

Yakub Surti

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Portfolio: [View my Projects](#)

An architecture graduate passionate about advancing in the built environment through innovative design, sustainability, and efficient project delivery. Skilled in conceptual and technical design, BIM, procurement, and multidisciplinary collaboration. With first-class grades and collaborative experience, I excel at bridging design intent with construction execution. My strength lies in the technical side of architecture, consistently shown through high first-class grades in technical modules and demonstrated (in my portfolio) via 3D representations of building fabric details and illustrations of structural assemblies. These abilities help me visualize/translate building frameworks into practical construction solutions beyond RIBA Stage 4

Education

BSc (Hons) Architecture First Class
University of the West of England, Bristol 2020-2024

Modules Included:

(Year 2 & 3)

| | |
|---------------------------------------|-----|
| Design Studio 3 | 70% |
| Advanced Technology and Environment 3 | 75% |
| Collaborative Practice | 80% |
| Dissertation | 68% |
| Design Studio 2 | 74% |
| Advanced Technology and Environment 2 | 75% |
| History of Architecture | 80% |
| Design Representation | 67% |

Etone College 2017-2020
Nuneaton, Warwickshire

Subjects Included:

- Mathematics
- Psychology
- EPQ
- Physics
- IT

(As well as 9 GCSE's, including English and Mathematics)

Softwares & Skills

- Revit
- AutoCAD
- SketchUp
- Microsoft Office
- Adobe
- InDesign
- Photoshop
- Illustrator
- V-ray
- Twinmotion
- Procreate
- MakerBot
- Report Writing
- Adaptabe
- Problem Solving
- Organization
- Time Management
- Cost Management
- Mentorship
- Leadership

Achievements

Featured in an Architecture Publication

Getting Lost in Design Drawing with the Satnav Natives (Burch, J, 2022).

Zero Carbon Aware (Bronze Level)

Achieved a Bronze award in Sustainable Design and Carbon Awareness Course

References

| | | |
|------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------|
| Mina Tahsiri Senior Lecturer E: Mina.Tahsiri@uwe.ac.uk T: +44 (0) 11732 87647 | James Burch Associate Professor E: James.Burch@uwe.ac.uk T: +44 (0) 11732 82089 | Nick Drofiak Lecturer E: Nick.Drofiak@uwe.ac.uk T: +44 (0) 11732 81229 |
|------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------|

Experience

Stride Treglown Architects Semester 2: 2024
Experience Programme - Bristol

- Observed how project and site managers coordinate tasks, schedules, and teams to meet tight deadlines whilst ensuring compliance with building regulations.
- Saw how BIM enhances collaborative coordination with federated models and clash detection using software like Navisworks and BIM 360 under ISO 19650 criteria.
- Experienced the benefits of MMC, including prefabrication, modular construction, alongside modern materials, for greater efficiency and sustainability.
- Understood how Passivhaus buildings use airtight construction, insulation, and mechanical ventilation for ultra-low energy efficiency.
- Learnt how project teams resolve design challenges collaboratively, balancing aesthetics, functionality, buildability and cost.

BM3 Architects Easter Holiday: 2018
Experience Programme - Birmingham

- Gained early insight on industry workflow. Worked on concept brief-based projects
- Developed early proficiency in architectural software, including AutoCAD, Revit, and SketchUp before enrolling onto an architecture course.

Activities

Crescent FC Management Present
Assistant Treasurer - Nuneaton

- Managed treasury, player registration, and parent payment tracking to ensure smooth club operations.
- Ensured on-site child safety by implementing safeguarding measures and supervising sessions alongside providing support and reassurance to injured players.

Pavillion Build Project Easter Holiday: 2022
Design and Build Team member - Bristol

- Multi-course group project, to design & build a stable trapezoidal wooden display shelf showcasing student arch research project submissions.
- Developed multi disciplinary teamwork, communication, problem solving, organization, time management, and wood working skills.

Work

Amazon Flex Present
Delivery Driver - Lutterworth

RS Components Summer: 2022
Warehouse Operative - Nuneaton

Maps Cash and Carry Summer: 2020
Logistics Assistant - Leicester

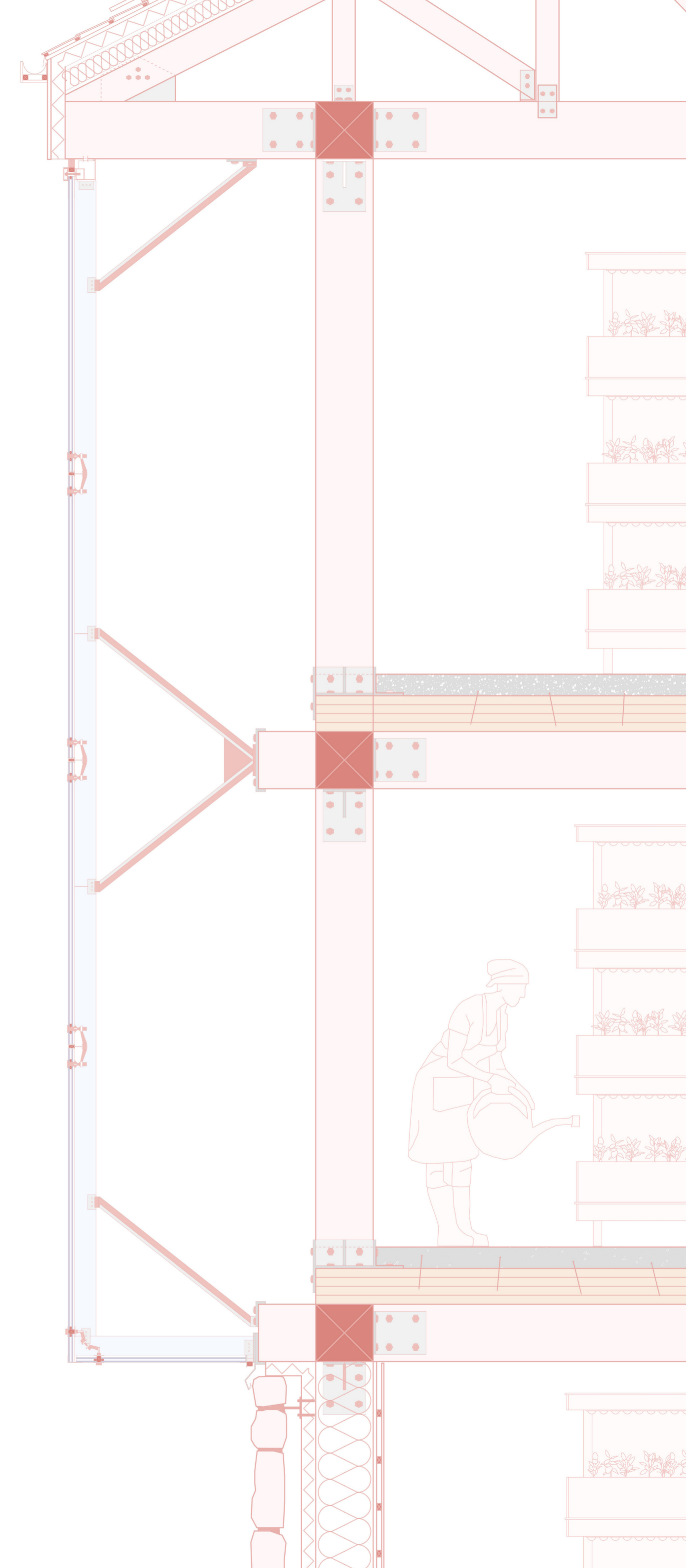
Yakub Surti
PORTFOLIO.

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| Project 1 - Ground For Revival | 06-17 |
| Project 2 - Emergency Dwellings | 18-27 |
| Project 3 - Corbett Residence | 28-31 |

Selected Works

2020-2024



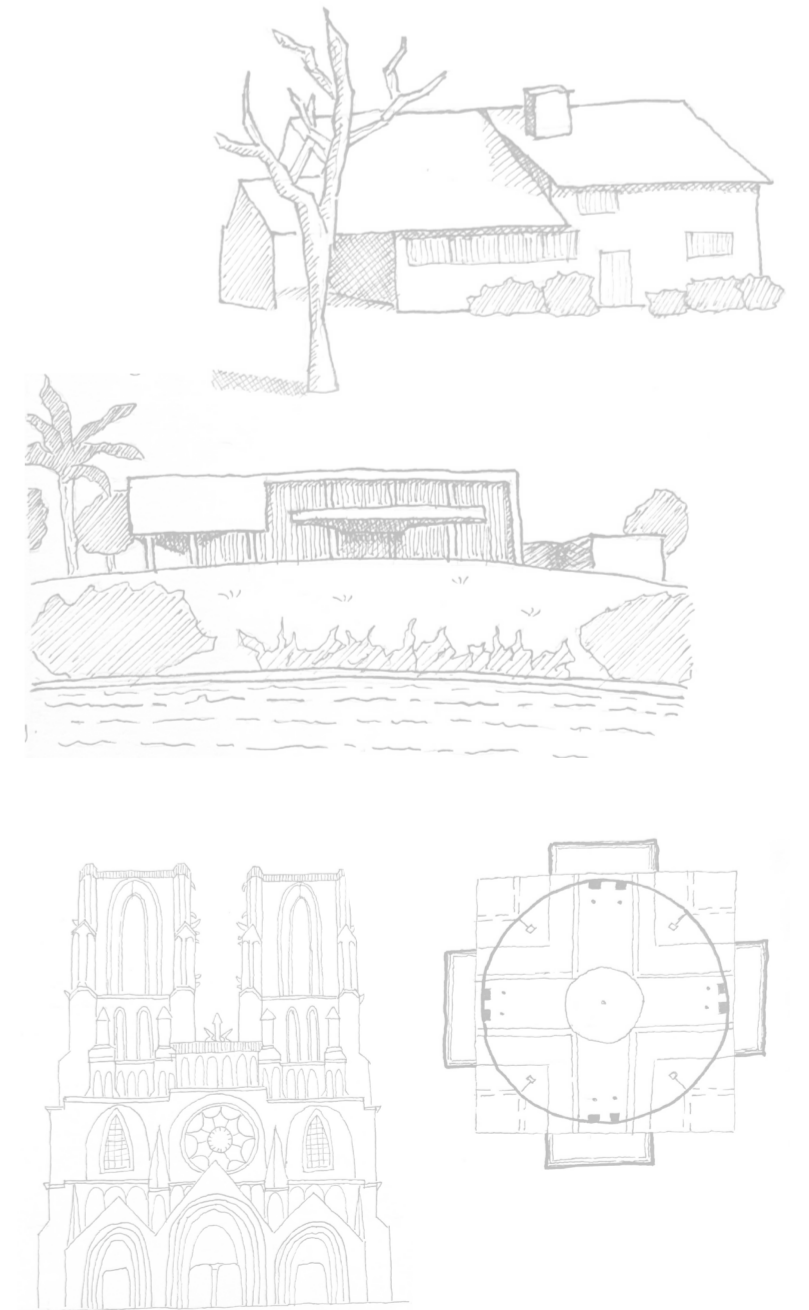
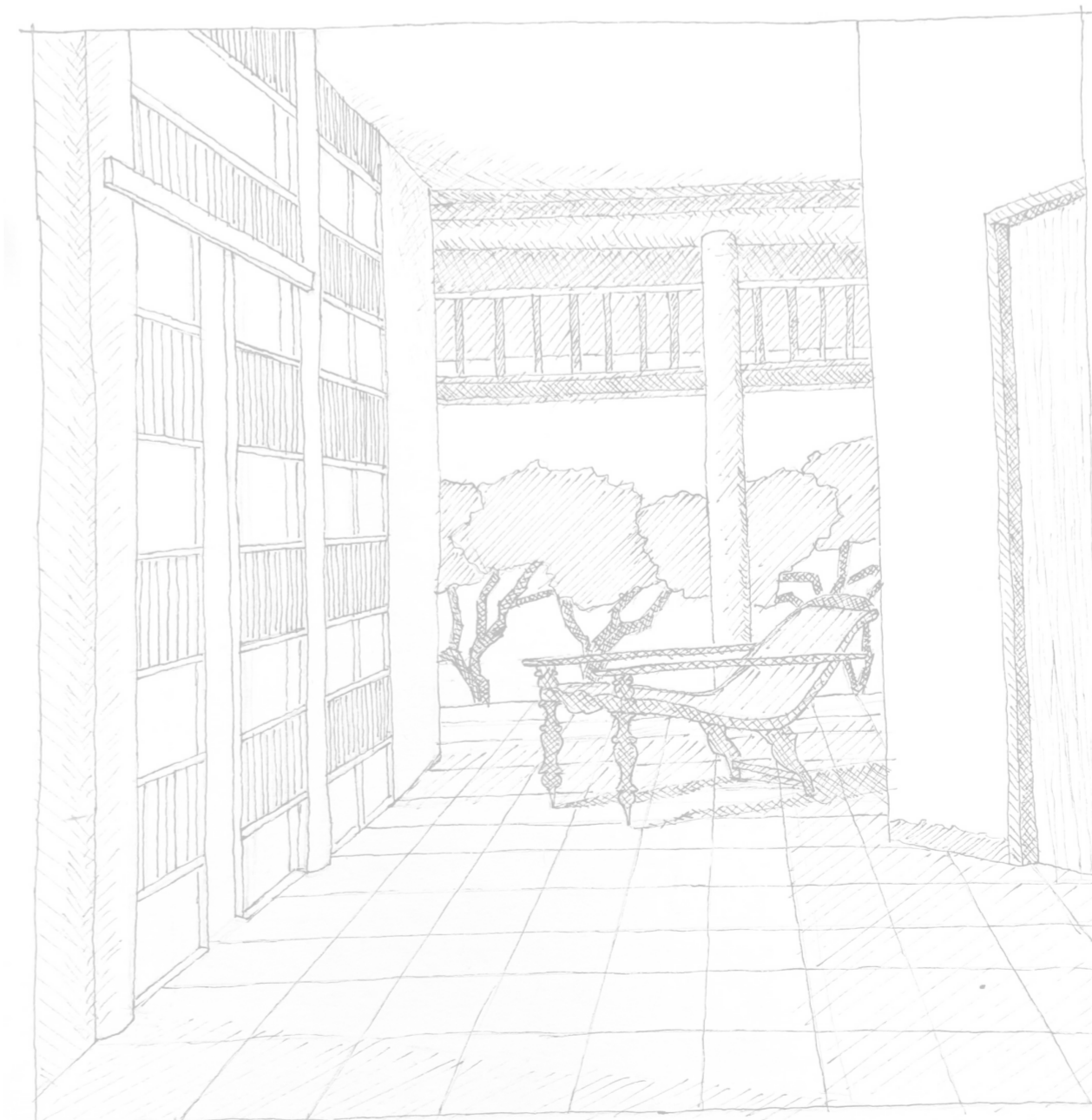


Introduction

Goals, Passions and Experiences

Hi, I'm Yakub. I am an architecture graduate with a focus on technical design, sustainability, and project delivery. I have skills in technical detailing, BIM management, procurement, and working with different disciplines. I have achieved first class grades in all my technical modules, with my lowest mark being 74%. I can create clear 3D visualizations of building details and structural assemblies, helping to turn design concepts into practical construction beyond RIBA Stage 4.

My experience at Stride Treglown and BM3 Architects have given me deep insights into diverse projects, each with their own distinct approaches, challenges, and coordination methods. These experiences contextualised my theoretical knowledge from my architecture course and provided real world examples of industry practices such as client design solutions, BIM, technical design, project coordination, MMC's, multi disciplinary collaboration, passivhaus etc.





Produced with AutoCAD, SketchUP, Twinmotion and Photoshop

Project 1: Ground for Revival

Year 3 Design Studio (2023 - 2024)

The manifesto for this project in Frenchay Village, Bristol, encapsulates a vision deeply rooted in the area's rich agricultural and architectural history while steering towards a future centered around sustainability and community empowerment.

Therefore, this project serves two purposes:

- Designing for Frenchay's rich history.
- Becoming an actively engaging community hub by means of the core functionality of the public building.

A Community Garden Centre: Inspired by local history, conservation practices, and local infrastructure analysis.

3 Functions of the Community Garden Centre:

- A Culinary School - Teaching the future generations to grow and cook their own produce continuing traditions
- A Cafe - Continuing traditions of the Tea Parties held locally.
- A Vertical Farm - An exhibitionary source of growing producing for the School and Cafe.

Frenchay Village Reviving the forgotten Traditions of the Past

The majority of the research for the site reading came from a historical perspective, being the museums. From which, I was able to identify key aspects of Frenchay that thrived in terms of culture, traditions and pure historical significance.

3 key themes that were identified were the allotments & the flower festival, the tea gardens and the preservation and conservation of local nature reserves and wildlife.

The allotments produce would be used as fresh goods for the tea parties of Frenchay, and also sold or displayed competitively in the flower festival farmers market.

Both of these activities would be used as means of continuing the village's historical traditions of farming alongside strengthening community relations with one another.

Nature reserves and green spaces would be preserved and used as grounds for the activities to take place. as grounds for the activities to take place.

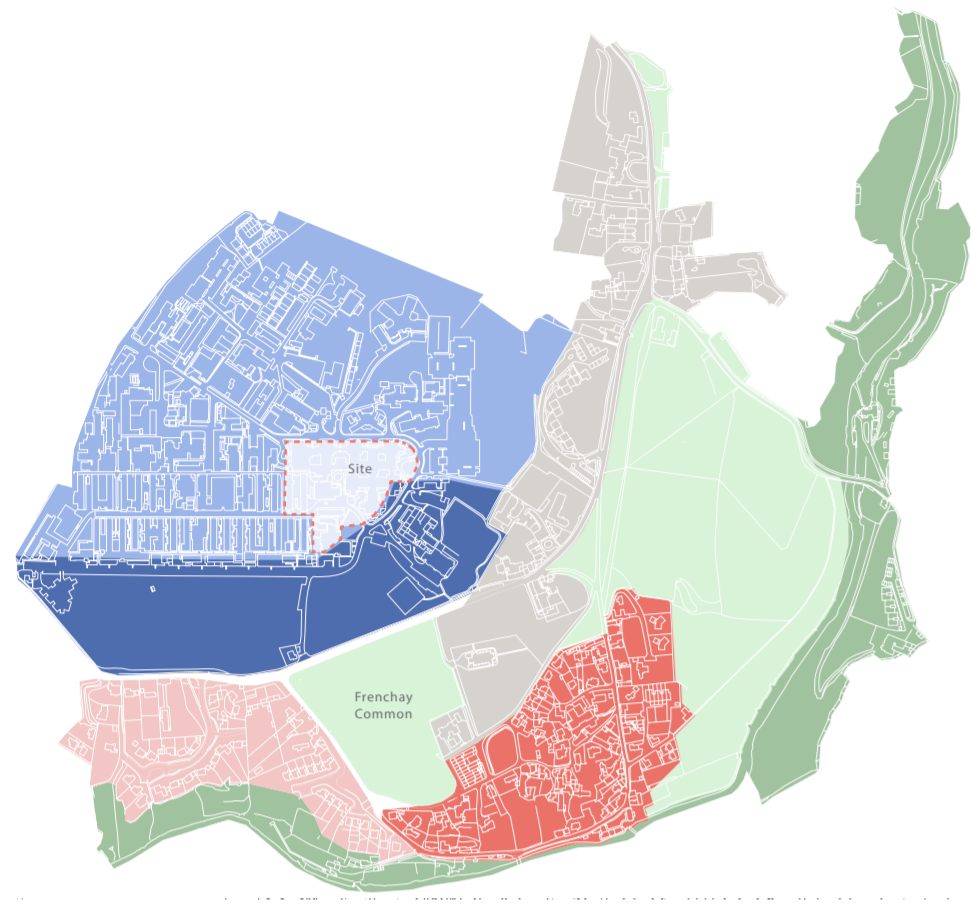


The Designated Site - 12,000sqm



Key Character Zones

Produced with Illustrator



- The Village
- Area of Modern Development
- Frenchay Park / Hospital
- Frenchay Hospital Extensions from WW2
- Woodlands, River Valley & Cleveewood Road
- Commons, Open-Spaces and Valley
- Georgian Houses and Churches by the Common and Beckspool Road

In 2007, Supplementary Planning Document by South Gloucestershire Council were created with concerns raised about this degradation of the land. But the concerns spread further to other preservations needs. These included Nature Conservation areas, Historic Parks, Listed Buildings and even locally indeginous animals/ habitats. By reviewing what they had enlisted as part of the Conservation and preservation policies, identifications were able to be made as to what it was the locals and council cared most for and what actions were going to be made

Conservation and Preservation

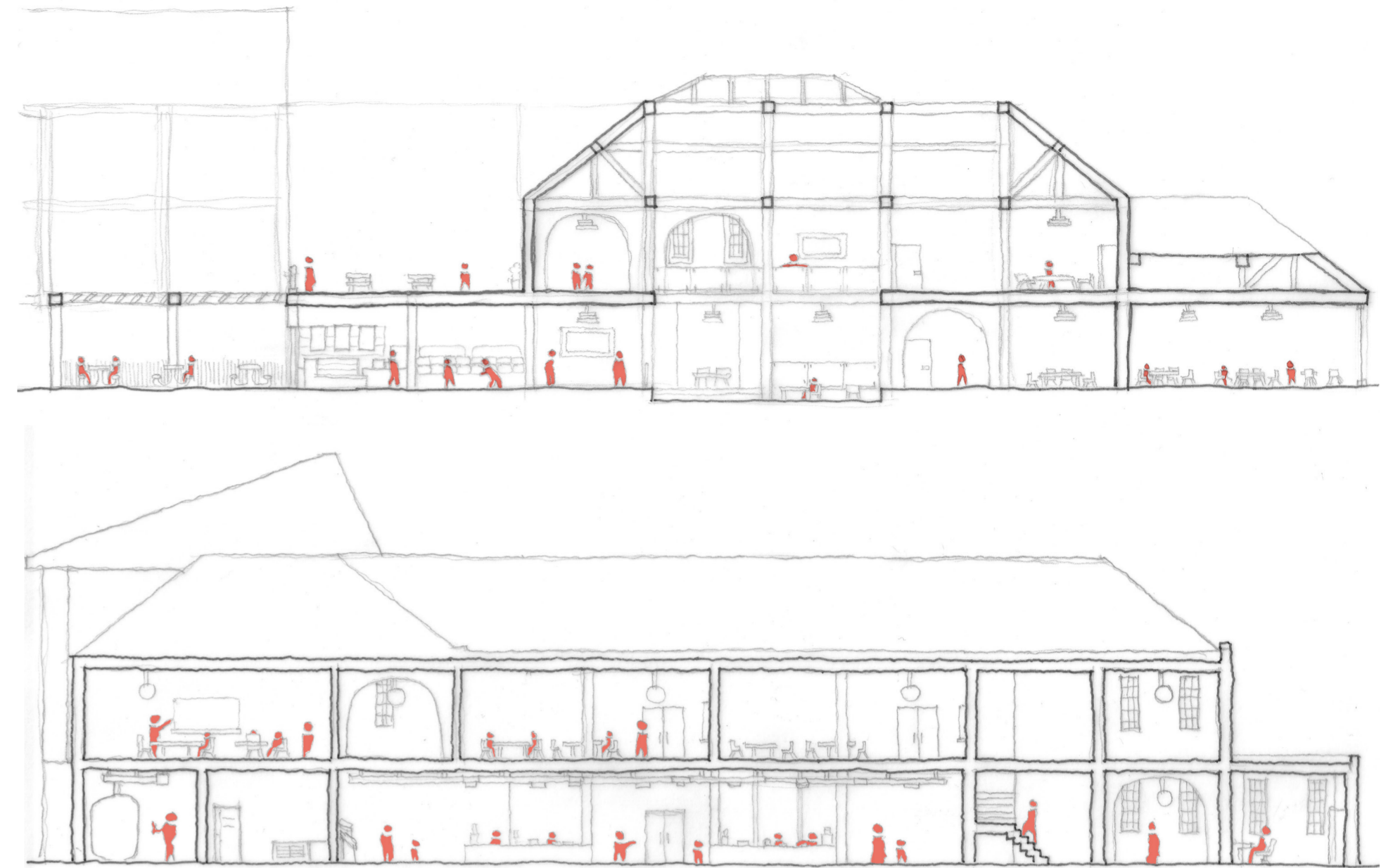
Produced with Illustrator



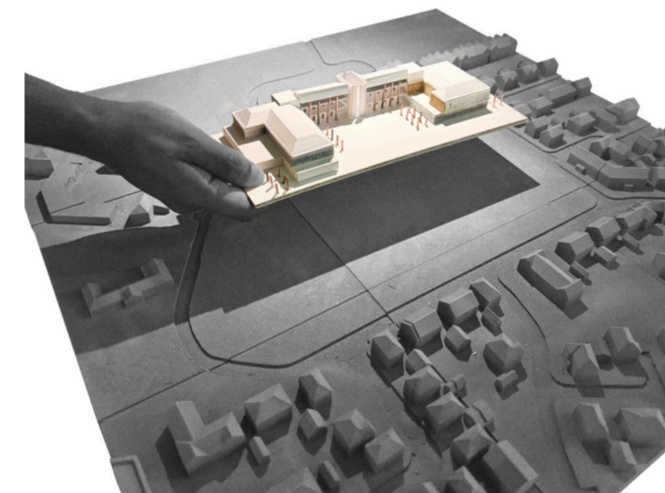
- Green Belt (Policy GB1)
- Nature Conservation Policy (L8)
- Protected Open Spaces (Policy L5)
- Listed Buildings (Policy L13,L14)
- Locally Listed Buildings (Policy L15)
- River Frome
- Adjoining Conservation Areas
- Conservation Area (Policy L12)
- Historic Parks & Gardens (Policy L10)

in response. These identifiers would draw valuable information as to how the project in Frenchay Village should be designed in adherence and respect for what the council and locals value/ want preserving. It can also be noted, from the key character zones, that where ever a dense amount of domestication occurs to the landscape, besides it will always have a dense amount of green spaces and forestry. For example, the Frenchay Park counters the density of the Frenchay Hospital, commons/open spaces/ valleys counter to the village and Georgian Houses.

Schematic Resolution - Developed Concept

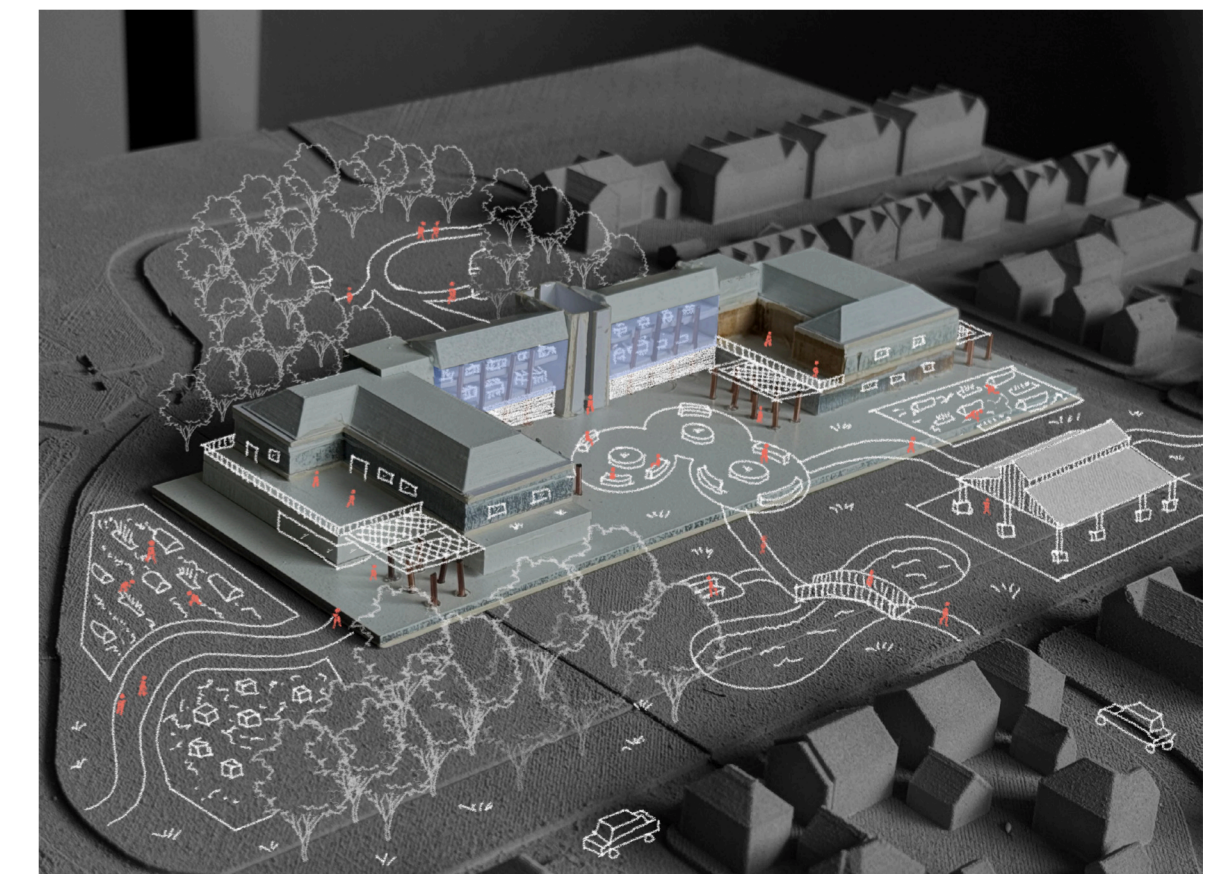
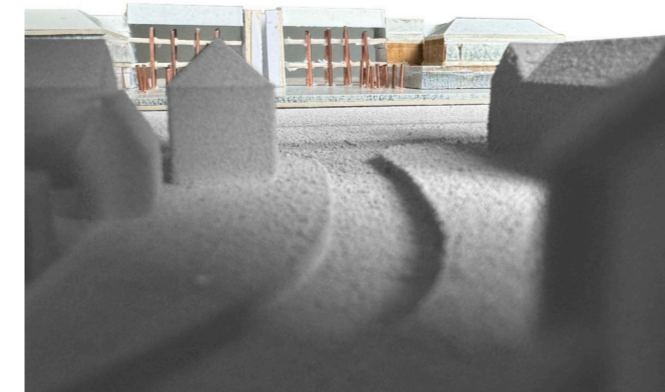


Physical Concept Model - 1:500



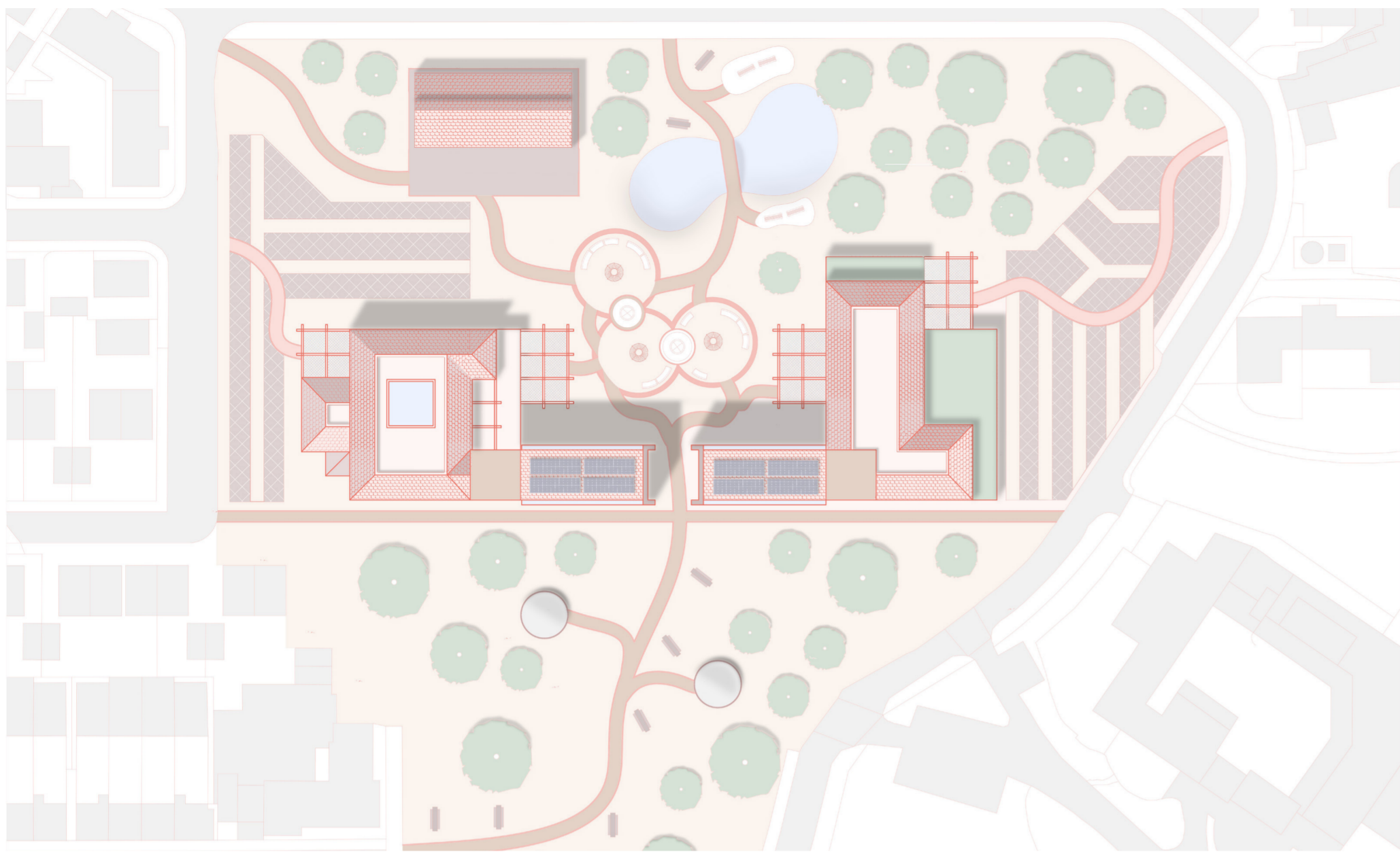
The physical model, after digital processing, provided a strong visual understanding of the final project, particularly the varied experiences from different entry points in terms of narrative. It also confirmed that 8,000sqm of the 12,000sqm site was efficiently utilized, avoiding dead spaces while balancing storytelling elements with the conservation spinney's expansion.

The Landscape was built in collaboration with another classmate with the same site. It comprised of 9 3D printed segments and coated with layer of concrete texture spray. The Building was made with woodwork, copper rods, and card. It was then post processed on Procreate and Photoshop.



Landscaping the Ingress for a Seamless Experience and Narration

Using the research from the site analysis, demographics and how the building would be used, concept sketches and iterations helped in the development for how the different narratives taking place and how the thresholds and ingress would help highten the different experiences. For the children coming from the primary school to the culinary school, allotments grounds and a clear view of the school kitchen deepens their experience, for the tourists from the museum, a picturesque view with an exhibitionary vertical farm highttens their experience, and for the locals its the cafe, allotment grounds and outdoor market.



Site Plan



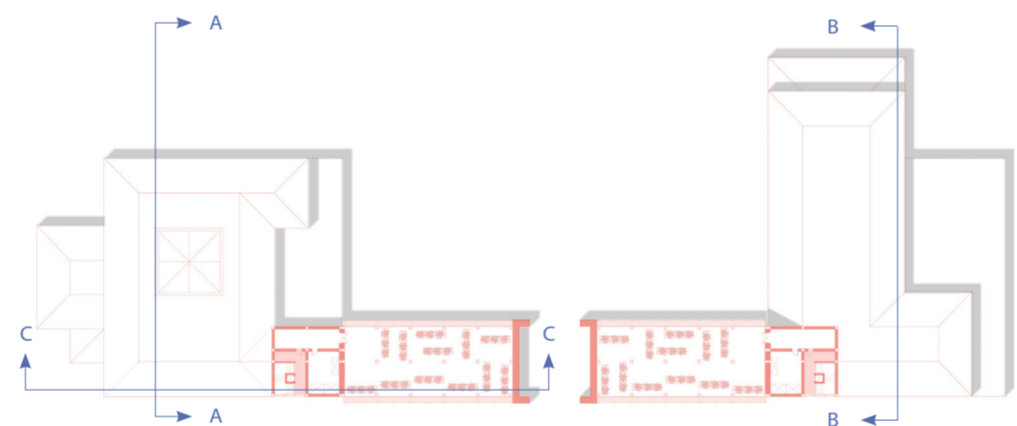
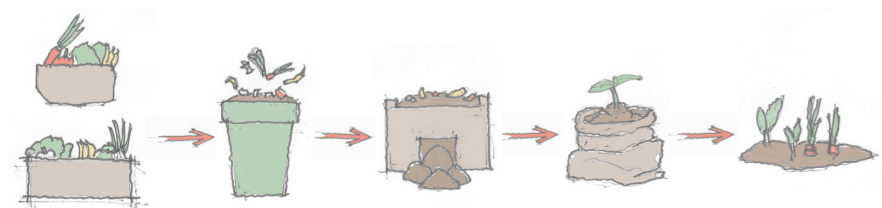
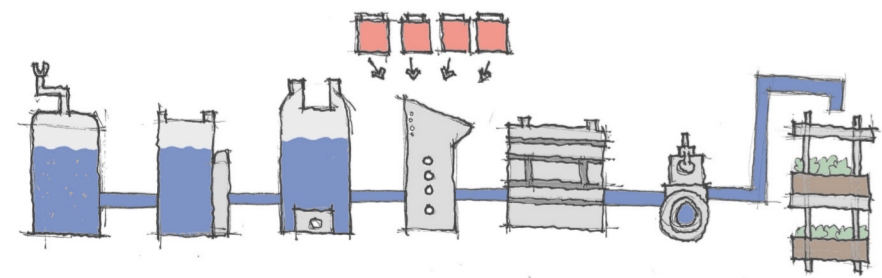
Vertical Farm

Irrigation System and Compost Design

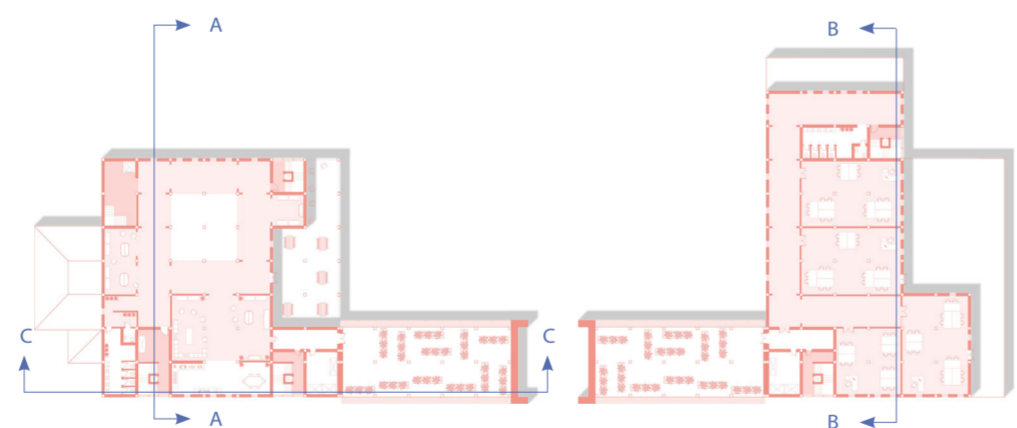
The Vertical Farm used 2 sustainable practices to help align the project with the RIBA SDG's, in particular SDG 12: Responsible Consumption and Production. An Irrigation System and a Compost Design was used to help achieve this.

This Irrigation System would collect rain water, filter it, store it, use a fertigation unit to add further nutrients, transferred to a tank preparation unit then pumped to sprinklers watering the vertical farms.

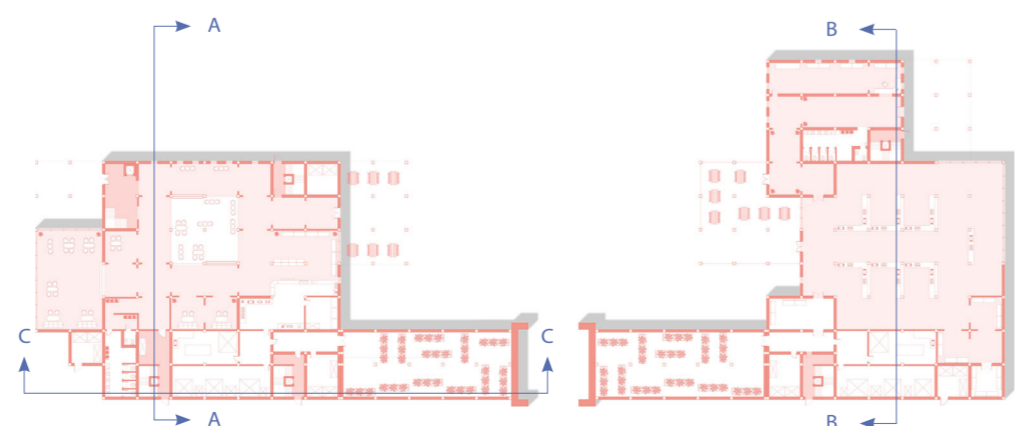
The Compost Design would use waste/left over food to create a type of compost (Bokashi Compost), which is then mixed with native Frenchay soil. Fertilizers are then added then used for growing new fresh produce.



Second Floor



First Floor

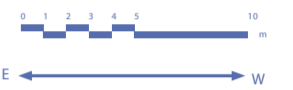


Ground Floor



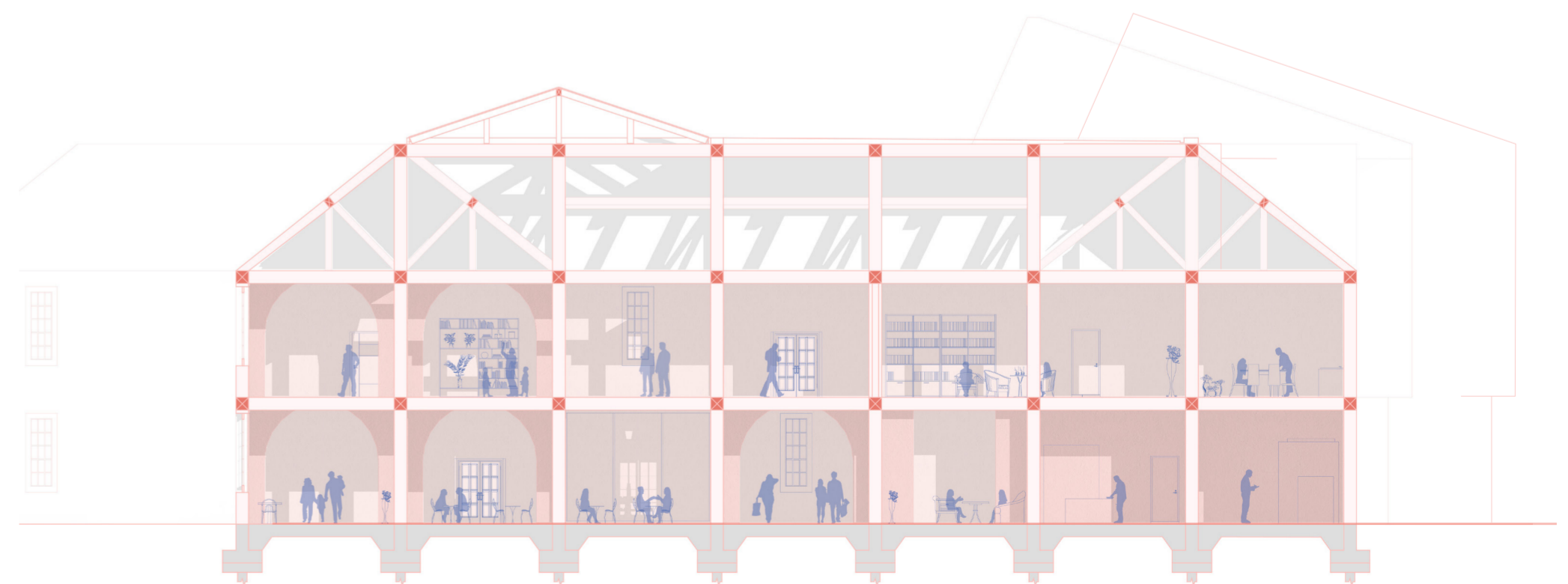
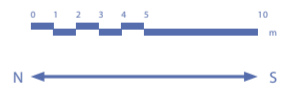
North Elevation

Produced with AutoCad, SketchUP and Procreate



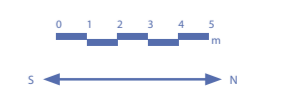
East Elevation

Produced with AutoCad, SketchUP and Procreate



Section A - A

Produced with AutoCad, SketchUP and Procreate





Community Garden 3D Aerial View
Produced with AutoCad, SketchUP, Twinmotion and Photoshop



Village Cafe Internal View
Produced with AutoCad, SketchUP, Twinmotion and Photoshop

Final Renders

The Community Garden 3D Aerial View highlights its seamless integration with the surrounding context, balancing form and function. The design maintains its distinct identity via the vertical farm and a carefully considered ingress threshold experiences.

The Village Café celebrates local heritage by connecting residents and tourists to farming traditions. Visitors enjoy dishes made from produce they've grown or cultivated in the café's vertical farm. This theme extends to the Culinary School render, where children learn to cook using their own homegrown produce, adopting sustainability and community pride

The External Renders highlight vibrant community life through flower festivals, conservation areas, and inclusive spaces, encouraging connection and engagement across all demographics.



Culinary School Internal View
Produced with AutoCad, SketchUP, Twinmotion and Photoshop



Farmers Market External View
Produced with AutoCad, SketchUP, Twinmotion and Photoshop

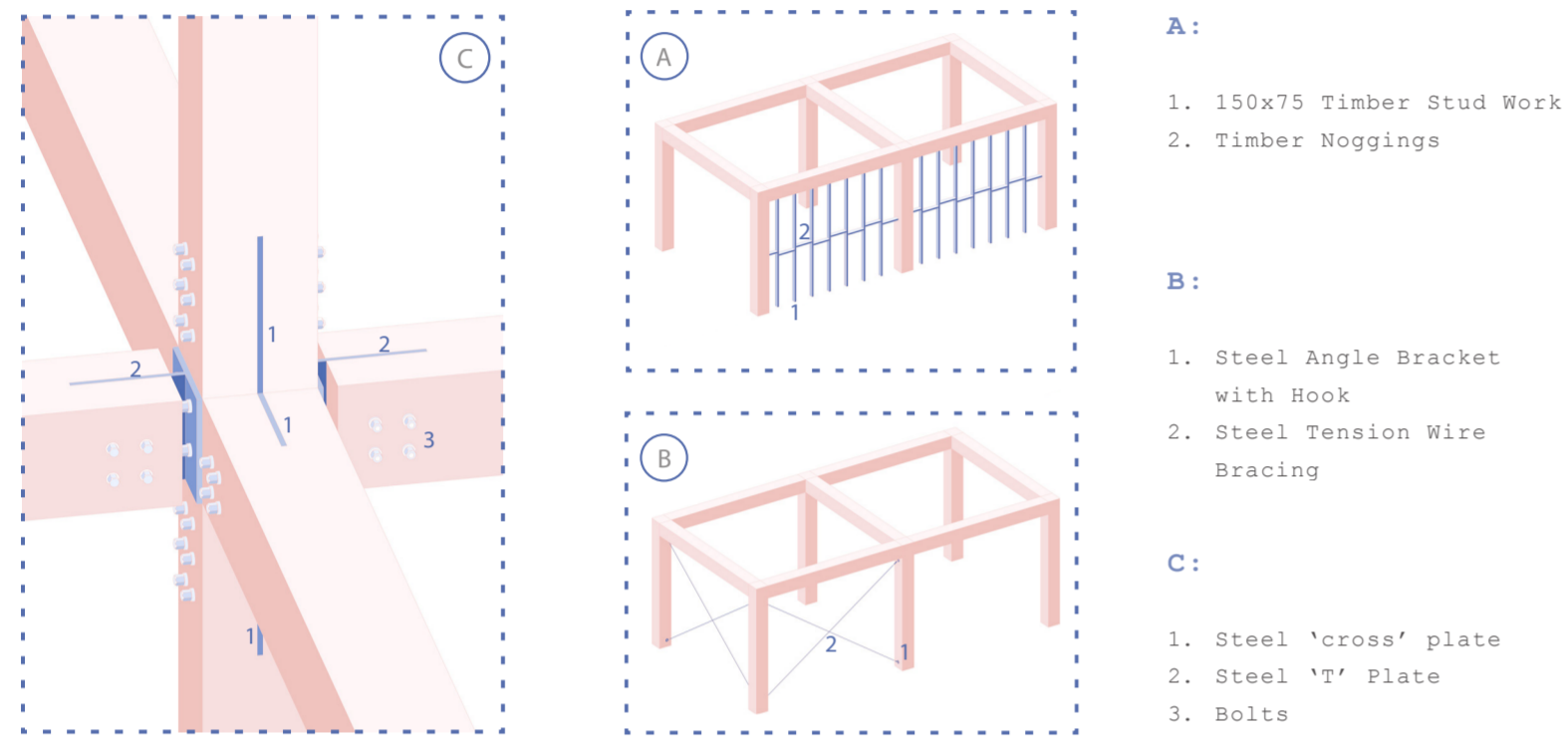


Central Courtyard External View
Produced with AutoCad, SketchUP, Twinmotion and Photoshop

Primary Framework

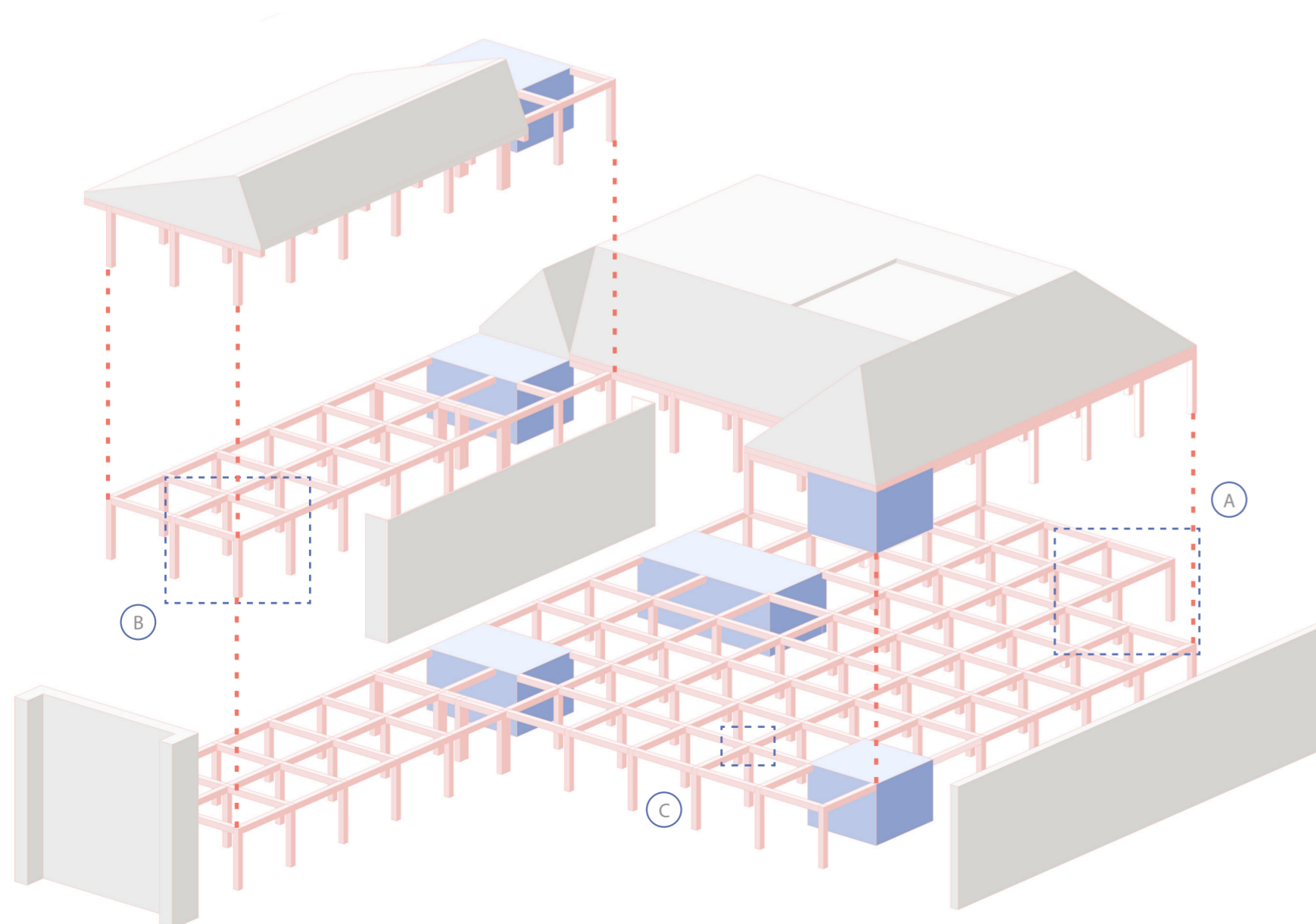
The structural system consists of Glulam columns and beams in a 5x5 grid. For the vertical farm (B), steel tension wire bracing resists wind loads while preserving unobstructed views. Portion (A) uses a stud work system, adequate for its two-story structure without extra bracing.

The connection point includes a column with four beams. Slits at 800mm above and below the connection allow a cross-shaped steel plate to be inserted and bolted, connecting two beams on each side and two more via T-shaped steel plates.



Structural System Diagram

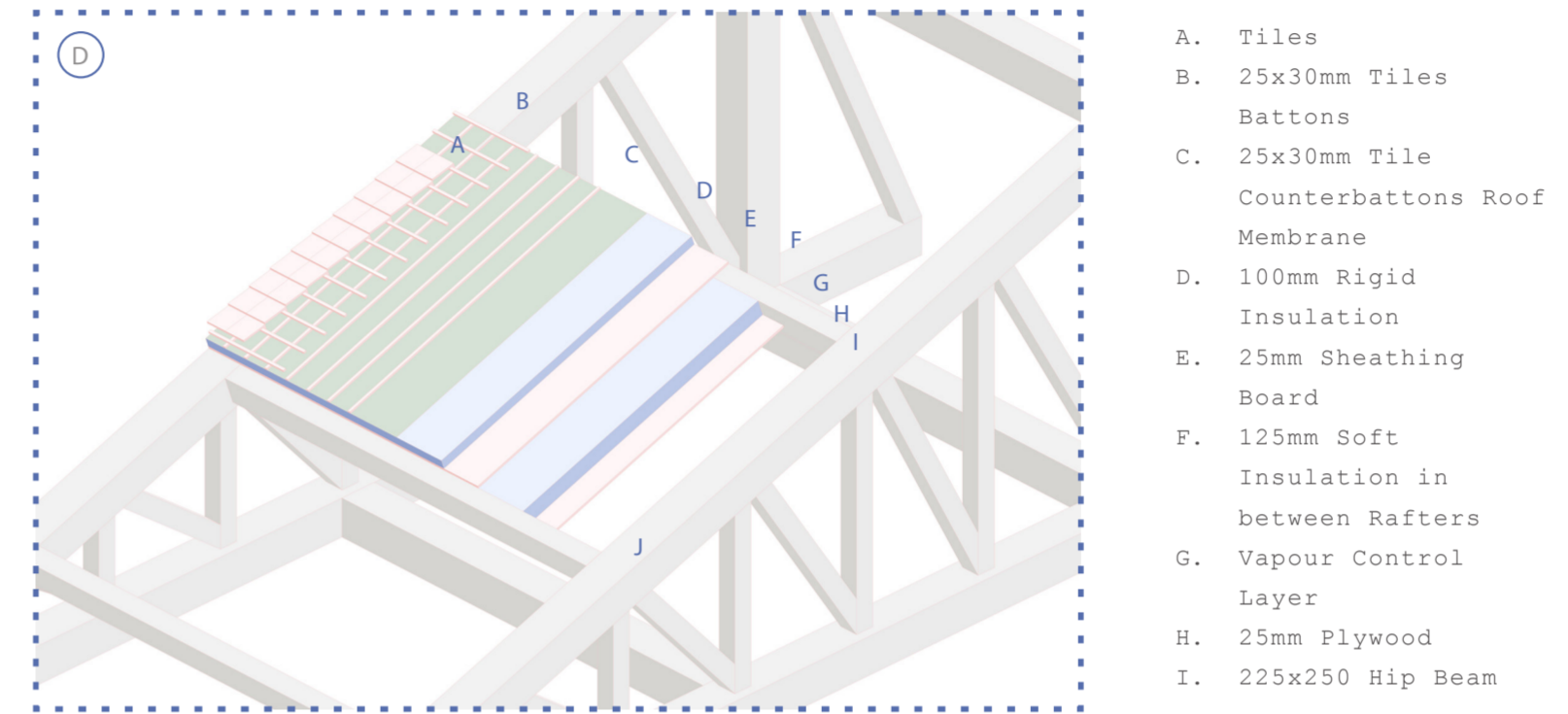
Produced with AutoCAD, SketchUP, Illustrator and Procreate



Roof Structure

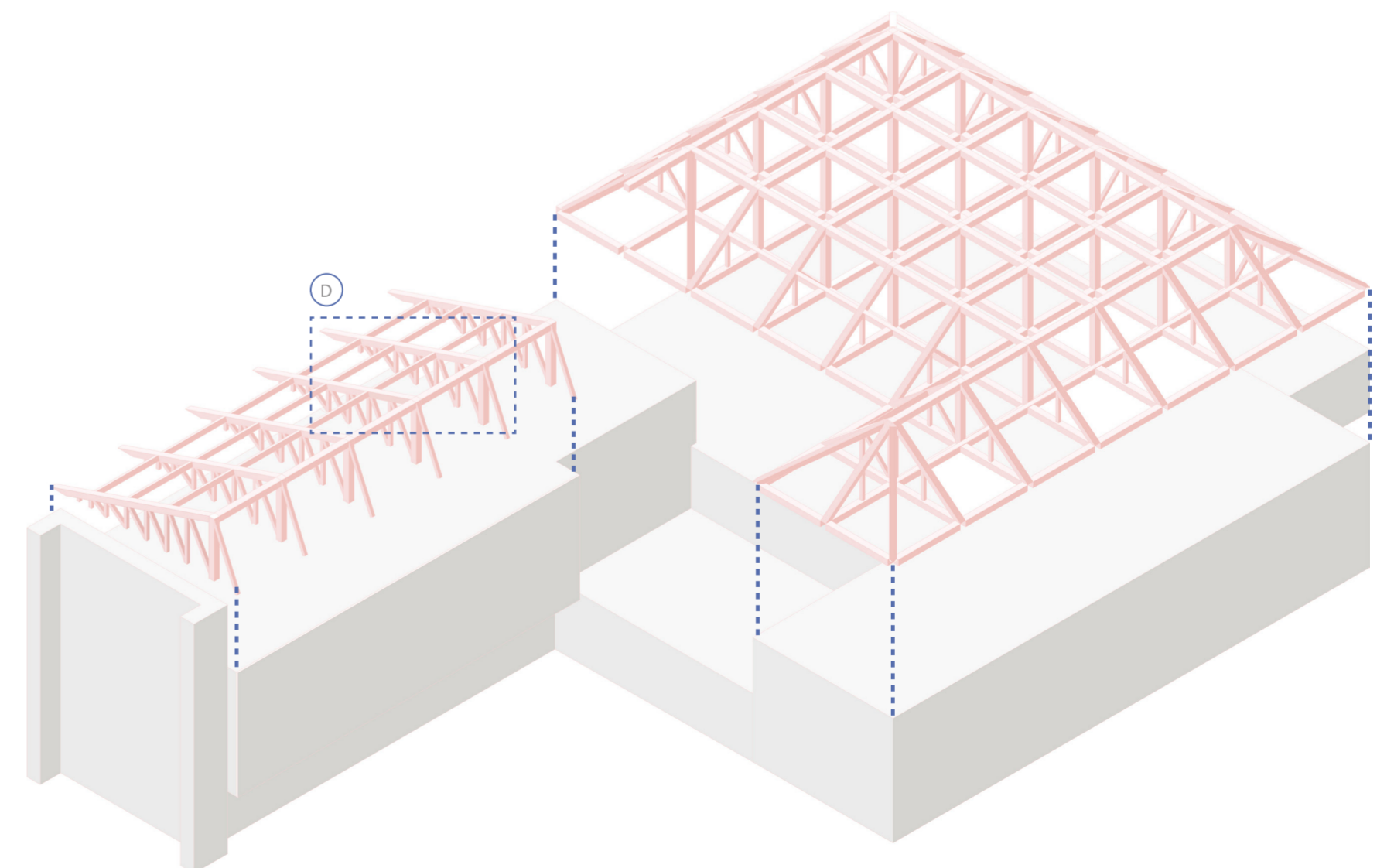
The pitched roofs required a Howe truss system to transfer the roof's live and dead loads to the columns and ground. As the rafters extend more than 5m to the columns, hip beams provided additional support. Struts and posts formed the Howe truss, offering more structural stability than columns alone.

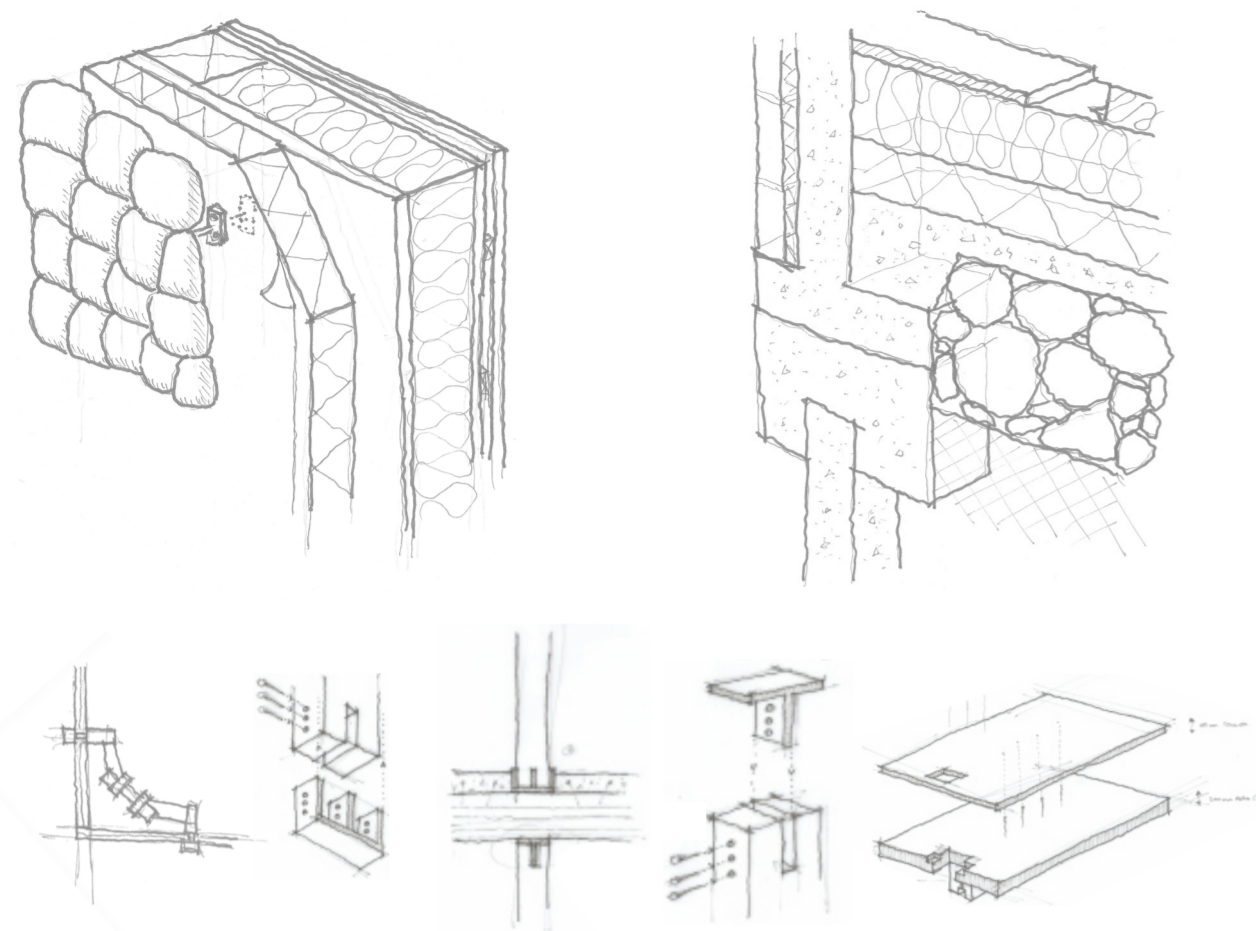
A roof membrane, placed between the rigid insulation and timber tile counter battens, directs wind-driven rainwater under the tiles into a gutter. The membrane extends slightly into the gutter with flashing to ensure a watertight seal.



Structural System Diagram

Produced with AutoCAD, SketchUP, Illustrator and Procreate





The Technical - Layering the Building Fabric Produced with AutoCAD, Illustrator and Procreate

Due to the distinct nature of the vertical farm incorporated into the facade of the building design, the fabric detailing required the study and analysis of multiple precedents. A key precedent that supported and guided my technical design was the Holbourne Museum, (particularly the glass extension). It introduced me to the rule of 3rd's for overhangs, how to make a building air tight with the use of large amounts of glass, alongside how the glass would be supported without framing.

(A)

Roof:

- Photovoltaic Panels
- Tiles
- 25x30mm Tiles Battens
- 25x30mm Tile Counterbattens
- Roof Membrane
- 100mm Rigid Insulation
- 25mm Sheathing Board
- 125mm Soft Insulation in between Rafters
- Vapour Control Layer
- 25mm Plywood
- 225x250 Hip Beam

1:5 Details:

1. Last Batton acting as roof flashing for wind-driven rain
2. Roof Membrane Overhang
3. Gutter
4. Fascia Board
5. Screw - Batton
6. Soffit
7. Zinc Sheet
8. Screw - Rigid
9. Aluminium Plate
10. Glass Pane Frame
11. Steel Bolts

(B)

Wall:

- 300mm Coursed Rubble Masonry
- Walls Ties
- Damp Proof Membrane
- 100mm Rigid Insulation
- 25mm Sheathing Board
- 400mm Soft Insulation in between Columns
- 25mm Sheathing Board
- Vapour Control Layer
- 45x35 Battens
- 15mm Gyproc Moisture Resistant Plasterboard

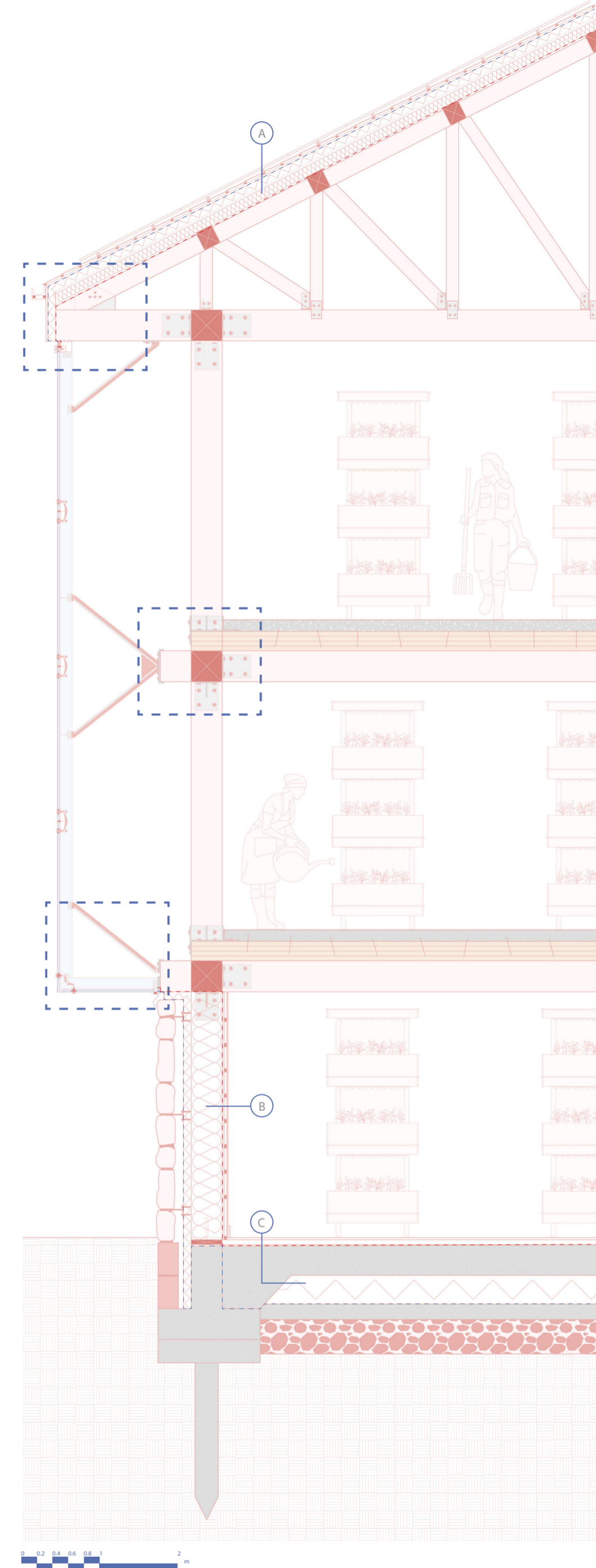
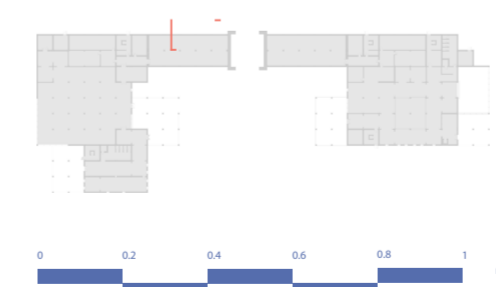
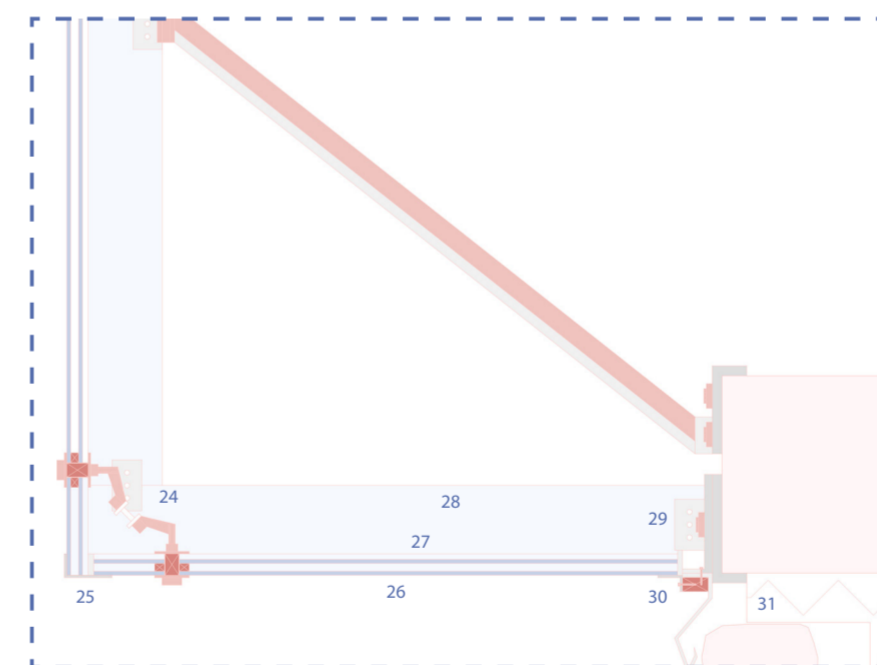
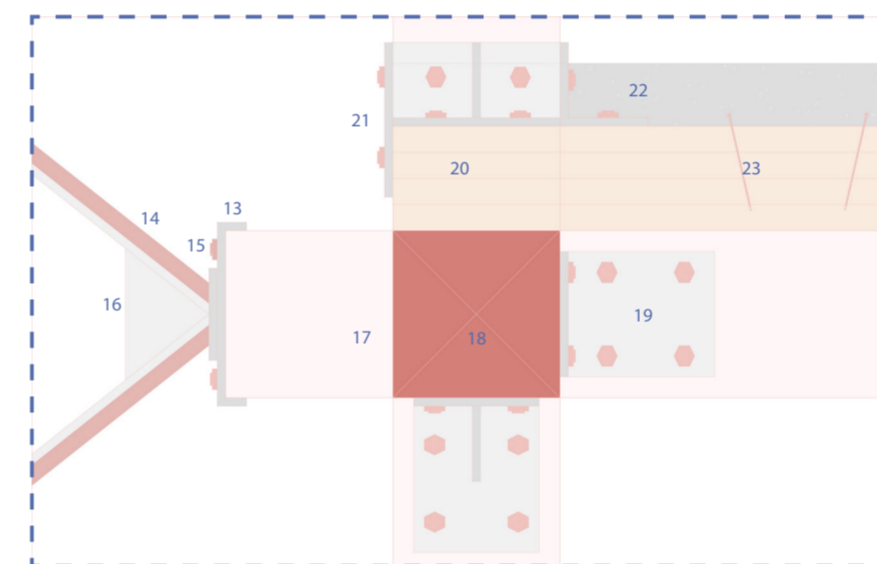
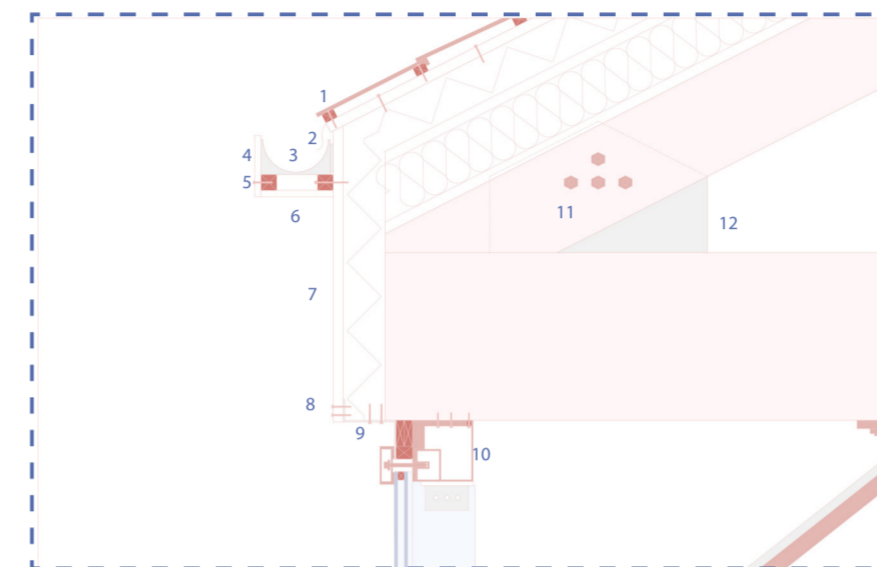
12. Steel Plate
13. Beam Capping
14. Steel Glass Support Frame
15. Steel Plate Bolted to Beam
16. Steel Plate Connector
17. Beam Overhang
18. Beam
19. Steel 'L' Plate Bolting Beam and Column
20. CLT Floor
21. Steel 'W' Plate Bolting Column to CLT
22. Precast Concrete

(C)

Floor:

- Finishing Layer
- 75mm Screed
- 385mm Precast Concrete
- Vapour Control Layer
- 370mm Rigid Insulation
- Damp Proof Membrane
- 200mm Insitue Concrete
- 450mm Hardcore
- Earth

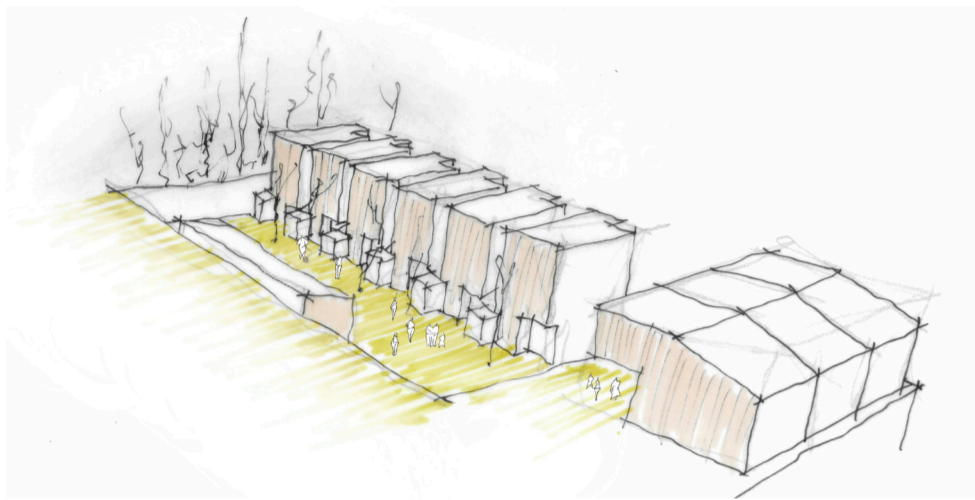
23. Concrete Screws
24. Corner Spider System
25. Aluminium Capping with Sikasil IG-25 S Silicone Insulating Glass Sealant for Glass Panes Connection
26. Double Glass Panes with Sealant
27. Sikasil IG -25 S Bonding Glass Panes to Glass Fins
28. Structural Glass Fin
29. Glass Fin Plate
30. Flashing
31. Rigid Insulation



Note: The Thermal and Water Lines continue through the Glazing Panels

Facade Detail

Produced with AutoCad, Illustrator and Procreate

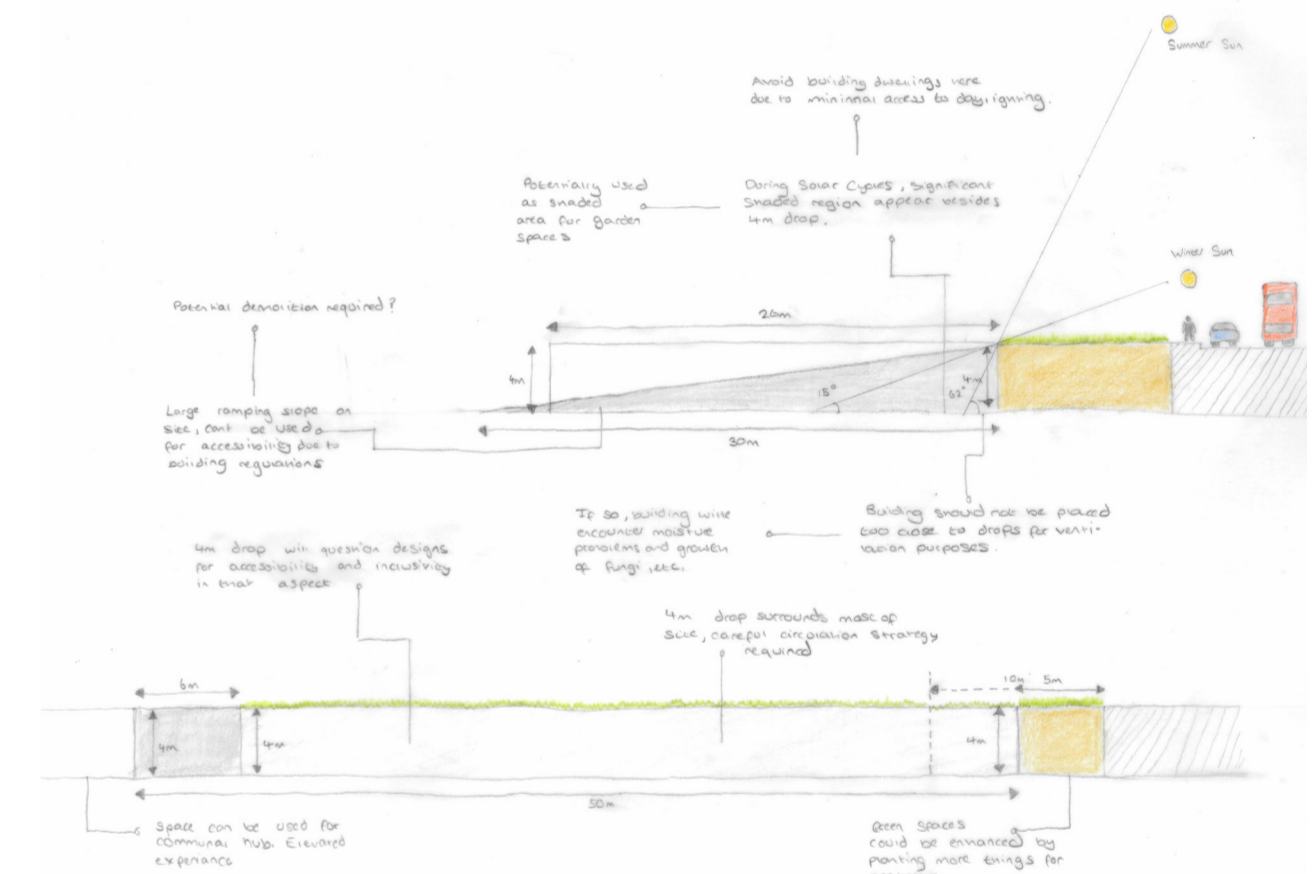


Project 2: Community Lead Housing

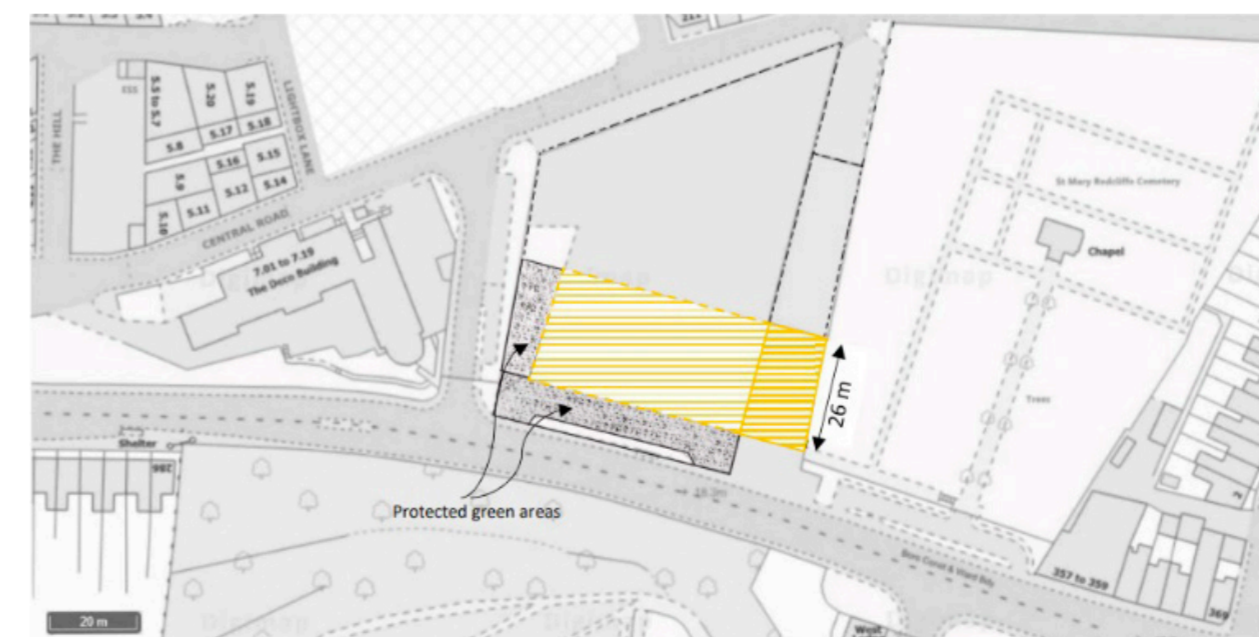
Year 2 Design Studio (2022 - 2023)

This project aims to establish a precedent catering to an intergenerational community lead housing scheme whilst tackling a housing crisis and climate emergency. The project is rooted with extensive research and analysis of the local area and community. The goal was not only to develop new residential units but also establish a vibrant hub catering to the needs and aspirations of all residents in the district.

A central focus of the project involved the creation of a promenade that seamlessly connects with the existing circulation. This design element ensures convenient and secure pedestrian flow between the residential spaces throughout the area. The hub itself, situated within the site's natural landscape, harmoniously incorporates the presence of old hedge maple trees, shaping the architectural layout around them.



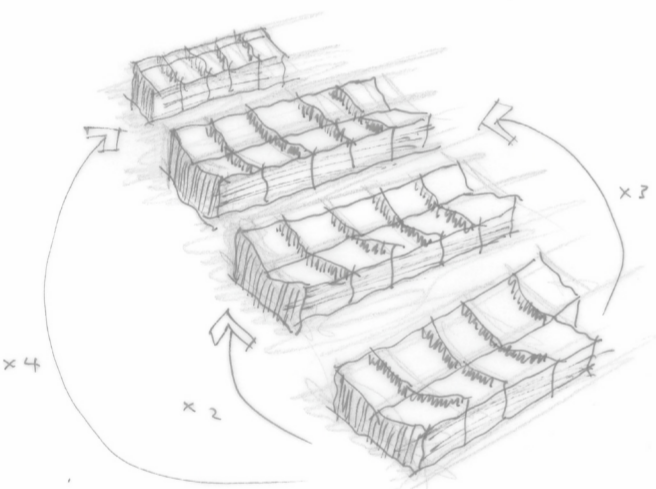
Site Section
Produced by Hand and Procreate



The Designated Site

Located by Arno's Court Park, Bristol City, one of the main challenges of the site was the fact that 1/4 of the site had a 5m drop from the main road creating a sudden uneven terrain. It also had 2 adjacent zones that were classed as protected green spaces.

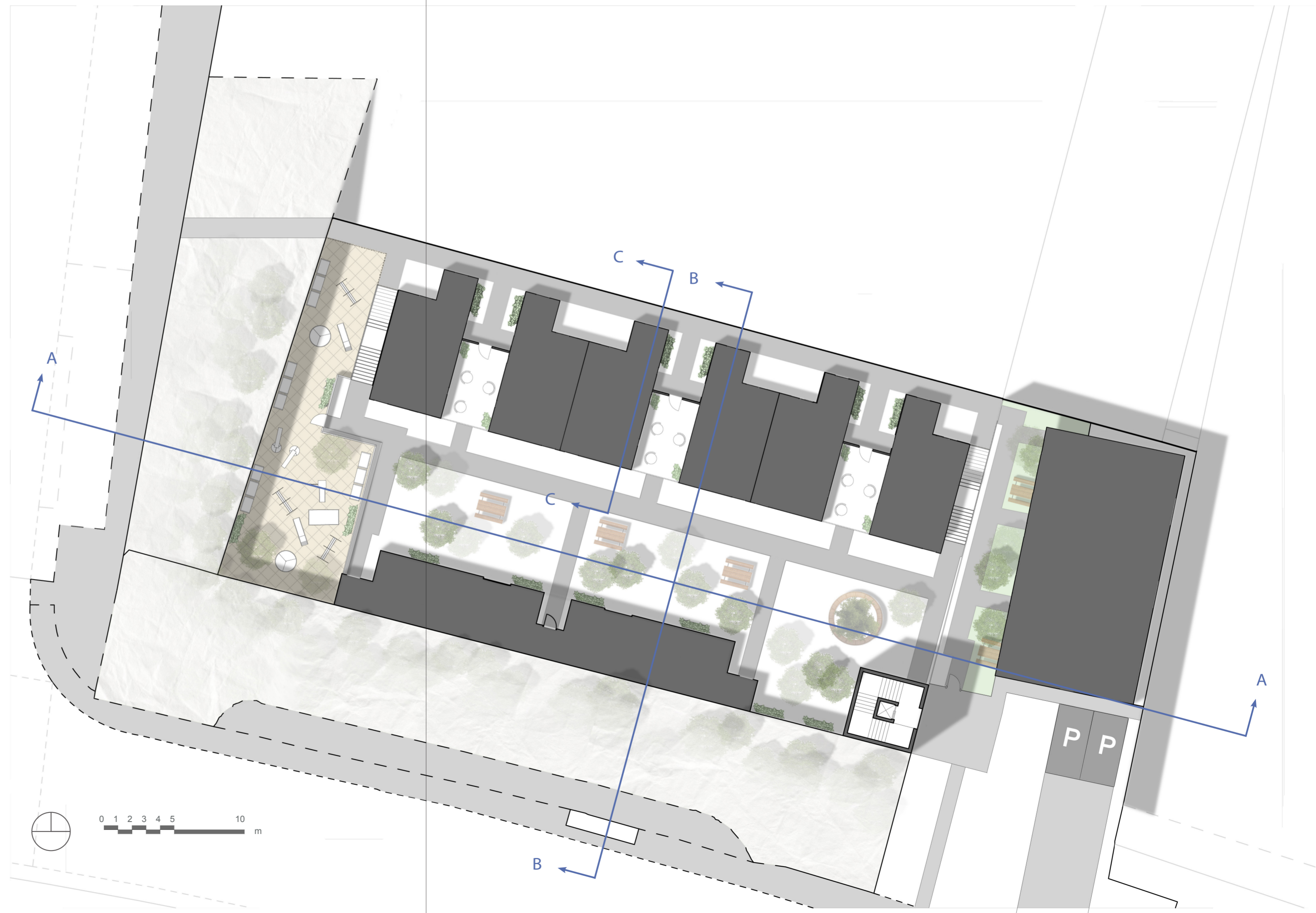
- 1726m² P2 Site:**
- 1304m² residential +
 - 390m² community area/access



Site Plan
Produced with AutoCad and Procreate

The site is segmented into 4 primary zone: housing type 1, housing type 2, the daycare centre and the semi public children play area. Respecting the 2 protected spaces, access to the site are on either side of the zones. Primary access that is disability friendly is on the side closest to the main road.

As the rest of the site beyond the given site boundary was also empty and required consideration for future development, the solution that I had was for designing the residential buildings in such a manner in which it can be repeated for an additional 3 more rows of housing without any issues following the same plans and designs. This is taken from a precedent, New Hall Be Harlow whereby they applied the same principal.





Site Elevation A - A
Produced with AutoCad and Procreate



Social Housing Scheme

As one of the aims of community housing scheme was building a vibrant community and build relationships with the residents, one of the ways this was achieved was by making all outdoor spaces for each residential home semi private where it be shared by 2 residents neighbouring one another.

This has been achieved in the floor plans as the residents on the bottom floor have a shared semi private garden in the backyard and the residents in upper duplex would have their outshoot shared space on the floor above towards the front.

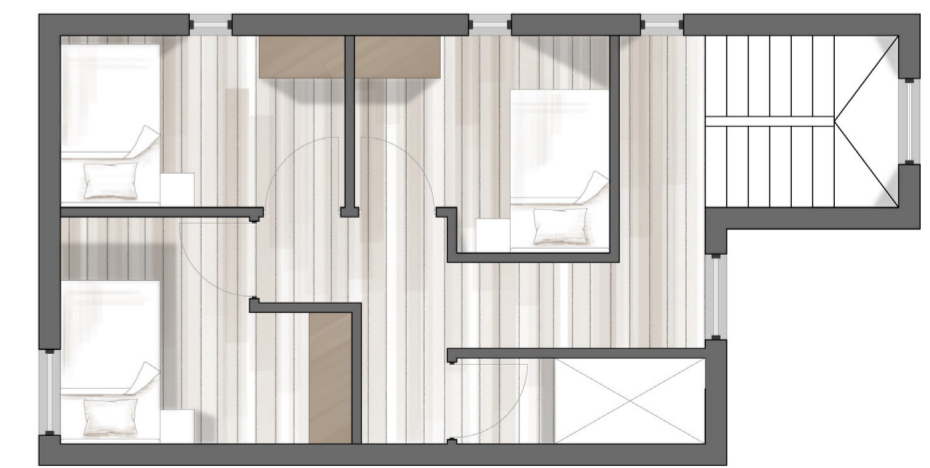
This would allow every resident to have no more than 1 resident to have shared outdoor space create a shared bond the with at least 1 neighbour as part of the vibrant community goal.



Ground Floor Plan

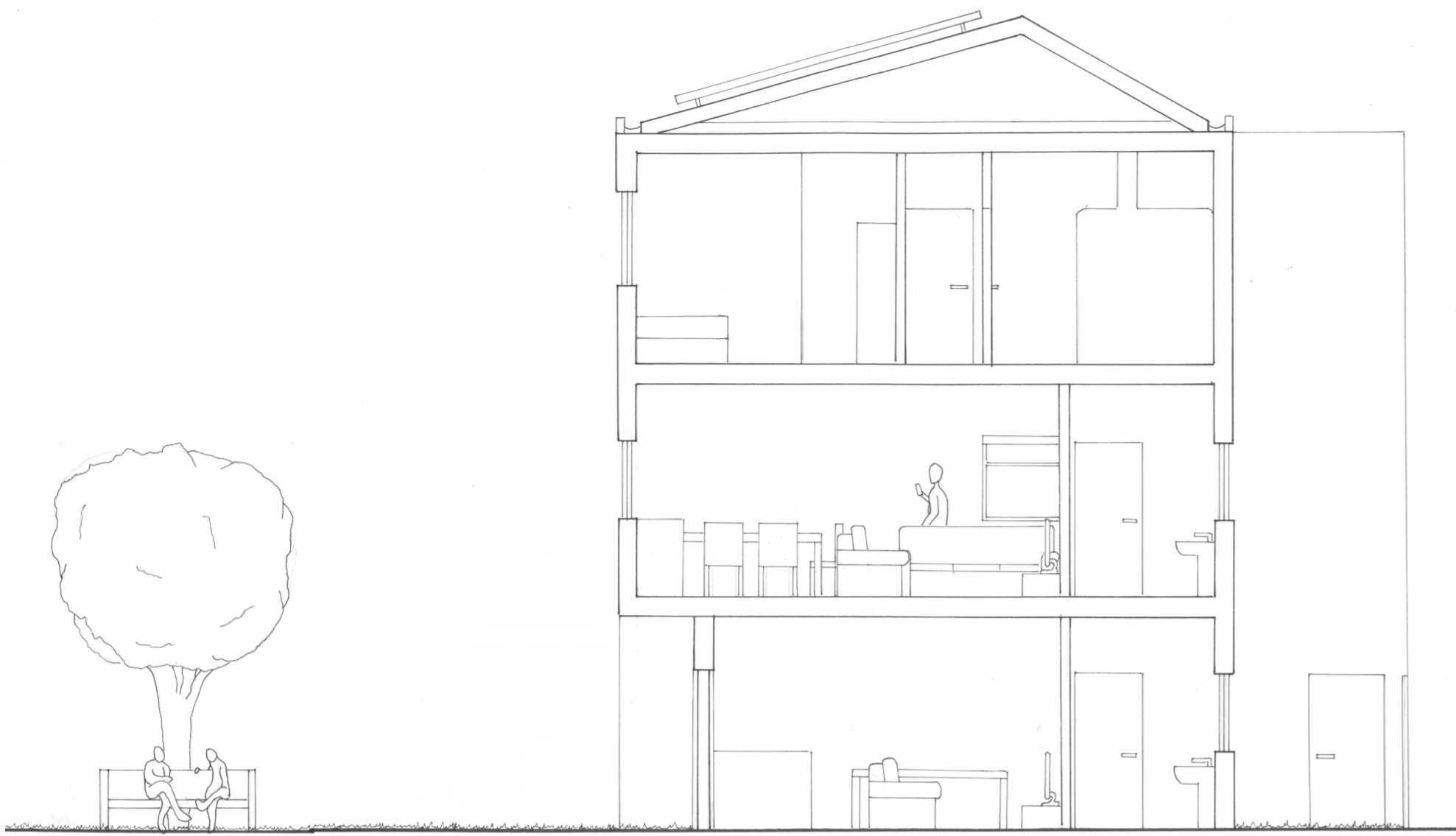


First Floor Plan

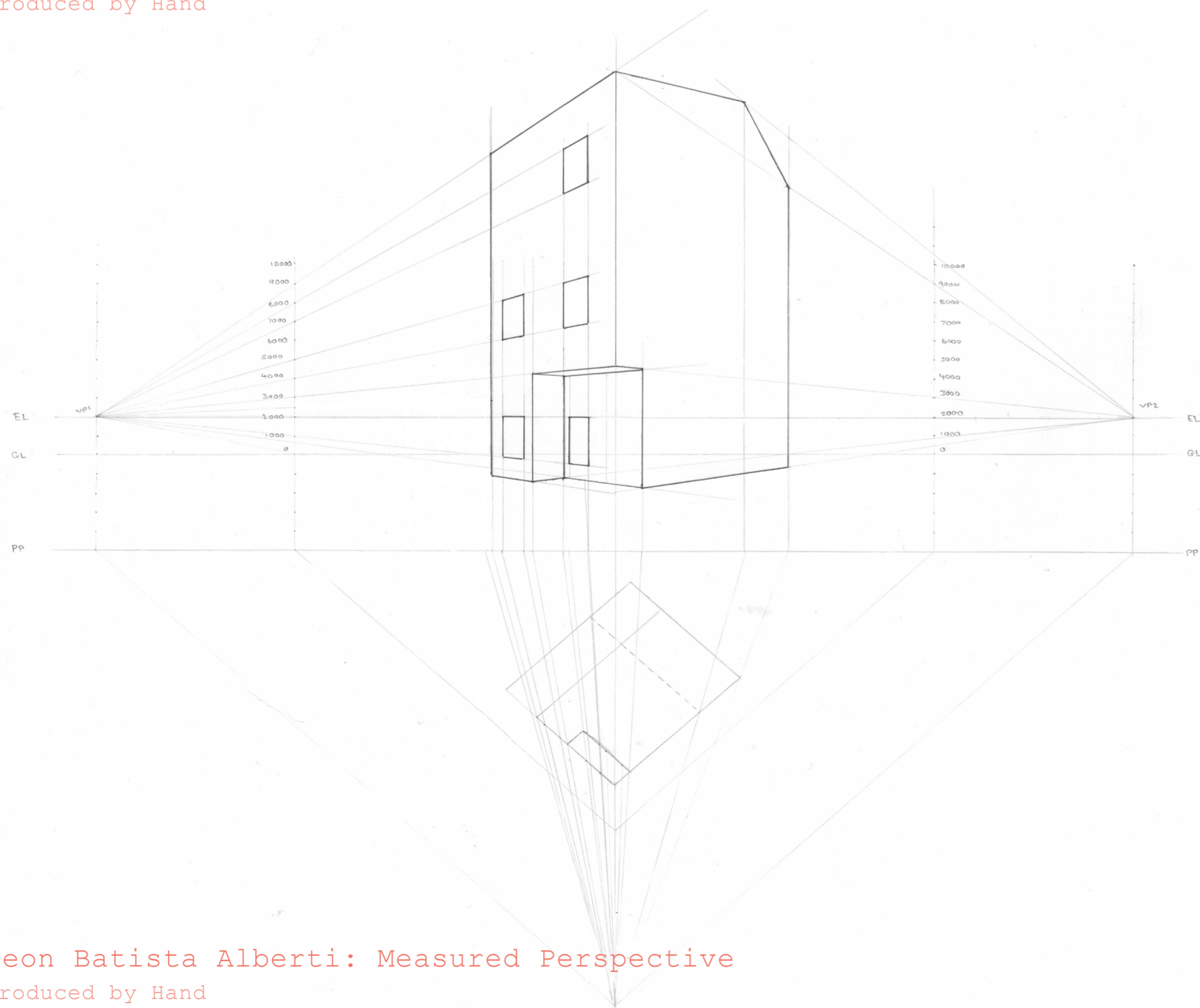


Second Floor Plan

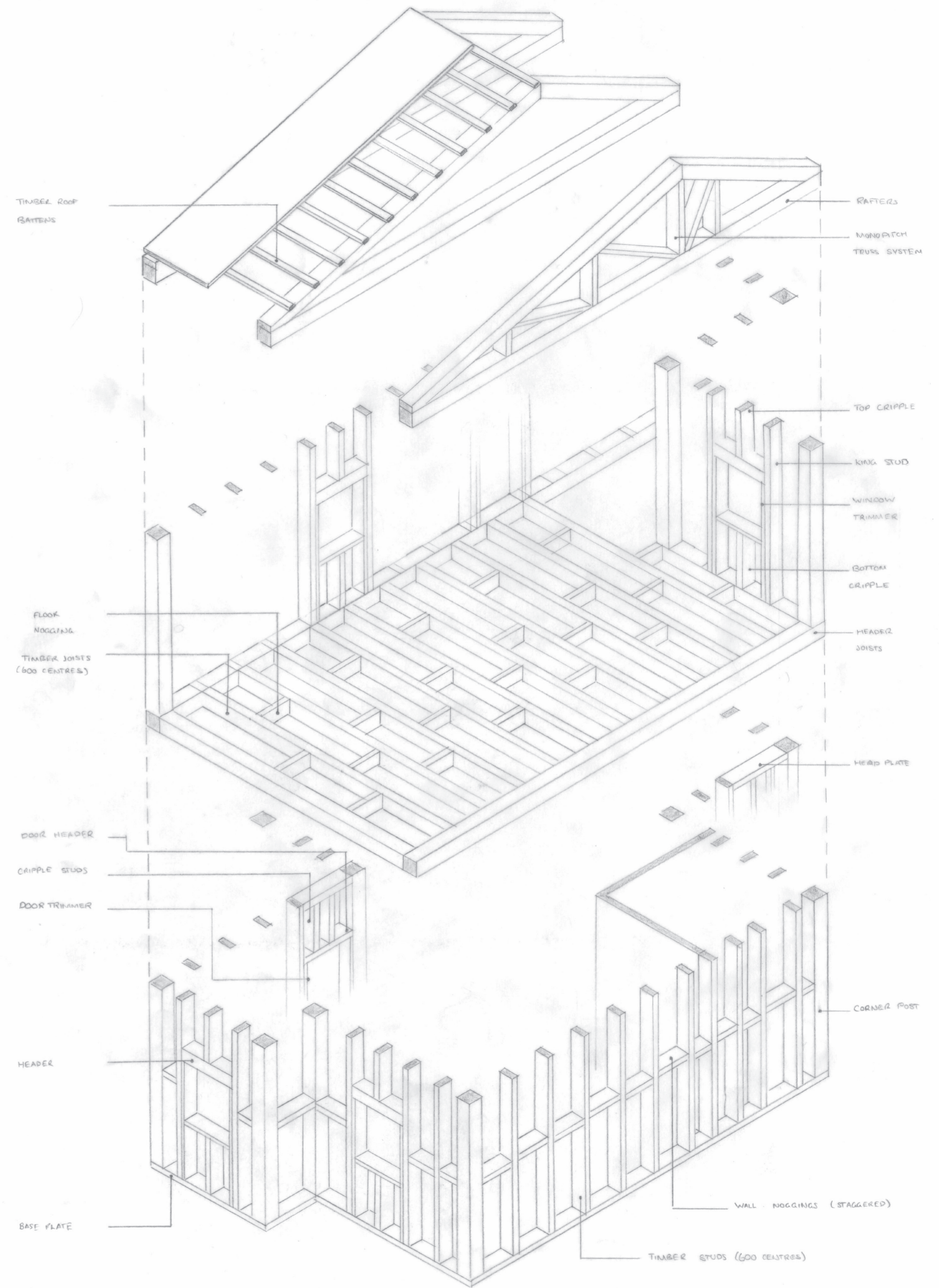




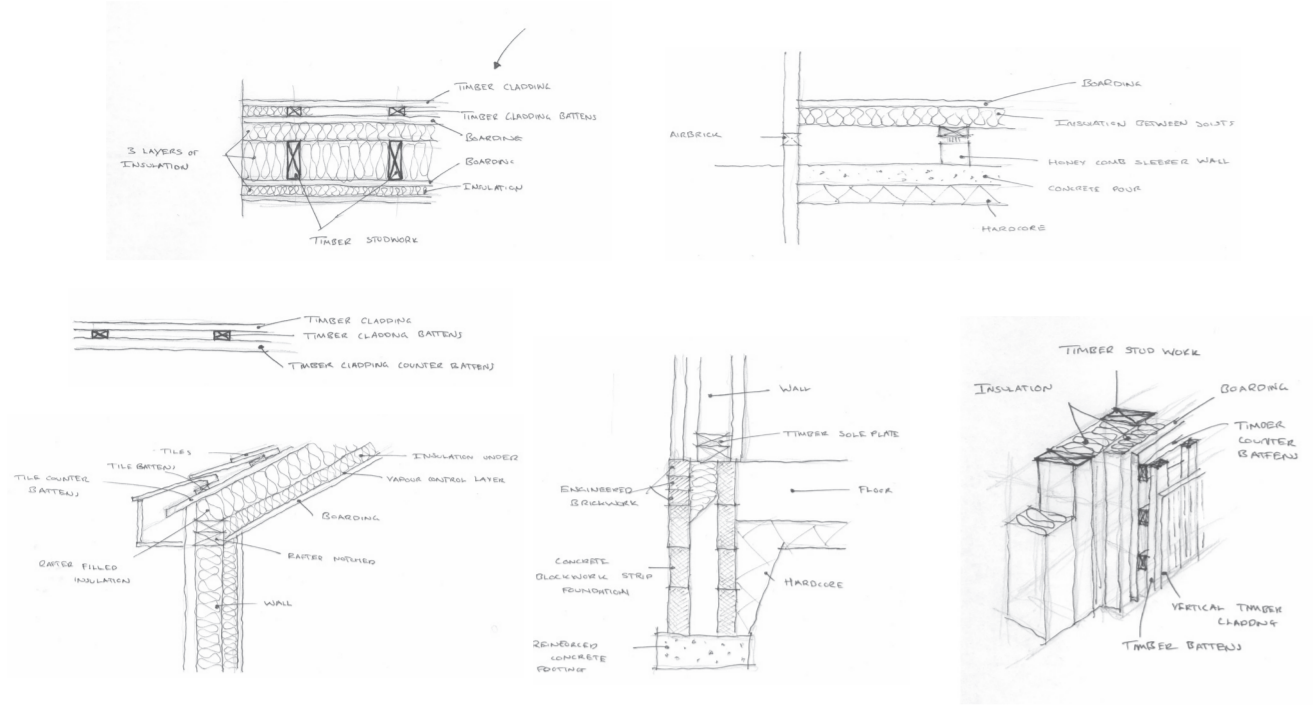
Section C - C
Produced by Hand



Leon Batista Alberti: Measured Perspective
Produced by Hand



Structural Diagram
Produced by Hand



The Technical - Layering the Building Fabric Produced with AutoCAD and Illustrator

As I was using a timber stud framework for the structural build for the building, I used precedents that used such frameworks as basis to then showcase how the building fabric would wrap it all up and the type of foundations and floor systems that would be most suitable for such superstructure. Majority of the precedents used to help develop these details were obtained from DetailLibrary and SpecifiedBy.

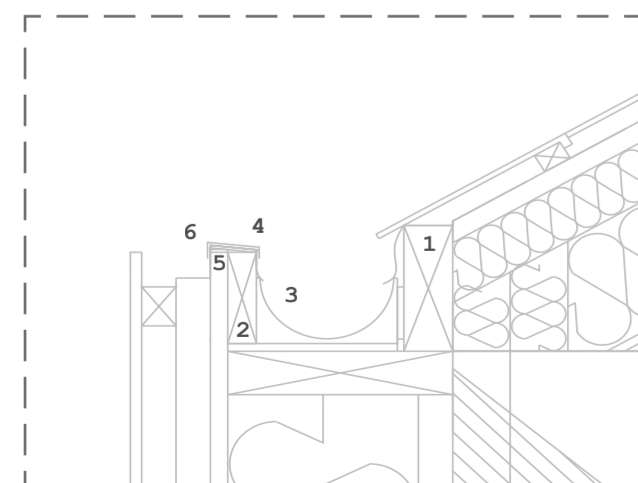
A

Roof:

- Tiles
- Tile Battens
- Roof Membrane
- Tile Counter Batten
- Rigid Insulation
- Soft Insulation
- Plywood

1:5's:

1. Wood Blocking
2. Parapet Timber Jamb
3. Breather Membrane continued into Gutter
4. Metal Capping
5. Wood Blocking
6. Single Ply Base Flashing

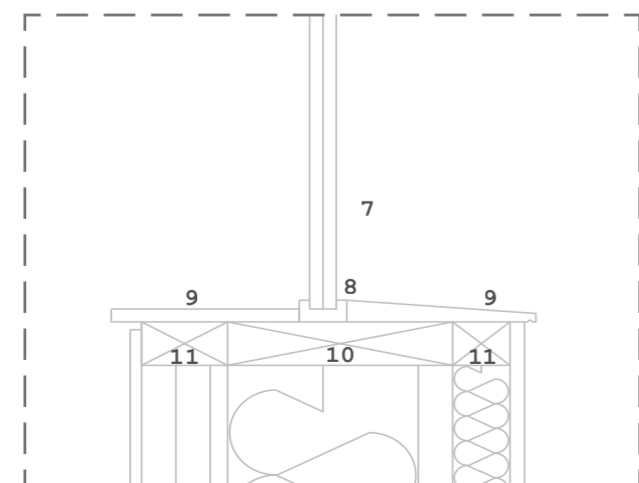


B

Wall:

- Timber Cladding
- Timber Cladding Battens
- Timber Cladding Counter Battens
- Breather Membrane
- Sheathing Board
- Soft Insulation
- Orientated Strand Board
- Soft Insulation
- Plaster Board

7. Double Glazing
8. Fenestration
9. Cill
10. Window Jamb
11. Jamb Extension

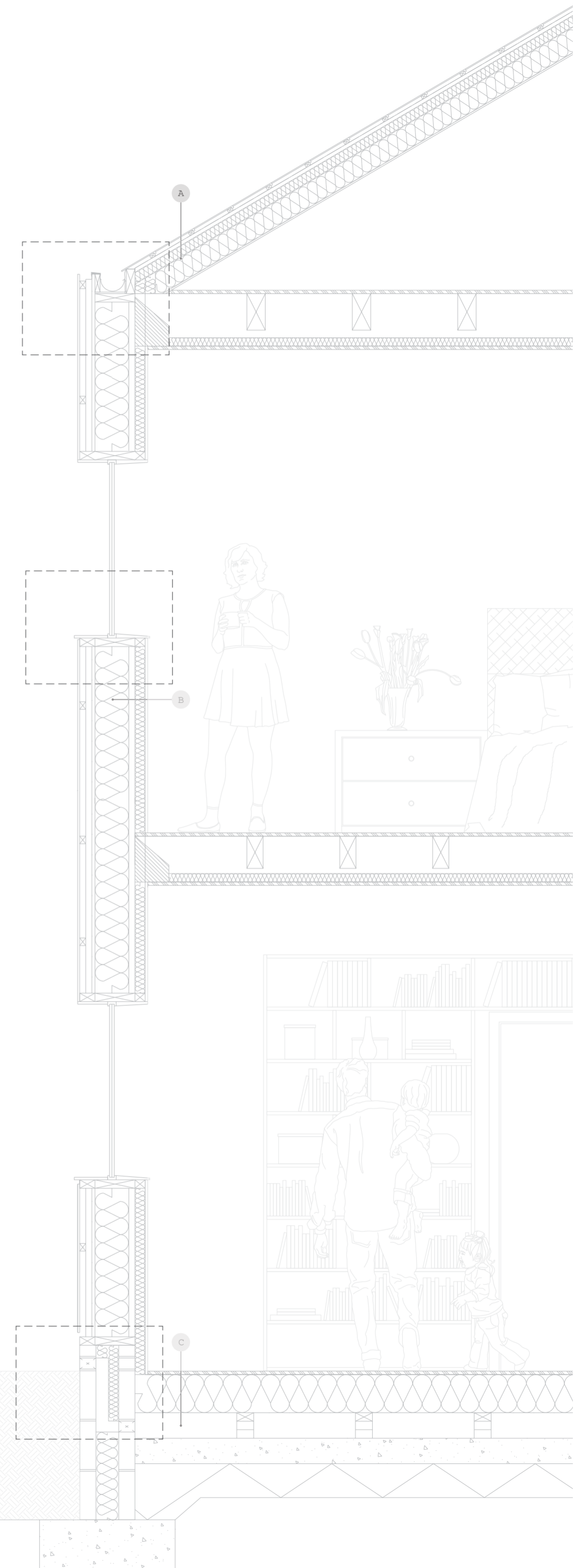
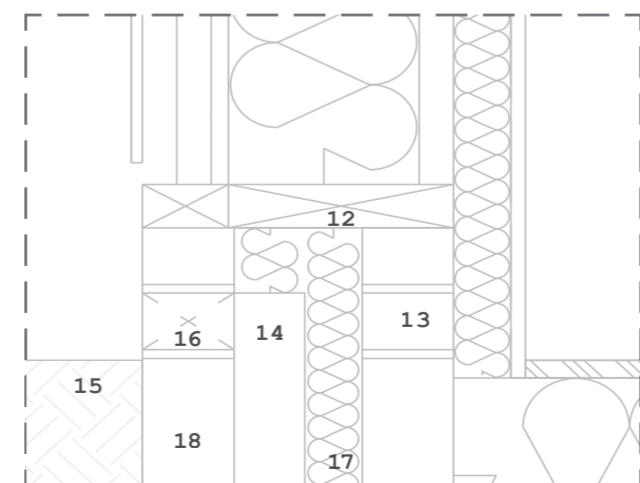


C

Floor:

- Plywood
- Vapour Control Layer
- Insulation
- Damp Proof Course
- Suspended Air Gap for Honey Comb Sleeper wall
- Concrete Pour
- Hardcore with Sandbinding
- Earth

12. Base Plate
13. Brick
14. Underscore Persore Vent
15. Earth
16. Air Brick
17. Insulation
18. Concrete Blockwork





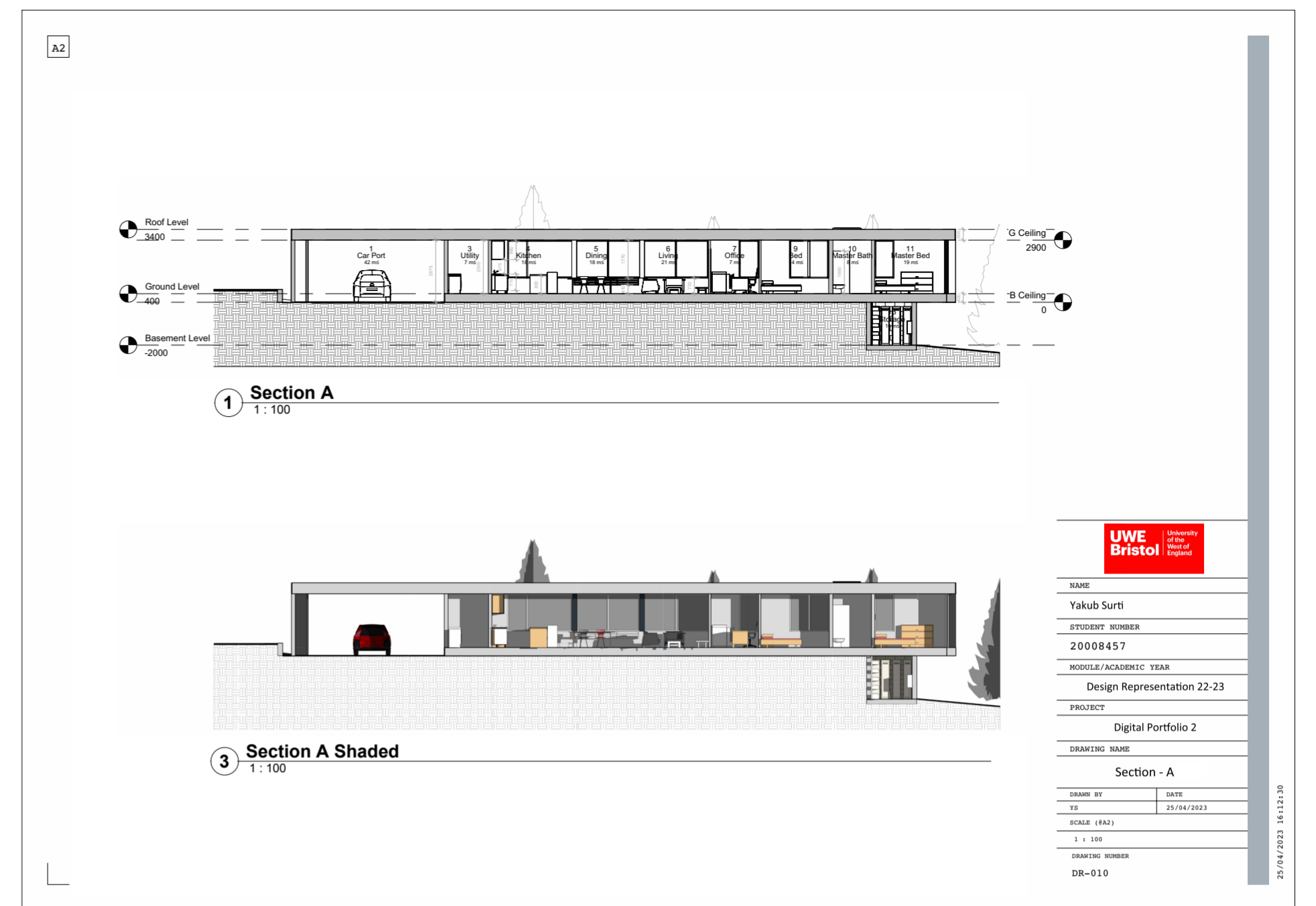
Produced with Revit, Twinmotion and Photoshop

Project 3: Corbett Residence

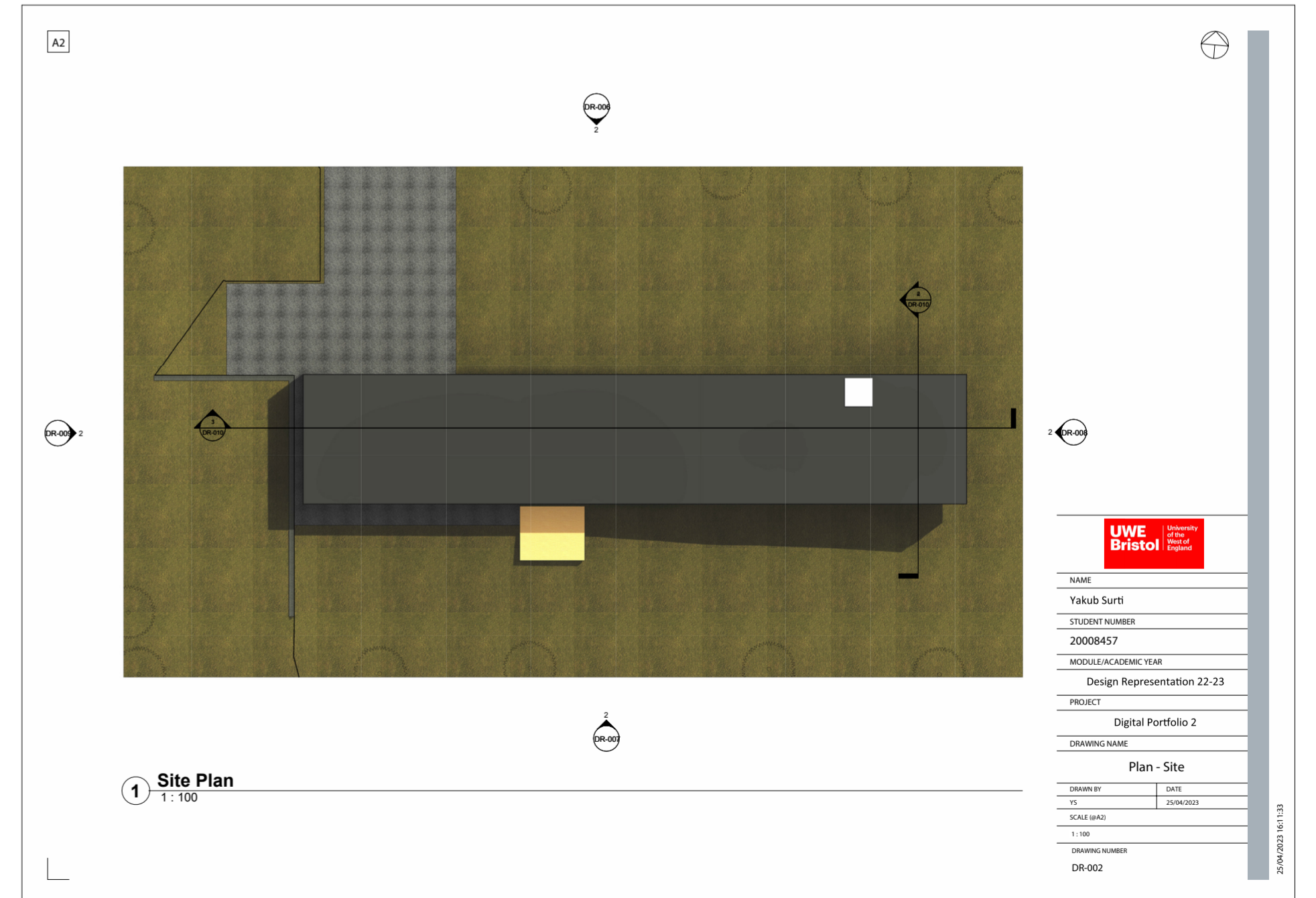
Year 2 Design Representation (2022 - 2023)

This project aims to recreate an architectural building with the goal of becoming familiar and proficient with using Revit software and its core basics. Once modelled and furnished, families, schedules and legends were created, displayed in tables and exported from project sheets. The 3D model itself was exported to a rendering software, Twinmotion, and post processed using Photoshop. The following pages showcase the revit sheets created using the model.

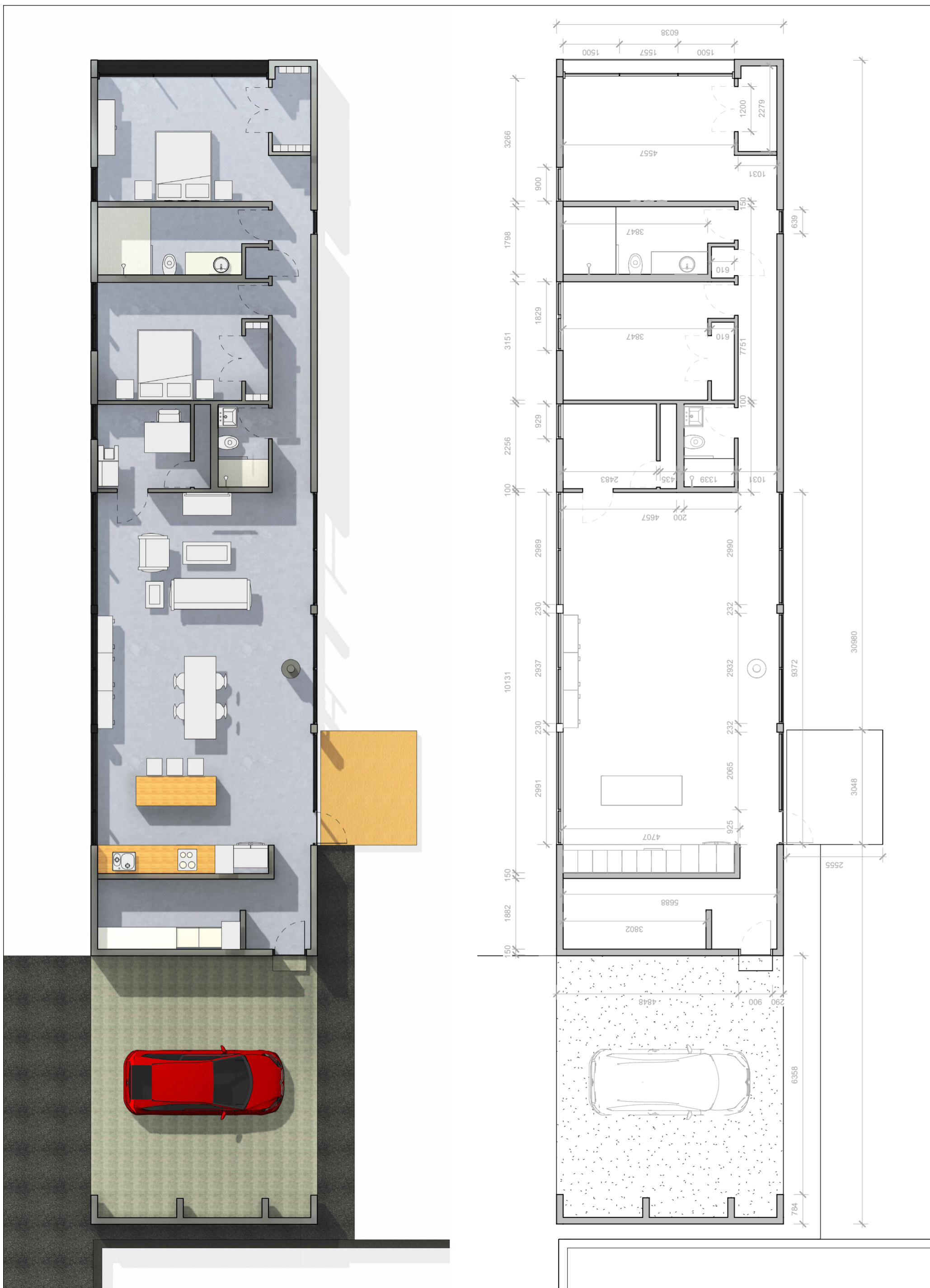
The dwelling is situated at the crest of a gentle hill. The rectilinear home rests on a base made of concrete block, with the upper portion clad in glass and blackened wood. "The house is a low, black box that strikes a line across the slope, mimicking the horizon.". The home is oriented to maximise views and natural daylight, while also providing a sense of seclusion. "The drive is thin and meanders between trees to protect the house from view,".



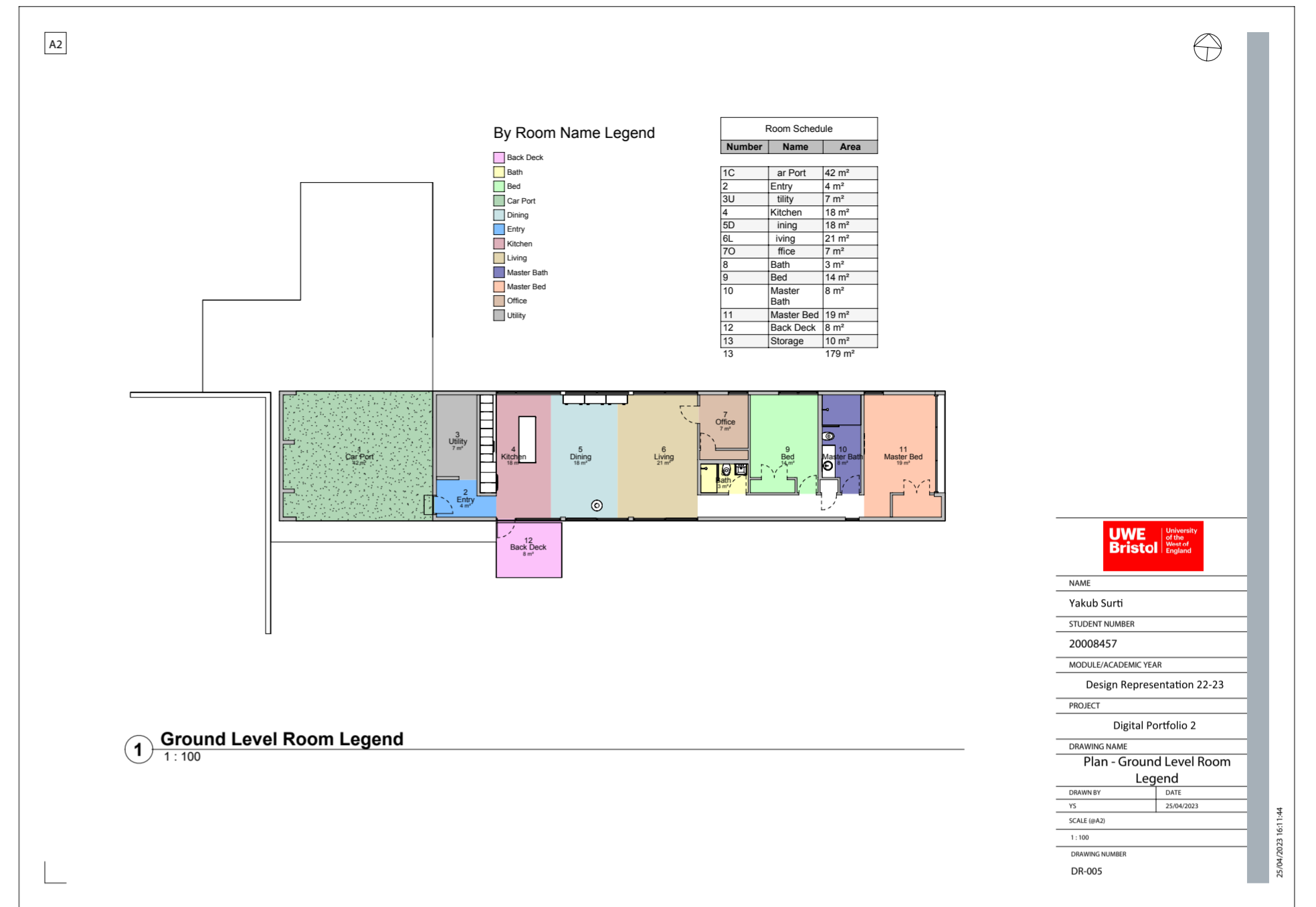
Section A
Produced with Revit



Site Plan
Produced with Revit



Ground Floor Plan
Produced with Revit



Room Legend
Produced with Revit



Schedules
Produced with Revit