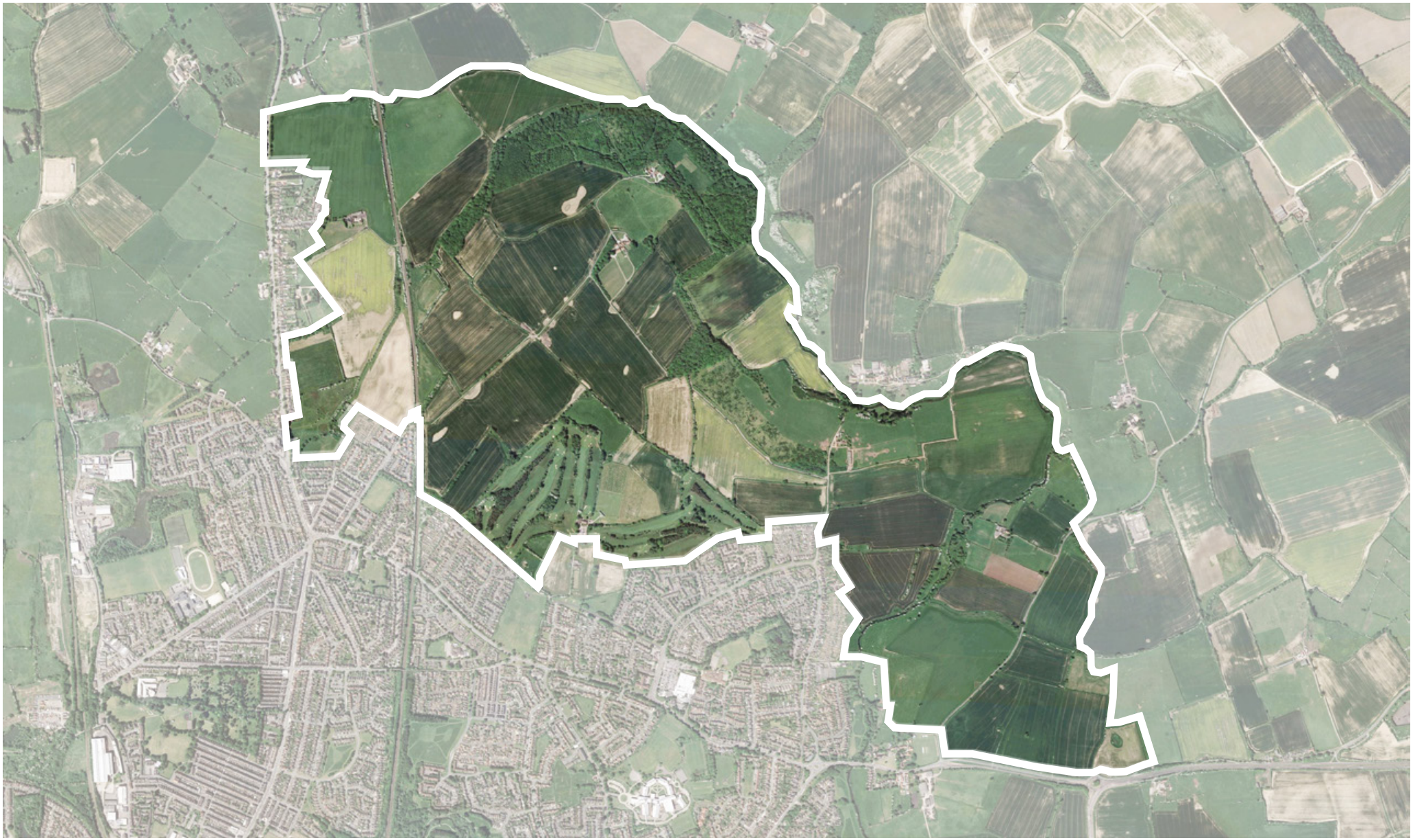

SKERNINGHAM GARDEN VILLAGE DESIGN CODE

DRAFT SPD

24.08.22

produced by
designe ltd

DARLINGTON Borough Council

CONTENTS

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0.0 | INTRODUCTION

Fig. 01: View within the site: looking South from the West side of the East Coast Mainline

Document Background

The document is informed by a range of influences from local, regional and national policy. These include the statutory plans, documents, standards and strategies that form part of the adopted Darlington Local Plan, as well as non-statutory frameworks and guidance produced by the Government.

In November 2016, the Council's Cabinet agreed to engage with the Advisory Team for Large Applications (ATLAS), now part of Homes England, to investigate how this part of the Borough could contribute to meeting the Borough's housing needs in a planned, sustainable way.

Working with the Council, the sites promoters and major landowners started a master planning exercise for the site in 2017. The emerging masterplan is being prepared with a focus on the landscape and biodiversity context of the site, its heritage assets, and its relationship with existing communities, adopting the Healthy New Town principles to its layout and design (see Policy DC 3).

The master planning process has been informed by a number of studies to identify the opportunities and constraints of the area including landscape, ecology, ground conditions, historic assets, transportation and accessibility as well as establishing the infrastructure and community facilities that will be required to support a sustainable community, integrated with the existing urban area.

A draft masterplan was also the subject of public consultation organised by the sites promoters during the Autumn of 2017. This work, along with the feedback from consultation, has in turn informed the illustrative Masterplan Framework and draft policy requirements for the strategic allocation.

About this document

This Design Code (DC) has been commissioned by Darlington Borough Council (DBC) to assist the Council in its statutory planning role to secure and maintain the highest standards of design for the proposed development of Skerningham.

The Skerningham Garden Village Design Code (this document) sets out the strategic design requirements to be provided in the future site development masterplan.

The Design Code is intended to be user-friendly for all readers and therefore easy to understand and apply. This will ensure that all elements within the scheme are designed to work in harmony towards achieving the design vision of a locally distinctive, high-quality place.

Design Code Pathfinder Programme

Government is committed to supporting and funding local authorities to ensure the planning system delivers more beautiful and sustainable buildings and places. The Department for Levelling Up, Housing and Communities (DLUHC) has supported 39 organisations (local authorities and four neighbourhood planning groups) as pathfinders to produce exemplar design codes and design coding processes, from which others can learn best practice This Design Code is part of that programme.

A wider support package includes thematic workshops, one to one support provided by the Office for Place, collective round-tables and the peer-to-peer networks.

All pathfinders have committed to preparing a project plan at the start of the programme, that has been shared with DLUHC.

0.1 | PURPOSE OF THIS DOCUMENT

It is condition precedent that, before the developers Masterplan is prepared, the Council are required to prepare a Design Code (this document) for the site, in consultation with the community, within a time-scale of approximately six months of the Local Plan being adopted.

The Council will adopt the Design Code as a Supplementary Planning Document and the comprehensive masterplan and planning applications will be required to have regard to it.

The finalised comprehensive masterplan including infrastructure phasing plan is to be prepared by the applicant(s) in consultation with the community and is to be agreed with the Council in advance of any planning application being submitted for the Skerningham allocation site, either as a whole or in part.

An infrastructure phasing plan is required to set out in further detail the appropriate phases of the development that the infrastructure requirements set out in parts a-i of Policy H10 will be provided. This includes community and social facilities including neighbourhood centre, health hub, schools and other community facilities; green infrastructure and transport network including sustainable transport.

The DC will be considered by the Council and when approved it will thereafter be used to check that the proposals brought forward for the new garden village meet the very high design quality thresholds before granting consent for the initial strategic masterplan and the subsequent detailed elements within it. As the DC is intended to be used throughout the implementation period for the garden village it will be periodically reviewed and where appropriate updated.

The use of Design Codes is promoted within the Department for Levelling Up, Housing and Communities (DLUHC) National Design Guide and further government guidance will be brought forward providing best practice advice on the use and content of such Design Codes.

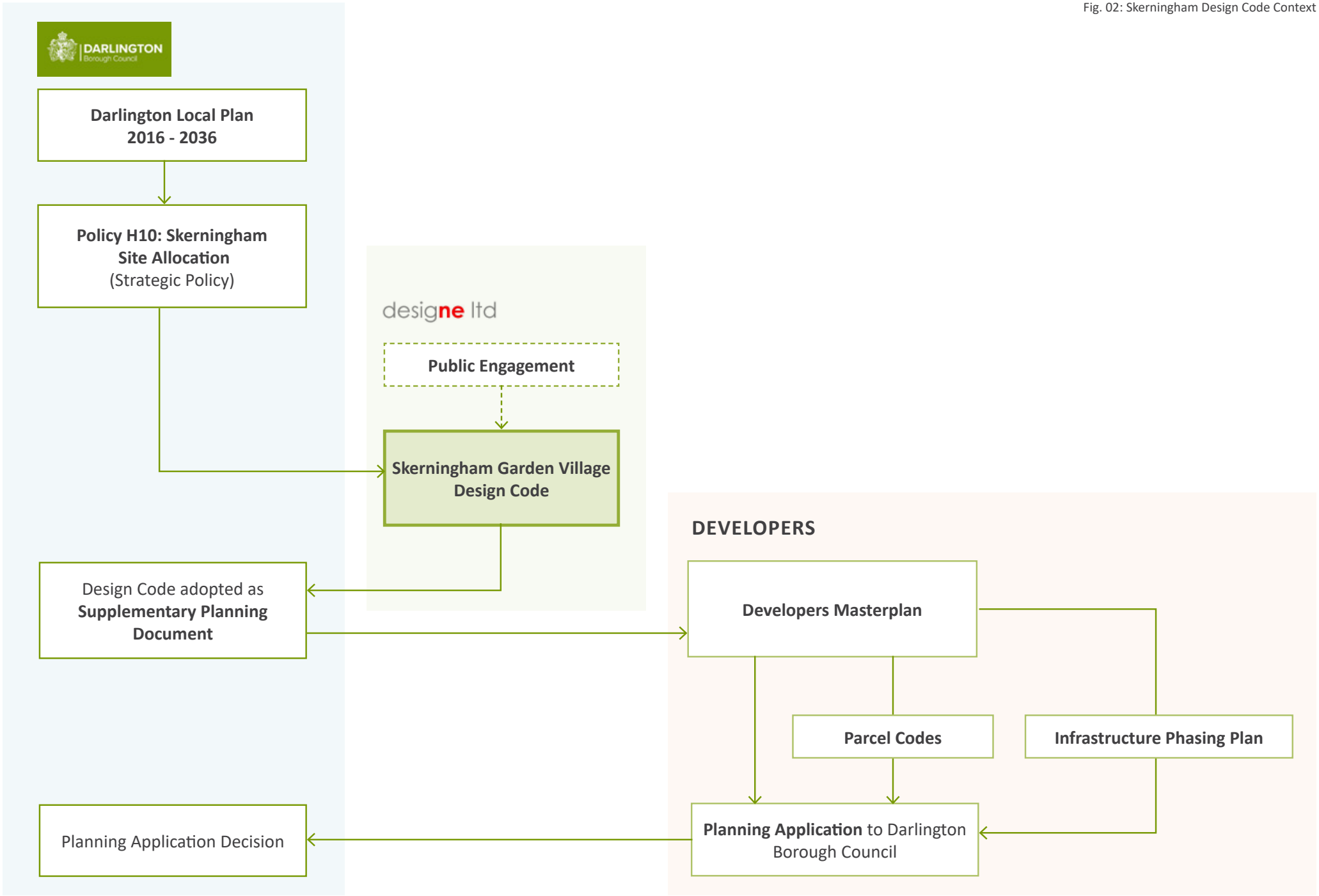
Parcel Codes

Once individual, discrete development parcels have been defined, a strategic Parcel Code for a block of development can be assembled by the Developer drawing upon the Design Coding for the overall scheme but highlighting specific building/public realm characteristics. The opportunity here is for the overall development to have a cohesive character but for a distinct identity of the individual hamlets to be defined and designed-in.

This should further avoid the overall scheme becoming a monoculture in terms of architectural style or planting character.

On sites of the scale of Skerningham the term “parcel code” would refer to a sub-set of a Character Area and relate to a hamlet-sized development parcel.

Fig. 02: Skerningham Design Code Context



0.2 | ROLE OF THE DESIGN CODE

Fig. 03: View within the site towards an existing cluster of buildings near Beaumont Hill

This Design Code should be used as overarching guidance for any future planning applications which come forward for the site.

The intention is to ensure that design quality is maintained throughout the entire development and that the vision for Skerningham is delivered.

01.
TO GUIDE FUTURE DEVELOPMENT

This design code establishes a clear set of rules and standards that will guide development in the future while offering the opportunity for creativity and flexibility for designers and developers.

02.
TO ENSURE HIGH QUALITY DESIGN

The Design Code will guide the character of development and ensure high-quality proposals that meet the vision and aspirations of the local community.

03.
TO ENSURE SITE SPECIFIC DESIGN

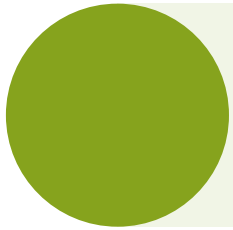
The Design Code will guide development by using a range of mandatory and advisory coding elements across the site in its entirety as well as within a defined set of character areas.

This Design Code (DC) for Skerningham includes a 'traffic light' type checklist for assessing the proposals brought forward through the statutory local planning process and in particular for evaluating the respective outline and reserved matter submissions together with any initial phased hybrid applications or separate infrastructure detailed proposals.

A 'traffic light' approach to appraising the respective components of what makes a successful place is a simple way to provides a comparative overview of how successfully a scheme meets the requirements of the code and identifies key areas that the promoters of the scheme need to focus on to meet the Council's aspirations for the development.

Additionally, the more assessors that evaluate a scheme using this tool, the better and more robust the averaged assessment will be.

The Assessment Checklist is included at the rear of this document as Section 7.0. The Checklist draws the key strategic criteria from the body of the report and allows the user to apply a RAG (red/amber/green) "traffic light" rating to indicate how successfully the scheme being evaluated meets the strategic requirements of the Design Code.



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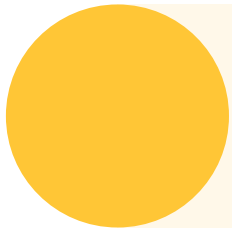
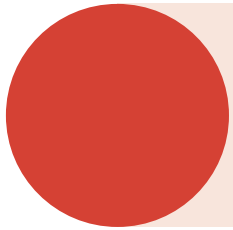


PARTIALLY MEETS CRITERIA REQUIREMENTS BUT REQUIRES FURTHER WORK BEFORE IT IS ACCEPTABLE.



DOES NOT MEET CRITERIA REQUIREMENTS AND CANNOT BE ACCEPTED.

0.4 | GARDEN VILLAGE ETHOS + PRINCIPLES

The promotion of new garden villages across England has been led by the DLUHC reflecting the desire to draw upon the successes of the original early 20th Century settlements in providing **sustainable, enduring and popular places to live and work** whilst enjoying a community lifestyle focussed on **personal well-being** within an **attractive natural environment setting**.

The Town and Country Planning Association (TCPA) has led the promotion of new garden villages believing that a new generation of 21st century garden cities could help to solve a range of problems such as the acute shortage of housing in the UK and the need to respond to climate change. This was set out in their influential 2011 publication *"Re-imagining Garden Cities for the 21st Century: Benefits and Lessons in Bringing forward Comprehensively Planned New Communities"*.

The principal features of a successful garden village as envisaged by the TCPA are to be:

A holistically planned new settlement which enhances the natural environment and offers high-quality affordable housing and locally accessible work in beautiful, healthy and sociable communities.

The related Principles for a Garden Village are highlighted in the adjacent diagram. These are intended to provide a framework for implementation and delivery.

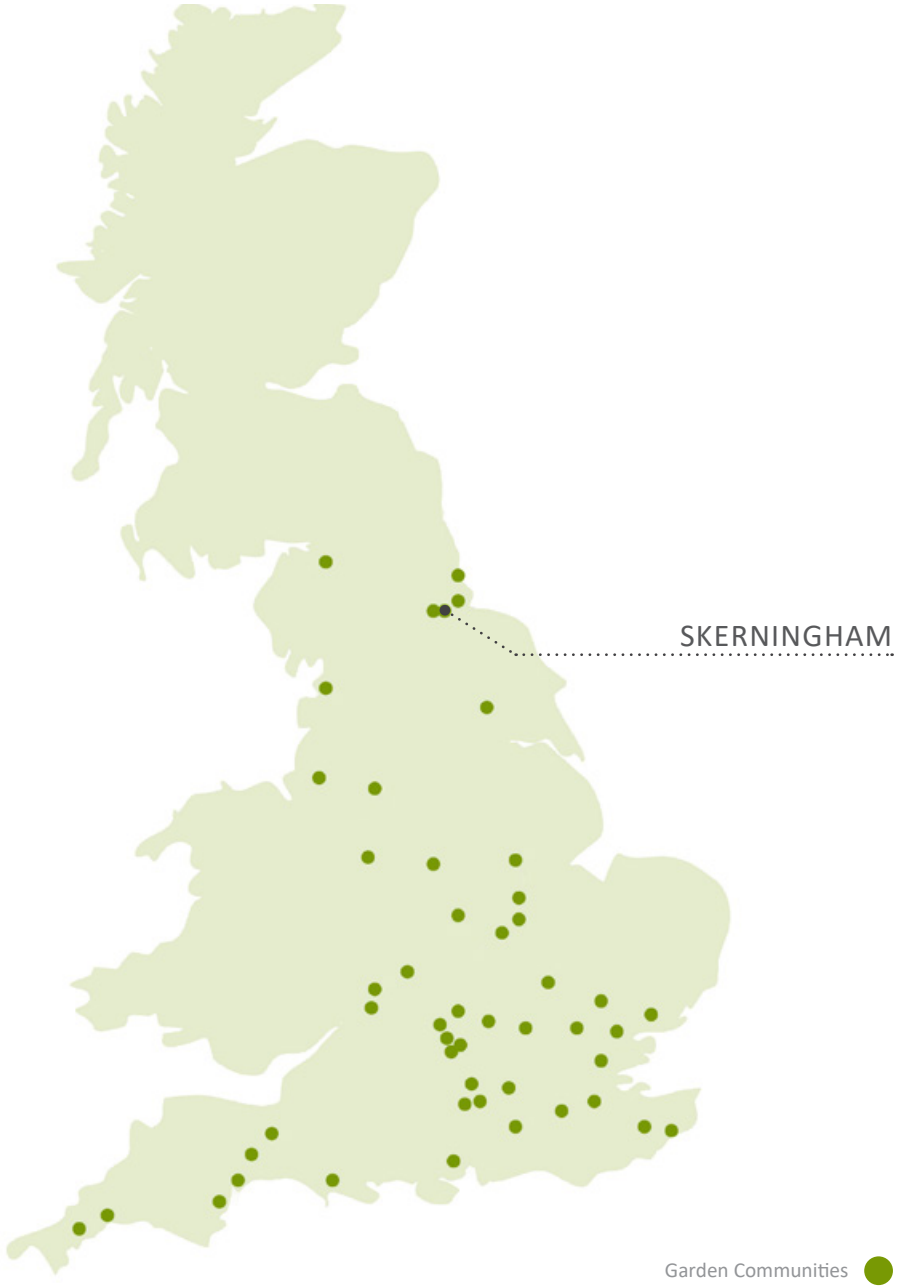


Fig. 04: Garden Communities Programme as of October 2020

Fig. 05: Planning Application Visual for *Oxfordshire Garden Village* by Grosvenor

Clear Identity

A distinctive local identity, including an attractive and functioning centre and public realm at its heart.

Sustainable scale

Built at a scale which supports the necessary infrastructure to allow the community to function self-sufficiently on a day to day basis, with the capacity for future growth.

Well-designed places

With vibrant mixed use communities that support a range of local employment types and premises, retail opportunities, recreational and community facilities.

Strong local vision

Designed with the engagement of the existing local community, and future residents + businesses, including consideration of the existing natural and historic environment of the local area.

Transport

Integrated, forward looking and accessible transport options. This should include promotion of public transport, walking, and cycling so that settlements are easy to navigate, and facilitate simple and sustainable access to jobs, education, and services.

Great homes

A wide range of high quality, distinctive homes, including affordable housing and a mix of tenures for all stages of life.

Healthy places

Designed to provide the choices and chances for all to live a healthy life, through taking a whole systems approach to key local health + well-being priorities and strategies.

Green space

Generous, accessible, and good quality green and blue infrastructure that promotes health, well-being, activity, and quality of life, and considers opportunities to deliver environmental benefits such as biodiversity net gain, carbon sequestation, and enhancements to natural capital.

Legacy + Stewardship

Should be in place for the care of community assets, infrastructure and public realm, for the benefit of the whole community.

Future proofed

Designed to be resilient places that allow for changing demographics, future growth, and the impacts of climate change, with durable landscape and building design planned for generations to come.

2.0 | CONTEXT

1.1 Local Context

1.2 Site Context

1.3 Planning Context

1.1 | LOCAL CONTEXT

Darlington

As described in Darlington Borough Council Local Plan 2016-2035 *'The Borough is regarded as the 'gateway' to the Tees Valley and the wider North East region.*

Darlington is a historic market town, surrounded by open countryside with many attractive rural villages.

An abundance of street trees and open space within the urban area contribute to the town's distinctiveness and biodiversity, particularly the green corridors along the River Skerne, Cocker Beck and Baydale Beck. An attractive, biodiverse and often wooded landscape has evolved along the River Tees corridor, complemented by more recent community woodland planting, especially at the urban fringe.'

Darlington Council Plan 2020 – 2023

The Vision - Darlington is a place where people want to live and businesses want to locate, where the economy continues to grow, where people are happy and proud of the borough and where everyone has the opportunity to maximise their potential.

Deliver Success For Darlington

The council will create the conditions and opportunities for growth, but it is the private sector from which much of the investment required to deliver growth will come. Our key partner in growing the economy is the Tees Valley Combined Authority, from which much of the funding required to deliver growth will come and be invested in Darlington and the Tees Valley. A thriving Tees Valley economy is important for Darlington's success and so we will continue to work with and support our neighbouring Tees Valley councils.

The borough's biggest asset is its residents, they make the place what it is and the Council hope everyone will get behind our plans to make it an even better place. We should all be proud and emphasise the positive benefits of living and working in a great borough.

Growing Darlington's economy by delivering:

- More sustainale, well paid jobs
- More businesses
- More homes

Supporting economic growth by keeping the borough:

- Clean
- Safe
- Healthy
- Sustainable
- Wel-planned
- One the move

Whilst:

- Valuing our heritage and culture

Supporting the most vulnerable in the borough by:

- Providing care and support when needed.
- Working with people to build their strengths to maximise their potential.
- Working with partners.

Maximise the potential of our young people by:

- Working with partners to maximise educational achievement.
- Working to remove barriers to young people reaching their potential.
- Working at a Tees Valley Level to match jobs with skills and training.

Working with communities to maximise their potential by:

- Maximising the benefits of a growing economy for all communities.
- Targeting services where they are most needed.
- Working with partners and communities.

Fig. 06: Darlington Town Centre

1.2 | SITE CONTEXT

Fig. 07: View within site towards the River Skerne from the Northern edge of Skunny Woods

Skerningham Site

The Skerningham area to the North East of Darlington, was identified as having potential for housing development as part of the Darlington Borough Council Local Plan Issues and Scoping consultation held in August 2016.

The site area extends to approximately 487 hectares and is largely comprised by agricultural fields. It also includes Darlington Golf Club, Skerningham Community Woods; the East Coast Mainline to the west; and the River Skerne lies towards the northern boundary. There are several farmsteads and existing residential properties within the site at Low Beaumont Hill, Skerningham Manor, Low Skerningham, Elm Tree House, Elly Hill House and Burdon Gardens.

Refer to 2.0 Baseline Analysis for further information on existing site.

- Farmstead/ existing residence
- East Coast Mainline
- River Skerne
- 1 Golf Course
- 2 Skerningham Community Woods
- 3 Darlington

Fig. 08: Existing Site - key features

1.3 | PLANNING CONTEXT

National Planning Policy Framework (NPPF 2021)

The National Planning Policy Framework (NPPF) sets out the Government's economic, environmental and social planning policies for England. The policies set out in this framework apply to the preparation of local and neighbourhood plans and to decisions on planning applications.

Paragraph 10 of the NPPF states: *"at the heart of the Framework is a **presumption in favour of sustainable development.**"*

In terms of housing growth, the NPPF states that: *"To support the Government's objective of significantly boosting the supply of homes, it is important that a sufficient amount and variety of land can come forward where it is needed, that the needs of groups with specific housing requirements are addressed and that land with permission is developed without unnecessary delay."*

When planning for larger scale development, the NPPF states that Local Planning Authorities should, inter alia: *"consider the opportunities presented by existing or planned investment in infrastructure, the area's economic potential and the scope for net environmental gains;… [and]…set clear expectations for the quality of the development and how this can be maintained (such as by following Garden City principles), and ensure that a variety of homes to meet the needs of different groups in the community will be provided;" (paragraph 72)*

The NPPF is clear, at paragraph 8, that the planning system should support: "*strong, vibrant and healthy communities, by ensuring that a sufficient number and range of homes can be provided to meet the needs of present and future generations; and by fostering a well-designed and safe built environment, with accessible services and open spaces that reflect current and future needs and support communities' health, social and cultural well-being."*

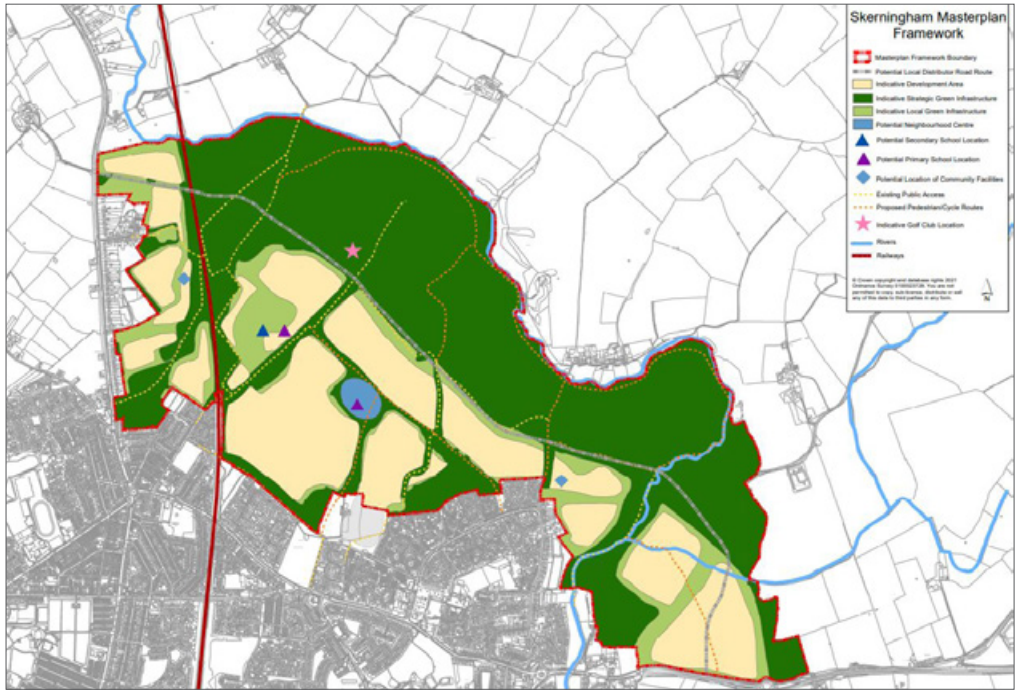
In Chapter 12, the NPPF places emphasis on achieving well-designed places which can be aided by early engagement with local communities and other stakeholders. The NPPF states that: *"Early discussion between applicants, the local planning authority and local community about the design and style of emerging schemes is important for clarifying expectations and reconciling local and commercial interests. Applicants should work closely with those affected by their proposals to evolve designs that take account of the views of the community." (Paragraph 128)*

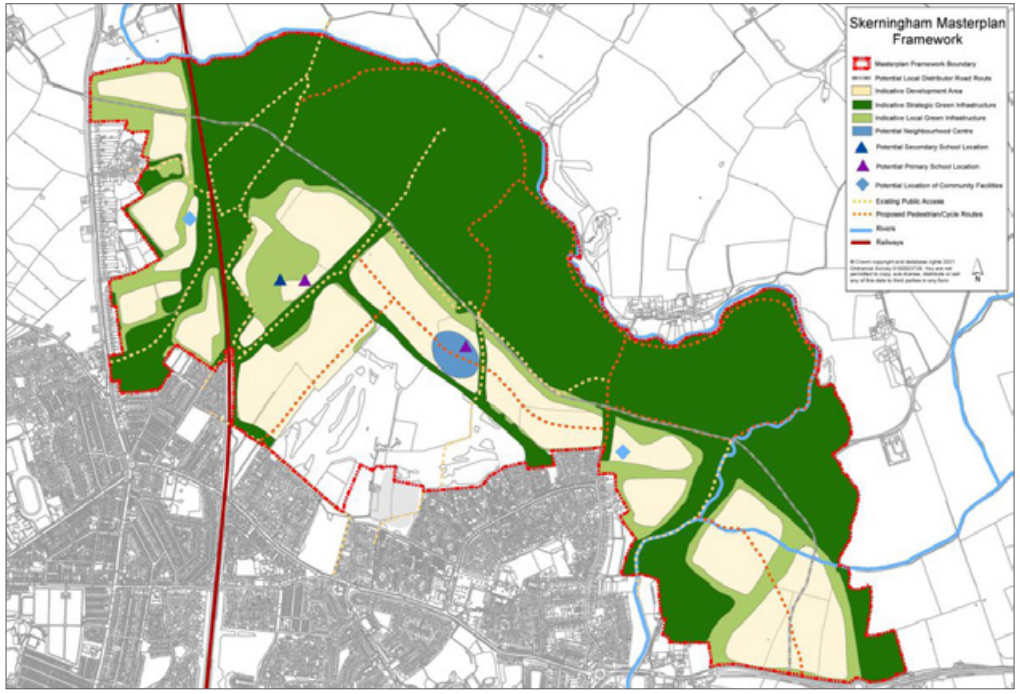
Darlington Local Plan 2016 - 2036

The Darlington Local Plan is now adopted (February 2022) . The Local Plan identifies Skerningham as a location to facilitate the delivery of a high-quality mixed-use community with education, employment, housing, and open space. This is intended to provide the right economic and environmental conditions to support a sustainable new community to the north east of Darlington.

Fig. 09: (top right) Skerningham Masterplan Framework from Darlington Borough Council Local Plan 2016 -2035

Fig. 10: (bottom right) Skerningham Masterplan Framework (with golf course in situ) from Darlington Borough Council Local Plan 2016 -2035





Policy H10: Skerningham Site Allocation

Policy H10 of the Darlington Local Plan allocates Skerningham as a strategic site for the delivery of 4,500 dwellings with an expectation that 1,650 dwellings will come forward in the plan period.

The site is also identified to deliver new schools; community and health facilities; commercial / employment; and safeguarded corridors for the Northern Relief Road. Policy H10 outlines a number of principles that are established which any development at Skerningham will be required to accord with.

The key parameters cover phasing, local facilities provision, highways, housing, and green and blue infrastructure.

The preferred approach for the development of the Skerningham site, set out in the Local Plan, is for the golf club to be relocated (see Fig. 09). This issue might require further discussion.

However, should it be demonstrated that this is not possible, the Local Plan suggests an alternative masterplan framework illustrates how the key principles for the development of the Skerningham site (see Fig. 10).

The following diagrams illustrate a summary of the proposed development parameters and deliverables in accordance with the Skerningham Masterplan Framework. Refer to the Local Plan for further and more detailed information.

Fig. 11: proposed highways in accordance with DBC Local Plan

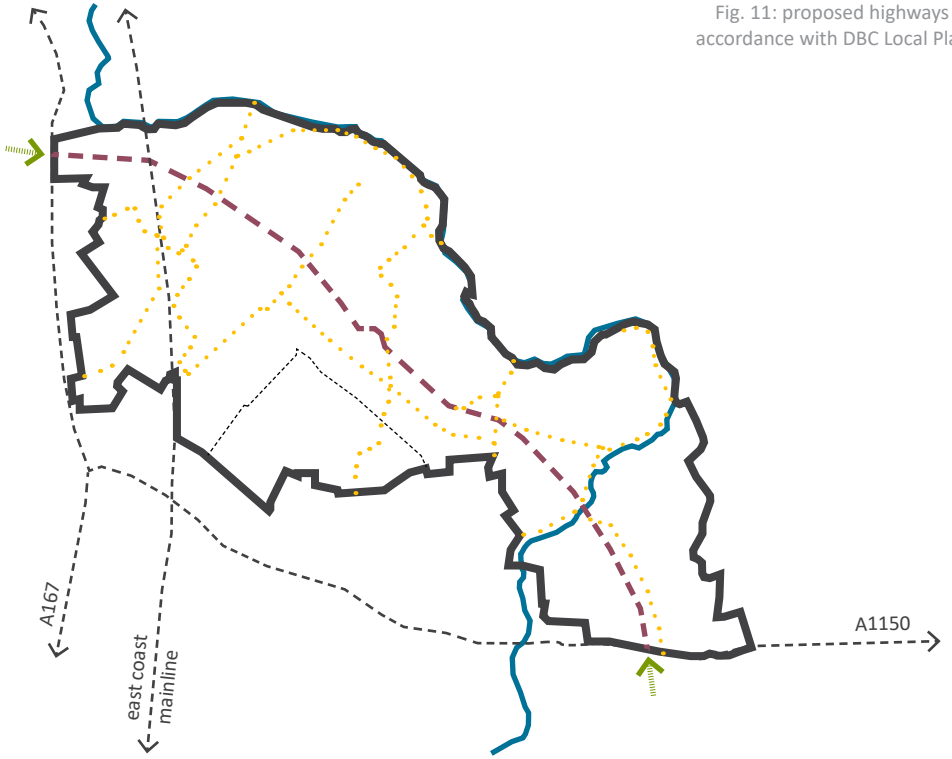
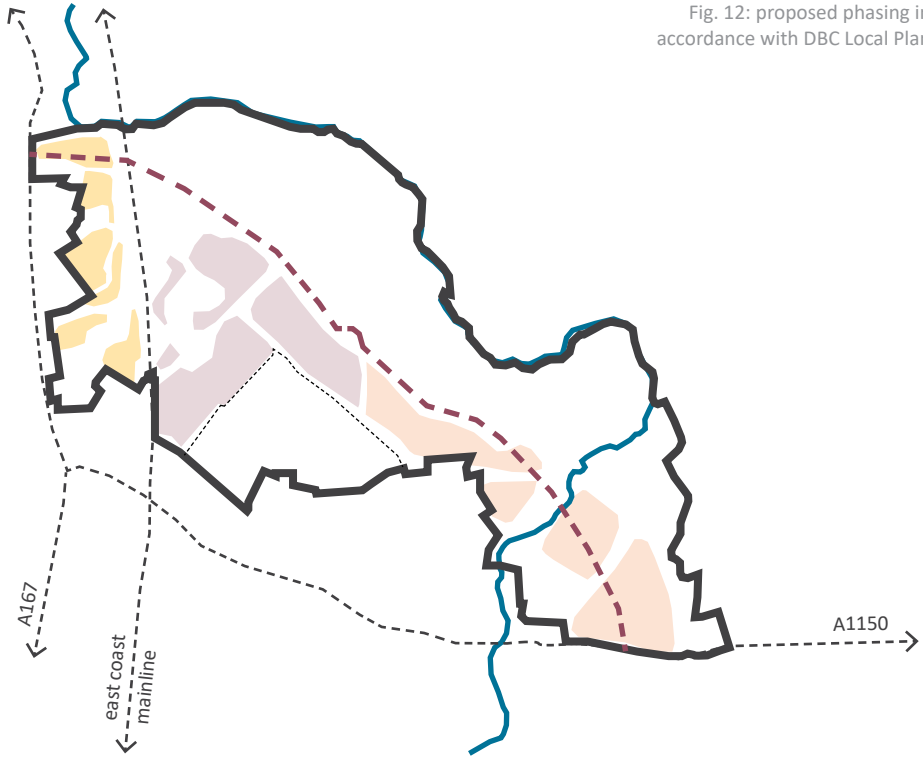


Fig. 12: proposed phasing in accordance with DBC Local Plan



Highways

The Local Plan proposes a new distributor road between the A167 and A1150 with new vehicular access points from existing roads. Policy H10 requires an integrated transport network focused on sustainable transport modes, including public transport, walking and cycling with strong links to adjoining communities, employment locations and Darlington town centre. Refer to Policy H10 for key phasing requirements that coordinate with the initial phases of development.

- Principal vehicular access points
- Proposed distributor road
- Existing and proposed public access routes

Initial Phasing

Policy H10 of the Darlington Local Plan allocates Skerningham as a strategic site for the delivery of 4,500 dwellings to include a mix of housing types, tenures and sizes including self-build/ custom build housing and minimum of 20% affordable housing to be delivered. Approximately 1,650 homes are to be delivered during the plan period [note: this is not capped]. Policy H10 identifies the locations within the site for the initial phases of the development, as follows:

- 600 dwellings
- 1,050 dwellings
- future development

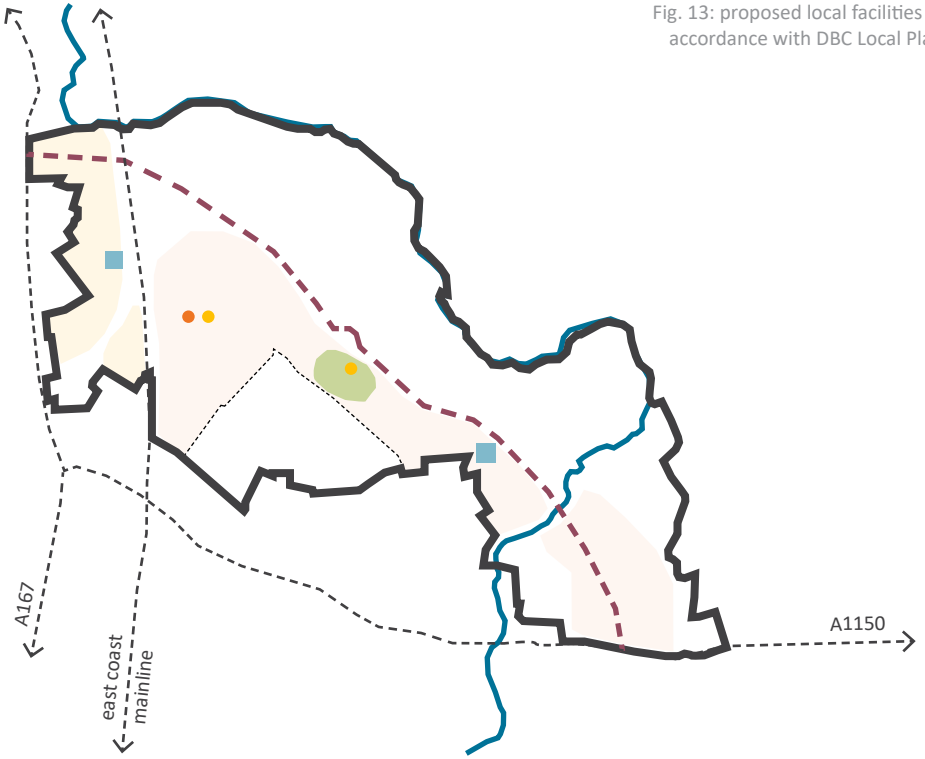


Fig. 13: proposed local facilities in accordance with DBC Local Plan

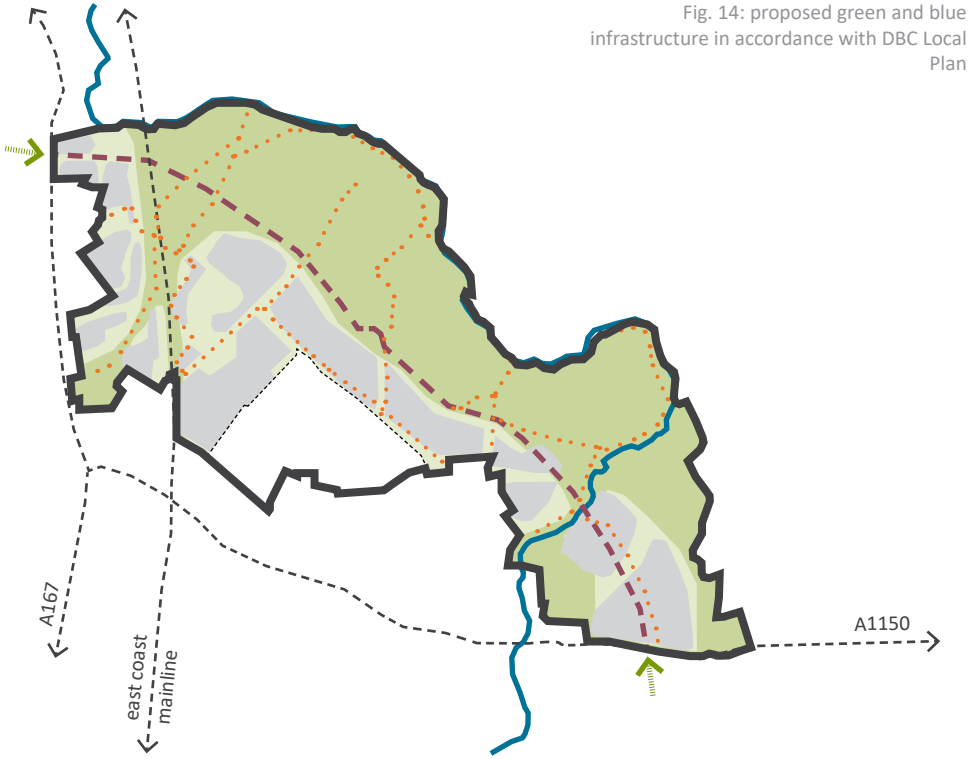


Fig. 14: proposed green and blue infrastructure in accordance with DBC Local Plan

Local Facilities

Policy H10 requires a centrally located and well-connected neighbourhood centre which is to include a health hub, other community facilities for education, employment, retail, and food and drink. Community facilities should be closely related to public transport links, walking and cycling facilities, and respond to the scale and nature of the surrounding development.

- Potential neighbourhood centre
- Primary school
- Secondary school
- Potential location of community facilities

Green and Blue Infrastructure

The Local Plan states that "around 45% of the site area is expected to be retained and enhanced as accessible green infrastructure, managed agricultural land and/or the relocated golf club, as part of a wide green corridor on the south side of the River Skerne". This would increase to around 55% of the site should the golf club remain in situ.

- Safe, attractive and accessible network of public foot and cycle paths
- Well integrated and inter-connected green spaces to provide space for the local community, wildlife, sports and recreation, and allotments.
- Indicative development area.

2.0 | BASELINE ANALYSIS

2.0 | BASELINE ANALYSIS

Introduction

The purpose of this section is to establish and describe “what the site currently is”, highlighting any relevant topographical, natural or man-made characteristics that can be considered as **relevant factors** in any development of the site, and from these to identify **predominant factors** which are most likely to influence the form and location and detail of any proposed development on the site.

Fig. 15: Existing path through the site
Image: Save Skerningham Facebook community page

2.1 | TOPOGRAPHY

Fig. 16: Gently sloping fields within the existing site
Image: Save Skerningham Facebook community page

The varied existing topography of the overall allocated site for the Skerningham Garden Village will be a key influence on the respective character areas reflecting their related landscape context.

Defined by a ridge, the shallow Skerne river valley is a distinct feature along the northeast boundary. Broadly the site landform falls in this direction with an overall range of some 28m difference in ground levels with notable high points located at Low Beaumont Hill; Skerningham Manor; Hutton Plantation; the restored Barmpton Quarry site; and Elly Hill.

Much of the garden village area is characterised by gentle slopes with the steeper slopes located around Barmpton and Skerningham – the eastern most area near Bishopton Lane is generally flatter with occasional undulations.

2.2 | OPEN SPACE + GREEN INFRASTRUCTURE

Fig. 17: Existing green space + notable features

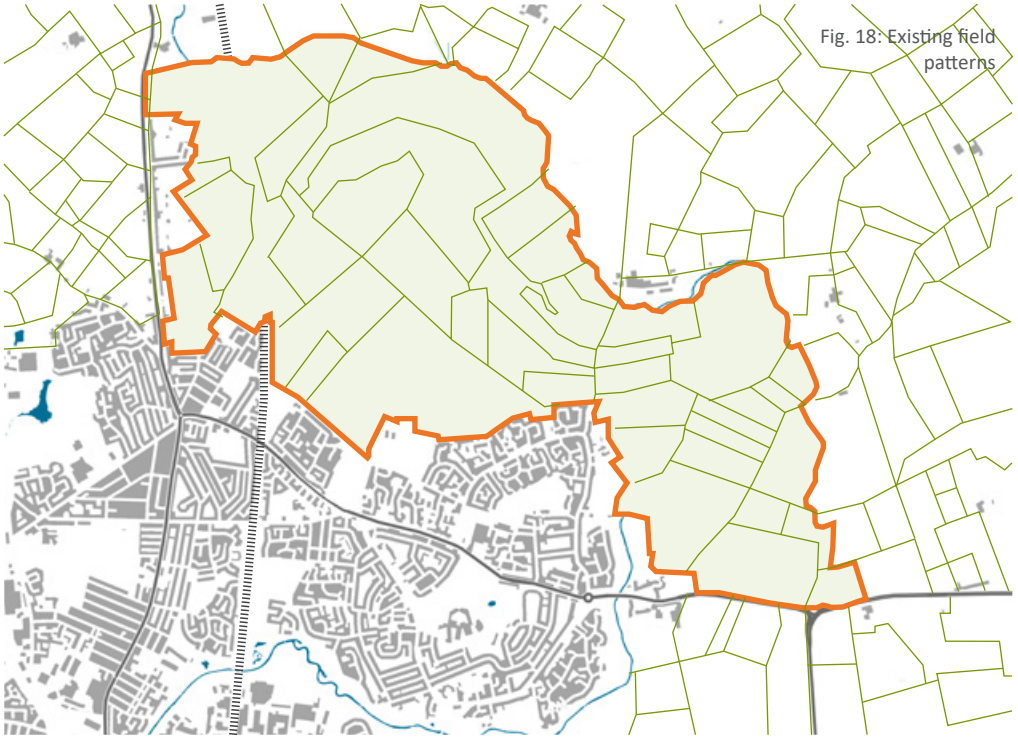


Fig. 18: Existing field patterns

Existing Open Green Space + Notable Features

The present site in its undeveloped state is almost entirely 'green' comprising mostly agricultural land. Notable features include Darlington Golf Course, Skerningham Countryside Park (known locally as Skerningham Plantation or Skunny woods), Elly Hill Wood, Hutton Plantation, several farmsteads and residential properties dispersed within the site, the River Skerne and the heavily used network of Public Rights of Way footpaths and bridleways.

- green space
- woodland areas
- east coast mainline
- Skerningham site boundary

Field Patterns + Existing Biodiversity

Other than Skerningham Countryside Park, much of the tree cover is restricted to field boundaries, identified above, and hedgerows with only occasional trees located within fields. In more recent times much of the land was in use for arable farming with many historic field boundaries removed to create larger fields reflecting modern farming methods. The dominant tree species is Ash with occurrences of Oak, Sycamore and Beech. Many of the ash trees are in poor condition due to over-maturity and/or infection. The hedgerows are well maintained and in reasonable condition.

- field boundary
- east coast mainline
- Skerningham site boundary

Fig. 19: Dense mature woodland along edges of agricultural fields

Fig. 20: Edge of the woodland

Fig. 21: View towards allotments to South of Beaumont Hill

Fig. 22: View of existing path within site lined with hedgerows

2.3 | HERITAGE ASSETS

Heritage assets

The known assets of the Skerningham garden village site area consists of below and above ground heritage initially identified by desk-based assessments which will be confirmed by follow on site investigation as recommended.

Below Ground Heritage

The below ground heritage identified in the local Historic Environment Record (HER) includes pre-historic crop marks although as yet no known recorded assets from the Roman period. From the medieval period there are some early documentary references to a 7th Century settlement at Skerningham and also of a possible Deserted Medieval Village located near to Skerningham Manor. In addition the present Darlington Golf Course appears to follow the relics of earlier field system boundaries with some surviving areas of ridge and furrow.

There are also recorded areas of previous quarrying near Barmpton and within the Skerningham Plantation.

Above Ground Heritage

Other notable assets include the golf course founded in 1908 and originally designed by Dr Alister MacKenzie a renowned golf course architect who went on to design three of the top 10 presently ranked best golf courses in the world at Augusta National and Cypress Point respectively in the USA and Royal Melbourne in Australia.

In addition, there is a surviving WW2 concrete pillbox located close to the East Coast Mainline railway – next to Salters Lane - presumably constructed as part of the strategic defence network for Britain against the threat of invasion in 1940.

There are also two Grade II listed buildings within the site – Skerningham Manor and Low Skerningham – located to the northern part of the overall site. Both are presently set within the wider current arable landscape with related woodland setting which will need to be appropriately respected in the prospective garden village masterplan.

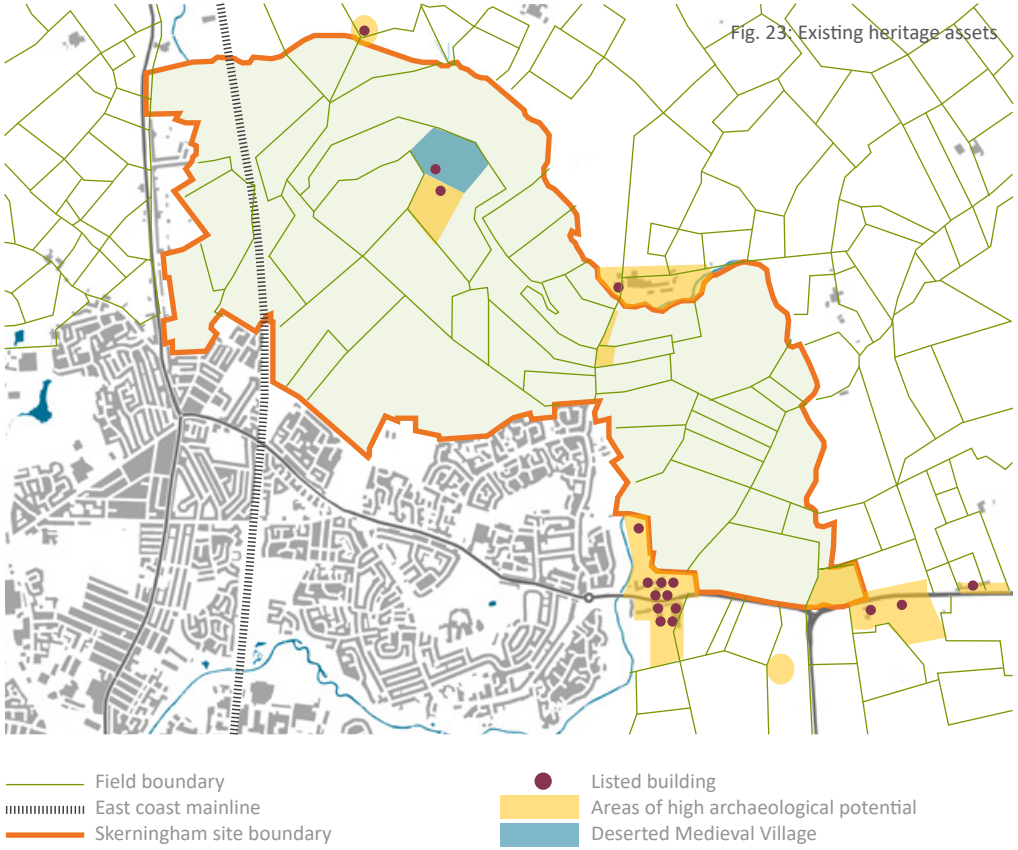


Fig. 23: Existing heritage assets

Fig. 24: Ketton Packhorse Bridge

Fig. 25: WW2 pillbox

Fig. 26: Existing community infrastructure

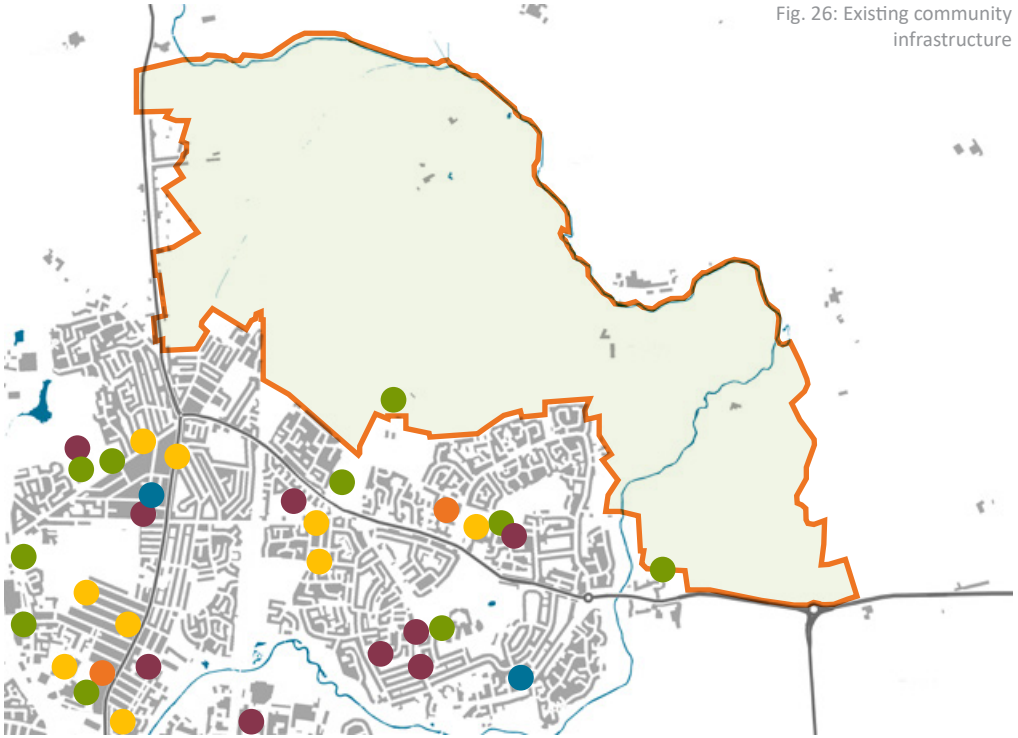
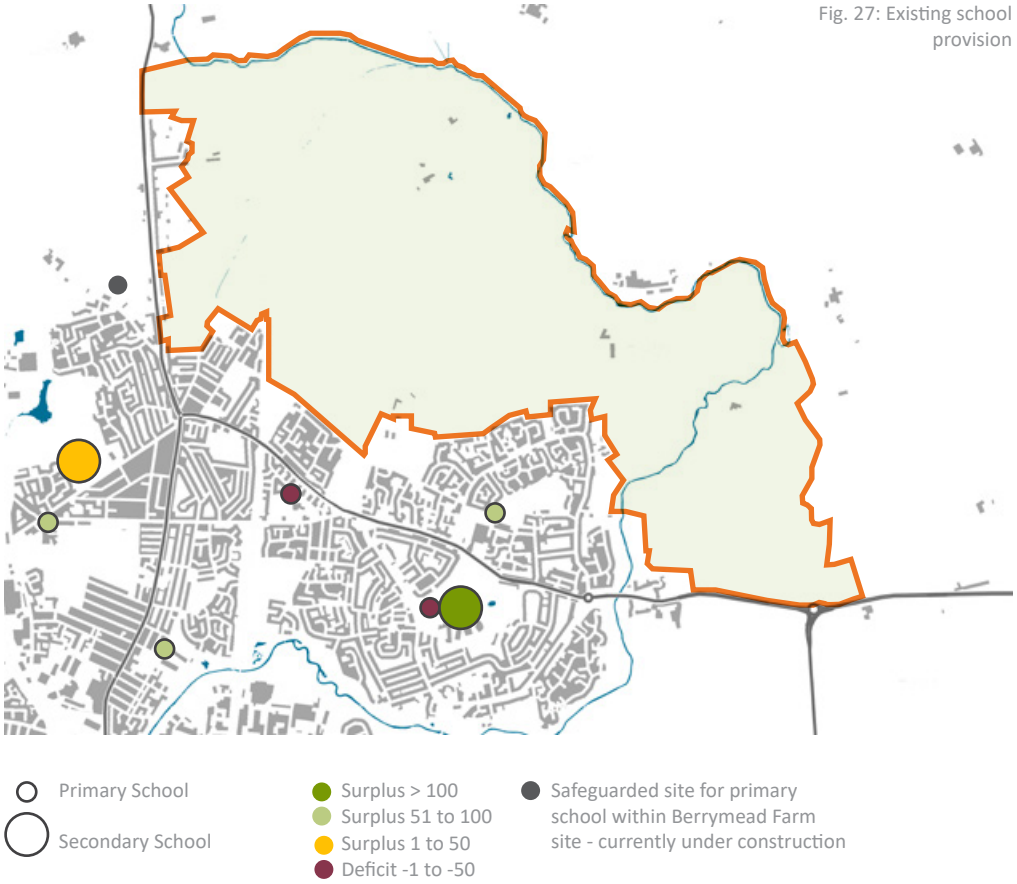


Fig. 27: Existing school provision



Existing Community Infrastructure

There is a good level of existing community and social infrastructure within 3 miles of the Skerningham site. Existing facilities are predominantly located to the south and south west in the main urban area of Darlington.

Existing School Provision

There are currently 6 primary schools within 2 miles of the Skerningham site. There are currently 2 secondary schools within 3 miles of the site.

2.5 | PUBLIC TRANSPORT ACCESSIBILITY

Public Transport

Buses: The present public transport provision has buses serving Harrowgate Hill/Beaumont Hill running along the A167 Great North Road and also through Whinfield along the A1150 Whinfield Road together with additional local services running through Whinbush Way/Barmpton Lane as well as separately looping around Glebe Rd/ Mayfair Rd. Great Burdon also has bus services running to Darlington town centre and Middlesbrough. The existing bus services allows convenient access to other regional and national destinations.

Train: The east coast mainline runs along the west of the site connecting neighbouring Darlington to other major cities, North and South.

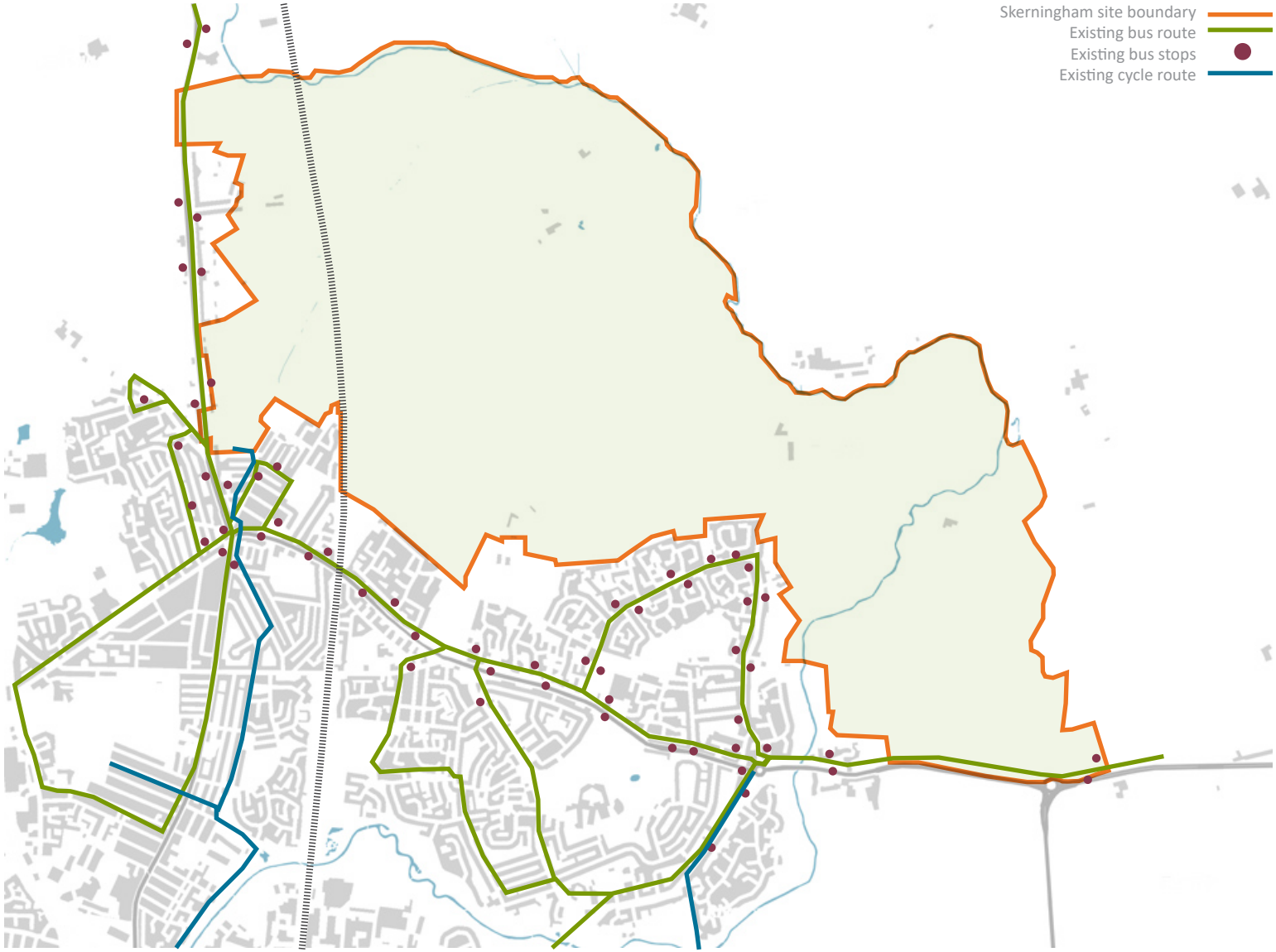
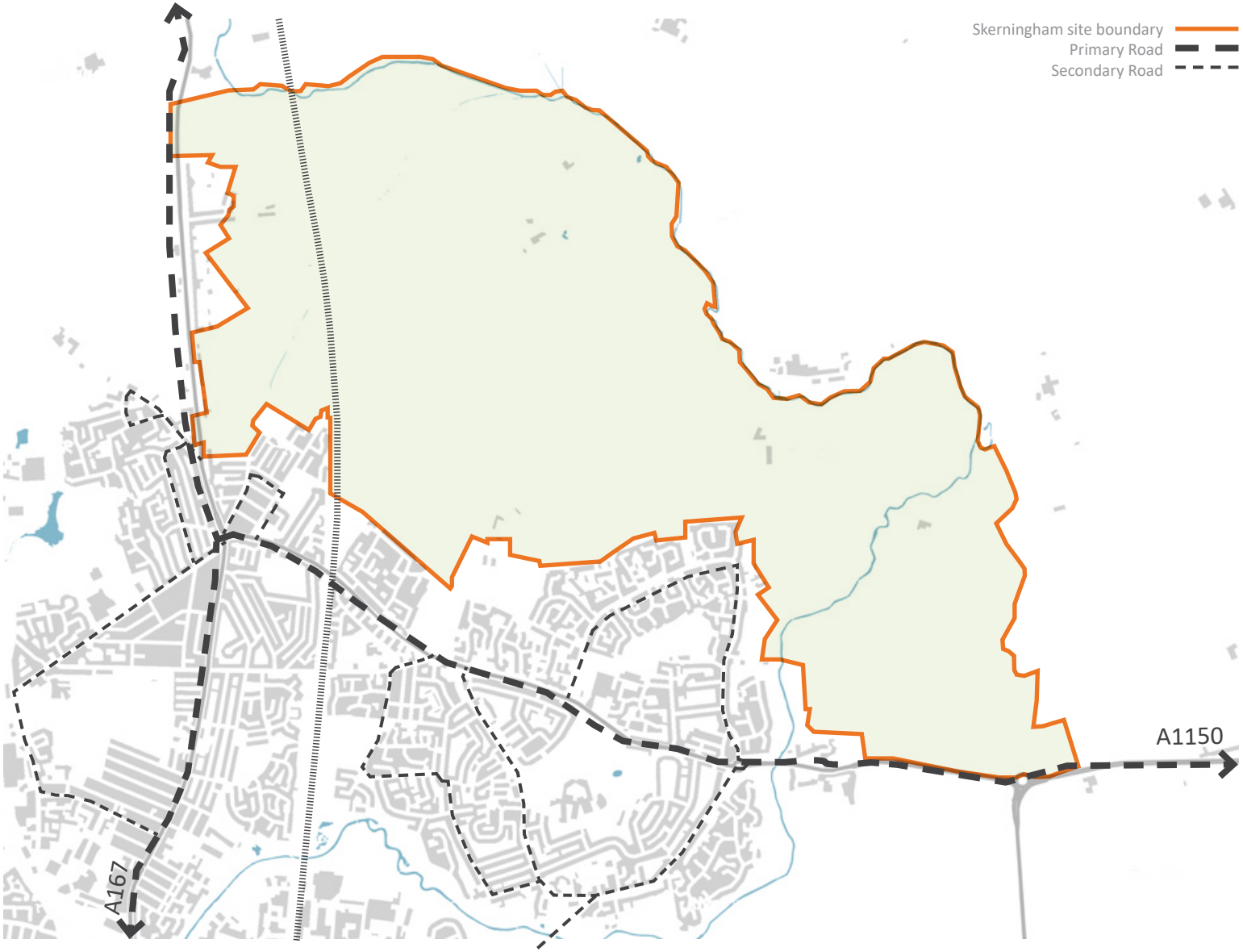


Fig. 28: Existing public transport in and around the immediate context

2.6 | ROAD + STREET HIERARCHY



The overall garden village site context is a logical and sustainable extension to Darlington and is accessible to the existing highway network benefiting from being within close proximity to the A1(M) on the western side and to the A66 on the eastern edge.

The existing southern highway network is however already at close to capacity which requires the focus of the street hierarchy to alleviate that without creating problems elsewhere.

Darlington is a relatively compact town with about one fifth of journeys by residents no further than 1km, nearly half less than 3km and three quarters of all journeys begin and end in the town. Darlington is a town of short journeys.

Fig. 29: Existing key roads + streets

3.0 | INSPIRATION + VISION

3.1 | THINKPIECES

Thinkpiece Introduction

designe have commissioned a series of "Thinkpieces" from its Panel of Built Environment experts. The purpose of Thinkpieces is to take a relevant key subject, examine it in detail, and establish what is the most current and up-to-date thinking on that subject irrespective of geographic location. Also, what is the direction of travel for those subjects and what national milestones or rules are being prepared for implementation?

Some of the issues raised in this section of the Design Code are challenging, but necessarily so. The world is changing – mankind is slowly realising the imperative to change too – what seems esoteric and almost far-fetched is rapidly becoming reality and we will need to make difficult decisions and be much more creative, particularly in our responses to climate change effects and liveability.

It is important to understand that the issues rehearsed in these Thinkpieces are relevant across the country and are not just specific to the Skerningham site. Not every part of a Thinkpiece is relevant to a specific development site. But each Thinkpiece has an influence on other areas of the Design Code.

These Thinkpieces inform the Strategic Toolkit in Section 4.0.

What follows is a summary, by topic, of the "golden threads" within the Thinkpieces which have informed the Design Code and remain evident throughout the document.

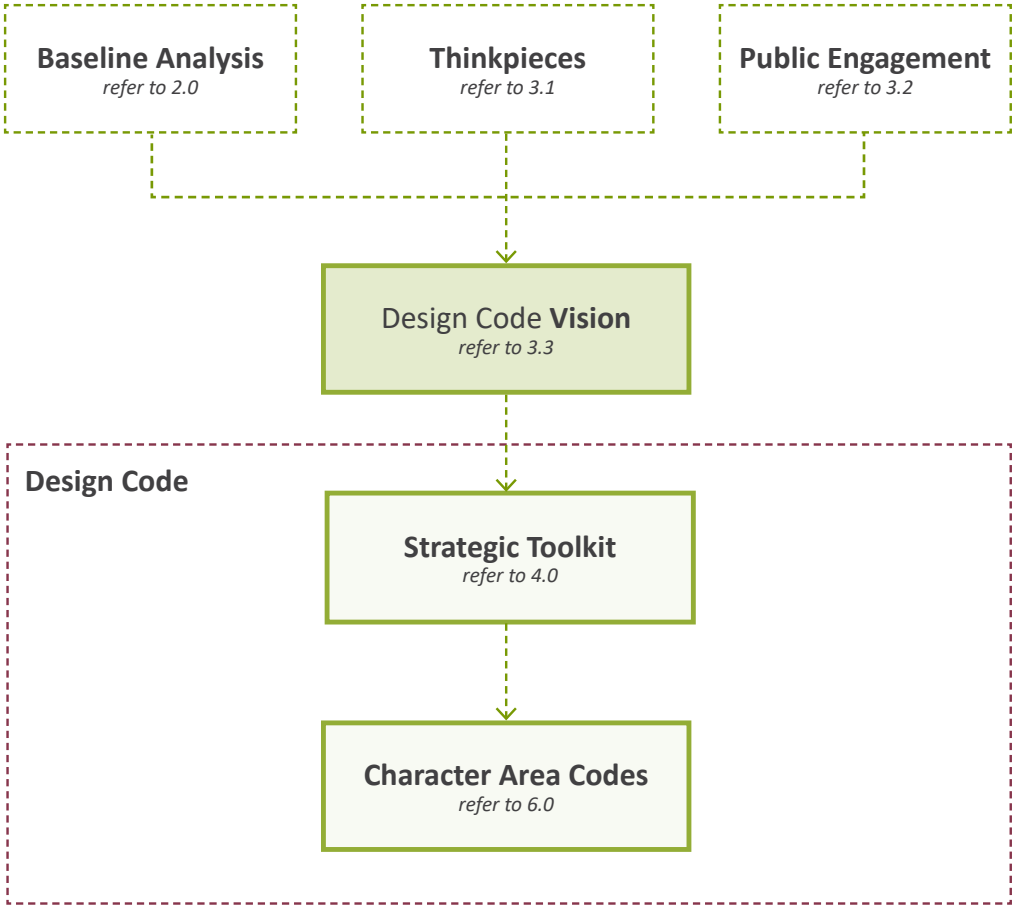


Fig. 30: DC Process and Output

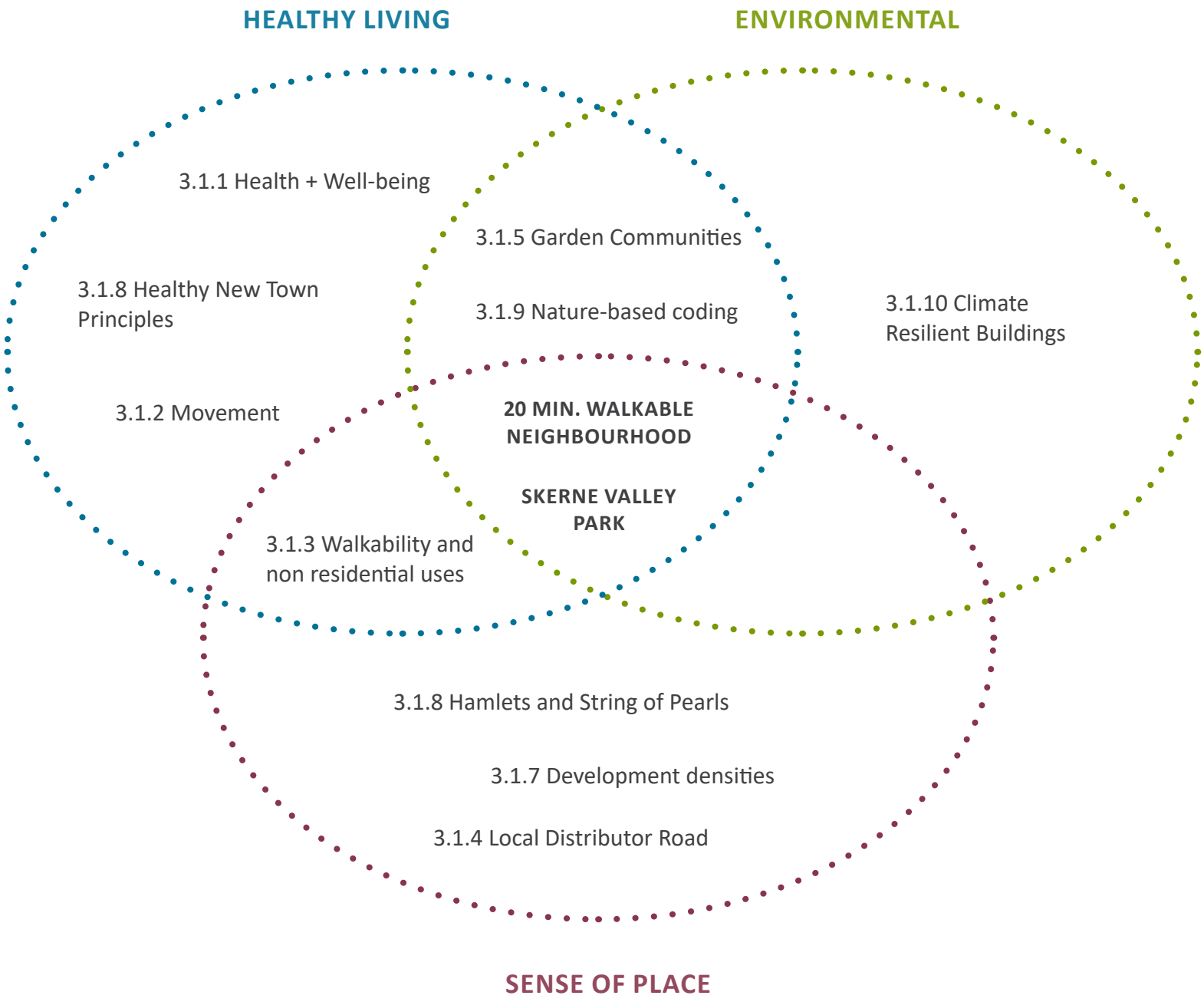


Fig. 31: Thinkpieces

3.1.1 | HEALTH + WELL-BEING

Key Principle

Putting Health into Place must be a Golden Thread running through the statutory approvals process, development, delivery, subsequent occupation and use of future developments.

Thinkpiece Summary

This Thinkpiece identifies 5 key factors that should be considered in the design and delivery of any future developments as summarised below:

01. Putting Health into Place
A series of publications produced by NHS England and other partners that capture the findings of the Healthy New Towns Programme. It provides 10 principles that cover the following; planning, assessment and involvement; design, delivery and management; as well as development and provision of Health Care Services.

02. Building for a Healthy Life
The key measure of design quality for developments such as this.

03. 2 Hours of Nature
New research that could confirm two hours in nature could join five a day of fruit ad veg and 150mins of exercise a week as official health advice.

04. 20 Minute Neighbourhoods
An idea that has been gaining momentum for several years with an increased interest following COVID-19 pandemic lockdowns. The TCPA are working with a range of partners to help councils and communities introduce 20 minute neighbourhoods. The aim is to create attractive, interesting, safe and walkable environments in which people of all ages and levels of fitness are happy to travel actively on a daily basis.

05. Biophilic Design
Biophilic Design is a design concept that relies on the idea of building and nurturing the relationship between people and nature. The main principles of Biophilic Design relate to provision of vegetation, water features, natural and permeable materials, good ventilation, biomorphic shapes and more outdoor space.

Fig. 32:The Runnyhoneys is a running group based in the Healthy New Town of Bordon in Hampshire and two other locations Photo: Mike Ellis/NHS

Fig. 33: Active travel.
Image: Department for Transport, from *"Gear Change - a bold vision for cycling and walking in England"*

Key Principle

The overarching vision is to build on this strong foundation by promoting active travel so that walking and cycling are an instinctive choice for all ages from 8 to 80 undertaking everyday short journeys.

Thinkpiece Summary

A key policy driver is **'Gear Change'** the government's bold vision for cycling and walking in England.

This requires that the design of any major residential development must ensure that movement networks and routes for those travelling by cycle or on foot will incorporate the five core principles and will be Coherent, Direct, Safe, Comfortable and Attractive catering for the broadest range of people

Active Travel England will be a statutory consultee on major planning applications to ensure that the largest new developments properly cater for pedestrians and cyclists.

The 20 minute neighbourhood is about designing compact permeable blocks of development that include non- residential uses and create direct and legible walking and cycling routes between where people live and where they want to go to. It requires a realistic assessment of the walking time/distance between places.

Public Transport

There are several things to take into account to take a realistic view of public transport:

+ The first is about accessibility to existing and potential bus services.
+ The streets would ensure all homes could be within 400 metres of a bus stop.

+ When will a (useful) bus service be operated into the development and who will meet the costs until a service is viable.

The risk is that behaviours will established e.g. use of car before services can be justified and the plan must consider the need to relate house completions to the **funding** of bus services.

3.1.3 | WALKABILITY + NON-RESIDENTIAL USES

Key Principle

A greater emphasis on the location and scale of non-residential development within the proposed Garden Village can significantly increase walkability and contribute to more successful placemaking.

Thinkpiece Summary

The Darlington Local Plan states that the Skerningham Garden Village must include the following:

+ A centrally located and well connected neighbourhood centre providing local community facilities including a health hub for GPs and Dentists, clustered with other facilities and services to meet the day to day needs of residents, education, employment opportunities, retail and food and drink.

+ Other local community facilities to serve residential areas as required, closely related to public transport, walking, and cycling facilities, and shall be delivered in accordance with the infrastructure phasing plan.

+ Two primary schools, associated nursery provision (5.6 ha) and a reserved space for a secondary school (5 ha).

In addition there is a large area allocated for employment uses in the eastern corner of the proposed Garden Village development area.

It is important to consider how can we ensure that all of these non-residential uses are of a scale and location that will that will encourage walkability, achieve a 20 minute neighbourhood, and improve viability.

+ Case studies demonstrates that a focus on building a place and not just homes can result in a very walkable neighbourhood with the many benefits that brings of a mixed use development including healthier lifestyles, local employment, support for the local shops and services.

+ A Stewardship business model adopted in other places has enabled early provision of community and other services.

Fig. 34: *"Pedestrians First: Tools for a Walkable City"* (ITDP)

3.1.4 | DISTRIBUTOR ROAD

Fig. 35: Indicative vision for distributor road
Image: *Biodiversity Corridor Project* by civiliti, LAND Italia, Table Architecture and Biodiversité Conseil

Thinkpiece Summary

The Darlington Local Plan requires that a distributor Road between the A167 and the A1150 close to the Little Burdon roundabout is provided in a number of stages.

The role of this distributor road is understood to be:

+ to provide access to the Garden Village development areas in phases from each end and:

+ when complete, in effect, also act as a by-pass to provide some relief to the existing routes A167 and A1150.

The challenge is to achieve a balance between these two roles and to achieve this the following guiding principles should shape this road.

+ It will be designed for low traffic speeds with speed limit of no more than 40mph and potentially lower in the central section. It will look like a road that is part of a garden village and not a high speed bypass and should emphasise a sense of place.

+ A number of compact roundabout junctions on the distributor road will be the only vehicular access points to the development and local street network

+ The way in which the road connects with Barmpton lane will require careful treatment to minimise the attractiveness of this existing road as an alternative vehicular route for development and construction traffic.

+ Properties will face the road accessed from service roads with landscaping and trees giving an Avenue feel.

+ Sensitive crossing of Important green infrastructure corridors as part of the footpath , cycleway and bridleway network will be required.

+ The eastern part built initially as a construction only haul road.

These guiding principles are expanded in section 4.1 Movement.

3.1.5 | GARDEN COMMUNITIES

Key Principle

Garden communities are environments designed to promote community inclusion and walkable, sociable, vibrant neighbourhoods. Community is at the heart of the garden communities philosophy.

Thinkpiece Summary

Designed for the 21st century, garden communities reflect and respond to the opportunities offered to place-making, living and working by technology and data, while addressing both climate change and climate resilience. Self-sustainability is put into practice through active, healthy lifestyles embodied in walking and cycling, locally grown produce and locally based employment and services.

Garden communities are founded on ten key principles:

01. Land value capture for the benefit of the community.

02. Strong vision, leadership and community engagement.

03. Community ownership of land and long-term stewardship of assets.

04. Mixed-tenure homes and housing types that are genuinely affordable.

05. A wide range of local jobs in the garden village within easy commuting distance of homes.

06. Beautifully and imaginatively designed homes with gardens, combining the best of town and country to create healthy communities, and including opportunities to grow food.

07. Development that enhances the natural environment, providing a comprehensive green infrastructure network and net biodiversity gains, and which uses zero-carbon and energy-positive technology to ensure climate resilience.

08. Strong cultural, recreational and shopping facilities in walkable, vibrant, sociable neighbourhoods.

09. Integrated and accessible transport systems, with walking, cycling and public transport designed to be the most attractive forms for local journeys.

10. Provision of comprehensive and future-proof digital connectivity to support the use of smart technology.

Fig. 36: Garden Communities
Landarth Garden Village by AHR Architects

3.1.6 | HAMLETS + STRING OF PEARLS

Fig. 37: Hamlet cluster
Image: *Mountfield Park* by Proctor and Matthews Architects

Key Principle

Consider developing the area as a Garden Village, comprised of a series of discrete hamlets, all with defined edges, their own character (under an over-arching architectural theme), and individually named.

The opportunity for the hamlets to be linked to form a circuit-linear new village can be explored, treated as a" string of pearls", linked to each other by Footpaths, Cycleways and Roads.

Thinkpiece Summary

The overall development should have a unique sense-of-place, that is distinctive and, through its composition, form, materials, etc whilst also being grounded in the locale.

01. This DOES NOT mean slavishly copying and replicating "historic" building forms.

02. The **core settlement should be clearly identifiable** as the heart of the settlement. Its form and character need to reassure people that they have arrived at the centre of the village.

03. Ideally, the **village core settlement should be established early** and as soon as possible start offering residents the full range of services required by the new community.

04. The **hamlet edges should be outwards-facing into the green space network** and avoid at all costs presenting rears of buildings and back-gardens to public view.

05. **"Defined edges"** means that a hamlet can be completed without the need to have a "meanwhile" use or edge solution.

06. Hamlets can be **developed as and when demand occurs** and the Design Code could by being reviewed and updated, morph to accommodate different thinking over time.

3.1.7 | DEVELOPMENT DENSITIES

Thinkpiece Summary

The density range for different scale housing will be influenced by the adopted Local Plan and existing site context. With the ambition for a high percentage of overall green space, an initial assessment of likely development densities in a 'typical' new garden village suggests the following indicative range excluding open space:

Low density - c. 25 - 30/35 dwellings per hectare (DPH)

Promoting an essentially green organic character - more reflective of the natural 'found' context - providing a spacious development form with a higher proportion of semi-detached & detached dwellings

Reminiscent of a traditional hamlet and likely to be confined to a few special locations.

Medium density - c. 35 - 45 DPH

This range of development typically offers greater legibility to and from the lower and higher density areas within the wider garden village.

It still maximises opportunities for homes to overlook open spaces and characterful streets; provides a high degree of permeability; and encourages a positive mix of more generous groupings and tighter urban living.

High Density - c. 45 - 55/60 DPH

Typically these should reinforce the core of development areas promoting urban living relative to the setting.

There will generally be a tighter urban grain of streets and spaces with greater use of terrace and linked properties.

This is still consistent with the centre of a typical traditional village whilst promoting efficient use of land together with 20 min. walkable neighbourhoods which can still abut generous greenspace.

Local and Neighbourhood Centres – typically up to c. 80 DP

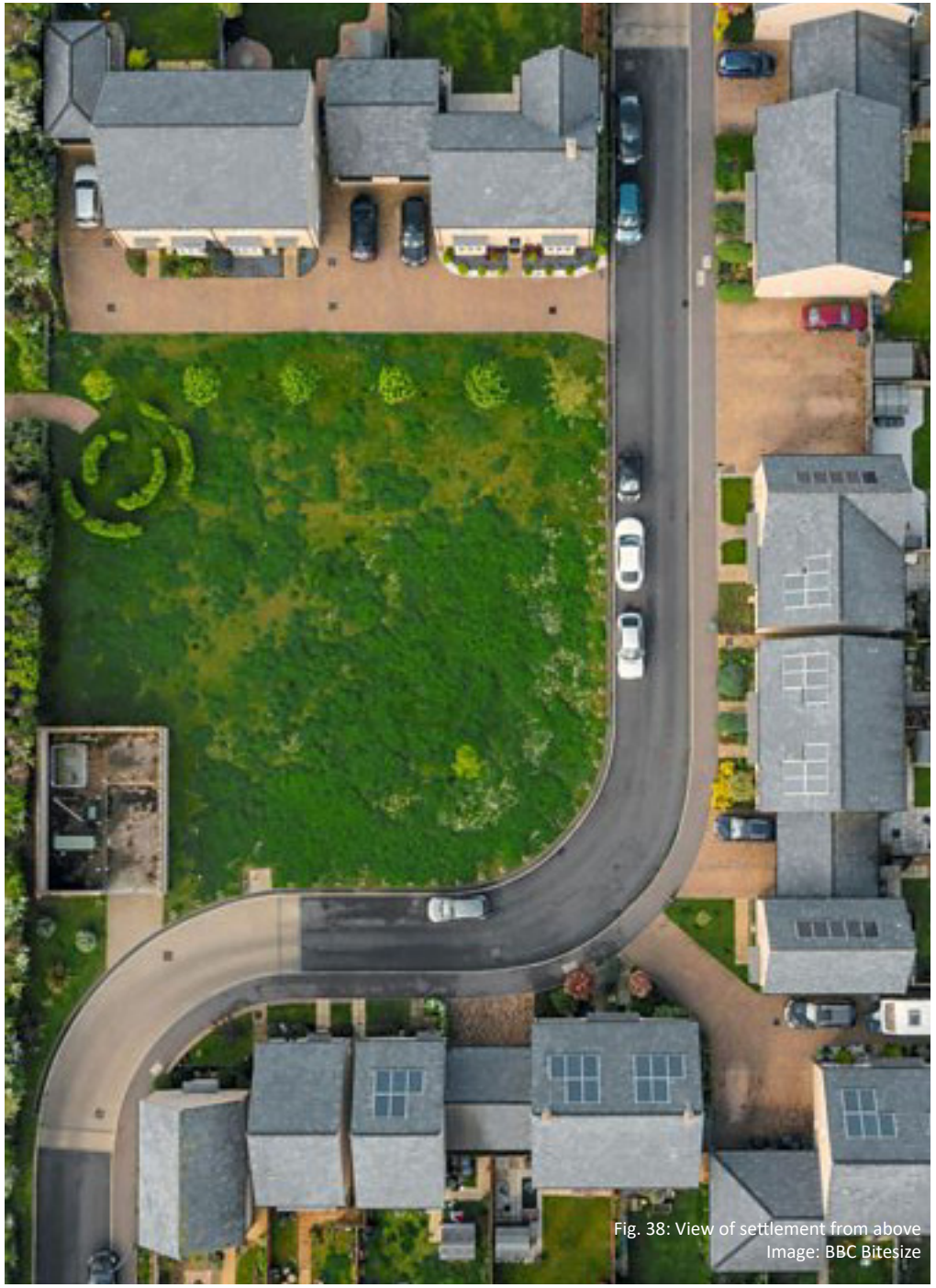


Fig. 38: View of settlement from above
Image: BBC Bitesize

3.1.8 | HEALTHY NEW TOWN PRINCIPLES

Fig. 39: Healthy New Town in Barton Park, Oxford
Image: Barton Oxford LLP (Oxford City Council and Grosvenor developers)

Key Principle

The learning from the healthy New Towns programme in which Darlington was a pilot has been distilled into 10 principles within three key areas of guidance that should inform the Garden Village.

Thinkpiece Summary

This think piece suggests how some of the 10 principles should be applied to Skerningham.

The key principles that are particularly relevant to the Skerningham Design Code and should be reflected in it are;

Principle 4 Creating Compact neighbourhoods-compact spaces and places with services to maximise use and impact with multi-functional green spaces

Principle 5 Maximise active travel-embedding active travel from the first phases

Principle 7 Foster health in homes and buildings-provide suitable homes that are healthy and efficient , workplaces that stimulate productivity efficiency and resilience and educational settings that support growth and development and community hubs that support health and connections

Principle 8 Enable healthy play and leisure-Create play, leisure, and community activity spaces for all and enable

Principle 10 Create integrated health and well -being centres – ensure a joined up approach to the provision such services to serve Skerningham and adjacent existing communities.

3.1.9 | NATURE BASED CODING

More Nature: Thinkpiece Summary

Globally we need to protect and reinstate more land for nature to safeguard natural systems from micro-flora and -flora in soil to birds in the sky, and all between. Previous estimates of 30% of the planet's surface required to recharge nature was recently recommended by Science to exceed 45%.

What would somewhere look like where EVERY item contributed to nature ?

+ Bus stops with green roofs
+ Bin stores with bug wall enclosures
+ Swift and sparrow colonies on gable end
+ Bat tiles in roofs
+ All rainwater run off by SUDS
+ Could waste water be treated locally through nature based solutions to recharge aquifers for irrigation?
+ Feasibility of storm water retention by beaver introduction in the Skerne Valley
+ Pesticide free street weeding as with 80 UK councils with wildflower colonisation and management to keep accessible
+ Reinforced grass vehicle surfaces
+ Green walls and roofs
+ Celebrate 'scruffy' undisturbed areas for wildlife to flourish
+ Stop potential nutrient flow from farmland into waterways

The principle of retaining the most valuable ecological resources and connecting them across a site by means of wildlife corridors is critical for genetic diversity and healthy populations of wildlife.

Woodland should be retained from a BNG metric and Carbon perspective, acknowledging food security what is therefore the most and least valuable farmland to be retained?

Work iteratively with project ecologists.

The more appealing the destination is, the closer it is to daily life and the further away from busy roads, the greater the uptake will be. 'Wildlife corridors for people' should be created. The Skerne Valley Park would be a critical aspect of Skerningham's identity.

Fig. 40: Solar Panels
Image: Yorkshire Energy Systems

Fig. 41: Grandmother and grandchild hiking in a forest
Image: Juliane Liebermann via unsplash

Immersing People in Nature: Thinkpiece Summary

We need to balance a healthy ecological place that supports more wildlife with a place to live and spend at least 2 hours a day 'in nature' for the benefit of individual lives, maintaining landscape character and enhancing biodiversity as evidence shows :

+ Psychological effects, make us feel healthier, happier and more fulfilled;
+ Behavioural responses encourage us to make active life choices;
+ Physiological, medicinal relationships from the air we breathe - called 'Forest Bathing' in Japan.

It is vital to establishing places and routes people currently perceive and value as 'nature'. Supported by ecological and landscape design, memory-mapping must be central to masterplanning. The immersion of people in nature can be seen as 3 tiered within green infrastructure :

01. The environment to live, learn, work or receive services;
02. Places to visit for recreation or exercise;
03. Transport routes – pedestrian, cycle and vehicle.

The more appealing the destination is, the closer it is to daily life and the further away from busy roads, the greater the uptake will be. 'Wildlife corridors for people' should be created.

There are many requirements of healthy placemaking and within green infrastructure it is important that ecological planning does not turn its back on the principle of creating lively spaces and streets with active frontages.

A hybrid green urbanity should be created, with urban focuses enjoying green connectivity and rural outlook.

3.1.10 | CLIMATE RESILIENT BUILDINGS

Key Principle

Climate change is happening now. It is one of the biggest challenges of our generation…. As we redouble our efforts to achieve net zero, we must also continue to raise ambitions on adaptation to ensure the UK is resilient to the challenges of a warming world.

Thinkpiece Summary

The importance of Designing for Climate Resilience is clear and should be at the forefront in design consideration for any development. As one of the Garden Villages Design Principles laid out in The Art of building a Garden City (Henderson, Lock, Ellis) it has particular relevance to Skerningham.

New homes must be built to be low-carbon, energy and water efficient and climate resilient. The costs of building to a specification that achieves these aims are not prohibitive, and getting design right from the outset is vastly cheaper than forcing retrofit later. In accordance with the Future Homes Standard, from 2025 at the latest, no new homes should be connected to the gas grid. They should instead be heated through low carbon sources, have ultra-high levels of energy efficiency alongside appropriate ventilation and, where possible, be timber-framed.

UK housing: Fit for the Future? Committee on Climate Change 2019

This was published more than 3 years ago and this is still very relevant and sadly only small incremental step have been made since then.

The positioning of buildings on site, orientation, form factor and genuine fabric first approach with integrated renewable or district heating system all contribute to climate resilience. Climate resilient buildings need to go beyond building regulations particularly anything that purports to be exemplar. Meeting building regulations, to some, is a race to the bottom, trying to get as near to the standard so only just being compliant. In other words, it is deemed acceptable that our new housing stock is only just legal. Coupled with the performance gap that the 'Fit for the Future' report describes many could fall below this.

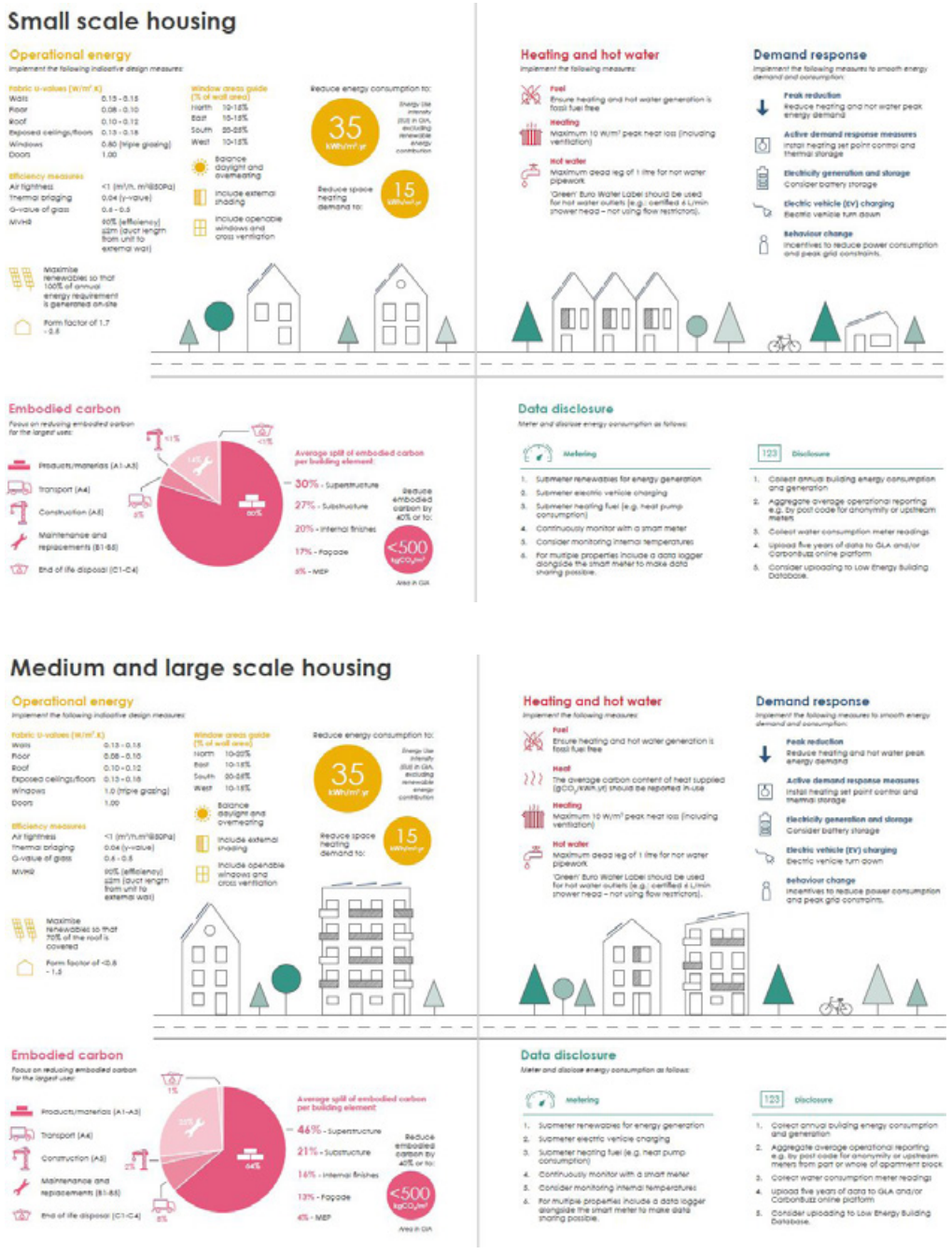


Fig. 42: Design guide diagrams from LETI
Clearer diagrams provided in Appendix 9.7

3.1.11 | PLAY, RECREATION + SPORT

Fig. 43: Design for play
Image: *Sunderland Pathfinder Play* - Colour (landscape architects)

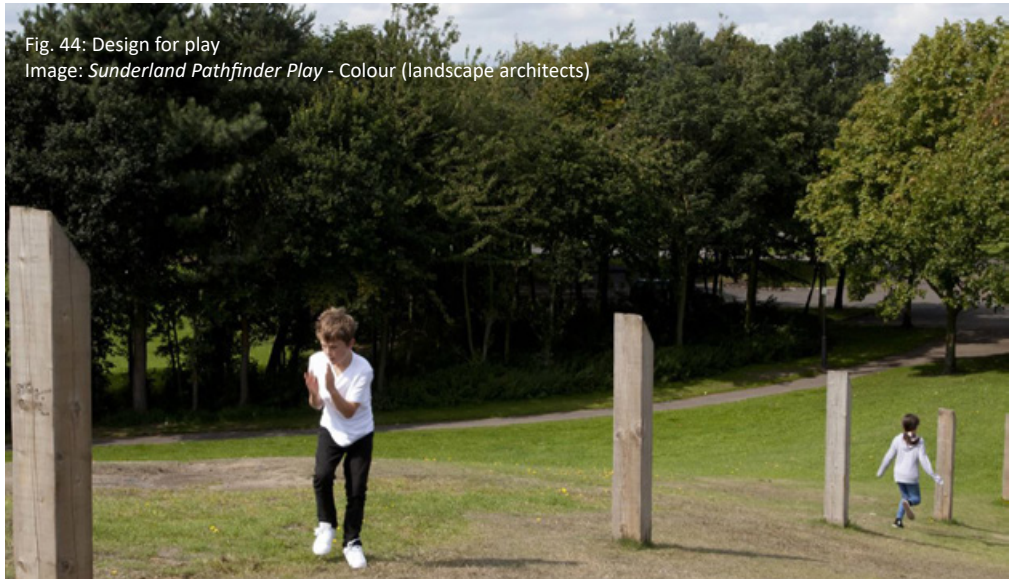


Fig. 44: Design for play
Image: *Sunderland Pathfinder Play* - Colour (landscape architects)

Thinkpiece Summary

The greatest impact on community health is through improving behaviour patterns of the least active. Masterplans can invite exploration and enjoyment of nature, encourage active transport, outdoor play and participation in formal and informal play. Through a little extra thought, infrastructure can be designed so as to become a nudge rather than a barrier to activity.

Organisations such as Sport England, UK Active, NHS England, the International Physical Literacy Association and Making Space for Girls provide excellent guidance and case studies in the planning, community consultation, design and management of places that appeal to as broad a range of the population as possible - safe for all ages, genders, cultures, interests and levels of physical ability.

Through being place responsive, environments should be playable, inviting a sense of adventure and exploration that aids physical development, promotes social interaction, safeguards user safety and safe testing of risk.

In establishing the need for facilities it should be recognised that core sports are not for everyone and no two locations or communities are the same, the traditional planning-led top-down sports dominated offer should be balanced by the needs of the wider population to achieve an active lifestyle. Informal use of public spaces, footpaths, cycleways and the services such as refreshment and toilets should be provided in appropriate locations.

There should be a mechanism within the planning process, spaces within applications and appropriate development funding to test what the community wants and thus avoid under-utilised sports, play and outdoor gym equipment in inappropriate locations.

3.2 | PUBLIC ENGAGEMENT

Community Engagement Summary of Process + Outcomes

This Design Code has been shaped by the effective engagement of both the residents of Darlington as a whole and specifically the local communities adjacent to the proposed Garden Village.

One Darlington the Borough Councils magazine that is delivered to all residents included feature articles about the proposed Garden Village and how people could get involved with developing a design code and a special section of the Darlington website provided regular updates and useful learning material.

In addition a programme of local face to face workshops were held to involve the local community in the development of the Design Code . The following proposed outcomes for the Public Engagement were shared and agreed at the outset;

+ An exemplary Design Code for Skerningham.

+ Good Quality Engagement so that people feel involved and informed.

+ Tangible 'Stuff' in the code that people would recognise as theirs.

The initial workshops were designed to build capacity in the local community to engage with the process of developing a design code. Starting with raising awareness of the ten characteristics of well-designed places, their relevance to Skerningham, and how local preferences would be considered for inclusion in the design code.

The aim has been to encourage a positive discussion about the potential to influence the quality and successful creation of Skerningham Garden Village, illustrate relationship between the public engagement and the development of the code and show how participants will recognise their input. These initial workshops indicated in particular the local importance of **access to nature** in the adjacent countryside, **good, connected footpath and cycle networks**, **minimal impact on existing communities** and a **good mix of housing designed for climate change**.

Further workshops have then distilled the many comments and suggestions to enable a further refinement of local preferences and greater clarity of the things that the design code will need to take into account.

Refer to Appendix 9.6 for detailed summary of community engagement process and outcomes.

Fig. 45: Image from public consultation

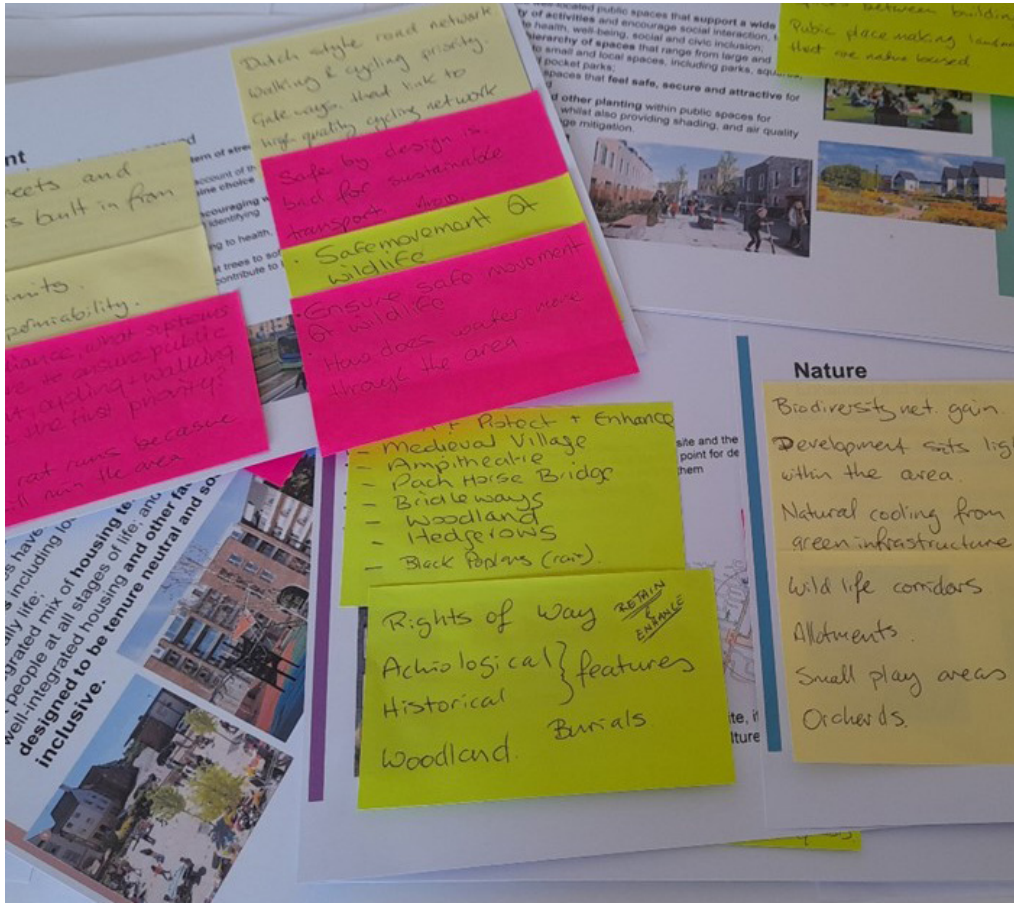


Fig. 46: Outcome snapshot from public consultation

3.3 | VISION

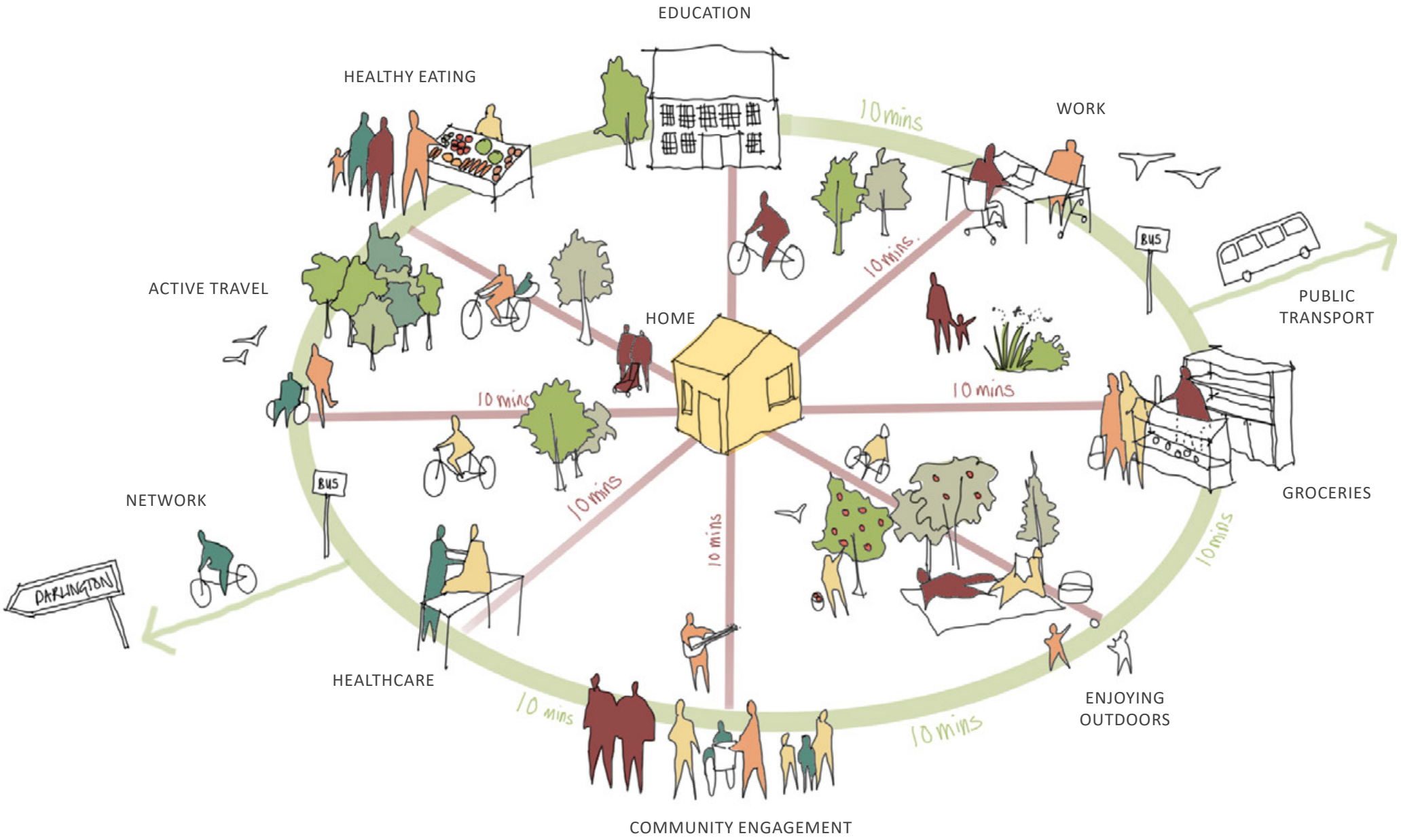


Fig. 47: Vision diagram

Vision Statement
The ambition for Skerningham Garden Village is to

create a great place for a new community to live, work and recreate

in accordance with national planning standards and best practice including the '*National Design Guide*' (DLUHC), '*Building for Healthy Life*', the new '*National Garden Village Principles*' (DLUHC), and the emerging Design Council '*A Public Vision for the Home of 2030*' which is supported by Government.

As a result of the public engagement and thinkpiece exercises, there are 3 key themes that inform the design code:

01.
HEALTHY LIVING

In 2016 Darlington was selected to be one of the 10 demonstrator sites for the **Healthy New Towns** (HNT) Pilot across the UK to explore how the development of new places could provide an opportunity to create healthier and connected communities with integrated and high-quality health services.

A publication, '*Putting Health into Place*' (PHiP) collates the learning from this programme and sets out 10 principles for healthy place-making. The proposed Garden Village presents the first large scale opportunity to embed PHiP in the UK and this opportunity must not be wasted.

02.
INNOVATION

The proposed Garden Village encourages innovative thinking in ALL aspects of the planning, design, delivery and future occupation and use of the Village.

The opportunities for innovative thinking extend beyond not only the expectation of the incorporation of high-speed broadband across the site, but into areas as diverse as: achieving a bio-diversity net gain from the development of the site; incorporating low and high density self-build plots within the overall scheme to address specific urban design requirements; reflecting the learning derived from the Darlington Healthy Living pilot; etc.

03.
SENSE OF PLACE

The overall development should have a unique sense-of-place, that is distinctive whilst also be grounded in the locale through its composition, form, materials, etc. It should demonstrate the best of current design thinking and reflect the need for long-term low environmental impact and sustainability.

Ultimately the success of a housing development scheme will be in its "Placemaking" ability & long-term success. Design Teams should ask themselves "Will the residents and users enjoy and care for the "place" over time and feel that they are living happy, contented, fruitful, healthy lives as a consequence of the design?"

4.0 | STRATEGIC TOOLKIT

4.1 | MOVEMENT

The Network

The movement network will provide a comprehensive network of routes for pedestrians, cyclists, and vehicular traffic to enable people to get from where they live to where they want to get to in the safest, most direct, and healthiest way.

Guiding Design Principles:

◯ To prioritise the movement and safety of pedestrians and cyclists of all ages and abilities through to provision of **Coherent, Direct, Safe, Comfortable** and **Attractive routes.**

◯ Residential development and essential community services and schools will be located to ensure that the **20 minute walkable** (10 minutes there and 10 minutes back) neighbourhood is achieved.

◯ It will be a **legible and permeable network of streets** with a clear street hierarchy, including a network of local and tertiary streets of varying character. The aim will be to move from main and secondary streets to local and tertiary streets as quickly as possible.

◯ Ensure **pedestrian and cycle connectivity** is made to connect the site with the surrounding area to both enable local communities to also access services within Skerningham and residents of Skerningham to access those beyond the site including the Skerne Valley Park.

◯ All homes and services will be within a **10 minute walk from a bus stop** with frequent service.

◯ Provide **appropriate level of vehicular and cycle parking** but ensuring it does not dominate the built environment , public realm, or open spaces.

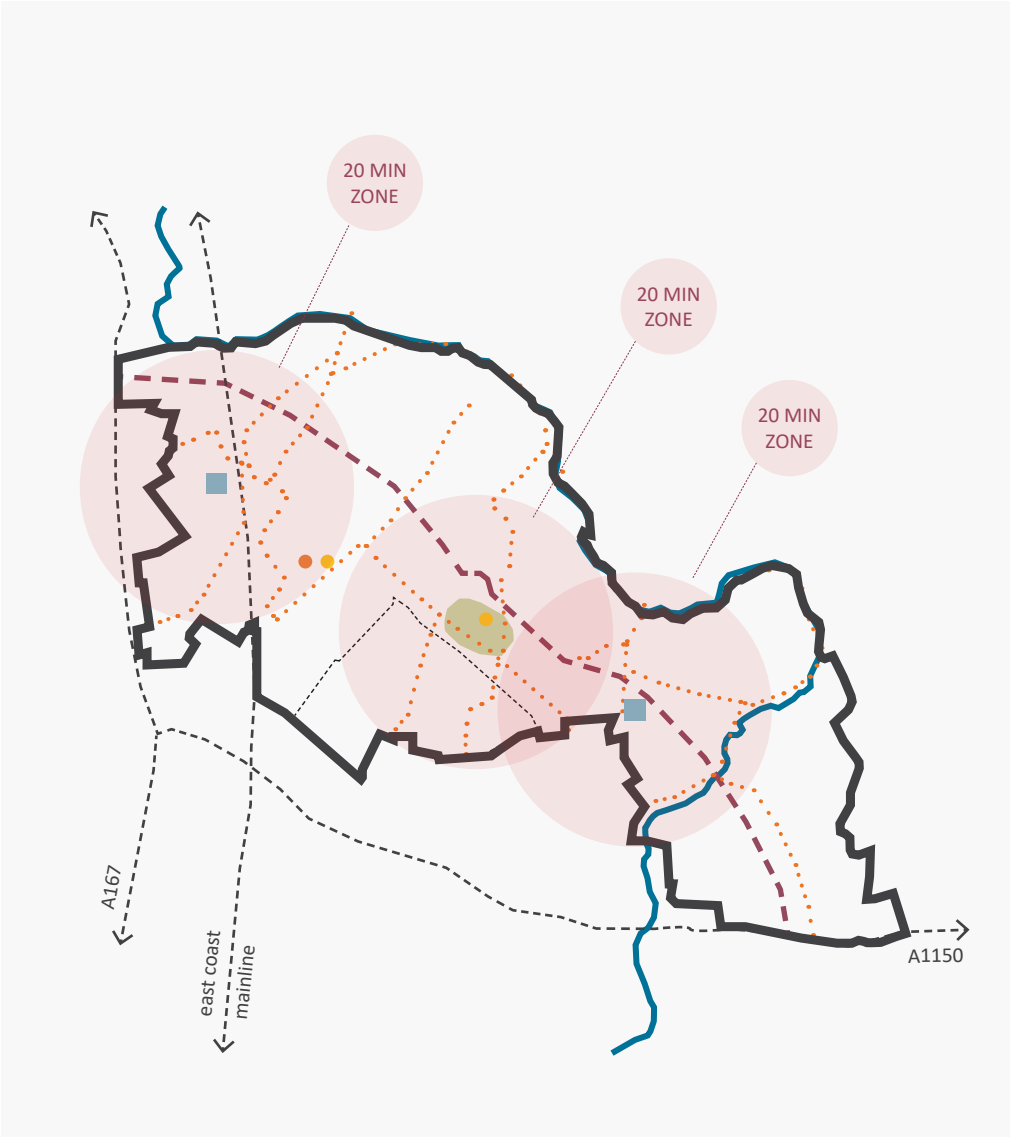


Fig. 48: Indicative 20 min walkable zones based on Skerningham Masterplan Framework

- Potential neighbourhood centre
- Primary school
- Secondary school
- Potential location of community facilities
- Safe, attractive and accessible network of public foot and cycle paths
- Proposed local distributor road to avoid the Skerne River Valley

Fig. 49: Designing for a sense of place

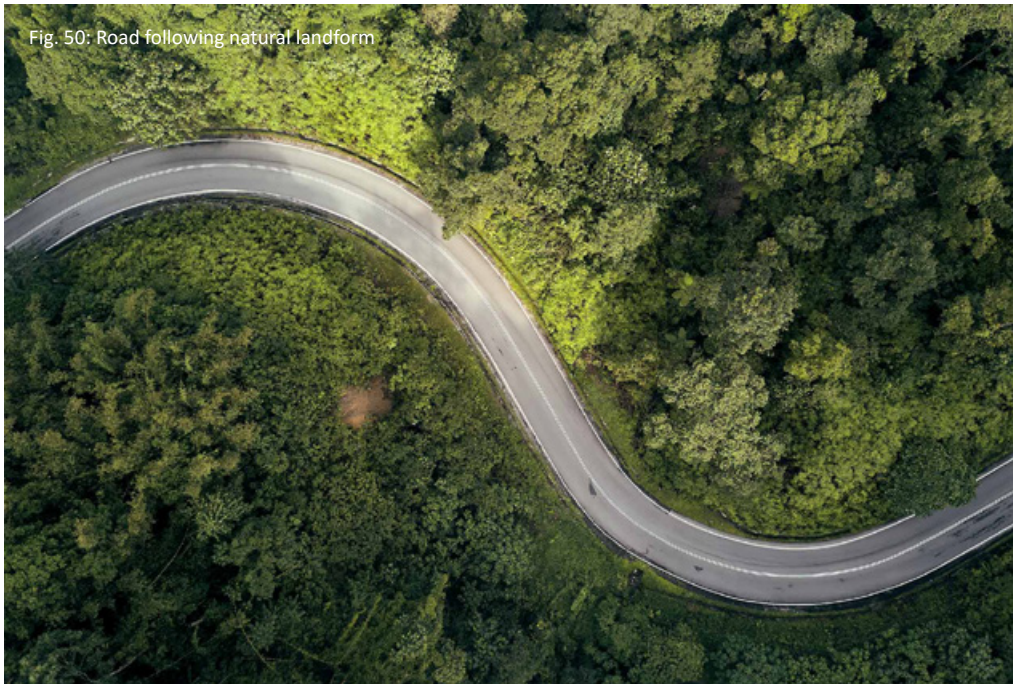


Fig. 50: Road following natural landform

The Local Distributor Road

The Darlington Local Plan Policy H10 states that a local distributor road between the A167 and A1150 will provide vehicular access to the development. The local Plan sets out the phasing requirements for the distributor road and **also states that the precise details of the road and development access points shall be agreed with the Council as part of the masterplan, infrastructure phasing plan and future planning applications for the site.**

Guiding Design Principles:

- It will be designed for **low traffic speeds** with speed limit of no more than 40mph and potentially lower in the central section. It will look like a road that is part of a garden village and not a high speed bypass and should emphasise a sense of place.
- The road will be aligned to **avoid the existing Skerningham Plantation** and being visible from the river Skerne.
- **Additional planting** will both enhance the road corridor and provide screening of sensitive locations as appropriate.
- Properties will face the road accessed from service roads with trees.
- **Sections of footway /cycleway** may run alongside the road in certain places, but they will be well separated by distance and landscaping.
- A number of **compact roundabout junctions** on the distributor road will give access to the development sites and local street network.
- To maintain the sense of green connectivity there will need to be **careful consideration of the locations and design at the meeting of footpath and or cycle network crossings** of the distributor road. This aspect is covered the sections below and in each of the relevant Character Area sections.

Street Hierarchy

Skerningham will have a connected network and hierarchy of routes for all modes of transport. The function of each street will depend on location with the development and the areas through which they connect. This will then influence the movement /place role and design criteria.

A replacement for Manual for Streets is currently being developed and when published later in 2022 will establish new design guidelines for all streets. Until then the following guidelines will be followed. (See also 7.1 Design Quality Coding Checklist).

There a four main street types in the movement hierarchy.

01. Main Village Streets

These are the strategic vehicular routes that link the site to wider town and surrounding areas. The Main Streets will have frontage development and vary in character to relate to specific areas such as the Village centre.

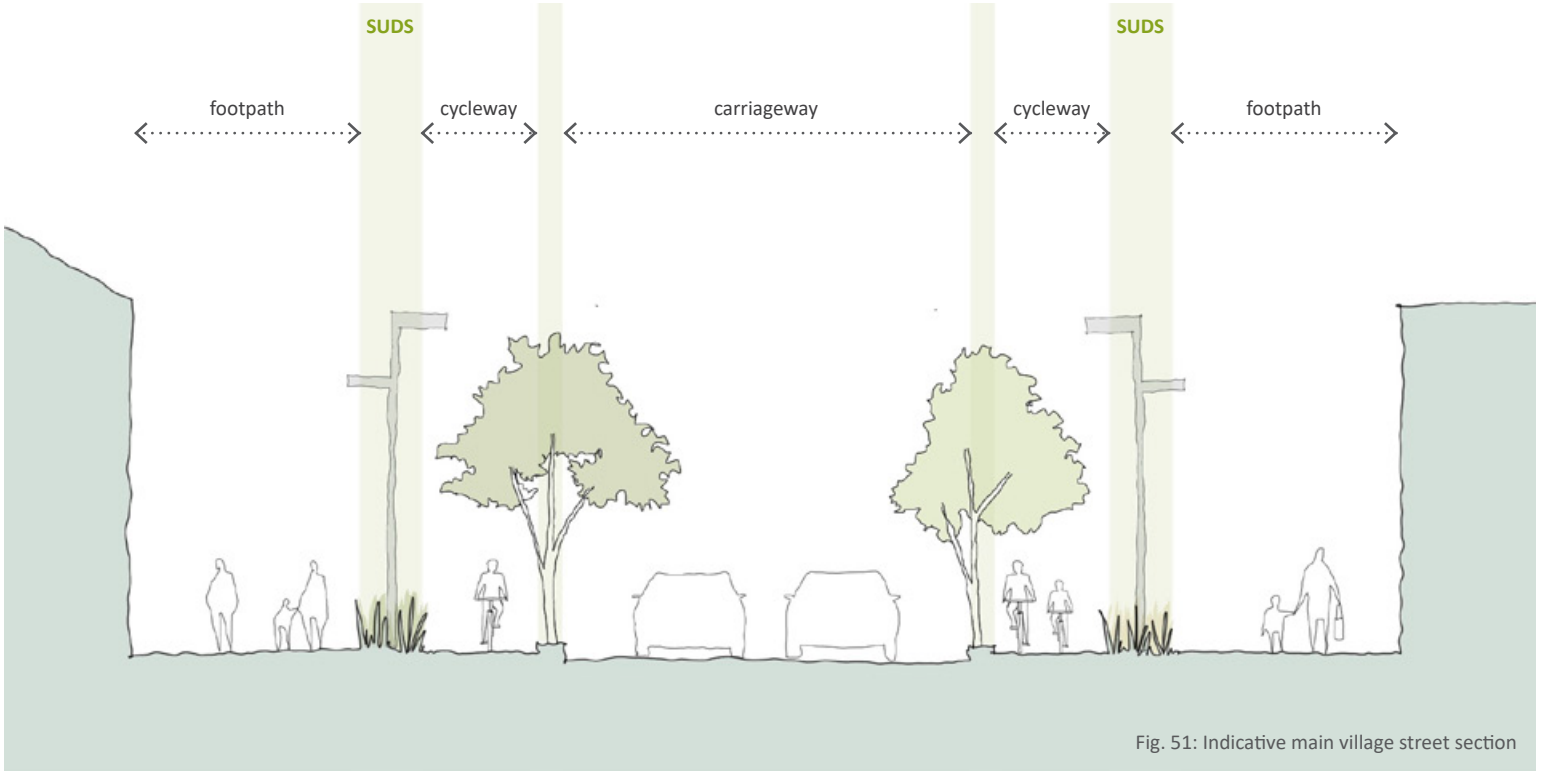


Fig. 51: Indicative main village street section

Guiding Design Principles:

- The main village streets will be short to encourage low speeds or broken up with changes in priority/width as part of a permeable network.
- They must create a positive pedestrian/cycle environment
- Street trees and SuDS will be included.
- There will be street lighting.
- Defined parking bays will be included.
- These routes will be a maximum width of 6.7 metres where they are bus and key servicing routes, and consideration should be given to a maximum width generally of 5 metres. Manual for Streets 2 - where HGVs and buses make up only a small proportion of traffic flow 2-2.5m wide lanes would be sufficient for most vehicles and would reduce carriageway width requirements, making it much easier for pedestrians to cross.
- Junctions will have tight radii corners.

02. Secondary Village Streets

Secondary Streets are mostly residential streets connecting the Main Streets.

Guiding Design Principles:

- Clear distinction between vehicular, cycle and pedestrian space and variation in typology according to their specific location .
- Street trees that give the sense of an avenue and SUDs will be included.
- Speed limited to 20mph.
- 5m wide with trees that give the sense of an avenue in a verge strip or carraigeway which will enable provision for parking bays.
- Tight junction radii and footpath treatment across junction bell mouths to confirm pedestrian priority.

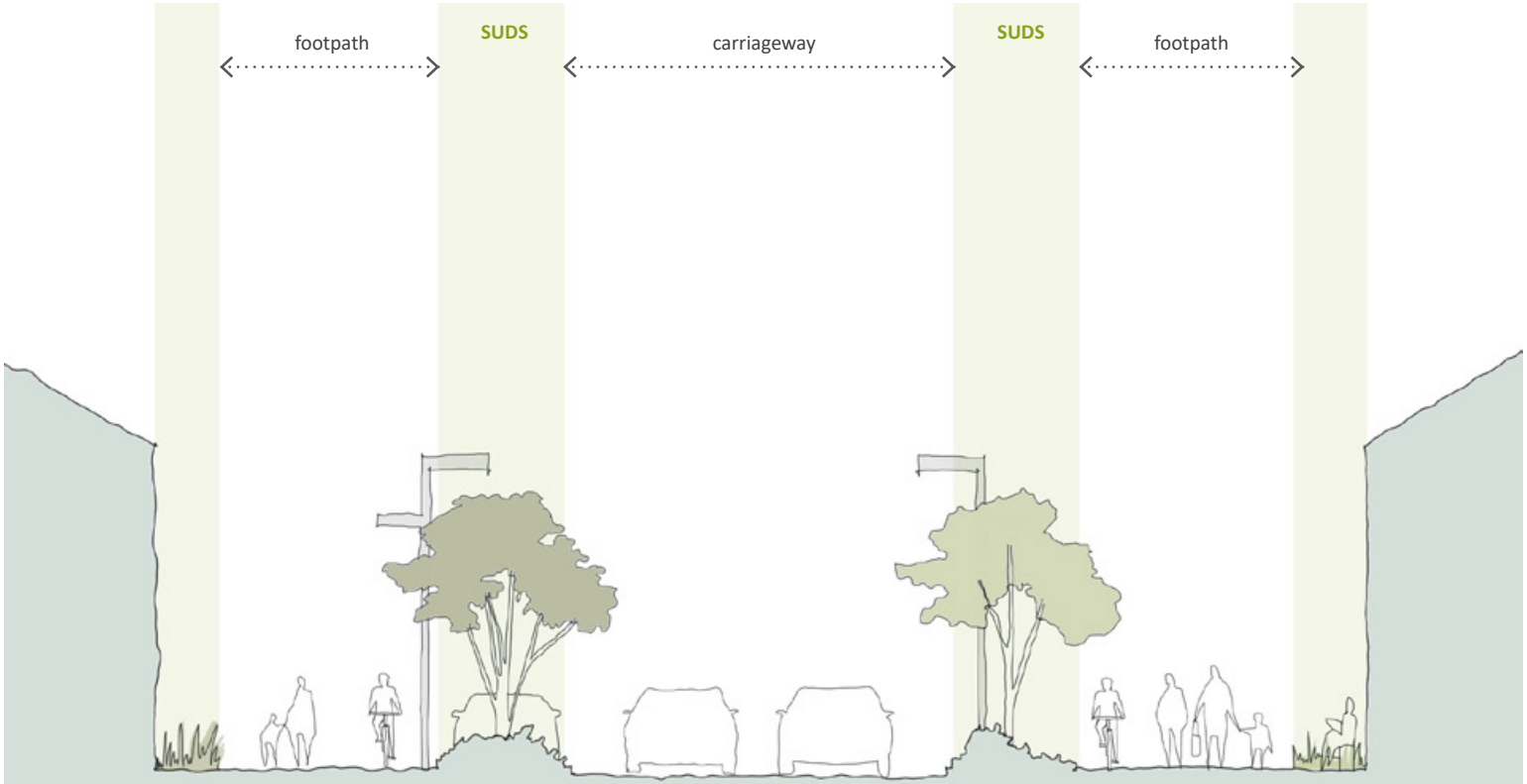


Fig. 52: Indicative secondary street section

03. Local Streets

These are residential streets with managed traffic flows to prioritise active travel that provide access to homes and support active travel, social interaction and health and well being.

04. Tertiary Streets

Lower order streets for access to small groups of clusters of homes and servicing. They can be mews courts, lanes alleyways and their final location and type will be determined through detailed design.

Guiding Design Principles:

- The use of cul-de-sac should be minimised. Where cul-de-sac are used connectivity for pedestrians and cycles must be ensured.
- Filtered permeability throughout the network will design-out rat-running, create a low traffic environment around homes whilst still allowing pedestrian and cycle movement.
- Creativity should be used to incorporated street trees, ideally in soft landscape into both typologies so as to create a strong green ambience.

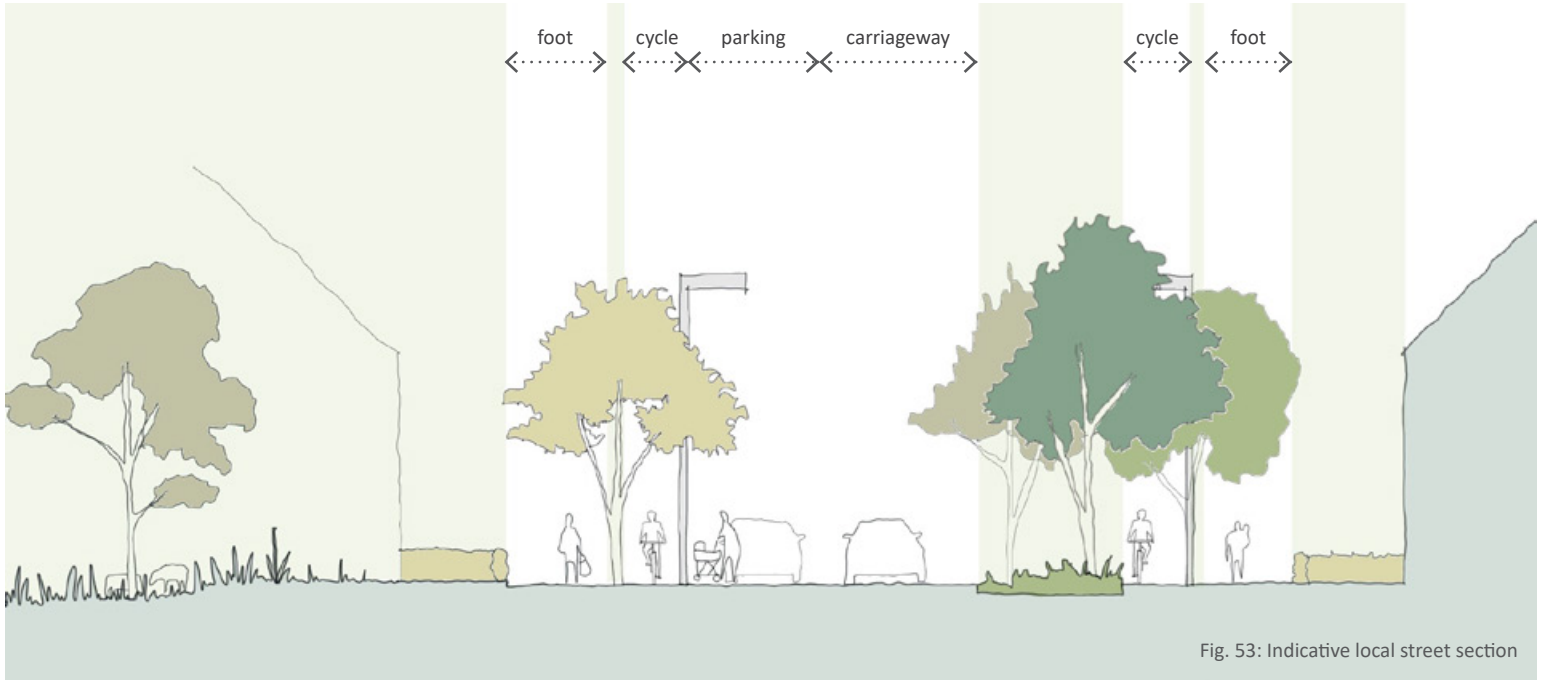


Fig. 53: Indicative local street section

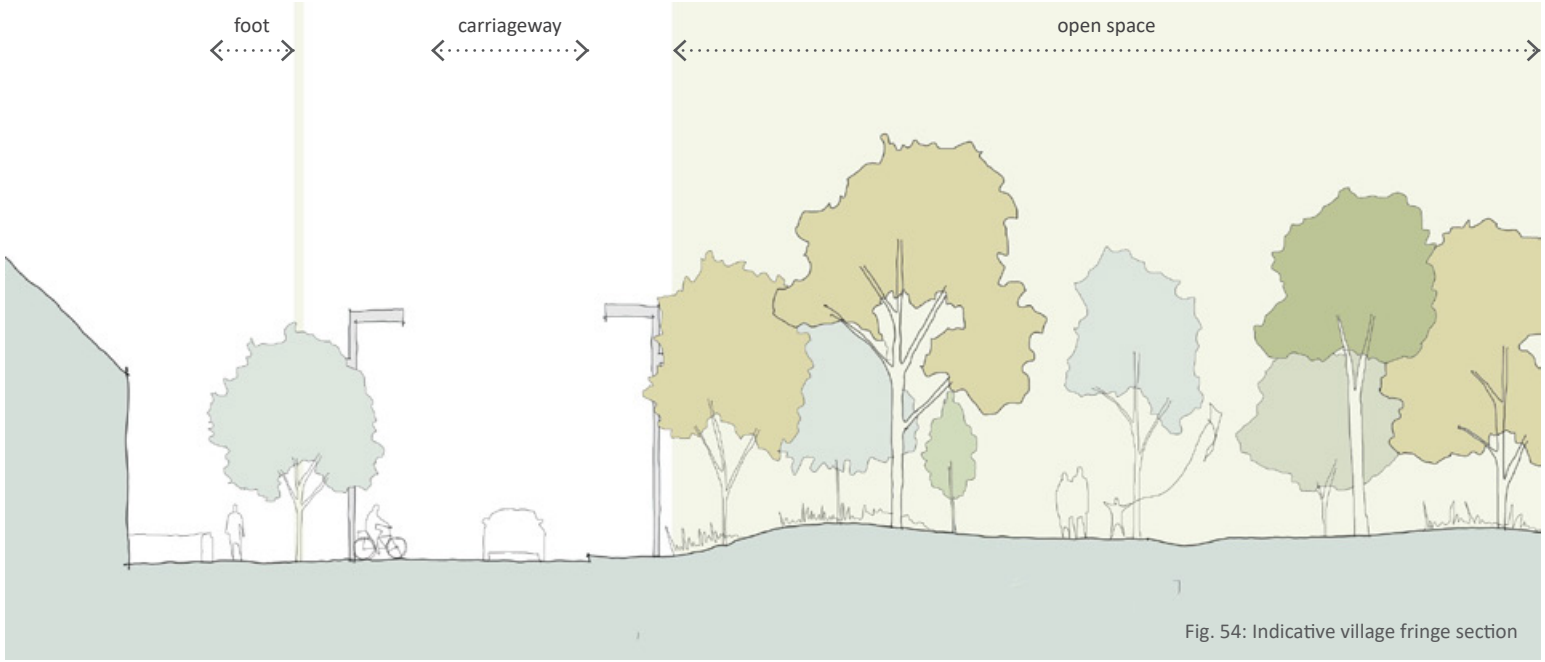


Fig. 54: Indicative village fringe section

Public Transport

Whilst the vision for Skerningham is that of a compact 20 minute neighbourhood with a range of services that meet most needs access to public transport will be key to providing choice for everyday journeys beyond the immediate neighbourhood to Darlington Town centre, employment centres and schools.

The parts of Skerningham will have good public transport accessibility when homes have a public transport stop within walking distance.

A small proportion of the proposed Skerningham development can be located within walking distance of existing bus routes and stops. This may require improving the permeability of existing pedestrian routes and or providing new routes.

However in the main to achieve good transport accessibility (all houses within 5 minutes walking distance of a bus stop) the development will require that parts of the proposed street network (main Streets) can accommodate bus services.

Fig. 55: Active travel
Image: Living Streets

Guiding Design Principles:

- In order to ensure adequate potential public transport penetration all households within 10 minutes walking distance) of a bus stop some or all of the Main Street network must be designed to accommodate local buses, including bus stops.
- Bus shelters should incorporate green or brown roofs.
- Streets should include infrastructure with secondary uses for play and exercise.
- Covered cycle and scooter storage to incorporate green or brown roofs.

Inclusive Streets

Our streets should be for everyone - providing safe and attractive places to travel, rest, play and spend time.

They need to work for all of us, whatever our age, ability, gender, race or income.

Creating pedestrian and cycle routes, the layout of public space, parks and green space that are safe, direct, convenient, and accessible for people of all abilities. The needs of those that are less mobile need to be considered.

Measures to include:

- Tactile paving at junctions and crossing points.
- Street furniture/ trees located so as not to impede movement.
- Footpaths/ dropped kerbs ensure ease of movement for wheelchair users or buggies.
- Adequate widths of shared footpath cycle lanes.
- Features to aid legibility, wayfaring, and ease of movement.

Fig. 56: Active travel

Active Travel

Active travel refers to non-motorised and sustainable forms of transport, primarily walking and cycling, and horse-riding in this location.

Streets and paths within Skerningham must connect people to places and public transport services in the most direct way, making car-free travel more attractive, safe, and convenient.

The aim is to make walking and cycling feel like an instinctive choice for undertaking short journeys for everyone, of all ages and capabilities.

The active travel network should be informed by 5 core principles (Coherent, Direct, Safe, Comfortable and Attractive).

Existing public paths will be protected and enhanced as appropriate and celebrated as significant historical routes e.g. Salters lane. These aspects are discussed in more detail within the Character Areas.

The routes must feel direct, logical, and understandable by all road users.

Guiding Design Principles:

- Everyone should be able to cross the road safely, directly, and without delay.
- Safe and convenient pedestrian and cycle crossings must be provided at regular intervals including informal and formal provision.
- Any signalised crossings should allow for appropriate crossing times and uncontrolled crossings main and secondary roads will be pinched to create short crossing widths.
- There will be places to sit, space to chat or play within the street.
- Pavements and cycleways will continue across side streets or there will be tight radii at junctions to ensure the pedestrian desire line is maintained.
- Private drives which frustrate pedestrian and cycle movement will be discouraged.
- Pedestrian and cycle routes must be safe, overlooked, and appropriately lit.
- Cycle routes must connect as directly as possible from the tertiary street network to key destinations both within and beyond the Skerningham Garden Village boundary (e.g. local shopping and services, secondary schools, colleges, the town centre) .
- Cycle routes will complement and, in some cases, extend Darlington's (Tees Valley) strategic cycle network.
- Cycle routes will follow the line of village main and secondary roads where appropriate. In situations where cyclists are sharing the carriageway speed differences will be reduced.
- The design of the Cycle network will adopt the guidance in Local transport Note 1/20 Cycle Infrastructure Guidance,

DfT July 2020. The network will follow the guidance on Cycling Level of Service (CLoS) and Junction Assessment Tools (JAT) with a mesh density of 250m max and a deviation factor of 1.2.

◯ Leisure cycle routes will run through open space and alongside the green/ blue infrastructure network. They are traffic free and provide safe environments for cycling for all ages and abilities.

◯ As pedestrian and cycle routes move from the residential areas into the open spaces up to and beyond the distributor road they will take on a more rural appearance; material such as crushed limestone will replace tarmac and there will be no streetlighting.

◯ The area of the village centres must be designed to be shared between pedestrians and cyclists.

Fig. 57: Shared surfaces for pedestrians and cyclists in the village centre

Junctions and Crossings

Where the pedestrian and cycle network meets the distributor Road the crossings will require careful and sensitive design depending on location.

In some cases the cycle or footpath route will have changed in character as it leaves the residential area and heads towards the open space up to and beyond the distributor road.

Vehicular Parking: Standards and design Requirements

Encouraging active travel is not about preventing people from buying/owning cars and other vehicles. It's about usage and creating the conditions to encourage short journeys to be made on foot or on bike within and beyond the boundary of the garden village.

The design must therefore anticipate realistic levels of car parking demand, guarding against displaced and anti-social parking.

Parking within the new garden village will include private dedicated parking for residential homes, public parking spaces for visitors and shared parking for residents, employees, and visitors within village centres.

The Darlington Local Plan states: *Local parking standards for new development and changes of use will be set out in the Tees Valley Highway Design Guide (due to be updated 2021/2022), in the meantime nationally defined parking standards will be applied in the Borough.*

Guiding Design Principles:

◯ Tees Valley Standards Normal requirements for a dwelling are 2 spaces per household. This includes visitor and residents parking. In a conventional development this provision is expected to consist of a garage and driveway (the driveway must be at least 6m in length from the back of footpath).

◯ Communal visitor parking 0.5 per dwelling-is this enough.

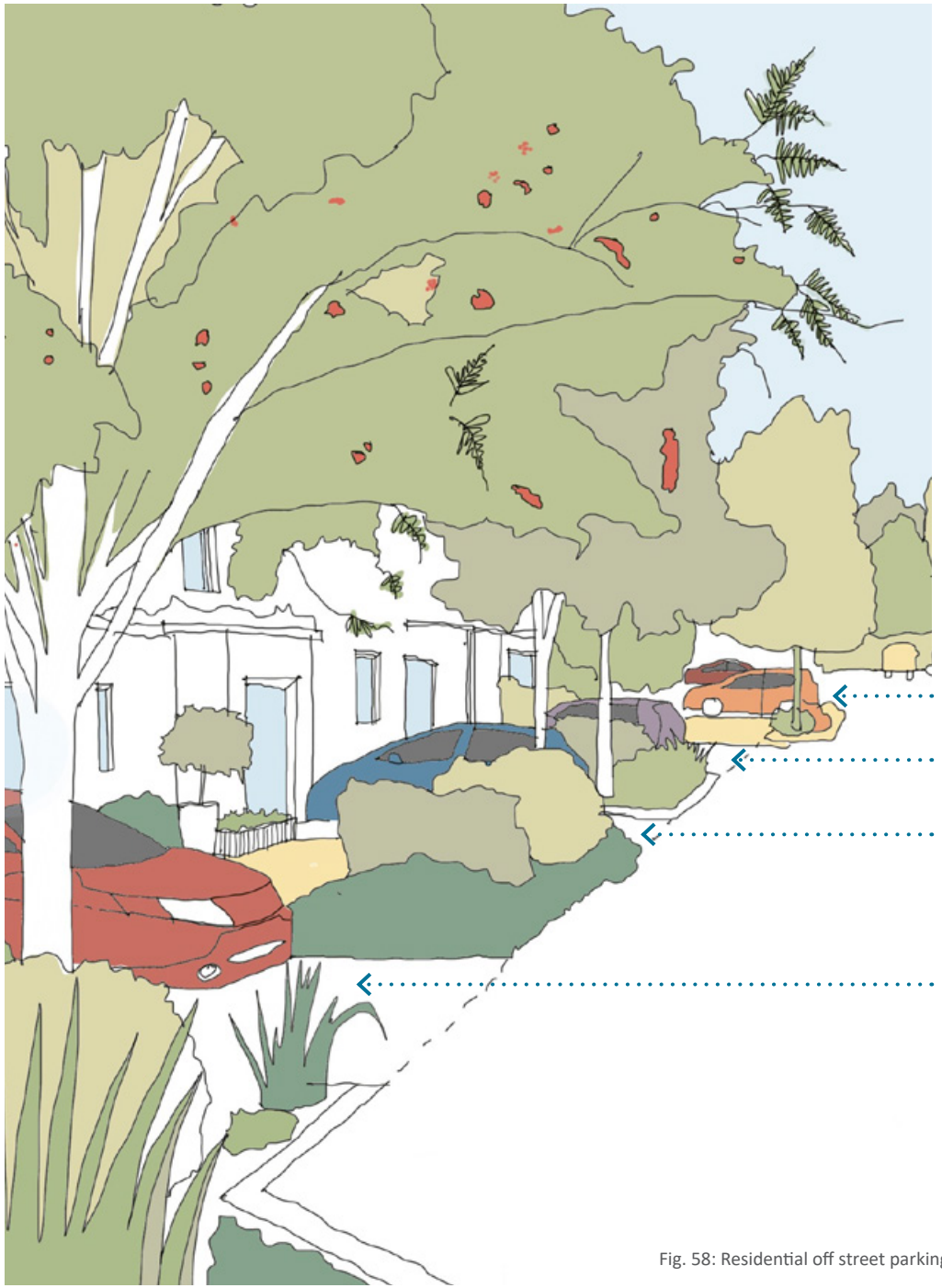


Fig. 58: Residential off street parking

Fig. 59: Shared bike storage and recycling

Fig. 60: Well integrated refuse stores must be considered early to avoid this

Cycle Parking: Standards and Design Requirements

To deliver the vision for Skerningham, as a place that encourages active travel, suitable cycle parking infrastructure must be provided to allow residents to own and conveniently use cycles for everyday journeys.

Guiding Design Principles:

- Cycle parking must be designed as an essential component of the development and located in both key public spaces, outside destinations, such as schools and within private residences.
- Visitor spaces must be provided separately.
- At least storage for one cycle where it is as easy to access as the car.
- Secure and overlooked cycle parking that is as close to (if not closer) than car parking spaces (or car drop off bays) to the entrances of schools, shops, rail station and other services and facilities.
- Provide scooter and cycle parking at schools. Scooters can encourage younger children to get active on the way to school.

Waste, Recycling & Utilities

Services and utilities must be considered at the outset of any future design proposals of Skerningham to ensure quality of space.

Guiding Design Principles:

- Well integrated refuse stores, recycling facilities, meter boxes, pipes, flues, and vent must be considered early in the design process and integrated into the overall scheme.
- All homes must have access to High speed (Ultrafast gigabyte) broadband connectivity must be a feature of the development to encourage a ‘live/work’ balance.
- Electric Vehicle Charging points. Active: 20% charge point provision for residential parking bays Passive: 40% of parking bays Definition of “active” and “passive” provision of charge points: Active - A socket connected to the electrical supply system that vehicle owners can plug their vehicle into. Passive - The network of cables and power supply necessary so that at a future date a socket can be added easily.

4.2 | NATURE

Fig. 61: Existing Site

Nature should be retained, enhanced and integrated throughout the landscape, architecture and infrastructure of the Garden Village for the benefit of existing, new residents and visitors so as to maintain a green local identity and help address global environmental issues. Solutions are likely to be interrelated and interdisciplinary so as to create a true holistic solution.

More Nature

Outcome = ensure a Biodiversity Gain of 20% for every planning application so as to be an exemplar development with more nature than prior to development and above 2022 national planning requirements.

Guiding Design Principles:

◯ Identify existing ecological resources and create buffer zones around these for assisted natural regeneration as advised by a qualified ecologist

◯ Avoid 'greenwash' but incorporate meaningful innovative nature-supporting infrastructure as appropriate such as green roofs, architectural bird colonies, insect hotels, or reinforced grass vehicle surfaces throughout.

◯ Create as many ecological niches as possible in line with local Biodiversity Action Plan ambitions.

◯ Planting to be predominantely native and locally sourced wherever possible.

Fig. 62: Two grey herons
Image: Save Skerningham Facebook page

Better Connected Nature

Outcome = the basis of the masterplan is a network of green infrastructure formed of a mosaic of interconnected habitats that strengthens the existing ecological resource.

Guiding Design Principles:

- Wildlife corridors must interconnect existing ecological resources such as woodlands, watercourses, hedgerows, fence lines and wet areas so as to create a green network
- There should be two or more primary 'ecological superhighways' that connects that connect the existing urban centre with open countryside;
- These should be identified and designed by professional ecologists iteratively with the master-planner and landscape architect;
- Connecting corridors should be carefully designed to work with the topography, landscape character views and crossing of the distributor road.

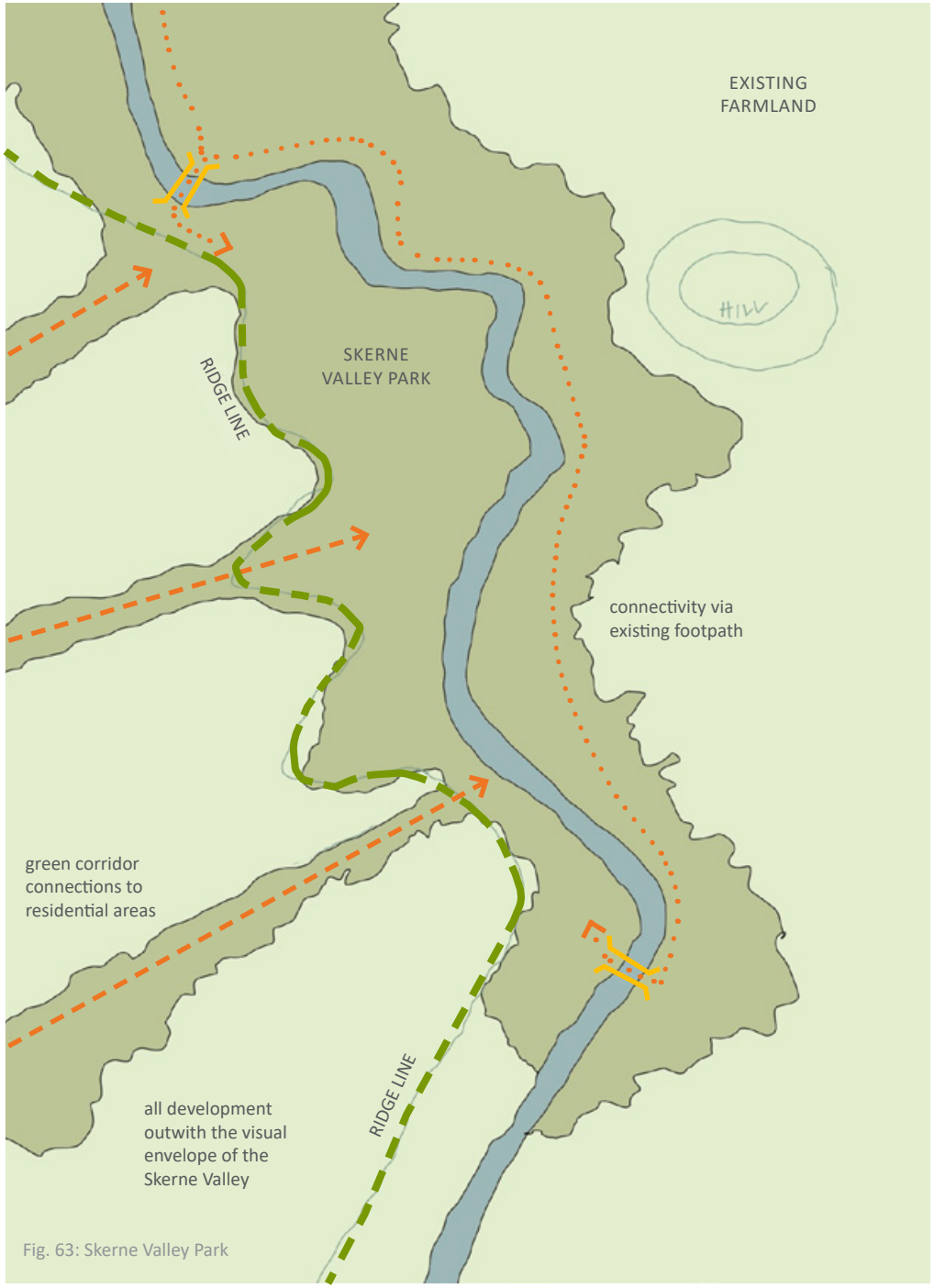


Fig. 63: Skerne Valley Park

Climate Resilience

Outcome = all solutions should be of benefit to Carbon sequestration, reduced flood risk, passive cooling or heating

Guiding Design Principles:

◯ Landscape strategies should promote sequestration of atmospheric Carbon. For instance felling of mature trees should only be permitted if there is a public safety risk

◯ Management and maintenance operations should be reviewed in terms of minimising the use of energy and chemicals

◯ The shading and cooling benefits of vegetation should be exploited on both a micro level to reduce unwanted solar gain and on a macro level to reduce any potential heat island effects

◯ Sustainable Urban Drainage is mandatory and should be designed so incorporate stepped swales as part of an approach that maximises biodiversity

◯ Areas prone to flooding should be embraced with landform and wetland habitats created that hold water and help sequester Carbon such as wetlands.

Fig. 64: Utilising wetlands or areas prone to flooding within design

Fig. 65: Existing Garden Community, Chelmsford
Image: Countryside Zest & Homes England

Living in Nature

Outcome = people's lives to be within an environment that gives the perception of being immersed in nature.

Guiding Design Principles:

◯ All scales of public open spaces streets of should be designed so as to promote nature, furthermore the masterplan should ensure that natural features are inviting for public access so as to promote health and well-being without compromising biodiversity.

◯ Existing and proposed footpaths, cycle routes, bridleways and Public Rights of Way should be safeguarded within green corridors that work for wildlife.

◯ The experience on green routes should be that of being within nature, be it an enclosed country lane, broad sweep of meadow, riverside or woodland experience.

◯ Green infrastructure such as SUDs and other interventions that perform ecosystem services should be accessible for public use and enjoyment wherever feasible.

◯ Every street should enjoy views of existing or meaningful proposed Green or Blue Infrastructure. No places should feel 'landlocked'.

◯ Ensure that new community facilities such as schools, GP surgeries and shops are connected to nature and users have opportunities for instance to study in the landscape, undertake social prescriptions or just relax under a tree.

◯ Lawns and amenity grass should be species rich and not require artificial pesticides and herbicides. Reduced mowing regimes and areas of long grass should be considered wherever possible to both promote biodiversity and reduce energy use.

◯ External lighting should be cognisant of nature – particularly bats.

◯ Agricultural stewardship should promote nature, soil health and include features such as nature strips besides hedges and drainage ditches, depressions for ponds and buffer zones to prevent nutrient ingress into waterways.

4.3 | BUILT FORM

Fig. 66: Existing Garden Community
Image: *The Water Garden Village* by AR Design Studio

Built Form

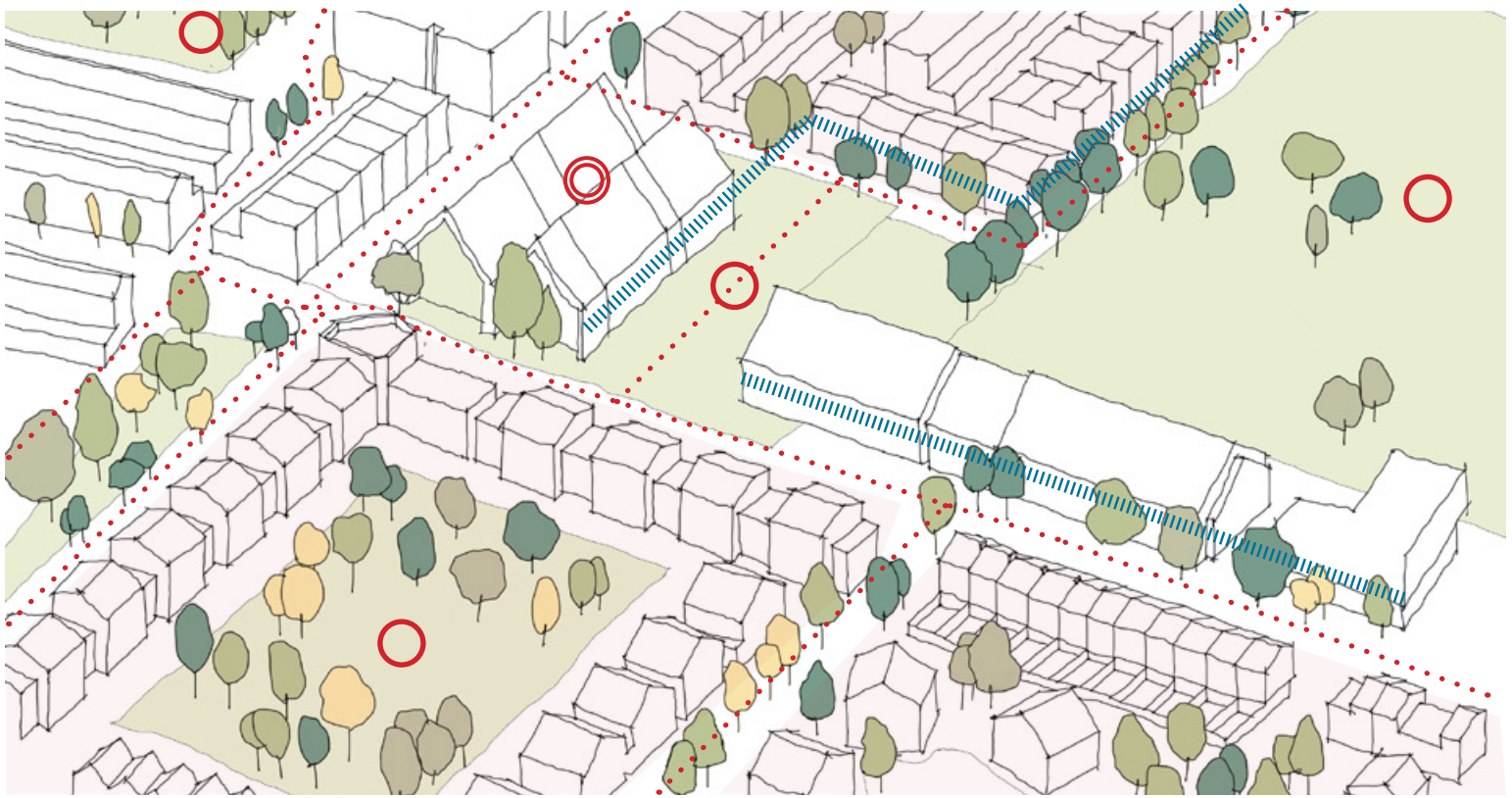
The National Design Guide defines the 'built form' of an area as the *'three-dimensional pattern or arrangement of development blocks, streets, buildings, and open spaces'* that make up any built-up area or development. It says that a well-designed place has a coherent form of development. For built form this means: a compact form of development and appropriate building types and forms.

Density Overview

The ambitions for the new Skerningham garden village include achieving a built form that is both **locally distinctive** and **rooted in an enhanced landscape setting** making the most of what is presently there. The 'as found' edge condition for the most part provides only limited opportunities to directly extend existing built form patterns and where appropriate complete development perimeter blocks.

Instead, the new built form will need to focus on structural responses that support the creation of 20min. walkable neighbourhoods which implies relatively dense and tighter development patterns consistent with a typical village configuration as seen in local examples in and around Darlington.

Fig. 67: Illustrative sketch demonstrating Kevin Lynch's 5 principles



Urban Design Principles

Developers are encouraged to apply the principles of Kevin Lynch (Image of the City) to the overall development: paths, nodes, districts, edges, landmarks, plus additionally gateways. There are important urban design tools that help us create and define these special character areas.

These include the recommended approaches of 'Lynchian Analysis' - pioneered by the influential American urban planner Kevin Lynch notably in his book 'The Image of the City' - with its focus on identifying

- paths,
- nodes,
- districts,
- edges,
- landmarks,

plus additionally gateways. Also, the celebrated British urban designer Gordon Cullen whose book 'Townscape' highlighted the way our local environment is structured in terms of the built form and the external spaces in between.

Key Design Principles

◯ Define a coherent design strategy for the area as a whole.

◯ Consider all buildings as important elements and ensure that they work as a whole, in terms of alignment, massing and architectural approach.

◯ The clear aspiration of the Council for the choice of building uses, forms and materials to help create a sense of uniqueness in the final development – indicating that it is located in Darlington and nowhere else – and stands out clearly from other developments in the northeast through a unique mix of architecture, layout including public spaces and choice of materials palette.

◯ Development on the Skerningham site should reflect and celebrate local themes in terms of materials, colours, form and style, not in a pastiche manner, but in a modern interpretation of the local vernacular, making development on the site distinctive and unique. This project will have failed if it does not achieve that goal.

Fig. 68: Low density

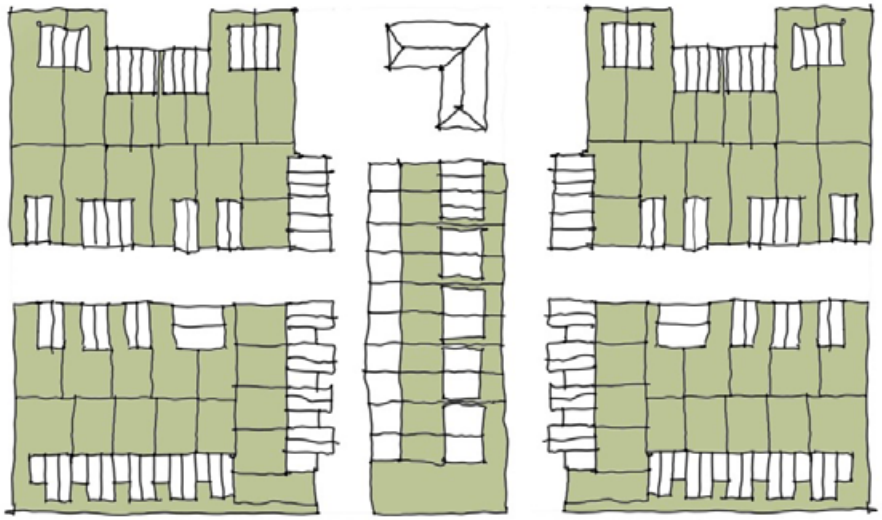


Fig. 69: Medium density

Residential Density

A series of village scale new neighbourhoods with, where appropriate, slightly less dense supporting 'hamlets' or building clusters like a traditional farmstead or 'manor' house with traditional outbuildings could be the basis for the strategic masterplan.

This requires new ideas about creating a great place as an evolution of the 20thC garden villages precedents which are consistent with the local context. It most definitely must not be solely a series of sub-urban scale phased housing estates with little or no sense of the existing context or relationship with each other which all too often characterises much of the residential development of the past few decades.

The National Design Guide advocates achieving a coherent and recognisable pattern of development using the available land efficiently by building at optimal densities.

The built form should be focussed on bringing people together to support local services and facilities whilst encouraging walking for short journeys and cycling to these local destinations with related street layouts responding to the wider context.

This requires a strategic design process to determine the development built form for each of the varied character areas that make up the Skerningham garden village.

This should take account for each site, their context, and the respective opportunities they present; the proposed identity and character for the development in the wider place; the lifestyles of occupants and other users; and resource efficiency, climate change mitigation and adaptation.

Additionally the evolving built form should be looking to establish an appropriate relationship with the varied pattern, sizes, and proportions of existing streets in the local area together with the adjacent greenspace that characterises the present north-eastern edges of this part of Darlington.

Within each character area the new built development should be looking to create recognisably successful 'real' streets which are characterised by buildings facing onto the street to provide visual interest, passive overlooking and active frontages at ground level. This requires establishing a clear relationship between building fronts and backs together with turning corners and avoiding excessive lengths of rear garden inactive boundaries abutting streets.

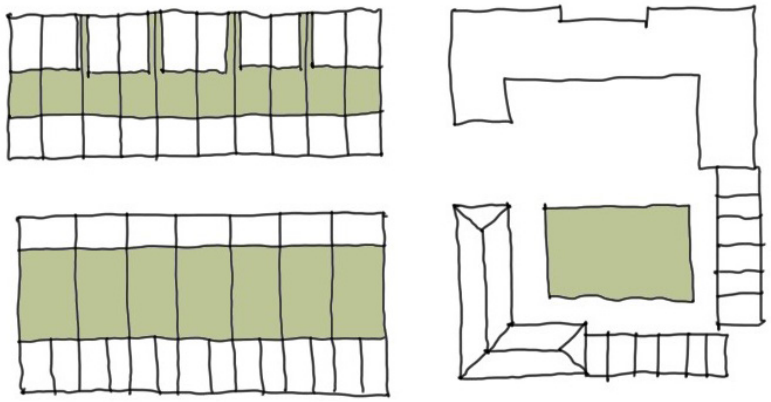


Fig. 70: High density

Density for other uses

The NDG also highlights the key importance of creating destinations as they provide opportunities for people to meet, share experiences and come together as a community. By also where possible bringing existing and new together, these destinations become a place for everyone.

This is particularly relevant for realising the ambition for 20min walkable neighbourhoods in Skerningham garden village since these destinations need to be readily at hand by clustering key uses; including high quality public spaces; increasing densities so more people live and work around them; and making sure they have active edges. This also means that a range of destinations of varying scale and type should be provided with the aim that each of the character areas should have at least one walkable identified community focused place. That could be a village green or public square with some related communal uses on the perimeter or a street with a 'parade' or group of non-residential uses to provide a distinct destination.

Guiding Design Principles:

◯ **Composition:** a façade needs to relate to both the external context and the arrangement of internal spaces. Windows need to be composed to reflect the daylight needs and hierarchy of these spaces.

◯ **Articulation:** Façades can benefit from depth and articulation. This may be achieved with architectural features such as setbacks, balconies, porches and bays. These set forward or back from the main facade that relates to the building line.

◯ **Material + Detail:** The details of design combine to enhance the building. The choice of symmetry or conscious asymmetry, the use of colour, quality materials and detailing – preferably drawn from the surrounding context. A degree of complexity in the design of façades will ensure that buildings are attractive from a distance and close-up.

◯ **Windows:** Elevations work best with a wall to window ratio of 15-35%. The proportion and design of windows can shape the facade based on whether they are horizontal or vertical, and the depth of the reveals. Deep window and door reveals visually suggest a robustness to a façade and should be the norm.

◯ **Building Lines:** Spurious changes in building lines on any street should be avoided. Any change in addressing the predominant building line should have a sound reason or purpose.

◯ **Building Heights:** Developments should aim for the village/hamlet cores to be identified by an increase in overall building heights (reinforced by tall features if viable).

4.4 | IDENTITY

Fig. 71 Identity responding to context
Image: MawsonKerr Architects - Riverside Sunderland

Identity

The clear aspiration of the Council is for the choice of building uses, forms and materials to help create a sense of uniqueness in the final development – indicating that it is located in Darlington and nowhere else – and stands out clearly from other developments in the northeast through a unique mix of architecture, layout - including public spaces - and palette of materials. The National Design Guide (NDG) highlights that it is a key part of successful places that they are attractive and distinctive because having a positive identity is what attracts people to a place, persuades them to stay and binds them together as a community.

Development on the Skerningham Garden Village site should reflect and celebrate local themes in terms of materials, colours, form and style, not in a pastiche manner, but in a modern interpretation of the local vernacular, making development on the site distinctive and unique. This project will have failed if it does not achieve that goal.

The architectural solutions developed for this site should show strong links to the local materials and building forms.

This DOES NOT mean slavishly copying and replicating "historic" building forms. This will inevitably look wrong and be in danger of being a grotesque pastiche of the past. Consider a design philosophy approach, such as:

+Replicating traditional forms but constructed from overtly modern materials, or
+ Using traditional materials/colours but in a non-traditional building form, or
+ A creative and intelligent mix of both of the above.

Contextuality

Firstly, any new development should respond to and relate to its surroundings. This is called "context" and historically contextual architecture evolved based upon the locally available materials, micro-climate, and skillsets of the local populace. As the mass production of standardised construction materials developed, along with affordable transportation systems, these new materials infiltrated local development and "standardised" the look of the end product, and in the process diluted the unique local architectural character and identity of developments.

The main driver for successfully achieving a distinct identity for the new development will be in response to the local context which is highlighted in the analysis for each of the 10 distinct character areas that make up the Skerningham garden village area.

The existing landscape and topographical features of the site are to be retained, and the built form should respect this. For example, existing site levels will be adhered to and not flattened to fit standard building types. Hedging and existing boundaries are to be intertwined into the design. Likewise, the existing buildings on


Fig. 72: existing site identity


Fig. 73: existing site


Fig. 74: existing site

the site – notably High Faverdale Farm group - will provide focal points and be integral to the masterplan celebrating the old alongside the new. It is important that one can distinguish what is old and what is new and gives an honesty to the scheme.

The identity of the proposed Skerningham Garden Village will come not just from the form and appearance of the buildings and spaces but also from the way that it is planned to sit within its natural environment and the mix of uses of its buildings. This includes the way that it responds to the character of the local area and the design of its buildings and public spaces.

This is an edge of town rural site gently rising from the north-eastern edge of Darlington and to an extent is visible from long views. The opportunity here is to concentrate the development on the site into discrete groupings, and leave substantial space between groupings of buildings, hence being referred to as clusters of hamlets.

Guiding Design Principles:

◯ Views of existing or proposed green infrastructure to be enjoyed at every street end and turn.

◯ Make use of local materials and detailing.

◯ Incorporate legibility and way-finding strategies.

◯ Be guided by a strong masterplan.

◯ Encourage the incorporation of public art in the design of buildings and spaces as well as free-standing pieces.

◯ Street design: Create a unified pallet of materials and street furniture to be used in different area types.

◯ Use of different street tree species to create distinct identities for different streets

◯ Vista ends: Use taller buildings and architectural expression on buildings that close vistas along a street or square.

◯ Use colour, materials or specific details to create a distinctive character for different neighbourhoods.

◯ Do buildings satisfactorily: meet the ground – turn the

4.5 | PUBLIC SPACE

Public Space

Public spaces are streets, squares, and other spaces open to all and the quality of the spaces between buildings is as important as the buildings themselves. Skerningham GV will include well-located public spaces that support a wide variety of activities and encourage social interaction, to promote health, well-being, activity, social and civic inclusion. Spaces should be predominantely green in character.

The streets and roads of the Garden Village will make up a large proportion of all public space and how they are designed will have a significant impact on people's lives.

Section 4.1 Movement defines the street types and their functions to be included in Skerningham. These street types each have to balance the dual function of place and movement. Their design will vary both by their position in the street hierarchy and the neighbourhood they pass through.

Social Interaction

Streets and other public spaces such as public squares have an important social function to bring people together and to act as a focus for community life. Parks and other green spaces described in the nature section also contribute towards social interaction.

Special consideration needs to be given to safety, multi- functional and generational spaces and reducing the risk of crime.

Meeting Places

The Skerningham Garden Village neighbourhoods will include public spaces as focal points at the heart of the community. They will include squares, market places and village greens. All of these spaces will provide informal settings for activities such as meeting, resting, playing, holding events and parking.

Guiding Design Principles:

◯ Spaces should be playable and incorporate nudges that promote physical activity.

◯ **Scale:** Public spaces need to be appropriately sized and proportioned. In new development, it is good practice to identify suitable precedents to inform their dimensions.

◯ **Enclosure:** The size of a square is informed by the scale of surrounding buildings. Typically, the enclosure ratio of the short dimension of a square is at least twice the height of the buildings.

◯ **Public uses:** Squares may act as a focus for public uses such as educational buildings, churches, pubs, restaurants and cafes. They are also gathering space for uses that draw large numbers of people.

◯ **Events:** Facilities can be provided for various types of event, ranging from outdoor stages and tiered seating to market stalls, or power supply and lighting.

◯ **Traffic:** Squares can accommodate some local traffic around their edge, ideally not on all four sides.

◯ **Frontage:** Buildings can frame a square, take their main access from it and provide a continuous building line around it.

◯ **Active frontage:** Active frontages need to be provided around a public square, preferably at least two sides of it.

◯ **Setbacks:** Buildings will normally be positioned at the back of pavement around the square.

◯ **Servicing:** Deliveries may be from the rear of properties or from the square itself with provision being made for deliveries.

◯ **On-street parking:** On-street parking may be accommodated either permanently or when not being used for other activities.

◯ **Green infrastructure:** Trees may be provided within squares. The type of trees and their position will depend on the function of the square, so as not to compromise the flexibility of the space.

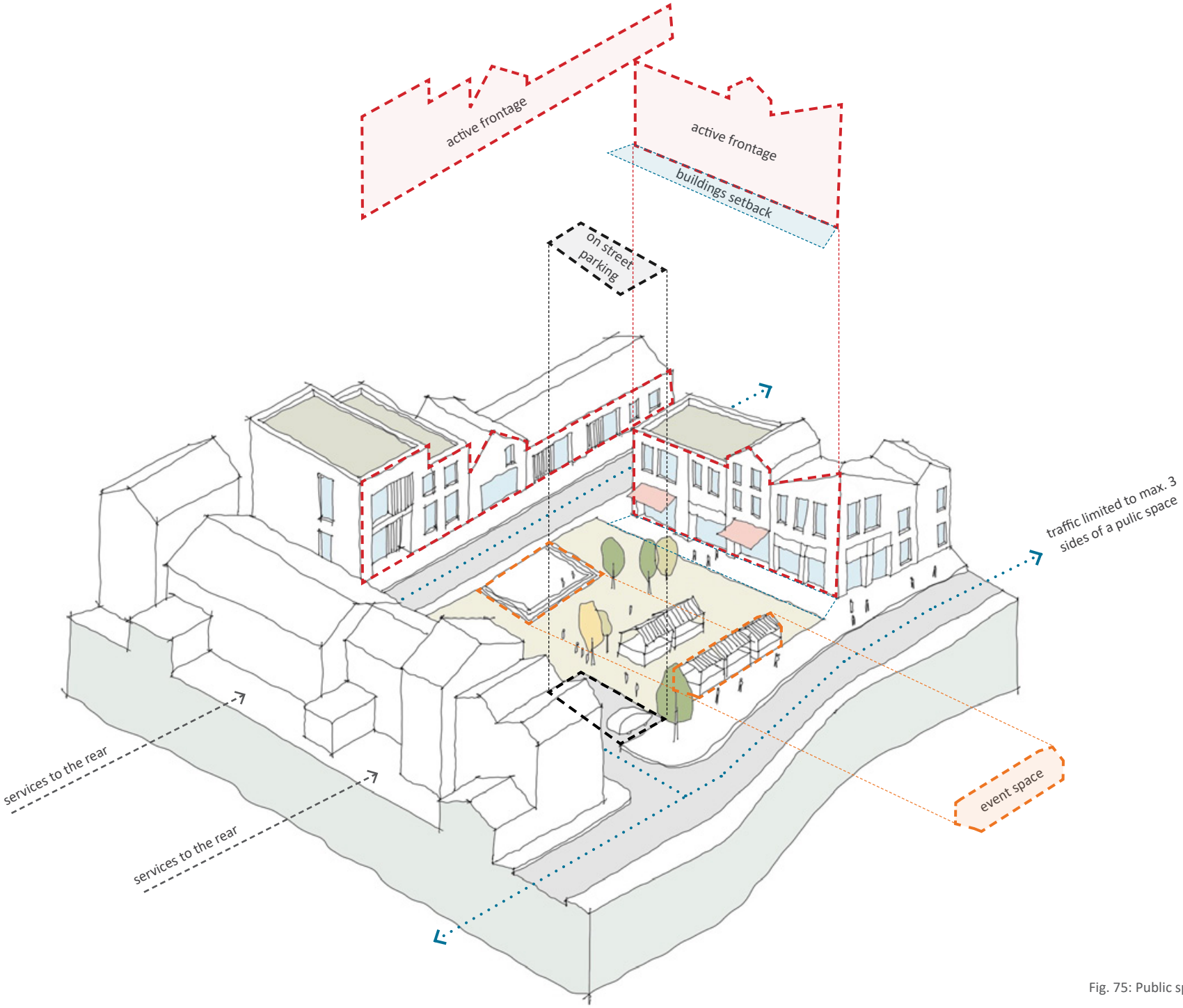
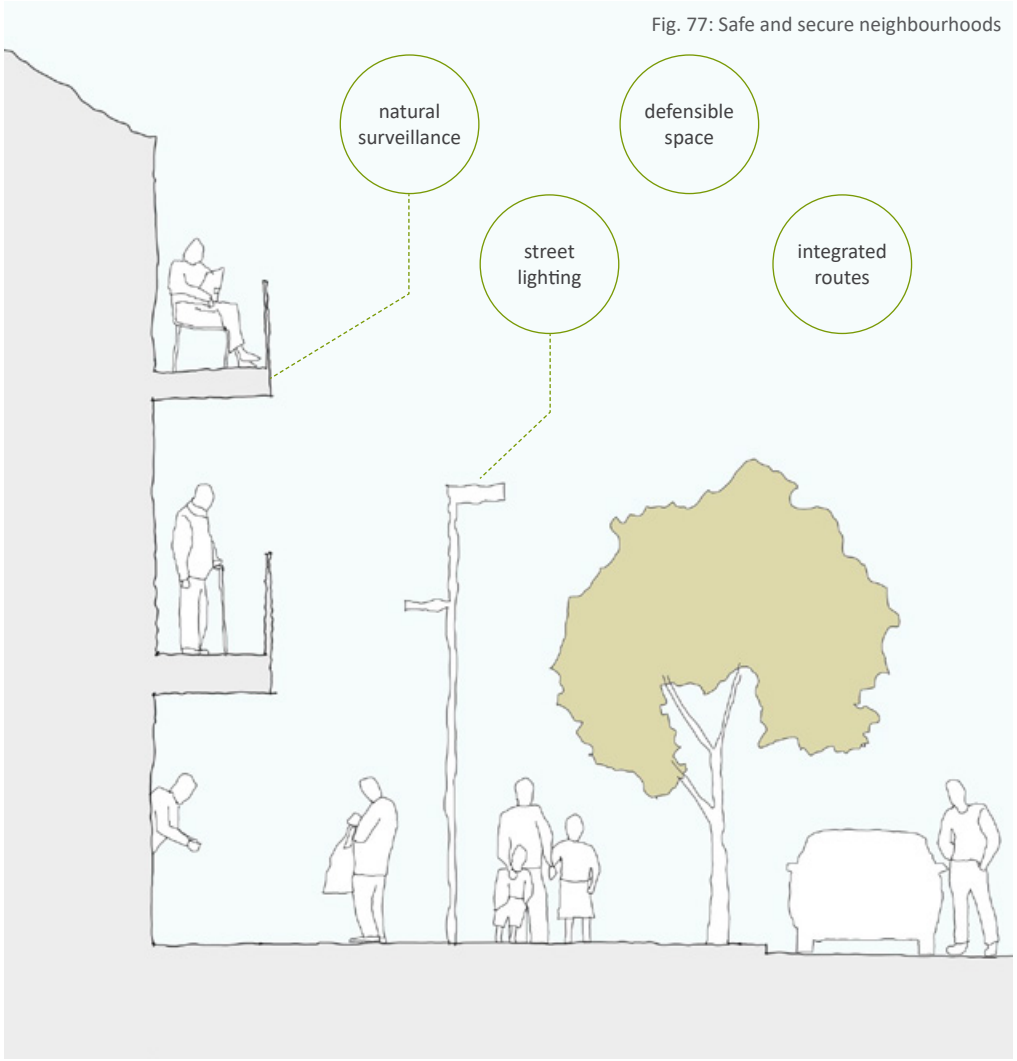


Fig. 75: Public space principles

Fig. 76: Home zones

Fig. 77: Safe and secure neighbourhoods



Home zones

Home zone principles can be applied on local streets. They are defined in guidance as residential streets where 'people and vehicles share the whole of the street space safely and on equal terms, where quality of life takes precedence over ease of traffic movement'. Vehicle speeds are reduced to walking pace. They can form part of the street hierarchy in the new development.

Security and Public Space

Reducing crime has a significant impact on building strong communities and ensuring the long-term sustainability of the Garden Village. The increased threat of terrorism also needs to be considered in the design of the public spaces. Neighbourhoods need to be designed to make all people feel safe and reduce the incidence of crime in accordance with the recommendations of **Secured by Design**.

Fig. 78: Mixed use village centre

Sustainable Places

Sustainable places include a mix of uses that support everyday activities including space to live work and play

The principal features of a successful garden village as envisaged by the TCPA are to be:

A holistically planned new settlement which enhances the natural environment and offers high-quality affordable housing and locally accessible work in beautiful, healthy and sociable communities.

So, this is not just about housing development. Its about creating the mix of support services that make a community work and to provide employment within the development for those who wish to work locally i.e. a wide range of local jobs in the Garden Village within easy commuting distance of homes. Landscape, nature and open space is a fundamental driver to the design response in order for Skerningham to become a successful Garden Village.

Intensification

This is about making more efficient use of land. As a design principle the Council are seeking compact higher density residential areas surrounded by generous amounts of Public Open Space.

This concept of creating smaller, more densely developed hamlets, with greater public open space provision was supported by those involved in the Public Engagement process.

Mix

A mix of uses is a prerequisite of this site with non-residential development proposed for the character areas at the extreme eastern end of the lands.

The correct balance of uses will help increase the amount of activity in an area throughout the day, reduce overall travel, encourage sustainable travel and support shops and services with a critical mass of people. This will contribute to the creation of a sustainable and successful place.

Housing

Ensure the scheme provides a varied mix of housing tenures and types. Successful neighbourhoods contain a rich mix of people, including families and the elderly, young people and students, people with physical disabilities and those with mental health needs. This, in turn, requires a variety of housing in terms of tenure, type and construction.

Schools

There are specific requirements stated in the local plan with delivery triggers clearly identified, relating to numbers of dwellings occupied at any given time.

Schools and nurseries comprise an important part of the community facilities serving an area. They can provide a focus for community life and incorporate important facilities beyond educational uses. They can also create activity that supports local shops and other services.

Schools need to be located to be as accessible as possible to the communities which they serve and to provide maximum support to local shops and services. There needs to be sufficient provision to serve local need where appropriate.

Fig. 79: Mix of housing types and tenures
Image: Proctor and Matthews Architects - Riverside Sunderland

Community Facilities

Schemes need to exhibit due consideration of:

Cultural and community facilities: Village halls, community hubs and other cultural facilities.

Local shops: The design code needs to provide guidance for the design of and access to local shopping facilities.

Pubs/cafés: Local shops can include cafés and other food and beverage uses where people can meet and, increasingly, work.

Medical facilities: All areas need medical facilities, including doctor's surgeries, district nurses, dentists and chemists. GP's mostly work in group practices in health centres, so only the largest schemes will be required to include them. Health facilities need to be in accessible locations at the heart of a community and planned in co-operation with relevant health and care organisations.

Places of worship: New buildings for religious worship are an important community function as places of congregation and community and need to be integrated into new development.

Home-working hubs: Home-working employees can support local facilities and there may also be scope to provide facilities to support home workers. Hubs include meeting spaces, shared resources such as printers, and even a delivery address

Guiding Design Principles:

- sustainable places include a mix of uses that support everyday activities, including to live, work and play.
- a mix of uses including local services and facilities to support daily life.
- an integrated mix of housing tenures and types to suit people at all stages of life.
- well-integrated housing and other facilities that are designed to be tenure neutral and socially inclusive.
- The Design Code seeks to facilitate a mix of uses that reflects local needs and support community life.
- Co-locating higher density housing with shops, services and public transport nodes.
- Provide substantial, accessible, useable green/public spaces rather than multiple small strips and verges.
- Ideally people need to be able to meet most of their day to day needs within a walkable radius of their home.

4.7 | HOMES + BUILDINGS

Building Design Ethos

The design of the buildings must be contextual and take influence from the local vernacular represented in a contemporary way. Building on the past and combining this with current best practice and sustainable architecture will help create a distinctive development.

Many schemes have the ambition of being exemplar from the outside however this ambition can be watered down during the design, procurement and building process and it is important the principles of the scheme as being exemplar is engrained into project and all involved have this collective buy. Objectives and quantifiable exemplar outcomes are to be identify early on and assessed throughout the process in order for the aspirations to become reality.

The built form is to consider the existing features and topology of the site and have design solutions that work with the existing constraints and not use standard house types that require the flattening of the site.

Housing Quality

Successful residential design can be aided by thoroughly understanding the distinctiveness of the local area. Some of the key considerations are highlighted within the Darlington Local Plan and section 2.0 Baseline Analysis. Using these studies to inform the design will help to develop high quality, contemporary design grounded in the vernacular - giving both a sense of renewal and belonging.

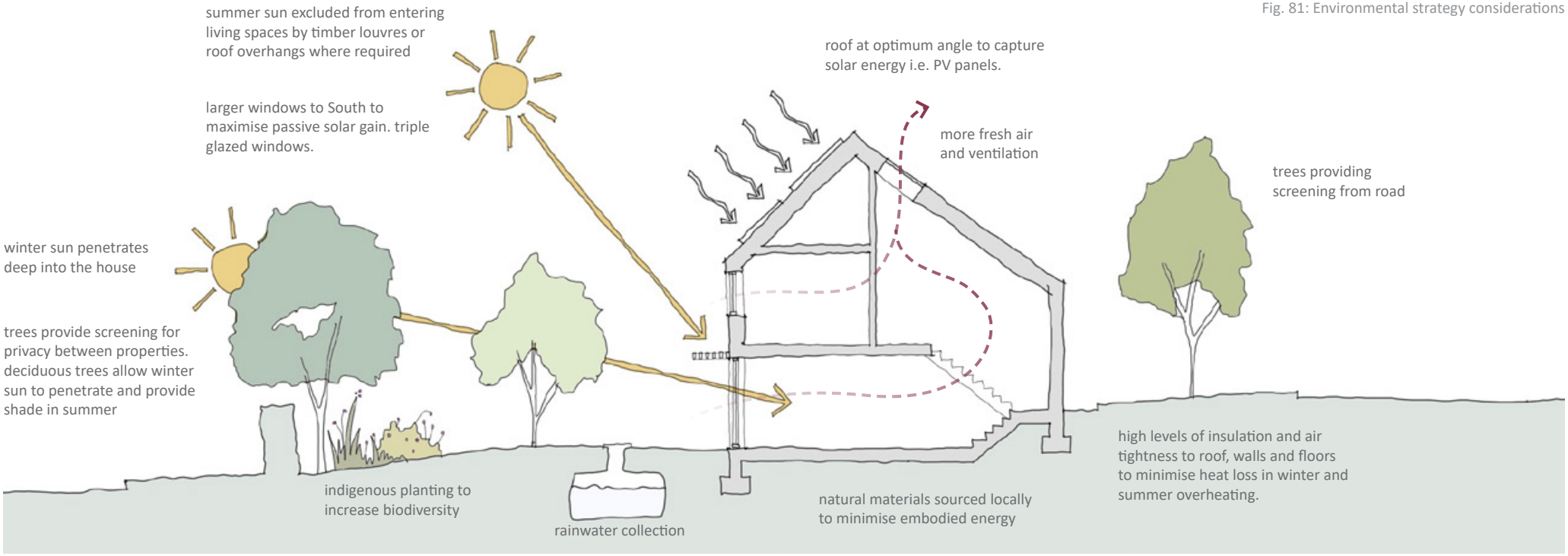
Poorly executed pastiche version of the traditional is to be avoided as is a pick and mix of different architectural styles or periods.

Form of Buildings

Compact simple forms. Drawing from the vernacular of the area with contemporary interpretation. Form factor to be considered. The form, scale and layout are to contribute to the sense of place and help create a community feel. Ornamental add ons should be avoided and any 'addition' should be integral to the overall design, contributing to the character and distinctness of the place.

Fig. 80: Housing quality: simple forms with traditional materials to reflect local vernacular with contemporary detailing and consideration of sustainability.

Fig. 81: Environmental strategy considerations



Building orientation – first principles

The orientation and position of the dwelling within their site is crucial for place making but also for the first principles of sustainable design making the maximum of the South facing orientation for passive solar heating whilst also considering overheating.

Internal layout: Space Standards.

The principles of the Garden Village aimed to provide spacious and well-planned houses. This should be no different in its aims. To provide comfort, enhance standard of living and well-being all dwellings in the Garden village should have a minimum space standard.

Guiding Design Principles:

◯ As a base level these should be in line with the National Minimum Space Standards by the RIBA (Royal Institute of British Architects) Internal volume is also important as well as floor area and the floor to ceiling height should be a minimum of 2.5/2.6m on the principal floor.

◯ The ability to work from home needs to be integral to the layout of all houses to enable flexibility and futureproofing for the occupants and promote a sustainable work/life balance.

Immediate External Space – bin store, bike store, renewables such as PVs, ASHP

So often forgotten or considered too late in the design process are storage, waste, servicing and utilities.

Guiding Design Principles:

◯ These areas are to be integral into the initial design and carefully considered for functionality but also to contribute to the house design and the wider street scene and not detract from it. Clutter is to be avoided on the façade and in the immediate external area of the house. Renewables such as ASHP and PV which have a valuable contribution to the sustainability and energy efficiency of the homes should not appear to be an add on.

Fig. 82: Corner buildings
Image: Proctor and Matthews Architects

Fig. 83: Materials and Detailing
Image: Pollard Thomas Edwards

Corner buildings

Corner buildings should have elevations that face the 'street' on both sides. These are to be considered primary façades and active frontages are to be used.

The house is to actively turn the corner with the use of entrances, windows and architectural cues to create a welcoming frontage. Contrived or pastiche architectural features are to be avoided. The corner buildings should be tailored to the context in which they sit making use of views, sight-lines and where appropriate the creation of landmarks.

Materials and Detailing

Materials are to be carefully considered to work with the building form and the local area. These can be traditional or modern materials but should be a simple high-quality palette of materials that is well crafted. Simple detailing is to be utilised with high quality materials.

Embodied carbon is to be taken into consideration for material choice as well as it's durability, appearance, and maintenance strategy overtime. The junctions between materials are to be carefully considered and there should be a simple hierarchy. Simple forms will aid in this rather than a complex shape.

UPVC window should be avoided. Timber cladding can be a great addition to a housing development however detailing, weathering and ventilation need to be carefully considered.

Accessibility:

At least 90% of homes are to meet building regulation M4(2), 'accessible and adaptable dwellings', and at least 10% of new housing will meet building regulation M4(3), "wheelchair user dwellings". As a minimum, the new Garden village is to meet this benchmark.

Daylight + Windows

To promote good daylighting and thereby improve quality of life and reduce the need for energy to light the home the following should be a minimum.

Average daylight factor of at least 2% for kitchens, average daylight factor of at least 1.5% in living rooms, dining rooms and study. At least 80% of the working plane in these rooms receives natural light.

The daylight factor is a comparison of the natural light levels within a room and the natural light levels in an unshaded location outside and the working plane is a nominal surface positioned 0.85m above the floor.

Further information on natural lighting can be found in BS 8206-2:2008 Lighting for Buildings – Part 2: Code of practice for daylighting.

Designing for Climate Resilience

All dwellings should be substantially better than building regulations. To only aim for building regulations means that the dwellings are only just legally acceptable. This is not good enough for this aspirational development.

As a minimum the development should adhere to the RIBA Climate Challenge 2030 and should hit the targets corresponding to the years 2020, 2025.

To be truly exemplar as a Garden Village development it should strive to showcase the very best in design and construction. Modern Methods of Construction (MMC) should be used to aid in quality assurance and consistent performance of the dwellings.

A percentage of the dwellings should be showcasing Certified Passivhaus standards the exemplar in low energy standards with a larger percentage utilising the Low Energy PH standard which is easier to attain and a substantial step up from the building regulations.

Fig. 84: Courtyard housing
Image: Patel Taylor

4.8 | RESOURCES + LIFESPAN

Resource efficiency

Improving resource efficiency can produce many benefits such as cost savings, reducing environmental impact and support the circular economy.

Doing more with less is the aim by:

+ Using fewer materials
+ Optimising the use of materials
+ Prevent waste
+ Using material that are reclaimed or that have a higher recycled content.
+ Reduction of water usage

Whole Life-Cycle Carbon

Whole Life-Cycle Carbon (WLC) emissions are the carbon emissions resulting from the materials, construction and the use of a building over its entire life, including its demolition and disposal.

WLC should be considered throughout the development and as part of the use of resources and the lifespan of buildings.

LETI has outlined Whole Life-Cycle Carbon as:

Reduce embodied carbon
+ Use Low impact materials
+ Design for disassembly
+ Use less materials
+ Use local materials
+ Use for longer & design for flexibility

Operational Carbon
+ Optimise form, massing and fabric
+ Design for orientation
+ Provide solar shading
+ Use natural ventilation
+ Use natural daylighting
+ Use Heat Recovery Ventilation

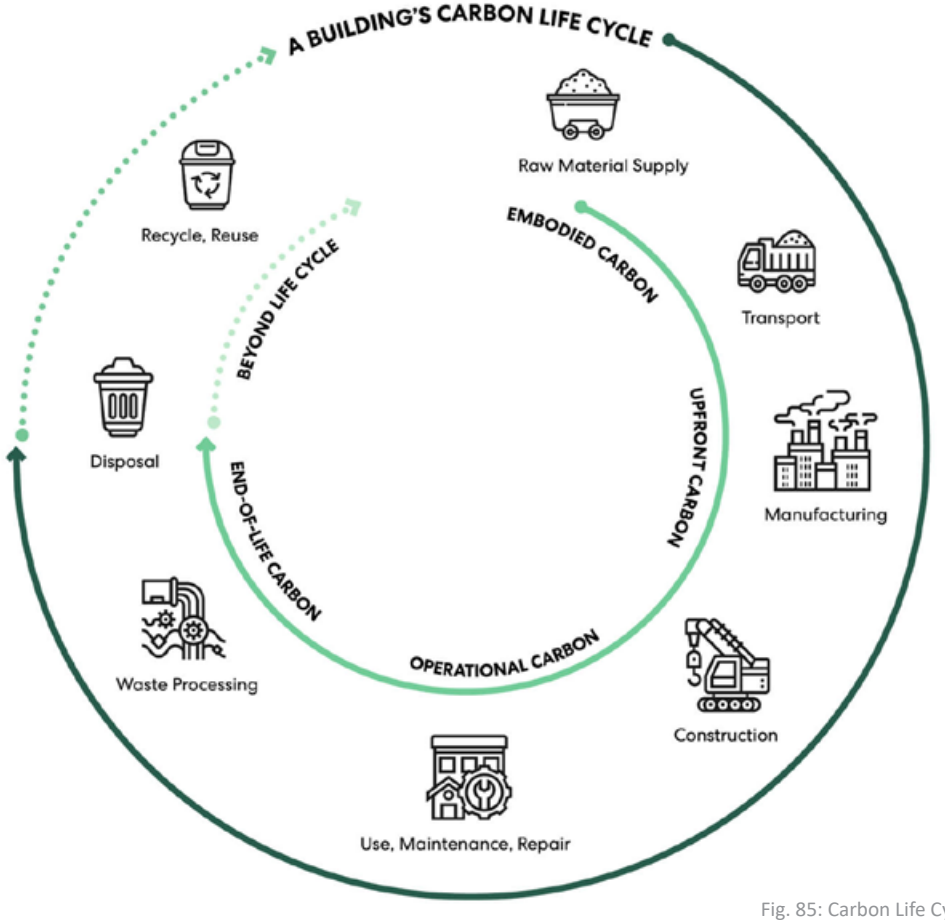


Fig. 85: Carbon Life Cycle

Well designed places, buildings + spaces

Well-designed places, buildings and spaces are:

+ designed and planned for **long-term stewardship** by landowners, communities and local authorities from the earliest stages;

+ robust, easy to use and look after, and enable their users to establish a **sense of ownership and belonging**, ensuring places and buildings age gracefully; That means thinking about these issues as part of the design process, not as an afterthought.

+ **adaptable** to their users' changing needs and evolving technologies; and

+ **well-managed and maintained** by their users, owners, landlords and public agencies.

Guiding Design Principles

◯ No new homes should connect to the gas grid.

◯ Make all new homes suitable for **low-carbon heating**.

◯ All new homes should deliver levels of **energy efficiency** as soon as possible and by 2025 at the latest, consistent with a space heat demand of 15-20 kWh/m2 /yr. Space heat demand of 15-20 kWh/m2 /yr is moving close to the Passivhaus Standard. In order to have all houses built to this standard by 2025 an incremental percentage should be built to this standard each year to 2025 to increase skills in the workforce, knowledge and best practice.

◯ **Overheating risk in new-build homes to be considered.** Orientation of buildings and existing solar shading should be a primary solution rather than an over reduction of window sizes as internal daylight factors need to also be considered.

◯ Improve focus on **reducing the whole life-cycle carbon impact** of new homes, including embodied and sequestered carbon. RIBA 2030 Climate Challenge standards should be aimed for. Net Zero Carbon using the UK Net Zero Carbon Building Standard is to be implemented.

◯ **Improve water efficiency** performance in homes. RIBA 2030 Climate Challenge standards should be aimed for.

◯ Alongside continued funding for flood defences, **strengthen flood resilience** measures at property and community level. This needs to be considered from the start of the masterplan.

◯ The development should enable **sustainable travel**, which should be a primary consideration from the beginning of the planning process. Increase in cycle and pedestrian connections within the development and to its neighbours. Pedestrian, cycle, vehicle hierarchy.

◯ **Green infrastructure** needs to be considered from the offset and implemented in the first phase

◯ **Long term stewardship** should be organised and implemented to create a development that is sustainable in the long term.

◯ In line with the Garden City Standards for the 21st Century (guide 4) a **net zero energy strategy** needs to be implemented and incorporated in the masterplan. This needs to be a whole system approach and an exemplar for the region.

5.0 | CHARACTER AREAS

5.1 | CHARACTER AREA MAP

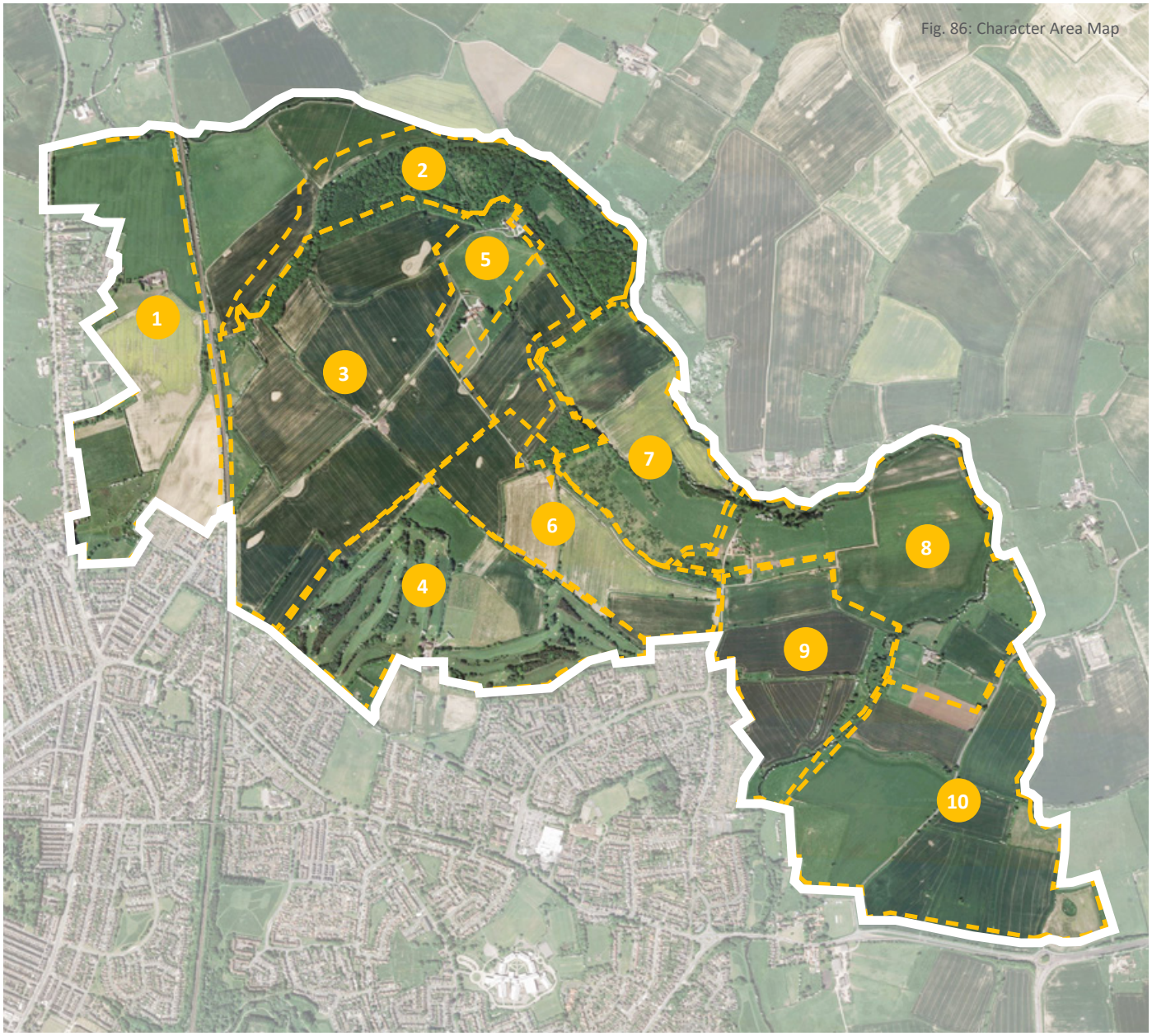


Fig. 86: Character Area Map

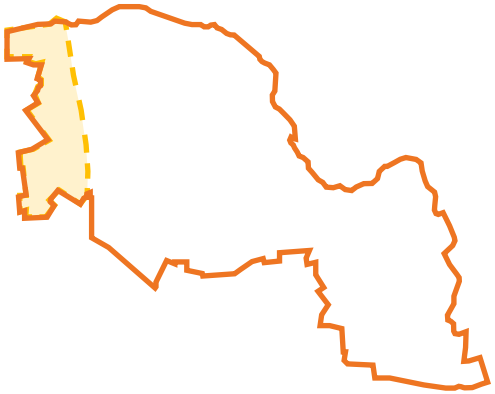
Introduction

The adjacent map identifies 10 existing character areas within the allocated Skerningham site.

This section of the document provides a brief introduction to each character area prior to section 6.0 which sets out the character area codes.

1. Beaumont Hill
2. Skerningham Woods
3. Skerningham Lane West
4. Golf Course (The Fairways)
5. Manor House View
6. Skerningham Lane East
7. Quarry Woods
8. Barmpton Forest
9. Barmpton Lane
10. Bishopton Lane

5.2 | BEAUMONT HILL



Beaumont Hill

Undulating arable farmland with low lying grasslands. Established hedges and tree groups with a footpath crossing the Southern area. Existing farm to the North which, with its access road and building, dissects the land to the North. 2 main access points to the land to the West across the East Coast mainline and at least 3 existing access point from Beaumont Hill.

Fig. 87: Beaumont Hill

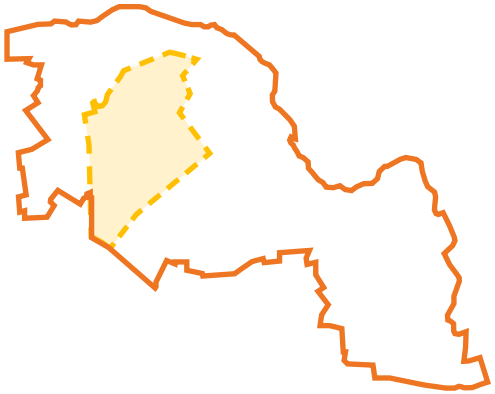
5.3 | SKERNINGHAM WOODS

Skerningham Woods

Open farmland and the Skerningham Community Woodlands is situated on north facing slopes that fall towards the gently meandering river. With low water levels and scrubby riverside vegetation, it is often difficult to discern the course of the river although a bridge to the west offers views and a gravelly beach with scattered nearby trees is a popular spot for families to play in the water. The East Coast Mainline can be partially seen on a viaduct.

Fig. 88: Skerningham Woods

5.4 | SKERNINGHAM LANE WEST

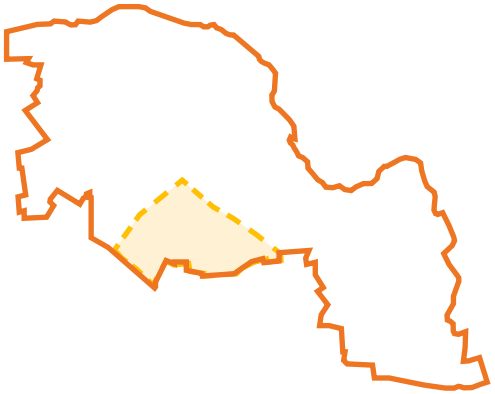


Skerningham Lane West

Predominately arable land with East Coast Mainline to the West and existing links across the line. A strong tree-line to the South/ South East and connected to Skerningham Lane East to the East. Low Skerningham Lane is a strong route towards Skerningham Manor and features the pillbox, a locally recognised landmark. Salters Lane towards 'Skunny Woods' is also a key feature and well used route.

Fig. 89: Skerningham Lane West

5.5 | GOLF COURSE (THE FAIRWAYS)



Golf Course

Located at the existing residential edge on very gently undulating land, including heavily managed fairways with dividing tree planting, plantation, woodland blocks, some wetland and agricultural fields with field trees, hedgerow field boundaries and a group of buildings at Elm Tree Farm. Smaller fields to the south have an enclosed feel with a dense hedgerow network. The golf club house is set within hard-standing for car parking and associated supporting structures.

Fig. 90: Golf Course

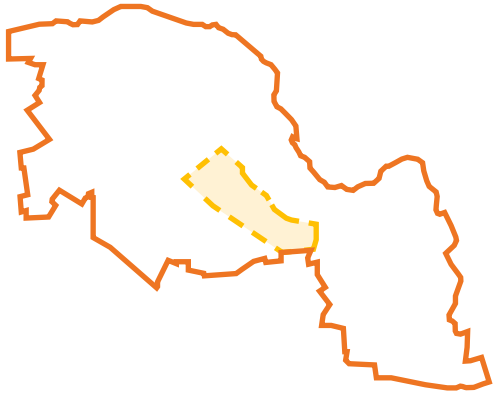
5.6 | MANOR HOUSE VIEW

Manor House View

This character area includes the Grade II listed Skerningham Manor and surrounding agricultural land. It sits just to the north of the ridge line and will be to the north of a proposed local distributor road serving the Skerningham development.

Fig. 91: Manor House View

5.7 | SKERNINGHAM LANE EAST

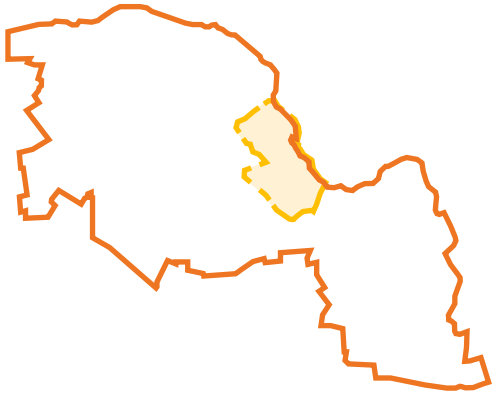


Skerningham Lane East

Predominantly arable land but connects with existing development on Barmpton lane. Mixed plantation woodland and footpath runs along the northern edge and the land falls away south from the ridge line. Amenity grassland runs along the southern boundary and an important footpath north south through the area.

Fig. 92: Skerningham Lane East

5.8 | QUARRY WOODS

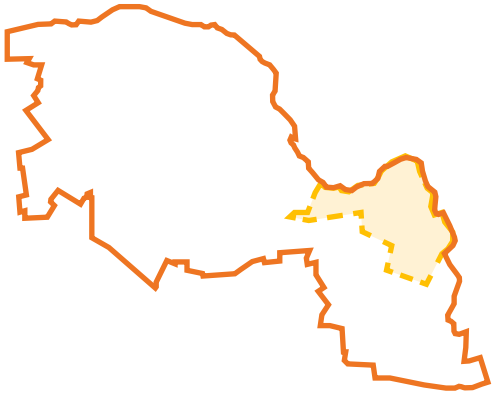


Quarry Woods

A section of the shallow northeast facing Skerne river valley containing open rolling arable land with Skerningham Community Woodlands to the north and riparian woodland where the valley narrows to the east close to Barmpton. Slopes all face east and northeast and fall towards the gently meandering river. With low water levels and scrubby riverside vegetation, it is generally difficult to see the actual river. Drainage ditches incise the fields and lead to the river.

Fig. 93: Quarry Woods

5.9 | BARMPTON FOREST

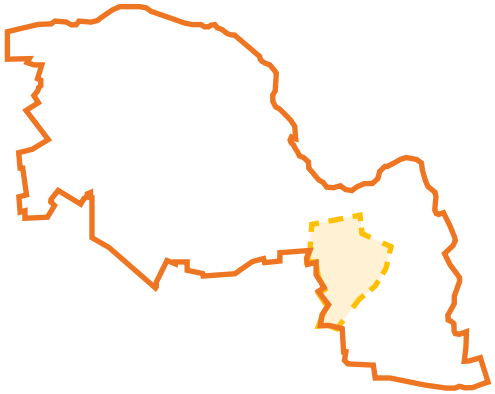


Barmpton Forest

Open low lying floodplain of agricultural land with a large scale field within a meander of the River Skerne, gently rising to the west and south of the river with a farmstead. There is a noticeable lack of tree cover are a few trees along the river and on field boundaries, few hedge-lined field boundaries and a scrubby edge to the river that screens views of the actual water making it difficult to establish the presence of the Skerne

Fig. 94: Barmpton Forest

5.10 | BARMPTON LANE

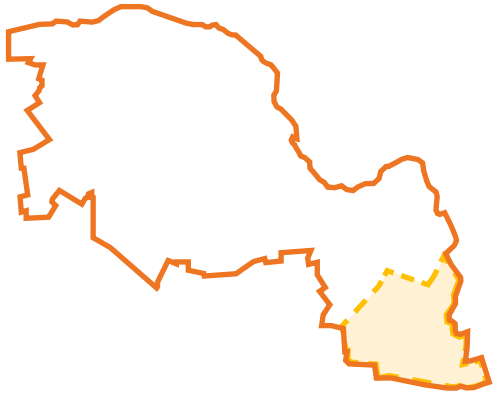


Barmpton Lane

This area is the land predominately to the east of Barmpton lane and rear gardens of the existing dwellings in the neighbouring Whinfield community. It is effectively bounded to the south-east and east by the River Skerne with its related riverside trees and planting. The land rises towards Elly Hill in the North which falls with the neighbouring Barmpton Forest character area.

Fig. 95: Barmpton Lane

5.11 | BISHOPTON LANE



Bishopton Lane

This character area covers the land that lies either side of Bishopton Lane. It is bounded to the south by the A1150 Stockton Road; to the west and northwest by the River Skerne where it abuts the Barmpton Lane character area; to the east and northeast it follows a series of meandering field boundaries; the south eastern part juts out to effectively overlap the adjacent strategic A66 roundabout junction.

Fig. 96: Bishopton Lane

6.0 | CHARACTER AREA CODES

6.1 | BEAUMONT HILL

Fig. 97: Character Area in context

Nature

Existing features such as hedges, high grade trees, marshland are to be maintained and enhanced and wildlife corridors clearly identified. The low laying areas are to be used as part of the strategy to enhance biodiversity. SUDS can contribute to this rich natural area which will have no buildings present.

Movement

Pedestrian and cycle hierarchy over vehicles is imperative. No development should be North of the new access road as it would be detrimental to the development and sense of place and create a barrier to the new community connection with facilities and the rest of the character area.

Built form

Due to the nature of the topography, flooding issues and the new road to the North, the area of land that can be built on is reduced. Therefore, a layout that enables 600 homes to be built in this character area must have a higher density. This will also help contribute to the sense of place and houses being near to facilities and amenities. The route of the pylons are to be taken into account but this buffer must appear to be natural rather than a hard edge.

Identity

It is important for Beaumont Hill and the development to the West of the East Coast Mainline (ECM) to be able to function and be sustainable in its own right. This is important due to the phasing of the housing to the East and the physical restrictions of the ECM. That said it must endeavour to use all available existing routes across the line and improve these to enable ease of pedestrian and cycle flow between the East and West areas. These links should be enhanced as part of phase one in order to link with the green infrastructure.

There should be local amenities such as a shop and café within the Beaumont Hill character area and an easily identifiable ‘centre’.

Public space

Public rights of way are to be maintained and enhanced. Existing and historic hedges and boundary

are to be given consideration in the masterplan as are buffers to the existing houses and the existing farm. Public space shouldn't be a by-product of the housing layout it should by the primary driver for the masterplan. Wildlife corridors along with public spaces for different activities are to be integral for this character area and green infrastructure a driver for design choices.

Uses

Local amenities are crucial to the success of this character area to allow it to be sustainable, reduce vehicle travel and give it identity. Vehicle travel should be discouraged to these amenities and walking and cycling encouraged. local community shops and cafés to be encouraged however any out-of-town facilities such as 'Drive Thrus' contradict the essence of place and identity of the garden village and should not be allowed. Allotments should be encouraged and there is a known demand as confirmed by the allotment committee to the South of Beaumont Hill. They currently have demand that could double the size of their current facility. With 600 additional housing it is clear allotment space should form an important part to the masterplan of this area.

Homes + buildings

No building on or near flood plain. Climate change and increased heavy rainfall to be considered when identifying housing location.
Town houses, terraces and a village centre density is to be encouraged over detached and low density housing.

As this is the in the initial phase it is important that the houses reflect the ethos of the overall scheme and also enables the future larger scale phases to meet the climate challenge. Custom build, self-build and space set aside for Co Housing (typically 20-25 houses) is to form part of this masterplan. Pilot scheme for net zero carbon houses and building is to be implemented in the first phase to learn from and be able to deliver all future phases as zero carbon homes. This upskilling is imperative if we are to meet the climate emergency we are facing.

Fig. 98 'Home for Life'
Image: Pilgrim Gardens - PRP Group LLP

6.2 | SKERNINGHAM WOODS

Fig. 99: Character Area in context

Nature

The river and all existing habitats should be enhanced. As an opportunity for further Biodiversity Net Gain, the river should be broken out of its channel creating scrapes, wetlands and offset ponds which could have a SUDS role. The semi-natural woods and plantation of Skerningham Community Woodlands should be managed for longevity, tree health, biodiversity and visitor access. Existing hedgerows should be maintained and improved with buffer strips, gaps filled and improved species diversity. Invasive Himalayan Balsam should be eradicated across the area. Effective buffer strips should be instated adjacent to the River Skerne to prevent potential nutrient leaching from agricultural land into the river.

Movement

All Existing Public Rights of Way should be retained and enhanced with the extensive network within Skerningham Community Woodlands being clearly signed for access in and out. Public access to and along the River Skerne would aid memory mapping of the area with the bridge crossing being a key landmark for what would become part of the **Skerne Valley Park.** Wildlife corridors incorporating pedestrian and cycle access should connecting to other character areas and existing urban development.

Built form

Due to the attractive quality of the landscape, the topography and flooding issues, there should be no new houses within the valley which are beyond the ridge line of the Skerne Valley. A visitor centre with interpretation, toilets, refreshment and car parking could be incorporated if not developed beforehand in another of the riverside character areas.

Identity

The existing quiet rural character should be maintained although land use could transfer from intensive agriculture to meadows managed for biodiversity or grasslands for public access. The presence of the river Skerne should be elevated within the area for public enjoyment and the benefit of wildlife. Wetlands could further contribute to this character.

Public space

There is reasonable public access at present, but the Skerne Valley Park would transform this into a country park. Public access should be dovetailed with ecological enhancement and spaces created that are formed of ecological building blocks of low maintenance species rich grassland, woodland, wetland and scrub with riverside access Wildlife corridors incorporating pedestrian and cycle access should connect to other character areas.

Uses

The predominant use of the character area should be a country park that incorporates the existing Skerningham Woods and a possible new visitor centre. Land use would be in combination with agriculture. The low-lying floodplain could offer the potential for more strategic SUDS wetland infrastructure.

Homes + buildings

If outwith the visual envelope of the valley and integrated sensitively with woodland, low density executive housing could be incorporated. Possible visitor centre and bird hides within the Skerningham Valley Park.

Fig. 100 Visitor Centre/ Cafe
Image: Mount Grace Priory Cafe - MawsonKerr Architects

6.3 | SKERNINGHAM LANE WEST

Fig. 101: Character Area in context

Nature

There are several strong natural features within the character area which should be a starting point for any masterplan. Hedges, paths, high grade tree groups are to be maintained and enhanced and wildlife corridors clearly identified.

Movement

Pedestrian and cycle hierarchy over vehicles is imperative. The masterplan for this area and connected areas need to clearly demonstrate more sustainable travel and the ability to achieve a 20min neighbourhood. There needs to be clear vision of how pedestrians and cyclist will have priority when crossing the new road to the North to access Skerningham Woods and other green infrastructure.

Built Form

No build form to the East of Salters Lane should undertaken and a buffer to the pylon route is to be considered. Historical hedge, field boundaries and footpath to be used as a design driver for the build form.

There is an indication of a possible Deserted Medieval Village located close to Skerningham Manor which be an opportunity to locate and celebrate in some way.

Identity

The future 'centre' of Skerningham is to be established within this character area and Low Skerningham West which give further emphasis in the need of a sense of place and identity.

Public Space

Public squares and green space to have priority within this character. These spaces, such as public squares to have adequate building density surrounding it in order to help create a sense of place. Like other character areas public spaces are to be a primary driver for the masterplan. Good links to public spaces via footpath and cycleways to connect all public spaces throughout the overall masterplan. This network is to be implemented in the first phase.

Uses

This area is to ultimately be the centre of the overall masterplan and as such local amenities and services, education, employment and leisure are to be considered carefully and designed in from the outset. Consideration must be given for phasing and that this area will not be in the first phase so adequate local amenities need to be provided in other first phase areas that complement this character area when completed. Uses are to be positioned to encourage walking and cycling and discourage driving. Central areas for amenities and services should be pedestrianised.

Homes and Buildings

A good density of housing and buildings is important in order to avoid urban sprawl and create identity. This area is in the later phases of the development and therefore should reflect the step change in net zero carbon methods piloted in the first phase.

Fig. 102: Village Centre
Image: Riverside Sunderland - Proctor and Matthews Architects

6.4 | GOLFCOURSE (THE FAIRWAYS)

Fig. 103: Character Area in context

Nature

The landscape structure with existing habitats of hedgerows, hedgerow trees, field trees, woodland, plantation and wetland all should be retained, buffer strips incorporated, further connected to created wildlife corridors in and outwith the character area and enhanced for biodiversity. Species composition and tree structure of the plantation should be managed towards more native species and greater openness for public access. Wetlands could have a SUDS role from the wider area. Management of the golf course, if retained in this location should be adjusted so that it is of greater benefit to biodiversity.

Movement

A well-used pedestrian and cycle route runs along the southwest boundary of the site, it does however feel quite enclosed. This route should be opened up without detriment to nature, make wider connections from existing residential areas towards the Skerne River and be set within wildlife corridors that provide the experience of being 'in nature'. If the golf club is retained, safe and manageable access should be created through the course; but if it is relocated greater opportunities exist for the public enjoyment of the parkland landscape.

Built Form

Scenarios differ depending on whether the golf club moves or not. Low density, possibly executive housing could be incorporated into the landscape compartments and if removed, potentially a linear residential typology could maintain the mature trees that structure the fairways. In either scenario, the green infrastructure should become a more visible and usable public amenity.

Identity

The landscape character currently could be seen as urban fringe with many positive aspects such as green infrastructure and no-vehicle movement routes. These should be emphasised and developed with increased public access as key components of public perception of place in development proposals. The role that the golf course currently plays as a green resource should be

retained in both scenarios.

Public Space

An improved movement strategy that connects town with the River Skerne through wildlife corridors should open out at junctions and in places of good passive surveillance to create usable public green space and a network of linear parks. Opportunities should be found to open up the semi-private open space of the golf course site to greater public use.

Uses

A combination of two or three of public open spaces, leisure or small scale agriculture should be provided here, with the key being improved public access and green infrastructure that facilitates SUDS.

Homes and Buildings

Low density housing or linear typologies such as garden mews that work around the existing green infrastructure should be provided in this location. The golf club if retained should be developed as a greater community asset for events, services and social support.

Fig. 104: Existing Golf Course

6.5 | MANOR HOUSE VIEW

Fig. 105: Character Area in context

Nature

Existing features such as hedges , woodland and tree belts are to be maintained and, where appropriate, enhanced including the green infrastructure corridors.

Movement

Existing pedestrian and vehicular access to the communities at Skerningham Manor and Low Skerningham from both Barmpton Lane and Salters Lane will need to retained.

The local distributor road will run to the south of this area below the ridge line and sensitive treatment of the Salters Lane green infrastructure corridor crossing will be critical to retain the character of this route.

Built Form and Identity

Skerningham Manor is a focal point with land to the south sitting lower on the landscape. In addition to the Grade II Listed Skerningham Manor there is a group of grade II listed buildings at the edge of the community woodland to the north.

Both groups of listed buildings are currently within a largely arable landscape (question what the long term role of existing agricultural land within the garden village area is?-see below.)

There is an indication of a possible Deserted Medieval Village located close to Skerningham Manor which be an opportunity to locate and celebrate in some way.

Public Space

This largely arable landscape at present -what is the right long term role for this area of non-developed open land -should it be retained for some productive agricultural use -community

Uses

Potential open space

Homes and Buildings

Apart from any remaining conversion of existing buildings It is not envisaged that there will be additional development in this area.

Fig. 106: Existing farmhouse

6.6 | SKERNINGHAM LANE EAST

Fig. 107: Character Area in context

Nature

The mixed plantation woodland (Hutton Plantation and former Quarry) runs along the northern edge with a public footpath along its length -the ridge line follows the line of the plantation. There is also an existing public footpath which runs from Whinfield north to the footpath both of these should be retained and enhanced as appropriately as green infrastructure corridors

Movement

Parts of this area will be the amongst the first phases of the Garden Village and will need to clearly demonstrate a commitment to the 20 minute neighbourhood vision. Pedestrian and cycle permeability within the area and into and through existing development to services beyond the development area needs to be established from the start.

As development progresses one of the streets running through this area will be a bus route to ensure that all homes are within 5 minutes' walk from a service.

The local distributor road from A167 to A1150 will run through the entire length of this area. There will be at least one roundabout junction on the distributor road to provide access to the development areas.

The local plan states `Development of the initial phases of development at the eastern part of the allocation will be accessed via Barmpton Lane and /or Bishopton Lane.` In order to minimise the impact of the development and its construction vehicular access via Bishopton lane only should be pursued at the outset. Barmpton Lane /Whinfield Way would provide the link to a bus network through the development.

Built form

There will be no development to the north of the road. There will be a green barrier between existing and new development.

Identity

Parts of this area will be the amongst the first phases of the Garden Village and will need to clearly demonstrate a commitment to quality of place and local identity.

Views from this area to the open space to the north important and the distributor road must not dominate views to the north.

Public Space

In addition to informal and formal open space that will be provided within this area access to the open space to the north beyond the distributor road and the amenity grassland along southern edge will need to be ensured.

The footpath/ cycle crossing of distributor road will require sensitive treatment as routes move from an urban paved and lit form to a more rural character as part of the green infrastructure corridors.

Uses

Achieving a good mix of residential and non-residential uses to support the 20 minute neighbourhood will mean some community services will be located in or adjacent to this area.

Homes and Buildings

The topography of this area would suggest that medium and higher density development should be at southern end closest to services and public transport with lower density creating a more rural character and softer edge to the north.

A small part of the eastern end of this area (and the western side of area 10) could be accessible to the existing public transport.

Fig. 108: Accordia
Image: Fielden Clegg Bradely Studios

6.7 | QUARRY WOODS

Fig. 109: Character Area in context

Nature

The river and all existing habitats should be enhanced. As an opportunity for further Biodiversity Net Gain, the river should be broken out of its channel creating scrapes, wetlands and offset ponds which could have a SUDS role. Woodlands should be managed for longevity, tree health, biodiversity and visitor access. Existing hedgerows should be maintained and improved with buffer strips, gaps filled and improved species diversity. Invasive Himalayan Balsam should be eradicated across the area. Effective buffer strips should be instated adjacent to drainage ditches and the River Skerne to prevent potential nutrient leaching from agricultural land into the river.

Movement

Public access is currently limited and a pedestrian riverside route should be created that would connect Skerningham Community Woodlands to the northwest with Barmpton in the southeast. In addition, an upper route along the ridge line would offer users the opportunity of panoramic views of the River Skerne and the highly attractive rural landscape on the north side of the valley. A continuous public footpath runs along the north side of the river outside of the Skerningham site boundary. Wildlife corridors incorporating pedestrian and cycle access should connecting to other character areas and existing urban development. A new timber bridge of memorable design that is suitable for both pedestrians and cyclist should cross the river Skerne so as to enable a figure of 8 loop around both sides of the river and thus provide greater choice for users.

Built form

Due to the attractive quality of the landscape, the topography and flooding issues, there should be no new houses within the valley which are beyond the ridge line of the Skerne Valley. A visitor centre with interpretation, toilets, refreshment, community facilities and car parking could be incorporated if not developed beforehand in another of the riverside character areas.

Identity

The existing quiet rural character should be maintained although land use could transfer from intensive agriculture to meadows managed for biodiversity or grasslands for public access. The River Skerne should become visible and elevated within the area for public enjoyment and the benefit of wildlife. Open views of the site are enjoyed from the public footpath along the north side of the river outside of the Skerningham site boundary. The form of the bridge must positively to contribute to the identity of Skerningham and the Skerningham Valley Park.

Public Space

There is minimal public access at present, but the Skerne Valley Park would transform this into a country park. Public access should be dovetailed with ecological enhancement and spaces created that are formed of ecological building blocks of low maintenance species rich grassland, woodland, wetland and scrub with riverside access.

Wildlife corridors incorporating pedestrian and cycle access should connect to other character areas.

Uses

The predominant use of the character area remain agricultural or become country park that incorporates the existing Skerningham Woods to the north and a possible new visitor centre if the first section of country park to proceed. The low-lying floodplain could offer the potential for more strategic SUDS wetland infrastructure.

Homes and Buildings

If outwith the visual envelope of the valley and integrated sensitively with green infrastructure such as woodland, low density executive housing could be incorporated. Possible visitor centre within the Skerningham Valley Park.

Fig. 110: Loch Leven National Nature Reserve
Image: Raeburn Farquhar Bowen, Landscape Architecture

6.8 | BARMPTON FOREST

Fig. 111: Character Area in context

Nature

Existing trees and hedges should be maintained, riparian woodland developed along the river and the river's role as a wildlife corridor accentuated and linked to the hinterland with appropriate planting and dimensions. The river banks could be opened up, scapes and wetlands created. These could play a role in SUDS for the wider Skerningham. Wide buffer strips should be incorporated to reduce the risk of agricultural chemicals and nutrients leaching into the river.

Movement

The nature of the flood plain and open attractive landscape presents an ideal opportunity for pedestrian and cycle recreational access for the enjoyment of nature and the landscape. Footpath loops should be created which form part of a wider Skerne Valley Park with new footpaths and bridleways linking into existing routes in Barmpton and wildlife corridors incorporating pedestrian and cycle access connecting to other character areas.

Built form

Due to the nature of the topography and flooding issues, there should be no new houses within the valley. A visitor centre with interpretation, toilets, refreshment and car parking could be incorporated if not developed in another of the riverside character areas beforehand. Referencing the existing farmstead typology to the southeast, small scale housing could be incorporated outwith the valley within woodland and not breaking the skyline from within the valley.

Identity

The existing quiet rural character should be maintained although land

use could transfer from intensive agriculture to meadows managed for biodiversity or grasslands for public access. The presence of the river Skerne should be elevated within the area for public enjoyment and the benefit of wildlife. Wetlands could further contribute to this character.

Public Space

There is little public access at present, but the Skerne Valley Park would transform this to a country park. This should include opportunities to encourage play. Nudges that promote physical activity and interpretation that accessibly tells the story of the place. Public access should be dovetailed with ecological enhancement and spaces created that are formed of ecological building blocks of grassland, woodland, wetland and scrub with riverside access. Wildlife corridors incorporating pedestrian and cycle access should connect to other character areas.

Uses

Public park with possible visitor centre.

Homes and Buildings

Possible small scale housing outwith the valley within woodland, visitor centre and bird hides.

Fig. 112: Bird Hide
Image: *Ecology of Colour* by Studio Weave

6.9 | BARMPTON LANE

Fig. 113: Character Area in context

Nature

This is presently an area of predominantly agricultural land characterised by field trees and hedge lined field boundaries which should be a strong influence in shaping subsequent built development.

There are opportunities for buffer planting to the west as well as reinforcing the present River Skerne planting to provide an overlapping edge with the neighbouring Bishopton Lane area

Movement

The existing local facilities can be accessed off Barmpton Lane using the existing footpath skirting the informal amenity space and Whinfield primary school playing fields.

The main street connection will be via Barmpton Lane to the north and will need to link through to the likely southern development parcel

It is not anticipated that there will be any direct access to the northern link highway.

Built form

Existing properties are relatively low density with long narrow garden plots with a large area of communal allotments abutting the south west edge.

The opportunities for new development within the character area should establish a tighter and higher density built form given its favourable walkable/cycling proximity to the existing facilities in Whinbush Way.

Identity

This is an opportunity for a distinct relatively small new neighbourhood in an enhanced natural setting whilst benefiting from the existing facilities to the west in Whinfield.

This may be arranged as a standalone village and related hamlet scale of

development to respect the present field boundary pattern.

At its heart will be a village like cluster around a focal space to assist with legibility.

Public Space

This will be informal natural amenity space acting as a buffer to the Barmpton Lane properties rear gardens; an enhanced setting for the River Skerne bankside; and to the north an extension to Barmpton Forest with new pedestrian/cycle connections.

Uses

Primarily residential and passive recreational uses with the possibility of supporting community facilities including space for local food growing as well as formal allotments There could additionally be some local 'cornershop' type retail or related facilities near the Barmpton Lane entrance to the character area to supplement the existing main Whinfield neighbourhood centre.

Homes and Buildings

Opportunities for a bespoke group of homes and related community facilities to reinforce creating a strong sense of place in this eastern area of the garden village.

This is anticipated to be a relatively dense place comprising predominately contemporary terraced; link terrace; and semi-detached homes to achieve this. Only a limited number of homes will be detached to be used in key locations to reinforce the village cluster concepts and seeking to avoid previous surburban house types and layouts.

Fig. 114: Affordable housing, all set within a series of green spaces and children's play areas, creating a new community
Image: *Cocoa Works West* by JTP Architects and OPEN Landscape Architects

6.10 | BISHOPTON LANE

Fig. 115: Character Area in context

Nature

The present arable fields are considered more open in landscape assessment terms with far less of the surviving historic field pattern relative to other character areas.

This will require investment in advance planting and related landscape design features to ensure a suitably enhanced bio-diversity as well as visual amenity for future public use.

Movement

The future movement network will initially remain focussed on Bishopton Lane as the principal access route within the character area.

The pedestrian and cycle network will need to create a number of off road links towards the west in order to connect with the existing Whinfield neighbourhood to meet the overall garden village concept of providing 20 minute walkable neighbourhoods.

Built form

Similar to Barmpton Lane character area this will have a separate neighbourhood form and street pattern from the rest of the garden village.

Identity

At present are open fields and sparse surviving hedges which should beneficially remain around the edges of the future new development.

Employment uses would of necessity involve larger buildings and bigger plots that will need to be set within a much-enhanced landscape setting to mitigate the visual impact.

Particular attention will be required in order to achieve a positive identity for relatively ‘big box’ type business

uses whilst striving for human scale in the external spaces such as active public frontages with service yards and all but essential parking located to the rear.

Public Space

This will both provide a perimeter buffer between the respective development zones either side of Bishopton Lane to respect the present landscape setting at the edges of the character area as well as human scale amenity spaces to provide features within the business clusters of development.

Uses

These have been pre-determined within the Local Plan allocation for business use subject to employment land needs and take up during the plan period.

Some supporting local facilities could be provided in support of either employment or residential uses given the relative distance from the existing Whinfield neighbourhood and depending what might be provided in the adjacent Barmpton Lane character area.

Homes and Buildings

Business use developments require a different form and scale of buildings compared with housing. Strategic design principles should be followed to achieve a coherent group of buildings in terms of elevational treatment including fenestration and materials; main street frontages and entrances; building lines; screening of parking and service yards.

Should homes be subsequently introduced then they should broadly follow the principles set out in the neighbouring Barmpton Lane character area.

Fig. 116: Residential
Image: Proctor and Matthews Architects

7.0 | ASSESSMENT TOOLS

7.1 Building for a Healthy Life

7.2 Design Quality Coding Checklist

7.1 | BUILDING FOR A HEALTHY LIFE

Building for a Healthy Life is England's most widely known and most widely used design tool for creating places that are better for people and nature. It is endorsed in national planning policy (NPPF 2021, Chapter 12, paragraph 133) as an assessment framework to support the delivery of well-designed places.

Building for a Healthy Life, integrates the learning from the Healthy New Towns Programme-Putting Health into Place in which Darlington was a Pilot and is the key measure of design quality for this development.

The 12 considerations in Building for a Healthy Life should form basis for discussion and design exploration at the very start of the design process, recognising that good design requires more time, analysis and thought.

Neighbourhoods including a range of homes that meet local needs will be well integrated into the site and their wider natural and built surroundings creating and connected places that are easy places to move through and around. The norm will be that short trips to key services are made on foot or bicycle within and beyond the site on the right infrastructure helping to improve health and air quality. Places will be distinctive and memorable and based on a legible network of streets and spaces that are well enclosed by buildings and structural landscaping with front doors and main façades of buildings facing streets and public spaces. The Tertiary streets are where there must be a balance between the need to accommodate the movement of motor vehicle alongside the need for people of all ages

The 12 Considerations are:

Integrated Neighbourhoods
01. Natural connections
02. Walking, cycling and public transport
03. Facilities and Services
04. Homes for everyone

Distinctive Places
05. Making the most of what's there
06. A memorable character
07. Well defined streets and spaces
08. Easy to find you way around

Streets For All
09. Healthy streets
10. Cycle and car parking
11. Green and blue infrastructure
12. Back of pavement front of home

In addition **Streets for a Healthy Life** - a companion Guide to Building For a Healthy Life (BHL) and Manual for Streets (MFS) has been prepared to illustrate and explain what good residential streets look like, and how they function. A revised Manual for Streets is now in the course of preparation (August 2022), which Streets for Healthy Life will help to inform and, in the interim, will be used to assess the quality of streets in the Skerningham development.

The 12 considerations must inform the design process and each phase of the garden Village from the early Masterplanning to detailed design stages.

It will be a requirement that individual BHL assessments of development parcels will be undertaken prior to seeking detailed planning approval and must achieve a minimum of 9 green lights (and no red lights - indicating aspects that need to be reconsidered).

If a parcel scores one or more REDs, then the scheme has failed, and no further assessment should take place until the scheme is redesigned and under reassessment achieves an absolute minimum of 9 GREENS and 3 AMBERS under the BHL test criteria.

The BHL assessment criteria are therefore the first to be assessed, before moving on to assessing the scheme against the remaining criteria in this Code.

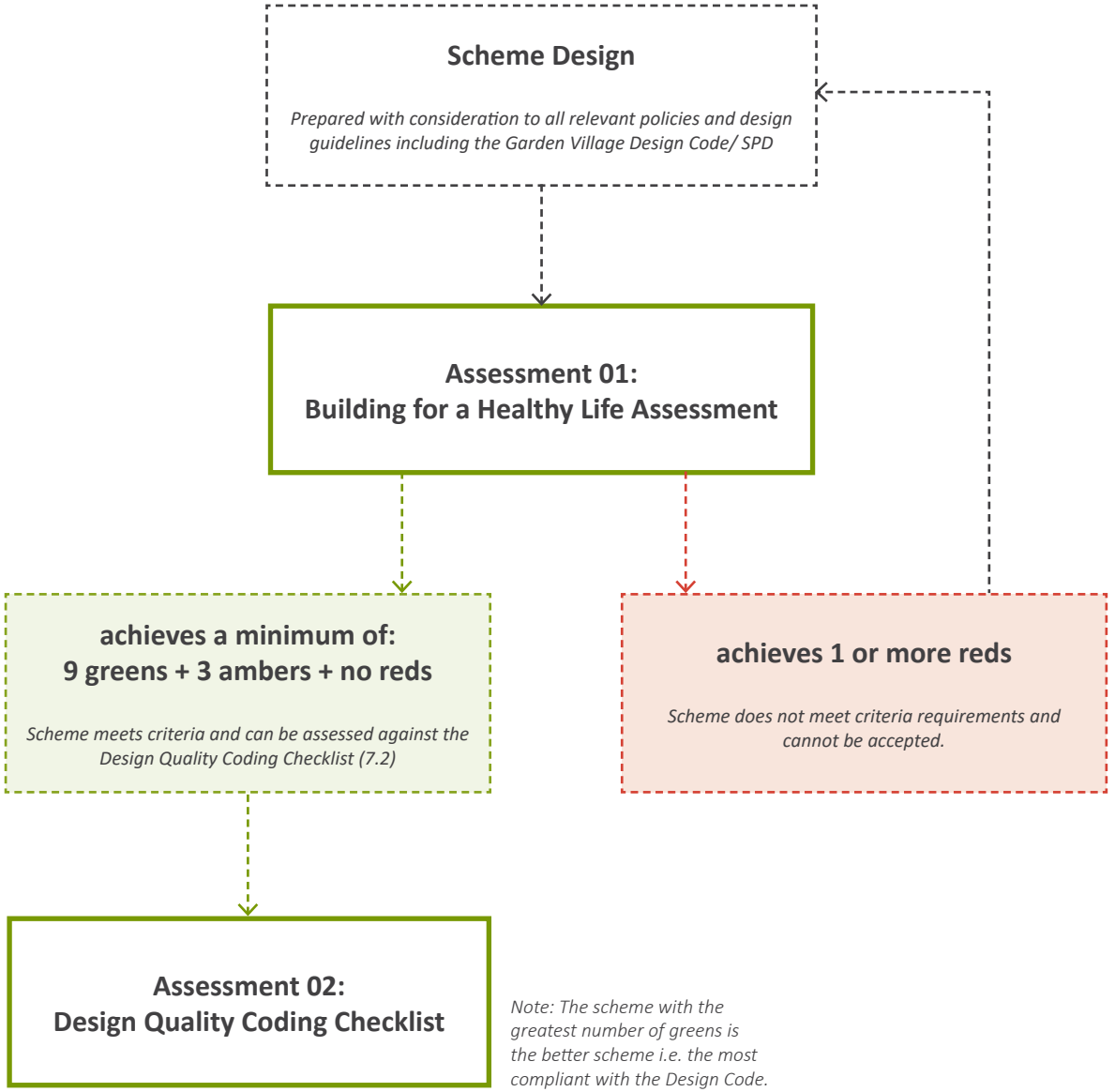
The full BHL guide can be accessed at www.designforhomes.org

Accredited Provider
designe
Independent design reviews and assessments
Design and site briefs
Support and advice
Research, audits and training
Building for a Healthy Life

designe ltd is the accredited provider of BHL assessments in the northeast.

When ready to assess a development parcel designe ltd can guide you through the process and assist with the provision of assessment proformas, etc.

The assessment process is as outlined in the adjacent diagram.



FULLY MEETS CRITERIA REQUIREMENTS AND CAN BE ACCEPTED.

PARTIALLY MEETS CRITERIA REQUIREMENTS BUT REQUIRES FURTHER WORK BEFORE IT IS ACCEPTABLE.

DOES NOT MEET CRITERIA REQUIREMENTS AND CANNOT BE ACCEPTED.

Does the proposed development comply with the following design guidelines?	Yes	Partially	No
4.1 Movement			
Movement around the development must:			
prioritise the movement and safety of pedestrians and cyclists of all ages and abilities through to provision of Coherent, Direct, Safe, Comfortable and Attractive routes?			
locate residential development and essential community services and schools to ensure that the 20 minute walkable (10 minutes there and 10 minutes back) neighbourhood is achieved.			
ensure pedestrian and cycle connectivity is made to connect the site with the surrounding area to both enable local communities to also access services within Skerningham and residents of Skerningham to access those beyond the site.			
locate all homes and services will be within a 5 minute walk from a bus stop with frequent service.			
provide appropriate level of vehicular and cycle parking but ensuring it does not dominate the built environment , public realm, or open spaces.			
The design of the Local Distributor Road must:			
be for low traffic speed on the distributor road with speed limit of no more than 40mph and potentially lower in the central section.			
look like a road that is part of a garden village and not a high speed bypass and should emphasise a sense of place.			
be aligned to avoid the existing Skerningham Plantation.			
include additional planting will both enhance the road corridor and provide screening of sensitive locations as appropriate.			

consider properties will face the road accessed from service roads with trees.			
include sections of footway /cycleway may run alongside the road in certain places, but they will be well separated by distance and landscaping.			
include a number of compact roundabout junctions on the distributor road will give access to the development sites and local street network.			
demonstrate careful consideration of the locations and design at the meeting of footpath and or cycle networks with the distributor road.			
Main Village Streets must:			
be short to encourage low speeds or broken up with changes in priority/width as part of a permeable network.			
create a positive pedestrian/cycle environment			
include street trees and SuDS.			
include street lighting.			
include defined parking bays.			
be a maximum width of 6.7 metres where they are bus and key servicing routes, and consideration should be given to a maximum width generally of 5 metres. Manual for Streets 2 - where HGVs and buses make up only a small proportion of traffic flow 2-2.5m wide lanes would be sufficient for most vehicles and would reduce carriageway width requirements, making it much easier for pedestrians to cross.			
include junctions with tight radii corners.			
Secondary Village Streets must:			
have a clear distinction between vehicular, cycle and pedestrian space and variation in typology according to their specific location .			

have speed limts to 20mph.			
be 5m wide with trees in a verge strip which will enable provision for parking bays.			
include tight junction radii and footpath treatment across junction bell mouths to confirm pedestrian priority.			
4.2 Nature			
Identify existing ecological resources and create buffer zones around these for assisted natural regeneration as advised by a qualified ecologist			
Avoid 'greenwash' but incorporate meaningful innovative nature-supporting infrastructure as appropriate such as green roofs, architectural bird colonies, insect hotels, or reinforced grass vehicle surfaces throughout.			
Create as many ecological niches as possible in line with local Biodiversity Action Plan ambitions.			
New planting to be predominantly of native species, wildflower seeds of local provenance and species that support wildlife such as pollinators in particular.			
Management of the landscape to promote biodiversity, minimise the application of chemicals and the use of fossil fuels.			
Wildlife Corridors must:			
Interconnect existing ecological resources such as woodlands, watercourses, hedgerows, fence lines and wet areas so as to create a green network			
Are there two or more primary 'ecological superhighways' that connect that connect the existing urban centre with open countryside;			
Do connecting corridors work with the topography, landscape character views and crossing of the distributor road.			
Climate Resilience:			
Do landscape strategies promote sequestration of atmospheric Carbon?			

Do management and maintenance operations minimise the use of energy and chemicals?			
Has shading and cooling benefits of vegetation been exploited to reduce unwanted solar gain and on a macro level to reduce any potential heat island effects?			
Is Sustainable Urban Drainage designed to incorporate stepped swales as part of an approach that maximises biodiversity?			
Do areas prone to flooding have landform and wetland habitats created that hold water and help sequester Carbon?			
Climate Resilience:			
Does the masterplan ensure that natural features are inviting for public access so as to promote health and wellbeing without compromising biodiversity?			
Are existing and proposed footpaths, cycle routes, bridleways and Public Rights of Way should be safeguarded within green corridors that work for wildlife?			
Is g reen infrastructure such as SUDs and other interventions that perform ecosystem services accessible for public use and enjoyment wherever feasible?			
Does every street enjoy views of existing or meaningful proposed Green or Blue Infrastructure.			
Do new community facilities such as schools, GP surgeries and shops connect to nature?			
Has reduced mowing regimes and areas of long grass been considered wherever possible to both promote biodiversity and reduce energy use?			
Is external lighting designed to be cognisant of nature – particularly bats?			
Do agricultural stewardship proposals promote nature, soil health and include features such as nature strips besides hedges and drainage ditches, depressions for ponds and buffer zones to prevent nutrient ingress into waterways?			

4.3 Built Form			
Urban Design Principles:			
Define a coherent urban design strategy for the area as a whole.			
Consider all buildings as important elements and ensure that they work as a whole, in terms of alignment, massing and architectural approach.			
Demonstrate the clear aspiration of the Council for the choice of building uses, forms and materials to help create a sense of uniqueness in the final development.			
Do the proposals reflect and celebrate local themes in terms of materials, colours, form and style, , not in a pastiche manner, but in a modern interpretation of the local vernacular, making development on the site distinctive and unique?			
Articulation: Do façades benefit from depth and articulation?			
Material + Detail: Do the details of design combine to enhance the building? The choice of symmetry or conscious asymmetry, the use of colour, quality materials and detailing.			
Elevations work best with a wall to window ratio of 15-35%. Do the proposals meet this criteria?			
Have spurious changes in building lines o been avoided?			
Have the village/hamlet cores to be identified by an increase in overall building heights?			
4.4 Identity			
Contextuality:			
Do the proposals make use of local materials and detailing?			

Do the proposals ncorporate legibility and wayfinding strategies?			
Are the proposals guided by a strong masterplan.?			
Is public art incorporated in the design of buildings and spaces as well as free-standing pieces?			
Are the street designs created from a unified pallet of materials and street furniture?			
Are different street tree species used to create distinct identities for different streets?			
Are taller buildings and architectural expression on buildings used to close vistas along a street or square?			
Are colour, materials or specific details used to create a distinctive character for different neighbourhoods?			
Do buildings satisfactorily: meet the ground – turn the corner – touch the sky?			
4.5 Public Space			
Design Principles:			
Are public spaces appropriately sized and proportioned?			
Does the enclosure offered by public spaces meet the guidelines?			
Have facilities been provided for various types of event, ranging from outdoor stages and tiered seating to market stalls, or power supply and lighting?			
Do buildings adequately frame squares, providing a continuous building line around the square?			
Do the squares incorporate active frontages?			
Is public space green, inviting, playable and encouraging people to be active?			

4.6 Use			
Design Principles:			
Do the proposals offer a mix of uses that support everyday activities, including to live, work and play?			
Do the proposals ioffer an ntegrated mix of housing tenures and types to suit people at all stages of life, and that are tenure neutral and socially inclusive?			
Is higher density housing co-located with shops, services and public transport nodes?			
Does the scheme provide substantial, accessible, useable green/public spaces rather than multiple small strips and verges?			
Can peoples daily needs be met within a walkable radius of their home?			
4.7 Homes + Buildings			
Design Principles:			
Are the proposals based upon Compact simple forms, drawing from the vernacular of the area with contemporary interpretation?			
Is the orientation and position of the dwelling within their site making the maximum of the South facing orientation for passive solar heating?			
Do dwellings meet the National Minimum Space Standards by the RIBA (Royal Institute of British Architects) and as Internal volume is also important as well as floor area, have a floor to ceiling height of 2.5/2.6m on the principal floor, as a minimum?			
Do at least 90% of homes meet building regulation M4(2), 'accessible and adaptable dwellings', and at least 10% of new housing meet building regulation M4(3), 'wheelchair user dwellings'?			
Are storage, waste, servicing and utilities "built-in" to the design solutions?			

Do corner buildings should have elevations that face the 'street' on both sides?			
Do proposals adhere to the RIBA Climate Challenge 2030 and aim to meet the targets corresponding to the years 2020, 2025?			
Is embodied carbon taken into consideration for material choices, as well as it's durability, appearance, and maintenance strategy overtime?			
Is good daylighting designed into dwelllings to improve quality of life and reduce the need for energy to light the home?			
Are Modern Methods of Construction (MMC) used in the construction of the dwellings?			
Do a percentage of the dwellings showcase Certified Passivhaus standards, twith a larger percentage utilising the Low Energy PH standard?			
4.8 Resources + Lifespan			
Design Principles:			
All new homes should deliver levels of energy efficiency as soon as possible and by 2025 at the latest.			
No new homes should connect to the gas grid.			
All new homes suitable for low-carbon heating.			
Is the overheating risk in new build homes considered in the proposals?			
Net Zero Carbon using the U K Net Zero Carbon Building Standard should be implemented.			
Are flood defences, strengthened flood resilience measures at property and community level considered from the start in the masterplan?			
Does the scheme support sustainable travel?			
In line with the Garden City Standards for the 21st Century (guide 4) a net zero energy strategy needs to be implemented and incorporated in the masterplan.			

8.0 | ABOUT US

8.0 | ABOUT US

Design Code Project Team

John Devlin
Chair of designe ltd
Project Lead

Tony Wyatt
Vice Chair designe ltd

Alan Wann
Vice Chair designe ltd

Chris Gill
Vice Chair designe ltd

Emily Scullion
Senior Panel Member

Dan Kerr
Senior Panel Member

Lowri Bond
Senior Panel Member

Peter Owens
Senior Panel Member

designe ltd is the design review and project enabling service for the north-east of England, and offers independent, impartial, objective advice to clients on issues relating to the built environment. designe ltd is a profit-for-purpose company which attempts to raise the bar on design quality and sustainability of proposed developments. In terms of sustainability, we mean financial, physical, social and economic sustainability – a balanced, broad-spectrum approach which acknowledges the realities of developing in the north-east of England arising from its underlying economy. designe ltd deploys a range of tools to deliver services to clients, including Design Reviews, Project Enabling, Training, and acting as "critical friend" in supporting clients think-through and review strategic and tactical matters relating to their built environment and project viability issues. Gateway Reviews are also offered for projects, to confirm readiness to commit to the next stage of investment. designe ltd maintain a Panel of 30+ Built Environment Experts – from seasoned professionals to up-and-coming professionals at the leading edge of their disciplines - and across the spectrum of built environment professions.

designe ltd services include expertise on project & programme management, project funding and assistance in partnership negotiations. Our aim is to assist our clients successfully launch schemes and initiatives which are the best that they possibly can be and are capable of long-term sustainability. You can find out more about our services at www.designeltd.com.

9.0 | APPENDICES

9.1 | DEFINITIONS + TERMINOLOGY

ASHP	Air-sourced heat pump. Works like a refrigerator; efficiently transfers heat from outside to inside a building.
Biodiversity	The number and types of plants and animals that exist in a particular area or in the world generally.
Biodiversity Net Gain	(BNG) is an approach to development that leaves biodiversity in a better state than before (The Chartered Institute of Ecology and Environmental Management).
BHL	Building for Healthy Living (formerly Building for Life 12 – BfL12)
Context	The physical surroundings, natural or man-made, within which a building or space might be created.
DBC	Darlington Borough Council
DC	Design Code – this document.
Design Code	A document that sets rules for the design of a new development, generally more detailed than other policy documents.
Design Review	A "peer review" system to maximise the design quality and sustainability of proposed schemes. Best undertaken at RIBA Stage 2.
DPH	Dwellings per hectare
DLUHC	Department for Levelling Up, Housing and Communities (Formerly Ministry of Housing Communities and Local Government - MHCLG)
EA	Environment Agency
GV	Garden Village
HE	Homes England
LETI	A network of over 1000 built environment professionals that are working together to put the UK on the path to a zero carbon future.
MMC	Modern Methods of Construction (low energy, sustainable, generally part factory manufactured buildings)
PV	Photo-voltaic panels - convert solar energy into electricity, which can then be stored/used on site or exported to the grid.
RAG rating	Using Red Amber Green "traffic light" system to identify compliance with assessment criteria
RIBA	The Royal Institute of British Architects
RIBA Stage 2	The 2nd Stage - Concept Design - of the RIBA Plan of Work which separates the design & development process into 7 stages.
ROW	Public Right of Way
SPD	Supplementary Planning Document - built upon and providing more detailed advice or guidance on policies in the adopted local plan
SuDS	Sustainable Urban Drainage
TCPA	Town and Country Planning Association
Thermal mass	The measure of a building material to maintain its heat capacity. Generally, high thermal mass stabilises internal temperatures.
Urban Design	The design of the spaces and places created by groups of buildings (What the public most readily think of as "planning").
Whole Life-Cycle Carbon (WLC)	Whole Life-Cycle Carbon (WLC) emissions are the carbon emissions resulting from the materials, construction and the use of a building over its entire life, including its demolition and disposal.

9.2 | LOCAL CONTEXTUAL CHARACTER INFLUENCES

Historical precedents from local villages around Darlington can help inform the urban design of the new garden village when developing key public realm spaces and related building typologies for the emerging character areas.

These include Bishopton; Brafferton; Great Burdon; and Hurworth on Tees. Also formerly distinct villages like Cockerton and Haughton le Skerne now enveloped by Darlington's urban expansion.

Possible urban design learning opportunities include:

- benefits of locally distinctive shaped community green spaces as focus of development

- subtly varied built form frontages of predominately terraced or link dwellings onto feature spaces like a village green which could be more linear and not necessarily with parallel street sides

- set piece frontage plot alignments can be 'backed up' by denser development blocks like an 'absorbed' local village

- advance planted green spaces anticipating future phases to achieve a 'mature' setting with established trees

- simple 'toolkit' for the materials pallete; fenestration and elevational detailing to create distinctive & varied places

- the stronger the spatial typology the less likelihood of car parking provision dominating

- combination of various degrees of enclosure at key entrances with an open aspect for beneficial longer views as well as strengthening the built edges as they transition into the wider landscape

- similarly 'vista closers' by built structures within set piece community spaces potentially offering supporting uses consistent with a 20 min walkable neighbourhood

- larger scale buildings like a village hall or church were not always placed centrally but to one side (near the entrance) or even behind the main linear development

- focal residential uses like traditional manor houses can either be on the main village green or space

– or set behind within a parkland contributing to the wider setting Cockerton notably still retains the strong village green structure and much of the original sense of enclosure

9.3 | SELECTED REFERENCE MATERIAL

Building For A Healthy Life [BFL]. Design for Homes, 2020

TCPA Publications (various), search by topic at tcpa.org.uk/resources

RIBA 2030 Challenge Target, version 2, 2021

The Art of Building a Home, Parker & Unwin, 1901

Upton Design Code, Northampton Borough Council, Version 2, 2005

Arbury Design Code, SPD, Nuneaton & Bedworth Council, January 2022

Northstowe Phase 2 Design Code, Tibbalds, 2017

DESIGN COUNCIL A Public Vision for the Home of 2030

Garden Communities Prospectus MCHLG, 2018

Architecture & Design Scotland, Typologies Series, search by topic

Homes England Garden Communities Toolkit (September 2019)

10 Characteristics of Places where People want to Live, RIBA, 2018

Streets for a Healthy Life: A companion guide to Building for a Healthy Life (Issue 01, Homes England

Preparing Design Codes, CABE/DCHLG, RIBA 2006
Design Code Pathfinder Programme Support Grant Prospectus Rev A, DLUHC, 8 July 2022

The National Design Guide, MHCLG, 2021

National Model Design Code, MHCLG, 2021

Guidance Notes for Design Codes, MHCLG, 2021

Urban Design Compendium, Third Edition - HCA with studio real (2013)

Safer Places: The planning system and crime prevention ODPM, (2004)

The National Planning Policy Framework [NPPF], MHCLG,2021

By Design - Urban design in the planning system: towards better practice - Commission for Architecture and the Built Environment (CABE), (2000)

The Cool Sea (The summary report and toolkit of the Waterfront Communities Project Interreg3b) ISBN 0 901273 40 6 (2007)

Manual for Streets - Department for Transport, and Community and Local Government, (2007)

Life Between Buildings: Using Public Space – Jan Gehl (2006)

Responsive Environments: a manual for designers, Routledge, London. (1985)

Sport England Active Design checklist - October 2015

Sport England Handbook Designing for physical activity - December 2021

RIBA 2030 Climate Challenge target metrics for domestic buildings

RIBA Sustainable Outcome Metrics	Current Benchmarks	2020 Targets	2025 Targets	2030 Targets	Notes
Operational Energy kWh/m^2/y	146 kWh/m^2 /y (Ofgem benchmark)	< 105 kWh/m^2/y	< 70 kWh/m^2/y	< 0 to 35 kWh/m^2/y	UKGBC Net Zero Framework 1. Fabric First 2. Efficient services, and low-carbon heat 3. Maximise onsite renewables 4. Minimum offsetting using UK schemes (CCC)
Embodied Carbon $kgCO_2e/m^2$	1000 $kgCO_2e/m^2$ (M4i benchmark)	< 600 $kgCO_2e/m^2$	< 450 $kgCO_2e/m^2$	< 300 $kgCO_2e/m^2$	RICS Whole Life Carbon (A-C) 1. Whole Life Carbon Analysis 2. Using circular economy Strategies 3. Minimum offsetting using UK schemes (CCC)
Potable Water Use Litres/person/day	125 l/p/day (Building Regulations England and Wales)	< 110 l/p/day	< 95 l/p/day	< 75 l/p/day	CIBSE Guide G

RIBA 2030 Climate Challenge target metrics for all buildings

Best Practice Health Metrics		References
Overheating	25-28 °C maximum for 1% of occupied hours	CIBSE TM52, CIBSE TM59
Daylighting	> 2% av. daylight factor, 0.4 uniformity	CIBSE LG10
CO_2 levels	< 900 ppm	CIBSE TM40
Total VOCs	< 0.3 mg/m^3)	Approved Document F
Formaldehyde	< 0.1 mg/m^3)	BREEAM

RIBA 2030 Climate Challenge target metrics for non-domestic buildings

RIBA Sustainable Outcome Metrics	Current Benchmarks	2020 Targets	2025 Targets	2030 Targets	Notes
Operational Energy kWh/m^2/y	225 kWh/m^2/y DEC D rated (CIBSE TM46 benchmark)	< 170 kWh/m^2/y DEC C rating	< 110 kWh/m^2/y DEC B rating	< 0 to 55 kWh/m^2/y DEC A rating	UKGBC Net Zero Framework 1. Fabric First 2. Efficient services, and low-carbon heat 3. Maximise onsite renewables 4. Minimum offsetting using UK schemes (CCC)
Embodied Carbon kgCO_2e/m^2	1100 kgCO_2e/m^2 (M4i benchmark)	< 800 kgCO_2e/m^2	< 650 kgCO_2e/m^2	< 500 kgCO_2e/m^2	RICS Whole Life Carbon (A-C) 1. Whole Life Carbon Analysis 2. Using circular economy Strategies 3. Minimum offsetting using UK schemes (CCC)
Potable Water Use Litres/person/day	>16 l/p/day (CIRA W11 benchmark)	< 16 l/p/day	< 13 l/p/day	< 10 l/p/day	CIBSE Guide G

Integrated Neighbourhoods	National Planning Policy Framework	National Design Guide
Natural connections	91a; 102c and e; 104d; 127b; 127f	B3; M1; M2; N1; R3
Walking, cycling and public transport	20c; 91a; 91c; 127e	B1; B3; M1; R3
Facilities and services	102; 103	B1; B3; N1; P3; U1; U3
Homes for everyone	60-62	B1; B2; U2; U3
Distinctive Places		
Making the most of what's there	122d; 127c; 127d; 153b; 184	C1; C2; I1; B2; R3
A memorable character	122d; 127c; 127d	C2; I1; I2; I3; B3
Well defined streets and spaces	91a	B2; M2; N2; N3; P1; P2; H2; L3
Easy to find your way around	91b; 127b	I1; M1; M2; U1
Streets for All		
Healthy streets	91b; 102c and e; 110a-d	M1; M2; N3; P1; P2; P3; H1; H2
Cycle and car parking	101e; 127f; 105d	B2; M1; M3
Green and blue infrastructure	20d; 91b; 91c; 127f; 155; 170d; 174	C1; B3; M1; N1; N2, N3; P1; P3; H1; R3; L1
Back of pavement, front of home	127a-b; d; f	M3; H3; L3
Generally	7; 8; 124; 125; 126; 127; 130	15; 16; 17; 20-29; 31-32
Using the tool as a discussion tool	39; 40-42; 125; 128; 129	

The relationship between Building for a Healthy Life, the National Planning Policy Framework and the National Design Guide.

9.6 | PUBLIC ENGAGEMENT

Public Engagement

Section 3.2 of the main document sets out a short summary of how the Community Engagement approach has helped to shape the Design Code through seeking to involve both the residents of Darlington as a whole and the local communities adjacent to the proposed Garden Village.

This appendix provides more detail about the community engagement and what we, designe ltd, have learned.

Initial Public Meeting

The community engagement was launched at an initial public meeting in the Dolphin Centre, Darlington March 24 2022.

The purpose of this first session, which was attended by about 50 people, was to set the scene by explaining the process, outlining the engagement programme, timescale and opportunities for input as follows:

What has happened?

+ Local plan for Darlington agreed.
+ Garden Village at Skerningham agreed.
+ Design Code (DC) for Garden Village to be produced before any planning applications.
+ Darlington Council adopts Local Plan.
+ Darlington Council appoints designe ltd to develop DC.
+ Skerningham DC to act as a national pilot.

What happens next?

+ designe ltd to engage with locals over the next few months to develop DC.
+ Good quality engagement where people feel involved and informed.
+ DC to include tangible 'stuff' that people can see is theirs.
+ Exemplary DC for Skerningham.
+ Code adopted as Supplementary Planning Guidance (SPD).

What is going to happen?

+ designe ltd to facilitate and guide community engagement in the process.
+ designe ltd to help understanding of DCs.
+ designe ltd to hold face-to-face workshops in the area.
+ designe ltd to provide material to facilitate engagement, including opportunities to engage and comment online.

What is a Design Code?

+ Visual tool to inform development proposals.
+ Look and feel of a development
+ Maximum clarity about design expectations.
+ Reflects local character and preferences.
+ Framework to ensure high quality.
+ Encourages best of modern design and build techniques.

Call to Action - Your opportunity to influence

What can you influence?

+ The future quality of this area.
+ The mix of development and green space.
+ The priority given to nature and biodiversity.
+ Priority given to active travel.
+ What the streets will look like.

How we will engage with you

+ Inclusive, clear, and transparent.
+ Empower you to inform the proposals.
+ Actively listen.
+ Build trust.
+ Creative, bold, ambitious.

What we mean by 'you'

+ People who live or work in Darlington.
+ People of all ages.
+ People who live near Skerningham.
+ People in recent developments.
+ Employers in Darlington.

Introducing some of the material / documents we will draw on

+ The guiding Principles of Garden Villages.
+ The National Design Guide.
+ Building for a Healthy Life.

Workshop 01 (26+28 April 2022)

The first face-to-face workshops were held on 26 April at Oban Court and on 28 April at Harrowgate Club and Institute in the residential areas close to Skerningham.

The initial workshops were designed to build capacity in the local community to engage with the process of developing a DC. Starting with raising awareness of the ten characteristics of well-designed places from the National Design Guide, their relevance to Skerningham, and how to identify things that are important or concerns about the area that should be considered for inclusion in the DC.

The aim was to encourage a positive discussion about the potential to influence the quality and successful creation of Skerningham Garden Village and to illustrate the relationship between the public engagement and the development of the DC.

The following proposed outcomes for the Public Engagement were shared and agreed at the outset:

+ An exemplary DC for Skerningham.
+ Good quality engagement so that people feel involved and informed.
+ Tangible 'stuff' in the code that people would recognise as theirs.

Participants were encouraged to bring any material, such as photos, that would inform the workshop. The format was informal with a mixture of presentation and group working with participants around tables in mixed groups. Following table discussions about the 10 characteristics and relevance to Skerningham, the groups were then invited to select 3 of them to consider and agree for each an opportunity and a concern for at least 3 of the characteristics that a design code for Skerningham Garden Village should take account of.

It was acknowledged that some participants may have felt uncomfortable about speaking out in the groups and may have preferred to provide their own input at the workshop or via the dedicated email address for the Skerningham project.

It was explained that the presentations and the unedited responses would be circulated and posted onto the website followed by an invitation for those unable/ or who did not wish to attend these first face to face workshops to study the presentation and make an initial input on- line on opportunities and concerns. The designe ltd team undertook some basic analysis to present at the next meeting.

The follow up workshops were scheduled at a slightly later time to allow people to come after work and would then focus on key local preferences and things to include or take account of in the development of a design code for Skerningham.

Workshop 02 (19 May 2022)

The first part of the second workshop included a short presentation of the material from the earlier workshops, for the benefit of those who were unable to attend the initial workshops and as a reminder to those who did attend.

It was confirmed that the extensive and broad ranging thoughts on opportunities and areas of concern identified by the group discussions at both sessions had been sent to the participants and were available on the website.

A basic analysis of the findings; the `what you told us`; the outcome of table discussions; and what we have done with it, was presented and this indicated in particular the local importance of access to nature in the adjacent countryside, good, connected footpath and cycle networks, minimal impact on existing communities and a good mix of housing designed for climate change.

Having identified the main areas of concern or opportunity this enabled the groups, with the benefit of the combined material, to focus more clearly on the key local preferences and things to include or take account of in the next stage of developing of a DC for Skerningham.

It became evident during this session that some participants felt either that they did not have enough information or enough time to consider the issues adequately.

As a result it was agreed to hold a further workshop to continue the discussion and prioritisation of key local preferences and also to clarify what the Local Plan says about Skerningham. In other words the 'Fixes' .

Workshop 03 (09 June 2022)

Participants were encouraged to form the same groupings as the last time and new participants will join those groups or form new groups depending on numbers. With a facilitator at each table to help answer questions /clarify points the workshop was based around three main parts.

01. The first part clarified what the adopted local plan says about Skerningham. In other words what are the 'fixes'? These were shown on a large plan of the area. The relationship between the adopted Local Plan, the preparation of the Skerningham Garden Village DC, Subsequent Supplementary Planning Document, and a Masterplan for Skerningham was also explained.

02. The second part focused on further refining what is felt to be important locally. The previous workshops had made great progress in identifying and prioritising local preferences in relation to the 10 characteristics of well- designed places that will form the framework for the DC. The groups were requested to further refine local preferences into red (no-go issues), amber, or green categories. At the last workshop one of the groups put helpful comments on a number of the photos that were available on the tables. Large scale plans of the area were on the tables and groups were encouraged to draw on these to show anything they think would be useful such as walking routes and permeability with existing key development, special sites etc.

03. The third part was to illustrate what a DC would look like, explain next steps in the preparation of the code and the purpose of the next workshop on 30 June.

The red, amber, green responses are illustrated by the photo of the work of one of the groups and the photo illustrated likes and dislikes of some of the images circulated.

Workshop 04 (30 June 2022)

The fourth phase of public engagement meetings and workshops was held on 30 June Participants were thanked for great progress made over the course of the last few weeks at the previous workshops in identifying and prioritising local preferences in relation to the 10 Characteristics of Well- Designed Places that will form the framework for the Design Code.

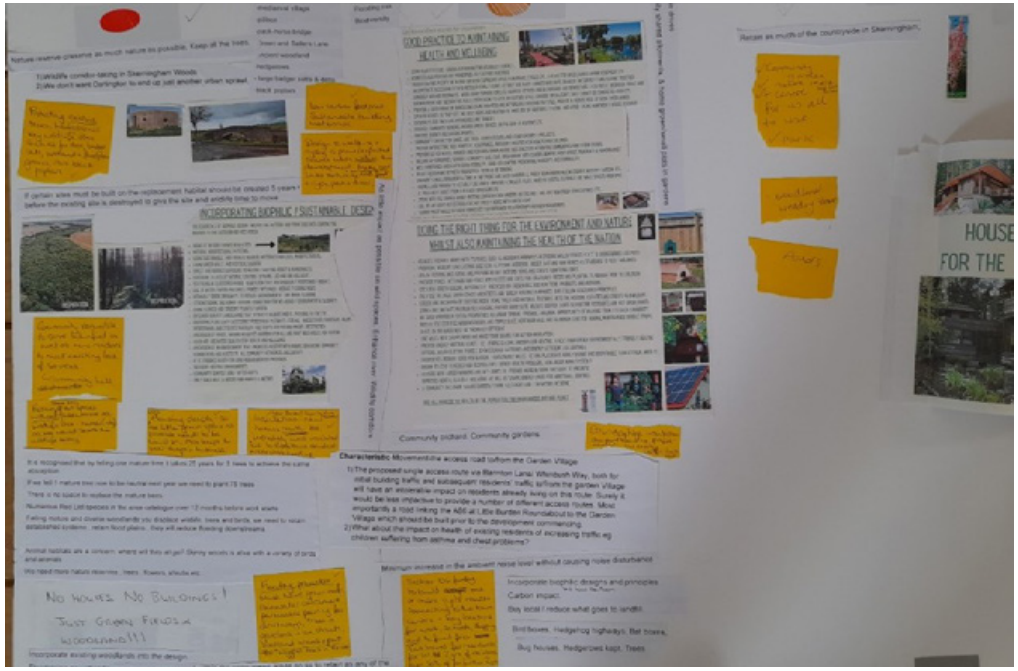
At workshop on 9 June in discussion groups at the tables groups further refined what is felt to be important locally and indicated in a traffic light system the relative importance of those preferences.

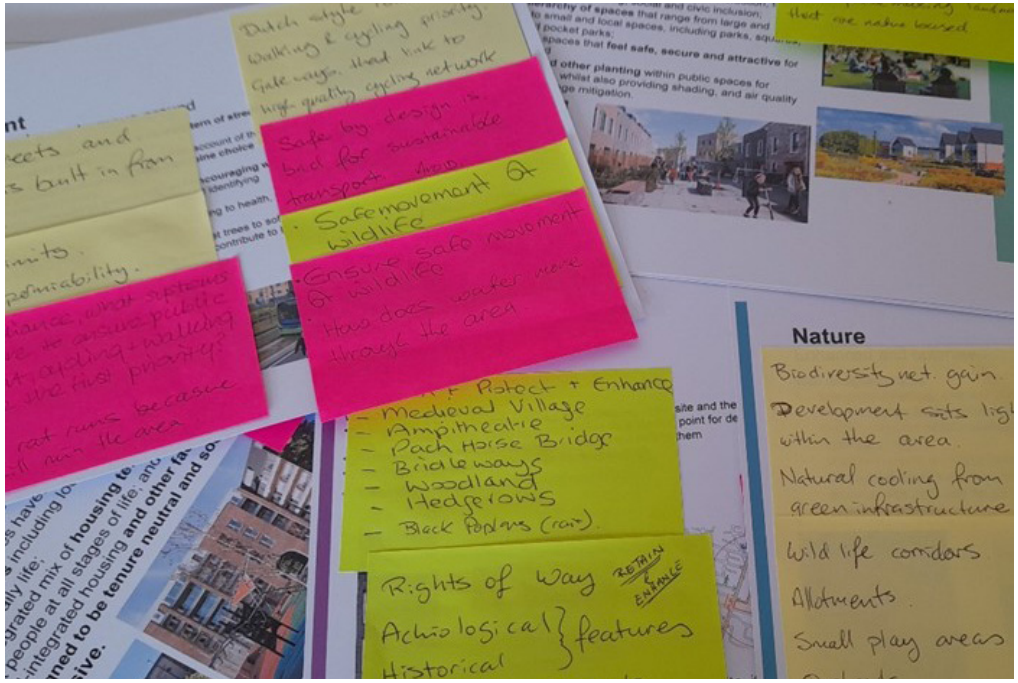
It was explained that all that information has been collated and this meeting was to give feedback on as many of those points as possible and indicate whether we designe ltd think it would be appropriate to be include them in the code and how. That feedback has subsequently informed the design code and participants will be able to see how their input has been taken into account and shaped the DC for Skerningham.

There was a discussion about how the Skerningham site could be broken down into a number of what might be called character areas, which acknowledged the different contexts across the Skerningham site could influence the style and shape of development.

Pictures of different streets and places were circulated around the tables at the workshops and participants encouraged to post comments on them.

Participants were also invited to submit which they think capture the character of Darlington and could inform the DC, some of which are in this draft.





Communication + Information

Good Communication and information were critical parts of the community engagement programme. It was our intention, confirmed with feedback at the first public meeting, that communication routes to both the residents of Darlington as a whole and the local residents of the communities adjacent to Skerningham needed to by a mixture of means which recognised the variety of ways that people receive and provide comments.

The communication routes included the following:

One Darlington Magazine
One Darlington the Borough Councils magazine delivered to all residents included feature articles about the proposed Garden Village and how people could get involved with developing a DC and a special section of the Darlington website provided regular updates and useful learning material.

A Skerningham Page on Darlington Borough Council website
A dedicated area on the Darlington Borough Council website was established to provide a continual flow of information and feedback during the engagement programme.

A Skerningham email address
skerninghamdesign@darlington.gov.uk was established to enable anyone to send ideas, comments, concerns etc. This was actively used.

designe ltd website
The designe ltd website also included a dedicated area for Skerningham.

Direct to Core Group
At the first public meeting attendees were invited to give their email contact details so that a core communication group could be established to enable information to be provided and received. This core group grew as participants at workshops also provided contact details.

Leaflet drops to households
In advance of each informal workshop information leaflets were delivered to over a thousand houses considered to be the local community affected by Skerningham.

Social Media
Darlington Borough Council communication team gave great support to the whole communication process and used the Council's social media platform to also widely publicise the engagement programme and workshops.

Small scale housing

Operational energy

Implement the following indicative design measures:

Fabric U-values (W/m².K)

Walls	0.13 - 0.15
Floor	0.08 - 0.10
Roof	0.10 - 0.12
Exposed ceilings/floors	0.13 - 0.18
Windows	0.80 (triple glazing)
Doors	1.00

Efficiency measures

Air tightness	<1 (m³/h. m²@50Pa)
Thermal bridging	0.04 (y-value)
G-value of glass	0.6 - 0.5
MVHR	90% (efficiency) ≤2m (duct length from unit to external wall)

Window areas guide (% of wall area)

North	10-15%
East	10-15%
South	20-25%
West	10-15%

Balance daylight and overheating

Include external shading

Include openable windows and cross ventilation

Reduce energy consumption to:

35 kWh/m².yr

Energy Use Intensity (EUI) in GIA, excluding renewable energy contribution

Reduce space heating demand to: 15 kWh/m².yr

Maximise renewables so that 100% of annual energy requirement is generated on-site

Form factor of 1.7 - 2.5

Heating and hot water

Implement the following measures:

Fuel
Ensure heating and hot water generation is fossil fuel free

Heating
Maximum 10 W/m² peak heat loss (including ventilation)

Hot water
Maximum dead leg of 1 litre for hot water pipework

'Green' Euro Water Label should be used for hot water outlets (e.g.: certified 6 L/min shower head – not using flow restrictors).

Demand response

Implement the following measures to smooth energy demand and consumption:

Peak reduction
Reduce heating and hot water peak energy demand

Active demand response measures
Install heating set point control and thermal storage

Electricity generation and storage
Consider battery storage

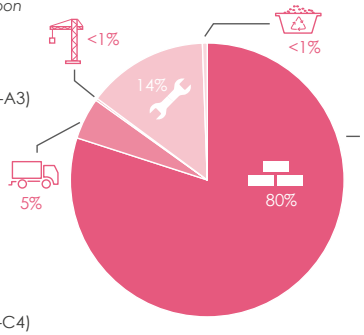
Electric vehicle (EV) charging
Electric vehicle turn down

Behaviour change
Incentives to reduce power consumption and peak grid constraints.

Embodied carbon

Focus on reducing embodied carbon for the largest uses:

- Products/materials (A1-A3)
- Transport (A4)
- Construction (A5)
- Maintenance and replacements (B1-B5)
- End of life disposal (C1-C4)



Average split of embodied carbon per building element:

30% - Superstructure

27% - Substructure

20% - Internal finishes

17% - Façade

5% - MEP

Reduce embodied carbon by 40% or to: <500 kgCO₂/m²

Area in GIA

Data disclosure

Meter and disclose energy consumption as follows:

Metering

1. Submeter renewables for energy generation
2. Submeter electric vehicle charging
3. Submeter heating fuel (e.g. heat pump consumption)
4. Continuously monitor with a smart meter
5. Consider monitoring internal temperatures
6. For multiple properties include a data logger alongside the smart meter to make data sharing possible.

Disclosure

1. Collect annual building energy consumption and generation
2. Aggregate average operational reporting e.g. by post code for anonymity or upstream meters
3. Collect water consumption meter readings
4. Upload five years of data to GLA and/or CarbonBuzz online platform
5. Consider uploading to Low Energy Building Database.

Medium and large scale housing

Operational energy

Implement the following indicative design measures:

Fabric U-values (W/m².K)

Walls	0.13 - 0.15
Floor	0.08 - 0.10
Roof	0.10 - 0.12
Exposed ceilings/floors	0.13 - 0.18
Windows	1.0 (triple glazing)
Doors	1.00

Efficiency measures

Air tightness	<1 (m³/h.m²@50Pa)
Thermal bridging	0.04 (y-value)
G-value of glass	0.6 - 0.5
MVHR	90% (efficiency) ≤2m (duct length from unit to external wall)

Window areas guide (% of wall area)

North	10-20%
East	10-15%
South	20-25%
West	10-15%

Balance daylight and overheating

Include external shading

Include openable windows and cross ventilation

Reduce energy consumption to:

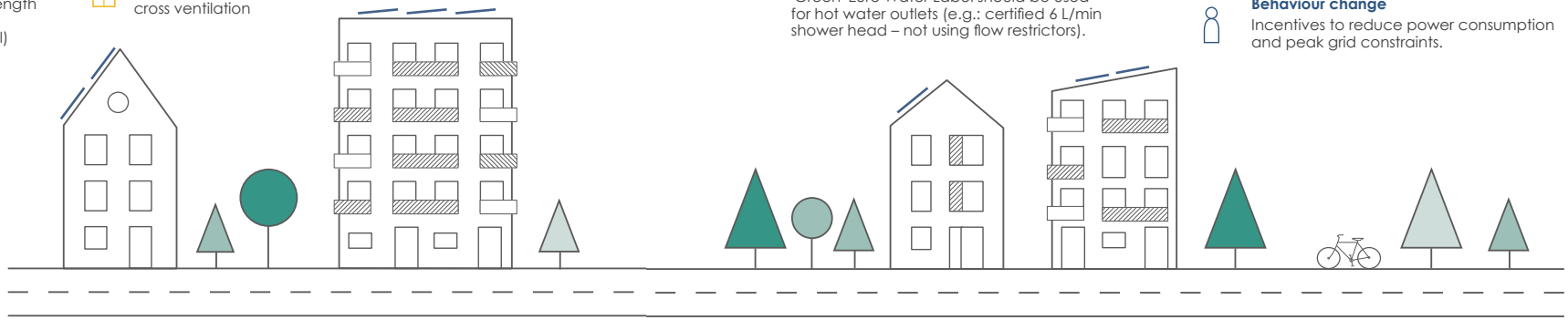
35 kWh/m².yr

Energy Use Intensity (EUI) in GIA, excluding renewable energy contribution

Reduce space heating demand to: 15 kWh/m².yr

Maximise renewables so that 70% of the roof is covered

Form factor of <0.8 - 1.5



Heating and hot water

Implement the following measures:

Fuel
Ensure heating and hot water generation is fossil fuel free

Heat
The average carbon content of heat supplied (gCO_2/kWh.yr) should be reported in-use

Heating
Maximum 10 W/m² peak heat loss (including ventilation)

Hot water
Maximum dead leg of 1 litre for hot water pipework

'Green' Euro Water Label should be used for hot water outlets (e.g.: certified 6 L/min shower head – not using flow restrictors).

Demand response

Implement the following measures to smooth energy demand and consumption:

Peak reduction
Reduce heating and hot water peak energy demand

Active demand response measures
Install heating set point control and thermal storage

Electricity generation and storage
Consider battery storage

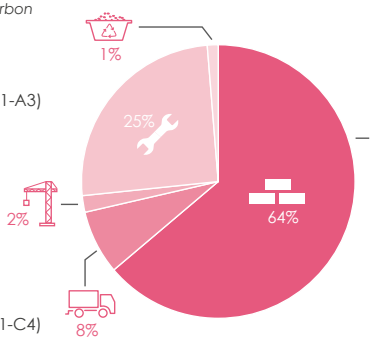
Electric vehicle (EV) charging
Electric vehicle turn down

Behaviour change
Incentives to reduce power consumption and peak grid constraints.

Embodied carbon

Focus on reducing embodied carbon for the largest uses:

- Products/materials (A1-A3)
- Transport (A4)
- Construction (A5)
- Maintenance and replacements (B1-B5)
- End of life disposal (C1-C4)



Average split of embodied carbon per building element:

46% - Superstructure

21% - Substructure

16% - Internal finishes

13% - Façade

4% - MEP

Reduce embodied carbon by 40% or to: <500 $kgCO_2/m^2$

Area in GIA

Data disclosure

Meter and disclose energy consumption as follows:

Metering

1. Submeter renewables for energy generation
2. Submeter electric vehicle charging
3. Submeter heating fuel (e.g. heat pump consumption)
4. Continuously monitor with a smart meter
5. Consider monitoring internal temperatures
6. For multiple properties include a data logger alongside the smart meter to make data sharing possible.

Disclosure

1. Collect annual building energy consumption and generation
2. Aggregate average operational reporting e.g. by post code for anonymity or upstream meters from part or whole of apartment block
3. Collect water consumption meter readings
4. Upload five years of data to GLA and/or CarbonBuzz online platform
5. Consider uploading to Low Energy Building Database.

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