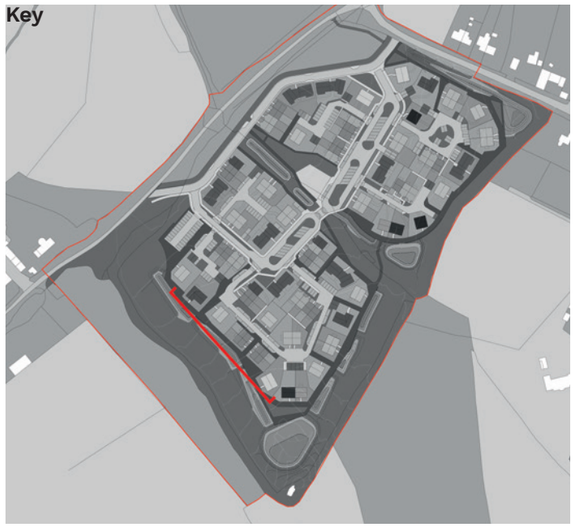
Key



Elevation 04

Proposed attenuation basin + leisure route

# Streetscape Elevations





## Connectivity

The street hierarchy has been informed by the principles of prioritising walking and cycling, and of private car travel not being the default mode of transport to, from, and within Rickman’s Green Village. The street hierarchy has therefore been developed with Safe System principles at the fore. This approach incorporates segregation of users and directional movements, slow vehicle speeds within all parts of the development, and prioritising cycling and walking within the highway corridor.

The geometry of streets within Phase 1 have been informed by forward and lateral visibility splays required for 20mph vehicle speeds, as well as swept paths for large refuse vehicles as appropriate to ensure servicing is achievable across the site. Where one-way working is designed for vehicles, places suitable for give-and-take waiting are intervisible to remove the potential for conflicting vehicle movements within the straight sections thereby prioritising cycling and walking through the core residential areas.

# Refuse Strategy

## Key

**Communal bin stores**

**Individual refuse access**

NTS

### Parking

A core principle underpinning the Rickman's Green Village Proposal, is that walking, cycling and public transport use should be overtly prioritised above car use. The car parking strategy is fundamental in supporting this Vision. The quantum of car parking proposed accords with West Sussex County Council Guidance on Parking in New Developments (September 2020) as set out in the table below:

| Number of bedrooms | Vehicle Spaces | Cycle Spaces |
|---|---|---|
| 1 | 1.5 | 0.5 |
| 2 | 1.7 | 1 |
| 3 | 2.2 | 2 |
| 4+ | 2.7 | 2 |

A 10% reduction has been applied to parking provision (in line with WSCC guidance) to promote sustainable travel modes, and the means by which car parking which is surplus to demand can be permanently removed from the streetscape, has been set out in the Framework Residential Travel Plan provided under separate cover.

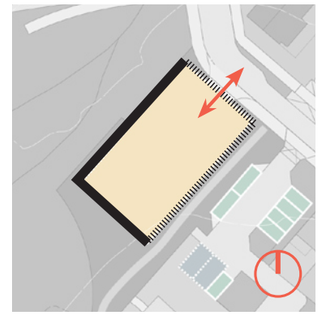
For the 108 homes, the total number of parking spaces provided is 206 with 8 spaces provided within the wider farm masterplan.  Each home has 1 parking space provided in close proximity and 2 spaces for some larger properties. Second cars and visitor parking is dispersed throughout the site.

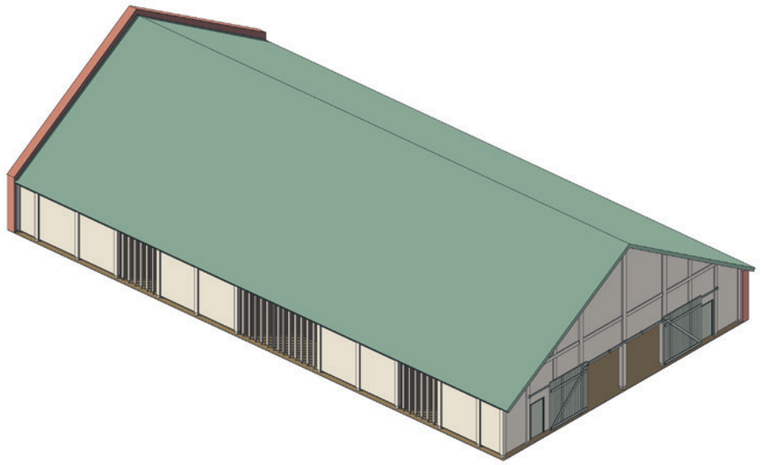
### Cycle Parking

All houses have rear garden access for cycle parking on plot. Apartments are provided with combined bin and cycle stores for communal use. WSCC guidance does not currently determine a need for visitor cycle parking provisions.

## Key

- Garages
- On street parking
- Tandem parking, on plot
- Parking Barn





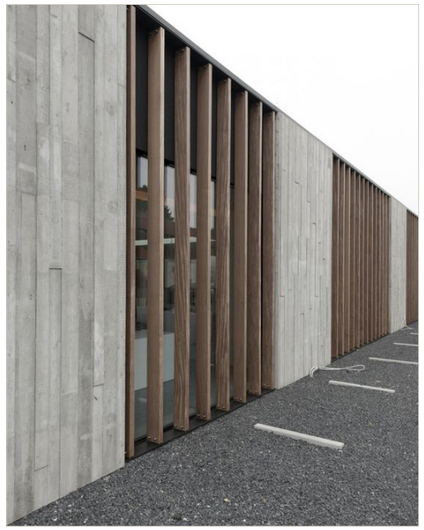
**Parking Barn**

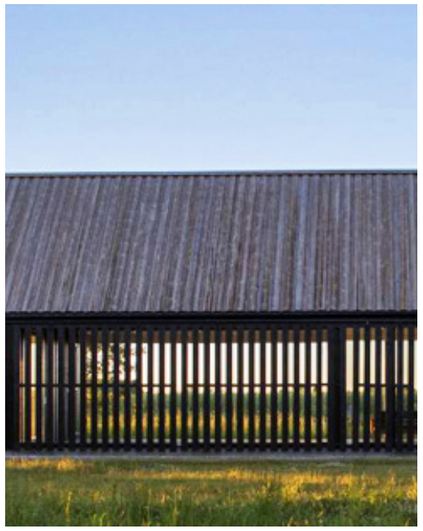
In addition to the Barn house typology, there is the further opportunity to reinforce the semi-agricultural character of the site with the introduction of a ‘parking barn’ structure.

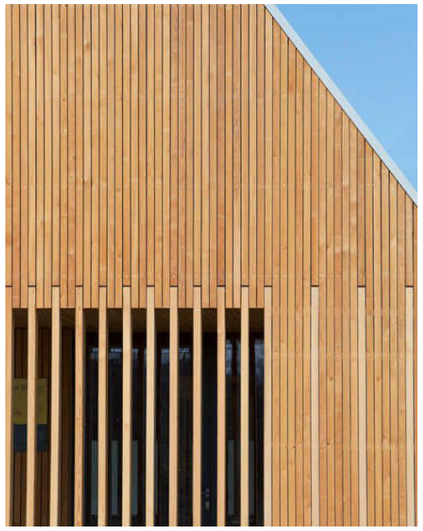
The Parking Barn is envisaged to accommodate c. 22 spaces and used for a mixture of resident and visitor parking as well as additional EV charging points.

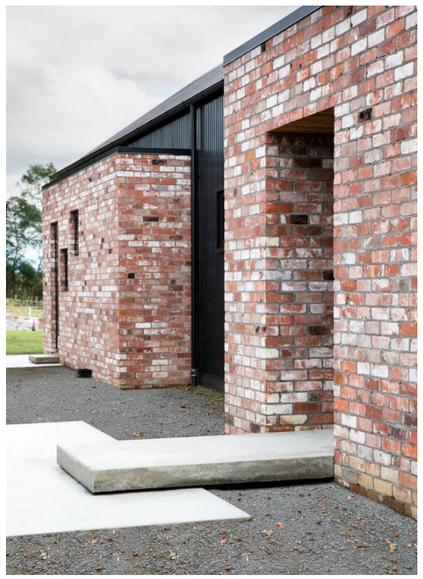
The NW and SW elevations of the Parking Barn are of solid brick construction limiting light spill and noise towards the adjacent Green Buffers (‘Ecotones’). The NE and SE elevations are facing public realm, with the latter running parallel to the leisure route, and therefore feature a more permeable façade of vertical timber cladding and slats.

However, safety and security are also key considerations, especially in the dark and when there are not many people about. Therefore, the timber façades are permeable only visually, allowing light to spill out, but restricting pedestrian access to only the controlled entrance points. Both vehicular and pedestrian entrances are envisaged to be controlled by an electronic access system. A CCTV system could also be considered, but this would need to be linked to a wider management plan across the entire Rickman’s Green Village.







This chapter sets out the Phase 1 landscape design proposals only. Please refer to Appendix A for the full Landscape Supporting statement, which considers the proposals in the context of the whole Rickman's Green Village masterplan.

# 07 Landscape Design Proposals

# Landscape Infrastructure

The landscape design strategy for Phase 1 of the proposed development very much reflects the wider infrastructure landscape principles for the masterplan (described in the Landscape Supporting Statement by Sheils Flynn provided in Appendix A) and looks to create and maintain a landscape that provides a rich and stimulating environment for residents. The landscape is not considered as a cosmetic addition but rather an integrated part of the design, management and function of the development. Opportunities for informal play and social interaction are prominent throughout the scheme, offering residents of various ages an opportunity to play, socialise and interact with the wider community. The landscape design principles can therefore be split and described in terms of the following key components:

- Linear Green & Screening Woodlands
- Central Landscape Corridor
- Ecotone and Recreational Routes
- Village Streets

These components are described in more detail on the following page.


**Phase 1 Landscape Infrastructure Plan**

### 1. Linear Green & Screening Woodlands

The new farm access route to the south of the existing farm entrance will set up the opportunity to implement the first phase of the new Linear Green envisaged in the wider masterplan.

Turning into the site from Rickman's Lane, Phase 1 will dominate the view to the right of this new road; whilst to the left, the hedges and trees of the existing farm access will be retained and combined with additional woodland planting to create a strong linear greenspace. The new and existing planting will in turn combine with other off-site planting to the north-west of the existing access route in order to effectively screen the Phase 1 area, over time, in views further from the north. The new access route reconnects with the existing farm access just south of the central landscape corridor after which new understorey and woodland planting to the south will gradually screen the Phase 1 neighbourhood from users of this route. Potential future access points linking to any wider masterplan will be carefully considered in order to minimise landscape and visual impact but will not be fully implemented as part of Phase 1.

### 2. Central Landscape Corridor

The central landscape corridor aligns on the existing field boundary and splits the Phase 1 development area north-west to south-east into separate northern and southern zones. These zones are linked mid-way by the main Phase 1 street, which crosses this landscape corridor at this point. The single crossing allows the corridor to otherwise retain a unity of form into which it is possible to integrate the Phase 1 SUDs/ drainage strategy. A linear swale collects surface drainage as a carrier route connecting under the main street linking onwards into an attenuation pond, positioned at the south-eastern end of the spine next to an attractive stand of oak trees. These retained trees provide a very strong structuring element and visual focus which is complemented by a new line of multi-stemmed trees aligned along the swale, to the north of the main street. This SUDs corridor along with the new trees provide an opportunity to establish an attractive visual focus to the landscape as well as creating opportunities for ecological enhancement.

The main pedestrian recreational routes will align either side of the central swale, which in turn creates an opportunity for positive development frontage onto this important neighbourhood space. A play area and allotments are located adjacent to each other on the north side of the main pedestrian link and together they establish an important community focus. A bold pedestrianised zone enables safe connection onwards across the new farm access to the adjacent central linear green with easy connection to the wider PROW network.

### 3. Ecotone & Recreational Routes

The Phase 1 development area is set back on the line of the "ecotone" buffer zones. The edge of the southern zone is 30m from the tree line with the northern zone 10m from the tree line. These buffer zones provide extremely attractive landscape views and the Phase 1 layout demonstrates the opportunity for development to positively front onto extensive landscape corridors that will also become key recreational routes.

For the southern development zone, the ecotone edge is defined by the neighbourhood SUDs drainage swales along which the recreation route also aligns. A low "ha-ha" style gabion retaining wall on the development side of the swales retains the path with a parkland style rail on top allowing open views whilst at the same time deterring access. The swales link onwards to an attenuation pond in the very southern corner of the site. The drainage swales and attenuation areas will be seasonally wet and will therefore create a variety of opportunities to establish new habitats and add biodiversity as well as creating points of visual interest and focus.

The recreational route is designed to create a variety of widths and scales of spaces along its length with places to sit, socialise and enjoy the view. The multiple connections back into the wider neighbourhood create positive permeability and attractive points of easy access. A thick biodiverse native hedgerow will define garden plots as a backdrop to the route and assist with further preventing any light spill or other domestic activities from impacting the ecotones. The "ecotone" recreational routes will become an integral part of the identity of the new village and provide a wide variety of opportunities for circular walking routes linking back to the main village greens and destination open spaces.

The northern development zone is served by a very similar recreational route with a "ha-ha" style wall and rail which loops northwards enabling linkage back to Rickman's Lane in the north-east corner of the site before returning to link with the linear green at the entrance to the village.

### 4. Village Streets

Within the Phase 1 neighbourhood, the streetscape will be simple and low-key. The overall layout is structured around a main street and a series of lanes/courtyards which, combined with the variation of house types and the gentle slope of the site, create a good balance of order and informality.

Specimen street trees of a variety of sizes are carefully located as integral components of the street scene. Garden boundaries fronting the public realm will be defined by a mixture of hedges, walls and parkland type railings. For all areas of planting the aim will be to choose habitat rich species in order to encourage local wildlife into gardens by creating linkage with the ecotones and woodland habitats surrounding the site. The linear rain garden in the main street will be one such opportunity to create a striking visual and ecological feature which will connect directly, visually and functionally, with the wider landscape corridors.




**1. Linear Green & Screening Woodlands**

**2. Central Landscape Corridor**

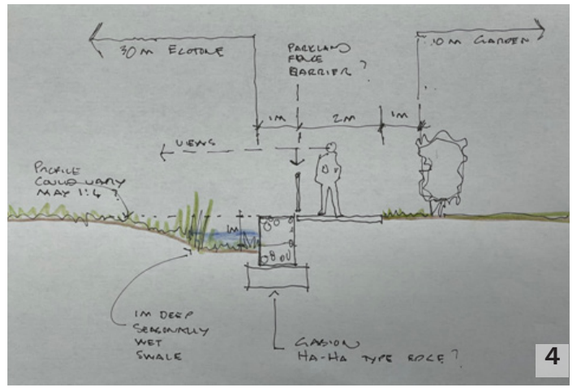
**3. Ecotone & Recreational Routes**

# Landscape Layout


**Phase 1 Hard and Soft Landscape Layout**

# Landscape Layout




1. Rain garden

2. Central drainage swale

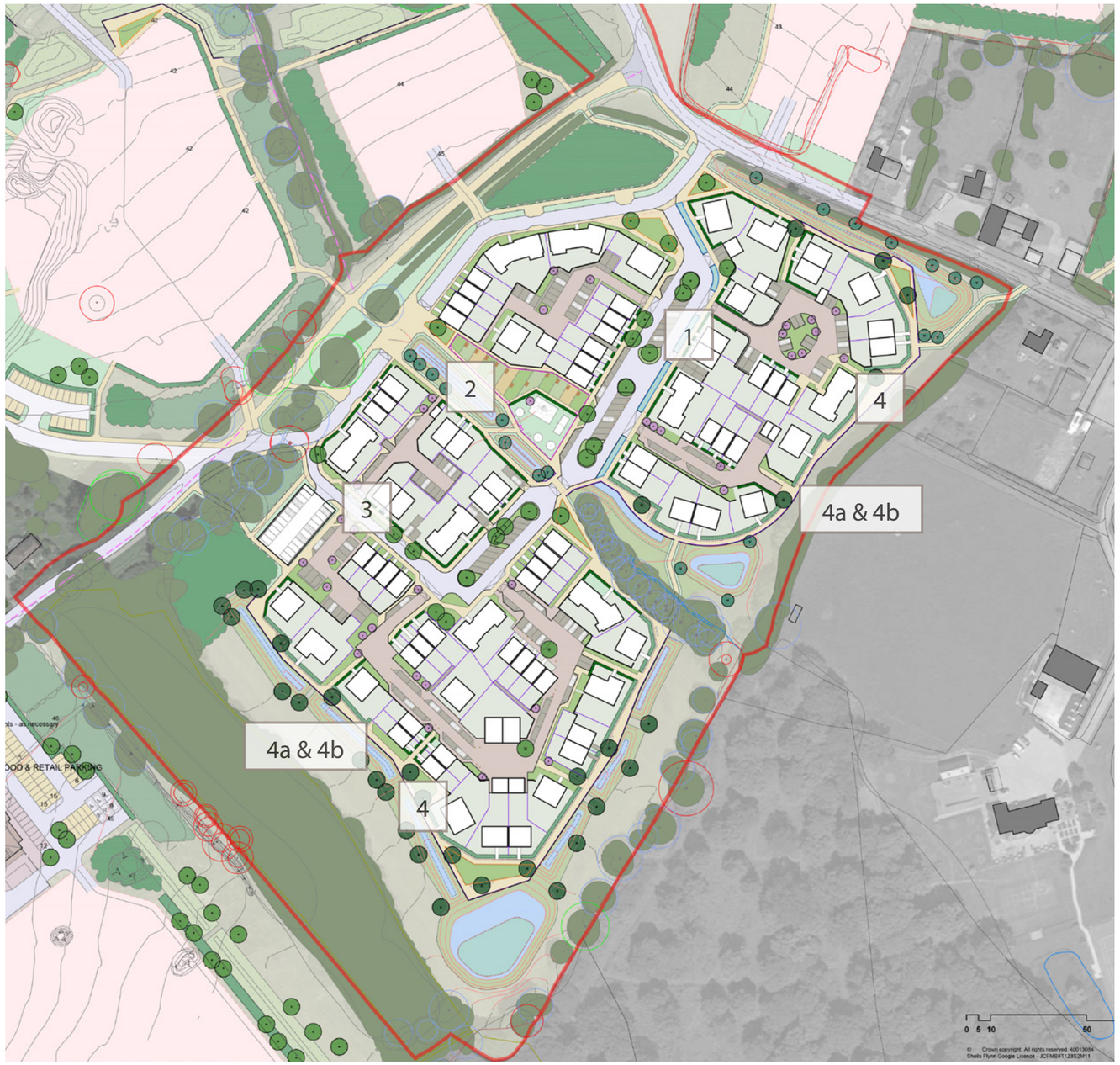
3. Native specimen trees with native inspired planting

4. Ecotone edge recreational route

4a. Ha-Ha retaining wall

4b. Parkland fence





We have consulted the 'Secured by Design Homes 2019 (Version 2)' guidance document, in the development of the scheme, and demonstrate how the principles that are relevant at this stage of design have been applied.

### Layout of Roads and Footpaths

The scheme has been designed to prioritise walking and cycling over vehicular movement, thereby ensuring that the street hierarchy and movement network is well defined and easy to navigate. Each street and route, including the minor green connections to the peripheral recreational route, is well overlooked by primary and secondary frontages of houses and apartments.

### Layout and Orientation of Dwellings

The Phase 1 scheme incorporates a mixture of different dwelling types, from dual aspect apartment blocks to houses in detached, semi-detached and terrace configurations, arranged in an organic and informal layout in line with the central concept of a rural village settlement influenced by the agricultural context. This approach lends itself naturally to increased opportunities for natural surveillance of the streets, lanes, community green spaces and leisure routes throughout the day. Care has been taken that all public spaces are overlooked by active façades.

### Communal Areas and Play Space

The Central Green Corridor, which forms the backbone of the scheme, and the circular recreation route, running around the perimeter of Phase 1, are an integral part of the development and offer significant visual amenity to the scheme generally, but also in particular to the surrounding residences. Therefore, homes have been oriented to maximise views of these primary green infrastructure assets, which as a result benefit from increased natural surveillance.

The play space is located within the Central Green Corridor at the heart of the development and similarly benefits from natural surveillance from the surrounding homes. The only exception is the end-of-terrace property to the north-east, which sits within the 20m safeguarding zone and therefore does not have windows overlooking the play space.

### Gable End Walls

Across the Phase 1 development, there are limited instances of windowless elevations generally - the majority of homes have windows on upper levels on all façades - virtually none immediately adjacent to public spaces. The exception to this is the end-of-terrace property immediately adjacent to the play space due to safeguarding reasons. Defensible planting should be considered in this location.

### Dwelling Boundaries

All dwelling boundaries are clearly defined as shown on the hard and soft landscaping plans. Boundary treatments facing public realm are aligned with the landscape-led approach that has driven the design of this development and are therefore typically planted solutions rather than walls or fences.

Front boundaries are typially demarcated with clipped hedges or native hedgerows (adjacent to ecotones) and occasionally with ornamental grasses and shrubs (fronting onto main routes). Where necessary, the specification for the hedges and hedgerows can be upgraded to more effective defensive species. Rear boundaries are a combination of garden walls and hedhes/hedgerows, depending on location within the masterplan. Rear gardens are subdivided using 1.8m timber close board fencing.

### Vehicle Parking

As the scheme intends to promote modal shift, focusing the design of public realm towards pedestrians and cyclists over cars, there is limited provision of on-plot parking spaces. Instead, the majority of parking is provided in small groups within the streetscape as well as courtyards. In all instances, these spaces are located in high thoroughfare areas and/or well-overlooked by the individual properties.

The proposed 'parking barn' will be access-controlled and lit to the relevant levels as recommended by BS 5489-1:2013. A CCTV system could also be considered, but this would depend on the intended management plan for the wider residential development and the 'village hub' at the centre.

### Street Lighting

Lighting is often used to provide a sense of security in urban environments and generally reduce the fear of crime. As Rickman's Green Village is located in a naturally dark rural setting and is close to the South Downs International Dark Sky Reserve, the use of typical street lighting is incompatible with retaining the dark character of the area and protecting the dark skies above. As the wider area of Plaistow surrounding the development is designated as 'no street lighting' in guidance provided by West Sussex Council combined with the low crime rate and rural setting, no streetlighting is proposed.

Each properties entrance is to be fitted with a suitable exterior light operated on proximity sensors which is carefully designed to provide sufficient light for facial recognition, sense of security at the door and general amenity for the residents. This lighting is carefully designed with lighting professional and ecologist input to ensure the light is not detrimental to the intrinsically dark setting or light sensitive ecology.

## Key

- Primary Façade
- Secondary Façade (windows on both storeys)
- Main Vehicular & Cycle Access
- Secondary Vehicular & Cycle Access
- Footpaths
- Leisure Route
- Green Pathways
- Small Parking Courts
- Communal Areas
- Play Space
- Play Space Buffer / Restricted Façade

All development should respond to the impacts of climate change and emphasise planning for the future. This chapter sets out principles that have already been adopted within the proposals for Phase 1 as well as the framework for building on the sustainability aspirations for the delivery stages.

# 08 Sustainability

# The built environment accounts for 39% of global carbon emissions and it's time for the industry to embrace change and adapt.

**The UN describes climate change as one of the most pervasive and threatening issues of our time, with far reaching impacts in the twenty-first century. It goes on to say climate change is expected to have unprecedented implications on where people can settle, grow food, build cities and rely on functioning ecosystems for the services they provide. In many places, temperature changes and sea level rises are already putting ecosystems under stress and affecting human wellbeing.**

- The global average temperature in 2019 was 1.1 degrees Celsius above the pre-industrial period, according to the World Meteorological Organization (WMO).
- 2019 concluded a decade of exceptional global heat, retreating ice and record sea levels driven by greenhouse gases produced by human activities (WMO).
- Average temperatures for the five-year (2015-2019) and ten-year (2010-2019) periods are the highest on record (WMO).
- 2019 was the second hottest year on record (WMO).

Nations agreed to a legally binding commitment in 2015, the 2016 Paris Agreement, to limit global temperature rise to no more than 2.0C above pre-industrial levels, but also offered national pledges to cut or curb their greenhouse gas emissions by 2030.

Scientists believe we must restrict global temperature rise to 1.5 degrees Celsius above the pre-industrial period. There will still be serious climate impacts at 1.5°C, but this is the level scientists say is associated with less devastating impacts than higher levels of global warming. Every fraction of additional warming beyond 1.5°C will bring worse impacts, threatening lives, livelihoods and economies.

To prevent warming beyond 1.5°C would require a reduction in emissions by 7.6% every year from this year to 2030.

On 27 June 2019 the UK became the first major economy in the world to legislate to end its contribution to global warming by 2050, increasing the ambition of its commitments to reduce greenhouse gas emissions under the Climate Change Act 2008.

The Built Environment contributes to approximately 30% of the UK's total carbon footprint. The UK Government is committed through the Climate Change Act to reduce $CO_2$ emissions to 80% of 1990 levels by the year 2050 through a programme of $CO_2$ emission reductions.

To achieve this we must design buildings to be:

**Zero energy / carbon in operation** - The carbon dioxide produced as a result of the production and use of the energy from fossil fuels consumed for the day-to-day operation of buildings and infrastructure.

**Zero embodied energy / carbon** - The carbon dioxide produced from the energy used in the extraction, fabrication, and transportation from place of origin of the materials used in the construction, including recognised carbon offset schemes.

**Climate Adaptable** - How do we design, construct and renovate buildings, and infrastructure to maintain the desired performance in the event of climate change in future decades, for example if local temperatures continue to rise or rainfall increases.

- At 1.5°C, over 70% of coral reefs will die, but at 2°C over 99% of all reefs will be lost.
- Insects, vital for pollination of crops and plants, are likely to lose half their habitat at 1.5°C but this becomes almost twice as likely at 2°C .
- The Arctic Ocean being completely bare of sea ice in summer would be a once per century likelihood at 1.5°C but this leaps to a once a decade likelihood at 2°C .
- Over 6 million people currently live in coastal areas vulnerable to sea level rise at 1.5°C degrees, and at 2°C this would affect 10 million more people by the end of this century.
- Sea-level rise will be 100 centimetres higher at 2°C than at 1.5°C.
- The frequency and intensity of droughts, storms and extreme weather events are increasingly likely above 1.5°C.

# RIBA Sustainable Outcomes 2030

## Background

The transition to a zero-carbon built environment requires the collective efforts of all involved, doing the minimum is not an option. As a construction industry we should see this as an opportunity and not just an obligation.

By adopting good design principles and acknowledging statutory and industry guidance Rickman's Green Village has an opportunity to create beautiful, comfortable places to live, work and play with a net-zero impact on the planet by reducing the operational and embodied carbon associated with constructing and running buildings.

As signatories of the 2030 Climate Challenge, HLM have adopted the targets and approach set out by the RIBA in their 2030 Sustainable Outcomes Guide and we have set ourselves a bold and ambitious goal that all projects designed in our studios will be capable of meeting these targets by 2025.

Our aim is simple, to deliver the highest performing buildings which have a positive impact on the lives of those who use them and a positive impact on the world for future generations.

In this context we have set out a framework for achieving a truly sustainable, healthy community at Rickman's Green Village.

## Framework

Proposals for both Phase 1 and all future phases of Rickman's Green Village should aim to embrace sustainable design across all possible aspects of the scheme, both on an individual home as well as the whole masterplan scale. For this reason, we recommend a design framework based on the RIBA Sustainable Outcomes, mapping design decisions against each of the 8 Outcomes from the throughout the design process.

At this stage, the proposals for Phase 1 have sought to incorporate as many of the Outcomes as possible.

## RIBA Sustainable Outcomes

In line with the UN's *Sustainable Development Goals*, the RIBA have developed 8 Sustainable Outcomes (*the "Outcomes"*). These are outlined overleaf, along with an outline strategy for achieving them. The target for each *Outcome* and the techniques for measuring them should be established prior to the next stage of design and agreed amongst the entire project and design team.

Where the UKGBC and FHS provide a framework and statutory regulation, the RIBA outcomes encompass a more holistic approach to sustainability, covering sustainable water use, ecological improvement and social value as well as operational costs and building performance.

With an overwhelming amount of information available, the Outcomes seeks to distil the complexity of sustainable design in to a set of measurable and manageable outcomes that can be embedded in daily industry practice. The outcomes:

- Are measurable by common industry accepted methods of building evaluation;
- Align with requirements of the UK Government's Ministry of Housing Communities and Local Government (MHCLG) and the Treasury's Green Book;
- Are rigorous and robust, built on cutting edge knowledge in the field, and expressed in interdisciplinary global language of research to encourage engagement across industry and academia, across disciplines and cultures.

It is also important to highlight that the outcomes should not be seen as separate silos, and instead are inextricably cross-linked. For example, Net Zero Operational Carbon and Net Zero Embodied Carbon should be seen as twin targets under the concept or Whole Life Net Carbon as defined by the UKGBC Net Zero Carbon Buildings: A Framework Definition (2019) and reported using the RICS Whole life carbon assessment for the built environment (2017)[5].

At this stage, the proposals for Phase 1 have sought to incorporate as many of the principles within the Outcomes as possible. However, this has only established a solid basis for delivering on this vision as the majority of Outcomes are truly realised only at delivery stages of schemes.


Above: "RIBA Core Sustainable Outcomes Target" from RIBA Sustainable Outcomes Guide, published by RIBA 2019.

# RIBA Sustainable Outcomes

## Net zero operational carbon

Target - <0-55kWh/m2/y

The carbon dioxide produced as a result of the production and use of the energy from fossil fuels consumed for the day-to-day operation of the building or structure, including Low/zero carbon renewable energy technologies both on and off-site, plus recognised offset schemes where essential.

[As principally defined by *CIBSE TM 54 Evaluating Operational Energy Use of Buildings at Design Stage, 2013, or Passivhaus PHPP.*]

**Energy & Operational CO2 emissions** – Identify established local and regional energy standards, building form and fabric are developed to optimise energy efficiency.

**Adapting to climate change** – set design standards to lower the risk of overheating and flooding, under current and future climate scenarios. Encourage the use of mitigation strategies at the urban scale (e.g. via increase in green cover and trees) and building scale (e.g. orient building to reduce overheating, utilisation of shading and solar control glazing etc.).

## Net zero embodied carbon

Target – 300CO2e/m²

The carbon dioxide produced from the energy used in the extraction, fabrication, and transportation from place of origin of the materials used in the construction, including recognised carbon offset schemes.

[As principally defined by *RICS Whole Life Carbon Assessment for Built Environment, 2017.* ]

**Materials & Embodied CO2 emissions** – Set criteria to ensure that all materials are sustainably sourced, in line with established sourcing standards (e.g. FSC, BRE Green Guide ratings etc.) and appropriate ranges for embodied carbon emissions are set for differing areas within the proposed development area.

**Waste** – Limit construction waste by establishing minimum standards and encouraging off-site construction techniques where feasible.

## Sustainable water cycle

Target – 10l per person per day

Analogous to operational carbon dioxide, the amount of mains water used in the operation of the building including the offset by use of greywater or recycled water to reduce mains water consumption.

[As principally modelled by *England and Wales building regulations water calculator*]

**Flood risk & Sustainable Drainage** – Identify if the development sits in an area at risk of flooding and set a standard to ensure that the proposed district centre will be designed to mitigate these risks and attenuate surface water flow effectively.

**Water efficiency** – set criteria to limit the daily water use for differing building types and encourage the use of rainwater and greywater harvesting, and inclusion of additional features such as waste water heat recovery systems (WWHRS).

## Sustainable connectivity and transport

Metric - kgCO2/km/per occupant

The purpose of this outcome is to measure the resultant carbon impact of the travel of occupants and visitors to and from site or building to a local transport hub or local retail and community facilities.

[As principally defined by *BREEAM 2018 Transport Credits*]

**Transport** – Identify existing transport links to the site and set design standards to identify additional public transport requirements, reduce private modes of travel within the development and promote sustainable modes of transport such as cycling and walking. Set standards for delivery and servicing transport requirements of the site (e.g. waste collection).

## Sustainable land use and biodiversity

Target - Urban Greening Factor (UGF) of 0.3

The intention is that this outcome should be used as a measure of actions taken to maintain, protect and improve the flora and fauna on site.

[As principally defined by *BREEAM 2018 bio-diversity credits* and *Urban Green Factor tool*]

**Micro-climate** – Set design standards to ensure that unfavourable micro-climatic conditions, such as areas of increased wind flow at pedestrian and amenity areas, are discouraged or mitigated where they may occur.

**Nature conservation & biodiversity** – establish criteria to clearly distinguish the ecological value of the site, including the identification of trees, plant and animal species that may be 'at risk'. Set standards to retain ecological areas containing 'at risk' species and develop the outline design by integrating the conservation of these areas and replace any ecological features lost by incorporating 'green cover'.

## Good health and wellbeing

Metric – Various

This outcome includes key variables of internal occupant health and well-being, including Indoor Air Quality, Daylight, overheating, acoustic comfort, responsive controls, and physical contact to outside.

[As principally defined by *CIBSE TM 40, 52,* and *59, Good Homes Alliance* overheating guidance and/or *WELL Building Standard v2 Preconditions, 2019*]

**Daylight & Sunlight** – Set design standards for ensuring that the development is designed to reduce overshadowing and detrimental impacts on daylight and sunlight access.

**Noise & Acoustics** – Identify potential risks from noise via highways and roads and set criteria for mitigation.

**Air quality** – Set minimum standards to minimise impacts on air quality from construction and demolition works. In addition, set criteria to minimise air pollution via traffic, material finishes (e.g. limit the use of VOC and formaldehyde emitters) and operational uses within buildings (e.g. limit NOx emissions).

## Sustainable communities and social value

Metric – Various

The intention of this outcome is to measure the positive impacts of good placemaking on a local community.

[As principally defined by *RIBA Social Value Toolkit, 2019*]

**Engagement** - With University stakeholders, staff, students, the community and Local Authority to develop proposals that meet social, economic and environmental objectives.

**Place** - Create a strong identity for the development that is permeable, accessible, inclusive and secure.

## Sustainable life cycle cost

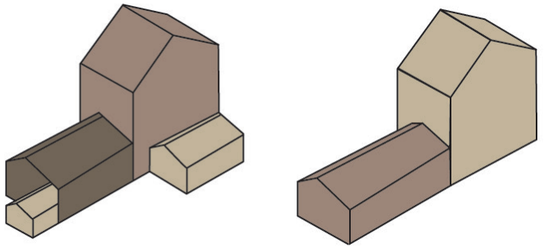
Metric - £/m2/yr

To ensure a holistic outcome with regards to economic sustainability, the intention is to use Government Soft Landings requirement for measuring operational costs of buildings.

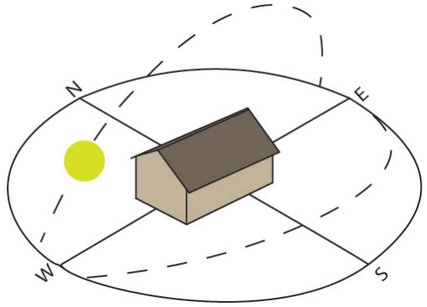
[As principally defined by *ICMS Global Consistency in Presenting Construction and Other Life Cycle Costs, 2019*]

**Wholelife Costs** - Identify direct emissions (those you can control such as primary energy), indirect energy emissions (those that are a consequence of your activities but that you cannot control) and other indirect emissions (such as business travel and waste disposal). Whole Life Cost Assessments inform capital and operational expenditure decisions.

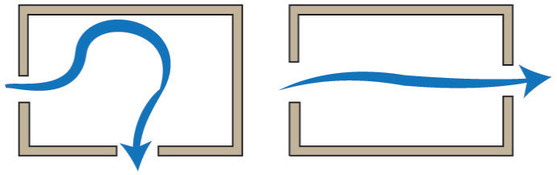
**Post Occupancy Evaluations** - Carry out detailed process, function and technical evaluations of buildings in use to monitor building performance and inform future projects.



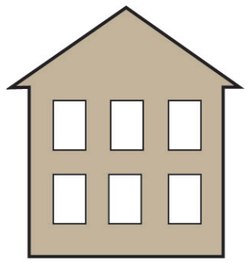
Keep building form compact to avoid large exposed surface areas that are vulnerable to heat loss



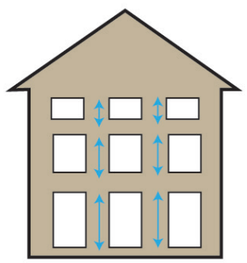

Prioritise south- facing homes, that are orientated no more than +/- 30º south. To avoid overshadowing allow at least 1-1.5m distance for every 1m of height



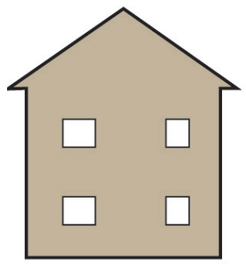
Prioritise dual aspect dwellings with cross ventilation. Allow for several openings across the façade to climate excess heat



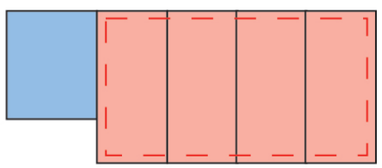
Maximise windows on the south facing façade for optimal daylight and solar gain in winter ( can add shading devices to avoid overheating in summer)



Reduce window size up the façade due to greater daylight availability and less overshadowing. Aim for max window size of triple glazing to be 700mm wide and 1,600mm high



Minimise windows on the north façade due to increased heat loss



Group spaces to minimise heat loss and increase efficiencies. Keep cold spaces separated with increased insulation between warm and cold spaces

Modern Methods of Construction (MMC) delivers more efficiency, cost savings, improved build quality, reduces waste and thereby reduces the carbon footprint of development. As a sustainable method of construction, it is increasingly recognised for the many benefits it can provide to the construction industry. Since 1994, every major review of the construction industry has in some way recommended a move towards offsite construction.

However, in some parts of the world, including the UK, take up remains low, with less than 5% of housing projects described as modular. Meanwhile, many other countries, such as Germany, Japan, China, and the Netherlands, are growing their capabilities, with Sweden blazing a trail with 84% of housing projects considered modular.

Certainly, almost all major contractors are now earnestly preparing to embrace MMC within the next few years if they were not already, with market leaders such as L+G and Skanska forming a joint venture with IKEA to produce the BoKlok. More and more designers are realising there is an urgent need to treat building design as a manufacturing process, where quality checks and safety and product finishes can be more effectively managed, saving both on costs and the period of disruption on site.

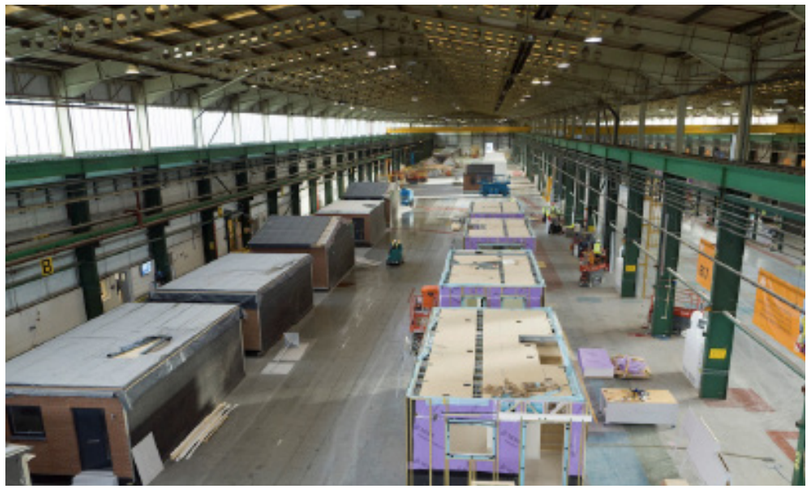
The perceived benefits of MMC are considered to be certainty of programme and cost, improved quality of product and reduced disruption time in creating livable environments.

Legislation and insurance is changing also with BRE Innovate UK progressing with the initiative to review building regulations in relation to MMC.

Across other sectors, such as residential, hospitality, workplace and defence, there is also a new willingness to embrace MMC to improve standards in the development process.

Although the examples provided on this page are of an urban character, the MMC processes do not determine character. Instead, they provide a sustainable means of realising design. The house types for Phase 1 of Rickman's Green Village have been designed to MMC principles. They therefore provide an exciting opportunity to embrace MMC construction techniques in delivering a village suited to the twenty-first century.

**^^ TopHat MMC facility**
South Derbyshire



**^^ ilke Homes MMC facility**
North Yorkshire

**^ TopHat MMC completed homes**
Kitchener Barracks, Chatham


**^ ilke MMC completed homes**
Southam, Warwickshire

**Leisure Route**

The scheme puts emphasis on the leisure route and thus plants sustainable travel at its core. Interaction with this green route notates a prime location on site and creates community

Furthermore, on-plot parking is limited, moving parking into communal shared zones - this is possible due to scope within the WSCC car parking guidance for consideration to reduce the expected level of parking demand by 10% in order to promote sustainable travel modes.

**Lovedon Fields**
Rural walk

# Rainwater Harvesting

**Rainwater Harvesting (RWH)**

Rainwater harvesting is the process of collecting rainwater to reuse it within the home, reducing dependency on the mains supply for some daily activities.

This strategy is to be adopted by Phase 1 of Rickman's Green Village. It would require a rainwater collection tank to be installed on every plot - either under the house or below the garden. Each plot has ample space for this provision and all houses would benefit from the recycling of grey water for use in flushing toilets, garden irrigation and car washing, to name a few.

The size of the tank equates to the roof area of the built area on plot.

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