

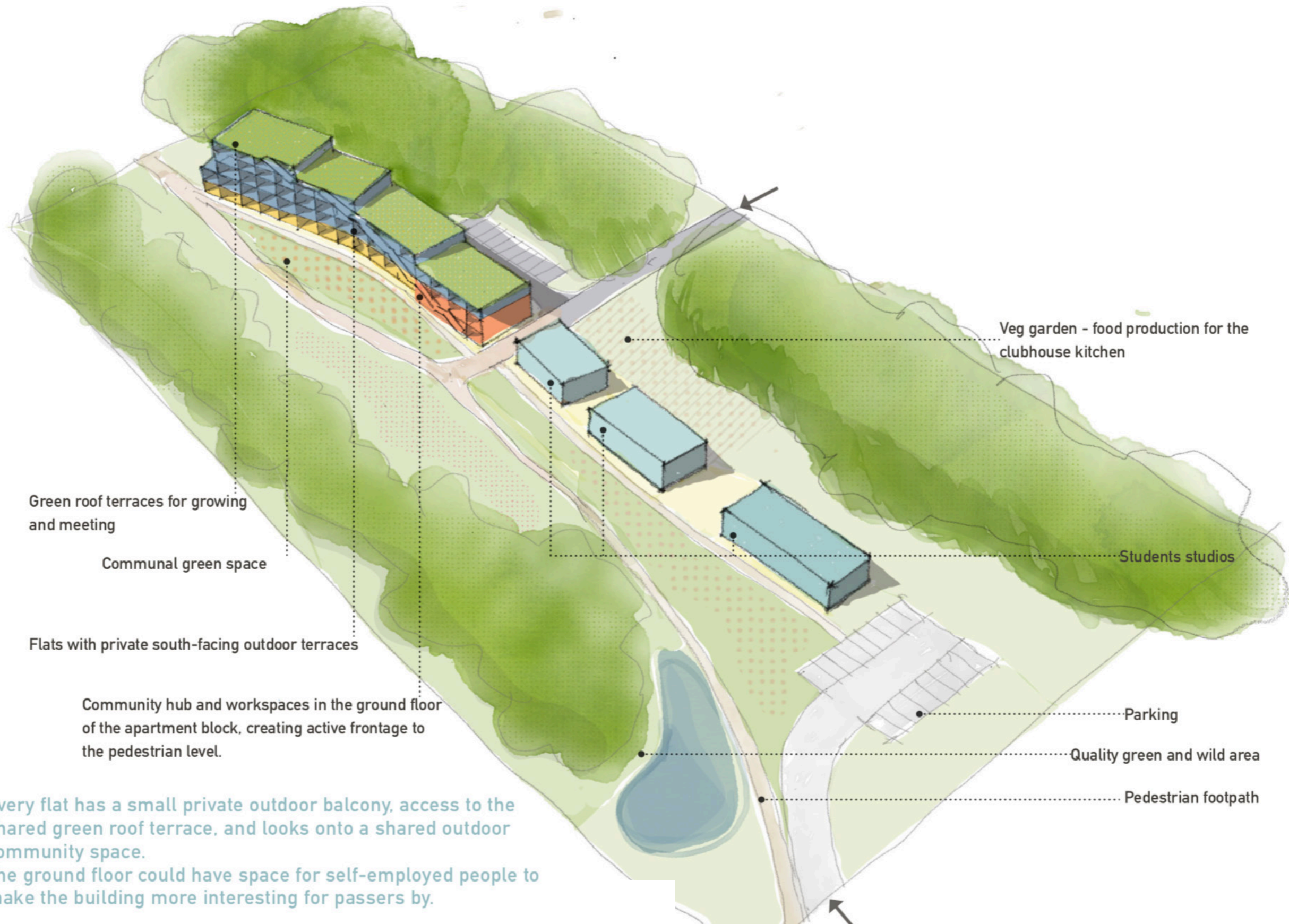
AmBos Cohousing

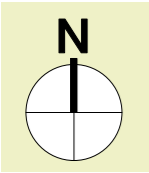


Ambos: Cohousing - Suburban



Option 1 view - 'Rising higher'





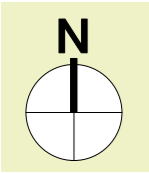
Site Plan Option 2 - 'Street'



-  Community club house
-  Work units
-  Terrace houses
-  Students studios

Option 2 view - 'Street'

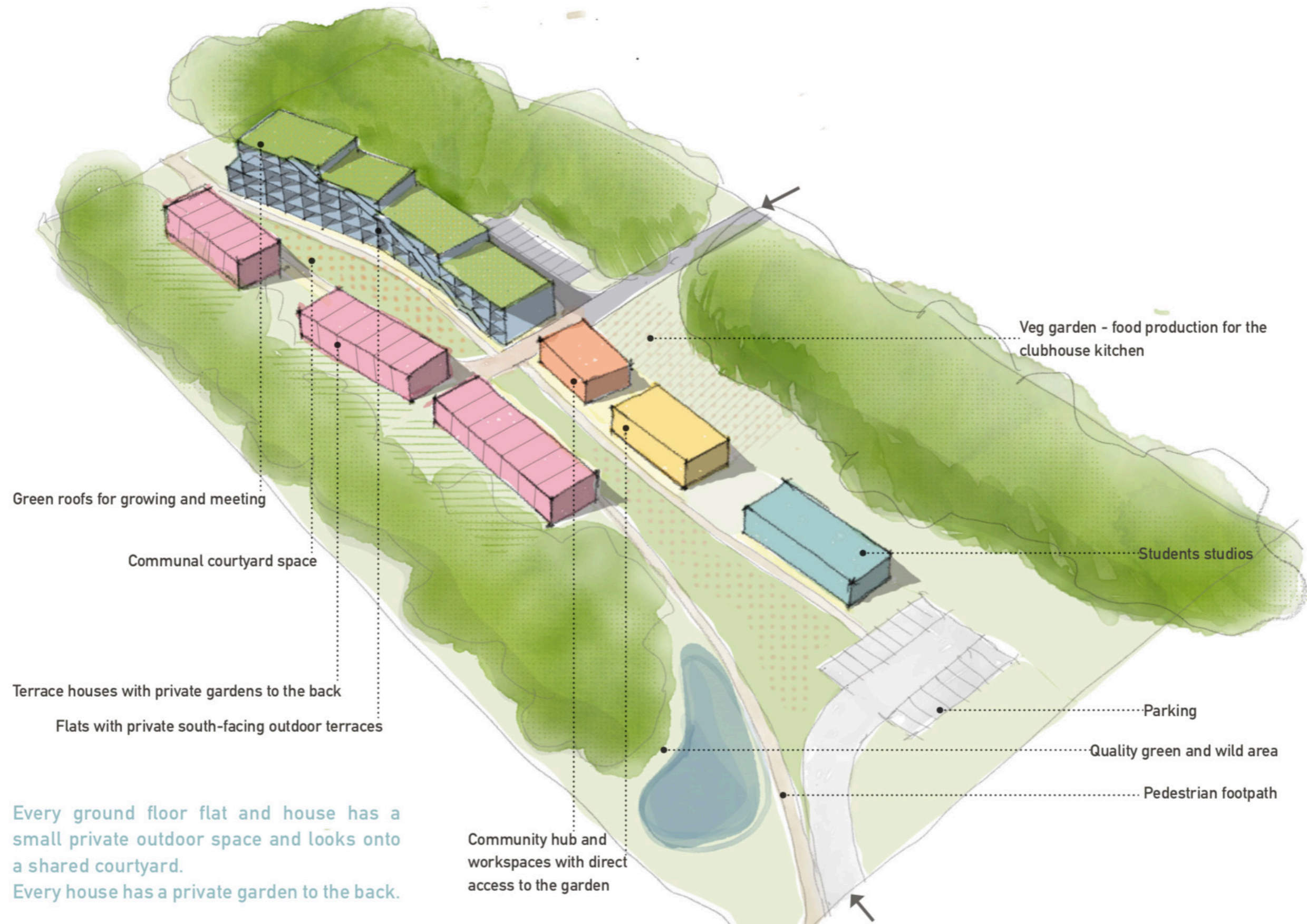




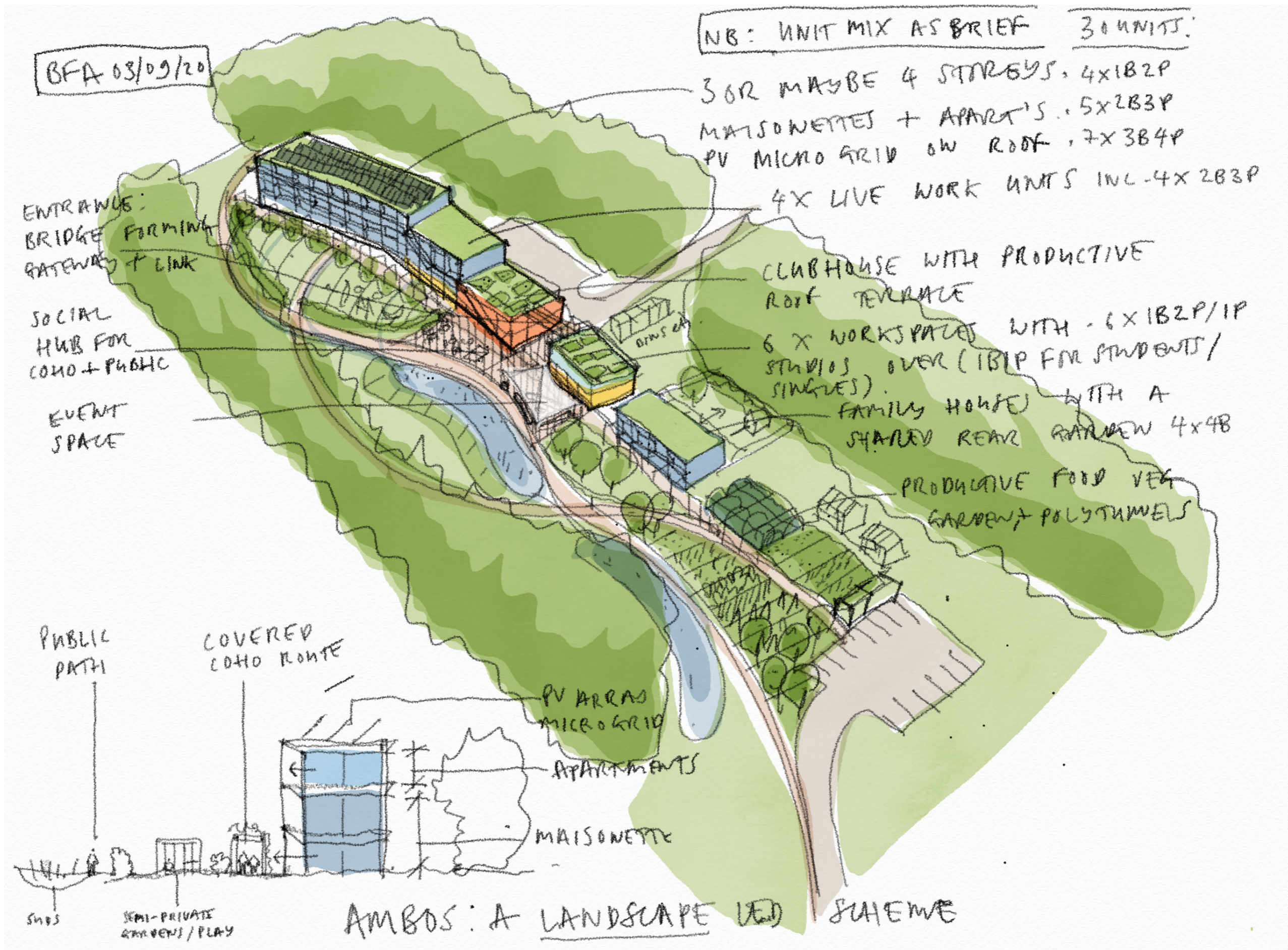
Site Plan Option 3 - 'Little and large'



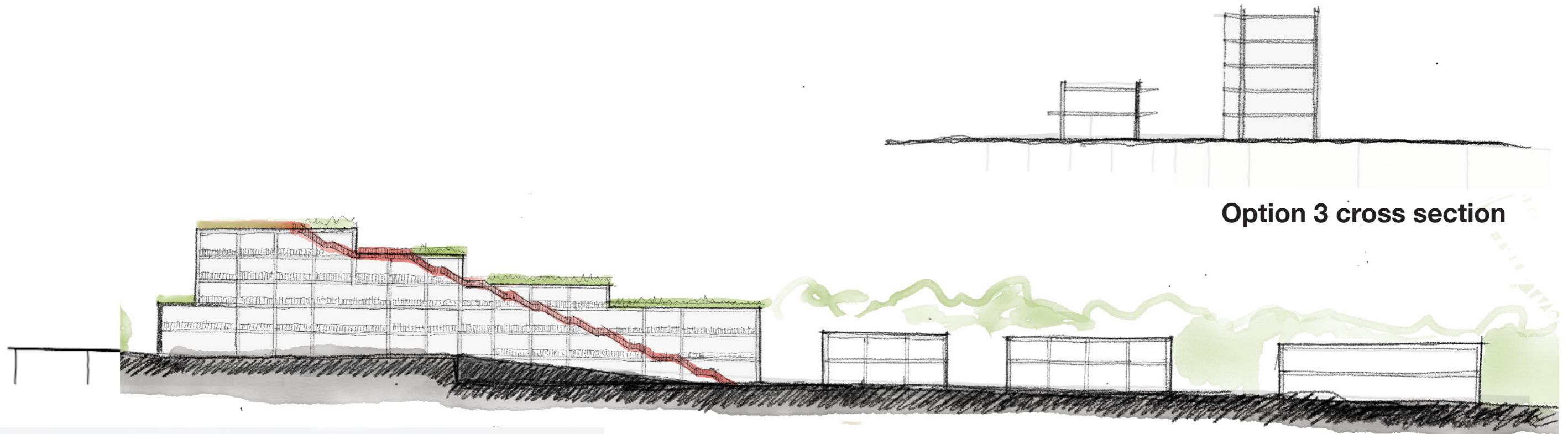
Option 3 view - 'Little and large'



Option 4 view - 'Integrated'



Site sections & views

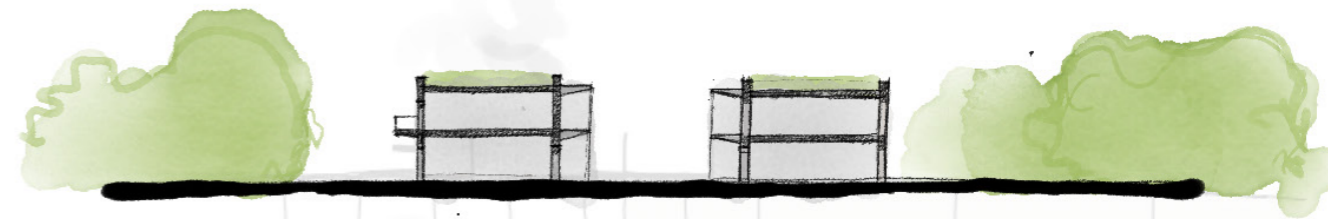


Option 3 cross section

Option 1 & 3 long section



Option 1 street view



Option 2 cross section



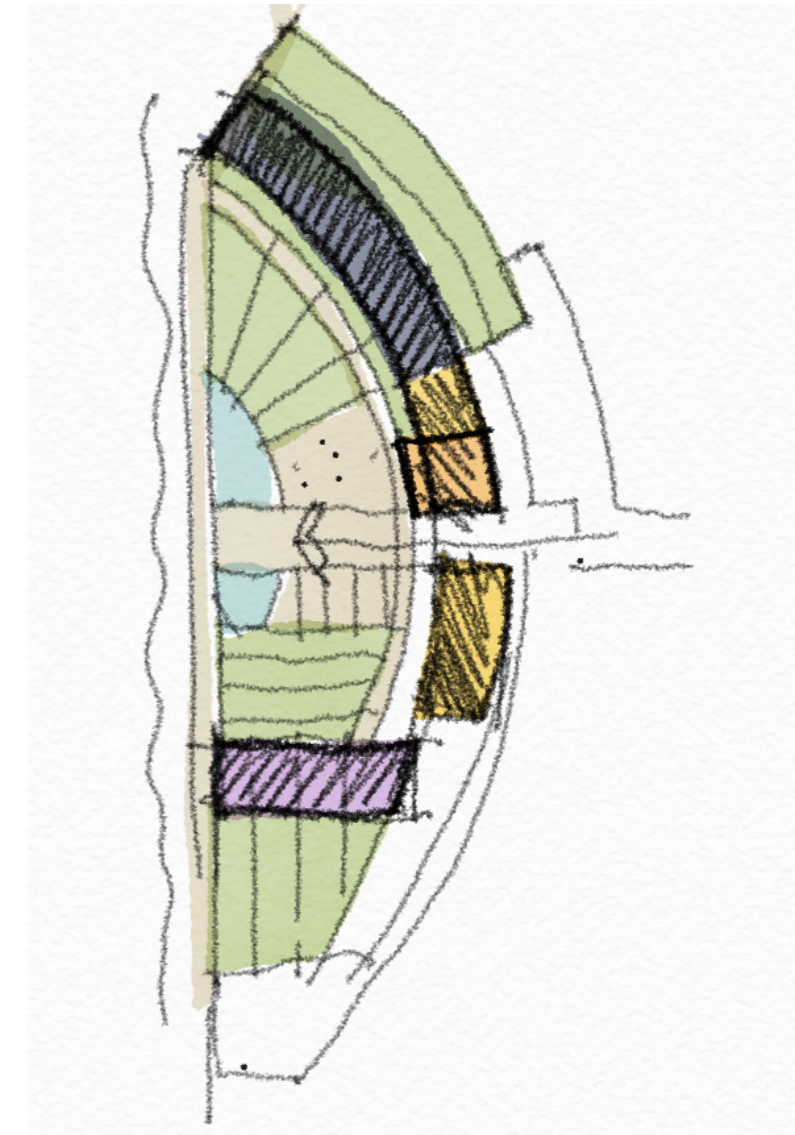
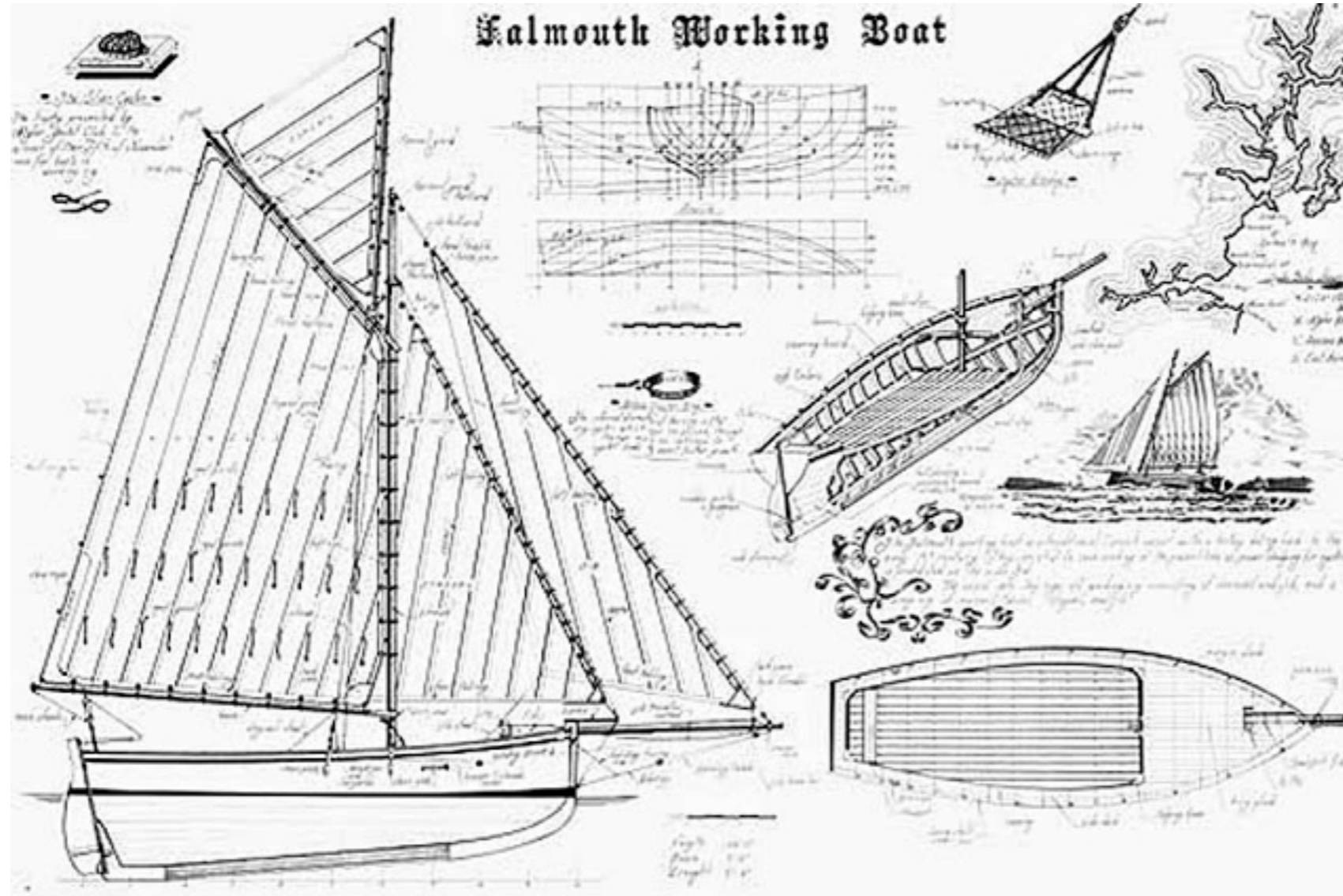
Option 2 long section

Street view sketch

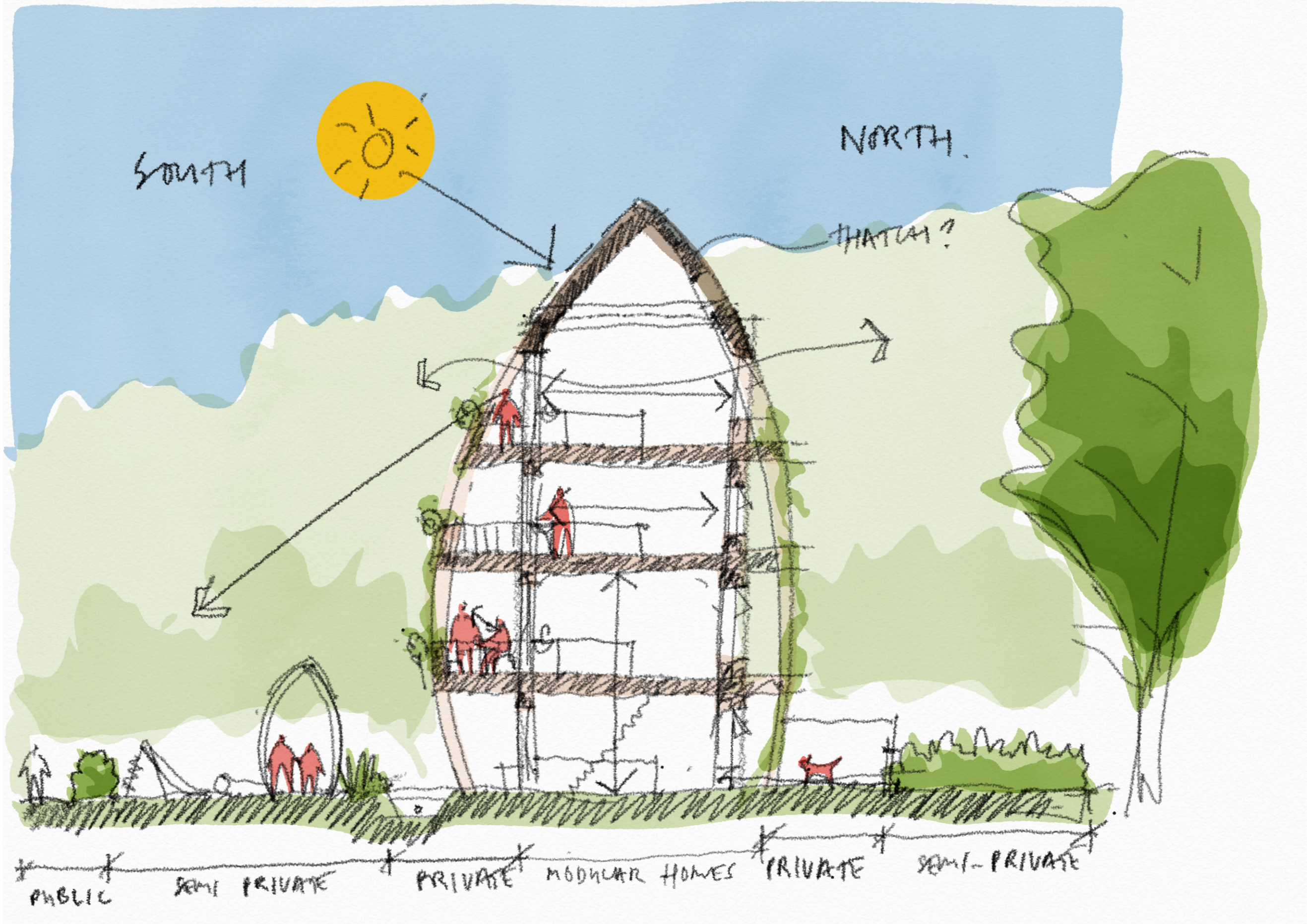


Concept Design: Strategy

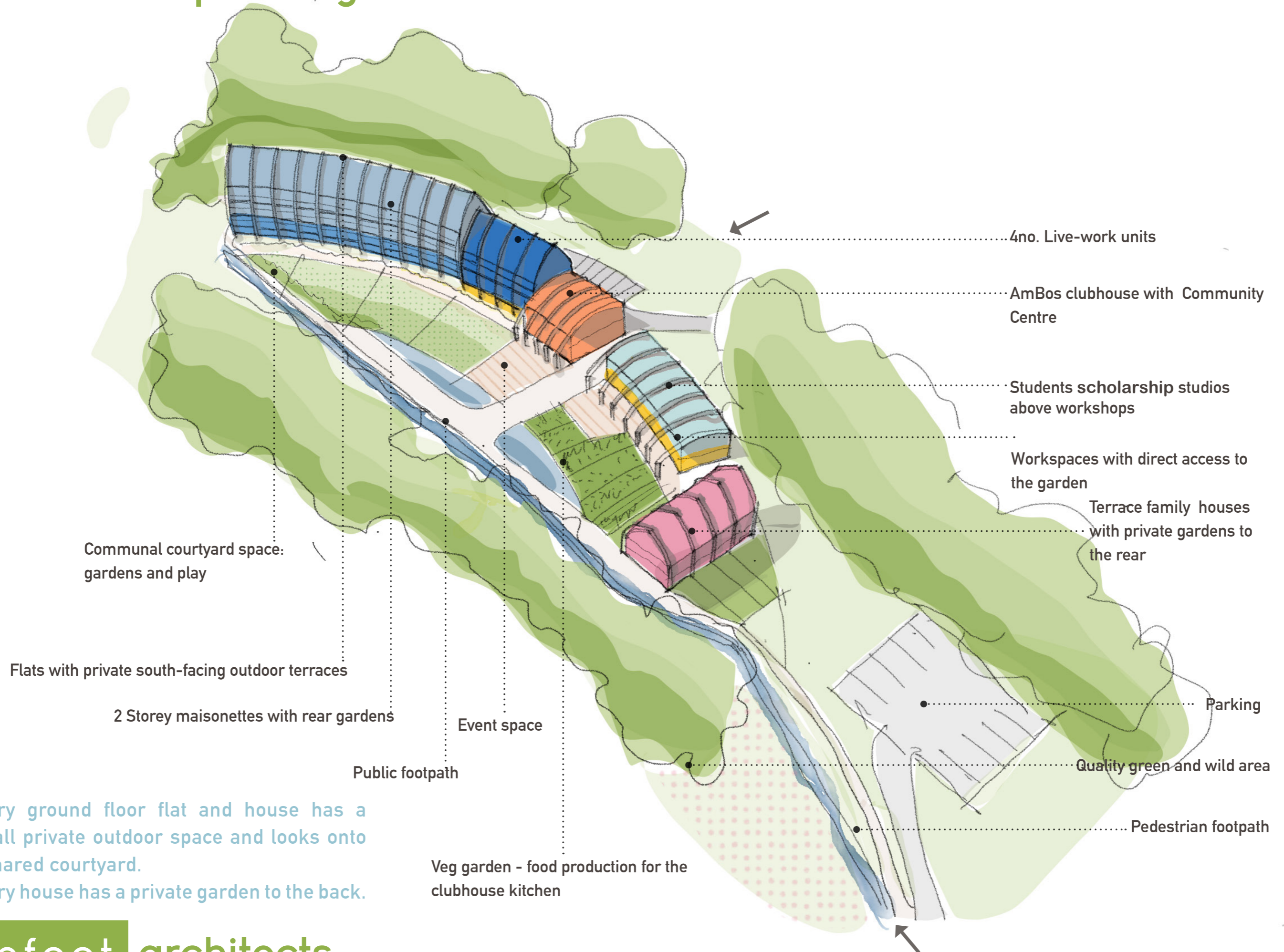
Falmouth working boats form the starting point for the developed design concept of a gentle crescent development which surrounds a central shared garden area. The design 'motif' of a hull inspires both the layout and the form of the buildings.



Concept Design: Modular Section



Concept Design: Accomodation Overview



Every ground floor flat and house has a small private outdoor space and looks onto a shared courtyard.
Every house has a private garden to the back.

Concept Design: Illustrative Overview



Concept Design: Illustrative View



Houses: Initial Thoughts

The sketches on the following pages are intended to be some provocations and a starter for 10 for the group to react to! We hope they help to distil some initial ideas and give an indication of our first thoughts on achieving a beautiful, practical and affordable place to live.

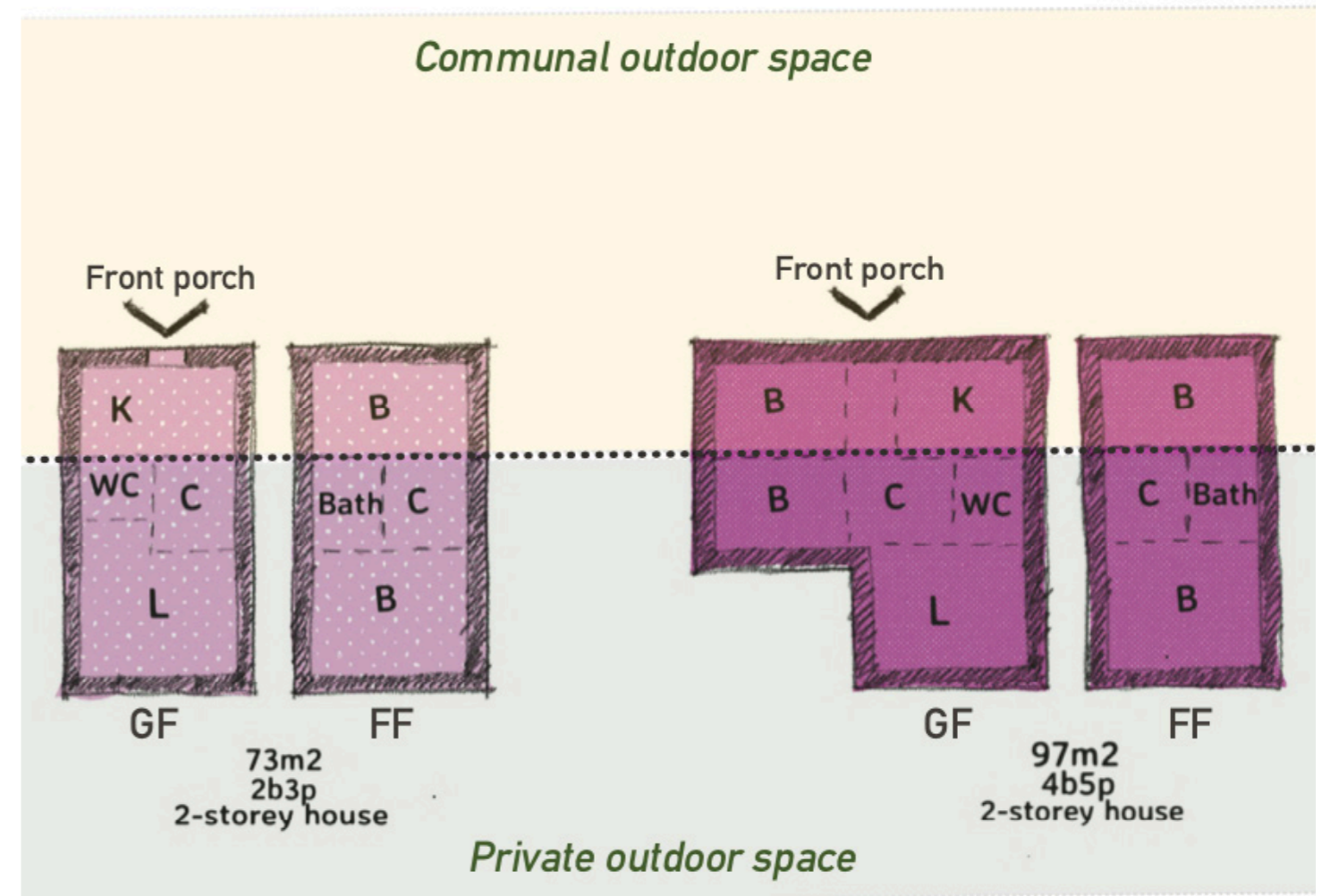
Some principles we are considering are how to make the project:

- A comfortable balance between private, communal and public spaces.
- Design that encourages interactions.
- Simple, modular, repetitive and affordable design.
- Efficient, sustainable and ecological homes that have easy access to green and wild spaces

Every house and flat type will be based on a repeatable module, in order to simplify the design, minimise the construction price and time and ensure high quality of living units.

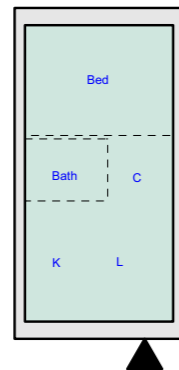
Kitchen and dining space in every house house layout will be facing the communal courtyard in order to allow visual connection with the community life.

Living space will be at the back side of the house to provide privacy.

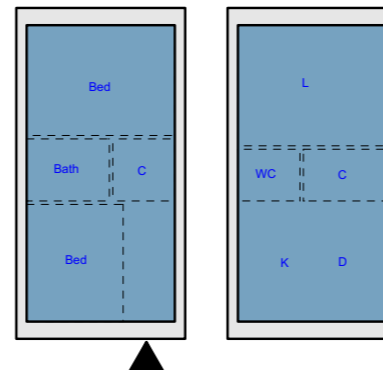


House layouts - initial ideas of space distribution

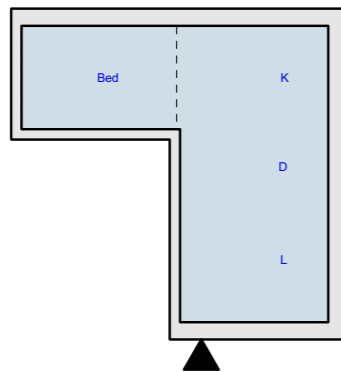
House and Flat Types



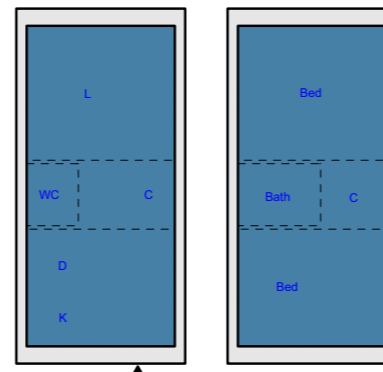
37m2
6 x 1b1p
Student studio



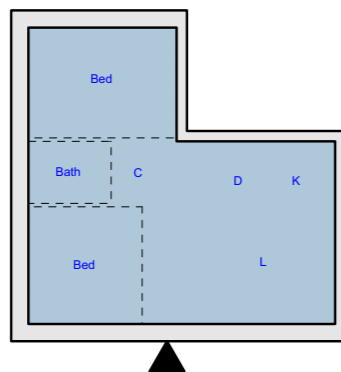
74m2
9 x 2b3p
2-Storey Maisonette



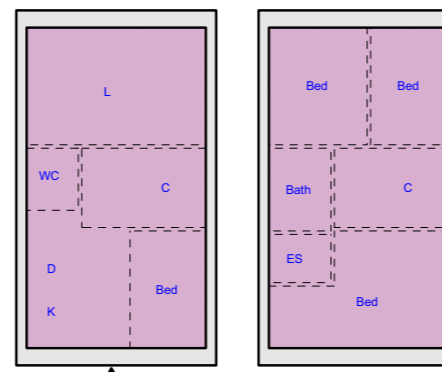
50m2
6 x 1b2p Flat



80m2
4 x 2b4p 2-Storey Maisonette



61m2
6 x 2b3p Flat



96m2
4 x 4b5p 2-Storey House

FLAT & HOUSE TYPES

The homes shown on this sheet are indicative only and demonstrate the areas for each of the house / flat types in accordance with the Technical housing standards – nationally described space standards.

The layouts & configuration will be explored further at a later stage.

Passivhaus Principles

+ Building sustainably for a zero carbon future

In building new homes, you have the opportunity, and indeed requirement under the planning and building regulations process to build to a high standard. There is an increasing need to consider how new developments can attain a zero carbon status, and there are a number of considerations for the building envelope, heating, lighting, water use, appliances, drainage to name a few.

+ Fabric first

A 'fabric first' approach to building design involves maximising the performance of the components and materials that make up the building fabric itself, before considering the use of mechanical or electrical building services systems.

+ Materials

The most effective way to reduce the environmental impact of the construction of a new building of this kind is to build using natural, renewable materials, such as timber, and insulating with wood fibre, recycled newspaper or sheepswool, whilst minimising the amount of concrete used in the foundations etc.

+ Energy

Other considerations for a new dwelling include exceeding the Building Regulations for energy use by following the rigorous Passivhaus Standard. For a building to be considered a Passive House, it must meet the following criteria:

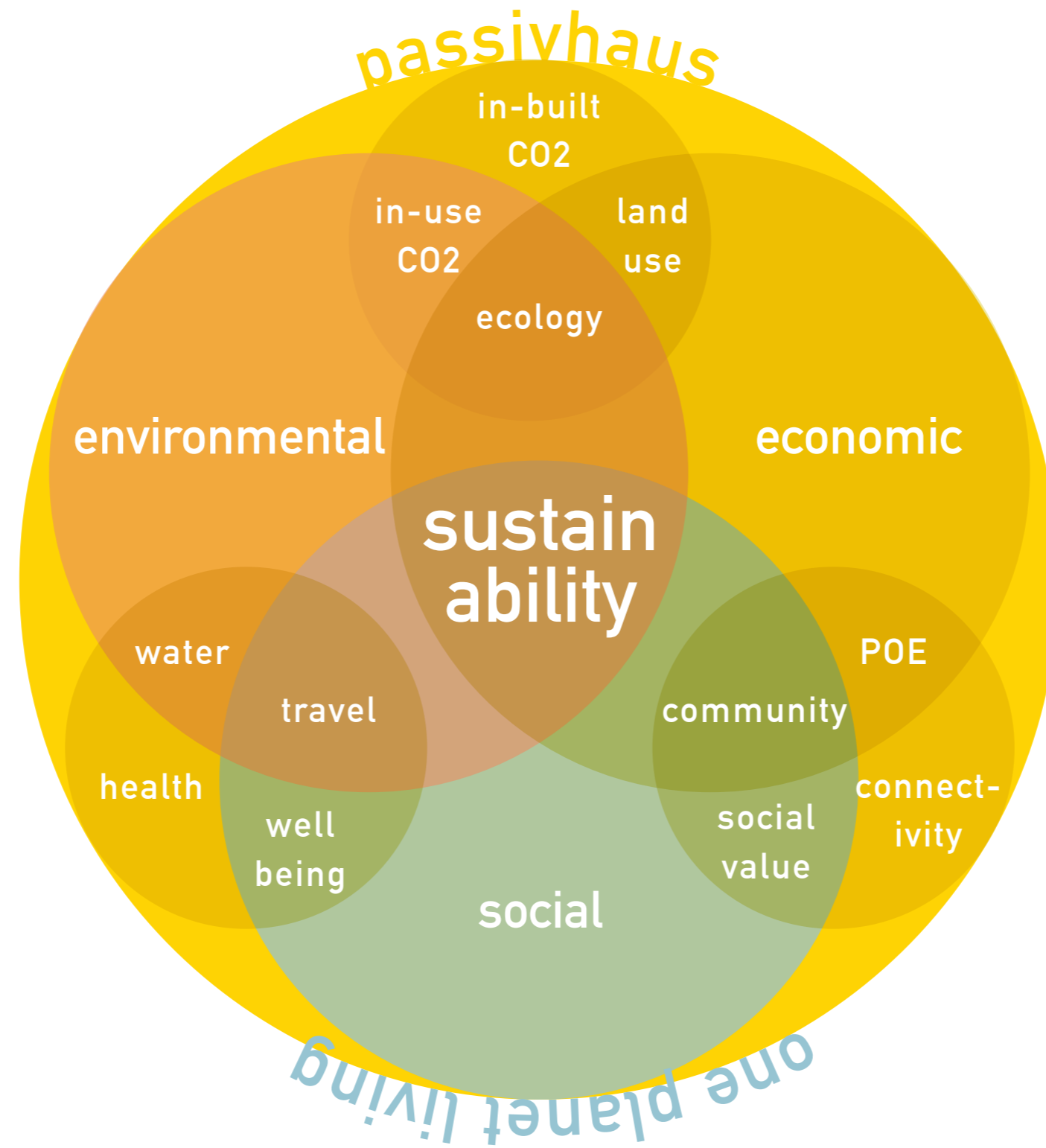
1. The Space Heating Energy Demand is not to exceed 15 kWh per square meter of net living space (treated floor area) per year or 10 W per square meter peak demand.

2. The Renewable Primary Energy Demand, the total energy to be used for all domestic applications (heating, hot water and domestic electricity) must not exceed 60 kWh per square meter of treated floor area per year for Passive House Classic.

3. In terms of Airtightness, a maximum of 0.6 air changes per hour at 50 Pascals pressure (ACH50), as verified with an on site pressure test.

4. Thermal comfort must be met for all living areas during winter as well as in summer, with not more than 10 % of the hours in a given year over 25 °C. Passive House buildings are planned, optimised

Sustainability Overview



Reaching Zero Carbon

+ Net Zero Operational Carbon

We will: Prioritise Fabric First principles; Fine tune internal environment with efficient mechanical systems; Provide responsive local controls; Specify ultra low energy sufficient appliances; Prioritise maximum use of on site renewables;

+ Net Zero Embodied Carbon

We will consider whole life carbon analysis of building elements; Prioritise ethical and responsible sourcing of all materials; Prioritise low embodied carbon and healthy materials; Minimise materials with high embodied energy impacts; Target Zero construction waste diverted to landfill; Promote use of local natural materials; Consider modular off-site construction systems; Detailing to be Long life and robust; Design building for disassembly and the circular economy.

+ Sustainable Water Cycle

We will: Provide Low flow fittings and appliances and waterless appliances where possible; consider Rainwater and grey water recycling and attenuation but consider implications of complex systems; Create SUDS for natural habitats and amenity.

+ Sustainable Connectivity & Transport

We will: Prioritise high quality Digital Connectivity to avoid need for unnecessary travel; Prioritise public

transport; Provide end of journey provision for cycling; Provide infrastructure for electric vehicles.

+ Sustainable Land Use & Ecology

We will: Leave the site in better 'regenerative' ecological condition than before development; Retain existing natural features; Create a range of green features; Create habitats that enhance biodiversity; Create 'productive' landscapes for food.

+ Good Health & Well-being

We will: Provide spaces with strong visual connection to outside; Provide easy controls eg. opening windows; Design spaces with good air quality; Design spaces with good daylighting; Design spaces with good acoustic comfort; Design spaces that are inclusive and accessible; Provide indoor and outdoor planted spaces.

+ Sustainable Communities & Social Value

Prioritise place making that expresses identity and territory; Create secure places for privacy; Create places for social interaction; Create Secure Places with overlooking views.

+ Sustainable Life Cycle Cost

Measure energy costs; Measure management and maintenance costs; Measure overall running costs; Measure added value of sustainable outcomes of building.

Contacts

Sam Goss RIBA (Director)

Barefoot Architects Ltd

Unit 5.2

Paintworks

Bristol

BS4 3EH

sam@barefootarchitects.co.uk

maria@barefootarchitects.co.uk

www.barefootarchitects.co.uk

0117 9070 971

07976 924 251 (Sam)