



Summary

This document has been produced to support a design for a replacement cafe at the Beach House Cafe site in Mundeford, Hengistbury Head.

The document is intended to provide an overview of an alternative concept for the new cafe taking into consideration the feedback of key stakeholders, as well as considering planning constraints and construction methodology.

We have sought views from a local structural engineer and modular building company with experience on the peninsula to help distil what is considered a practical and affordable construction approach.

Whilst the essential considerations and environmental impact of adding a new cafe to this site remain consistent, the intrinsic nature of site, the new building, its users, and the community surrounding it are unique, and all have been factored into this alternative design.

Within this document and accompanying information, we will demonstrate that this proposal is wholly appropriate and presents a scheme that considers all issues effecting this sensitive site.

Background

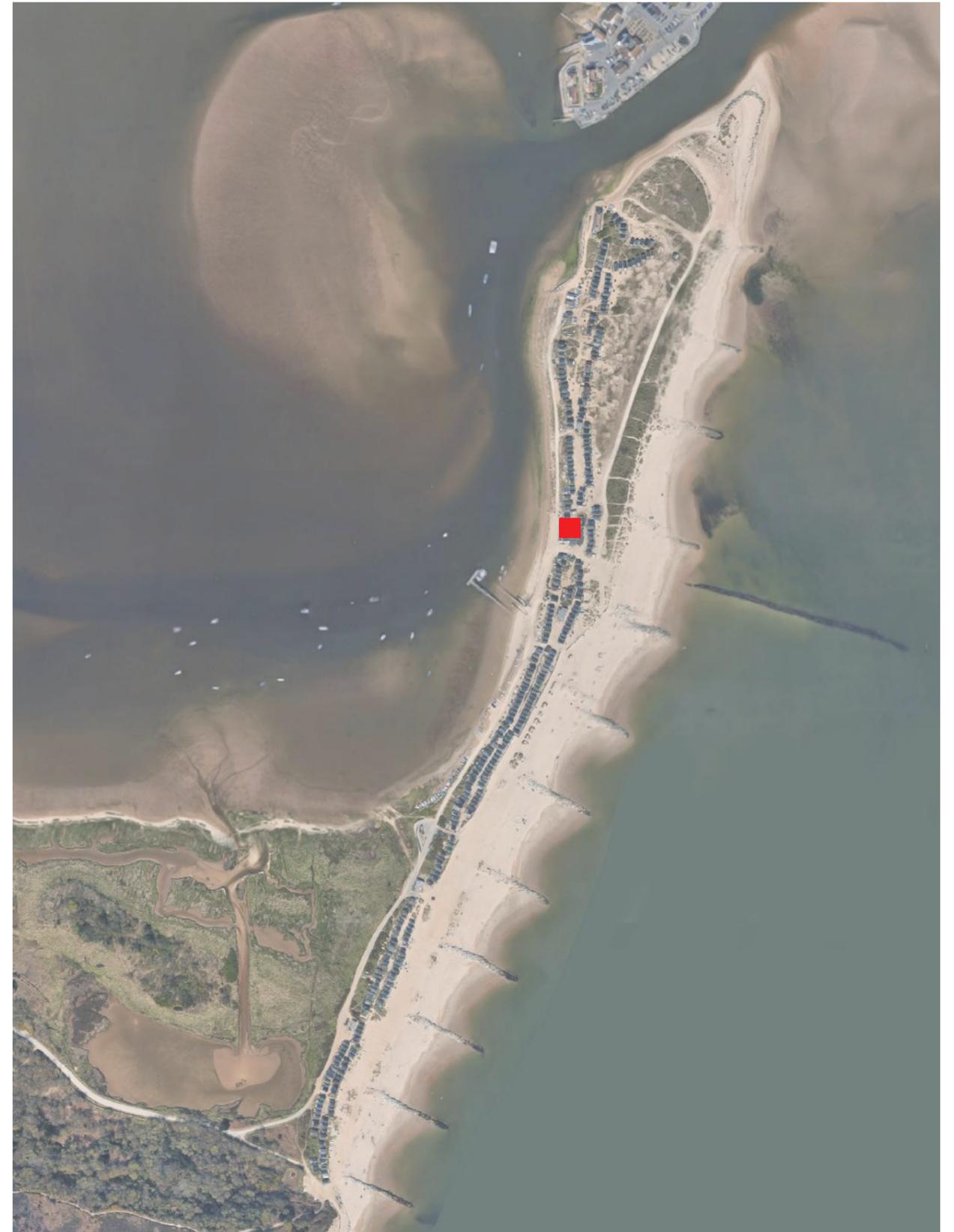
In late 2020, DMW Chartered Architects were approached by a consortium made up of the current Beach House Cafe tenant Mr K Slater, and a representation of beach hut owners headed by Mrs C Bath, to develop a concept for a replacement cafe for the current site on Mundeford Spit.

The brief was to create a simple and elegant building design that would be appropriate in terms of function, aesthetic and budget but above all, a building that would be wholly appropriate for this sensitive setting.

Concept designs were developed, presented and reviewed over a period of months until a satisfactory design was developed that reflected all considerations and stakeholders' visions for the site.

This final design is the culmination of a collaborative and collective approach: a building that addresses all issues and considerations of key stakeholders.

It is noted that the previous proposals did not engage with beach hut owners or consider the multitude of issues effecting the site.



Aerial Image

Concept

Our design proposal for the new Beach House Cafe will provide a harmonious addition to Mundeford Spit.

The concept simply seeks to replicate the numerous beach hut buildings found lined-up along the sand spit.

The cafe design draws upon the geometry, scale, height and rhythm of the surrounding beach huts to ensure it will have a strong relationship with its immediate neighbours but also to present a congruous and characteristic form when viewed from the surrounding Green Belt & SSSI.

Key Design Principles

A simple and recognizable form, modest in scale, presenting a clear and uncluttered building for all users to enjoy

- *Accessible for all
- *Building with a clear identity and sense of place
- *Minimise physical and environmental impact
- *Lightweight and modular building
- *Perimeter dune grasses to promote stability and living roof to encourage wildlife
- *Recognisable form harmonises with setting and character of site
- *Materials will be sustainable and local
- *Harness Solar Energy, Natural Daylight and Harvest Rainwater
- *Enhance privacy and outlook for beach hut residents
- *Unified and uncluttered visual appearance



Concept Sketch

Design

The building will be simply constructed, like a beach hut, with posts and beams and be lightweight, well insulated and have built-in flexibility for future proofing.

Upon arrival, the visitor will enter into a top-lit covered 'courtyard atrium' where the central servery is located. We wanted to maintain the informal, beach-like, character already established with the current offering.

Internally, a large open-plan floor with posts and beams supports the pitched roofs over, providing a flexible and bright floor space.

To the back of the space is ancillary service and storage facilities.

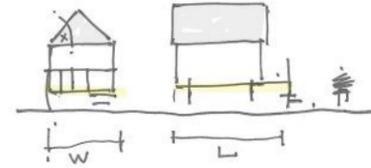
The remaining seaward floor plan opens-up to panoramic views and access to an enclosed external deck seating area. Fixed angled vertical louvres to the sides of the seating area prevent any overlooking into beach hut neighbours.

Externally, a simple, naturalistic type landscape scheme will see the planting of perimeter indigenous dune stabilizing grasses. The facing materials will be silvered in appearance, robust and capable of withstanding prevailing winter weather. Cladding will be non-combustible

The replacement building will be a positive asset to the spit, providing a practical, appropriately scaled and harmonious addition to the peninsula and surrounding Christchurch Harbour.

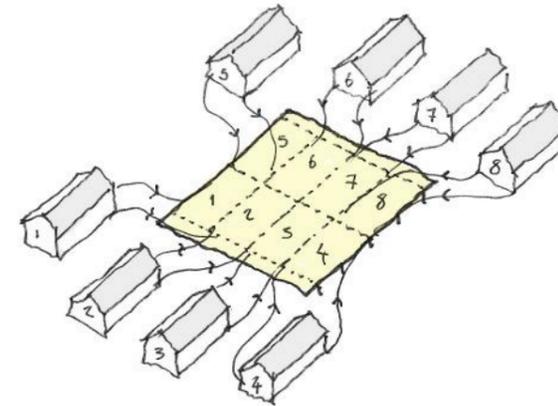


Rhythm and Scale

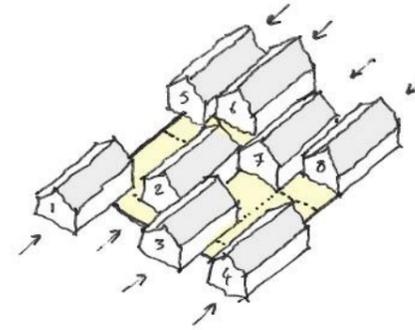


Create a typical beach hut module...

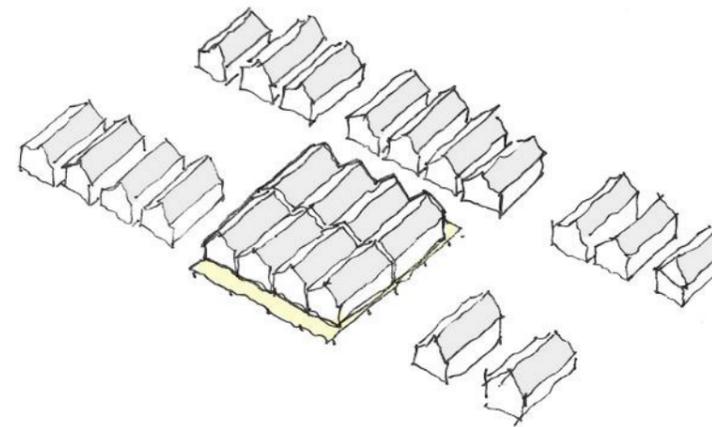
...beach huts all similar in scale, form height and pitch...



...suspended slab over hovering over the sand spit...

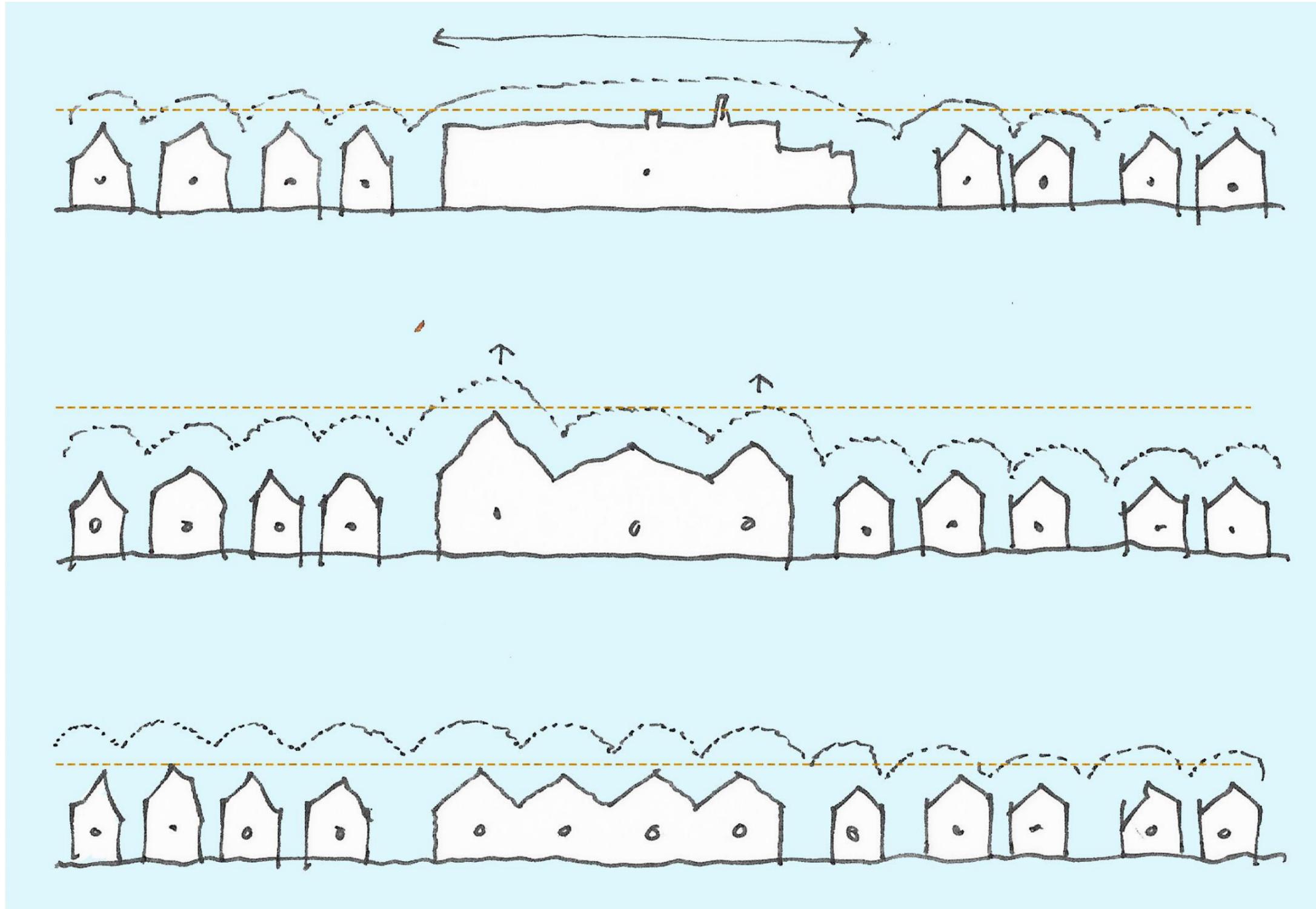


....locate, align and and shunt a series of 8 beach hut modules together over the new slab...



...new building reflects surrounding beach huts in rhythm, scale and height.

Concept Diagram



Current & Pre-Fire Buildings

- Unfamiliar flat roof form
- Breaks pitched roof rhythm
- Creates 'visual void'



Refused Scheme

- Over-scaled pitched roof forms
- Breaks pitched roof rhythm
- Larger in scale, height and mass



New Scheme

- Familiar pitch roof form
- Retains rhythm, height & scale
- Harmonises



Analysis Comparison Diagram

Construction

Having an understanding of the unique site nature and access constraints for the site and proposal, we received the following advice from Smith Foster structural engineers and Ecologic-Sips about construction type and the proposed methodology.



Peter Samson, Founder | Ecologic-Sips

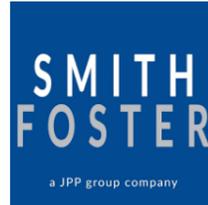
Many thanks for giving Ecologic Sips the opportunity to comment on the concept design for the rebuild of the restaurant on Mudeford Sandbank, we have reviewed the design and suggested build methodology and feel that the project is viable when considering the limiting factors of the delivery and location.

I would suggest the majority of the structure could be delivered with a combination of Laminated timber portal frame with a SIPs "skin" affixed to the frame.

This in combination with concrete pre cast piles will result in a low impact efficient structure that will withstand the extreme level of exposure the site is subject to.

We are well placed to comment on the designs, our company has successfully designed constructed and delivered over 55 Modular units to Mudeford Sandbank over the last 10 years.

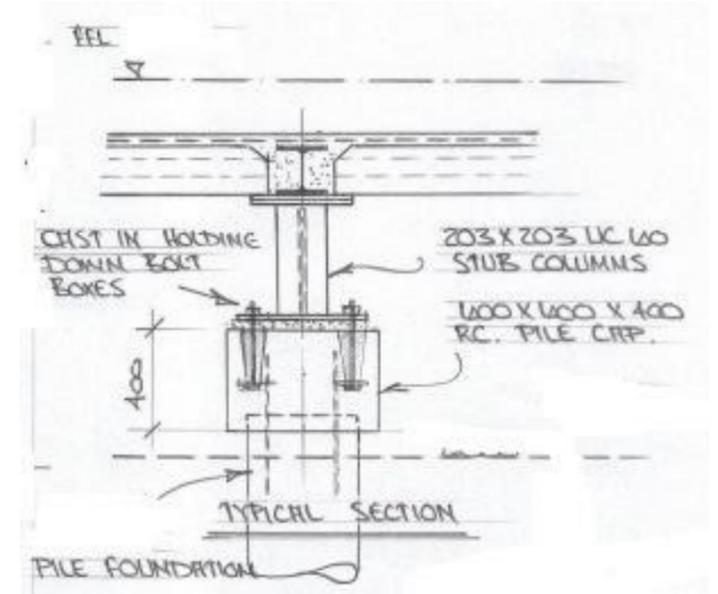
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Scott Vincent, Director | Smith Foster Structural Engineers

The main issue affecting the site will be logistics, we therefore recommend that as much of the building can be prefabricated as possible. To this end we would suggest the following structural arrangement:

- *Precast concrete driven piles, these would be cut off below ground level to afford them some protection from sea spray.
- *Ground floor steel frame to be erected above the pile grid with stub columns bolted onto the concrete piles. This can all be galvanised and painted to a high specification for durability.
- *Ground floor to be erected from precast beam and block units or hollowcore slabs, sat on the ground floor steel frame.
- *Super structure will also be erected from a steel frame with the main load bearing columns being portalised to provide lateral stability.



Typical Detail

Driven concrete piles - robust, weatherproof, minimise footprint

Steel framed modular block slab over - create flexible free spanning floor base

Structural members in grid formation - supports SIPs wall & roof arrangement

Construction

A modular building from pre made components, constructed off site to minimise time, noise, cost and construction traffic

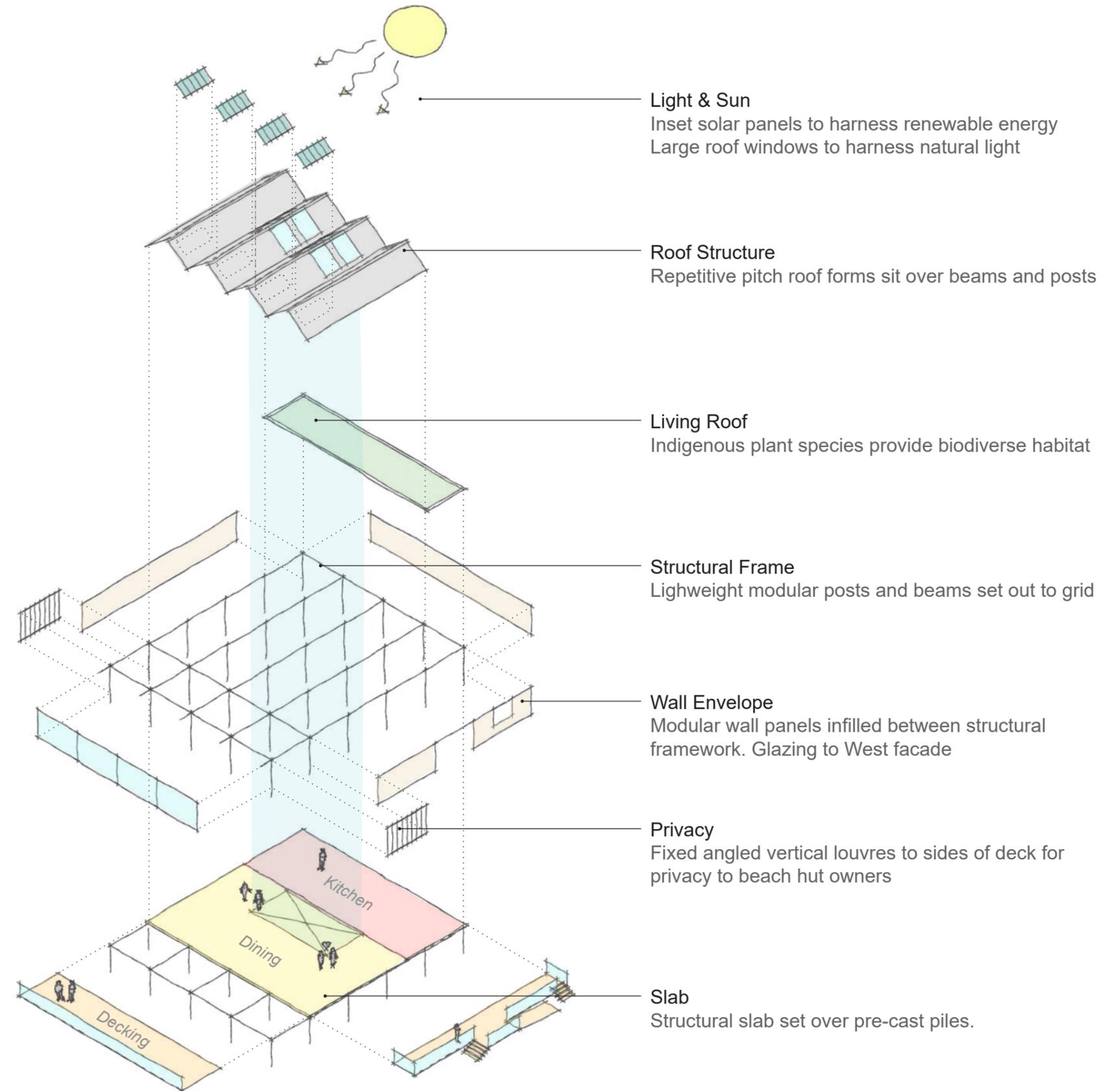
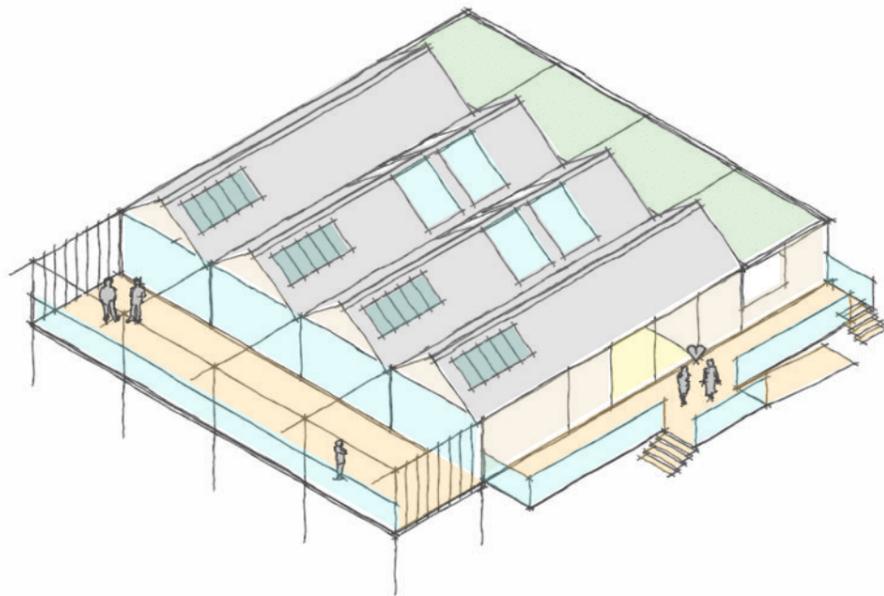
*Pre cast concrete piles with modular galvanised steel frame set over

*Pre cast concrete floor planks to support walls

*SIPS modular wall and roof panels

*Non combustible cladding materials

*Robust steel roofing material and rainwater goods



Light & Sun
Inset solar panels to harness renewable energy
Large roof windows to harness natural light

Roof Structure
Repetitive pitch roof forms sit over beams and posts

Living Roof
Indigenous plant species provide biodiverse habitat

Structural Frame
Lightweight modular posts and beams set out to grid

Wall Envelope
Modular wall panels infilled between structural framework. Glazing to West facade

Privacy
Fixed angled vertical louvres to sides of deck for privacy to beach hut owners

Slab
Structural slab set over pre-cast piles.

Materials

The appearance of the new building building will be silvered and weathered .

Taking on board comments about the risk of fire spread and also in consideration of the buildings' exposed location, the cladding for the building will be a silvered horizontal fibre cement cladding board face fixed over battens.

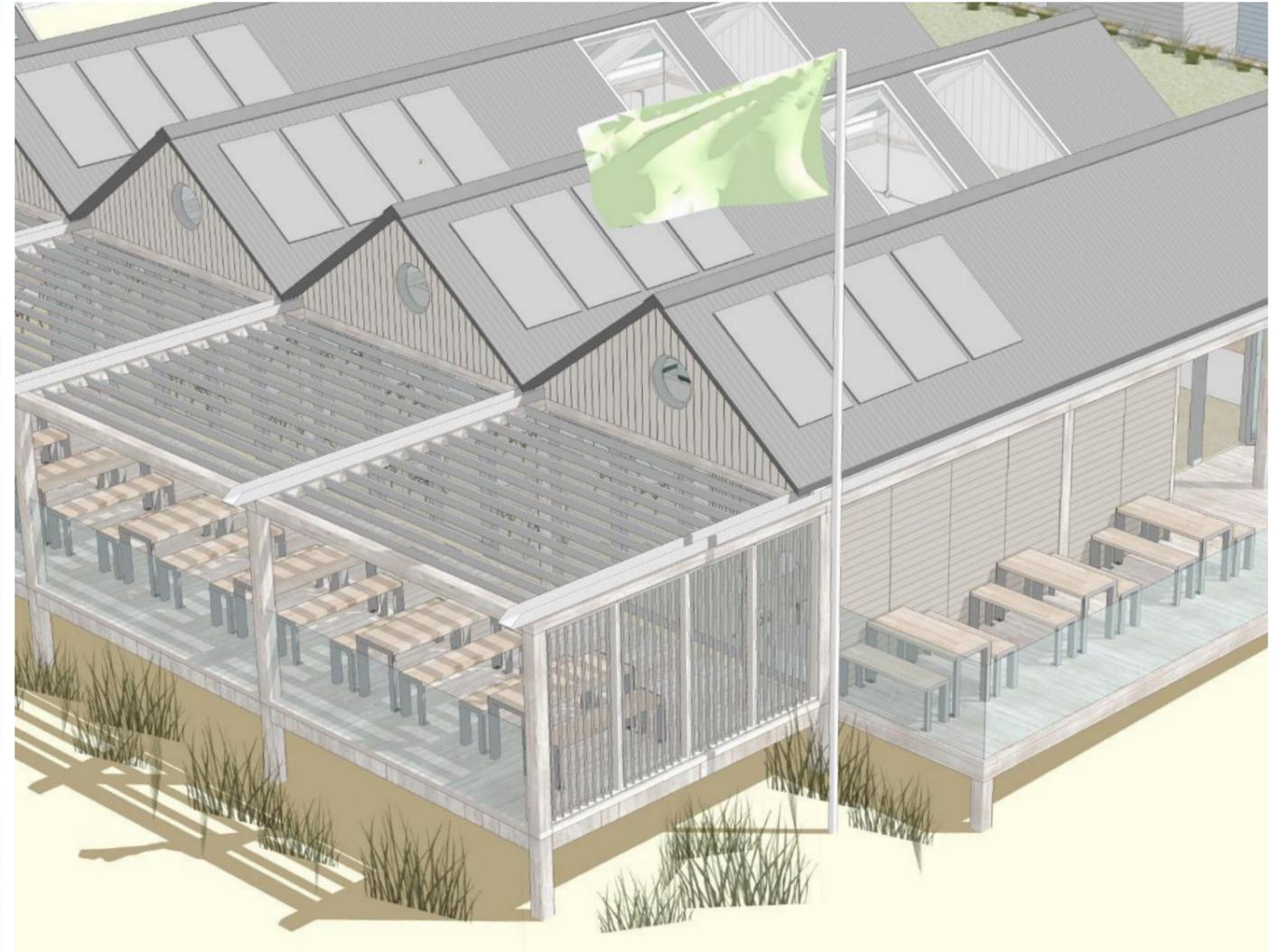
The roof will have corrugated coloured metal sheets with a light grey tone. This will drain into colour matched rainwater gutters.

The external deck finish will be in a matching silvered recycled composite board, with expressed structural members clad in a similar material.

The choice of materials has been chosen for their suitability and sensitivity within the context, their robustness, ability to weather and to be sourced sustainably. We did not want the building to stand out but blend in with the surrounding beach huts.



Materials Palette



Birds Eye Detail of Proposal

Site Layout

Solar Panels :
Inset South facing photovoltaic array to harness renewable solar energy and offset power consumption

Marram Grass Planting :
New Marram Grass planting to building perimeter to promote dune stabilisation, encourage new species and provide soft buffer to hard building edges

External Deck Area to West :
Lightweight frame structure over decking area provides fixing position for solar shading and privacy louvres to the sides of the external seating area

Red Dash:
Denotes outline curtilage of current building and surfaces

Commercial Bin Store:
New designated waste & recycle coral for cafe use only
Relocate existing shed subject to BCP arrangement

Gas Tank

Gas Tank:
New open coral to visually unifying with new building

E SS

Substation:
Electric substation with rear access integrated within new building footprint from non combustible construction | final specification subject to building regulation compliance

Living Roof:
Living roof planted with low-growing indigenous plant species to single storey roof. Provide pebble edge detail to prevent wind uplift

Green Edge:
Marram grasses to rear elevation provides soft buffer and partial screening to hard building edge

Access:
All inclusive access to new building through ramp and ambulant disabled steps

Pump

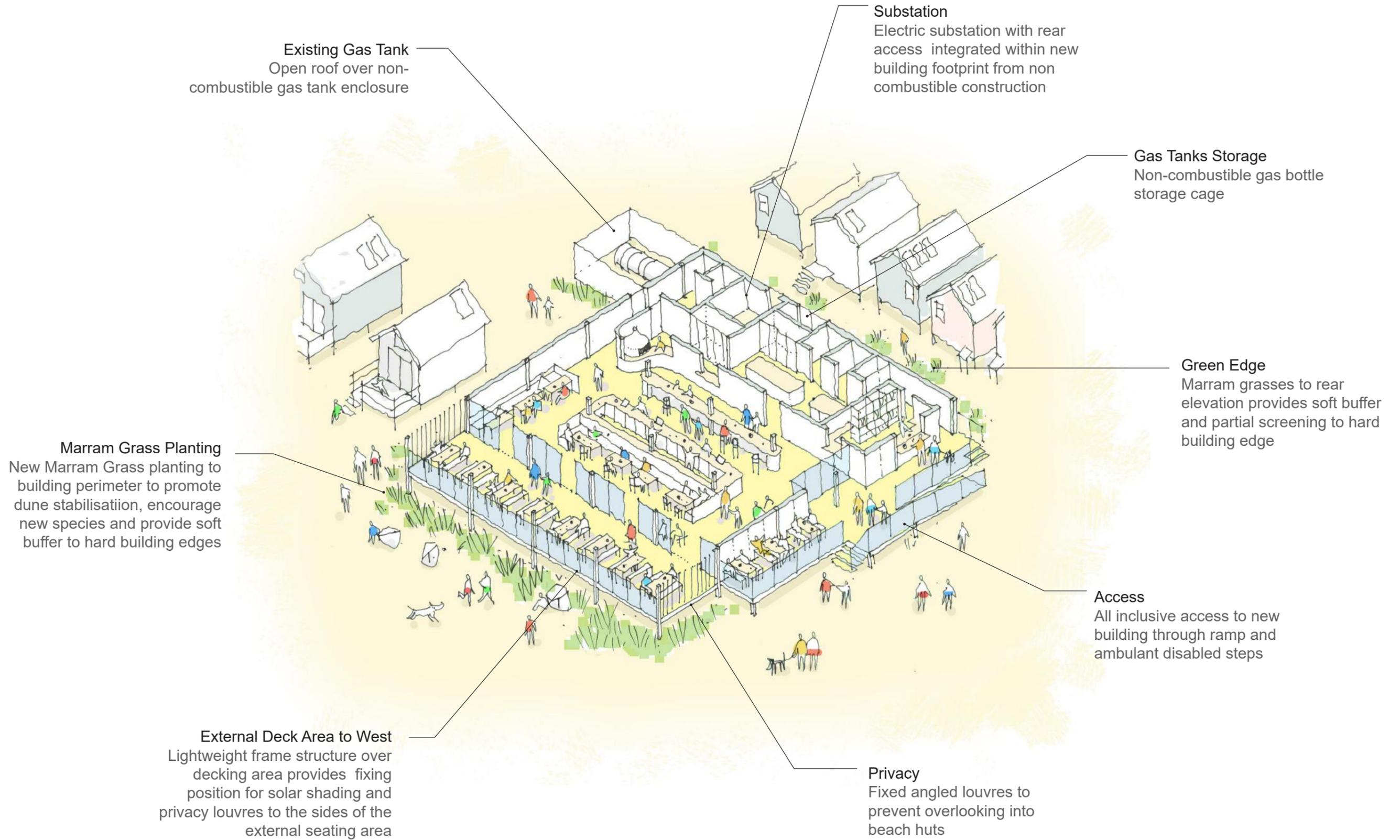
Bins

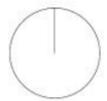
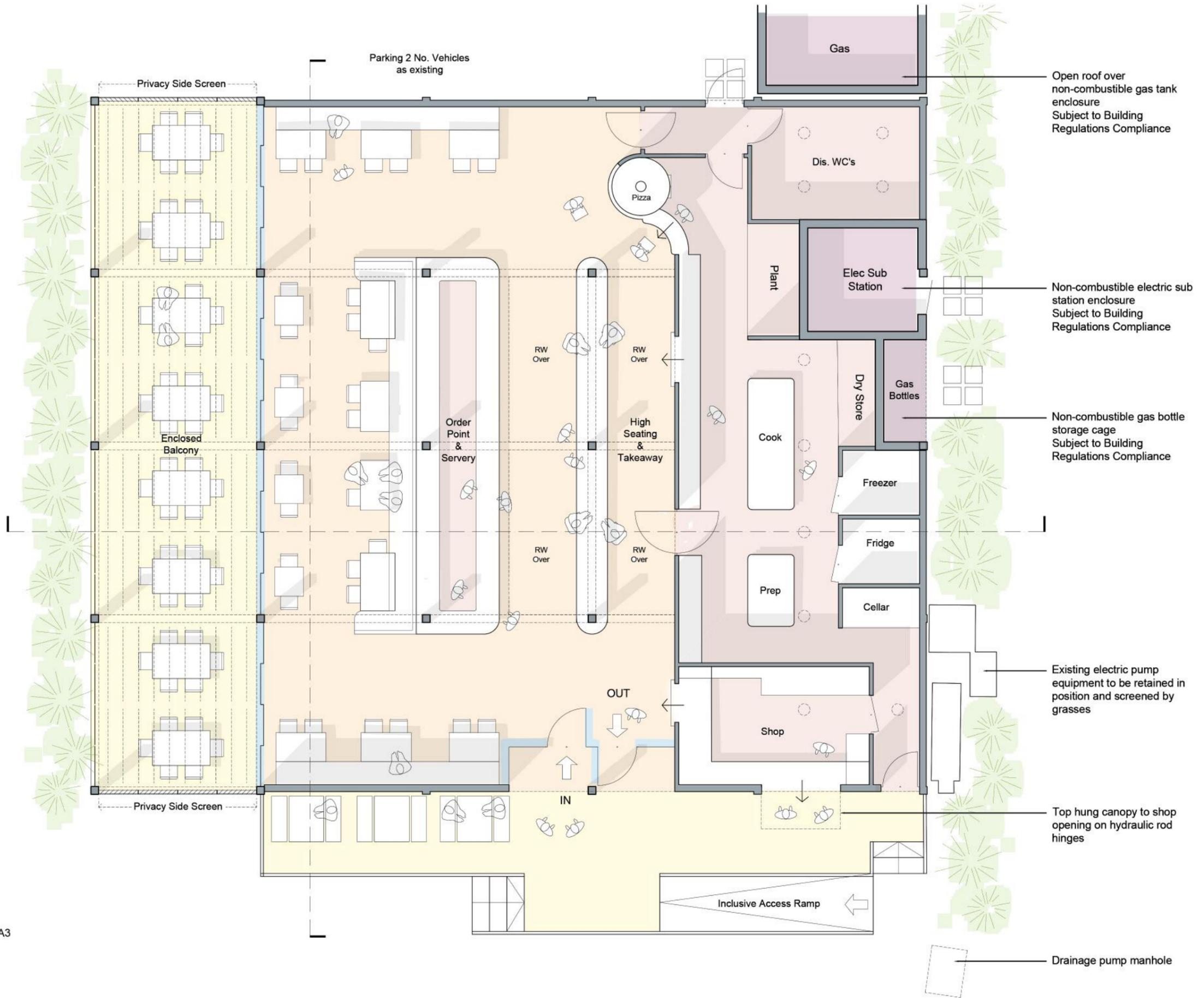


PROPOSED Site Plan
1/200



Building Layout

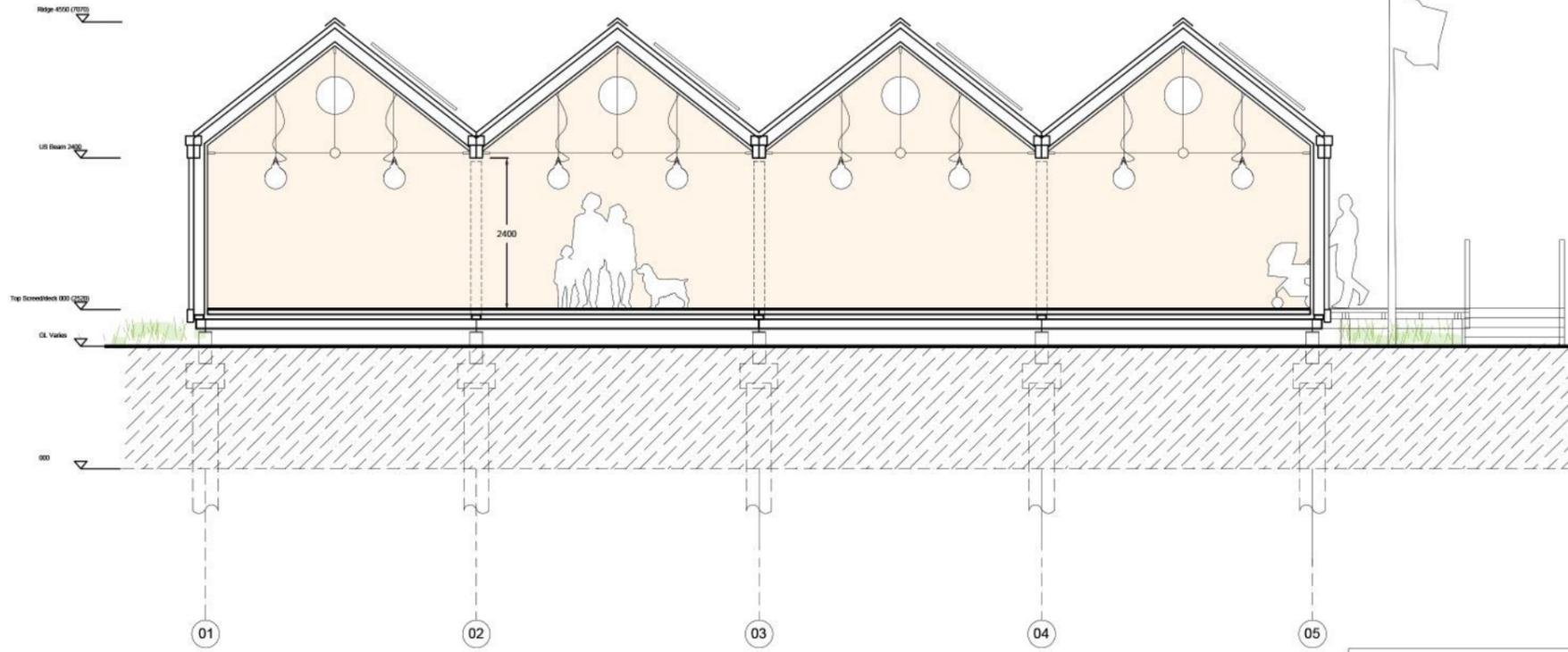




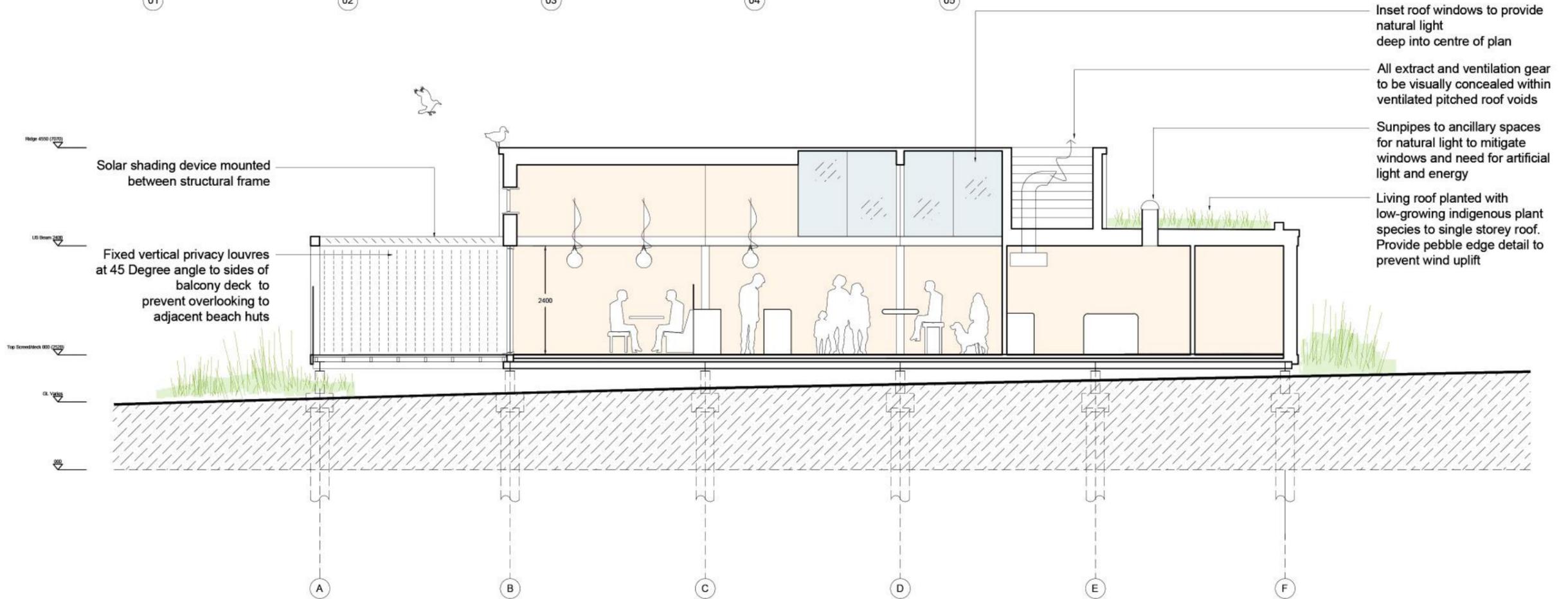
PROPOSED Floor Plan
1/100



Sections



Typical Cross Section
1/100

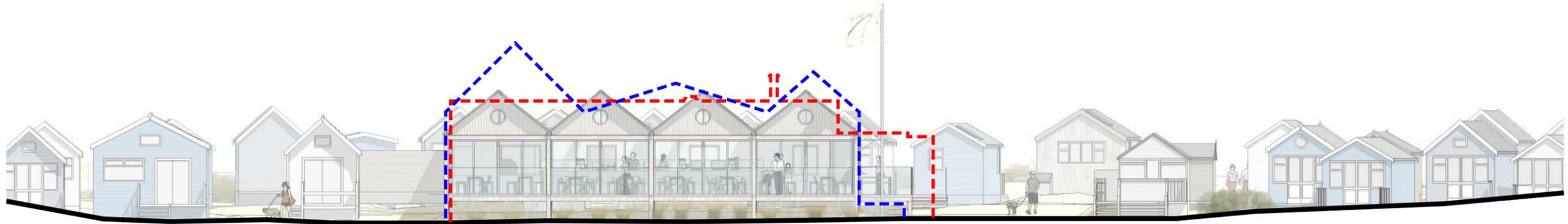


Typical Long Section
1/100

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- Inset roof windows to provide natural light deep into centre of plan
- All extract and ventilation gear to be visually concealed within ventilated pitched roof voids
- Sunpipes to ancillary spaces for natural light to mitigate windows and need for artificial light and energy
- Living roof planted with low-growing indigenous plant species to single storey roof. Provide pebble edge detail to prevent wind uplift



Proposed West Contextual Elevation
1:200



Proposed North Contextual Elevation
1:200



0m 2 4 6 8 1:200 A3

Birds Eye View



'The replacement building will be a positive asset to the spit, providing a practical, appropriately scaled and harmonious addition to the peninsula and surrounding Christchurch Harbour'

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architects

Replacement Cafe | Beach House Cafe, Hengistbury Head, Mundeford

