

# Langarth Garden Village

## MASTERPLAN SUMMARY

Prepared by AHR

November 2020



This Summary has been prepared including work by:



Revision	Date	Dr By	App By	Comments
P01	14. 07.2020	KB	MDLN	DRAFT
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## LANGARTH GARDEN VILLAGE

This Design Code has been prepared in response to support the delivery of Langarth Garden Village, a new 21st century garden community for Truro, Cornwall.

This document has been prepared by  
AHR with input from Arcadis, CF Moller Architects, PBWC Architects, The Environmental Partnership, WSP and Atlantic Arc Planning on behalf of Cornwall Council (CC).

The summary document includes extracts from Langarth Garden Village Design and Access Statement and other relevant documents submitted as part of the Hybrid Planning Application for Langarth Garden Village.



An architectural rendering of a modern residential street. The scene is set under a bright, cloudy sky. In the foreground, a lush garden with various colorful flowers (red, purple, yellow) and greenery is visible. A paved walkway leads to a street with a low stone wall. Several people are walking along the street, including a man in a brown coat and a woman in a blue jacket. The buildings are modern, featuring a mix of materials like wood, stone, and brick. A prominent building on the left has vertical wood slats and large windows. In the background, more houses with gabled roofs and brick chimneys are visible. The overall atmosphere is bright and contemporary.

**INTRODUCTION AND EXECUTIVE SUMMARY**

**PART A BACKGROUND AND PROCESS**

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# Langarth Garden Village

MASTERPLAN SUMMARY



# Langarth Garden Village

## MASTERPLAN SUMMARY

## INTRODUCTION

### INTRODUCTION

The Langarth development has a long and complex history. This had resulted in the granting of planning permissions for up to 2,700 houses to a number of private sector developers during the past 10 years. With these planning permissions already in place some development was inevitable on the site. With growing concerns over the quality of the proposed development, increased pressures on local schools and health services, and the impact on existing traffic, Cornwall Council took the decision to intervene in the project, allocating £159m to support the creation of a new vibrant, connected and well planned community for between 8,000 and 10,000 future residents of Cornwall across 3550 dwellings plus 200 extra care units and 50 units of student/health worker accommodation, including affordable housing .

The masterplan, developed with representatives of the local community and key partners, will provide a new community with green infrastructure at its heart, where people are prioritised over cars. A landscape-led development which offers an attractive and healthy environment for people to live in, grow and develop over time. Langarth Garden Village will include beautifully designed homes which meet the needs and budgets of all sectors, and new education, health, cultural and leisure facilities and flexible workspaces – all set in open and walkable green landscapes.

The Council's involvement means the new community will be delivered as an integrated whole rather than as piecemeal development, with new schools and GP surgeries shaped around the needs of residents and delivered at the start of the project.

### The Vision

The vision for Langarth Garden Village, articulated in the initial masterthinking work undertaken in early 2018, included the following elements:

- An excellent place for people to live, taking advantage of the outstanding natural assets with high-quality facilities for active living (play, leisure), first class education and where people have the opportunity to work close to where they live

- Designed in a way that is distinctive, with a range of styles that build on best practice in the UK and abroad;
- Green and clean
- Have a principal centre that is within easy walking distance of most of the development, with smaller local centres towards each end of development
- Provide for 35% affordable housing on average across the development area.

### The Brief

The Brief was then developed to inform the selection of a new masterplanning team and was used as a basis for the early engagement with the public and stakeholders.

AHR led the masterplan with Arcadis with the following key drivers:

- Build a community suitable for a range of residents, workers and visitors
- Deliver great social infrastructure as thriving civic spaces that foster a strong sense of community
- Deliver a range of dwellings and commercial units to meet a wide range of needs
- Knit together planned development with existing settlements at Threemilestone, Treiske and Gloweth
- Design the built environment with a variety of styles that relate to each other in a harmonious way
- Take full advantage of the natural countryside location to develop green and sustainable features that add to the value
- Ensure that cars are accommodated but are not dominant, with walking and cycling the preferred mode of transport
- Exploit the opportunities presented by the proximity to existing and planned facilities
- e.g. the Stadium and the park & ride
- Provide a mix of employment facilities particularly through development that supports start-up and growth for SME's
- Provide local retail and services to meet the day-to-day needs of residents and visitors
- Ensure input and buy-in from stakeholders to the vision;
- Ensure that any interventions safeguard a sustainable long-term future for the site.



Fig.1: Illustrative Masterplan

## Engagement

Extensive public and stakeholder engagement as taken place and findings and concerns taken on board wherever possible.

- Over 50 one to one meetings with key stakeholders
- Many community engagement events with several presentations showing Vision, concepts, emerging options and final preferred masterplan.
- A rigorous process of engagement with the Langarth Stakeholder Panel (monthly meetings, chaired by Cllr Tudor) enabling the creation of 10 Design Principles
- Several Working Group session with invited key stakeholders from across the community representing sectors from tourism, business, community, environment, transport, education, health and wellbeing
- Workshops at schools and youth groups
- Presentation to Truro City Council
- Cornwall Design Review Panel

## The Masterplan

The developed masterplan instills a strong-sense of local character and the concept rigorously works with the existing land via a landscape centric concept.

It encourages sustainable travel modes across a network of roads, cycle tracks and pedestrian access ways across the site.

A series of separate character areas separated by important structural green infrastructure will provide a ranges of experiences and options across the length of the site.

Design Codes support the need for high quality housing and spaces and will guide the subsequent Reserved Matters applications and push towards zero carbon solutions.

Links to the adjacent existing communities, wider soft transport linkages to the city and the wider countryside fully found Langarth into its context.

An architectural sketch showing a modern building with a balcony on the left and a large, dense cluster of trees on the right. The drawing is done in a loose, sketchy style with visible lines and some color washes.

**Specific benefits to existing and future local residents of the Council's involvement include:**

1. Protecting at least 48% of the existing green space within the site (compared with just 23% in the previous applications)
2. Providing at least 35% affordable housing (for local people), as well as homes for key workers such as nurses and teachers, and extra care housing for older people and people with disabilities.
3. Building high quality homes to a standard at least 20% higher than current building regulations, with a target of achieving Zero Carbon.
4. Using low carbon energy sources such as ground source heat pumps to heat the whole development rather than fossil fuels, with electric charging points for every house and high levels of insulation
5. Providing new primary schools and health facilities at the start of the project (rather than at the end when all the houses have been built)
6. Improving transport links – with works to improve the existing A390 as part of a wider transport strategy for Truro, as well as delivering the new Northern Access Road at the start of the development, providing segregated cycle paths which link with new cycle routes into and around the city, and improved public transport, with increased bus services, cheaper fares, and E-Bike and E-car clubs.
7. Improved connectivity with generous and interconnected green corridors linking to existing settlements at Threemilestone, Treliske and Gloweth, with the Royal Cornwall Hospital, Truro and Penwith College and with existing and planned retail developments in the rest of Truro.
8. Investment in community projects in Threemilestone and Highertown areas to help ensure local services do not come under pressure as a result of the Langarth scheme. These include a Community Hall at All Saints Church Highertown, a new hall at Threemilestone School, upgrading the Community Centre, providing new playing pitches, improving the village centre to reduce congestion and increase parking and improve pedestrian and cycle links with Langarth and the potential expansion of the business park.
9. Using sustainable drainage systems as a natural flood prevention system that enhances biodiversity.
10. Creating a vibrant, co-ordinated development where people want to live, work and visit, with green and public spaces allowing communities to interact and flourish; live-work housing solutions, including access to superfast broadband and support for start-ups and growth for small and medium sized enterprises, and new sports, cultural and play areas
11. Providing areas for young families to live, close to schools and surrounded by nature and opportunities for children to develop in close relationship with landscape.
12. Building on Cornish heritage and promoting the use of locally sourced building materials and local tradespeople to create a variety of different housing sizes and styles – not a bland “one size fits all” approach.
13. Setting the development within the historic fields to minimise impact on existing hedgerows, and creating new hedges to help increase biodiversity on the site by up to 20%.
14. Planting at least 50,000 new trees as part of the Forest for Cornwall
15. Providing allotments, community gardens and community orchards to support food production and bring communities together.
16. Maximising the potential of proximity to the Stadium and Threemilestone Industrial Estate for work and leisure opportunities.

# Langarth Garden Village

MASTERPLAN SUMMARY





# **PART A**

# **BACKGROUND AND PROCESS**

# Langarth Garden Village

## MASTERPLAN SUMMARY

## CONTEXT

### Site Boundary

The site is located approximately 3km to the west of Truro City Centre and extends approximately 3.6km to the west. The site spans from the west at West Langarth Farm heading east towards Truro Golf Course, carrying in width from 300m towards the east and west, to 800m in the central area, comprising approximately 245 hectares.

The site is bordered to the south by the A390 (included within the red line boundary), which is a dual carriageway that separates the site from Threemilestone. Hedgerows and areas of woodland adjoined by minor watercourses bound most of the site to the west, north and part of the east. To the east the site adjoins The Royal Cornwall Hospital and Truro Golf Course and the housing estate of Gloweth to the south-east.

A low-density urban context surrounds the site to the east which transitions into rural areas to the west. The western part of the site comprises mostly of arable land, subdivided by hedgerows into smaller fields. The area is surrounded by urban context provided by Threemilestone and Gloweth to the south and to the south-west respectively.

The site is located in the Kenwyn Parish in Cornwall and the eastern site boundary abuts the parish boundary between Kenwyn and Truro.

### Policy Context

In recent years Cornwall Council has generated a number of different policies and visions, which currently play a vital role in bridging the inequality gaps in society and make a positive difference to people's lives.

The inputs that create the background of the work include the following:

**Cornwall Local Plan:** Cornwall's Local Plan was adopted in November 2016 and sets out a range of policies for development up to 2030 across the whole county, including some specific parameters (e.g. housing allocation) for Truro and Threemilestone.

**Truro & Kenwyn Neighbourhood Plan:** The Neighbourhood Plan was prepared by Truro City Council and Kenwyn Parish Council in parallel with the Local Plan and was also adopted in November 2016. It includes a vision for the area (which includes the Langarth development area) and a range of policies specific to the area.

**Existing site data:** A range of surveys, flood risk assessments, utilities capacity assessment, transport assessment, social infrastructure capacity assessments, etc. have been undertaken. Where these were absent, or out of date, work has been undertaken as part of this requirement to fill any gaps.



Fig.2: Wider Context Site Location

## Local Design Guidance

### Cornwall Design Guide

The Housing Design Guide is designed to lift the quality of housing delivery throughout Cornwall. It recognises the unique character of the county and makes suggestions as to how that might influence the pattern and architectural character of new developments.

It sets out the overall approach to site, place-making, individual plots and houses along with the performance of developments in environmental and energy terms. It tackles new developments and densities, which need to demonstrate appropriateness in terms of their surroundings. Maximisation of land use is also mentioned, as well as the need for creating mixed communities with a choice of dwelling types and lifestyle options.

Cornwall has extensive policy documents on character whether this is in the form of Conservation Area Appraisals or Landscape characterisation documents. These documents should inform development proposals along with careful site analysis.

New developments therefore should focus on the creation of sustainable communities which have a distinct character, are fully integrated with existing communities and establish a sense of place.

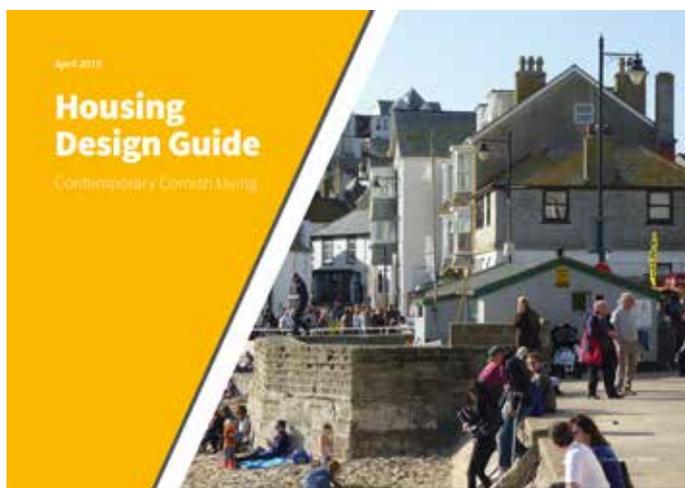


Fig.3: Housing Design Guide - Contemporary Cornish Living Cover

### Truro and Kenwyn Neighbourhood Plan

The Neighbourhood Plan involves the communities of Truro and Kenwyn (the two neighbourhoods) helping to set out how Truro and Kenwyn will evolve in terms of environment, employment, housing, education, culture & leisure, and Green Infrastructure. This means planning for local housing needs, community facilities and jobs and where they should go. It also means including the green and open spaces that are important to the community.

The plan seeks to address local issues of transport infrastructure, flood risk, economic resilience, community inclusiveness, land use, housing needs, amenity value, education and quality of the environment. It must fit with both the National Planning Policy Framework guidelines and also the Cornwall Local Plan, which sets out strategic policy as well as housing, employment and retail numbers and key issues for the Truro and Kenwyn area.

The current Truro and Kenwyn Neighbourhood Plan was formally adopted in November 2016 and is now being updated to reflect local and national changes.



Fig.4: Truro & Kenwyn Neighbourhood Plan

# Langarth Garden Village

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## VISION

### The Vision for Langarth Garden Village

The masterplan for Langarth Garden Village reflects a response to the natural features of the site, its heritage assets and the principle of creating walkable neighbourhoods that are well connected to surrounding villages and the amenities of central Truro.

Langarth will be a vibrant, connected, well planned community for between 8,000 and 10,000 future residents of Cornwall. It will have local character, strong services and integrated and accessible transport and green space. Langarth has Garden Village status and nature will be a key part of the design with green space and thoughtfully designed neighbourhoods. The involvement means high quality, well designed homes which are affordable for local people with infrastructure such as schools, health and play facilities built at the start of the scheme rather than at the end.

Sustainable transport systems, which include bus services, cycle paths and walkways are to be integrated within the masterplan. This will connect homes within the Garden Village and out into neighbouring communities and places of work.

As a community for all, it works during the day and the night, allowing people to connect with their family and friends. Langarth is a place where people will live, work and thrive.

As a Garden Village it is set to offer:

- High quality homes
- Jobs and community facilities
- Services in an attractive, landscape-led setting
- Schools, medical centres, green spaces, public transport, new roads, community centres and shops
- Community with local character, strong services, integrated and accessible transport and green spaces.

### Garden Village Principles

The aim is to create a vibrant and distinctive new community at Langarth where people want to live. Building upon nationally set guidelines - Garden Village principles, this includes:

- Walkable neighbourhoods
- Mixed use communities
- Sustainable transport
- Generous and high quality green spaces.

The scheme creates high quality, well designed housing and also provides:

- Improved infrastructure
- Spaces for work
- Services that fit the needs of a diverse population.

The scheme proposes key services at the start of the project rather than the end including:

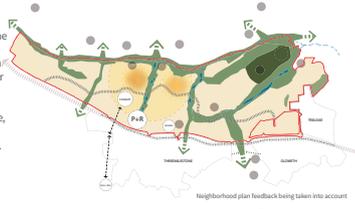
- The North Access Road link road
- New schools
- An extension to the park and ride scheme
- Health, leisure, play, faith, emergency facilities
- New community centres.

### Masterplan options

Three scenarios have been identified as a result of a parameter matrix, which uses topography, green and blue infrastructure, number of nodes, design principles, constraints and opportunities to establish series of key transitions.

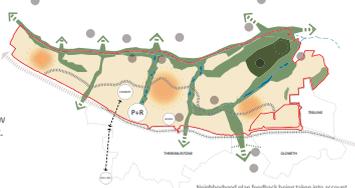
#### Scenario 01

The first option aims to minimise the footprint of the new development with a strong semi-urban extension of the proposed developments near the new stadium and the Hendra site. This enables the retention of a significant amount of the landscape, allowing the green element of the overall masterplan to be optimised. The new development will be defined by a strong edge towards the landscape and will have two local centres/ village squares.



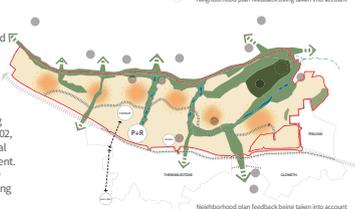
#### Scenario 02

Like the first scenario, this option maintains some of the physical connection with the proposed developments around the stadium and Hendra. However, some of the development density will be relocated in order to create two new village centres to the West and East. These new village centres will have a close connection with the green infrastructure.



#### Scenario 03

The third Scenario will be developed as five smaller settlements, with an emphasis on more low-density settlement clusters. These new settlements will have their own strong identity, surrounded by the landscape of the valleys. Expanding on the three centres from scenario 02, this scenario includes two additional clusters around the new park element. In this Masterplan scenario the new development is contained by a strong new landscape character.



[www.cornwall.gov.uk/langarth](http://www.cornwall.gov.uk/langarth)

### Next steps

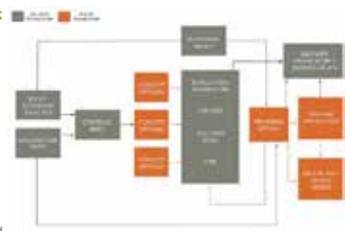
The masterplan team are working to a Project Programme, which builds the tasks upon RIBA workstages and their requirements. This programme seeks to submit an outline planning permission for the masterplan in April 2020.

STAGE 0	STAGE 1A	STAGE 1B	STAGE 2	STAGE 3
Outline Planning Permission	Final Planning Permission	Final Planning Permission	Final Planning Permission	Final Planning Permission
April 2020	August 2020	October 2020	December 2020	April 2021

### The Design Framework and the Delivery Framework

The Design Framework is the masterplan which will outline how the vision and design principles will look in spatial terms, through the layout of the various land uses across the site.

The Delivery Framework will ensure that the Design Framework meets the Council's objectives for development at Langarth, and that the proposals are affordable, commercially viable and deliverable.



### EIA scoping

An Environmental Impact Assessment (EIA) is being undertaken alongside the masterplan. This systematic and holistic process will ensure that the masterplan proposals consider and mitigate any potential negative impacts on areas such as ecology, biodiversity and heritage.

Through understanding these impacts, the masterplanning team will also be able identify and take full advantage of any opportunities to make improvements and net gains through the development. This could include, for example, improving the quality, variety and resilience of trees and vegetation, or securing habitats for native species within the site.

The EIA is currently at the scoping stage and a number of surveys are underway, which will help provide a comprehensive picture on environmental aspects for Langarth.



[www.cornwall.gov.uk/langarth](http://www.cornwall.gov.uk/langarth)

Fig.5: Early engagement collateral

## ENGAGEMENT

### Overview of Engagement

Extensive public and stakeholder engagement as taken place and findings and concerns taken on board wherever possible.

- Over 50 one to one meetings with key stakeholders
- Many community engagement events with several presentations showing Vision, concepts, emerging options and final preferred masterplan.
- A rigorous process of engagement with the Langarth Stakeholder Panel (monthly meetings, chaired by Cllr Tudor) enabling the creation of 10 Design Principles
- Several Working Group session with invited key stakeholders from across the community representing sectors from tourism, business, community, environment, transport, education, health and wellbeing
- Workshops at schools and youth groups
- Presentation to Truro City Council
- Cornwall Design Review Panel

### Public Engagement

Public engagement undertaken:

- Eight community engagement events (over 350 attendees in total)
- Early listening phase community events - Threemilestone, Hightertown, Chacewater, Shortlanesend and St Agnes.
- Presenting emerging options public consultation events – Threemilestone and Truro.
- Workshops at schools and youth groups inc Richard Lander and Chacewater schools, Truro Methodist Church Youth Group.
- Stand at Cornwall Business Fair 31st Oct
- In addition to conversations at events, feedback on the project has been gathered via questionnaire, both at events and online.

A monthly e-newsletter update is being sent to several hundred recipients, including Kenwyn Parish and Truro City Councillors, Cornwall Councillors, plus stakeholders and members of the public who have registered to receive it.

## Key Concerns

1. The most significant concern recorded across conversations is around the impact Langarth will have on local infrastructure and services. Increased congestion on the A390, the lack of adequate public transport provision to mitigate congestion and reduce reliance on cars, and overburdened services such as schools and health facilities are the most frequently sited concerns. Early provision of infrastructure is seen as essential, in particular the school and community facilities.
2. A strong worry exists around how existing communities, from Threemilestone and its school, to Truro city centre and its businesses, will be impacted by the new 'offer' at Langarth. There is strong support for Langarth to complement, not duplicate and this applies to everything from education provision to the business and retail offer. Safe, efficient transport links and connections between surrounding communities and Langarth are seen as vital to this.
3. The current public transport network, the frequency and directness of service, the cost of travel and the lack of safe and connected footpaths and cycle paths currently make it hard for public and stakeholders to envisage a community where people can reduce their reliance on cars.
4. There is a growing sense that the Council's intervention in Langarth, should deliver a better, greener, more connected community and that this is in contrast to the previous piece-meal approach taken to development. The jury is still out however, and there is certainly a significant degree of cynicism and fear around the vision remaining true given the size and complexity of the site. Without a strong narrative, positioning and direction Langarth risks being seen as part of the problem not part of a solution and the wider community are very sensitive to this.
5. How you create a genuine community from scratch, with a sense of neighbourliness, belonging and care and ensuring community spaces and assets (outdoor and in) are well maintained in the long term is frequently sited as an issue that will need to be addressed. Providing homes for 'locals only' versus 'delivering a diverse and inclusive community' presents an interesting challenge!

# Truro Placeshaping



PLACESHAPING PROJECT  
A TRURO PLACEHAPING PROJECT

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Truro Placeshaping Project

love





## Perceived potential benefits

1. Affordable housing provision is the number one potential benefit cited by respondents within questionnaires, with new and improved indoor and outdoor community resources, access to diverse green space and potential for new, improved services and infrastructure following on behind. These findings are reflected in wider conversations too.
2. There is a growing sense, particularly amongst key stakeholders and reflected in the Working Group session that Langarth Garden Village could be an exemplar, not only to demonstrate a new era of place-making in Cornwall but also to meet the needs of the times and in response to the climate crisis
3. The intention to work from the landscape upwards; to protect and enhance green space, maintain existing and create new Cornish hedges, plant trees, create diverse, natural green space for everything from leisure, sport, play, growing, wildlife and nature, soft engineering is seen as a potential positive.
4. The current trends for multi-functional community spaces, bringing all kinds of services under one roof and for encouraging multi-generational interaction within community, provide an opportunity for Langarth to deliver benefits around health, wellbeing and social interaction which is seen as a positive.
5. There is exciting potential for Langarth Garden Village to incorporate many elements of 'eco' living, to ensure it is future proofed. Energy efficient homes, carbon friendly building materials, great public transport infrastructure, e-car charging points, car sharing, e-bike hire, resource efficiency, heat pumps, renewable energy, waste minimisation, reuse and recycling, grey water recycling, food growing on site. Smart metering from start. Understanding consumption and waste.
6. Langarth is being seen as a catalyst for change within the village of Threemilestone; the community are keen to see investment in the village and ensure that Threemilestone does not become the 'poor relation' to the new Garden Village.

### Engagement Activities

#### Truro Day

During September 2019 representatives from the Langarth GV project joined representatives from the Pydar and Truro and Kenwyn Neighbourhood Plan projects in the Truro Place Shaping stand.

Around 200 people visited the stand during the day, with 61 comment forms completed by members of the public. There were also a range of children's activities, including designing a future village and the tree tag decoration.

Emerging themes included:

- A390 Traffic concerns – this was the area of greatest concern – over the current traffic congestion and the potential increases with the development. Location of crossings across the A390.
- Improvements to public transport and cycleways – concerns over the level of fares, and the accessibility of the park and ride service – ie opening hours and the limited places to buy tickets. Need for more frequent and cheaper bus services and safe cycling and pedestrian routes
- Truly affordable housing which met the needs of local people
- Improvements to public/ green spaces and calls for design to work in harmony with the natural processes, including the river and the wildlife which is already on the site
- Green spaces and community hubs for everyone to use and enjoy. Sports facilities for younger people in the site
- Key worker accommodation for staff at all levels of organisations such as the hospital, not just those in the more senior roles
- Scheme design to work in harmony with the natural processes, including the river, and the wildlife which is already on the site
- Identifying employment opportunities in the site itself and in other areas outside Truro to help reduce this
- Increased education and health services with high quality sports, culture and leisure provision for all ages

#### Truro City Council Presentation

Key members from the Team gave a detailed presentation on the project, and the development of the masterplan to a meeting of the full Council.

Councillors raised concerns over a number of issues including:

- How Langarth fits with the refresh of the Truro and Kenwyn Neighbourhood Plan
- 4,000 new homes excessive for local area
- Impact on Truro – traffic congestion / existing education, health and retail facilities
- Concerns over drainage and flooding
- Impact on the environment and climate emergency
- How the project fits with the Stadium.

Some councillors said they accepted that there were existing planning consents in place but, if a scheme had to go ahead, it was vital that the City Council had a role in shaping the new development was kept informed.

#### Cornwall Business Fair

The Langarth GV stand at this key annual event was well attended by representatives of local businesses of all kinds. More than 30 people visited the stand to talk to members of the team.

There was considerable interest in the proposals for the development. While some local businesses expressed concerns over the impact on infrastructure, others were optimistic about the potential positive impact on the economy of Truro. A large number were keen to be involved in the development of the scheme.

#### Developers Forum

In October 2019 a presentation to the developers forum took place. Here the design team introduced a panel of local developers to the masterplan proposal.

Progress and ideas were presented surrounding the design programme, vision, design principles, masterplan development and next steps. Keeping landscape at the forefront of the proposal was also discussed as a key aspect of the masterplan.

The developers forum reacted with great enthusiasm to the emerging options and vision for the development.

## Threemilestone Community Centre

More than 100 people attended the drop in event held at the local Community Centre to see the emerging options for the site. 31 questionnaires were completed .

Whilst some people continued to express concern about the impact of the new development on roads, services and infrastructure, increasingly the conversations turned towards the opportunities presented by the new development.

Key messages included:

- Importance of investment in community infrastructure
- Need to ensure good connectivity with surrounding communities
- Working with the landscape to make the most of the natural environment
- The need for really good public transport networks
- Developing the potential to be self sufficient energy wise
- Providing good community buildings.

## Kenwyn Parish Council Presentation

In November 2019, key members from the Langarth project team gave a detailed presentation on the project, and the development of the masterplan to a meeting of the full Council.

The site is located in the Kenwyn Parish so it was important to introduce the Council to the proposal and gather their thoughts on the emerging options. The design team presented the options and then time was allowed for the Council to give feedback and ask any questions.

Councillors raised concerns over a number of issues, including:

- Too many new homes would overwhelm existing infrastructure
- Negative impact on the village of Threemilestone – concern it would be seen as a ‘poor relation’
- Impact on the local schools and health facilities (including Shortlanesend as well as Threemilestone)
- Concerns over drainage - potential for flooding
- Impact on traffic congestion on A390

- Increasing access problems to village – ie access to industrial estate
- Scheme does not fit with changes to the Truro and Kenwyn Neighbourhood Plan
- 4,000 new homes excessive for local area
- Lack of existing sports facilities in village – how will this help.

## Truro City Council Masterplan Development Update

Members of the Langarth team provided an update on the development of the masterplan and the preferred option to an informal meeting of the City Council in January 2020.

Key points discussed included:

- Surface water drainage – Truro is vulnerable to surface water run off – can the scheme ensure Truro is not at further risk
- Foul sewerage - need to understand how sewerage is going to be dealt with, is there sufficient capacity at Newham plant. Also need to ensure any storage tanks do not cause issues /smell etc. as has happened elsewhere in Truro
- Importance of public transport
- Need to ensure the development does not undermine existing Council funded services
- Deliverability - is the project viable?
- Support for bio diversity improvements and tree planting.

# Langarth Garden Village

## MASTERPLAN SUMMARY

### Stakeholder Panel

Cornwall Council set up the Langarth Stakeholder Panel with the aim to help shape the development of the Langarth Garden Village masterplan. The scheme needs to meet the needs of residents in Threemilestone and Gloweth, as well as the needs of new residents who will be living and working on the site.

Chaired by local Cornwall Councillor Dulcie Tudor, the panel includes representatives of:

- Truro City Council and Kenwyn Parish Council.
- Threemilestone School
- Threemilestone Community Centre
- Threemilestone business estate
- The stadium partnership
- Cycling and environmental groups

Councillor Tudor said “We want to protect the interests of the local community. This means creating positive benefits for both existing and future residents. Addressing concerns over the quality of some new homes. Addressing the impact on existing traffic congestion on the A390. Managing increased pressures on local schools and health services. We will work together to address these concerns. We want the scheme to provide a sustainable community. A more attractive place to live and good quality homes serving Truro.”

The Panel helped set the standards for Langarth Masterplan.

During the first panel meeting, members were asked for their ‘three wishes’ for the Langarth scheme.

They then worked with the masterplan team to create a range of design principles for the masterplan. These set the standards for place making and design.

### Impact of the stakeholder panel

The Council said the community must lead the masterplanning of Langarth Garden Village. The work of the Stakeholder Panel has played a key role in helping to achieve this aim. Panel members have commented on their involvement in the Langarth project

The initial Stakeholder Panel raised a series of initial points, which included the following (not exhaustive):

- Focus on the places where different spaces, social contexts and functions meet each other; fully utilising the synergies between different programmes, tenures, etc
- Each element should be more than one thing if possible. Productive landscape and flood protection can double up as amenity spaces
- A rich mix of tenure, price points, typologies and designs to welcome households of all kinds; a place to start out in life and a place to stay
- Streets to be full of life, safe to play as well as support the movement of pedestrians, cyclists, electric cars and small buses
- Keeping it local, with focus on community with a village ethos, with schools, public squares, local shops, cafés, play areas and gardens
- New masterplan should make it easier for the residents to live their lives in a healthy and sustainable way
- New places should be well interconnected and integrated with Truro, Threemilestone, Treliske. The new development should compliment and enhance the existing programme in the surrounding settlements
- Govers Farm included with development area when the Truro & Kenwyn Neighbourhood Plan designates this as an area of green space
- Facilities near to schools. Both Threemilestone school and Malabar School are a 10 minute walk from any facilities that the parents of children attending these schools on the whole do not use these facilities together after dropping their children at school.
- The inclusion of commercial premises at each of the multicentre site may lead to duplication and as can be seen from local villages, smaller shops are not well supported and find it hard to survive
- Impressed with the quality of the presentation and the underpinning preparatory work that has obviously been done

## Stakeholder Panel Meetings

01 - June	Defining better – In our own words
02 - July	Design Principles Awareness
03 - August	Defining Design Principles
04 - Sept	Langarth Delivery Framework
05 - October	Parameter Matrix Green Infrastructure NAR Overview Neighbourhood Plan
06 - Nov	Movement and Sustainable Travel Masterplan Options update
07 - Dec	Masterplan Options update Infrastructure and Utilities
08 - Jan	Masterplan Preferred Option
09 - Feb	Specific uses/ Masterplan update
10 - March	Application Update
11- April	Q&A
12 - May	Q&A

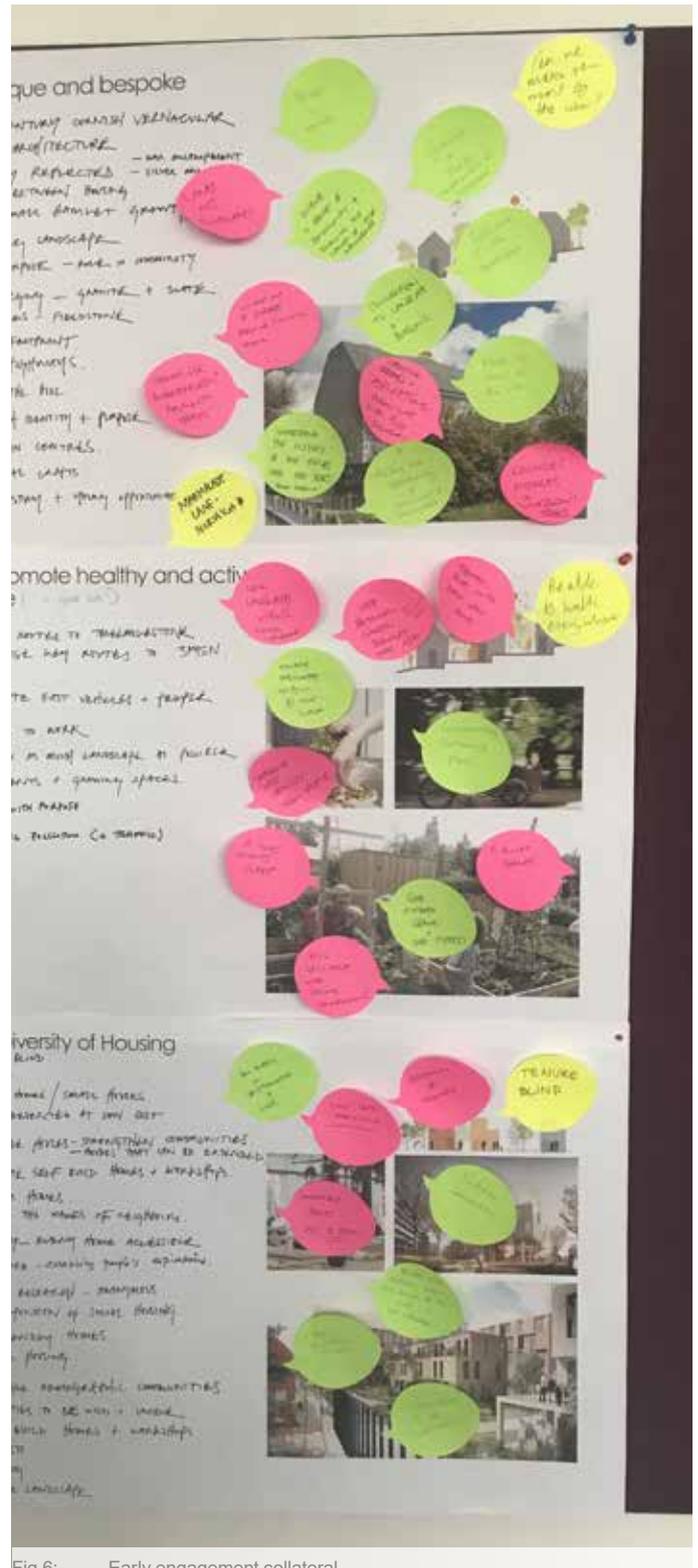


Fig.6: Early engagement collateral

# Langarth Garden Village

## MASTERPLAN SUMMARY

### Design Principles

Initially the Team had collated all the information, and came up with a series of pointers, which were the first iteration of the Design Principles required in order to create a coherent masterplan.

Taking into account the Langarth Stakeholder Panel input, Cornwall City Council Brief as well as publications such as Garden City Standards, NHS England's Healthy Towns and Transport for London's Healthy Streets guidance, a set of Langarth Design Principles were identified. These principles have been identified as a collaboration between all parties involved.

The **10 Design Principles** are:

1. Work with and enhance the quality of life for local communities;
2. Making it easy and possible to get around on foot, bike and public transport. Both within Langarth and into surrounding communities;
3. Help instil a strong sense of community;
4. Creating a place that builds upon and celebrates this unique environment;
5. Creating a hard working landscape that looks beautiful and is functional and productive;
6. Promote active and healthy lifestyles and a sense of wellbeing;
7. Designing for climate change resilience;
8. Offers a mix of homes of homes meeting the varying needs of residents;
9. Creating jobs and enhancing existing employment opportunities; and
10. A vision that is deliverable.

### Further Input

Since the 10 Principles were agreed the panel has considered the emerging masterplan options in detail. This includes advising on:

- The design and quality of housing
- Transport links
- Community facilities, including new schools, health, leisure, play, faith and emergency facilities,
- Green and open spaces
- Working with the Council to develop community investment projects in Threemilestone and Highertown.

Subsequent to a optioneering process the panel members supported the proposal of five centres across the site. They worked on the development of five character areas.

They advised on the Design Codes and helped guide the required standards for all development on the site.

They also supported the comprehensive consultation and community engagement programme. They worked with the Truro and Kenwyn Neighbourhood Plan group.

The final meetings were "virtual" meeting because of the coronavirus restrictions.

During the last meeting panel members reviewed the preferred masterplan proposals. They also highlighted further proposals to consider in the final masterplan.

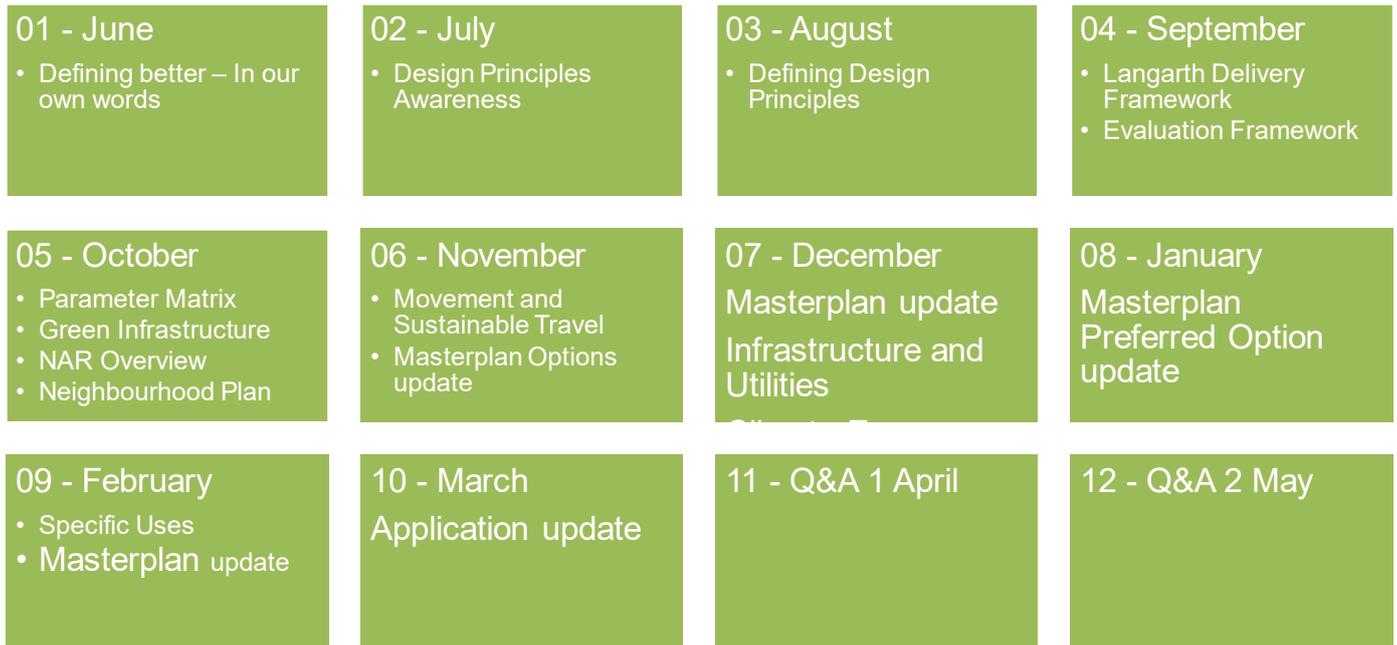


Fig.8: Stakeholder Panel Calendar of Engagement

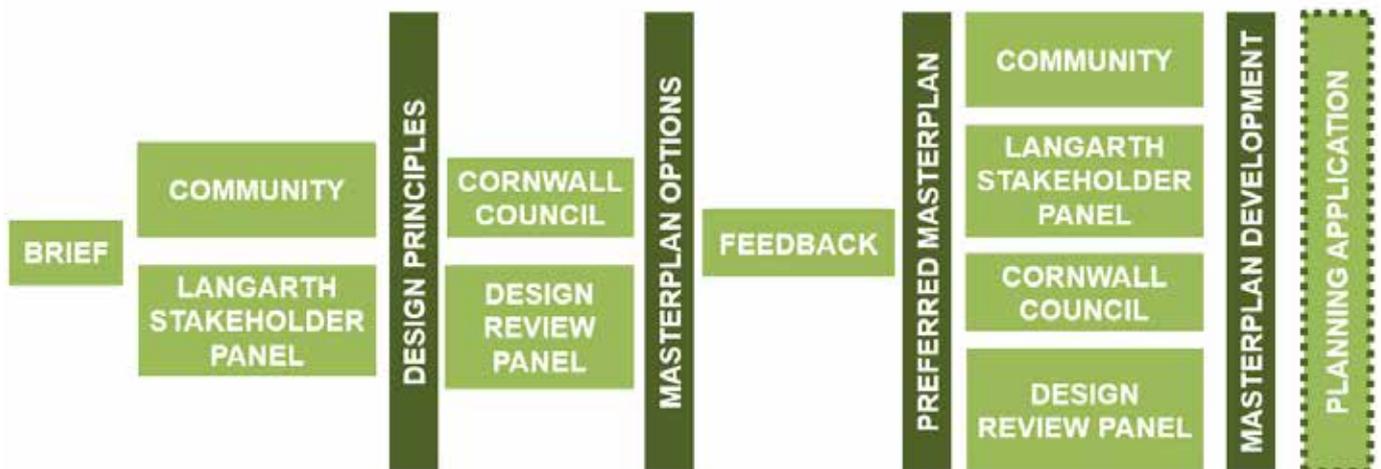


Fig.7: Project Process Map

Specific further suggestions to consider included :

- Promoting high quality building design. This will help create a “gold standard” for all future development in Cornwall and the UK;
- Including bike storage in all new homes;
- Developing community associations at the start of the project;
- The community must own and maintain green and open spaces;
- Building a bridge between Langarath and Threemilestone;
- Retaining as much existing natural habitat as possible. Create new wild spaces;
- Reviewing the number of car parking spaces per household, and
- Delivering integrated health facilities at the start of the project. These will meet the needs of the new residents and help relieve the pressure on the Royal Cornwall Hospital at Treliske in Truro.

The Design Code has been produced in response to the overall vision. It focuses on the characteristics desired for each area and stipulates design rules for all features considered critical to achieving them. These further link to the 10 Design Principles and Stakeholder Panels suggestions.

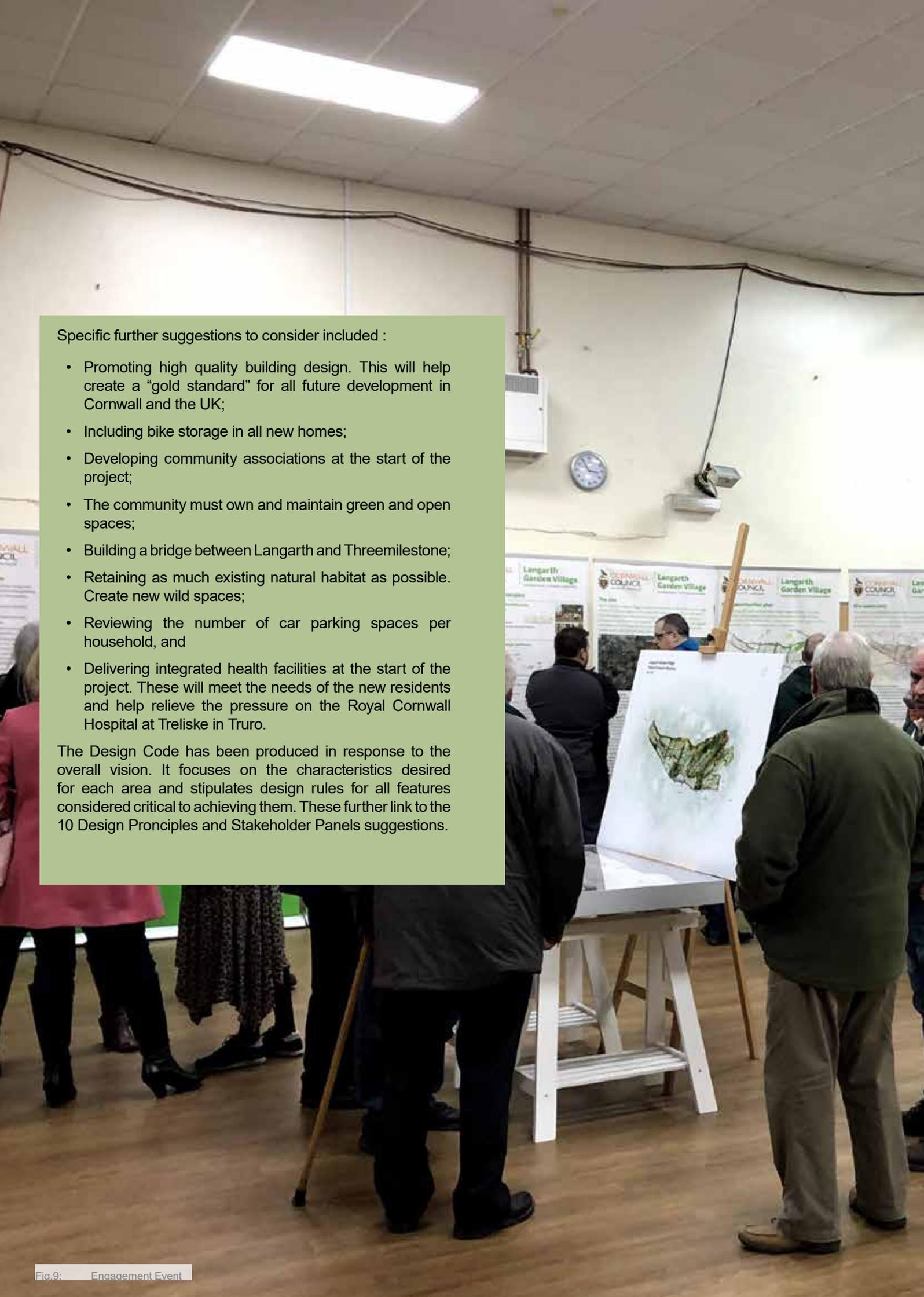


Fig.9: Engagement Event



Langarth Garden Village

COSEBROUGH COUNCIL

Langarth Garden Village



### Optioneering Process

#### Centres Development

Early engagement provided the basis for the development of several concept options.

All options were built on the same philosophy of a landscape driven masterplan.

Three options were developed that differed by the number of centres/ village centres/ community hubs/ nodes or Centres, the masterplan was structured around. Each Centre could host a range of community, commercial, retail, leisure and play facilities.

Each option performed differently in relationship to the 10 Design principles and were evaluated accordingly.

Each had a relationship with Threemilestone as the fixed Centre point.

Several separate projects are being undertaken to extend the benefits that Langarth provides into Threemilestone and to ensure better connection between the two places.

These include:

- Community Hall at All Saints Church Highertown;
- A new hall at Threemilestone School;
- Upgrading the Community Centre;
- Providing new playing pitches;
- Improving the village centre to reduce congestion and increase parking;
- Improve pedestrian and cycle links with Langarth; and
- Potential expansion of the business park.

All options performed equally across most criteria including the mix of uses, provision and location of social infrastructure, and open space, and crossing points to the surrounding area

Variance occurs when considering how the number of Centres has an impact on criteria such as accessing facilities and services, encouraging active travel, and movement between places.

The recommendation from the Team and with Stakeholder Panel agreement was to proceed with Option 3 for further development, as it provided maximum development flexibility and was therefore more deliverable. It also provided the maximum Health & Well-Being benefits and related well to Threemilestone.

#### Option 1 Major LGV Central node - high density centre - Scored 56 pts in evaluation

Featuring a single large centre located opposite Threemilestone. This provided too great a walk from the extremities of the site to the centre.

#### Option 2 Partially Decentralised node - medium density centres - Scored 65 pts in evaluation

Featuring a three medium centres located opposite Threemilestone. This provided too great a walk from the some parts the site to the centres and discouraged commercial development along the NAR and in certain Character Areas.

#### Option 3 Decentralised node - lower density centres - Scored 73 pts in evaluation

This provided a well developed linear route along the NAR, opportunity for better phasing, a varied and commercial offer across the site.

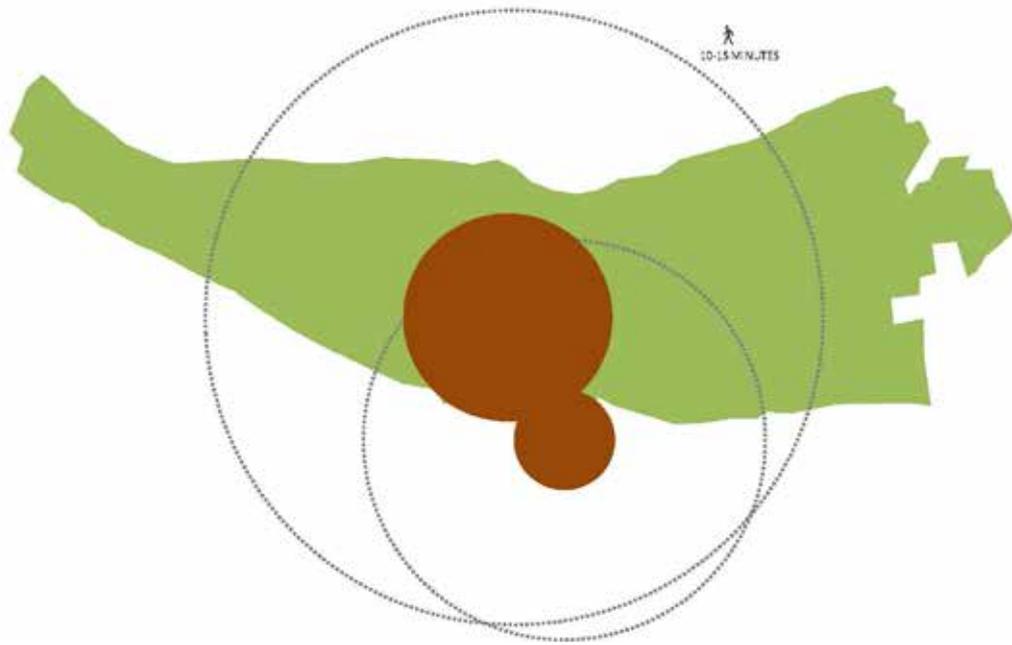


Fig.10: Option 1

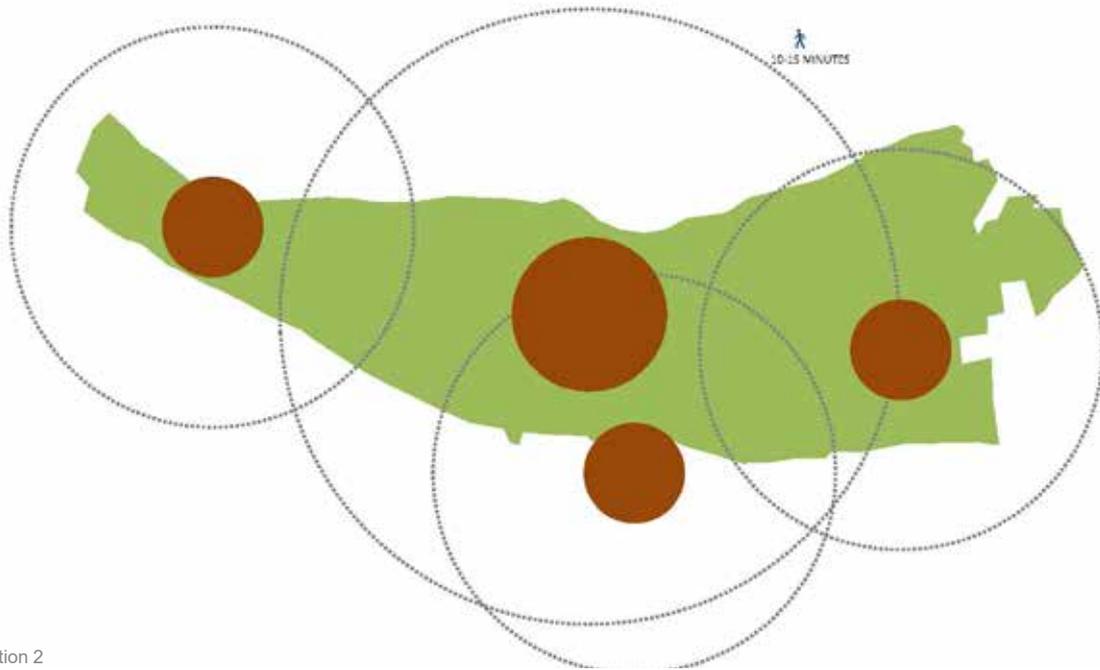


Fig.12: Option 2

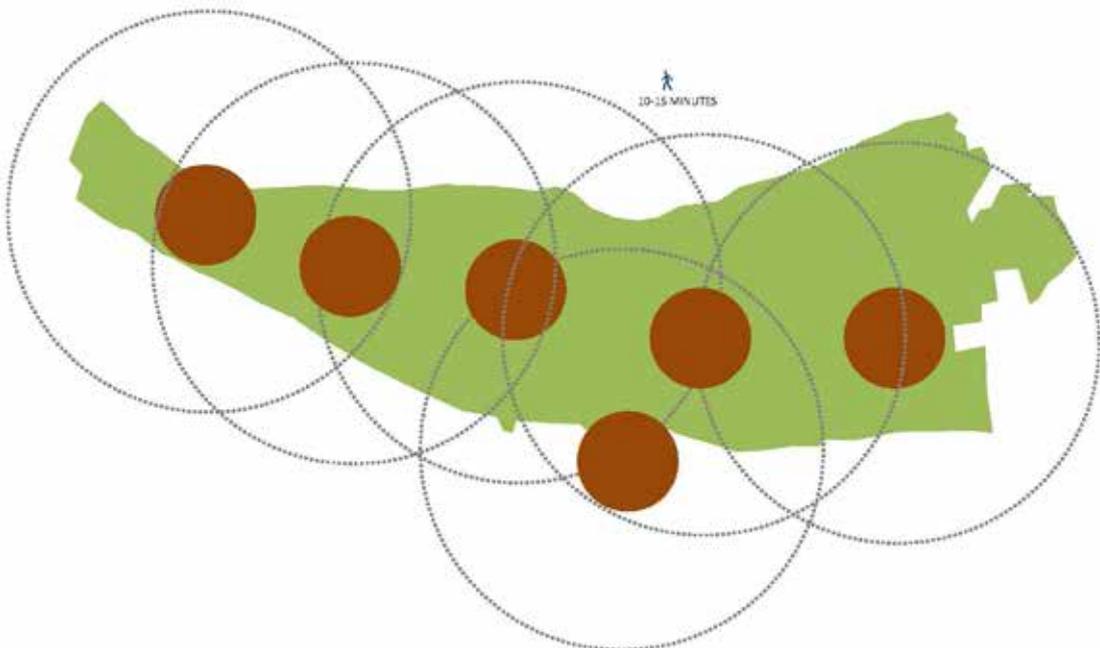


Fig.11: Option 3

# Langarth Garden Village

## MASTERPLAN SUMMARY

### Themed Working Group

The first of the themed working group sessions took place on Thursday 7th November at Pydar St Pop Up. Key stakeholders and experts were invited to themed working group sessions at key stages of the masterplanning process. Groups discussed emerging concepts and design development presented by the design team, examining, critiquing and providing a local opinion on the evolving development.

At the first themed working group, 65 key stakeholders were invited from across the community representing sectors from tourism, business, community, environment, transport, education, health and wellbeing. Each table was guided in exploratory conversations around 4 themes related to:

- Creating a community;
- Movement, travel and transport;
- Response to the climate crisis; and
- Opportunities (complementing not duplicating).

Facilitators kept to the broad subject topic but used questions as prompts. Conversations were allowed to expand and follow paths as led by participants. Some ideas from each table were captured on post it notes and a representative from each group gave a short presentation of their findings.

### Themed Working Groups Key findings

#### Creating a Great Place & Community

- To create a community you need welcoming indoor and outdoor spaces and facilities where people of all generations and backgrounds can mix. Can be anything from a café to a community centre to a laundrette to a park
- You can encourage neighbourliness through design, and this then sparks community by encouraging people to meet as they drop bins, pick up parcels etc. Neighbourliness is key first step in community forming
- Without ownership and a sense of belonging, community will struggle to form. This also helps with ongoing care of community assets eg Trusts/Community ownership
- Ease of access and movement both within Langarth and from and to existing communities is key

- Need to start community building early and involve existing groups and individuals. Think carefully about catalysts to spark community! Can often be around young families, nurseries and schools
- Need to think about the demographic of the residents as well as the visitors early on – this impacts on community engagement and volunteer engagement
- Need a clear economic model for sustaining and maintaining the community infrastructure. How will the funds be generated? Energy generation? Renting out community space?

#### Movement, Transport & Active Living

- Need clear incentives to use the car less from day one. Cheap public transport, provision of season tickets for residents, safe and pleasant cycling and walking routes. Joined up public transport infrastructure
- Feelings around car parking spaces, restricting parking in certain areas, drop off points, car use generally were mixed – need to be realistic for residents but also encourage foot/bike/public transport first
- Sports pitches, wild spaces, play-culture that supports children and young people, gym, swimming pool. Multi-functional spaces so that stuff is all under one roof to reduce travel
- Strategic, long term, accessible green area is vital for Truro
- Good connectivity with existing communities essential. Think about how cycle-paths connect with Saints Trail and on into city
- How can we protect/enhance existing lanes and tracks?
- Trend is for active, free play, away from formal sports, more informal 'play when I like, do as I like'
- Natural adventure type play, water, boulders, trees, trails – kids will be able to adapt and do something different each time (rather than swings and slides). Bring water and woodland into footpaths and trails
- Enhance what we already have in the landscape, slopes, water, fishing lakes, trees –all part of healthy, active life.

## Responding to the Climate Emergency

- Energy efficient homes, carbon friendly building materials, resource efficiency, heat pumps, renewable energy, waste minimisation, reuse and recycling, grey water recycling. Smart metering from start. Understanding consumption and waste
- On site growing of food, community café, orchards, mix of public and private garden spaces. Shared spaces to be 'given' to community early on. Health and wellbeing benefits too
- Retain trees and hedges – a tree for every home
- Electric charging points in homes and public spaces. Energy storage for renewable energy generated on site. AD for food waste
- An exemplary public transport network that puts public transport, cycle and foot ahead of car. All city buses to be electric
- Talk to young people about what they want and need
- Pay heed to site topography, wind direction, aspect – listen to the land.
- On site day care for children, older people and pets too. Consider how to encourage interaction between different ages. Students nurses living with older people for example
- How do we create business opportunities that have minimal transport requirements? Home working, professional services, innovation centres, digital services
- A central place for deliveries to be dropped and a volunteer delivery network – helps with community development too; and
- Make Langarth fit within the wider vision for economic growth in Truro and Cornwall – but be a driver not a follower.

## Exploring & Enhancing Opportunities

- Must complement not duplicate what already exists
- Encourage and provide for home working. Ensure there is also a place for home workers to meet up and interact with others
- Create flexible employment and storage space for trades as well as for offices
- Improve access to Threemilestone and Threemilestone industrial estate
- Need great connectivity with Truro city centre and key employers – much employment and retail will be outside Langarth and this should be embraced through accessibility and links
- Think about the Stadium and Hospital and how sports, leisure, health and wellbeing can all come together at Langarth
- What facilities will visitors want when coming to the Stadium? What might Langarth offer that would attract tourists? Key to enhancing this offer are connections and linkages back to Truro and wider communities



Fig.13: Themed Working Group

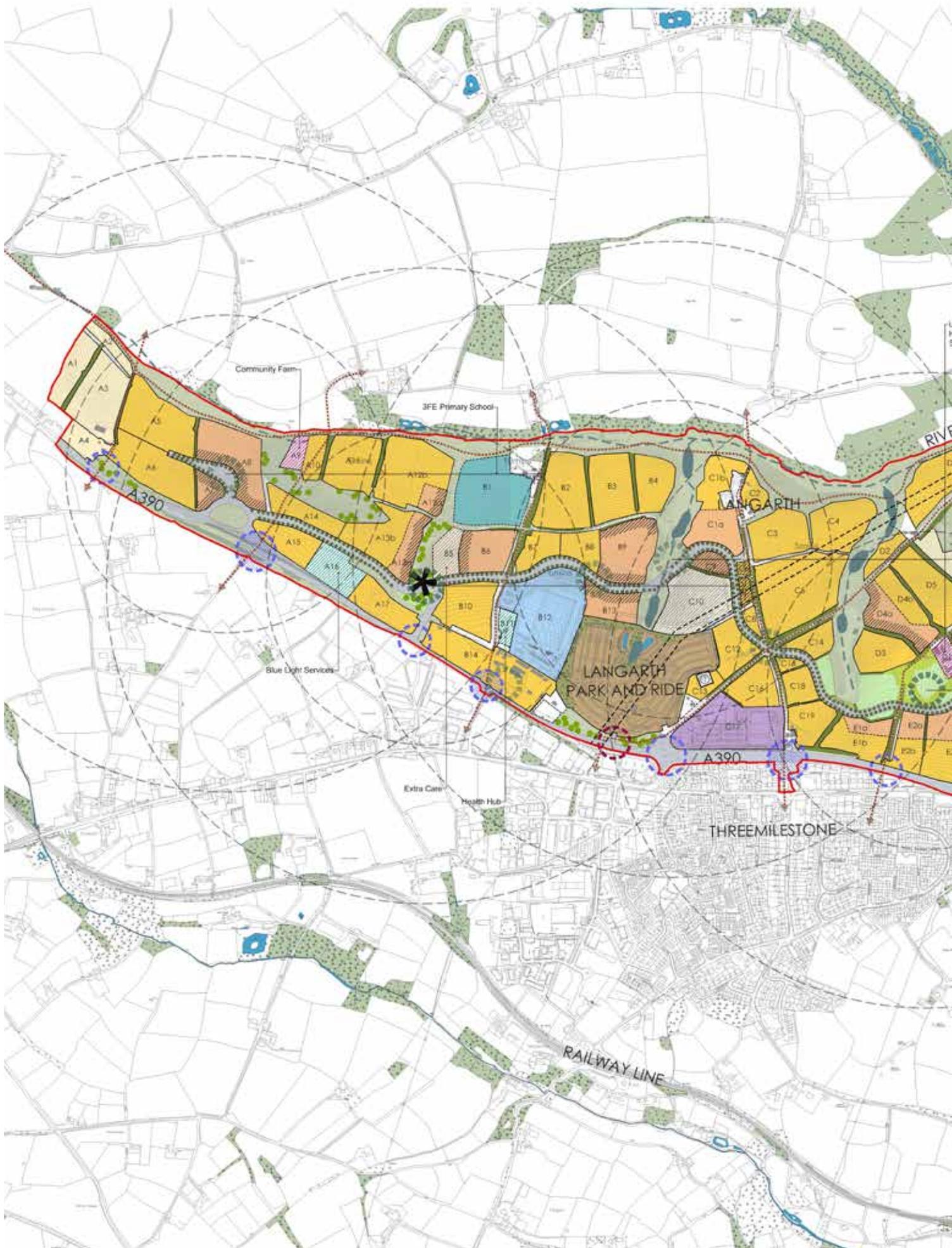
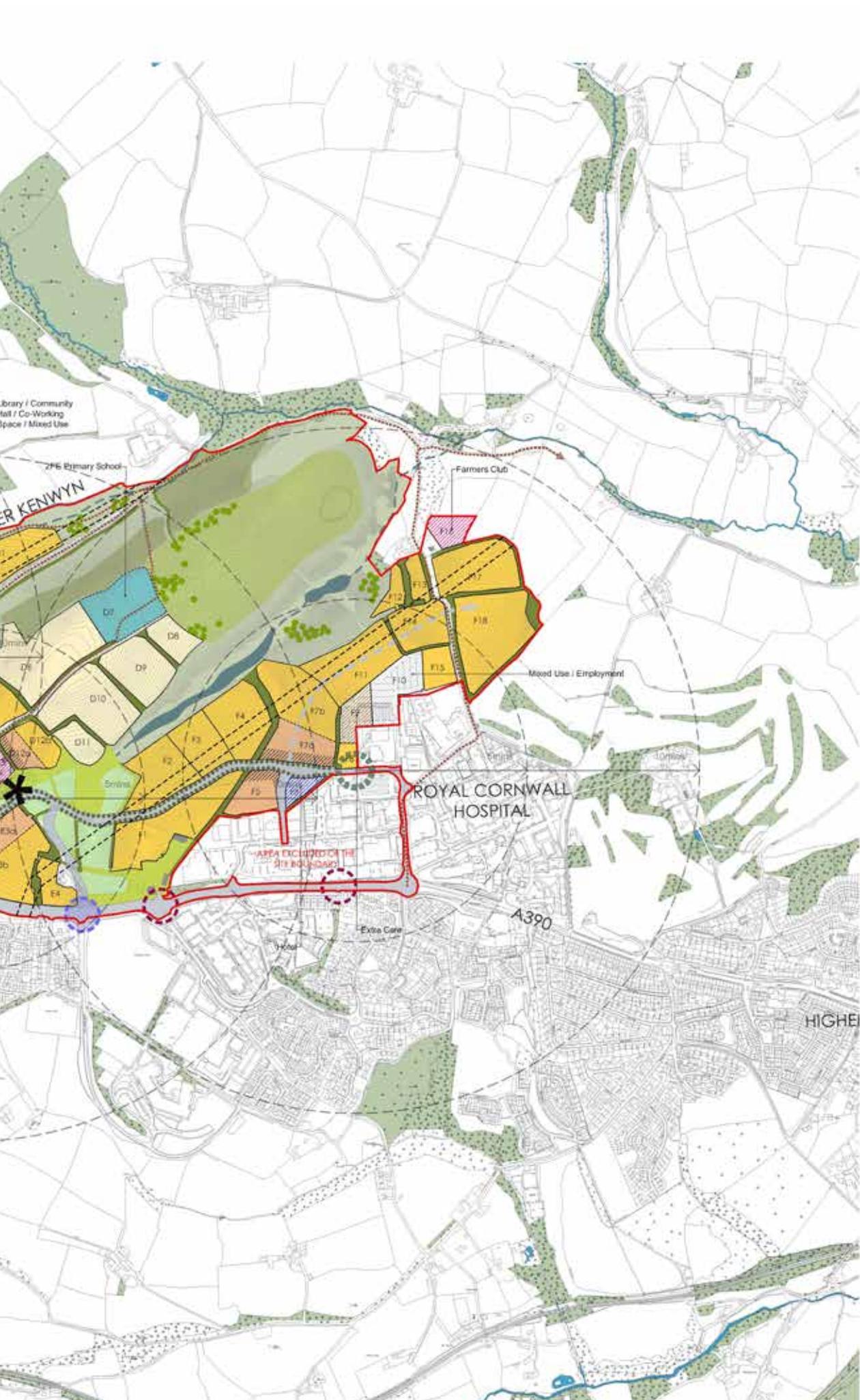


Fig.14: Developed Option 3 Concept



- Key**
- Site Boundary
  - Area = 253.86 Ha (627.30 Acres)
  - Existing Buildings on Site
  - Developable Plots
  - Strategic Green
  - Ancient Monument Land
  - Proposed Parkland
  - Existing Woodland
  - Proposed Woodland
  - Proposed Woodland Edge
  - Existing Trees and Hedgerow
  - Proposed Tree Avenue
  - Existing Waterway
  - Proposed Water Body
  - Lowest Density Housing - 30 dph
  - Low Density Housing - 35 dph
  - Medium Density Housing - 40 dph
  - High Density Housing - 45 dph
  - Highway Land
  - Retail - Retail
  - Stadium
  - Park and Ride
  - Existing Crossing
  - Potential Main Crossing
  - Potential Secondary Crossing
  - Arrival Space / Square
  - Pedestrian Routes
  - NAR Connections
  - ✱ School Drop Off / Pick Up
  - Community Uses
  - Health Uses
  - Extra Care Uses
  - Hotel Uses
  - Mixed Uses
  - Park and Ride Extension
  - Substation

# Langarth Garden Village

## MASTERPLAN SUMMARY

### Public Engagement response

The 10 Design Principles and three Options, Preferred Developed Option have been presented and discussed at many engagement events with the public.

Some respondents expressed objections based on the principle of developing the site and wider concerns with infrastructure capacity in the area, most notably the possible increase in pressure on an already congested A390.

Local residents are on the whole broadly knowledgeable about the Council's plans to develop the Langarth site and its inclusion in the Kenywn & Truro Neighbourhood Plan. They are less so of the previous permitted applications.

A number of respondents expressed their support for elements of the masterplan as they were aware of the existing planning permissions and were happy to see a more holistic response to developing the site.

There was however negative responses from a number of locals, mainly due to the fact that they believed the site should be left untouched. 71% gave feedback that was on the whole negative with 29% giving a positive or neutral response.

The exercise of prioritising design principles highlighted areas of the masterplan design that were of importance to neighbouring communities. 18% included "environment" as a priority and 11% chose "green space & landscape", demonstrating the importance of the masterplan being a successful Garden Village that incorporates landscape and green infrastructure without negatively impacting the local environment and existing countryside setting.

Below is a breakdown of responses received (121 total) from the public questionnaire prioritising Design Principles:

1. Enhancing communities - **13**
2. Public Transport, Walking, Cycling - **14**
3. Sense of Community - **2**
4. Environment - **22**
5. Green Space & Landscape - **13**
6. Health & Wellbeing - **10**
7. Climate Resilience - **10**

8. Mix of Homes - **4**
9. Employment - **5**
10. Deliverability - **2**
11. Other - **26**

When prioritising the established Design Principles, 21% of those surveyed included the option of "other". Some of the alternative priorities for members of the public included:

- Hospital / medical facilities
- Affordable homes
- Retaining the site as it is
- Impact on existing sewerage infrastructure
- Social housing for those earning lower than average income
- Enhance town centre first
- Farm the land instead
- Infrastructure before development
- Doctors, dentists, schools;
- Respect & enhance the existing environment
- Sustainability
- Leave as is
- Public involvement
- Traffic management
- Homes to passivhaus standard.

Many members of the public voiced concerns regarding the development. Some of the reasons for negative responses included:

- Increase in traffic on the A390
- Do not support development on agricultural land
- Wrong site for development
- Increased rat-running on quiet lanes
- Cost to tax payers
- General infrastructure concerns (e.g. schools and hospitals at capacity)

- Impact on hospital access for staff & patients
- Reality of achieving carbon-neutral development
- Potential flooding of the River Kenwyn.

## Response to Feedback

The feedback and comments received during the pre-application stages directly influenced the layout of the scheme and helped to refine the plans ahead of submission.

## Principle of Development

Several respondents expressed opposition to the principle of developing on this site. Many of the locals consulted agreed with the proposal and its principles of design, yet felt that the existing agricultural land of the Langarth site was not the appropriate setting for such development.

The masterplan is a direct response by Cornwall Council to create a site wide vision for a site that currently has various planning permissions. The Truro and Kenwyn Neighbourhood Plan identifies the site for the delivery of new homes, public open space, community facilities and leisure uses.

The masterplan by its very nature cannot totally address peoples concerns on the principle of development but does however provide a range of community uses, facilitate improvements in nearby communities, provide relief to the A390 and better access to a enhanced biodiversity and countryside.

## Traffic Management

One of the key topics of discussion with members of the public involved the potential increase in pressure on what is already perceived as a congested traffic network. Many members of the public felt that the site's proximity to the A390 would increase the levels of traffic on what is already a busy road into Truro.

A key aim of the masterplan is to improve management of the highway network, and in turn improve journey times, reliability and resilience of the highway network. The Northern Access Road, the proposed link road through the site, will aim to alleviate some of this pressure, as part of the wider strategic highway improvements being delivered by Cornwall Council.

This new route will reduce traffic flows on the A390 and aims to reduce conflict and safety concerns associated with rat running on quiet lanes, to the benefit of local residents and road users.

## Impact on Local Infrastructure

Another frequent comment during the consultation related to the effects of the proposed development on infrastructure and public services in this area of Truro.

As part of the planning application process, the Council would enter into a legal agreement which would secure significant financial contributions towards local infrastructure and services in the form of a Community Infrastructure Levy (CIL) and Section 106 payments. The nature and amount of these contributions is subject to discussion with the local authority, but would most likely contribute to local infrastructure such as healthcare, educational services and the public transport system.

In addition, the proposed masterplan will deliver opportunities to improve existing school and public healthcare provision in the district, to ensure that development is sustainable and respects the needs and interests of neighbouring residents.

## Impact on Existing Communities

With public engagement taking place in communities in close proximity to the site, many residents showed concern regarding the impact development would have on their already established community.

Cornwall Council recognise the concerns which have been expressed by people living in existing communities close to the proposed Garden Village site and the potential impact of the new development on their local facilities and services. While funding for new community facilities would normally come from land sales and be delivered towards the end of the development, Cornwall Council is providing early investment for a number of projects to ensure that local services do not come under pressure.

The masterplan will improve local transport systems and access to the site from neighbouring districts, meaning residents of said communities will have greater access to open space, employment, community facilities, leisure uses and retail. Improvements to the A390 will also introduce safe crossing points along the busy dual carriageway, in order to ensure access is possible for people of all ages and ability.



# **PART B**

# **MASTERPLAN DESIGN**

## MASTERPLAN



Fig.15: Illustrative Masterplan

# Langarth Garden Village

MASTERPLAN SUMMARY



## MASTERPLAN BENEFITS

### Masterplan Benefits over the previous permitted schemes

#### Design Principle (DP) 1- Work with and enhance the quality of life for existing communities

##### Previous planning applications offer:

- 3 Primary Schools (single form entry);
- 1 Health Centre;
- 2 Care Homes;
- 2 Hotels; and
- Community and Sport Facilities.

##### Langarth proposal offers:

- Mixed Uses / Retail;
- Health facilities as part of mixed use;
- 2 Extra Care Facilities;
- Minor Injury Unit; and
- NAR (segregated cycle route and public transport integration); and
- Supporting Infrastructure.

#### DP 2 / Making it easy and possible to get around on foot, bike and public transport, both within Langarth and into surrounding communities

##### Previous planning applications:

- Do not have a coherent route through due to the lack of Northern Access Road;
- Movement and access strategies differ from scheme to scheme;
- Cycling and walking are addressed within each scheme individually; and
- Walkable Neighbourhood Guidance is followed in principle.

##### Langarth proposal:

- Incorporates NAR within the scheme;
- Cycling and pedestrian movement merges with green infrastructure strategy;
- Public transport has been incorporated within the masterplan design;
- E-bike and car-sharing facilities are embedded within the movement strategy; and
- Proposes electric vehicle charging for every house with a 7KW currently agreed.

## DP 3 / Help instil a strong sense of community

### Previous planning applications:

- Provide various uses within the landscape strategy such as allotments, community garden and sports pitches;
- Propose Pavilion or Club House as well as Community Hall;
- Considers Community Orchard and Outdoor Sport within the Land Use; and
- Integrates some open space, but lack coherent strategy combining all the schemes.

### Langarth proposal:

- Divides masterplan into six areas allowing for small-scale sense of community to flourish;
- Connects Threemilestone as series of gateways into the development;
- Translates active street corners, green corridors, and a concentrated city centres into a new, sustainable district;
- Connects the centres within the scheme in a natural and organic way, which promotes human door-to-door network; and
- Generates open space allowing for community interaction.

## DP 4 / Creating a place that builds upon and celebrates this unique environment

### Previous planning applications:

- Render utilised;
- Some stone;
- Timber cladding; and
- Provides a number of different typologies which do not work coherently with the entire scheme.

### Langarth proposal:

- Connects built environment with the surrounding landscape;
- Promotes use of locally sourced materials within the building typologies;
- Arranges the settlements into smaller clusters building upon Cornish historic settlements;
- Provides a variety of typologies within each cluster creating distinctive character; and
- Treats community facilities as focal point in the central common areas.

# Langarth Garden Village

## MASTERPLAN SUMMARY

### DP 5 / Create a hard working landscape that not just looks beautiful, but is productive and functional

#### Previous planning applications:

- Integrated Equipped Play Areas and Sports Facilities within the landscape;
- Proposes some allotments and community gardens;
- Uses estate trees as landscaping;
- Use of green routes to promote pedestrian activity – not as extensive and not joined up; and
- Does not use landscape as the basis of a site wide concept.

#### Langarth proposal:

- Offers the rural village model with a tight relation to nature;
- Connects the development to local biodiversity;
- Provides play areas where children and families can play;
- Embeds community food production into the proposed landscape;
- Site wide green infrastructure utilised as basis for the masterplan concept;
- Green Infrastructure:
  - Previous planning applications:
    - 37ha (a total of 23%) this all across all planning applications
  - Langarth:
    - Without Governs Farm: 90ha (38%)
    - With Governs Farm) 102.8ha (44%)
- There will also be a % of open space within each plot in most plots, it could be a 5% as an overall of the developable land which accounts to 5ha.
- New Forest amounting to 5.03ha area for new trees.

### DP 6 / Promote healthy and active lifestyles and a sense of wellbeing

#### Previous planning applications:

- Does not have a coherent transport strategy, that across site or linking to wider locale could promote active modes of transport;
- Does have some green corridors promoting pedestrian activity; and
- Promotes some sports facilities incorporated within the landscape.

#### Langarth proposal:

- Prioritises walking and cycling over vehicular mean of transport;
- Takes public transport into account within movement strategy;
- Promotes social cohesion with a well thought-out community facilities;
- Provides allotments and food production areas as a way to bring people together;
- Provides a series of sports, play and cultural spaces;
- Prioritises walking and cycling over vehicular mean of transport;
- Takes public transport into account within movement strategy;
- Promotes social cohesion with a well thought-out community facilities;
- Provides allotments and food production areas as a way to bring people together; and
- Provides a series of sports, play and cultural spaces.

#### DP 7 / Designing for climate change resilience

##### Previous planning applications:

- Follow some of the principles identified in Sustainable Homes Design Codes;
- Does not meet the current Environmental and Sustainability Principles set as part of the project brief; and
- Could be delivered to meet minimum standards.

##### Langarth proposal

- Integrates air source heat pump with photovoltaic (PV) panels;
- Minimises land take & environmental footprint;
- Provides a gas free energy supply for the entirety of the scheme;
- Promotes sustainable drainage and natural flood prevention systems;
- Promotes food waste management; and
- Provides a commitment for 20% enhancement to biodiversity across site (national policy will soon be 10%).

#### DP 8 / Offer a mix of homes meeting the varying needs of residents

##### Previous planning applications:

- Does not have a coherent density or height strategy across site;
- Housing mix is considered for each application in isolation;
- Dwellings are generally 2 to 2.5 stories in scale;
- Gives topography some consideration;
- 35% Affordable Housing for Langarth Phases 1 and 2;
- Provides a good mix between detached (15%), semi-detached (25%), terraced houses (55%) and bungalows (5%);
- Raises building standards above Building Regulations;
- Builds the new neighbourhoods with the topography, allowing for easier access and maintenance;
- Provides a range of heights and densities that work with the landscape; and
- Commits to 35% Affordable Housing min - 1313 affordable homes.

### DP 9 / Creating jobs and enhancing existing employment opportunities

#### Previous planning applications:

- Provides District Centre and some food and non-food retail uses;
- Promote some industrial units;
- Provide hotel uses; and
- Retail provisions work in isolation from one another.

#### Langarth proposal:

- Will promote use of local tradespeople for construction;
- Creates local employment opportunities on and off site;
- Promotes live-work housing solutions;
- Identifies the link between business opportunities and proximity to Cornwall Stadium; and
- CC progressing studies how Threemilestone Industrial Estate can be enhanced and extended.

### DP 10 / A vision that is deliverable

#### Previous planning applications:

- Have been generated in isolation from one another;
- Do not have a coherent strategy in terms of movement, density, height, green infrastructure and climate change resilience; and
- Have not been delivered and some are arguably not implementable.

#### Langarth proposal:

- Works with Delivery Framework ensuring deliverability of the scheme across the region;
- Tests the cost and appraises the delivery of the scheme during design stage; and
- Assumes mixed tenure that equates of an average 35% Affordable and 65% Market Sales for the costing exercise.

## Specific benefits to existing and future local residents of the Council's involvement include:

- Protecting at least 48% of the existing green space within the site (compared with just 23% in the previous applications);
- Providing at least 35% affordable housing (for local people), as well as homes for key workers such as nurses and teachers, and extra care housing for older people and people with disabilities;
- Building high quality homes to a standard at least 20% higher than current building regulations, with a target of achieving Zero Carbon by 2030;
- Using low carbon energy sources such as ground source heat pumps to heat the whole development rather than fossil fuels, with electric charging points for every house and high levels of insulation;
- Providing new primary schools and health facilities at the start of the project (rather than at the end when all the houses have been built);
- Improving transport links – with works to improve the existing A390 as part of a wider transport strategy for Truro, as well as delivering the new Northern Access Road at the start of the development, providing segregated cycle paths which link with new cycle routes into and around the city, and improved public transport, with increased bus services, cheaper fares, and E-Bike and E-car clubs;
- Improved connectivity with generous and interconnected green corridors linking to existing settlements at Threemilestone, Treliske and Gloweth, with the Royal Cornwall Hospital, Truro and Penwith College and with existing and planned retail developments in the rest of Truro;
- Investment in community projects in Threemilestone and Highertown areas to help ensure local services do not come under pressure as a result of the Langarth scheme. These include a Community Hall at All Saints Church Highertown, a new hall at Threemilestone School, upgrading the Community

Centre, providing new playing pitches, improving the village centre to reduce congestion and increase parking and improve pedestrian and cycle links with Langarth and the potential expansion of the business park;

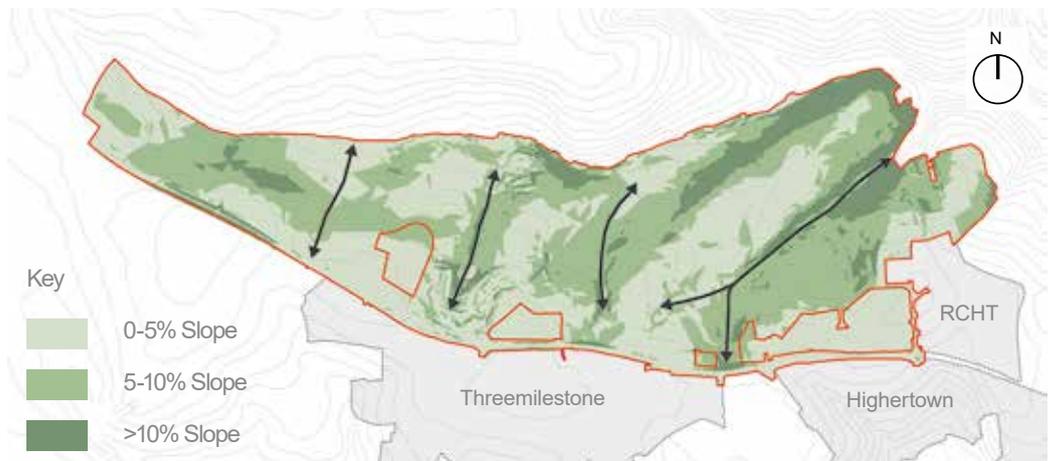
- Using sustainable drainage systems as a natural flood prevention system that enhances biodiversity;
- Creating a vibrant, co-ordinated development where people want to live, work and visit, with green and public spaces allowing communities to interact and flourish; live-work housing solutions, including access to superfast broadband and support for start-ups and growth for small and medium sized enterprises, and new sports, cultural and play areas;
- Providing areas for young families to live, close to schools and surrounded by nature and opportunities for children to develop in close relationship with landscape;
- Building on Cornish heritage and promoting the use of locally sourced building materials and local tradespeople to create a variety of different housing sizes and styles – not a bland “one size fits all” approach;
- Setting the development within the historic fields to minimise impact on existing hedgerows, and creating new hedges to help increase biodiversity on the site by up to 20%;
- Planting at least 50,000 new trees as part of the Forest for Cornwall;
- Providing allotments, community gardens and community orchards to support food production and bring communities together; and
- Maximising the potential of proximity to the Stadium and Threemilestone Industrial Estate for work and leisure opportunities.

### MASTERPLAN ATTRIBUTES

#### Concept Build-up

##### Site Topography

- Addressing existing slopes
- Utilising natural valleys
- Undulating landscape
- Maintaining valley views
- North facing slopes



##### Landscape Retention

- Connections to existing green infrastructure
- Utilising existing waterways
- Enhancing existing landscape on site



##### Heritage Protection

- Governs Suitable Alternative Natural Greenspace (SANGs)
- Scheduled monuments
- Retaining key views to and between landscape
- Incorporating key existing buildings



## Field Pattern Retention

- Historic field pattern defines plot structure
- Hedgerows along existing boundaries



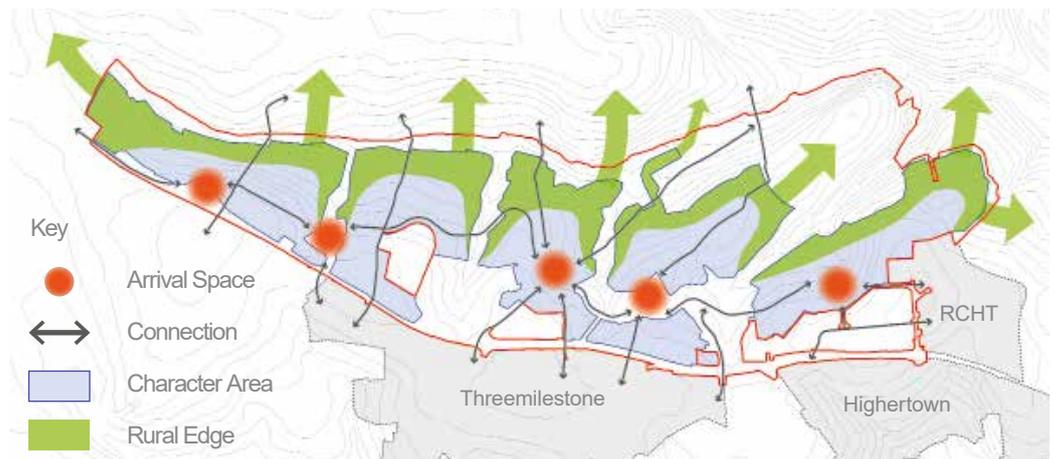
## Integrated Connectivity

- New link Northern Access Road (NAR)
- NAR/A390 connections
- Retained quiet lanes
- Links to wider communities



## Neighbourhoods

- Distinct settlements
- Connected by pedestrian and cycling routes
- Varying in character
- Connections to existing neighbourhoods
- Rural edge transitions between landscape and development



# Langarth Garden Village

## MASTERPLAN SUMMARY

### Urban Design Framework Plan - West

#### Key

-  Site Boundary
-  Green Infrastructure
-  Character Area
-  A390 Corridor
-  NAR - Traditional
-  NAR - Standard
-  NAR - Suburban
-  NAR - Urban
-  Primary Cycleway / Footpath
-  Heritage Route
-  Landscape Landmark
-  Local Centre
-  Main POS Amenity
-  Public Open Space - POS
-  Community Facility
-  Mixed Use
-  Landmark Building
-  Open View to Countryside
-  Development Frontage
-  Public Art



# Langarth Garden Village

MASTERPLAN SUMMARY



# Langarth Garden Village

## MASTERPLAN SUMMARY

### Urban Design Framework Plan - East

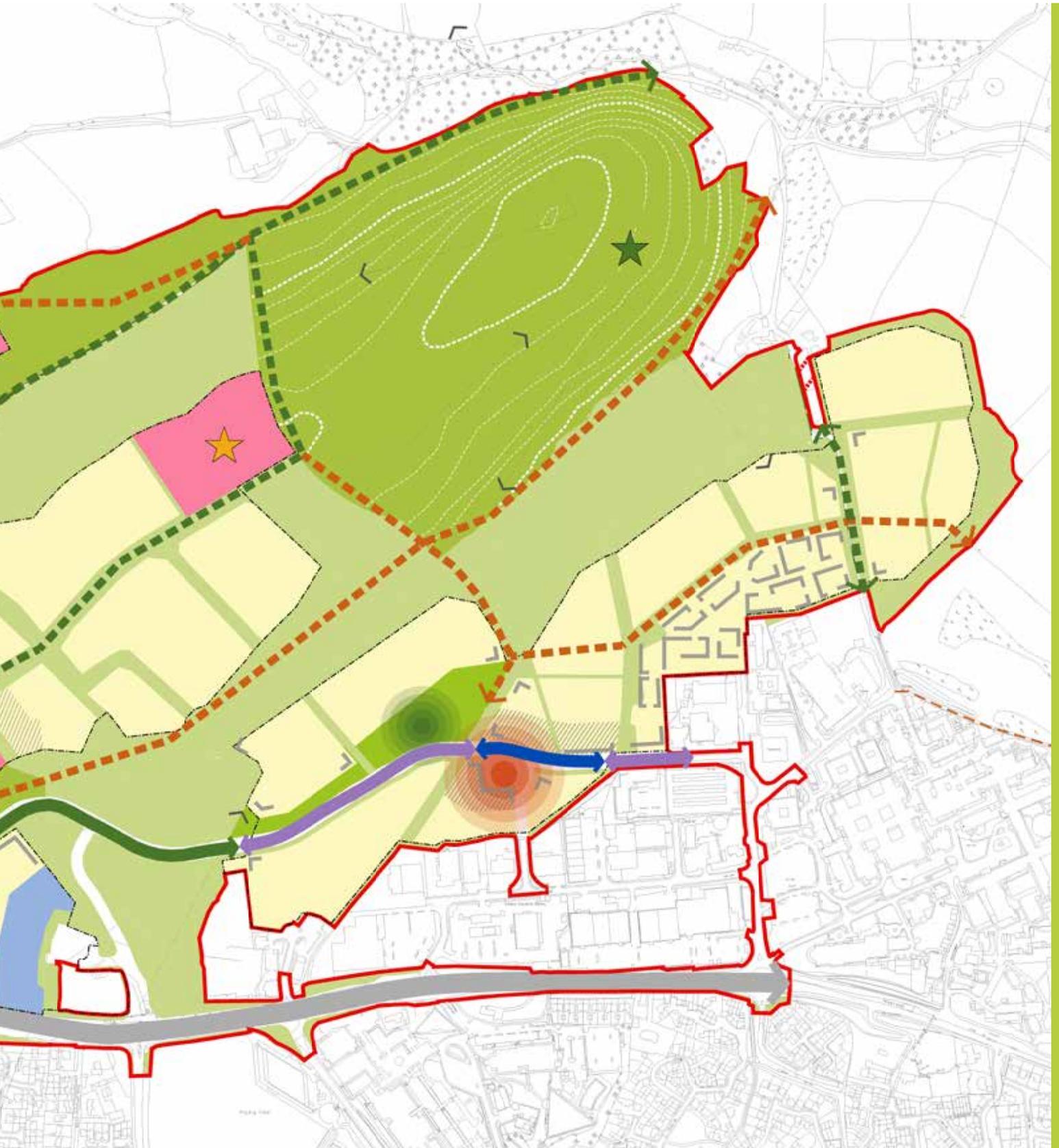
#### Key

-  Site Boundary
-  Green Infrastructure
-  Character Area
-  A390 Corridor
-  NAR - Traditional
-  NAR - Standard
-  NAR - Suburban
-  NAR - Urban
-  Primary Cycleway / Footpath
-  Heritage Route
-  Landscape Landmark
-  Local Centre
-  Main POS Amenity
-  Public Open Space - POS
-  Community Facility
-  Mixed Use
-  Landmark Building
-  Open View to Countryside
-  Development Frontage
-  Public Art



# Langarth Garden Village

MASTERPLAN SUMMARY



# Langarth Garden Village

MASTERPLAN SUMMARY

## GREEN INFRASTRUCTURE

### Working with the Site

Creating a comprehensive and connected network of Green Infrastructure (GI) will mean that green space is easily accessible from any part of the Langarth Garden Village. The proposed GI network will also help sustain the character of the Kenwyn and Treliske valleys, while assisting to integrate the Langarth Garden Village into the wider area and providing a high quality environment.

The connected network of GI is designed to support healthy living providing opportunities for active travel, sport and recreation, well-being and community engagement. It accommodates habitats for wildlife and sustainable drainage, while trees and woodland support cleaner air and assist in carbon capture.

The network of GI provides a series of legible and recognisable character areas, including more formal areas near to the A390 and sections of the Northern Access Road (NAR). The existing semi natural character is retained near to the River Kenwyn and Treliske watercourse, while the landscape setting to the Penventinnie Scheduled Monument is enhanced.

The green corridors formed by the smaller tributary watercourses to the River Kenwyn are retained and a semi natural character is proposed. Other types of GI such as amenity green space, play, allotments and sports pitches are accommodated on more level ground in convenient and accessible locations.

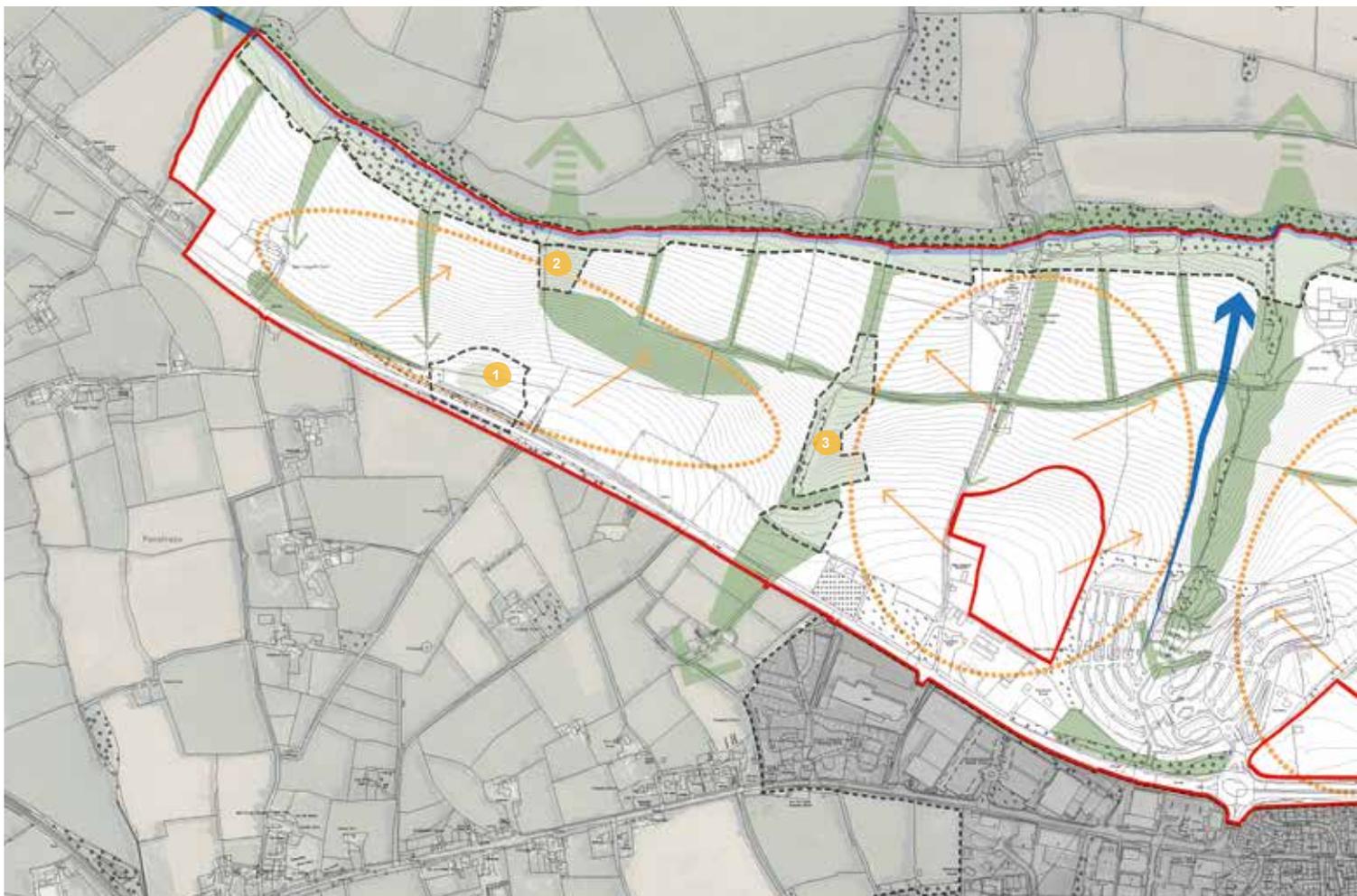


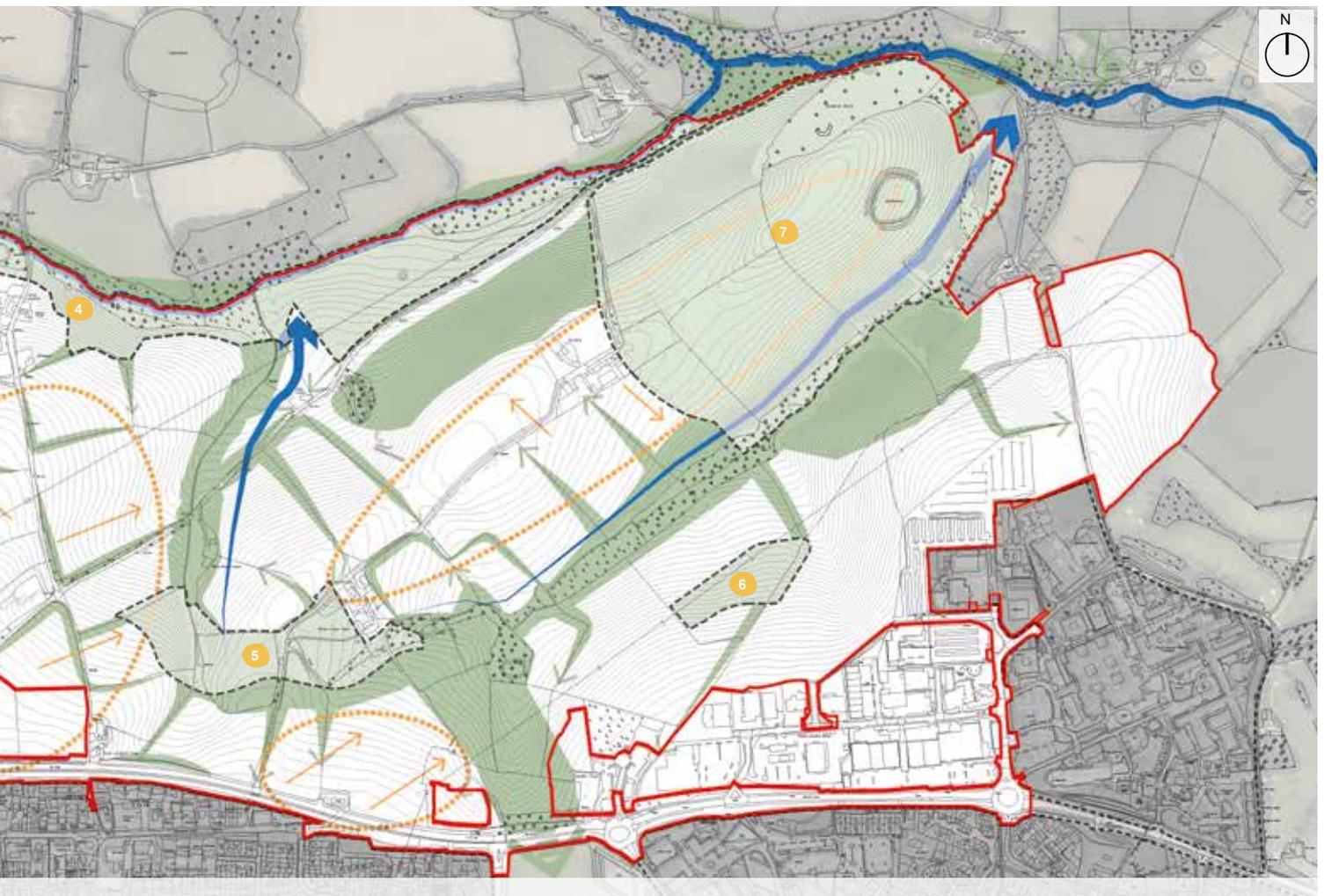
Fig.16: Landscape Strategy Diagram

# Langarth Garden Village

MASTERPLAN SUMMARY

## Key

- |  |   |
|--|---|
|  Site Boundary              |  Rural Gateway       |
|  Green Infrastructure       |  Village Common      |
|  Existing Development       |  Langarth Park       |
|  Watercourse                |  Bosvisack Corridor  |
|  Blue Infrastructure        |  Willow Green Park   |
|  Source Control Attenuation |  Penventinnie Park   |
|  Surface Drainage          |  Governs Farm SANGs |



## BLUE INFRASTRUCTURE

### Blue Infrastructure Integration

The approach to the integration of existing blue infrastructure and sustainable drainage of surface water runoff is vital in achieving the vision for Langarth. A comprehensive network of swales, infiltration basins and wetponds is proposed to slow the flow of surface water run-off into the wider Sustainable Drainage System (SuDS).

The overall service strategy follows and utilises the existing topography and the network of green infrastructure to develop a site wide sustainable services and drainage strategy. Existing blue infrastructure can be used with the natural valleys of the sloped site to form streams and ponds that contribute to a wider sustainable drainage system.

Basins, swales, watercourses and wetlands have all been carefully considered whilst developing the sustainable drainage strategy for Langarth Garden Village. Long-term storage capacity can be provided by various interlinked SuDS components within the development parcels and in strategic attenuation areas across the site, whilst maximising ground infiltration as far as practicable and allowing for exceeding flows.

The SuDS system will not only reduce the risk of flooding on site and downstream, it will also help to sustain water quality, provide benefits for biodiversity, offer opportunities for informal play and contribute to Langarth's sense of place.

### Wetponds

Attenuation basins and ever blue wetponds are proposed within the boundary of the site to provide storage capacity for excess water which will be collected and distributed along swales. In addition, wetponds provide an excellent habitat for many amphibians, insects and plant species, which further enhance the overall site biodiversity.

### Fishing Ponds

Within the Bosvisack Corridor lies two large fishing ponds c. 1,200m<sup>2</sup> each. Concealed by wet woodland, these ponds provide a rich environment for wildlife such as fish, water lillies and grasses to flourish whilst also providing outdoor amenity space for local anglers.

Located close to the Langarth Stream, these ponds provide a suitable area for the attenuation of surface water runoff from the development further up the slope of the site.



Fig.17: Langarth Stream

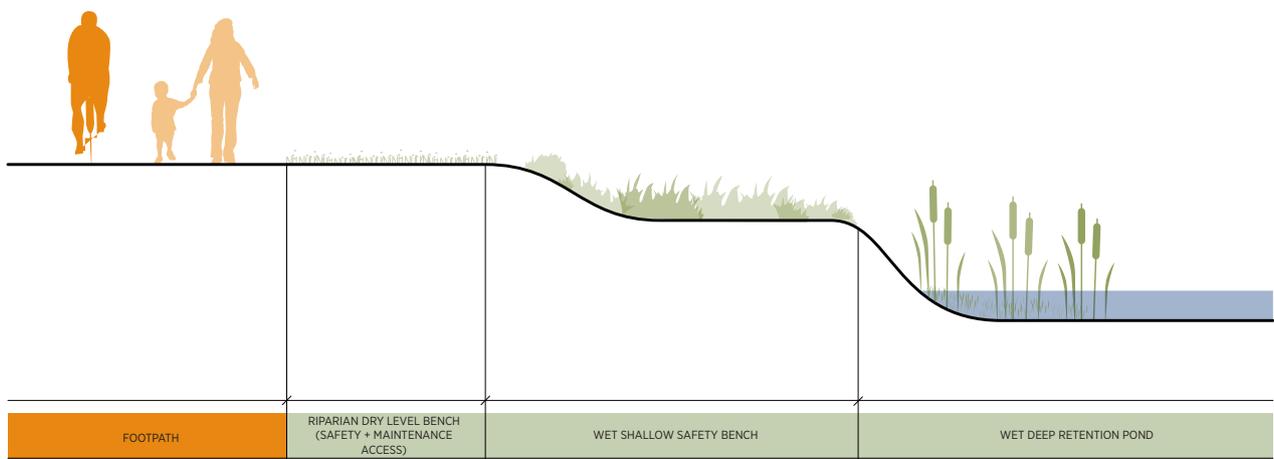


Fig.18: Fishing Pond at Bosvisack Corridor



Fig.19: Bank of the Fishing Ponds at Bosvisack Corridor

## E2.5 Wetpond



- Appropriate dry and wet riparian planting should be considered;
- Pond calibration should allow for exceedence levels to be articulated to prevent any accidental outfalls to adjacent areas; safety distances between outfall level and private or public property must be assured;
- Riparian dry level benches should be included, providing safety and maintenance access;



- An adequate SuDS Maintenance Plan should be in place, assuring all SuDS infrastructure will be maintained to the highest standards;
- For SuDS building and maintenance, please refer to CIRIA guidance, specifically The SuDS Manual (C753) and Guidance on the construction of SuDS (C768), Site handbook for the construction of SUDS (C698).



Fig.20: Wetpond Precedent Image



Fig.21: Wetpond Precedent Image



Fig.22: Infiltration Basin Precedent Image

## HERITAGE

### 2.13 Retaining Character

#### Green Infrastructure

The landscape strategy for the site proposes an interconnected network of natural areas and other open spaces that link into the wider green infrastructure network. The overarching strategy is to retain and integrate existing landscape features such as hedgerows, trees, woodland and copses wherever possible, as a framework for development.

Where feasible, open space will retain its existing character, be multi-functional and will include landscape and movement corridors, ecological features and buffers, sustainable drainage (SuDS) features, amenity spaces for future residents and existing communities.

The key habitats on the site are woodland, wet woodland, hedgerow and grassland (including marshy grassland). The site is particularly noted to the continuous wooded edges to the quiet lanes and farm access tracks.

Retained and proposed hedgerows and extensive woodland within the site boundary further aid in the connectivity of wildlife across the development. In general hedgerow boundaries to the arable fields are trimmed, whereas boundaries to pastoral fields and farm complexes tend to be overgrown with some hedgerow trees.

The boundaries to the network of country lanes and tracks tend to be overgrown hedgerows and hedgerow trees and the vegetation, in places, forms a tunnel effect.



Fig.23: Marshy grassland at Langarth Valley Bottom

#### Topography

The masterplan works with the existing topography and contours to create developments with a strong character. The majority of the slopes on the site are greater than 10%, with high percentage of the area broadly facing north. Both factors are a challenge to development and particularly constrained areas are to be retained as part of the green infrastructure network for the site, helping to retain the prominence and character of the natural environment in the Langarth Valley.

Landform contributes significantly to the division of the Langarth area into numerous clearly defined parts, each with its own aspect and character and these have aided in defining a variety of character areas across the site.

All efforts should be made to utilise the undulating landscape of the site to create unique and interesting areas that reflect the character of Cornwall and its topography.



Fig.24: Topography Diagram



Fig.25: Existing Steep Sloped Grassland

## Key Views

The prominence of topography and vegetation in the Langarth valley means that there are many varied types of view available. Views from the site tend to be directed towards the northern side of the valley and also towards distinctive features to the east and west including the wooded Governs Round Scheduled Monument.

Governs Round features elevated open views looking south-west toward the Treliske Valley and its wooded valley bottom. The employment land and Royal Cornwall Hospital at Trelisk are visible to the south. There is also inter-visibility on higher ground from the north-western edge of Govern's Round toward Bosvisack Round, which is located 1km to the north-west, outside the site boundary.

Where possible, development should seek to retain key views or view corridors in order to make the site memorable and distinctive.



Fig.26: View From North Towards Governs Round



Fig.27: View Towards Bosvisack Round

## Field Pattern

The existing field pattern of the site varies widely, from long narrow strips made from earlier open fields around hamlets, to the intricate, regular patterns around mining communities, and the rectilinear pattern of 19th-century and earlier enclosure of the once-extensive areas of rough ground.

The plots designated within the masterplan take landscape strategy and masterplan design principles as overarching element. Over the years some of the historic field pattern has been lost due to the hedgerow removal as part of the change of ownership or for farming purposes.

The masterplan aims to retain as much of the existing field pattern as possible by retaining hedgerows which allows for a natural network of developable plots to emerge. See below section 2.14 for the treatment of Cornish hedges and hedgerows.



Fig.28: Historic Field Pattern Diagram



Fig.29: Fields divided by existing vegetation

# Langarth Garden Village

## MASTERPLAN SUMMARY

### COMMUNITY

#### Community Infrastructure Plan

The infrastructure of the masterplan puts community as an integral element of the design with a variety of different uses designated for residents and visitors.

The landscape strategy designates a number of different parks, amenity and civic spaces (Type 1), public access sport facilities (Type 3), children (Type 4) and teen provision (Type 5), as well as allotments (Type 6), which can be used for food production on site.

In addition, the masterplan designates five local centres, providing hubs of community activity with character differing from centre to centre. The NAR passes through or along these arrival spaces, allowing for a connected series of neighbourhood centres with easy access between each.

The ancillary Stadium for Cornwall area accommodates a significant amount for leisure, commercial and office uses to complement future activities around the Stadium. Additional leisure plots (B11, B12) have been sited adjacent to the Stadium to promote a mix of activity along the footpath / cycleway when approaching from the south.

The existing Langarth Park and Ride facility is to be extended with an additional 600 parking spaces added. Access is provided off the NAR and from Langarth Square. The extension will also feature E-Bike / E-Car sharing hubs to provide alternative transport upon arrival.

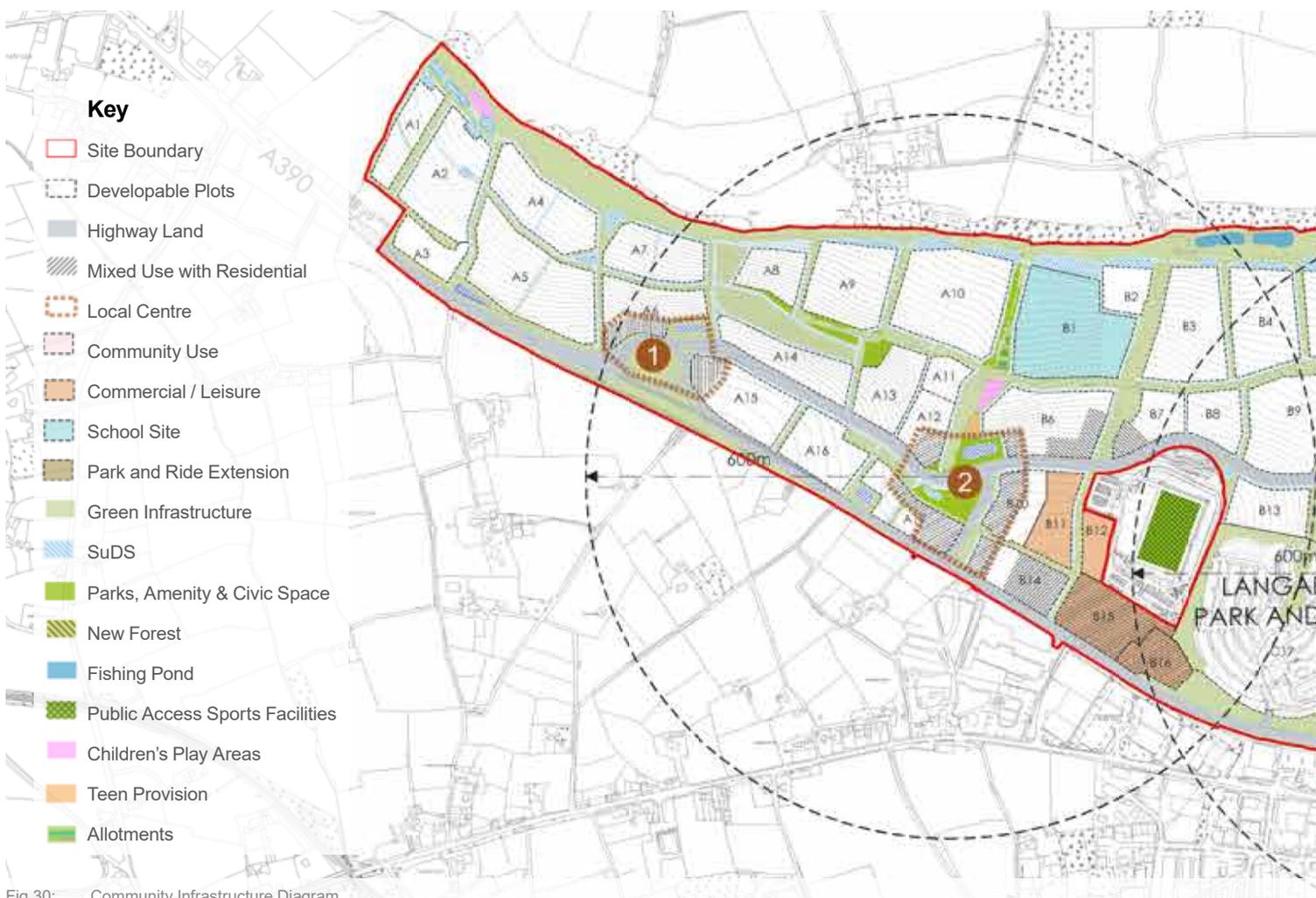
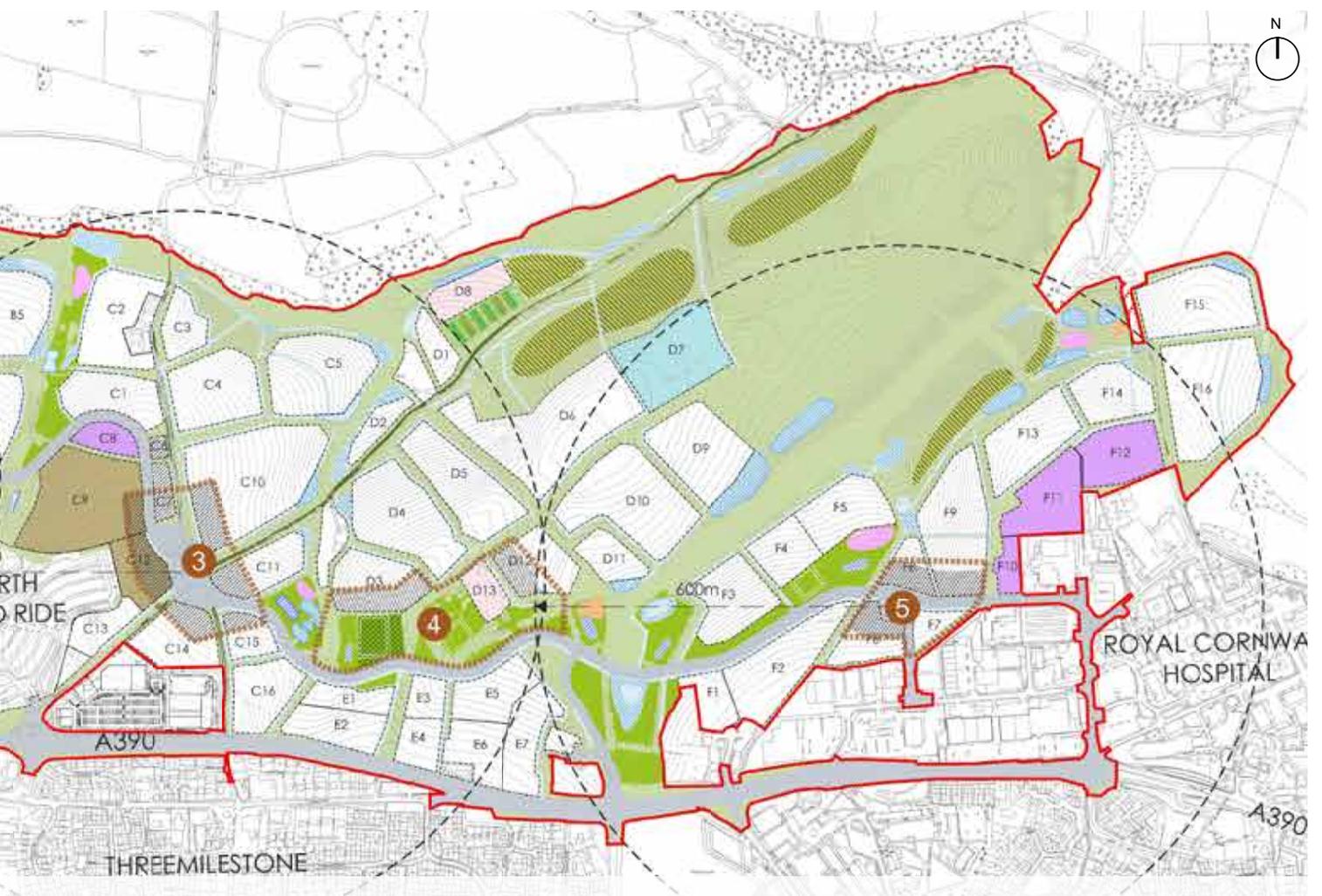


Fig.30: Community Infrastructure Diagram

# Langarth Garden Village

MASTERPLAN SUMMARY

	A Uses		B Uses		Community Uses	
	% of Total Use	GIA (sqm)	% of Total Use	GIA (sqm)	% of Total Use	GIA (sqm)
Centre 1	5%	130	15.5%	200	10%	250
Centre 2	20%	520	23%	300	15%	400
Centre 3	25%	650	23%	300	25%	600
Centre 4	10%	260	15.5%	200	10%	250
Centre 5	20%	520	23%	300	25%	600
Elsewhere outside the centre	20%	520	0%	0	15%	300
<b>Total</b>	<b>100%</b>	<b>2,600</b>	<b>100%</b>	<b>1,300</b>	<b>100%</b>	<b>2,400</b>



### SPECIAL PLACES & CENTRES

#### Governs Park - New Forest



Trees are the greatest land based contributor to climate and tree cover provides many other services including: shade and shelter; purification of air and water; production and maintenance of soil; and enhancing biodiversity.

The masterplan for Langarth Garden Village proposes an area for a New Forest, which could be planted at density of 1 tree per square metre. This could account for between 50 and 70 thousand new trees planted. In addition to that, the area adjacent Governs Park forms Suitable Alternative Natural Green Space (SANGs) as part of the Landscape Open Space provision within the overall masterplan.

This is a response to Cornwall Councils Climate Emergency Declaration, which proposed A Forest for Cornwall consisting of an area of 32 square miles or two percent of Cornwall’s land mass with trees and hedges to absorb carbon and increase public access to outdoor

Governs Round Scheduled Monument



Fig.31: Existing View Towards Governs Round Scheduled Monument



Fig.32: New Forest Precedent Image



Fig.33: New Forest Precedent Image

#### Key

- Site Boundary
- Developable Plots
- Parks, Amenity & Civic Space
- Natural Space
- Governs Round (SANGs)
- Retained Woodland
- New Forest
- Retained Hedgerow
- Hedgerow Enhancement
- Children’s Play Area
- Teenage Provision
- Quiet Lane
- Primary Cycleway / Footway
- Secondary Cycleway / Footway
- \* Scheduled Monument
- Landscape Arrival Space
- ← Open View to Countryside
- Governs Farm SANGs
- Watercourse
- Swale
- Infiltration Basin
- Wetpond

# Langarth Garden Village

MASTERPLAN SUMMARY

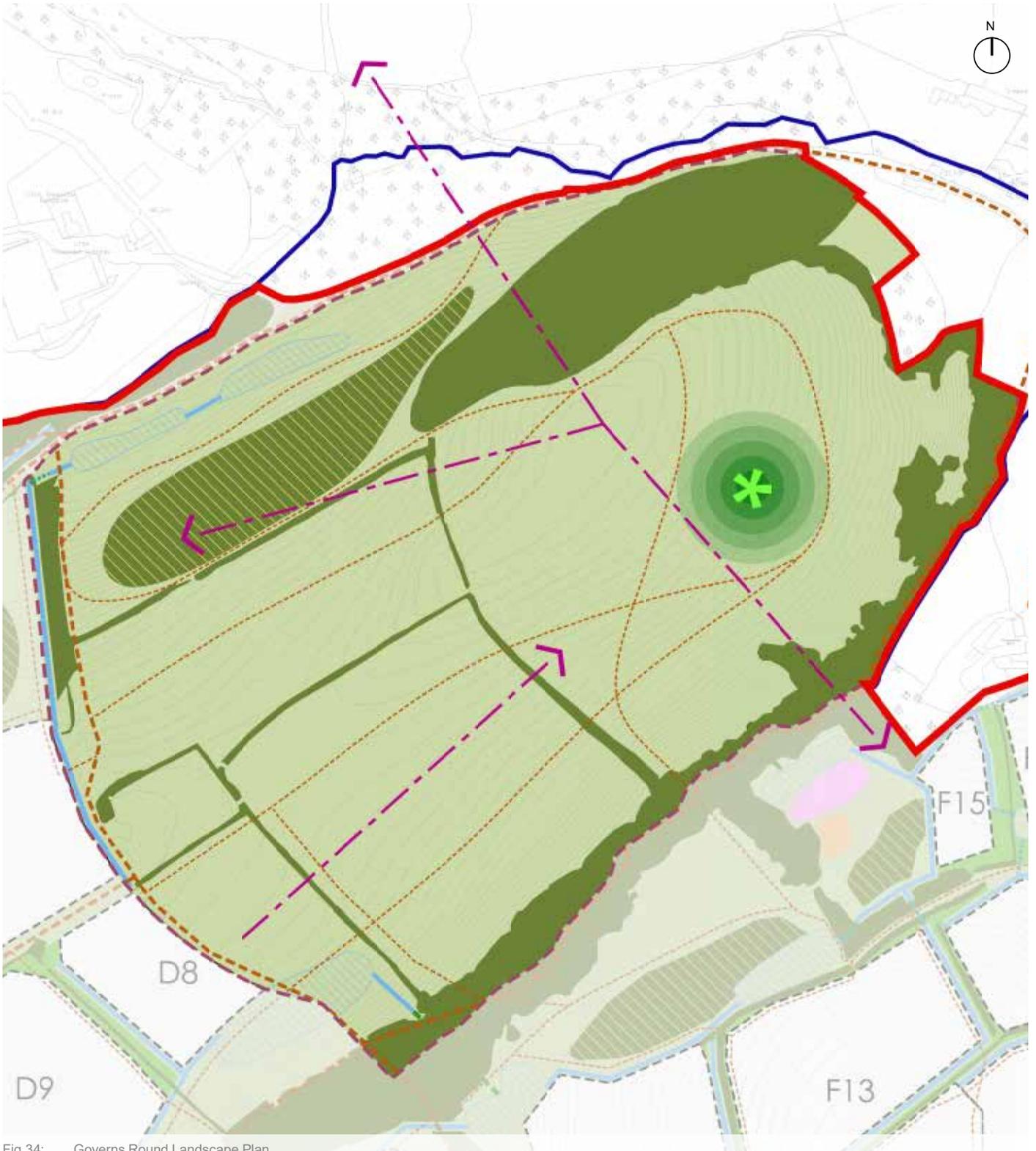


Fig.34: Govers Round Landscape Plan

# Langarth Garden Village

## MASTERPLAN SUMMARY

### Bosvisack Corridor



A major walking and cycling corridor is located within Bosvisack Corridor along the northern boundary of the site. The route provides an important biodiversity corridor for the site with various trees and hedgerows species inhabiting animals and insects.

The wooded area acts as a transition between the natural area North of the site boundary and the development within the site. The corridor utilises the existing woodland to provide both a visual and audible buffer between the two through areas of dense trees and vegetation.

A number of active spaces, wetponds and fishing-ponds are incorporated along the route making it an attractive realm for both residents and visitors as well as further enhancing the area for the wildlife

As a primary cycleway / footpath, the route will allow for segregated pedestrian and cyclist access along the length of the northern boundary of the site and the Langarth Stream. Areas for play and exercise will also be accommodated through outdoor gyms, walking routes and children's play spaces.

#### Key

- |                      |  |
|----------------------|--|
| Site Boundary        | Bosvisack Corridor Cycleway / Footpath |
| Developable Plot     | Primary Cycleway / Footpath            |
| Green Infrastructure | Secondary Cycleway / Footpath          |
| Retained Woodland    | Swale                                  |
| New Forest           | Infiltration Basin                     |
| Retained Hedgerow    | Wetpond                                |
| Allotments           | Watercourse                            |

Retained Woodland

Infiltration Basins

Existing Fishing Ponds

Wetpond

Primary School Site

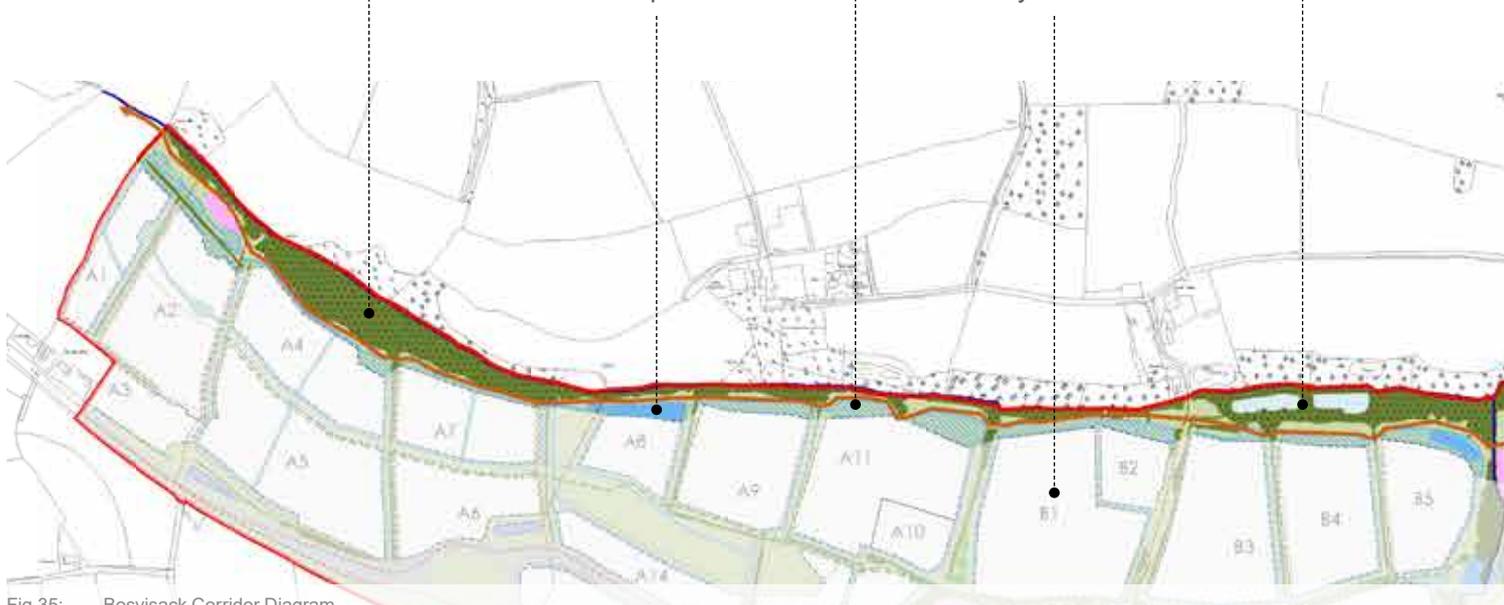


Fig.35: Bosvisack Corridor Diagram



Fig.36: Existing Fishing Pond



Fig.38: Cycling Precedent Image



Fig.40: Community Farm Precedent Image



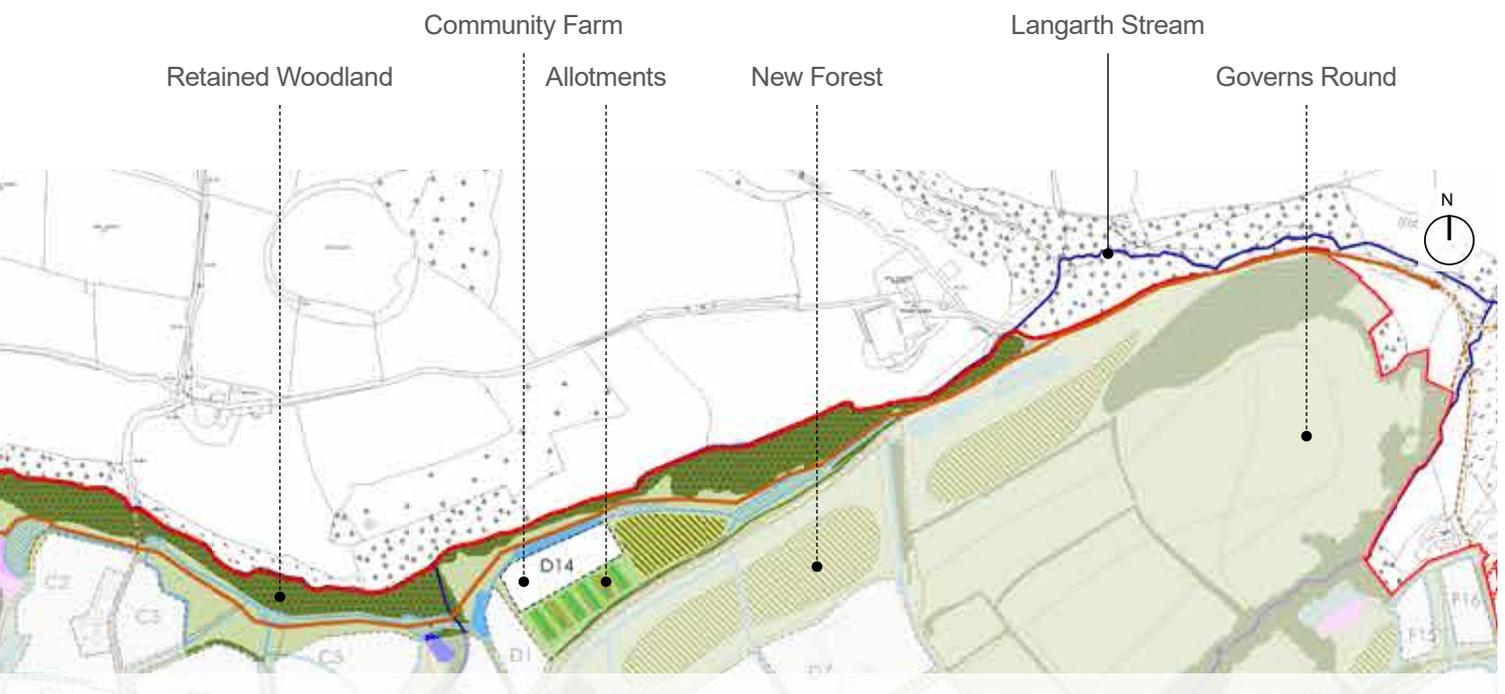
Fig.37: Existing Bosvisack Corridor



Fig.39: Woodland Precedent Image



Fig.41: Outdoor Gym Precedent Image



# Langarth Garden Village

## MASTERPLAN SUMMARY

### Rural Gateway



The Rural Gateway marks the western arrival into the Langarth Garden Village. It will include a planting concept that references local character including the Cornish hedgerow flanked by ornamental trees and native trees. The planting will also provide an appropriate setting for a piece of artwork and there will be a pond with aquatic planting. Avenue tree planting at the outer edge of the road will complement the gateway proposals.

Beyond the gateway, travelling eastbound along the northern access road, there will be views across the wider Langarth Valley, with the wooded northern slopes particularly prominent. Travelling westbound the planting in the gateway will be prominent in views and will mark the edge of the garden village and will signal the progression into the wider rural area to the west.

The gateway space will also be accessible for pedestrians and cyclists and the shared circulation routes will enable connectivity between the A390 and the northern access road.



Fig.42: Rural Gateway Precedent Image



Fig.43: Rural Gateway Precedent Image



Fig.44: Rural Gateway Precedent Image

#### Key

- |                           |                           |
|---------------------------|---------------------------|
| Retained Trees            | Ornamental Planting       |
| Retained Vegetation       | Rain Garden Planting      |
| Milestone (Relocated)     | Marginal Planting         |
| Developable Plot          | Bulb Planting             |
| Development Frontage      | Wet Grassland             |
| Reduced Frontage to NAR   | Species-rich Grassland    |
| Structure Planting        | Low Maintenance Grassland |
| Tree Planting (NAR)       | Amenity Grassland         |
| Tree Planting (Developer) | Waterbody                 |
| Cornish Hedgerow          | Artwork Opportunity       |

# Langarth Garden Village

## MASTERPLAN SUMMARY

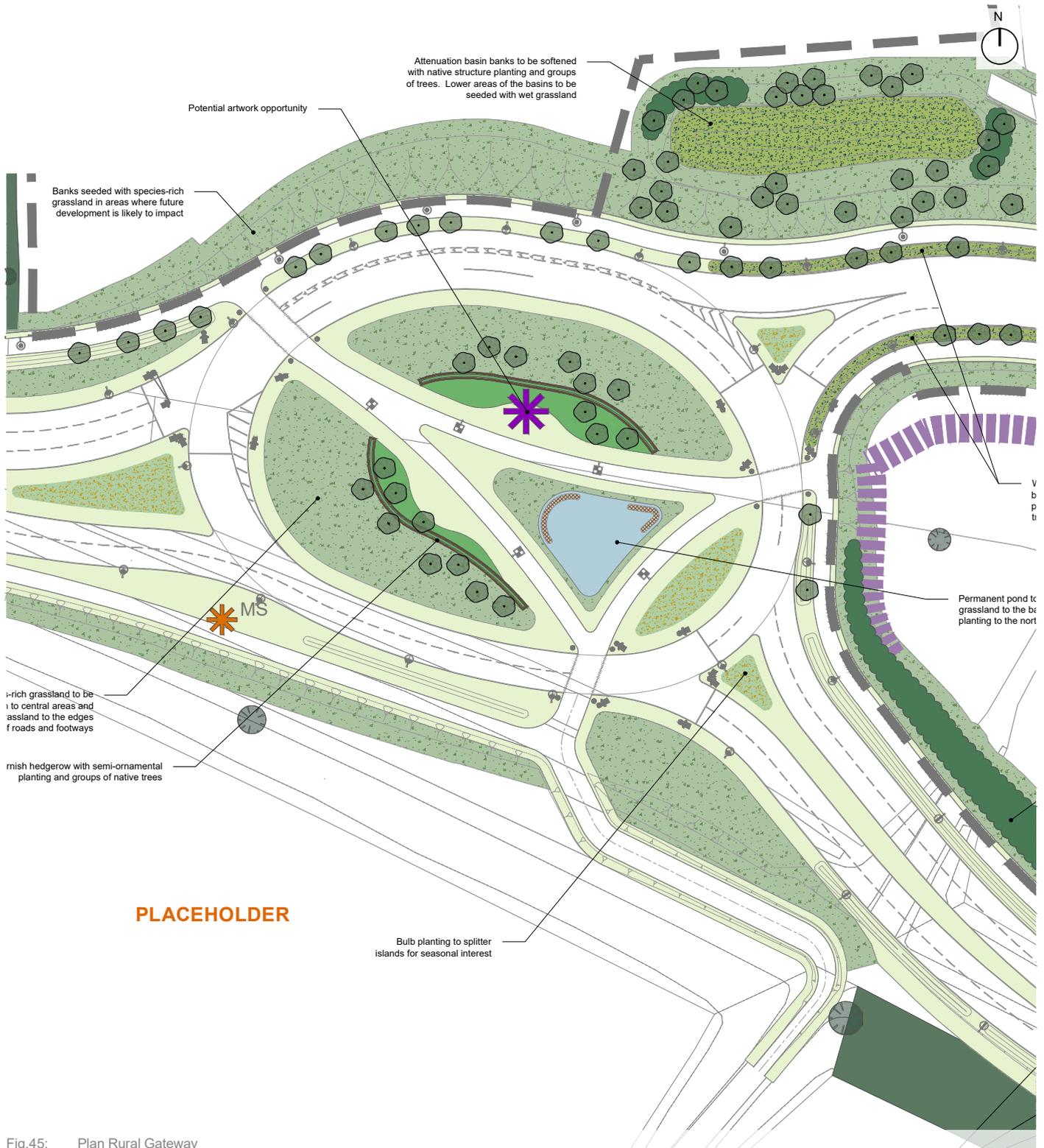


Fig.45: Plan Rural Gateway

# Langarth Garden Village

## MASTERPLAN SUMMARY

### Village Common



The Village Common is on the lower north facing slopes of the Langarth valley, forming part of an extensive area of natural space linking the valley bottom with higher ground. The Village Common will adapt to some of the steepest terrain in the Garden Village and will provide a dynamic environment with sweeping views of the wider valley.

The opposite plan shows the arrangement of an area of natural space that will enable pedestrian access to the relatively steep slope. The footpath will be configured to follow a meander reducing the gradient where feasible and providing an interesting sequence of views.

A series of viewing points with seating will capitalise on the distinctive views across the valley, with connections to the wider footpath network. Meadow grassland will contribute to the semi-natural character of the space along with some intermittent tree planting that will bring some definition to the space and contribute to biodiversity.

A network of swales will provide sustainable drainage while also providing an interesting visual feature. Swales orientated perpendicular to the slope will include regular check dams that will slow the flow of any water and gather sediment. Occasional wet features, allowing for the collection of water, will be incorporated to the upper side of the check dam to bring visual interest and a habitat for wildlife. Wet features will also occur at the intersection of perpendicular swales and swales orientated parallel to slopes.



Fig.46: Village Common Precedent Image



Fig.47: Village Common Precedent Image



Fig.48: Village Common Precedent Image

# Langarth Garden Village

MASTERPLAN SUMMARY



Fig.49: Plan Village Common

# Langarth Garden Village

## MASTERPLAN SUMMARY

### Langarth Park North



Langarth Park will provide the gateway space to the West Langarth character area. With its prominent location, the park will create a sense of arrival as well as a green setting for development and the northern access road. There will be two parts to the park with an area to the south of the northern access road and section to the north of the road.

The northern part of the park will extend northwards as a 'green finger' with a shared route for pedestrians and cyclists heading north. For teenagers there will be an off-road BMX pump track that will take advantage of the sloping topography. A swale will run along the eastern edge of the Park providing sustainable drainage and will added visual interest. The existing wooded area to the western edge of the facility will provide an established setting to the park.

The route for pedestrians and cyclists will progress northwards towards a neighbourhood equipped area of play facility (NEAP) that will adapt to the topography and provide a more dynamic environment for children. North of the NEAP, there will be an intersection of pedestrian and cycle routes, with footpaths providing access to the wider neighbouring development. The intersection will be located to enable distinctive views across the valley. North of the intersection there will be an allotment site, with the arrangement of individual plots adapting to the slopes.



Fig.50: Langarth Park North Precedent Image



Fig.51: Langarth Park North Precedent Image



Fig.52: Langarth Park North Precedent Image



Fig.53: Plan Langarth Park North

# Langarth Garden Village

## MASTERPLAN SUMMARY

### Langarth Park South



The southern portion of Langarth Park will feature a central level area to be reserved for an informal sports pitch linked to an events space immediately to the south. Avenue tree planting to the perimeter of the event space will help to create a sense of enclosure. Further tree planting will be planted on the southern edge of the northern access road and the link road to the east, bringing more definition to the park.

A network of footpaths linked to pedestrian crossings will provide easy access to the park from the northern access road and adjacent development plots. Tree planting along the network of footpaths will help bring definition and enclosure to the park.



Fig.54: Langarth Park South Precedent Image



Fig.55: Langarth Park South Precedent Image



Fig.56: Langarth Park South Precedent Image



PLACEHOLDER

Fig. 57: Plan Langarth Park South

# Langarth Garden Village

## MASTERPLAN SUMMARY

### Langarth Square



The concept for Langarth Square is based on the historic medieval crossroads and traditional market squares, often seen at the heart of Cornish towns and villages. These typically provide a multi-functional space defined by features such as a traditional Cornish cross, monument or other feature. The square is defined by the existing topography and responds positively to the steeply sloping environment, creating a series of intimate terraced spaces formed by the changes in level and facilitating direct movement corridors along the quiet lanes that intersect the space, while also accommodating the NAR.

The quiet lanes provide connections with the wider Garden Village to the north, south, northeast and southwest. These routes will be important movement corridors for people walking and cycling and will provide access to facilities. Each route provides a transition from the rural lanes to the urban character of the square. Formal trees and ornamental planting are used to define these linear routes, reflecting existing lines of trees and traditional Cornish hedgerows. Avenue tree planting will also be proposed along the NAR to contribute to visual amenity and a sense of enclosure.

The square would include focal features and public art that reflect the traditional Cornish cross that was once located at the cross roads with other features such as water features and lighting considered to create a strong sense of place and define vistas along the northern access road. These would be reinforced further through the choice of street furniture, surfacing, planting and interpretation, with opportunities explored for bespoke interpretation features such as paving, seating, lighting and artwork in order to strengthen character and identity.



Fig.58: Langarth Square Precedent Image



Fig.59: Langarth Square Precedent Image



Fig.60: Langarth Square Precedent Image

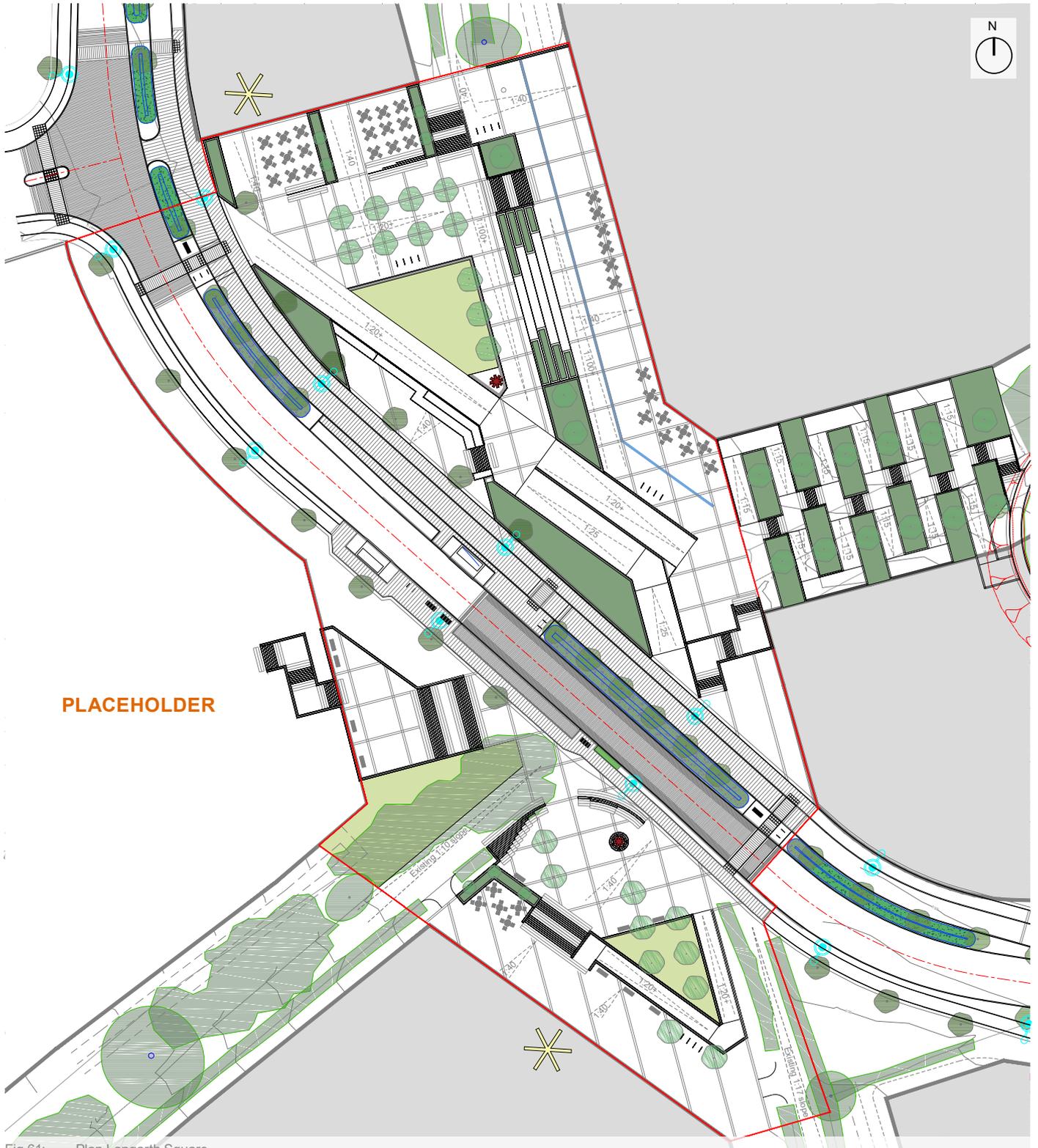


Fig.61: Plan Langarth Square

# Langarth Garden Village

## MASTERPLAN SUMMARY

### Willow Green Park West



Willow Green Park forms a linear park benefitting from a mature landscape structure encompassing some of the existing fields and field boundaries south of the former Willow Green farm. The well established field boundaries would be retained wherever possible. The central location of the park would make it easily accessible and it would have a prominent position fronting onto the northern access road.

Unlike other parts of Langarth, most of the park is sited on relatively level ground and would benefit from the established setting. The fields would be transformed into a series of spaces that would accommodate a range of facilities from play, informal sport and outdoor sport and connected by footpaths and cycleways.

The spaces would also host a number of infiltration basins and while their primary function would be to provide sustainable drainage, the depressions could also provide opportunities for play and habitat to encourage biodiversity. At the westernmost space land slopes towards an existing wooded watercourse. Several infiltration basins would occupy the space, although the depressions could be used for informal play and habitat to encourage biodiversity. Appropriate tree and shrub could be planted to sections of the perimeter of the infiltration basins to bring some definition to the space.

A children's equipped play facility (NEAP) would adapt to the landform near to the infiltration basins. Development to the north of the NEAP would provide natural surveillance.



Fig.62: Willow Green Park West Precedent Image



Fig.63: Willow Green Park West Precedent Image



Fig.64: Willow Green Park West Precedent Image

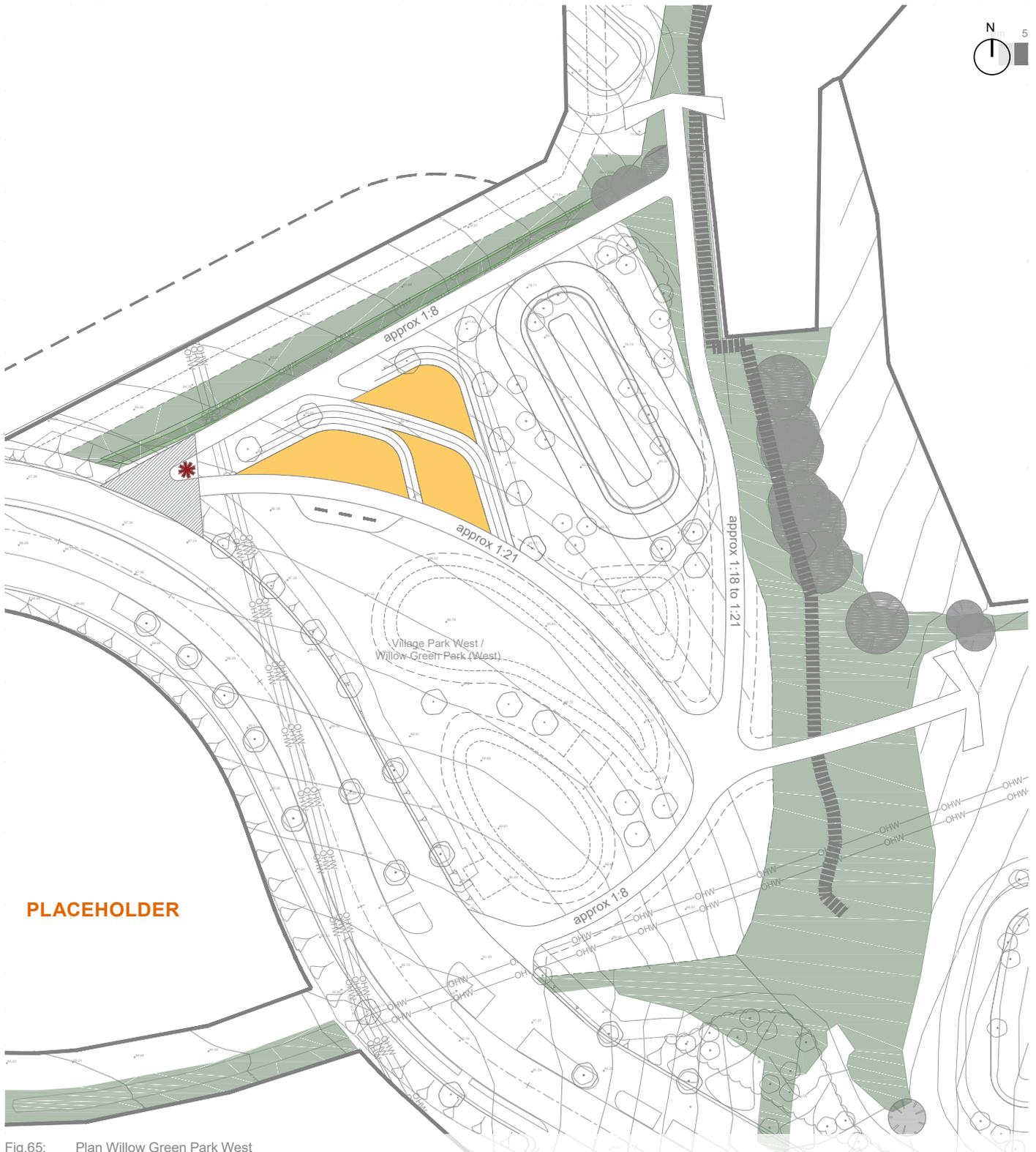


Fig.65: Plan Willow Green Park West

# Langarth Garden Village

## MASTERPLAN SUMMARY

### Willow Green Park East



In the east of Willow Green Park, an informal pitch would be provided, taking advantage of the wooded boundaries separating it from the NAR. A second smaller pitch could be provided in a smaller field to the north and overlooked by the proposed community centre.

Overall the network of footpaths and cycleways passing through the series of spaces would provide a sense of progression and interest for pedestrians and cyclists using Willow Green Park.



Fig.66: Willow Green Park East Precedent Image



Fig.67: Willow Green Park East Precedent Image



Fig.68: Willow Green Park East Precedent Image



Fig.69: Plan Willow Green Park East

# Langarth Garden Village

## MASTERPLAN SUMMARY

### Penventinnie Square



The site for Penventinnie Square is at the southern edge of the Treliske valley, it forms the easternmost arrival space of the Garden Village, accommodates the NAR and reinforces links with Penventinnie Park immediately to the north west. The square serves users of the nearby Royal Cornwall Hospital and Treliske employment area and residents and visitors to the Garden Village.

With the diverse mix of uses in the locale, the square acts as an important meeting place with a sense of vitality supported by the active ground floor uses. The space is able to host a range of activities from meeting and sitting to more communal events like markets and performances.

The concept for the public space is based on a traditional crossroads and market square, typically seen at the heart of Cornish towns and villages. These typically provide a multi-functional space defined by features such as a traditional Cornish cross, monument or other feature.

Avenue tree planting will also be proposed along the NAR to contribute to visual amenity and a sense of enclosure and the square also accommodates street trees to help articulate the space and direct views towards Penventinnie



Fig.70: Penventinnie Square Precedent Image



Fig.71: Penventinnie Square Precedent Image

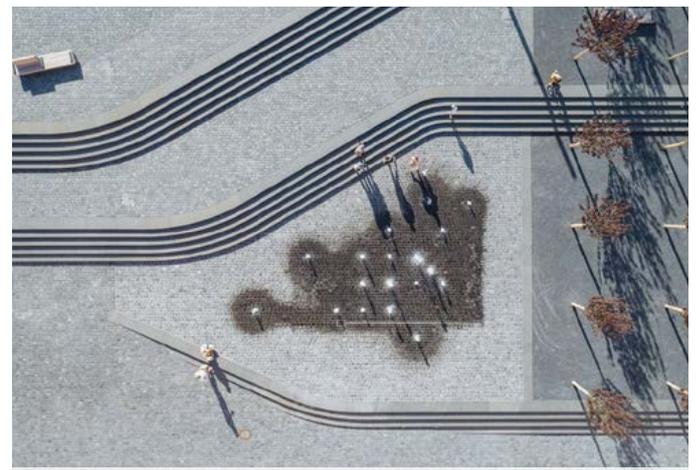


Fig.72: Penventinnie Square Precedent Image

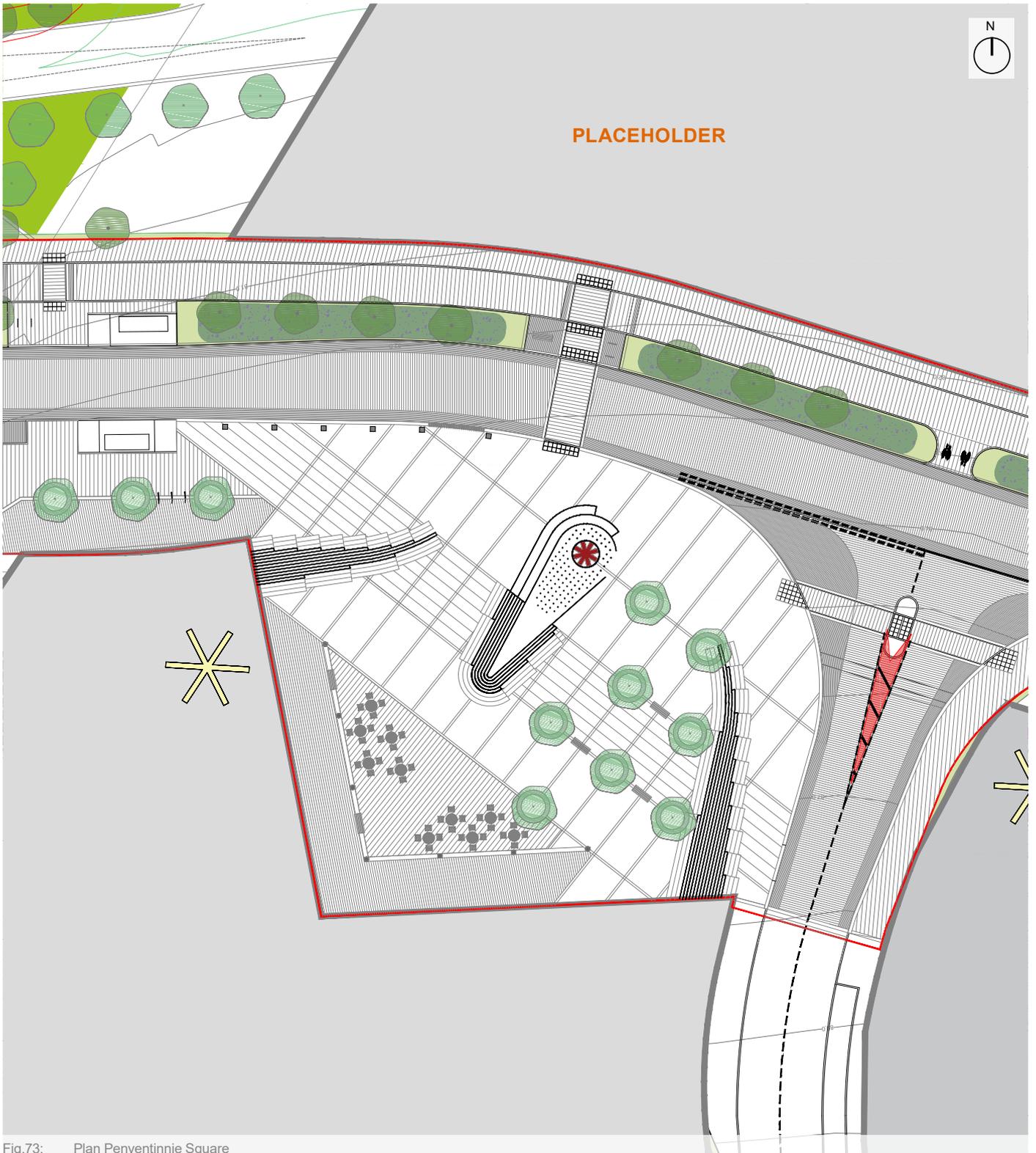


Fig.73: Plan Penventinnie Square

# Langarth Garden Village

## MASTERPLAN SUMMARY

### Penventinnie Park



Penventinnie Park extends east from Willow Green Park forming an extended linear landscape with views north east across Treliske Valley and towards Governors Round. At its western end the park would transform a former field with established wooded boundaries into an area of park with an infiltration basin and a wetpond with marginal planting to the northern end providing visual interest. Progressing eastwards the park would adapt to the north facing slopes providing users with varied views to the north east.

The park is to be fronted by housing on its northern edge, bringing an active edge and natural surveillance. Further to the east, the park would accommodate a destination play facility and this would be arranged into a series of smaller spaces in order to adapt to the north facing slope. At the eastern edge of the park there would be opportunity to accommodate an informal sport area and community event space. The former would require some land remodelling, while the slope to the south could provide some space for seating and spectating.

A network of footpaths and cycleways would provide access across the park linking the neighbouring housing with Penventinnie Square, while appropriate tree and shrub planting would articulate a series of smaller spaces without obscuring views to the north east.



Fig.74: Penventinnie Park Precedent Image



Fig.75: Penventinnie Park Precedent Image



Fig.76: Penventinnie Park Precedent Image



Fig.77: Plan Penventinnie Park

# Langarth Garden Village

## MASTERPLAN SUMMARY

### Cornish Hedgerows

Cornish hedgerows have defined the Cornish landscape for centuries, providing a distinct local identity. The structures provide many differing habitats and micro habitats, creating a network of linked refuges for biodiversity. Hedgerows generally border the existing fields across the site, creating a well defined field pattern.

The masterplan retains hedgerows where feasible, with the majority of the existing hedgerows retained. Hedgerows must be assessed as both a landscape and biodiversity feature as part of any development proposal. Proposed access points between existing Cornish hedgerows are to be sited at a hedgerow's point of least value.

In addition to the existing hedgerows, Langarth proposes new hedgerows along the green lanes (see below section 2.16) in order to provide more habitats for local flora and fauna to flourish and increase wildlife connections across the existing network of biodiversity. This also aids in providing security, structure and enclosure along the route through local methods of construction that incorporate vegetation and nature.



Fig.78: Traditional Cornish Hedgerows

### Hedgerow Enhancement

The protection of such interesting local features is key in delivering the vision for Langarth. The masterplan seeks to achieve 20% biodiversity enhancement across the site. It is therefore proposed that hedgerows are enhanced in order to create wider corridors of biodiversity throughout the site.

### Green Lanes

Existing tracks cut across the meadowy landscape of the western portion of the site. Lined by planting and vegetation, these routes provide opportunities for biodiversity enhancement and sustainable transport links such as segregated cycleways and footpaths.

The green lanes are to be extended to connect areas of public open space and amenity within the landscape. New Cornish hedgerows are proposed along the length of the routes in order to increase biodiversity and connect the existing green infrastructure network.

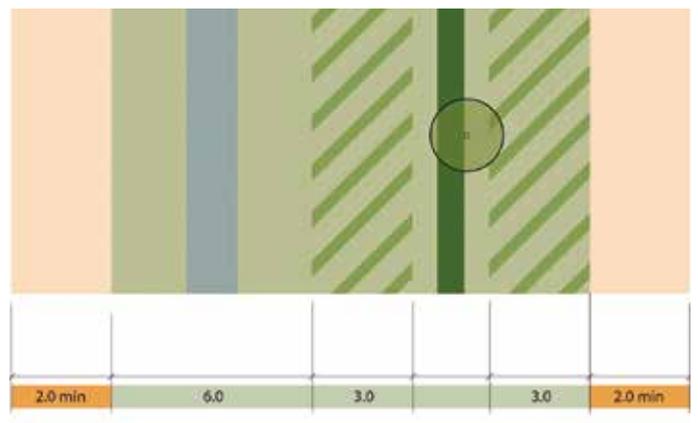


Fig.79: Biodiversity Corridor with Maintenance Strip

## Quiet Lanes

Quiet lanes are minor rural roads which have been designated by local highway authorities to pay special attention to the needs of pedestrians, cyclists, horse riders and other vulnerable road users. Langarth's existing quiet lanes are to be utilised to provide a network of safe, segregated travel for pedestrians and cyclists.

These quiet lanes have been designed to allow users to appreciate the beauty and tranquillity of the country lanes at slow speeds. By helping to protect the character and tranquillity of the countryside from traffic, building community links and encouraging healthy, recreational activities, quiet lanes play a valuable role in improving people's quality of life



Fig.81: Proposed Green Lane Movement

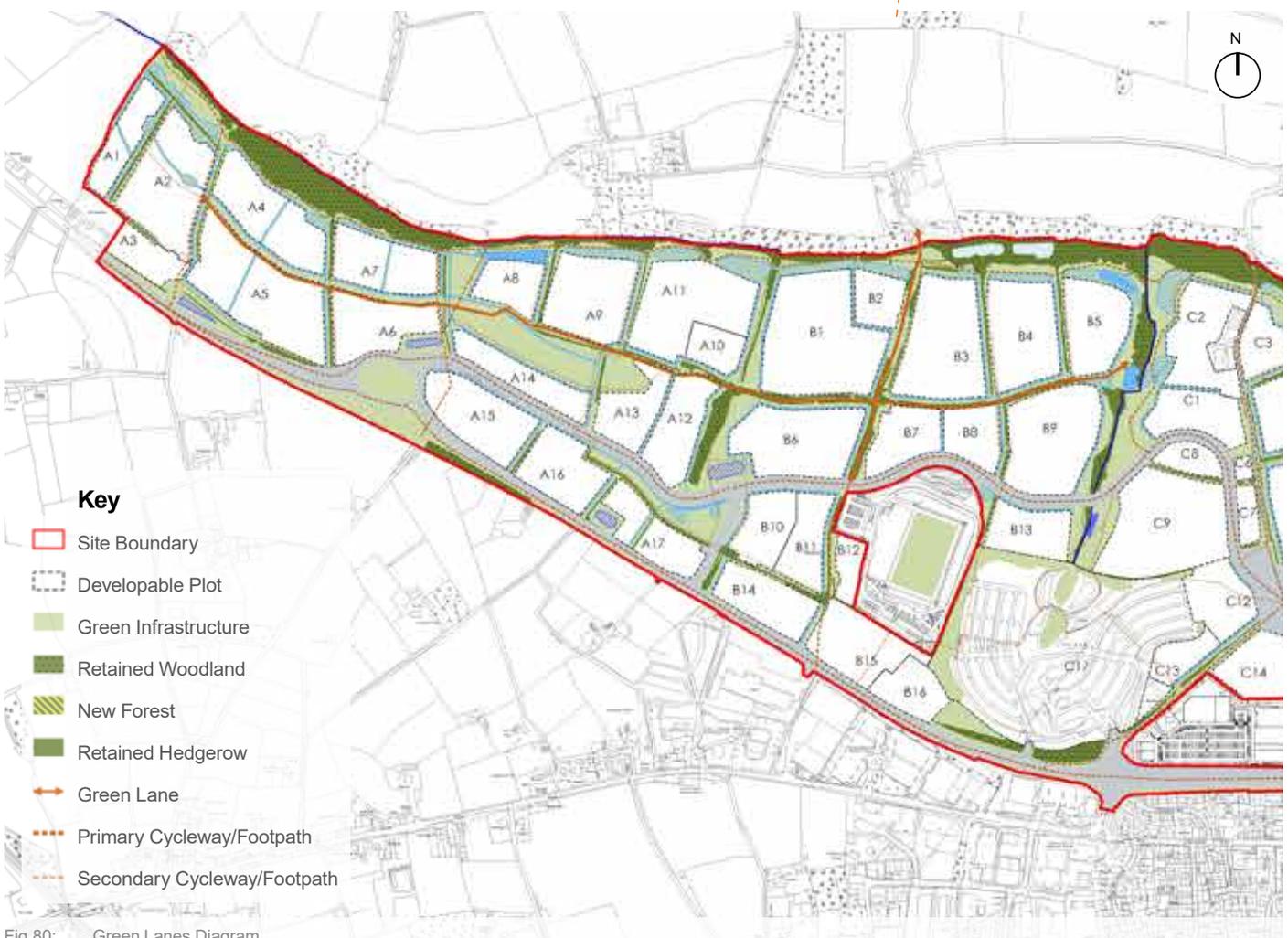


Fig.80: Green Lanes Diagram

### MOVEMENT STRATEGY

#### Promoting Sustainable Movement

To minimise transport impact the first approach that can be taken is to reduce the need to travel at all. Where the travel is necessary, use of public transport is recommended and the masterplan therefore accommodates the necessary links with existing infrastructure. A new bus route is proposed along the Northern Access Road (NAR), with bus stops located on either side for inbound and outbound journeys.

Landscape led development intends to encourage walking and cycling as primary modes of transport, which will promote healthy lifestyle and overall resident satisfaction. An increased number of routes also leads to improved permeability when accessing the development and increased ease of movement across the site.

#### 2.18 Strategic Movement

- E-Car and E-Bike Share Hubs implementation;
- Connections to existing A390;
- Park and Ride extension of 500 parking spaces;
- Reduction of parking provision;
- On street parking to provide visitor and shared parking;
- 20mph speed limit within the development;
- Utilise existing street network for walking, cycling routes and bridleways; and
- Improved bus service.

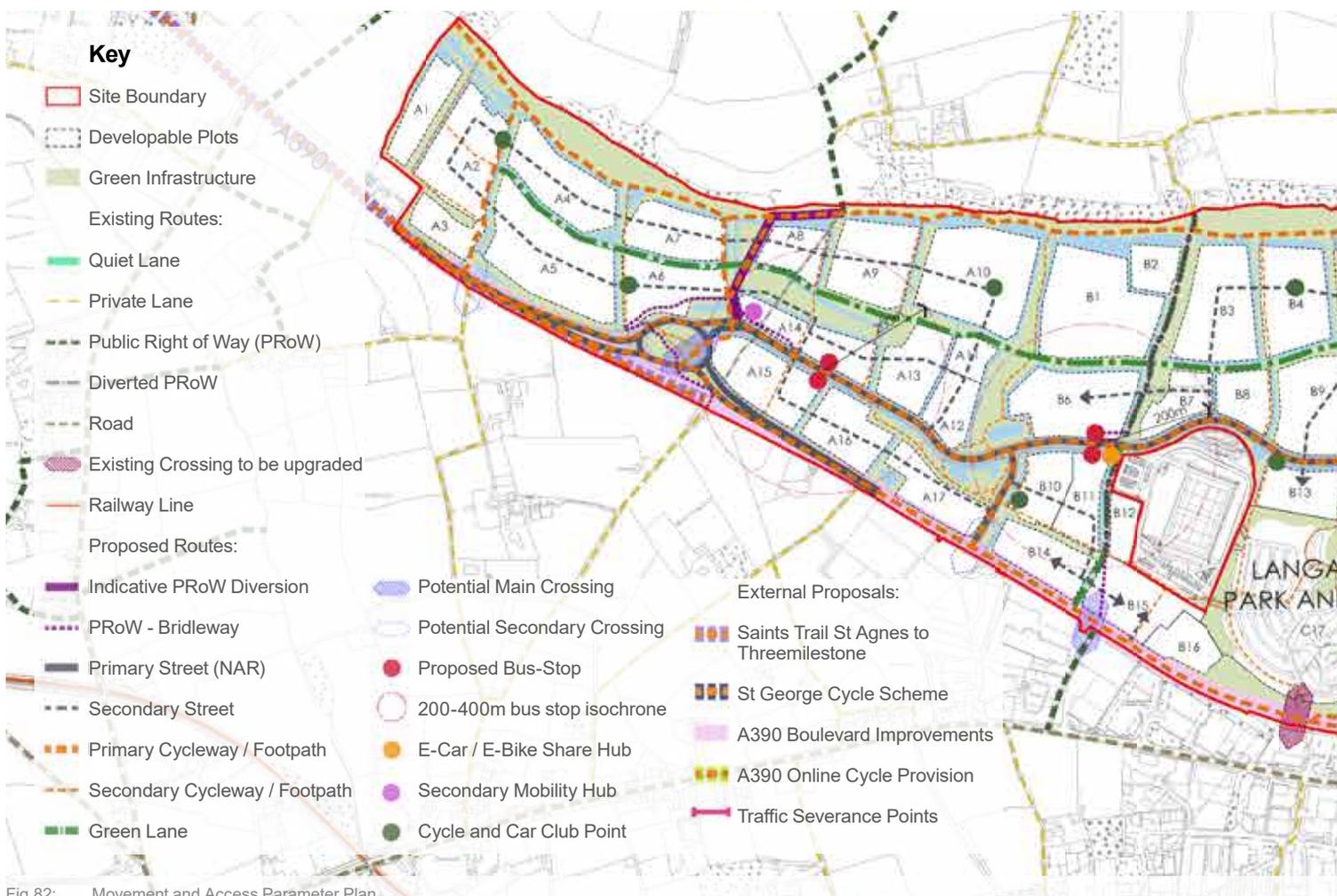


Fig.82: Movement and Access Parameter Plan

## Public Transport

A new bus route is proposed along the Northern Access Road, with bus stops located on either side for inbound and outbound journeys. The bus provides an all weather alternative to the private vehicle and it is the intention to provide the highest frequency service possible so that all users will experience as close to a 'turn up and go' service as possible. The route of the proposed bus route passes the location of proposed Park & Ride Extension facility in order to decrease car as the main mean of transport.

## Walking / Cycling

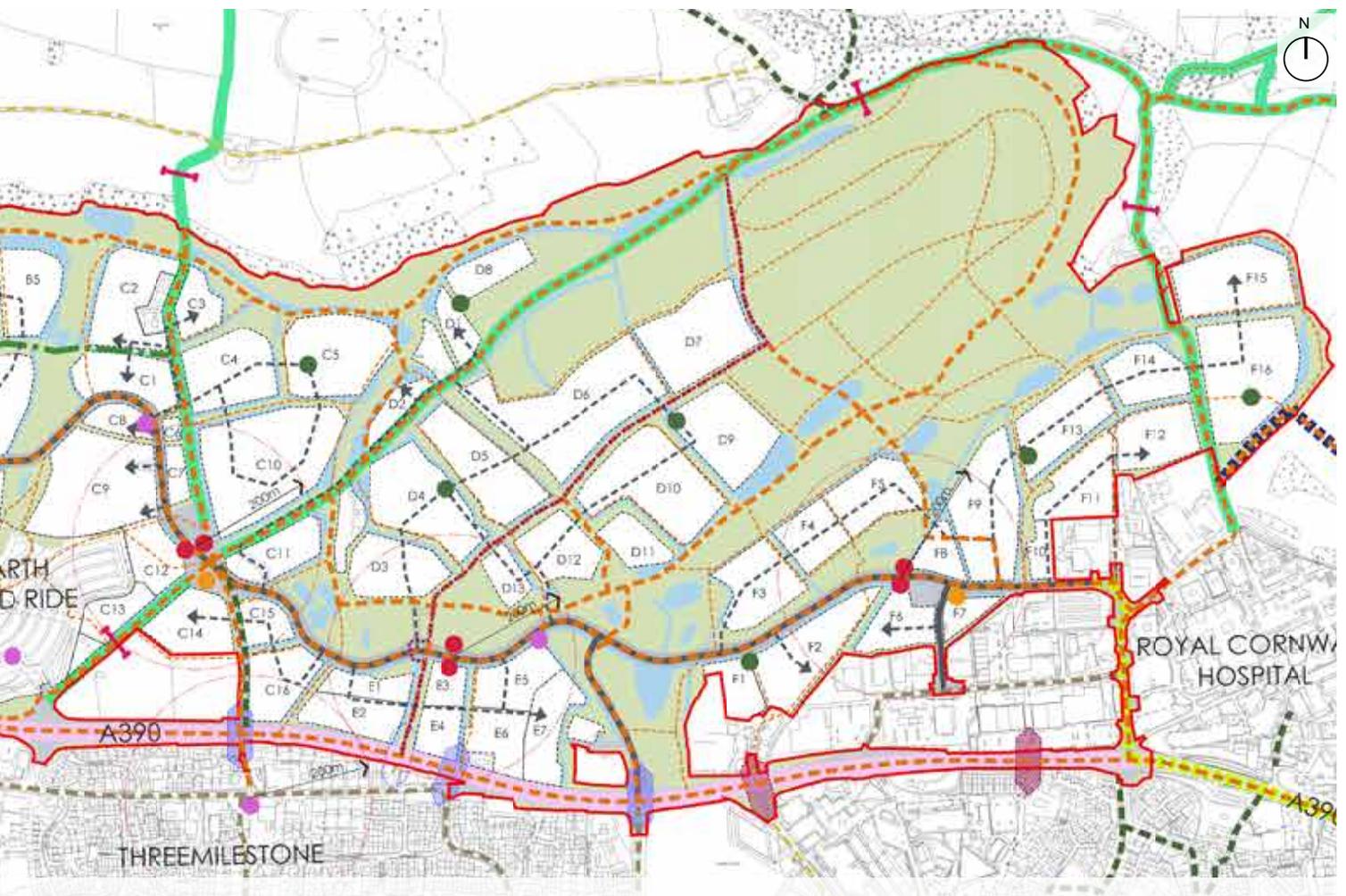
Implementation of a wide network of cycle routes and footways within the development is one of the proposals which responds to the design principles in terms of the ability to move freely and easily within the development. The masterplan utilises existing quiet lanes where possible to minimise development and disruption to the local ecology and environment.

## Park & Ride Extension

Located centrally within the masterplan, a 600 space Park and Ride extension of the already successful facility will help meet demand from city centre commuters and shoppers as parking becomes less convenient in the City. It will offer additional off-street parking for residents outside normal operating hours and provide convenient parking and charging points for e-bikes, e-cars and community car schemes. The site area could also offer the option for generating sustainable energy via photovoltaic panels over parking bays.

## E-Car and E-Bike Hubs

Promotion of car sharing and use of cycling over single person vehicular use is ensured by provision of E-Car and E-Bike Share Hubs located within key arrival spaces of the development, providing electric cars and vans for people who may occasionally need to use a private vehicle where other modes are not appropriate.



# Langarth Garden Village

## MASTERPLAN SUMMARY

### Northern Access Road

Infrastructure enabling the development of the area comprises of the Northern Access Road, which provides a route through connecting A390 to the west, Park & Ride and Treliske Hospital to the east. This new boulevard's primary task is to connect and provide access to each one of the masterplan areas, this new corridor will take a portion of the traffic from the A390, particularly vehicles accessing the Park and Ride and Treliske Hospital.

The primary NAR highway design component includes encouragement of sustainable transport links to local jobs, education and services. This is achieved through developing a sense of space with high quality design including footways, cycle ways, bus provision and access to Langarth Park & Ride.

The primary NAR design principles are:

- Segregation of footways and cycleways from the main traffic lanes with landscaping;
- Good balance of design favouring people and providing the appropriate transport capacity, through flexible and characterful design;
- Route that is easy to understand and navigate;
- Provision of route which is usable by all; and
- Sustainable Drainage System (SuDS) separate from the masterplan's drainage strategy.

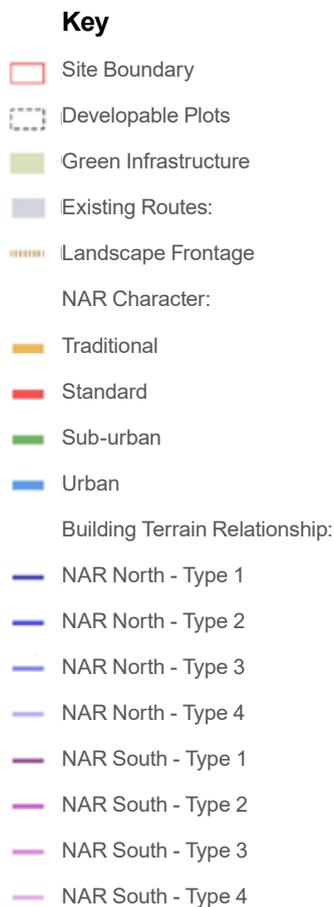


Fig.83: Northern Access Road Character / Frontage Diagram

NAR precedent image to be provided by Cormac

NAR precedent image to be provided by Cormac

Fig.84: NAR Precedent Image

Fig.85: NAR Precedent Image



# Langarth Garden Village

## MASTERPLAN SUMMARY

### Northern Access Road

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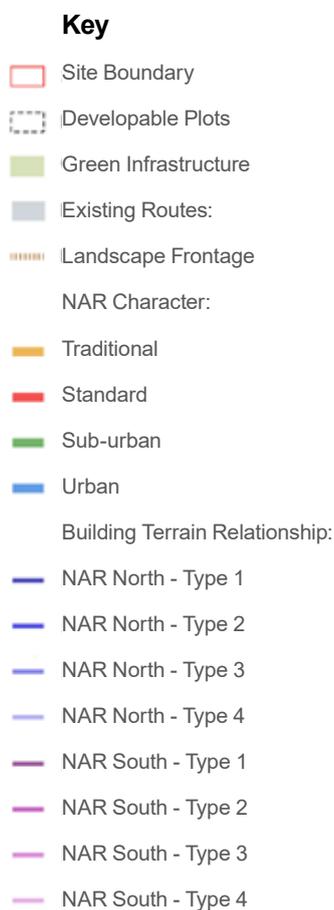


Fig.86: Northern Access Road Character / Frontage Diagram

NAR precedent image to be provided by Cormac

NAR precedent image to be provided by Cormac

Fig.87: NAR Precedent Image

Fig.88: NAR Precedent Image



# Langarth Garden Village

## MASTERPLAN SUMMARY

Langarth Garden Village promotes the use of sustainable modes of transport and is designed to facilitate walking and cycling. Four different parking standards are identified in response to the nature of the particular location, urban grain and proximity to amenities. It is encouraged to accommodate visitor and additional parking spaces on-street and courtyards areas dotted throughout the site.

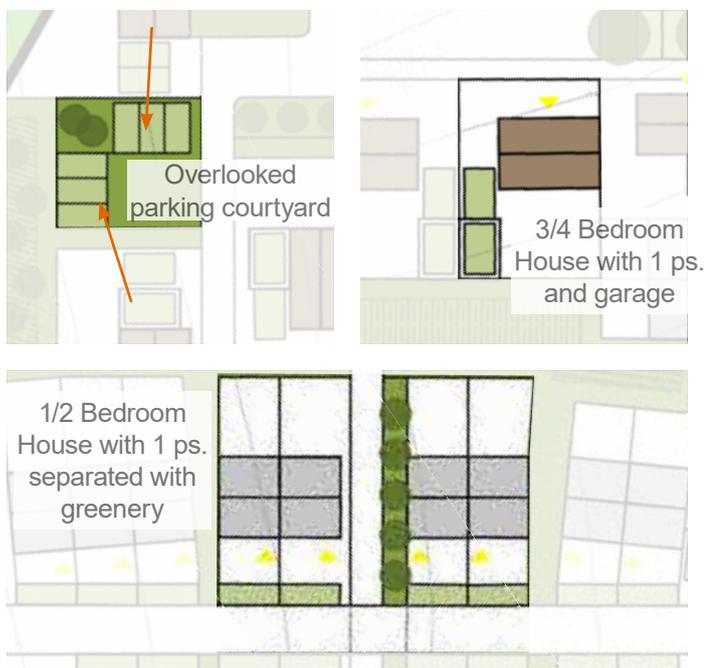
### Parking

#### Rural Hamlet



- 1 and 2 bed dwellings should provide 1 no. parking space per dwelling;
- 3 and 4 bed dwellings should provide 2 no. parking spaces per dwelling;
- Additional 10% parking for visitors must be provided;
- Parking should be predominantly on-plot or in small and well-overlooked courtyards;
- A flexible room should be provided, which can be used as a garage / storage space or extra room; and
- Provision should be made for the future conversion of parking spaces for alternative functions. See below for further details regarding future adaptability of car parking space.

#### Rural Edge



- 1 and 2 bed dwellings should provide 1 no. parking space per dwelling;
- 3 and 4 bed dwellings should provide 2 no. parking spaces per dwelling;
- Additional 10% parking for visitors must be provided;
- Parking should be predominantly on-plot with some provision for parking on-street and in small and well-overlooked courtyards;
- A flexible room should be provided, which can be used as a garage / storage space or extra room; and
- Provision should be made for the future conversion of parking spaces for alternative functions. See below for further details regarding future adaptability of car parking space.

# Langarth Garden Village

## MASTERPLAN SUMMARY



Rural Hamlet



Rural Edge



Village



Urban



### Village



- 1 and 2 bed dwellings should provide 1 no. parking space per dwelling;
- 3 and 4 bed dwellings should provide 2 no. parking spaces per dwelling;
- Additional 10% parking for visitors must be provided;
- Parking should be provided through a mix of parking on-plot, on-street or in small and well-overlooked courtyards; and
- Provision should be made for the future conversion of parking spaces for alternative functions. See below for further details regarding future adaptability of car parking space.

### Urban



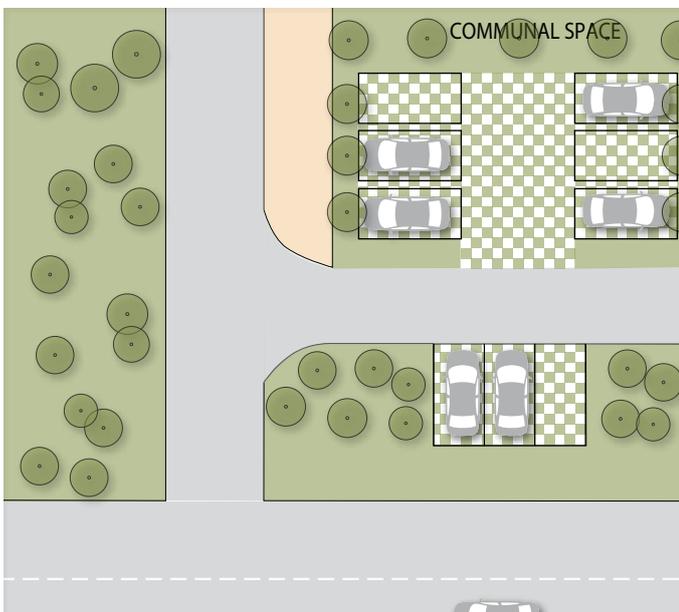
- 1 and 2 bed dwellings should provide 1 no. parking space per dwelling;
- 3 and 4 bed dwellings should provide 1.5 no. parking spaces per dwelling;
- Additional 10% parking for visitors must be provided;
- Parking should be provided through a mix of parking on-street or in small and well-overlooked courtyards; and
- Provision should be made for the future conversion of parking spaces for alternative functions. See below for further details regarding future adaptability of car parking space.

# Langarth Garden Village

## MASTERPLAN SUMMARY

### Communal Parking

#### P2.1 In landscape



#### P2.2 Courtyards



- Trees and low level planting around entrances will soften their appearance, while maintaining a good level of visibility.
- Car parking spaces will be unallocated, for use by both residents and visitors. Spaces will be limited to 10 no. spaces per courtyard.
- Communal parking should be designed and located so that future adaptation is possible.
- Permeable paving should be used for parking spaces located in the landscape



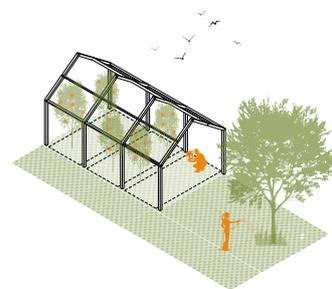
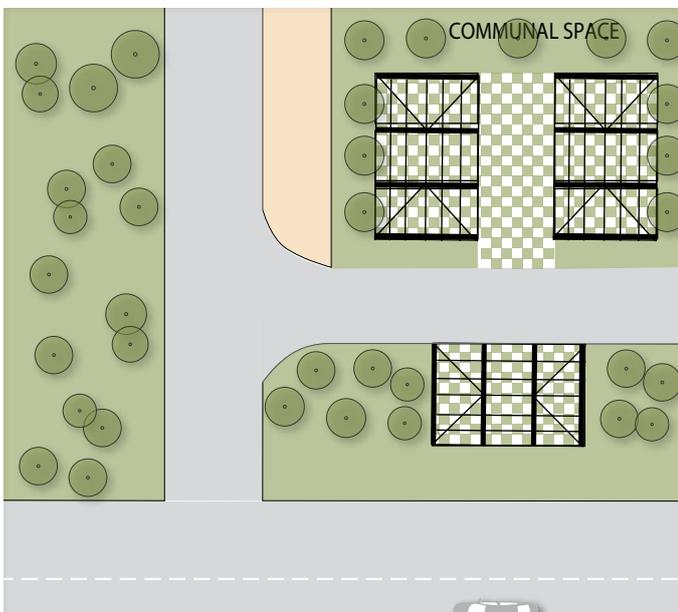
- Appropriate care should be given to pavement selection, in order to contribute to a pleasant street scene and intuitive perception of the different functions in place.

# Langarth Garden Village

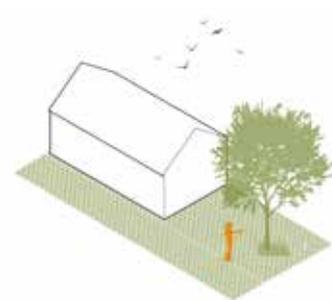
## MASTERPLAN SUMMARY

Although the parking standards for Langarth recognise the current need for additional parking spaces in certain locations, it also identifies how some of these spaces could be adapted in the future in line with predictions on reduction of car ownership, working from home opportunities, increased accessibility to public transport and potentially automated transportation methods.

### P2.3 Future adaptability



Green House



Redensification

### Green House



### Redensification



# Langarth Garden Village

## MASTERPLAN SUMMARY

### COMMUNITY FACILITIES

#### Schools



Two primary school sites are proposed on site. The first, and larger of the two, is a three form entry school in a more central location within the West Langarth character area (plot B1). This school site lies near to the Bosvisack corridor and will have a capacity of up to 675 pupils.

The second school site sits within the Governs character area (plot D7), near the proposed Governs Round SANGs and new forest. This will be a two form entry primary school with capacity of up to 465 pupils.

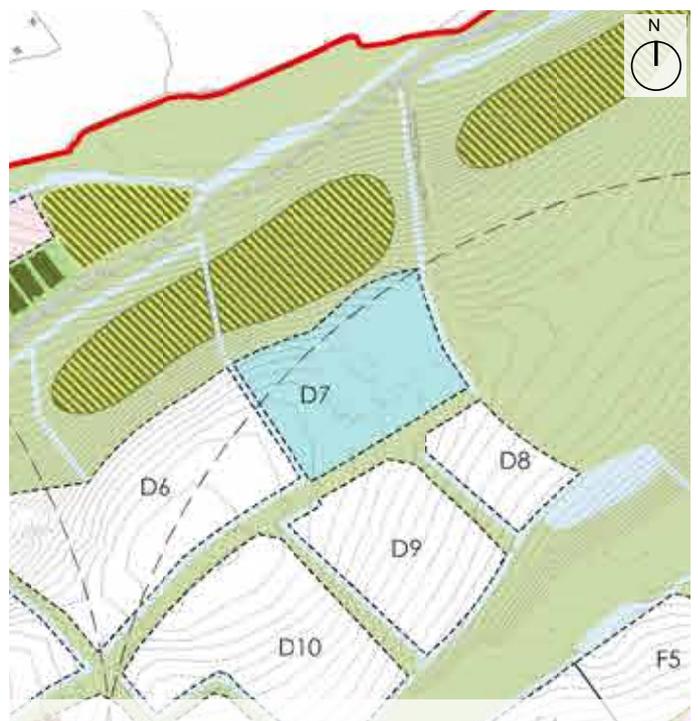
The proximity of both schools to retained and proposed woodland means that either school site will be suitable for use as a forest school.



Fig.89: School Precedent Images



Fig.90: School Sites - Land Use Plan Extracts



## Allotments



Allotments provide the opportunity for residents without their own garden or sufficient space, to grow their own food, whilst also promoting a healthy lifestyle and social interaction.

The Open Space Standards require that allotments should have a minimum size of 2,500m<sup>2</sup> with a catchment area of 800m. To meet the policy requirements, two allotment sites are proposed, one in the east and one in the west. The larger size of the allotment in the east would compensate for the size of the smaller allotment in the west which is constrained by topography.

Smaller sized allotments within the Green Infrastructure network as well as Communal Gardens and a Community Farm (plot D14) are proposed as part of the Community Infrastructure Strategy. They create a landscape which is not only beautiful but also performative.

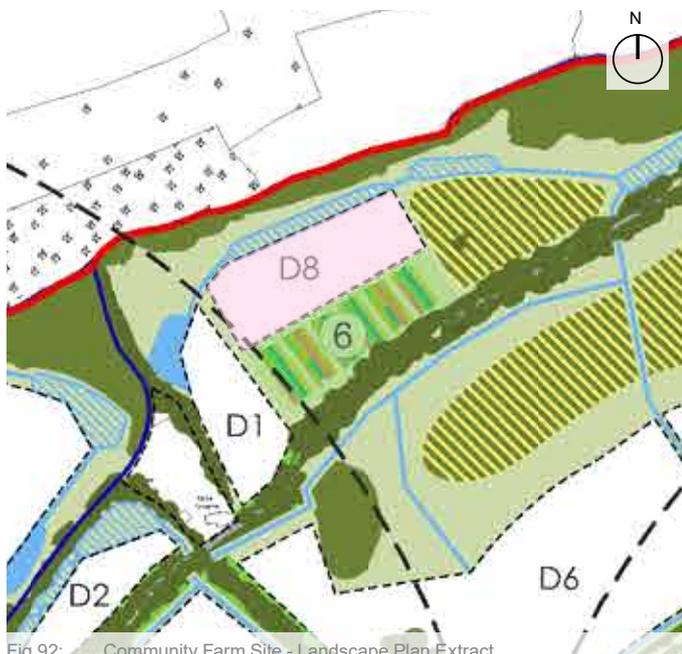


Fig.92: Community Farm Site - Landscape Plan Extract



Fig.91: Allotments and Community Farm Precedent Images

# Langarth Garden Village

## MASTERPLAN SUMMARY

### Play

Play provision at Langarth will be located on easily accessible outdoor sites forming part of the wider green infrastructure network. The distribution of play provision ensures that residents are within the recommended 600m catchment and they are well placed in relation to arrival spaces as well as residential development.

Play areas are to be situated in park and amenity space or natural space as follows:

- Four neighbourhood equipped areas for play (NEAP), with a minimum size 500m<sup>2</sup> (see example for Langarth Park North); and
- Two destination equipped areas for play, with minimum size 700m<sup>2</sup> (see example for Penventinnie Park).

The NEAP's and destination play areas would comply with Cornwall Council's Open Space Strategy for Larger Towns in Cornwall (2014) and the Council's play area specification with a minimum size of 500m<sup>2</sup> and 700m<sup>2</sup> respectively. They would have appropriate buffer zones to separate activity areas from residential dwellings, while accommodating natural surveillance.

**Playable space:** In addition all residential development would be no further than 330m from at least one type of open space suitable for children's informal play.

Teen provision at Langarth will be located on outdoor sites, forming part of the wider green infrastructure network, that are easily accessible particularly by bicycle. The distribution of ensures that residents are within the recommended 800m catchment and they are well placed in relation to arrival spaces (local centres) as well as residential development.

Teen provision would be situated in park and amenity space or natural space as follows:

- One multi-use games area (MUGA), with a minimum size 800m<sup>2</sup>;
- Two separately located satellite area (BMX track and skate park), each with a minimum size of 500m<sup>2</sup> (see example for Langarth Park North); and
- The skate park should also include some beginner facilities. This would require a smoothly surfaced 3.0m wide concrete path extending on level ground and a modest slope.



Fig.93: Children Play Provision Precedent Image



Fig.94: Children Equipped Play Space Precedent Image



Fig.95: Informal Play Provision Precedent Image

## Art / Culture

Culture and creativity are engrained in the vision for Langarth Garden Village in order to reflect the area's existing natural character and Cornish heritage.

The provision of art in the public realm is important in developing a sense of place and belonging, whilst also aiding with residents and visitors collective wellbeing. Artistic and cultural experiences will help promote creativity within the community and provide a platform for local artists and creatives to exhibit their work.

### Public Art Strategy

Key design principles for public art within Langarth:

- Commission local artists;
- Artwork to create a visually stimulating environment;
- Permanent and temporary works;
- Reflecting local Cornish character through installations;
- Variety of works such as: sculptures; digital art; performance art; landscaping etc;
- Explore opportunities to use artwork for wayfinding;
- Artwork to reflect the identity of character areas; and
- Art and culture encouraged within the community to promote social interactions.



Fig.96: Open Air Theatre Precedent Image



# **PART C CHARACTER AND DESIGN CODES**

# Langarth Garden Village

## MASTERPLAN SUMMARY

## INTRODUCTION

### Establishing Character

The rural village model, with its close-knit community and tight relation to nature, has been a source of inspiration for the design. The new masterplan translates these fundamental qualities – active street corners, green corridors, and a concentrated village centre – into a new, sustainable district.

The masterplan is divided into six character areas, allowing a more intimate, small-scale sense of community to flourish. Wild-planted natural swathes run between these six mini-villages, ensuring free movement for local species and integrating nature into the core layout of the new community. In this sense, the six areas are small islands in a wild sea of green. We have named them:

1. The Brake - The Rural Neighbourhood
2. West Langarth - Sports Neighbourhood
3. Langarth - Community Neighbourhood
4. Willow Green - Learning Neighbourhood
5. Governs - Cultural Neighbourhood
6. Penventinnie - Health Neighbourhood

### Role of the Design Code

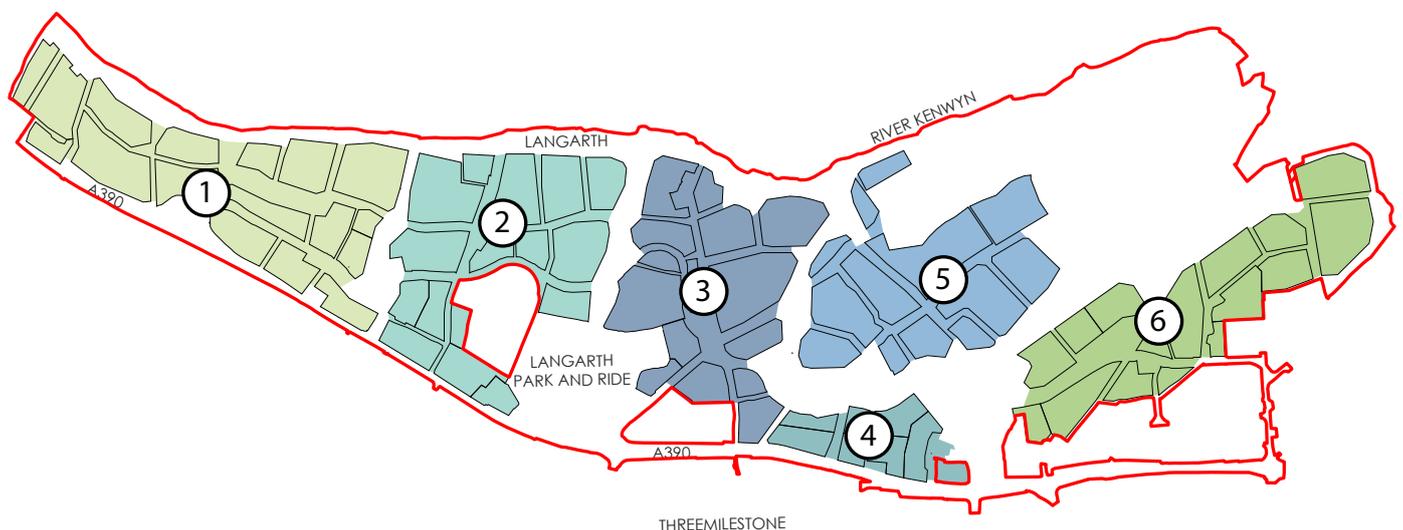
The Code will assist designers and developers in gaining a better understanding of the design intentions for Langarth Garden Village. It should equally assist the Planning Authority in the determination of future applications.

The Design Code establishes principles for character areas, streets, relation to the topography, open spaces, edge treatments, public realm and buildings. All of the above have been carefully assessed to achieve comprehensive design guidance in line with the Garden Community aspirations.

Variety is also a key element of the code to ensure distinctiveness is achieved in different neighbourhoods and ensuring legibility and wayfinding are somehow part of the design.

All Reserved Matters Applications submitted as part of the Langarth Garden Village development must demonstrate compliance with the Design Code by submitting a

A short extract of the 400 page Design Code document follows.



# DESIGN CODE EXTRACT

## How to navigate the Design Code

This page provides an overview of the Design Code structure and the relationship between the Design Code and the Regulatory Plan.

The key to the Design Code is the Regulatory Plan. Mandatory requirements for the detailed design of each area are identified in the plan with a specific reference that relates directly with a specific design code. The combination of elements identified in the Plan set out the parameters to enable detailed design.

In addition to the Regulatory Plan, the Illustrative Masterplan contained within the Design and Access Statement demonstrates how the scheme may be developed in accordance with the Parameter Plans, the Planning Requirements and the Design Code.



## REGULATORY PLAN

The Regulatory Plan sits at the front of this document and sets out on a single drawing the mandatory requirements which must be adhered to in order to achieve the vision for Langarth Garden Village.

The key for the plan sets the structure of the Design Code allowing easy reference between this document and the plan

Throughout the document a series of icons are used to illustrate whether text is either:



MANDATORY

or



DISCRETIONARY / INSPIRATIONAL

### PART A: BACKGROUND

Part A of the Design Code focuses on the background information of the project, such as location, physical and planning context, as well as masterplan vision.

### PART B: THE COMMON DOMAIN

Part B explains the site wide principles and treatments which are applicable as overarching design elements.

### PART C: CHARACTER AREAS

Part C focuses on character and neighbourhood areas, highlighting the different treatments and materials proposed to create distinctive centres.

### PART D: TECHNICAL

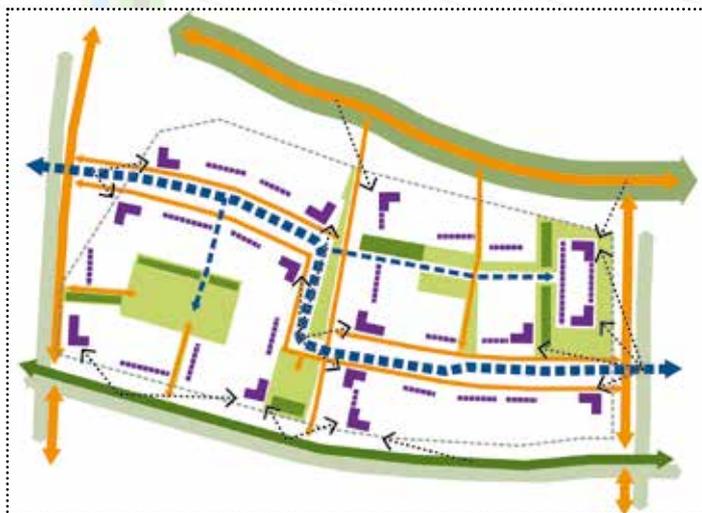
Part D contains technical information in terms of the construction methods, building standards, sustainability benchmarks and delivery checklists.

# Langarth Garden Village

## MASTERPLAN SUMMARY

### Plot Assembly - Rural Hamlet Grain

The grain captures the character of the surrounding natural areas and local farmsteads. It has an intimate feel around courtyards, featuring informal alignment of houses and routes through.



#### Key

- |                    |                   |
|--------------------|-------------------|
| Plot Boundary      | Communal Garden   |
| Street             | Allotment         |
| Footway / Cycleway | Key Corner        |
| Green Lane         | Building Frontage |
| Cornish Hedge      | Key Views         |
| Woodland           |                   |

Fig.97: Case Study Rural hamlet grain layout plan - Plot A7.

# Langarth Garden Village

## MASTERPLAN SUMMARY



Fig.98: Rural hamlet grain aerial view - Plot A7.

<b>Concept</b>	• Buildings organised around a communal green space and courtyards.
<b>Alignment</b>	• Plots aligned with existing Cornish hedges, then secondary streets and courtyards.
<b>Grouping</b>	• Predominantly detached and semi-detached groupings; • Maximum of 2 no. same unit types next to each other; • Single aspect row onto secondary streets or courtyard / mews arrangements.
<b>Frontages</b>	• Addressing secondary streets, green corridors, primary pedestrian routes and areas of open space;
<b>Key Corners</b>	• Located on secondary street entrances to developable parcel and public open space.
<b>Roofscape</b>	• Higgledy piggledy roofscape; • No dominant direction, variation is welcome.
<b>Communal Gardens</b>	• Focal or static spaces that create emphasis with good pedestrian connectivity; • Relate to existing or proposed landscape features and sit alongside internal pedestrian routes; • Accommodate areas of micro allotments and orchards;
<b>Private Gardens</b>	• Gardens facing public park and pedestrian routes for good surveillance; • Medium size gardens that transition to community gardens, maximum 6m if the back to a communal garden or open space; • Minimum front gardens 2.5m.
<b>Parking</b>	• Predominantly on-plot or in small and well-overlooked courtyards; • Communal surface parking should be well detailed and landscaped and must be overlooked by adjoining properties; • 1 and 2 bedroom dwellings should provide 1 no. parking space per dwelling; • 3 and 4 bedroom dwellings should provide 2 no. parking spaces per dwelling; • Additional 10% parking for visitors must be provided.
<b>Garages</b>	• Recessed to back of garden creating a break on the elevation line (mainly on secondary streets); or

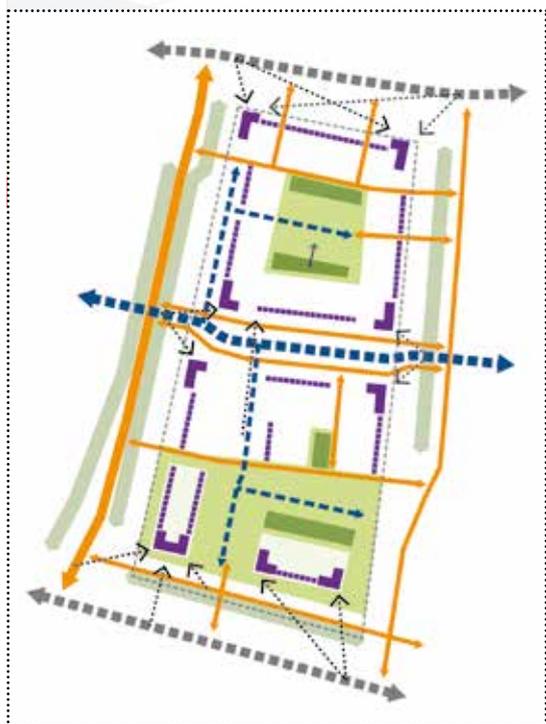


# Langarth Garden Village

## MASTERPLAN SUMMARY

### Plot Assembly - Urban Grain

Located predominantly around local centres, and between the two main arteries, NAR and A390, this grain features denser development with multiple courtyards located in-between more formally arranged streets.



#### Key

- |   |                    |   |                   |
|---|--------------------|---|-------------------|
|  | Plot Boundary      |  | Communal Garden   |
|  | NAR / A390         |  | Allotment         |
|  | Street             |  | Key Corner        |
|  | Footway / Cycleway |  | Building Frontage |
|  | Cornish Hedge      |  | Key Views         |

Fig.99: Case Study Urban grain layout plan - Plot E3 & E4.

# Langarth Garden Village

## MASTERPLAN SUMMARY



Fig.100: Urban grain aerial view - Plot E3 & E4.

<b>Main Concept</b>	<ul style="list-style-type: none"> <li>• Continuous strong frontages with clear separation public / private boundary.</li> </ul>
<b>Alignment</b>	<ul style="list-style-type: none"> <li>• Main entrances to apartments should be in the facade facing the highest grade road;</li> <li>• Streets aligned to plot boundaries and building frontages rather than contours.</li> </ul>
<b>Grouping</b>	<ul style="list-style-type: none"> <li>• Minimum of two of the same unit type unless on key corners;</li> <li>• Predominately terraced housing and groups of semi-detached.</li> </ul>
<b>Frontages</b>	<ul style="list-style-type: none"> <li>• Distance between rear elevations must be &gt;20.0m;</li> <li>• When distance between rear elevations is &lt;23.0m windows are to be staggered to avoid</li> </ul>
<b>Key Corners</b>	<ul style="list-style-type: none"> <li>• Corner buildings must address both streets;</li> </ul>
<b>Roofscape</b>	<ul style="list-style-type: none"> <li>• Repetition encourage at formal intervals;</li> <li>• Mono-pitch to be utilised to emphasise steep streets.</li> </ul>
<b>Communal Gardens</b>	<ul style="list-style-type: none"> <li>• Plots organised around a communal green space;</li> </ul>
<b>Private Gardens</b>	<ul style="list-style-type: none"> <li>• Min 4.0m deep private rear gardens with access to communal green space / gardens;</li> </ul>
<b>Parking</b>	<ul style="list-style-type: none"> <li>• Mix of parking on-street or in small and well-overlooked courtyards;</li> <li>• Surface car parking should be well detailed and landscaped and must be overlooked by adjoining properties;</li> <li>• 1 and 2 bed dwellings should provide 1 no. parking space per dwelling;</li> <li>• 3 and 4 bed dwellings should provide 1.5 no. parking spaces per dwelling;</li> </ul>
<b>Garages</b>	<ul style="list-style-type: none"> <li>• No garages allowed.</li> </ul>
<b>Bin / Bicycle Stores</b>	<ul style="list-style-type: none"> <li>• Access to bin storage should be separated from bike storage in apartments.</li> </ul>



# Langarth Garden Village

## MASTERPLAN SUMMARY

### Biodiversity Net Gain - Plot Design

The aspiration for Langarth Garden Village is to achieve a 20% Biodiversity Net Gain (BNG) across the site. In order to achieve this it is important to create the right Landscape Strategy (please see pg. xx on site wide framework chapter) and bring nature into development areas to create the connected green corridors. The following tables explain treatments which must be implemented in order to achieve the 20% Biodiversity Net Gain. Only by incorporating the below minimum percentages of communal gardens, semi natural open space, allotments, orchards and private gardens the 20% BNG will be achieved across the site.

Garden provision has been subdivided depending on the Residential Grain and the density within it. This has been following the logic of providing the biggest amount of private garden space within most rural plots, and gradually shifting this amount towards communal green areas within more urban parts of the masterplan.



Garden Provision within Residential Grains				
Residential Grain	Density	Communal Gardens / Semi Natural / Allotments (%)	Private Gardens (%)	Total Gardens (%)
Rural Hamlet				
	Up to 35	40%	20%	60%
	Up to 40	30%	20%	50%
	Up to 50	25%	20%	45%
Rural Edge				
	Up to 35	35%	25%	60%
	Up to 40	25%	25%	50%
	Up to 50	20%	25%	45%
Village				
	Up to 40	30%	20%	50%
	Up to 50	30%	15%	45%
	Up to 60	30%	10%	40%
	Up to 140	40%	0%	40%
Urban				
	Up to 40	35%	15%	50%
	Up to 50	35%	10%	45%
	Up to 60	35%	5%	40%
	Up to 140	40%	0%	40%

Fig.101: LGV Garden Provision table

## Plot Boundary Treatment

All boundary treatments used within proposed development feature planting as a combining element. This is done to further enhance biodiversity net gain by providing natural corridors for wildlife to move through.

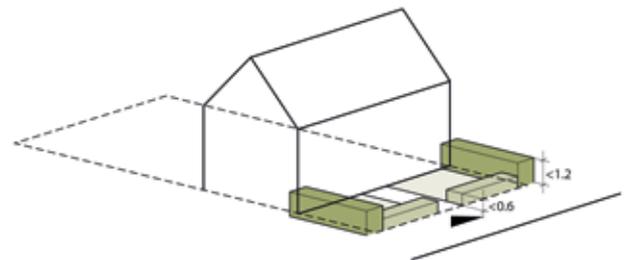
Three main boundary treatments proposed are: fully planted with low walls and railings with planting.

Timber fencing must be avoided and hedges should be used instead. Planted hedges can be more secured with the incorporation of metal mesh blended amongst the hedge.

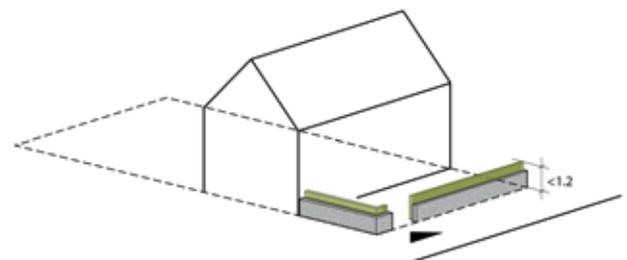
A full list of proposed boundary treatments is available in Chapter 10.05 of Technical Section.

Boundary Treatment within Character Areas		
Character Area	Density	Boundary Treatment
<b>A - The Brake - Rural / Gateway</b>		
	Up to 35	A
	Up to 40	B
	Up to 50	C
	Up to 140	C
<b>B - West Langarth - Sport / Wellness</b>		
	Up to 35	A
	Up to 40	A
	Up to 50	B C
	Up to 60	C
<b>C - Langarth - Community</b>		
	Up to 40	A B
	Up to 50	B
	Up to 60	C
	Up to 140	C
<b>D - Govers - History / Cultural</b>		
	Up to 35	A
	Up to 40	A B
<b>E - Willow Green - Research / Learning</b>		
	Up to 50	B C
	Up to 60	C
<b>F - Penventinnie - Health</b>		
	Up to 35	A
	Up to 40	A B
	Up to 50	B C
	Up to 60	C
	Up to 140	C

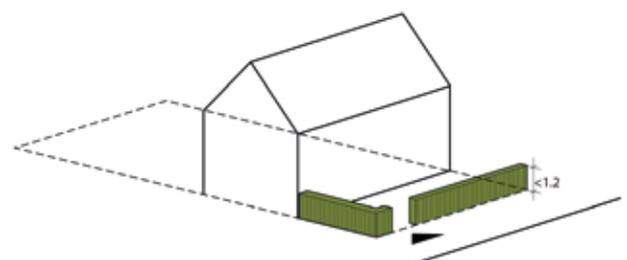
### A. Fully planted - with native shrubs



### B. Planted with low walls



### C. Railings with planting



# Langarth Garden Village

## MASTERPLAN SUMMARY

### Public Realm - Tonal

The materials palettes are designed to ensure that Langarth Garden Village has a distinctive character that draws inspiration from the vernacular architecture of the locality as well as a series of clearly distinguishable neighbourhoods.

The code does not seek to prescribe a particular architectural style but rather to develop a distinctive Langarth colour and materials palette that can be used on different styles of building as the place grows over time. The palette includes enough variety to create unity without uniformity, allowing each neighbourhood and residential grain to develop an individual identity but still be recognisably Langarth.

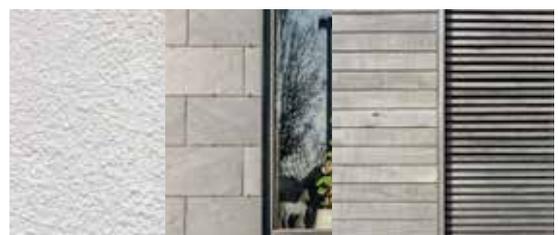
The tonal pallet is based on the earthy colour tones found in the typical stonewalls on farm buildings in the area. Spanning from the light grey to darker reddish over brown and yellow.

To the South the greyish yellow tones connects with the residential areas in Threemilestone and Treliske.

To the north the earthy brown / reddish colour tone works well with the existing farmsteads and as subtle backdrop for the ancient woodland and the scheduled monuments.

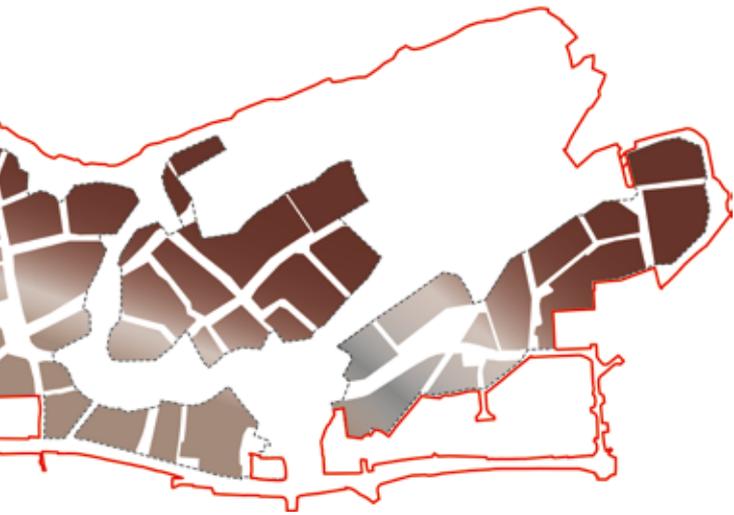


Fig.102: Reference - Typical Cornish farm building / Cottage



# Langarth Garden Village

MASTERPLAN SUMMARY

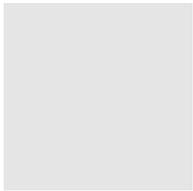


# Langarth Garden Village

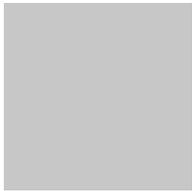
## MASTERPLAN SUMMARY

### The Brake - Materials Palette

#### Tones



Granite Grey

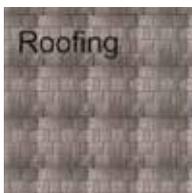


Dark Slate Grey

#### Texture and Materiality



Standing seam metal roof



Slate Effect Clay Tile

Natural Slate



Primary Urban



Accent Urban



Contrast



Primary Village

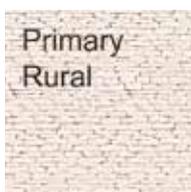


Accent Village

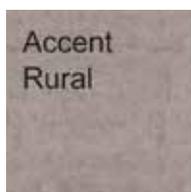
#### Primary Materials:

These will be mixed across the Urban, Village and Rural areas but the one identified will be dominant in each area.

Smooth, Textured and tumbled brick within tone range



Primary Rural



Accent Rural

#### Accent Materials:

Can be used across Urban, Village and Rural types but with a dominant accent in each area.

Timber cladding

Shingles

Stone

#### Precedents



# Langarth Garden Village

## MASTERPLAN SUMMARY

### Building Features

More traditional form because on the fringe of the new development area. Colours informed by traditional light granite stone and pale render. An example of the proposed building features can be found below.

### Architectural Style

Housing design takes their design cues from the existing rural buildings and drawing inspiration from the local vernacular of the Farmstead typology. Each Cluster is divided up into smaller parcels to give character and to allow adjustment to the undulating landscape. The sloping landscape character is utilised so that most clusters have views over the surrounding landscape.

The emphasis should be given to informal relationship between the frontage of homes and the street – avoiding a suburban character. Homes fronting the Common areas should be designed to form an attractive backdrop to this key space with attention given to creating a sense of enclosure.

### Roofscape/ Skyline

To create a strong link with the area's history and immediate context roofs should mostly be pitched. This is manifested in rectangular and L-shaped plan forms, with pitched, cat slide, hipped and half hipped roofs.

### Architectural Details

The form of development in the neighbourhood should respond creatively to the built and cultural heritage assets within the locality to emphasise the distinctiveness and identity of the new place. As with the original farmsteads each cluster can have a slightly different character, in terms of materials and architectural details, but that there is a strong overall character and identity for the area.



# Langarth Garden Village

## MASTERPLAN SUMMARY

### Terrain Adaptability Principles

Flat land is in short supply and Cornish towns and villages have adapted to building on steep slopes. Langarth Garden Village is no different and the undulating landscape represents a substantial challenge for future delivery. A fine balance between retention of existing character, including hedges, trees and lanes, and new methods of construction has to be found.

Steep landscape should be appreciated and worked with. Development at Langarth Garden Village must contribute to place and visual distinctiveness and topography can help with it.

#### Slope

Buildings can be stepped to reflect steep topography where necessary. Dwellings in these terraces may step individually in steeper locations, or step in pairs where the gradient is shallower. It will be necessary to explore non standard house types on particularly steep locations such as split level and upside down typologies to maximise views and address topography challenges.

Where keeping the levels untouched is not feasible, re-profiling should be minimised and should follow the cut and fill principles set out as part of this section. Land taken from one place, should be compensated in the location nearby to where it has been taken from. Open space and gardens should be stepped to accommodate level changes. Plot and building edge conditions and boundary treatments have to respond to existing or re-profiled terrain to allow for a seamless connection with the adjacent development. Building frontage has to allow for access off the street, and be accessible.

#### Orientation

Most areas at Langarth Garden Village are north facing, meaning most properties need to optimise west and east orientations to get solar gain.

Buildings must primarily be orientated in a way they can maximise the benefit of positive solar gain in cooler seasons and provide shade where necessary in the summer.

It is important to note that this approach must also be considered to landscape, open public space, community buildings as well as residential dwellings, to avoid overshadowing.

Initial design considerations should inform and shape any development proposals. These include:

- Designing and positioning new buildings to maximise beneficial solar gain in cooler seasons and provide shade where necessary in the summer;
- Maximising the benefits of both sunlight and shade within the design of the streets, open spaces, greenspace and gardens, to create attractive and comfortable external environments;
- Careful location of food growing within private gardens to benefit from sunshine throughout an extended growing season;
- Using landscape features to provide shelter from prevailing winds in exposed areas, and orientating buildings to avoid exposure to key evaluations;
- Considering climate change mitigation and adaptation in the design of buildings and landscape; and
- Roof orientation is important to maximise generation opportunities for PV.

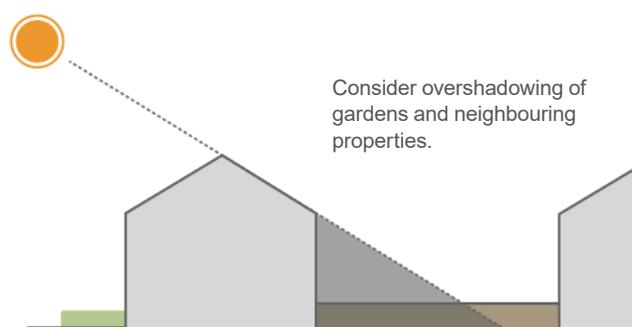


Fig.103: Orientation Diagram. Extracted from Housing Design Guide - Contemporary Cornish Living

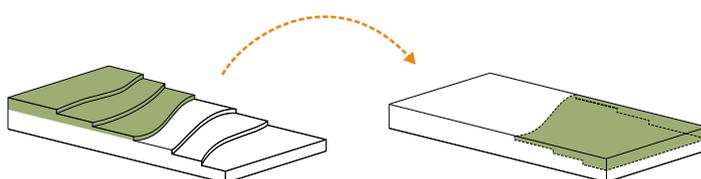


Fig.104: Cut and Fill Balance diagram

## Cut and Fill Strategy

The existing site generally has a steep topography with ground slopes ranging between 5% and 20%, with a significant proportion of the land zoned for development at 5% to 10%.

The four main features that determine proposed site levels are: existing features to be retained, street gradients, drainage, and development platform slopes. All of these elements need to be considered together and have to be checked to ensure that they tie in with the boundary constraints of the site.

Development platforms for buildings, gardens, courtyards, create a requirement for a relatively level slope across the development parcel. In general a slope of approximately 7% should remove the need for any significant retaining structures, although the exact plot layout will determine what may be required.

As outlined above, the majority of the developable site has an existing fall of around 8% and steeper. By inspection, a development parcel gradient of 7% is going to create a requirement for cut and fill. The general method for determining the extents of cut and fill has been as follows:

1. Extend principle street corridors from fixed existing points using the maximum allowable gradients and fix proposed street levels;
2. The vertical alignment of the NAR has been developed considering existing site constraints, geometrical design standards and the feasibility of adjacent development

plots. The vertical alignment of this primary street has dictated the extents of the earthworks cut and fill for the highway works. In general, the extents of the highway interface with the existing ground level at a gradient of 50%;

3. Determine locations of attenuation basins and fix levels of basin base and top water level to suit incoming drainage, outfall points and available land; and
4. Ascertain boundary levels for development parcels, considering items 1 and 2 above, together with fixed existing ground levels, retaining routes and Cornish hedges, and check the resulting overall slope across the parcel.

In general, where the resulting parcel slope is steeper than 10%, retaining structures will be introduced where possible to try and 'level up' the development platform, this could be in front or back gardens or the building itself. Where possible the aim is to balance the cut and fill however this is not always possible where a number of the above constraints all come in to play.

In some locations, the space available to remove the level differences is limited, therefore significant depths of cut and fill cannot be avoided. This can principally be seen for Penventinnie Square and other areas to the East of the site where there is a cut depth of up to 12m.

The cut and fill strategy must be developed in line with phasing to identify areas of storage for future use throughout the site. No cut and fill will be stored in the flood plain.

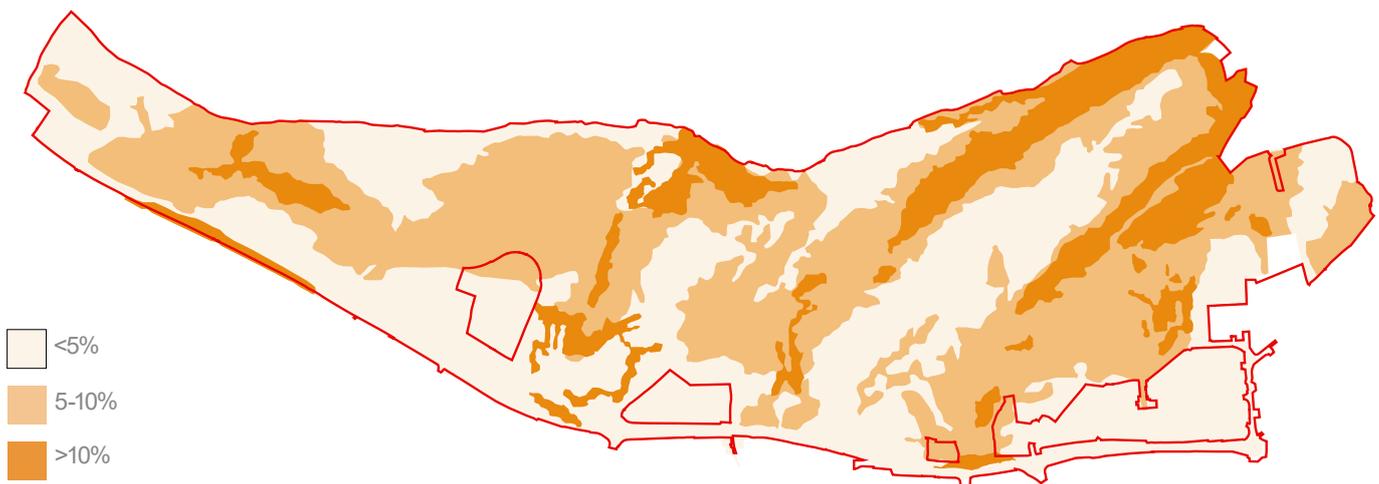


Fig.105: Slope Plan



- Following Cornwall Council's declaration of a Climate Emergency in January 2019, all buildings should be designed to allow progression towards achieving full Zero Carbon by 2030.
- The frequent review of the Design Code should assess the validity of the Sustainable Design Standards and seek to amend and improve upon the targets wherever possible to meet changes in legislation or technological advancements.

### Sustainable Design Standards

The Langarth Garden Village design principles form a key part of the masterplan strategy to deliver a highly sustainable development suitable for future living. Designing for climate change resilience is one of the fundamental principles of Langarth Garden Village.

#### Cornwall Council Climate Change Emergency

On 22 January 2019 Cornwall Council declared a climate emergency. The Council committed to reducing carbon emissions and to work towards becoming carbon neutral by 2030, a full twenty years ahead of the UK Government's target of 2050.

Cornwall Council's plan comprises several proposals including powering all new homes with alternative energy and making energy efficiency improvements to existing Council owned housing.

As a Cornwall Council led masterplan, the new development also offers a unique opportunity to deliver new buildings at the cutting edge of sustainable design. The Langarth site offers developers the scope to deliver an exemplar of Zero Carbon development.

In order to deliver the development to industry leading levels of sustainability, a series of Sustainable Design Standards have been developed. Designing new homes and buildings in accordance with a series of robust Standards will help achieve a zero Carbon development. The Standards offer developers guidance in how to achieve Zero Carbon performance, and are graded in three tiers; Silver, Gold and Platinum.

At the outset of development it is anticipated that the Silver Standard would typically be adopted, achieving Zero Carbon in operational energy only. Higher standards could be targeted at the outset if developers elect to do so. The following two stages would be implemented over time as the county progresses towards its Carbon Neutral target. As higher standards are adopted so the adoption of lower standards will become invalid.

Through consultation with specialists, it is envisaged that the Langarth Garden Village masterplan could achieve full Zero Carbon performance within the site boundary and as such implementing offsetting to other areas should be avoided.

### Reference Guidance

The following reports, documents and standards have been referenced in the compilation of the Sustainable Design Standards for Langarth Garden Village:

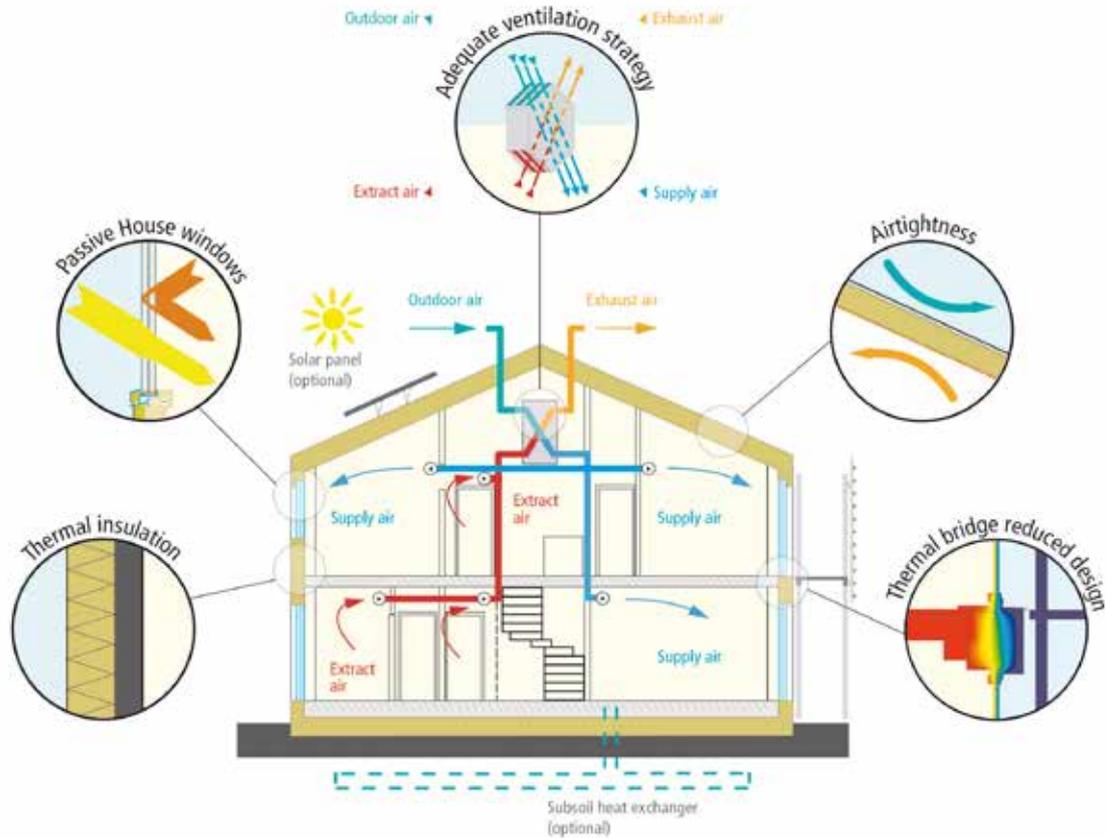
- Cornwall Environmental Growth Strategy;
- Building Regulations - Approved Documents L and F;
- RIBA – 2030 Climate Challenge;
- Passivhaus Standards;
- Future Homes Standards;
- London Energy Transformation Initiative;
- Building with Nature;
- Buildings for Life;
- United Nations - Sustainable Development Goals;
- Intergovernmental Panel on Climate Change.

The study of the above documents has shaped the content of Sustainable Design Standards, and highlighted the aspects of Sustainable Design that should be addressed by developers to deliver a Zero Carbon development.

The aspects included are Energy Efficiency, Embodied Carbon, Green House Gas Emissions, '360o Energy' and Mobility. It is noted that reducing potable water use has not been targeted in the standards, as the current Building Regulations are seen to sufficiently address this issue. The impact of potable water use on achieving zero-carbon developments should, however be reviewed as building performance improves.

# Langarth Garden Village

## MASTERPLAN SUMMARY



### Fabric Energy Efficiency

A fabric first approach will allow a more robust path towards meeting the UK's climate targets. By starting off with a well performing thermal envelope the gap to be made up by the systems will be smaller and less costly.

### Energy Use Intensity

Energy Use Intensity includes all energy uses in the building (regulated and unregulated) as measured at the meter and exclude on-site generation.

### Quality

With rising focus on the quality of housing across the UK, we have introduced an added consideration for commitment to a clerk of works who will inspect the workmanship, quality and safety of work on construction sites and report back to senior managers and clients.

### Embodied Carbon

The RIBA 2030 Climate Challenge document details targets for embodied carbon taking into account the latest recommendations from the Green Construction Board and have been developed in consultation with other UK professional bodies. The term embodied carbon refers to the 'upfront' emissions associated with building construction, including the extraction and processing of materials and the energy and water consumption in the production, assembly, and construction of the building. It also includes the 'in-use' stage (the maintenance, replacement, and emissions associated with refrigerant leakage) and the 'end of life' stage (demolition, disassembly, and disposal of any parts of product or building) and any transportation relating to the above. Embodied carbon is a topic that is becoming more relevant and important as we reduce operational carbon.

### Green House Gas Emissions

The UKGBC Net Zero Carbon Buildings, sets out definitions and principles around two approaches to net zero carbon. Developers aiming for net zero carbon in construction should design the building to enable net zero carbon for operational energy, and where possible this should be achieved annually in-use. Net zero carbon for both construction and operational energy represents the greatest level of commitment to the framework. This has been reflected in the formulation of the Silver and Gold Standards.

### 360° Energy

"Net zero carbon" is not the same as "zero carbon" even though the terms are often used interchangeably. The "net" element essentially treats CO2 emissions like a balance. The problem is that this is not how our energy system works; however much solar power is generated or off-site credits bought, it doesn't actually eliminate the emissions generated, they are still out there and that is why a development is considered "Net Zero Carbon" rather than "Zero Carbon".

To address the balance of supply and demand, we have proposed a 360° approach which considers the inter-connected elements of supply (Energy efficiency, Electric Vehicles, Demand Side Management, Battery Storage) and demand (Self-generation, Procurement), in real-time. Aiming to match the two, achieving a zero carbon standard, and reducing energy bills and infrastructure costs.



#### Silver:

- The 'Silver' standard achieves Net Zero Carbon for operational energy and is based upon the principles of the UK Government's Future Homes Standard (FHS).
- Building to the Silver standard should help with future adaptability in moving towards reduced energy use and complete carbon neutrality.

#### Gold:

- The 'Gold' standard drives building energy efficiency towards Passivhaus levels, without seeking specific certification.
- Zero Carbon achieved for building operation and residents' transport, in both new build and existing properties.

#### Platinum:

- Passivhaus standards and methodology applied to all buildings, with certification required at completion.
- Full Zero Carbon managed and monitored in real time throughout the year.



## Fabric Energy Efficiency

- Future Homes Standard Part L 2020 Option 1

- Reduced space heating demand to 15kWh / m<sup>2</sup>

- PassivHaus Plus
- Reduced space heating demand to 15kWh / m<sup>2</sup>
- Airtightness  $\geq n 50 = 0.6 / h$

## Energy Use Intensity

- Domestic <70kWh / m<sup>2</sup> / year
- Non-Domestic <110kWh / m<sup>2</sup> / year

- Domestic <35kWh / m<sup>2</sup> / year
- Non-Domestic <55kWh / m<sup>2</sup> / year

- PassivHaus Plus
- Primary Energy Renewable  $\leq 45kWh / m^2 / year$
- Renewable Energy Generation  $\geq 60kWh / m^2 / year$

## Quality

- Commitment to Clerk of Works

- Commitment to Clerk of Works

- Commitment to Clerk of Works
- PassivHaus Plus Certified

## Embodied Carbon

- Calculate Embodied Carbon using a recognised LCA Tool
- In line with RIBA Climate Challenge 2030 targets

- Domestic <450kgCO<sub>2</sub> / m<sup>2</sup>
- Non-Domestic <650kgCO<sub>2</sub> / m<sup>2</sup>
- In line with RIBA Climate Challenge 2030 targets

- Domestic <300kgCO<sub>2</sub> / m<sup>2</sup>
- Non-Domestic <500kgCO<sub>2</sub> / m<sup>2</sup>
- In line with RIBA Climate Challenge 2030 targets

## Green House Gas Emissions

- Net Zero Carbon
- Operational only

- Net Zero Carbon
- Operational and Embodied

- Net Zero Carbon
- Operational, Transport and Embodied

## 360° Energy

- Monitoring half-hourly tracking
- Reporting of live energy demand and supply

- 360° energy review of a building to optimise mix of renewables, storage, smart energy management and efficiency

- Full 360° energy review of site to optimise mix of renewables, storage, smart energy management and efficiency

# Langarth Garden Village

## MASTERPLAN SUMMARY



- Buildings should be designed to adapt to changes in lifestyle and the needs of different people. Internal layouts should be easy to change, with the scope for rooms and spaces to perform multiple functions, allow adaptation to different working methods, allow the installation of wheelchair access features, and to allow the ability to convert or extend.

### Building Adaptability

#### Home Workspace



The easy conversion of a secondary living space or bedroom into a home work space should be designed and suitable details incorporated to all dwellings.

The operation of this space as a work space should be carefully considered to minimise the disruption to and from family life in the remainder of the dwelling. This should include the location of the room to allow meetings.

#### Mixed Use Ground Floor



Where buildings and dwellings are located in local centres, the ground floor should be designed to allow the adaptation into small commercial premises to allow the natural growth of the community facilities in Langarth Garden Village.

The storey height of the street level floorplate should be a minimum of 4m (to the next floorplate above) to allow multiple varied uses to be accommodated.

#### Parking infill



The parking provision proposed in the masterplan should be adaptable to suit an anticipated reduced car use over time.

Areas of parking should be considered for future planting and growing spaces.

Communal parking areas should be designed such that they can be readily converted into community growing areas or to take community buildings. For detail see ##

### Electric Car and Bike Charging



All dwellings should have the facility for electric car and bicycle car charging points to allow adoption of a low carbon transport strategy throughout the development.

### Loft Conversion



The minimum 35 degree pitch of roofs throughout the development should help enable the conversion of loft spaces into liveable floor space.

The detail of roof structures should be designed such as to allow future conversion without major structural change.

### Extensions and outbuildings



Where extensions, outbuildings or other free-standing structures are proposed in dwelling curtilages they should not dominate the existing building in shape or size, and should preserve the principle frontage. Roof forms in particular should seek to complement the original house in design. The size colour and texture of materials should match or complement the existing building. Proposals should not negatively impact on neighbouring properties and should not be located close to the top of existing retaining structures.

### Accessibility



All buildings should allow easy adaptation to suit different and changing occupant accessibility requirements.

It is recognised that site topography presents challenges to accessibility but solutions to address easy access to buildings should be sought throughout.

As a minimum, the Lifetime Home Standard should be applied to all apartments and to other dwellings where topography challenges can be practically addressed.

# Langarth Garden Village

## MASTERPLAN SUMMARY



- Sufficient storage of waste and recycling must be provided within a properties boundary. It should be easy and convenient for people living and working at Langarth Garden Village to recycle as much as possible
- Space for compost bins is recommended to buildings with gardens to help support growing area use.

### Recycling and Waste Storage Strategy



For each dwelling the storage space should be able to accommodate:

- 1x 180 litre wheeled refuse bin
- 2x 60 litre recycling bags
- 1x 34 litre recycling bag
- 1x 55 litre black box
- 1x 32 litre food waste caddy

Wherever possible apartments will have their own containment, as detailed above, within a dedicated residents refuse and recycling. Larger bins can be used (bulk bins) but they must be the following:

Refuse must be stored in a bulk bin no bigger than 1100 litres per bin.

Dry recycling must have individual bulk bins for individual waste streams and each bin must be no bigger than 360 litres.

All homes should have a designed refuse area capable of holding a wheeled refuse bin and a range of recycling containers. The space should be flexible enough to cope with future changes in waste and recycling equipment.

Recycling and waste storage areas should be integrated into a building design wherever possible, perhaps as part of the cycle storage structure.

External containers or structures should be finished with materials that suit the material palette of the character area within which they are located. Careful attention should be made to ensure external refuse buildings appear recessive in their surroundings.

Recycling and Refuse storage spaces should be of a sturdy and durable construction, with a minimum design life equal to the building, or if externally located of at least 15 years, to avoid burdening residents with maintenance costs.

The ventilation, cleaning and maintenance of refuse and recycling enclosures should be carefully considered, along with suitable access for refuse services.



## A - Apartments



Apartment buildings should seek to integrate Recycling and Waste storage provision within the communal ground floor extents of the building form. Locating the provision in the ground floor will avoid cluttering the surrounding streets with small cycle storage structures.

## B - Terraced



Terraced buildings should seek to integrate recycling and waste storage provision within the ground floor extents of the building form, where possible. Terraced buildings could integrate provision within shared boundary structures, to minimise visual impact of additional storage structures. This could include wrapping the store in the same boundary material and should be consistent within terrace forms.

## C - Detached



Detached buildings should seek to integrate recycling and waste storage provision within the ground floor extents of the building form, where possible. Detached buildings could integrate storage provision within lean to structures adjoining the main building, to minimise visual impact of additional storage structures. This could include wrapping the store in the same building material.

# Langarth Garden Village

## MASTERPLAN SUMMARY

### Car & Cycle Parking

#### Carparking

Limiting car parking at trip origins is a key tool in reducing car ownership and use. In addition, parking should not dominate the street scene. The masterplan is designed to reduce the need for car ownership, by ensuring walkable neighbourhoods and providing excellent public transport and cycle facilities.

The emphasis is on creating a sustainable development. Parking will therefore be provided at levels below the maximums generally permitted elsewhere in Cornwall. The following table sets out the current Cornwall Council Parking Standards and the reductions that would apply at the development site. These must be reviewed if and when the Council Parking Standards are updated:

It is however anticipated that that there would be some complementary parking between residential and non-residential uses (e.g. retail-related parking being used overnight by residents). In addition, a limited amount of visitor parking spaces (maximum 1 space per 5 dwellings across site) can be provided on-street, but these should be located some minutes' walk from residential areas to discourage on-going use by residents. The amount of visitor parking should be increased in areas within 640m (10 minutes' walk) of the school, as these areas are more likely to be used for school drop offs. Careful design is required to limit unauthorised and ad-hoc parking opportunities (including pavement parking).

Covenants should be in place to prevent the conversion of front gardens to parking.

#### Location and parking layouts

Parking will be provided in a mix of on-plot, courtyard and on-street areas. On-street parking within adopted areas must not be allocated to particular dwellings. All on-street parking is to be within clearly defined bays to limit ad-hoc parking. Parking bays should not be provided directly adjacent to cycle routes due to the danger of dooring incidents occurring.

In order to limit visual impact, parking in, or visible from the public realm should be limited to small groups of no more than 3 bays (parallel parking or 5 bays (perpendicular parking)), separated by kerb buildouts, planting or street furniture. Parking bays should drain towards the street.

The following bay dimension should be observed:

- Parallel parking bays - 2m wide x 6m long
- Perpendicular parking bays - 2.4m wide x 4.8m long.
- A 6m clear area will be required to allow vehicles to reverse into and out of these bays.
- Echelon parking – dimensions and reversing areas to be determined via swept path analysis. Drivers should be encouraged to reverse into the bays as this is safer than reversing out.

The requirements for the layout of disabled bays are set out in the [Inclusive Design Section].

Motorcycle parking areas must be provided with convenient locking opportunities. Whilst it will not be necessary to mark individual bays, an allowance of 2m x 0.8m should be made for each motorcycle.

#### Parking Controls

The potential need for controlled parking within the development should be discussed with Cornwall Council as part of any planning application. It is important that the

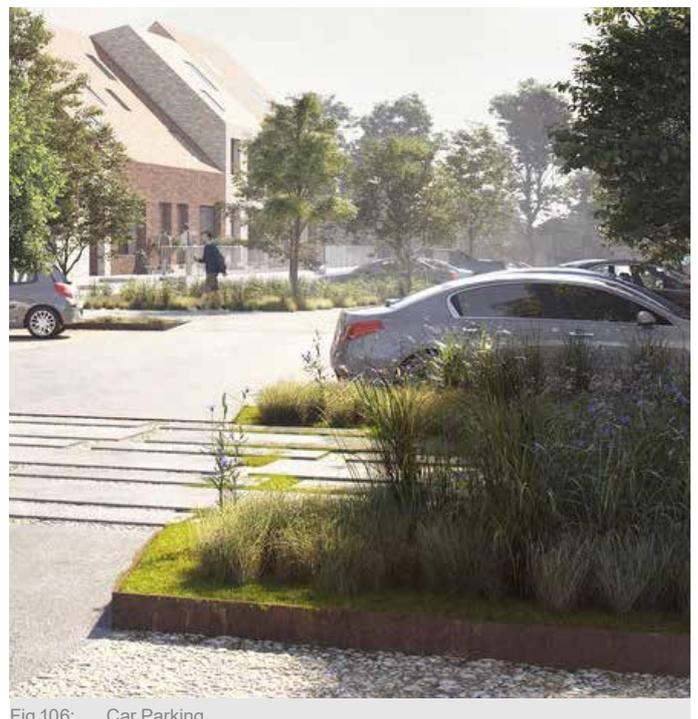


Fig.106: Car Parking

parking regime on the site is compatible with existing parking controls within Truro. In order to reduce street clutter, any on-street parking or waiting restrictions should be in the form of Controlled Parking Zones, with signage on entry to the zone. In such zones, parking would only be permitted in identified bays.

If residents' parking controls are introduced, there may be a cost to residents associated with this in order to cover management and enforcement

In order to discourage indiscriminate parking, all on-street parking must be in discrete parking bays. These should be indicated with features such as indented bays, planting and changes in surface finish, etc. that fit in well with the general

streetscape rather than being identified by conventional road markings.

LAND USE	Cornwall Council Max. Parking ratio	Langarth GV Max. Parking Provision
Food Retail	1 sp / 14 sqm GFA	1sp / 16sqm GFA (10% reduction)
Non Food Retail	1 sp / 25 sqm GFA	1 sp / 28 sqm GFA (10% reduction)
D2 including leaisure	1 sp / 25 sqm GFA	1 sp / 28 sqm GFA (10% reduction)
B1 (Including offices)	1 sp / 35 sqm GFA	1 sp / 39 sqm GFA (10% reduction)
B2 Employment	1 sp / 50 sqm GFA	1 sp / 55 sqm GFA (10% reduction)
B8 Warehousing	1 sp / 50 sqm GFA	1 sp / 55 sqm GFA (10% reduction)
Health Uses	1 / 4 staff + 1 per 3 consultation rooms	1 / 4 staff + 1 per 3 consultation rooms
Higher and further	1 sp / 2 staff + 1 sp / 15 total possible students	1 sp / 2 staff
All other schools	1 sp / 2 staff	1 sp / 2 staff
Community uses	1 sp / 5sqm public GFA	1 sp / 4 sqm public GFA (20% reduction)
Food and drink	1 sp / 5sqm public GFA	1 sp / 4 sqm public GFA (20% reduction)
Housing	1 sp / unit where highly accessible  2 sp / unit elsewhere	2 sp / unit for all units with 3 or more bedrooms  1 sp / unit elsewhere
Studios / bedsits	1 sp / 3 units	1 sp / 3 units
Care Homes	1 sp / 6 residents	1 sp / 6 residents
Hotels	1 sp / room	1 sp / room
Motorcycle / moped	2% minimum of all non-residential uses	2% minimum of all non-residential uses
Disabled Parking Provision	5% minimum of all non-residential uses	5% minimum of all non-residential uses

Fig.107: Figure 7

# Langarth Garden Village

## MASTERPLAN SUMMARY

### Cycle Parking

Cycle parking should be at least, if not more convenient than car parking.

The location, design and type of cycle parking is important to:

- Encourage all people to choose cycling as a mode of transport and supporting active travel
- Provide convenient, safe and secure facilities to lock and store bikes
- Reduce cycle theft
- Reduce obstruction and other nuisance caused by ad-hoc parking

Cycle parking within the site will be a mix of private and public facilities. Publicly available cycle parking should be provided at the following locations:

- Neighbourhood centres
- Health Centres
- Community facilities and services e.g. libraries, pre-school and day-care facilities, open spaces and play areas
- Schools / Colleges
- Workplaces
- Residential areas
- Key public transport stops / mobility hubs
- Leisure venues

Within the public realm, cycle parking is to be designed as an integral part of street design, in a prominent accessible location and connected with cycle routes. The areas of cycle parking are to be designed as secure as possible and are to

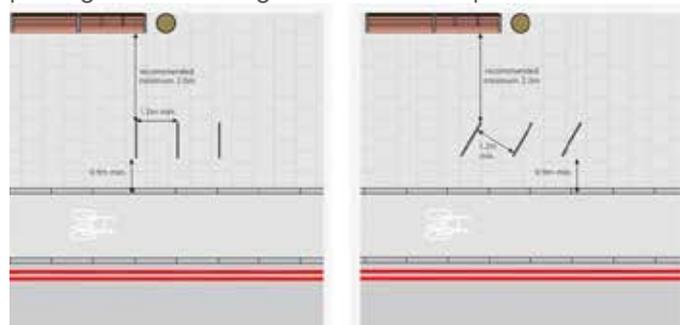


Fig.109: Figure 7

benefit from natural surveillance in the public realm.

The type of cycle parking to be provided will depend on the demand, trip purpose and length of stay. The provision will be fall into two categories:

1. Short Stay Parking
2. Long Stay Parking

### Short Stay Cycle Parking

Short staying parking will have a high daily turnover and cycles will be parked for a short duration, for example for a neighbourhood shopping centre. The use of simple tubular cycle stands (Sheffield stands) provide a simple, robust and cost-effective cycle parking solution. There are different types of tubular stands available and the selected cycle stands should be consistent with the adjacent street furniture.

Cycle stands located on-street should be highly visible, well-lit and clear of pedestrian and vehicle sight lines. The placement of cycle stands should not result in a reduction in width of the pedestrian footway. The visual impact of cycle stands can be reduced if they are placed between other items of street furniture, especially tree planting within an organised street furniture zone on-footway. Typical layouts on street arrangements for on street cycle stands are shown below.



Fig.108: Cycle Stands

Typical On-street Cycle Stand Layout (ref: TfL)

### Long Stay Cycle Parking

Long-stay cycle parking would be located at key transport hubs, residential accommodation or at workplaces. The facilities are to be located in a safe, secure, convenient and well-lit location. Different options for long stay cycle parking can be considered, such as

- Cycle lockers
- Secure shelters and compounds and cages

Cycle lockers would be appropriate solution for transport hubs. Secure shelters and compounds and cages can be used to provide additional security for long stay cycle parking at locations such as public transport interchange points, workplaces or residential developments. For secure shelter and compounds, the design considerations are:

- Security, for example access by fob or swipe cards for a registered user
- Type of cycle parking racks, allowing all types of cycles to be secured within the compound
- Personal security of those accessing the compound, including lighting, CCTV, visibility

- Future Management and maintenance of secure compound

Where visible from the public realm, the long-stay parking facilities should be designed to coordinate with street furniture in the local area.

The following locations are acceptable for long stay residential cycle parking:

- within garages
- within the house or apartment block;
- within the rear garden area, or
- within courtyard

In all cases, sufficient space must provided that cycles can be conveniently stored and moved into and out of storage. For example, for dedicated covered parking, a storage area will need to be a minimum of 1m x 2m (sufficient for 2 cycles if wall fixings are used). Although not an absolute requirement, long-stay cycle parking will generally be within the private realm and shorty stay cycle parking will generally be in the public realm.

LAND USE	LONG STAY CYCLE PARKING	SHORT STAY CYCLE PARKING
Food Retail	1 sp / 175sqm GFA for all units above 100sqm GFA	From a threshold of 100 sqm: first 750 sqm: 1 space per 40 sqm.
Non Food Retail	From a threshold of 100 sqm: first 1000sqm: 1 space per 250sqm	From a threshold of 100 sqm: first 1000sqm: 1 space per 125sqm
D2 including leaisure	1 space per 8 staff	1 space per 100 sqm
B1 (Including offices)	1 space per 150 sqm	1 space per 1000 sqm
B2 Employment	1 space per 250 sqm	1 space per 1000 sqm
B8 Warehousing	1 space per 500 sqm	1 space per 1000 sqm
Higher and further education	1 space per 4 staff + 1 space per 20 FTE students	1 space per 7 FTE students
All other schools	1 space per 8 staff + 1 space per 8 students	1 space per 100 students
Community uses	1 space per 8 staff	1 space per 100 sqm
Food and drink	From a threshold of 100 sqm: 1 space per 175 sqm	From a threshold of 100 sqm: 1 space per 40 sqm
Housing	1 space per bedroom	1 space per 40 units
Studios / bedsits	1 space per units	1 space per 40 units
Care Homes	1 space per 5 staff	1 space per 20 bedrooms
Hotels	1 space per 20 bedrooms	1 space per 50 bedrooms

Fig.110: Figure 7

# Langarth Garden Village

## MASTERPLAN SUMMARY

### Electric Vehicle Infrastructure and Parking

Electric vehicle charging infrastructure must form an integral part of the utility strategy and planned / integrated into the new development.

Every allocated residential parking space must allow for electric vehicle charging. In addition, charging points should be provided for 50% of unallocated on-street parking. Ducting and cabling should be installed for the remaining 50%. For apartment blocks a communal hook up point must be installed, the supply for which must be metered independently to any of the dwellings. For non-residential uses, any building with 10 or more spaces must have at least one charging bay. Additionally, ducting and cabling should be installed for 1 in 5 spaces overall.

All chargepoints must have a minimum power rating output of 7kW, be at least Mode 3 (or equivalent) and be fitted with a universal socket that can charge all types of electric vehicle currently on the market and meet relevant safety and accessibility requirements.

Key neighbourhood centres and transport hubs are to be provided with commercial chargepoints. The chargepoints to be provided are to be Superfast – 43/50 kW (AC/DC) points to allow 'rapid charge'. Cornwall Council is working with the ChargePoint Services' Genie Point network within the County. The chargepoints may form part of Mobility Hubs that include space for car clubs and electric bike stations.

### Car Clubs

Parking spaces are to be provided for Car Clubs at key neighbourhood centres, transport hubs, and employment areas. A car club provides its members with the convenience of a car without the costs of car ownership. Co-cars operates the existing Car Club in Truro in partnership with Cornwall Council. Developers should enter into a consortium to jointly commission a car club provider across the garden village. **Location of Car Club spaces to be agreed with local authority, Streetcar and the appropriate developer**

### Bike Hire Stations

A combination of bike and electric bike hire stations are to be provided at key neighbourhood centres, transport hubs, and employment areas. The location of the the bike stations are to be planned and integrated into new streets and spaces. The bike stations are to include docking stations for electric bikes to be re-charged. A single supplier is to provide and manage

the bike hire stations throughout Langarth Garden Village. This would be commissioned by a developer consortium.

All development parcels must utilise a variety of parking solutions and not rely on just one or two methods of accommodating cars.

On-plot parking must be positioned such that parked cars do not sit forward of the common or the projected building line in areas of high enclosure where a layout has established street continuity e.g. along strategic routes. This may be permitted along areas of lower density with larger set backs and in internal lanes / mews / courtyards.

All private parking spaces must be located with easy access to the dwellings they serve.

In no instance shall a group of more than 4 parking spaces in front of dwellings be proposed without sub-division by a landscape strip of minimum 1.5m or a large tree is planted in that row.

On-street parking, parallel to the carriageway, shall be laid out such that no more than three spaces are joined without sub-division by an area of landscape and sufficient space for planting of at least one street-tree, except in the District Centre and Local Centre squares.



Fig.111: Electrical Vehicle

## Communal Parking

The Sustainable Transport Strategy sets out the measures which aim to reduce car reliance, and reduce levels of second car ownership. The Parking Strategy works with this to ensure that the parking need is met across Langarth Garden Village, by adopting flexible, unallocated parking typologies, while also ensuring that parking does not visually dominate the neighbourhood.

Communal car parking will be provided around higher density areas. The valley topography lends itself well to podium parking typologies, meaning entrances can be designed sensitively and be visually open, providing improved natural surveillance, legibility and access.

Courtyard parking will be provided to supplement on-street parking. These will primarily be located to the sides of buildings, opening onto the street. Trees and low level planting around entrances will soften their appearance, while maintaining a good level of visibility. Car parking spaces will be unallocated, for use by both residents and visitors. Spaces will be limited to **10** spaces per courtyard.

Surfaces for communal parking areas will be permeable, this may be a permeably jointed, unitised paving system or a Shottenrasen, a stabilised gravel surface which is

permeable. Parking courts are present on the street in a number of locations, they afford opportunities for growing, communal recycling, cycle parking. They also offer opportunities for greening and in future, as car use reduces, bringing woodland and hedgerow character right into the street, close to homes.



Fig.112: Communal car parking

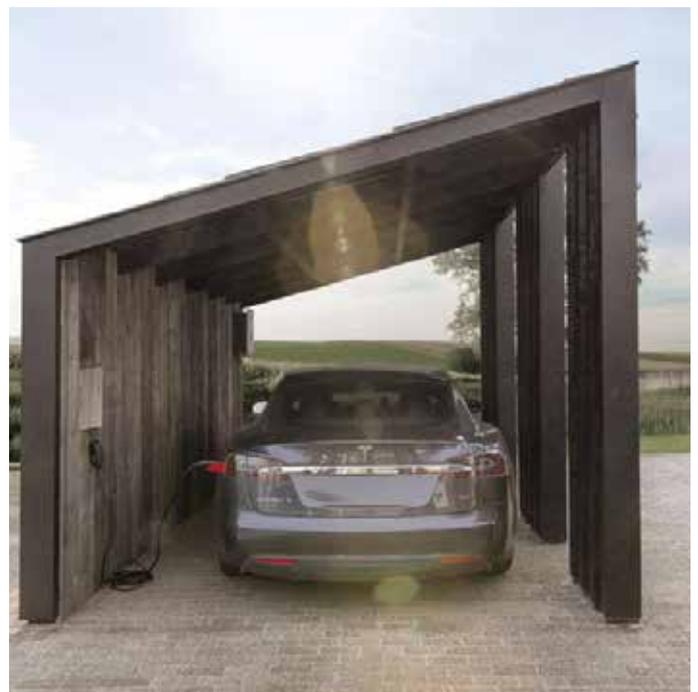


Fig.113: Individual car parking

# Langarth Garden Village

## MASTERPLAN SUMMARY



- Every dwelling in the development should have facility to securely store bicycles within the curtilage of the dwelling or apartment building.
- Each cycle store should be adaptable so as to allow the installation of an electric bike charging point(s), without compromising use for storage.

### Cycle Storage Strategy



A cycle store should be integrated into the dwelling design wherever possible to avoid clutter in the landscape, and could include additional storage for larger sports equipment, such as surfboards or golf clubs.

External cycle stores should be finished with materials that suit the material palette of the character area within which they are located. Careful attention should be made to ensure external refuse buildings appear recessive in their surroundings.

Cycle storage provision should be of a sturdy and durable construction, with a minimum design life of 15 years, to avoid burdening residents with maintenance costs.

Communal cycle stores, Electric bike clubs and electric bike charging facilities should be located centrally within neighbourhoods and be publicly visible. They should be designed in strict accordance with the material palette of the character area within which they are located, including the design of associated street furniture.

Where possible cycle and Recycling / Waste Stores should be combined within the same structure to avoid clutter.

## A - Apartments



Apartment buildings should seek to integrate cycle storage provision within the communal ground floor extents of the building form. Locating the provision in the ground floor will offer a secure and dry storage space to encourage use, and will avoid cluttering the surrounding streets with small cycle storage structures.

Designers should consider the provision of additional lockable storage for residents' large sports equipment.

## B - Terraced



Terraced buildings should seek to integrate cycle storage provision within the ground floor extents of the building form, where possible. Terraced buildings could integrate cycle storage provision within shared boundary structures, to minimise visual impact of additional storage structures. This could include wrapping the cycle store in the same boundary material and should be consistent within terrace forms.

Cycle storage structures should also provide additional storage for residents' large sports equipment.

## C - Detached



Detached buildings should seek to integrate cycle storage provision within the ground floor extents of the building form, where possible. Detached buildings could integrate cycle storage provision within lean to structures adjoining the main building, to minimise visual impact of additional storage structures. This could include wrapping the cycle store in the same building material.

Cycle storage structures should also provide additional storage for residents' large sports equipment.



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