

KOTO

In collaboration with

DARREN HAWKES LANDSCAPES

THE POINT, POLZEATH
DESIGN AND ACCESS STATEMENT

DECEMBER 2021

Volume 2

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4.0 DESIGN PRINCIPLES AND CONCEPTS
4.1 PROJECT ASPIRATIONS

The Point's ambition is to bring its guest closer to nature, through environment, architecture and experience.

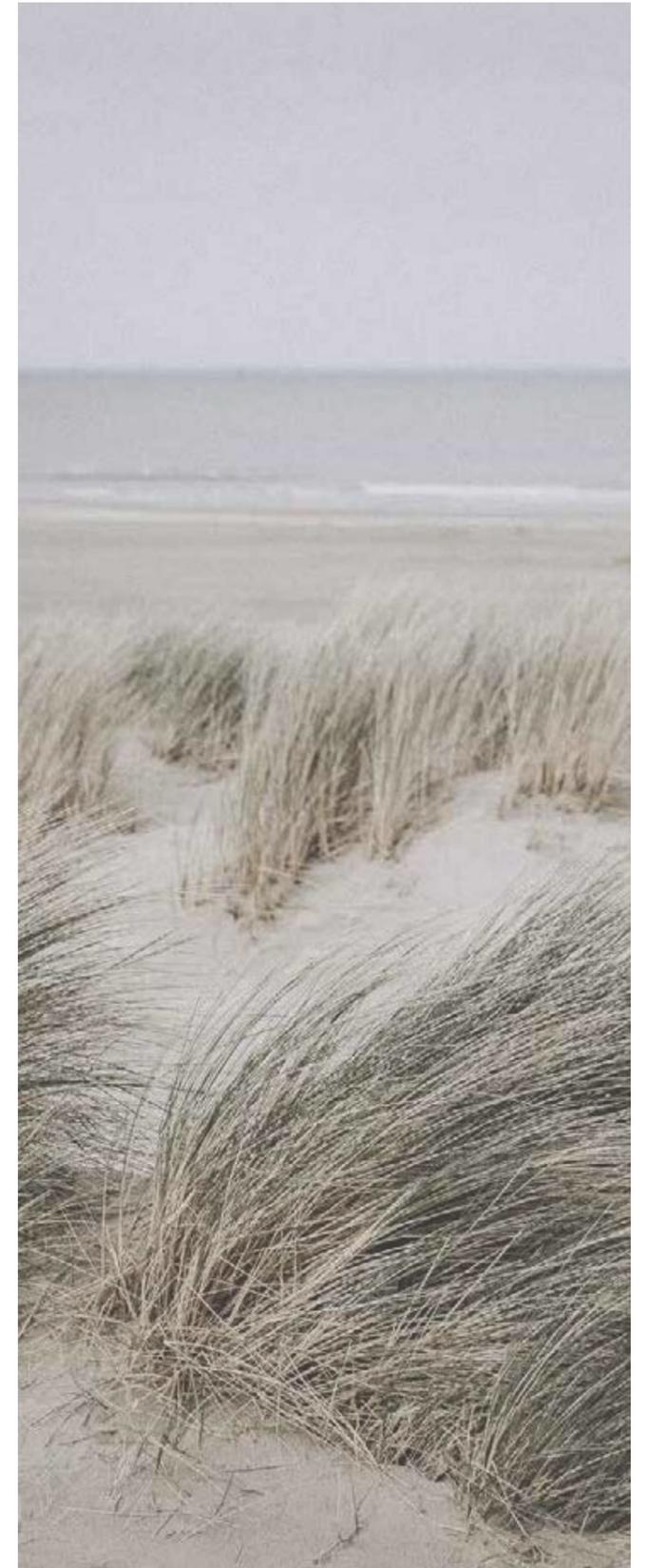
Fresh sea air, space, and an abundance of activities set in a re-wilding eco-resort. Creating holiday-home communities with a shared passion for nature.

The Point's location serves as a gateway to Cornwall and all it has to offer. Situated a stone throw away from some of the UK's finest beaches and breathtaking countryside a haven for surfers, walkers and bathers alike.

The vision is to create a coherent, natural, design-led eco retreat bringing clients closer to wild nature.

Outstanding design, unique amenities, a harmonious marriage of nature and modern design, quiet luxury.

Wild meadows with cut through walkways, spaces defined by the length of the grasses, seeding the margins with wildflowers of local provenance creating a calm, intriguing journey. Large areas of re-wilding are proposed that will set the scene of the new subtle and natural escapes. These will create wildlife corridors and set a sense of arrival.



4.0 DESIGN PRINCIPLES AND CONCEPTS
4.2 DESIGN APPROACH

The site and the landscape have been designed in collaboration between the client, architects and the landscape designers.

The brief for the design was set by the client and intended to be a high quality, sustainable and low-density development that will enhance the local area and bring more long-term holiday stays to the area to support local tourism and the economy of the south west.

The site itself has an existing occasional use as an airstrip but in reality, fits in the wider pattern of fields and hedgerows that make up the raised planes and plateaus of the wider Cornish landscape.

The design concepts developed are as follows:

1. Low Density

Amount

The amount of units proposed has been developed in order to give each unit a sense of space, privacy and to avoid 'over packing' the site to the point that it looks like a high-density development. The sparseness of the layout gives space for a wild landscape to be developed between the units so that from a distance it fits as part of the open countryside as opposed to obvious development.

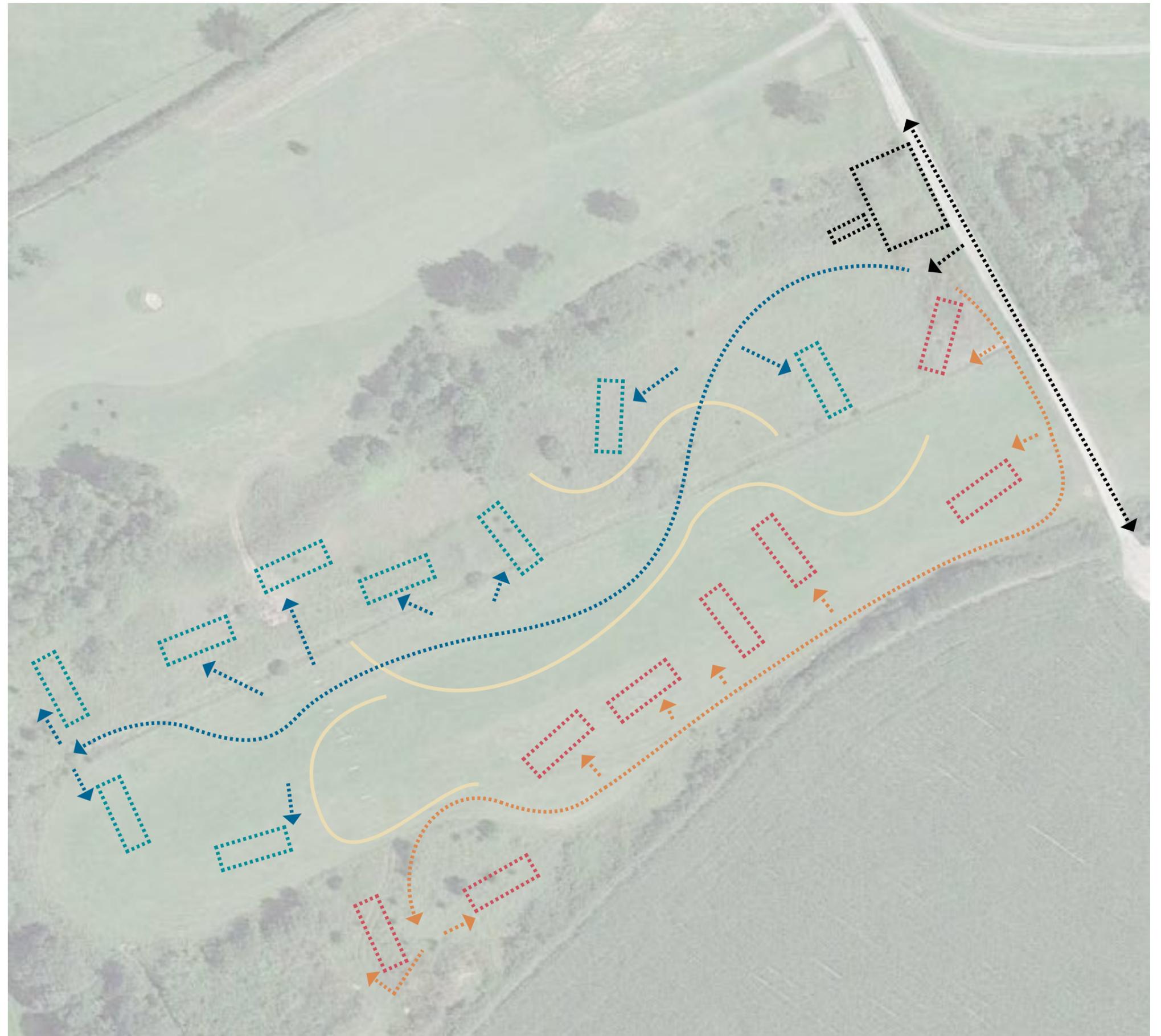
Layout

The design process for the development was completed with a ground led placing of each cabin to create the best mix of views, privacy and orientation for sunlight and prevailing winds.

Each area of the site has various benefits and each placement takes advantage of both the immediate context such as existing trees shrubs and planting as well as long distance views to the surrounding countryside and sea.

There are two distinct environments formed by the topography of the land, the higher plots which are more exposed with distant sea views and the lower plots that benefit from shelter and landscape views.

The access to each series of plots is as shown and is designed to impact the site as little as possible. Integrated into the landscape are a series of Cornish hedges which allow changes in level, privacy and a reference to traditional Cornish landscapes.



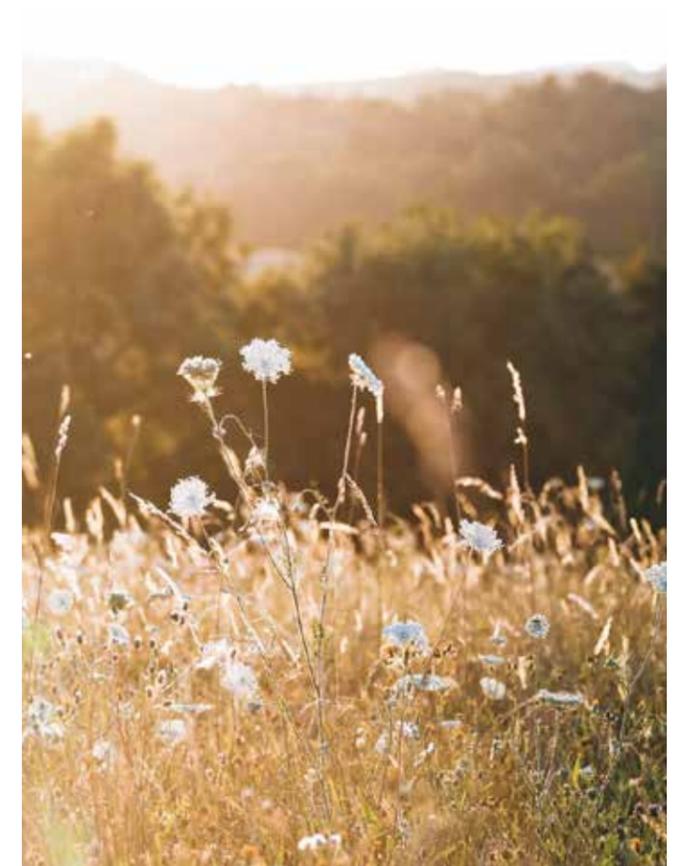
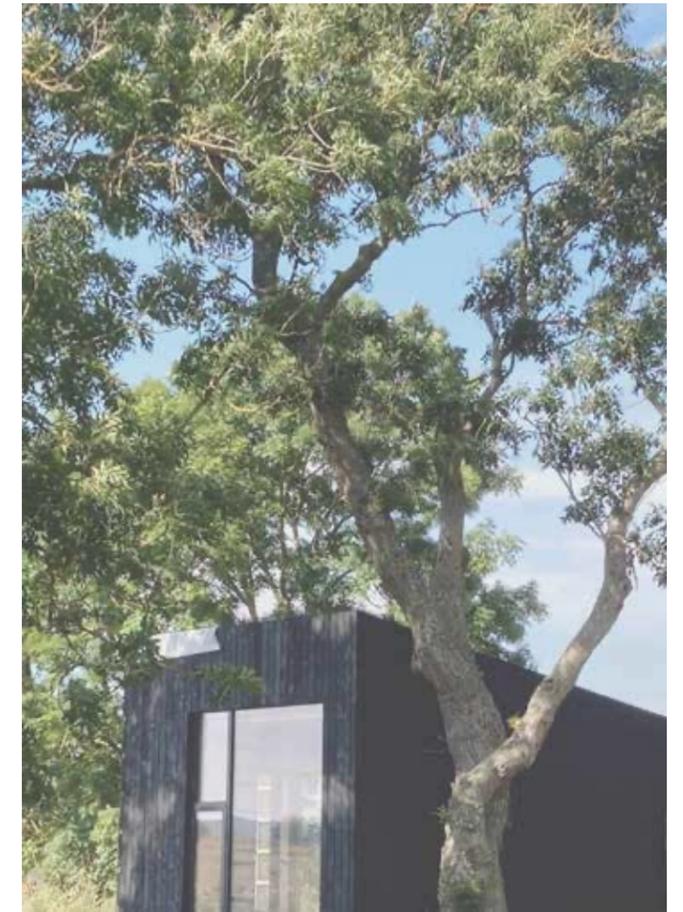
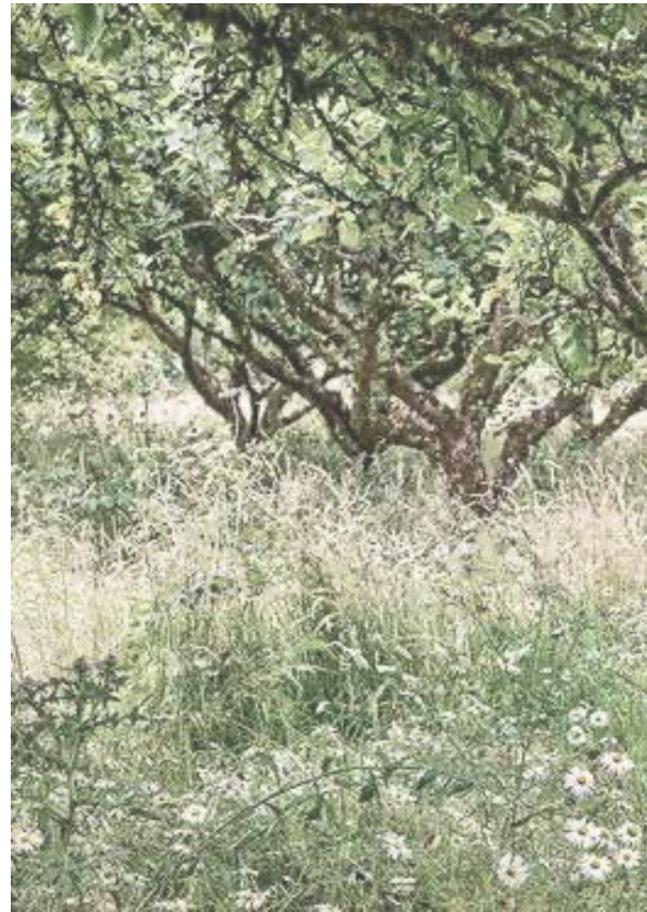
4.0 DESIGN PRINCIPLES AND CONCEPTS
4.2 DESIGN APPROACH

2. Re-Establish a more Wild Landscape

Landscaping and Appearance

The landscape strategy is one that seeks to blend with the surrounding countryside and develop over time. The buildings have been designed so that the roof forms will follow the topography and not jar against the landscape character.

The materiality of the cabins has been chosen to be a dark vertical timber cladding board. As most buildings will typically be seen against a backdrop of trees and planting this will help the built forms blend with the natural vegetation which forms the dark lines that criss cross the surrounding landscape.



4.0 DESIGN PRINCIPLES AND CONCEPTS
4.2 DESIGN APPROACH

The landscape design has been developed to respond to the wider Cornish landscape. The existing site is mainly grassland that is gently sloped down to the north west.

The landscape approach is to break down the scale of the large open grassland areas with Cornish hedging that runs across the site. Along with this a range of planting that forms a more natural appearance that will blend with the mature trees and hedgerows to the south and west.

The Cornish hedges form a unique vernacular response to the privacy and separation between each unit.

Areas of grassland will be allowed to grow with mown paths cut through them.



REFERENCE IMAGE: CORNISH HEDGE



INSPIRATION: ANDY GOLDSWORTHY



REFERENCE IMAGE: MOWN GRASS PATH



QUERCUS ILEX



PINUS RADIATA



CRATAEGUS MONOGYNA



HIPPOPHAE RHAMNOIDES



PINUS SYLVESTRIS

4.0 DESIGN PRINCIPLES AND CONCEPTS
4.2 DESIGN APPROACH

3. Structures that Respond to Views and Light

Scale

The scale of each cabin has been kept to the confines of the caravan act which limits the footprint to 20 metres in length by 6.8m in width. Internal ceiling heights are limited to 3.05m.

There are two design types and two bedroom variations for each design. Each of these has been developed in order to provide views, light and privacy across the site.

The design context is complex as the predominant views are to the north west, prevailing winds from the west and south west and sunlight generally to the south.

The concept has been to create structures that encourage people to be outdoors, connect with the wider Cornish landscape and temper the environment for wind, rain and bright sunlight. The main concept for this has been the integration of open courtyards into each design where the main living spaces can open onto outdoor decking areas and create hybrid indoor / outdoor spaces.

Materiality

The dark timber cladding has been chosen as this has the best chance of blending with the surrounding landscape. As with other design decisions the scheme is intended to blend with the surrounding planting and landscape features where the hedgerows and mature planting for dark bands across the landscape. Roofs are proposed as sedum which will naturally seed over time with local species.



4.0 DESIGN PRINCIPLES AND CONCEPTS
4.3 CABIN TYPE 1

The length of the Type 1 cabin sits perpendicular to the view with the roof form rising up from the south to the north.

The mass of the building is broken into three sections to minimise it's overall form in the landscape.

One of the key elements of the design is to create a space where the outdoors can be enjoyed in a variety of weather conditions. For this reason the central roof is angled in the other direction to allow sunlight into the open courtyard where inhabitants will be sheltered from the prevailing winds.

There are both a 2 and 3 bed variation with the living areas staying the same but the bedrooms are extending further out for the 3 bed.



ARTISTS IMPRESSION



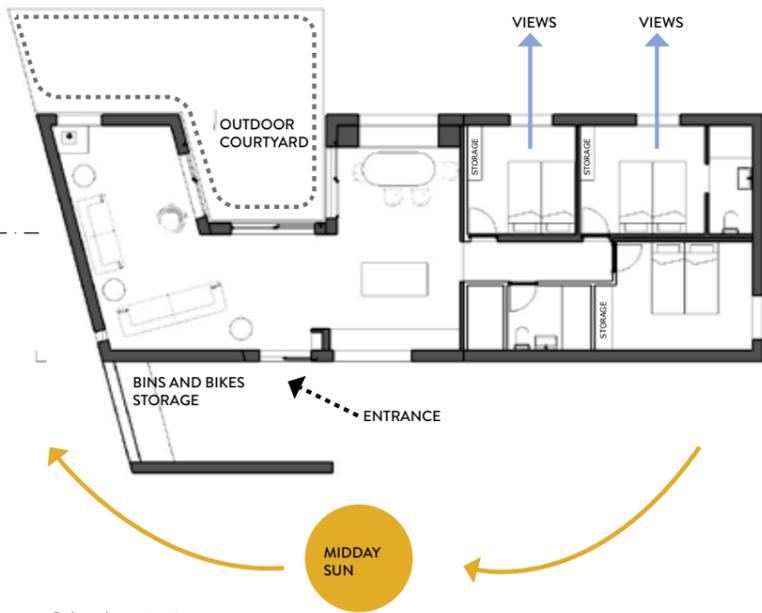
ARTISTS IMPRESSION



4.0 DESIGN PRINCIPLES AND CONCEPTS
 4.3 CABIN TYPE 1

KEY

- 1. Living room
- 2. Kitchen
- 3. Dining table & window seat
- 4. Terrace
- 5. Entrance
- 6. Service cupboard
- 7. Shower room
- 8. Bedroom
- 9. Bike and bin storage



3 bed variation

2 bed variation

4.0 DESIGN PRINCIPLES AND CONCEPTS
4.4 CABIN TYPE 2

TYPE 2

The Type 2 cabin is aligned parallel to the view. The roof form has been aligned so that it falls from the eastern high point down to the west. This mirrors the topography of the site and presents the green roof to people that may view the development when walking on the footpaths to the west.

Due to the form mirroring the topography this cabin has been kept as a single form as its mass will be less apparent from distant views.

The courtyard is facing to the west to catch afternoon sunlight, this also provides the entrance to the cabin and will provide some shelter from the wind.

The courtyard is glazed around three sides provides long views through the building out to the views beyond.



ARTISTS IMPRESSION



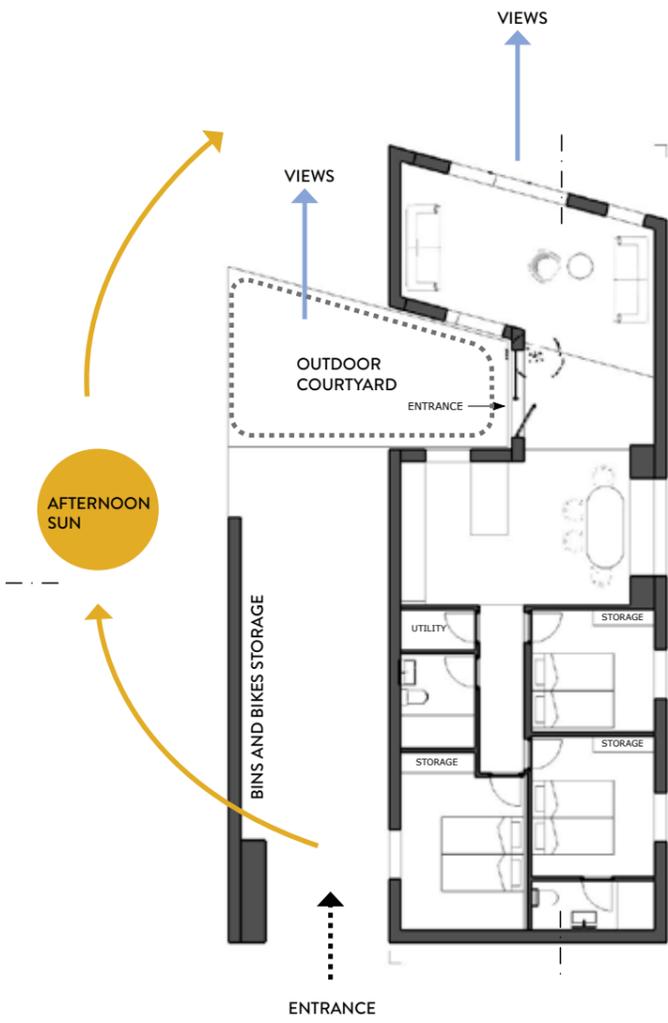
ARTISTS IMPRESSION



4.0 DESIGN PRINCIPLES AND CONCEPTS
 4.4 CABIN TYPE 2

KEY

- 1. Living room
- 2. Kitchen
- 3. Dining table & window seat
- 4. Terrace
- 5. Entrance
- 6. Service cupboard
- 7. Shower room
- 8. Bedroom
- 9. Bike and bin storage



3 bed variation



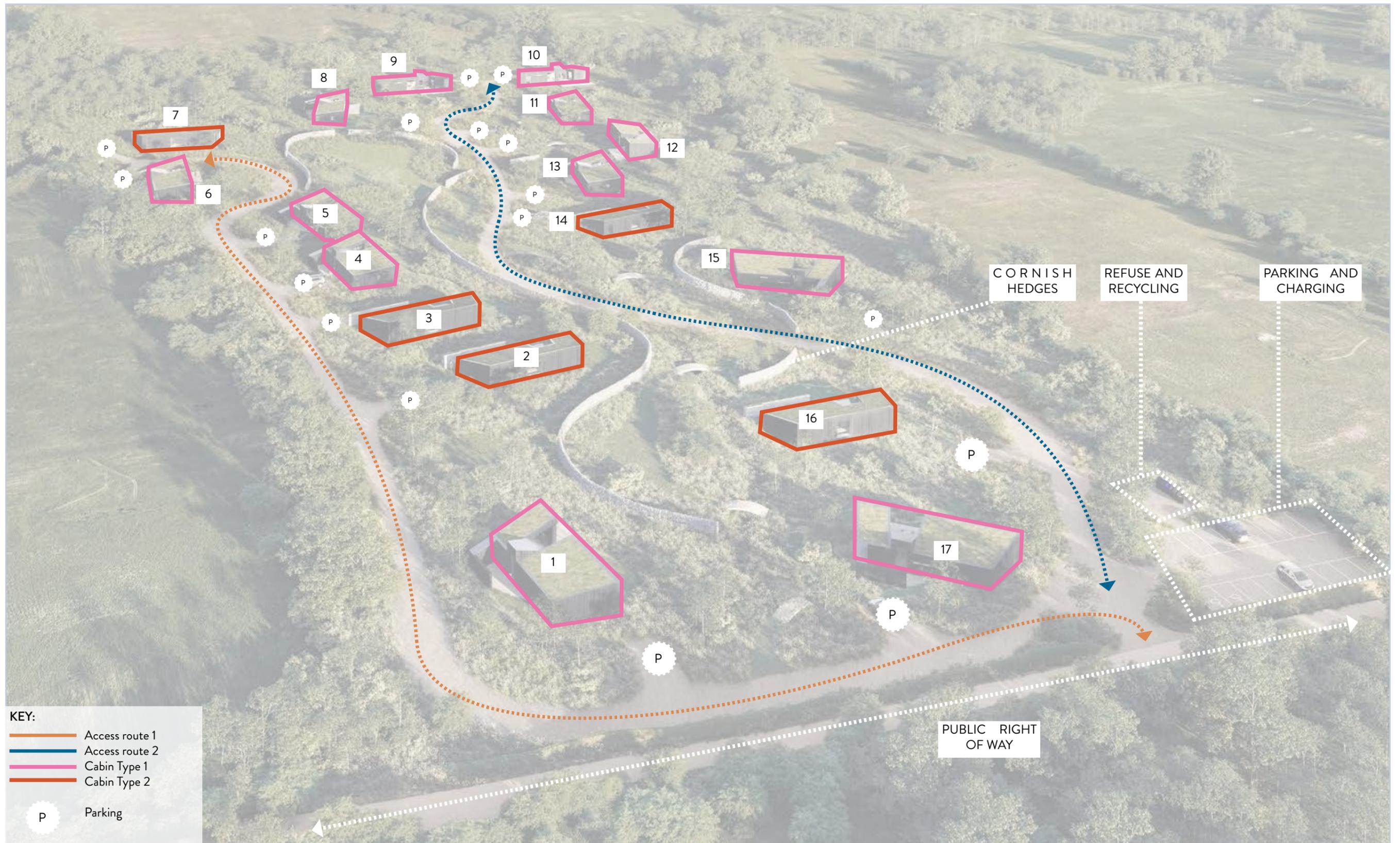
2 bed variation

4.0 DESIGN PRINCIPLES AND CONCEPTS
 4.5 MASTERPLAN PROPOSALS





ARTISTS IMPRESSION



5.0 SUSTAINABILITY

5.1 APPROACH

Sustainability is at the core of this development. A key focus of this design is building the cabins with nature to protect the environment and to encourage biophilic living; a connectedness between people and the natural world.

The homes are built out of sustainably sourced FSC accredited timber which holds carbon dioxide in the fabric of the buildings, actively removing it from the atmosphere and creating a carbon-neutral construction.

Each of the lodges will be pre fabricated off site and then towed into place to rest on a local foundation and service connections.

High performance building envelopes which exceed the building regulation requirements for new homes and buildings mean that the cabins can be run with very low energy input.

The buildings are designed to be fully breathable which allows for extremely long lifespans . This means that any moisture that is trapped in the walls, floors or roofs can dry out which is key to the building life-span.

The foundation proposal is to use helical screw piles as they have a low carbon footprint, are simple to install and can be removed after the lifetime of the building, returning the ground to its original state.



ARTISTS IMPRESSION

TY UNNOS SYSTEM

Based on the award-winning Ty Unnos research and development project, WoW Systems manufacture, supply and construct high performance modular and prefabricated buildings combining homegrown and Welsh softwood with locally sourced, natural and recycled products. Suitable for even the most challenging of sites, and fully adaptable to any design or performance requirements, the system provides a uniquely Welsh rapid construction solution for high quality, sustainable and affordable buildings.

Although the systems employed by WoW Systems offer great opportunity for cost effective standardisation and volumetric construction, the system components are highly flexible and can be tailored to all designs and building types. The company have delivered a portfolio of award winning buildings over the last 10 years, providing everything from large span engineered timber beams to fully fabricated architect designed kit homes.

Wales has nearly 80 thousand hectares of Sitka Spruce, accounting for approximately 70% of the total conifer cover. In its native range of North America, Sitka spruce grows slowly to a great age. British spruce however grows much faster producing timber of lower density with heavier branching and larger knots. It is processed for a number of markets including fencing, wood fuel, chipboard and pallets. The most important commodity produced is C16 graded carcassing timber, the lowest strength class in general use. It is seldom used in modern timber frame construction, with manufacturers preferring imported softwoods due to their greater stability and superior strength.

However the innovative research and development completed by WOW allows this highly sustainable material to be utilised as a primary building resource.



Structural building sections



Example of the system used for portal frames.



Volumetric housing construction.

BUILD SYSTEM - WOODS OF WALES

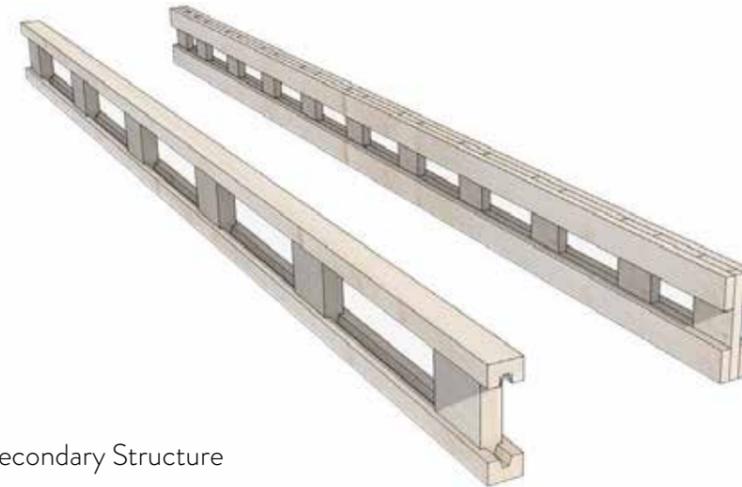
At the core of the Ty^ Unnos system are two simply assembled engineered timber components; a hollow box section beam and a timber based infill panel. When combined with frame connectors, 'breathable' sheathing boards, and natural and recycled insulation products, the engineered components form a flexible and innovative prefabricated kit of parts. Used independently the components offer marketable alternatives to solid glue-lam beams and composite engineered timber joists. Developed, tested and certified to European performance standards, the system components offer a highly efficient prefabricated Modern Method of Construction which can significantly reduce impact on site, construction related waste and on-site construction periods.

PRIMARY STRUCTURE

Sitka Spruce Hollow Box Section
Up to 16m Span
Infilled with recycled newspaper insulation.



Primary Structure



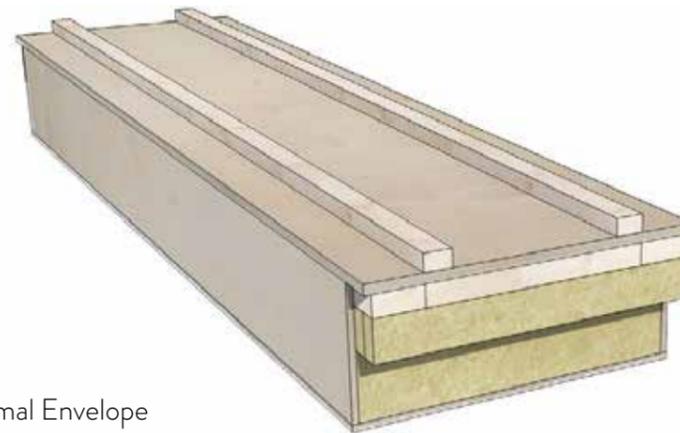
Secondary Structure

SECONDARY STRUCTURE

Sitka Spruce Ladder Beam and Stud
Up to 3m Span
Reduced thermal bridging.
Adaptable to accommodate variable specifications of thermal performance.

THERMAL ENVELOPE

Dimensionally Coordinated Infill Panel System
Up to 3.6m Span
Fully prefabricated in factory conditions
Infilled with recycled, natural and waste product based insulations.
Coordinated and interchangeable for walls, floor and roof.
Designed to be lifted and assembled by hand.



Thermal Envelope



ABOVE: Structural Testing.
BELOW: Primary Structure Assembly



5.0 SUSTAINABILITY
5.4 BUILDING FABRIC

External Wall Construction

External wall construction is as follows:

INSIDE

Service cavity

Airtightness Board

150 Ty Unnos structural frame and panels with warmcel infilled insulation.

Panelvent breather board

membrane

25mm x 50mm battens vertically

25mm x 50mm battens horizontally

Larch cladding - Profiled with various thicknesses.

OUTSIDE

Roof Construction

Roof construction is as follows:

INSIDE

Service cavity

Airtightness Board

300 Ty Unnos structural frame and panels with warmcel infilled

Panelvent breather board

membrane

25mm x 50mm battens vertically

25mm x 50mm battens horizontally

Sheet deck with membrane

Decking in roof terrace areas

OUTSIDE

Floor Construction

Ground Floor construction is as follows:

INSIDE

Floor finish

T&G structural sub floor

270 Ty Unnos structural frame and panels with warmcel infilled

12mm WPB Plywood board with liquid breather membrane

OUTSIDE

Windows

Fixed Windows

Aluminium framed windows with frames recessed into wall build-up.

Opening Windows

Aluminium framed windows with external frames recessed when viewed from the outside. Matt black ironmongery.

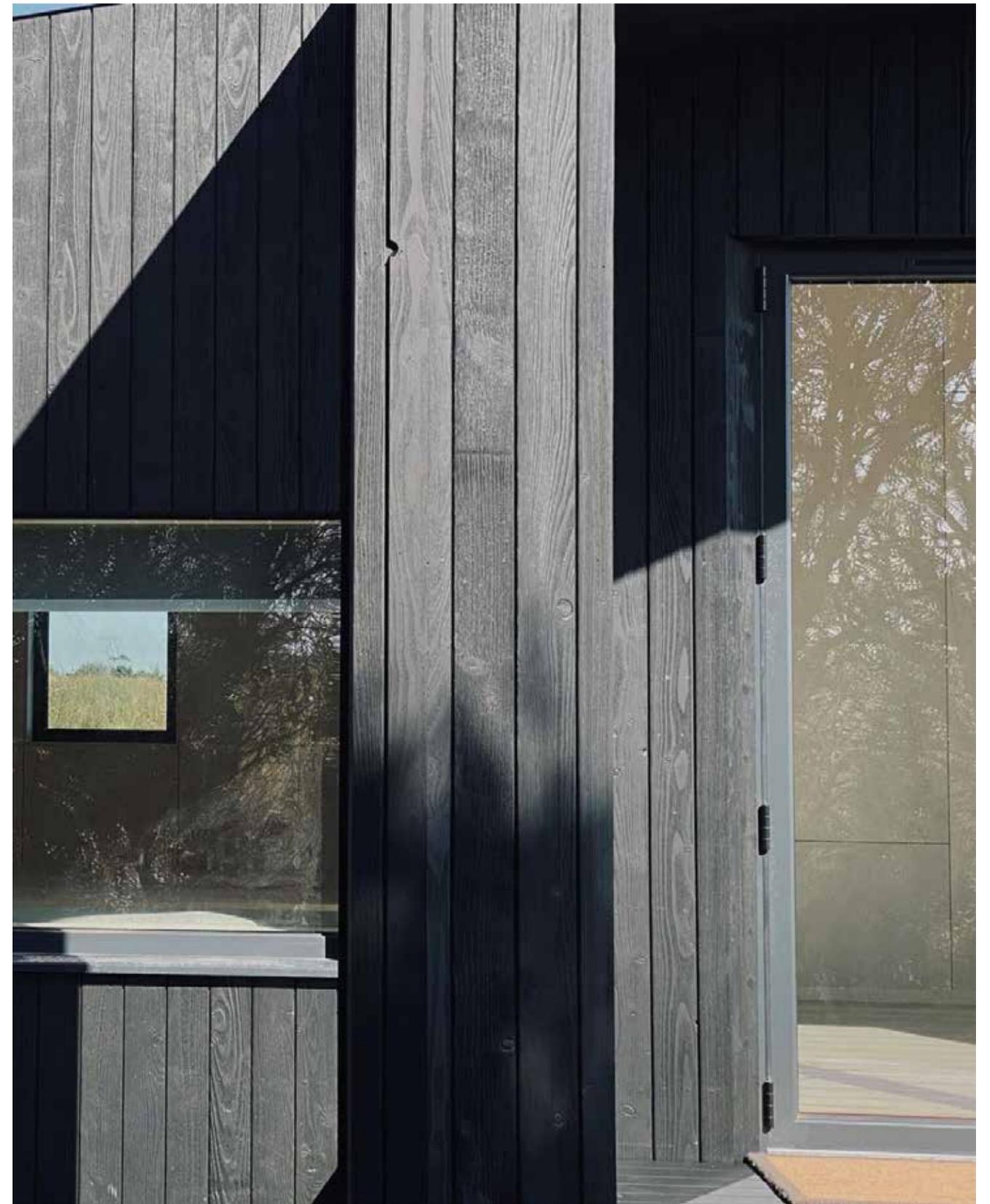
External Doors

Solid Doors

Insulated external door.

Sliding Glass Doors

Aluminium framed sliding and fixed panes. High quality sliding mechanisms and matt black ironmongery.



Touching the Earth Lightly

The foundation proposal is to use helical screw piles as they have a low carbon footprint, are simple to install and can be removed after the lifetime of the building, returning the ground to its original state. Examples of the preliminary structural proposals are shown on this page.

Status

The buildings are designed to meet the requirements of the Caravan Act which allows them to be a temporary installation that can be removed if required.

This is important to the overall project strategy at The Point in that the development is seen as reversible and the woodland and landscapes could be returned to their natural state in the future. This light touch to the development is a key consideration in line with the wider project vision of re-wilding and bio-diversity.

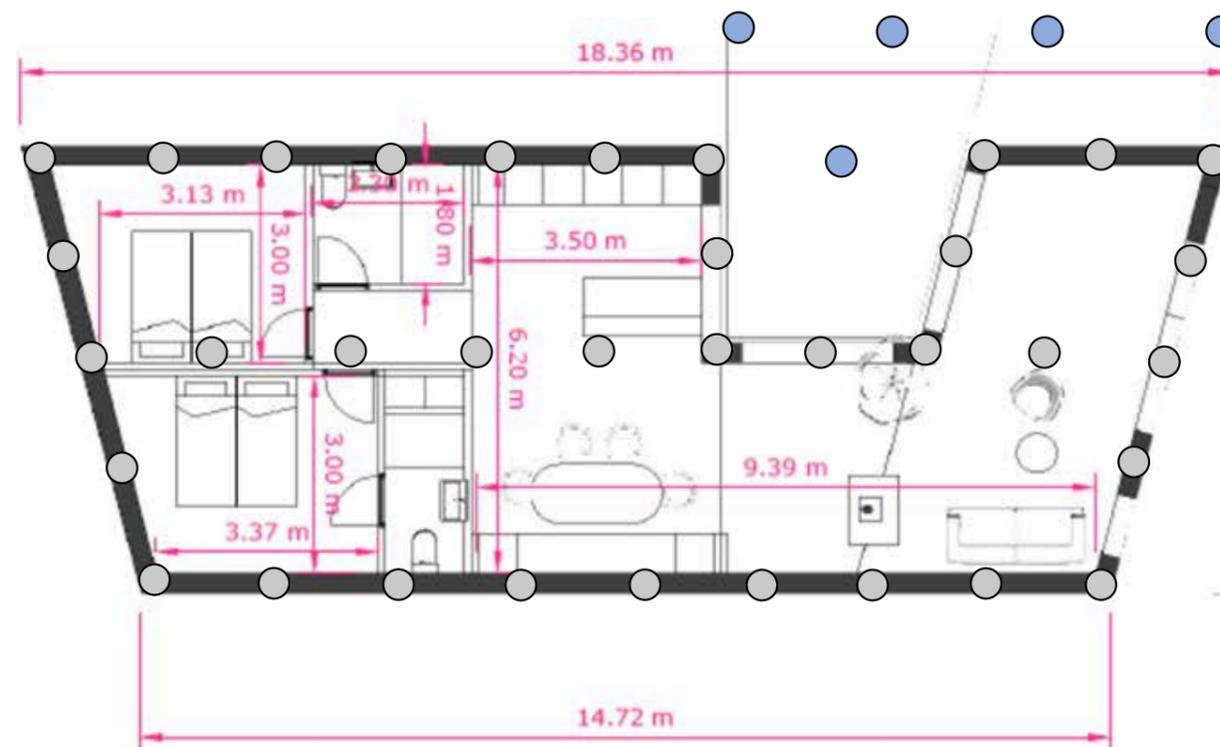
The cabins will sit on simple foundations with a preference for ground screws as these have a minimal impact. Cabin locations are moved away from mature trees to limit any impacts on mature planting that contributes to the wider landscape.

Each Cabin will be built to meet the definition of the Caravan Act and be legally classed as 'Caravans' or lodges.



150x150mm square plate top fitting

200mm circular plate top fitting



Screw Type	
	SGU Beam Screw
	SGS Post Screw
	SGP Adapter Screw
	SGC Adapter Screw

Timber Frame	
	47x97mm treated timber
	47x150mm treated timber
	75x150mm treated timber
	47x200mm treated timber
	75x200mm treated timber

Direction of joists (size as colour code above)

STOPDIGGING!

The Point - Polzeth

TRAVEL PLAN

As holiday properties it is most likely that many visitors to Cornwall will arrive by private car. The proposals take this into account but once on site, more sustainable means of transport will be encouraged

The transport strategy is based on the following principles:

Promote cycling and provide bike storage for each cabin so allow guests to travel around the local area sustainably but also to avoid summer traffic jams.

Promote local walking and running routes through a business that is focused on an active wellness agenda.

One parking spot will be provided at each cabin and another visitor's spot will be provided near the site entrance. This is to encourage walking and to reduce site traffic as much as possible.

Electric charging will be provided in the one large parking area. This will encourage residents and guests to become less car dependant as it will not be outside the front door.

ACCESS

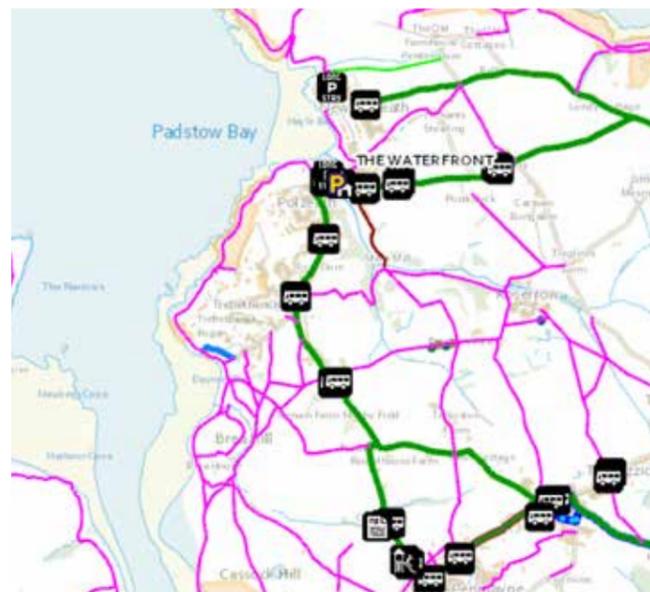
From an access perspective there are two roads that serve the site, each of these will be narrow, dual-direction and have spaces for passing.

The idea of a circular route was considered but it would have resulted in all cabins having an increased amount of traffic passing by.

Each cabin will be allocated a single parking space nearby and a visitors space in a centralised carpark near the entrance, this will reduce the amount of site traffic to make it a more inclusive and family friendly environment and promote the idea of walking and cycling in the area generally.

In terms of refuse and recycling each cabin will have an external refuse area and a central area is provided for council collections.

Access from parking spaces will be generally level with all cabins being on a single level.



Local bus stop in the nearby area



The centralised parking area provides spaces for guest cars but will also be the charging hub for this site.

A Preliminary Ecology Appraisal (PEA) has been carried out on the site to establish the present ecological value and identify any specific sites. The PEA has identified a variety of habitats which are shown on the diagram below. It also makes a series of recommendations which have been incorporated into the design proposals. These are noted on this page. For full details refer to the report.

RECOMMENDATIONS

Develop a detailed masterplan to show a definitive red line boundary, detailed layouts, accurately quantified areas of habitat loss / gain and landscaping proposals (including species mixes and methodologies for habitat creation / maintenance). This information will be required to inform Biodiversity Net Gain calculations (to be completed).

Retain and buffer and protect existing hedges / hedgerow trees, the ditch and ideally all scrub around the periphery of the site by at least 2m from all built development following the Cornwall Planning for Biodiversity Guide (Cornwall Council, 2018).

Plan the development carefully to conserve the ecological functioning of the ditch as a potential wildlife corridor running throughout the length of the site.

Commission a bat ecologist to more accurately assess the likely value of the site to bats. It is likely that activity surveys will be required to gather data on which species are present and how they are using the site to inform appropriate mitigation. This work can only be undertaken during the active season for bats (May-October).

If any trimming of hedgerow vegetation or further scrub removal is required avoid disturbance to nesting birds by undertaking this as well as removal of tall ruderal vegetation during the winter months (1st October – end February).

Commission a reptile survey to assess the site for the presence / likely absence of reptiles, determine which species are present and estimate the population size (as appropriate).

PROPOSALS

Manage undeveloped parts of the site for wildlife and develop appropriate landscaping to include new Cornish hedges, rough grassland, scrub and tree planting favouring native species, maximising diversity and providing connectivity for wildlife across the site wherever possible.

Include appropriate bat and / or bird boxes and bee bricks within the scheme.

Enhancements for bats and reptiles should be informed by the findings of further recommended survey work.



7.0 CONCLUSIONS

The proposed development at The Point brings a sensitive development of holiday homes to a prime Cornish location. The design development has prioritised low density, high quality design that has been led by landscape and ecology as main drivers.

Sustainability is at the heart of the development from a low impact approach to foundations through to using British grown timber as the primary building material.

The design of the cabins have been conceptually developed as a site specific response to views, landscape and the surrounding context to provide a unique series of properties that are unlike any in the surrounding area.

The project is also the next stage of the sustained economic development of The Point business and brings innovative high quality architecture to a bustling Cornish location.

Extract From Landscape and Visual Impact Appraisal

“The development provides a landscape and visually sensitive form of green tourism development which seeks to move away from the more traditional and often highly visible and regimented, high density tourism facilities which are numerous along this very popular holiday destination location, on the North Cornwall coast.”

“Overall, the proposed development accords with the local plan policies 2 and 5 in that through sensitive, low-density design which balances the built form with the external spaces and habitats, incorporating existing landscape elements and considerably enhancing the landscape proposals, recognises this to be a valuable asset to provide an attractive and desirable holiday setting. It also has low impact on designated landscapes and features.

In terms of the nature of the development proposals and the location, scale and extent form and level of landscape proposals, it is assessed that and level of anticipated impacts on visual amenity and landscape character is acceptable and would not present any significant impacts and over time could positively contribute to the character of the site as the landscape proposals mature.”



ARTISTS IMPRESSION