Zain Azhar

Portfolio

Selected Works
2022 - 2024

Contents

CV

Email:
zainazhar.studios@gmail.com

Telephone:
07918 922849

Skills

2D Design:
AutoCAD
Adobe CC Suite //
(Photoshop, Illustrator,
Portfolio, InDesign.
Lighroom)
Hand Drawing
Sketching
Procreate (IPad)

3D Design:
Rhino 3D
Grasshopper
Enscape
V-Ray
Model Making
3D Printing

Experience

Studio Rinaldi, London
Architectural Assistant
October 2023 - ongoing

- Working primarily on projects in London and Italy
- Collaborate with architects, contractors and clients to develope the project brief, incluiding drafting and interating ideas, further research, liasing with different members of the design team
- RIBA stages 1 - 5, with emphasis on stages 3 - 4 tender drawing packages
- Prepared technical drawings using AutoCAD and Rhino3D, rendering in V-Ray if required
- Prepared specification documents, presentations and planning applcations for contractor and client meetings or submission

Canterbury School of Architecture, Canterbury
Guest Critic
March 2023 - May 2024

- Was an active member of critics during Year 2 and Year 3 student presentations for architecturestudents
- Provided carefuly curated advice and feedback so the students could progress in their projects
- Valuable oppurtunity to grow as a student

Never Enough Architecture Competition, London
Competition Entrant
Oct 2023 - Jan 2024

- Entered a competiton through the lens of adaptive reuse and placemaking whilst working in office full time
- A 10 part lecture series was included, with speakers participating from top architecture practices (such as ARUP, Make, 100 Architects etc.)
- Pushed my views on my place in society, citinzenship psychology and how we can intergrate Architecture and make it more human and playful going forward

LT Ranch Summer Residency, Lithuania
Participant
June 2023 - October 2023

- Participated in a summer workshop post graduation
- Spatial research, experimentation and cultural events related to the environment explored through art, architecture, film and landscape

People + Place Architects, Canterbury
Mentee; RIBA Mentoring Scheme
April 2023 - July 2023

- Introduced into the world of how a practice worked and operated
- Taking part in site visits, understanding the types of roles architects could have throughout all stages of the RIBA Plan of Work
- Looked at and analysed past and present projects, seeing how projects develope within a practice, picking out key/important details

Education

September 2020 - June 2023
BA Hons Architecture // RIBA Part 1 - University for the Creative Arts,
Canterbury School of Architecture: Upper 2nd Class Hons (2.1)
Modules in Architectural Communication, Technological Analysis, Design Studio, Integrating Urban Design, Creative Practice & Cultural Context of Architecture, with emphasis on Design, Visual Representation & Research

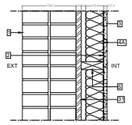
Notting Hill Town House

2023 - 2024 // Architectural Assistant

The aim of this project was to obtain planning permission for an amalgamation of the lower ground floor flat and the upper town house, combining the two to create a 5 storey house. Alongside this, a full renovation and reconfiguration of the building was ongoing, as well as various alterations and extensions (for example, adding a new skylight to the rear extension on the ground floor, making space for a conservatory, the addition of two rooflights to improve daylighting on the top floor etc).

My role in this project was to work closely with the project architect, as well as liasing with the rest of the design team, producing technical and GA drawings, which followed local building regulations and guidelines, updating drawings in line with design iterations, coming up with design solutions in line with the approved document specifications, developing diagrams, a 3D model, renders and schedules for various packages and design team meetings.

Stage 3 - 4 Tender
Stage 5 Construction



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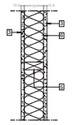

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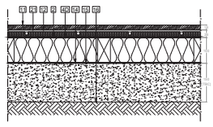

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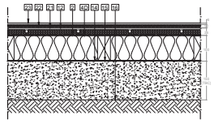

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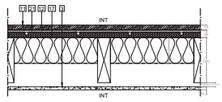

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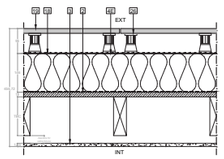

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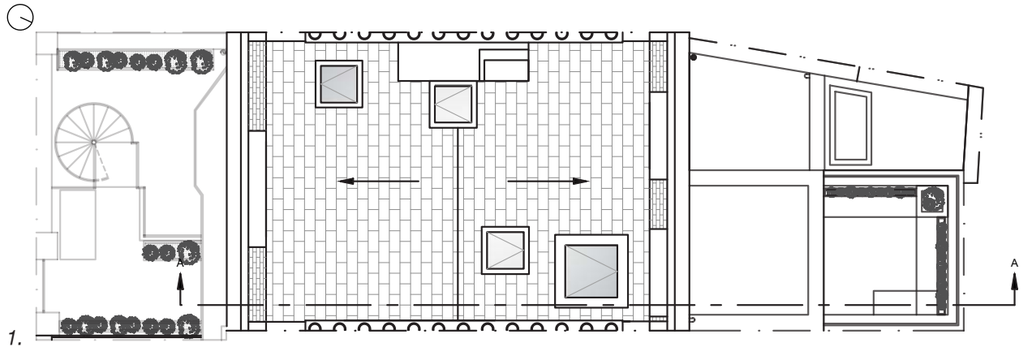

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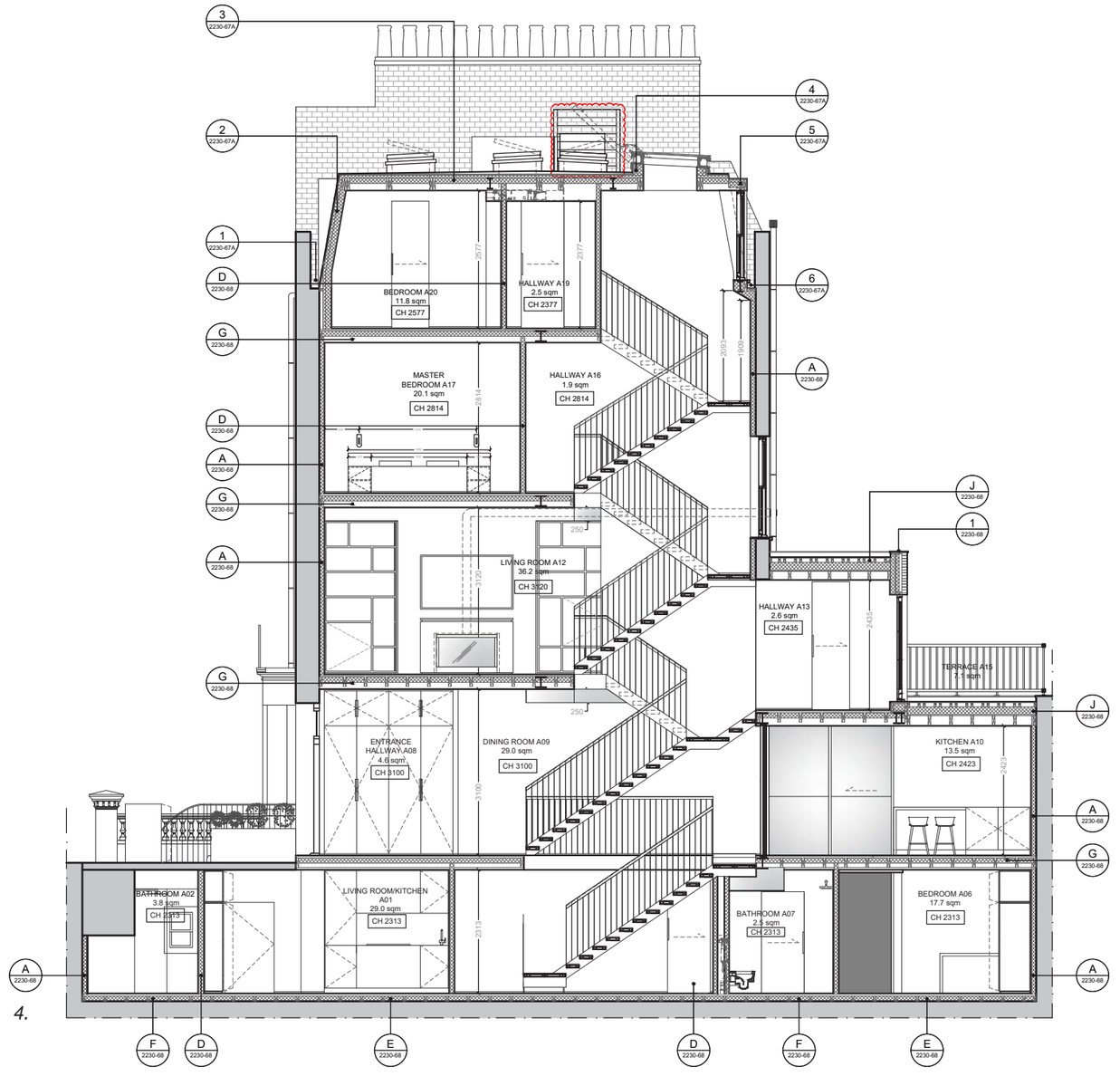


4.

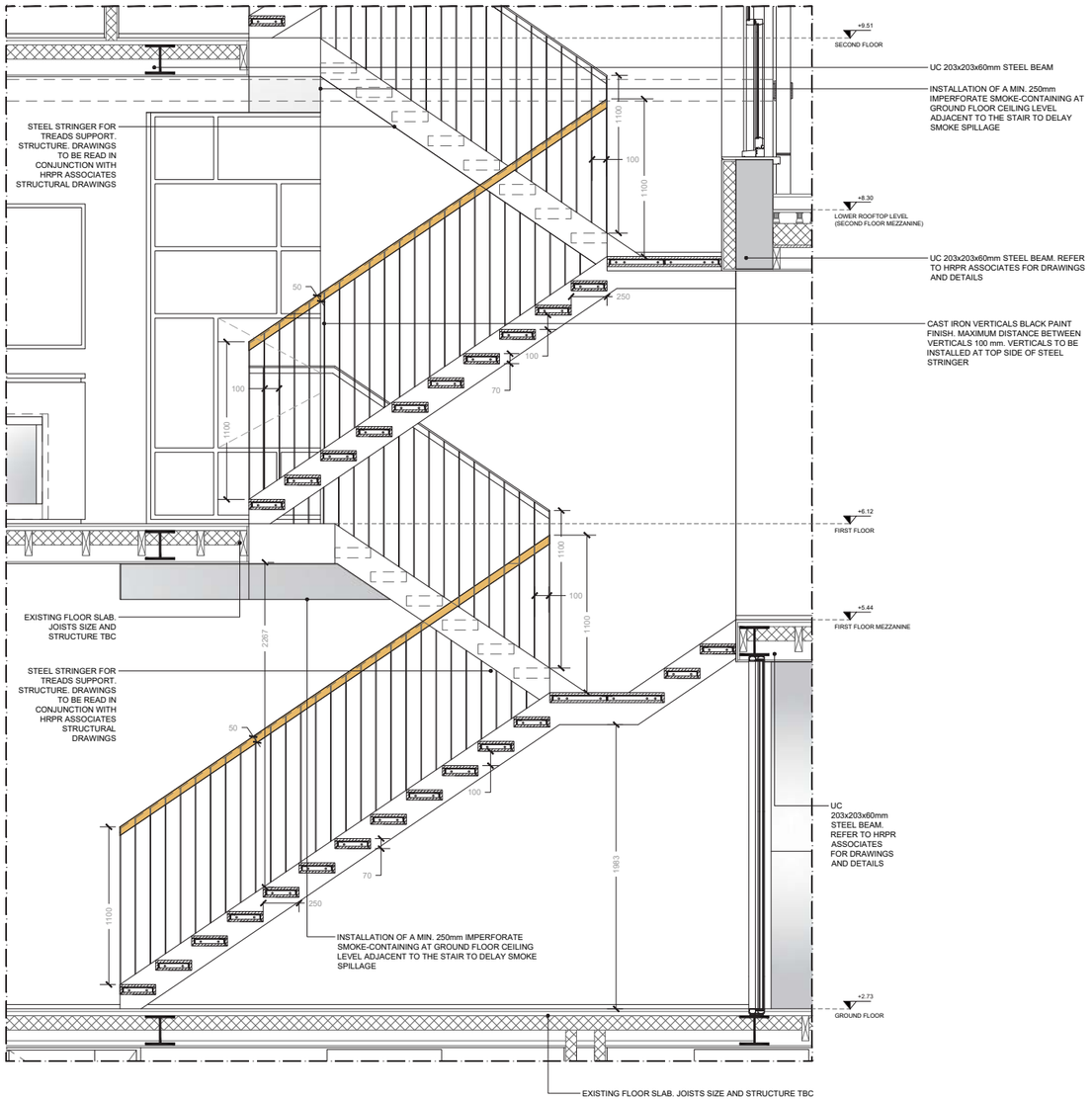
1. Rooftop Plan
2. Section Detail
3. Proposed Elevation of Building
4. Construction Section AA through Building

Notting Hill Town House

2023 (ongoing) // Architectural Assistant

When designing the new staircase, I had to strike a balance between understanding Approved Document K, and abiding by it, and satisfying the client. I came up with a number of iterations to present to our client, and after some back and forth of moving around pieces, we came to an informed conclusion to submit to the council.

Previously, when I was working with the Project Architect on the refurbishment, I helped draw the technical details for the previously approved staircase, which helped strengthen my understanding of residential technical details.



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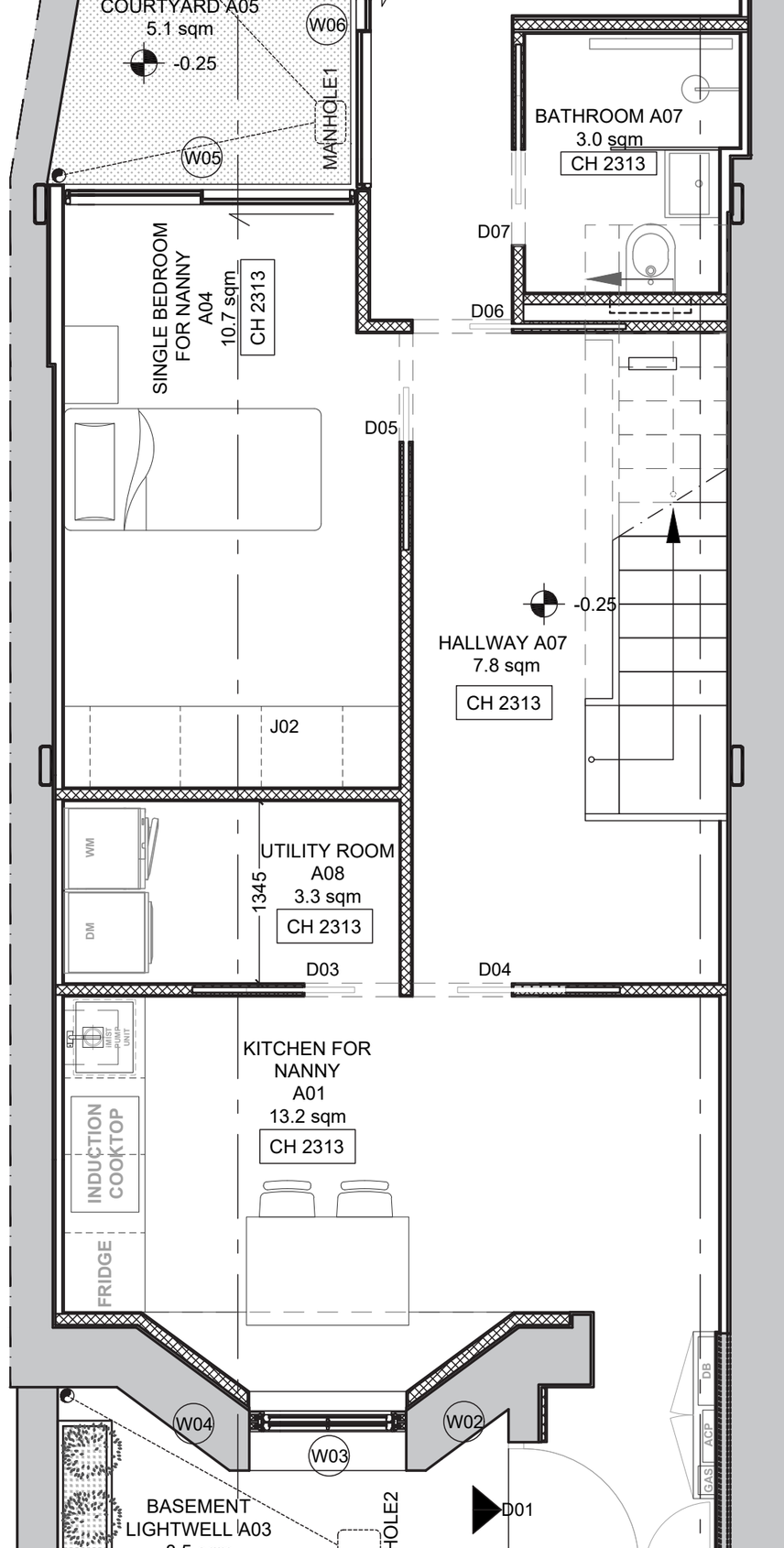


2.

1. Proposed Technical Staircase Details (pre planning application)
2. Proposed Lower Ground Floor Plan (part of the Amalgamation Planning Application)

Gloucester Terrace Duplex

2024 (ongoing) // Architectural Assistant

This was a fast-paced project to obtain planning permission for a newly purchased duplex in the borough of Westminister. It was also a listed building in the grade II category, so it was interesting to learn who was involved in such a project, how to approac the situation and how to navigate it movign forwards.

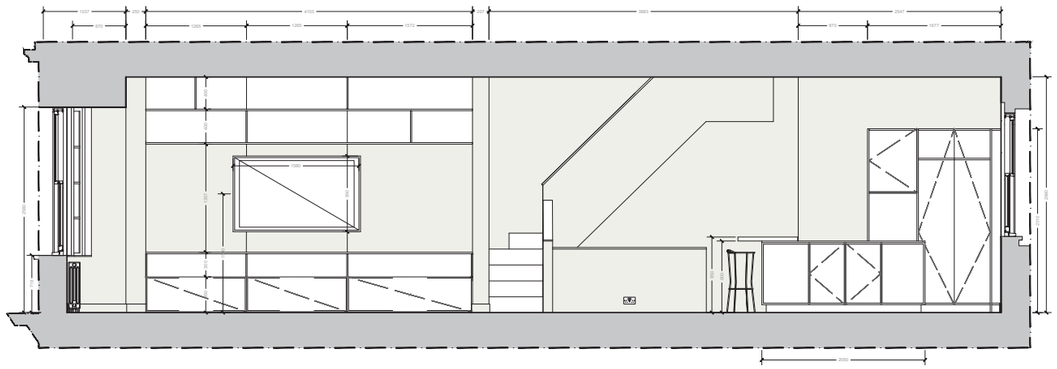
My role in this project was to work closely with the project architect, drawing the GA drawings necessaray for the planning application, modelling the duplex in Rhino and rendering on V-Ray, creation of an interior design brochure amongst other tasks, communicating and liaising with other members of the design team and the client.

We had to submit two planning applications for this project; one to replace the window sashes, and the other for to change the fire supression system and general layout.

Stage 1 - 2 Planning


4a.


4b.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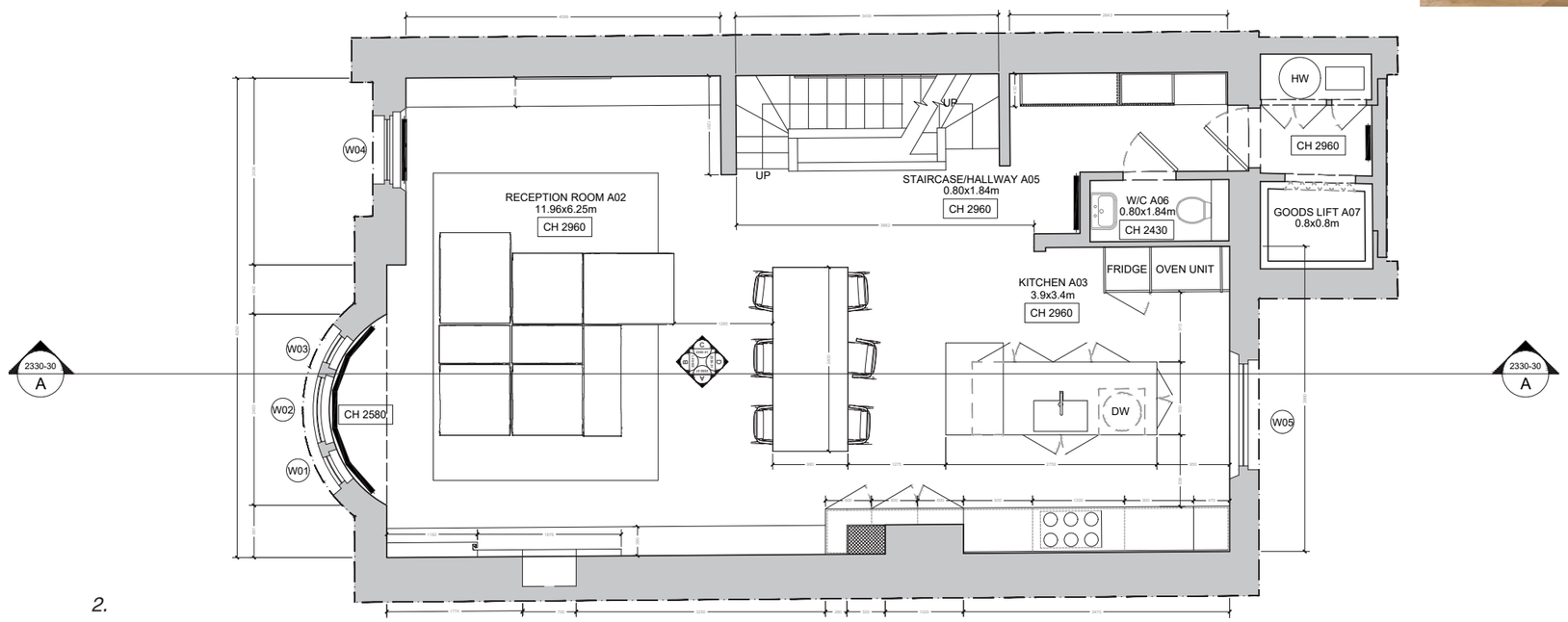
4c.



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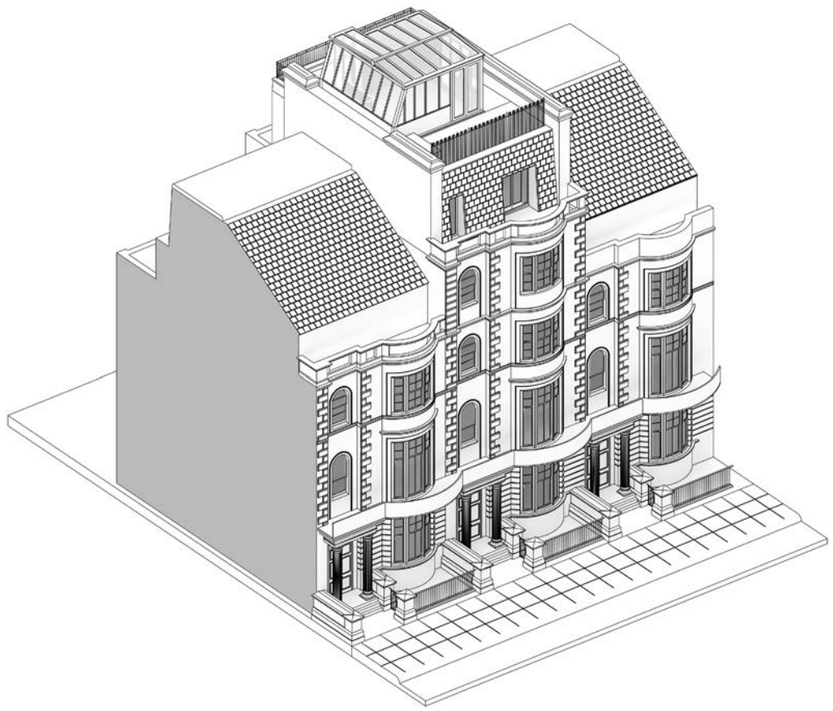

3.

1. Proposed Third Floor Elevation
2. Proposed Third Floor Plan
3. 3D Model of 109 Gloucester Terrace
4. Proposed Renders (Modelled in Rhino, rendered in VRay

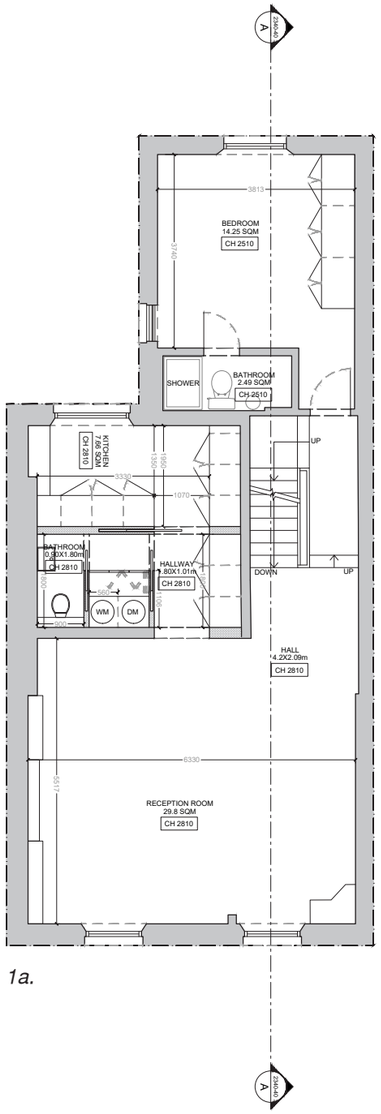
Barkston Gardens

2023 - 2024 // Architectural Assistant

The aim of this project was to obtain planning permission to start construction of a new mansard roof onto the existing building, as well as reconfiguration of the existing floor plan and the introudction to a roof terraace. We had to strategise and make the new roof fit in with the other mansard-extensions on the street.

I had to work independantly in the intial stages, sketching out an arry of solutions and making changes at every design team meeting, as well as updating a 3d model alongside the planning application process.

Stage 2 - Planning



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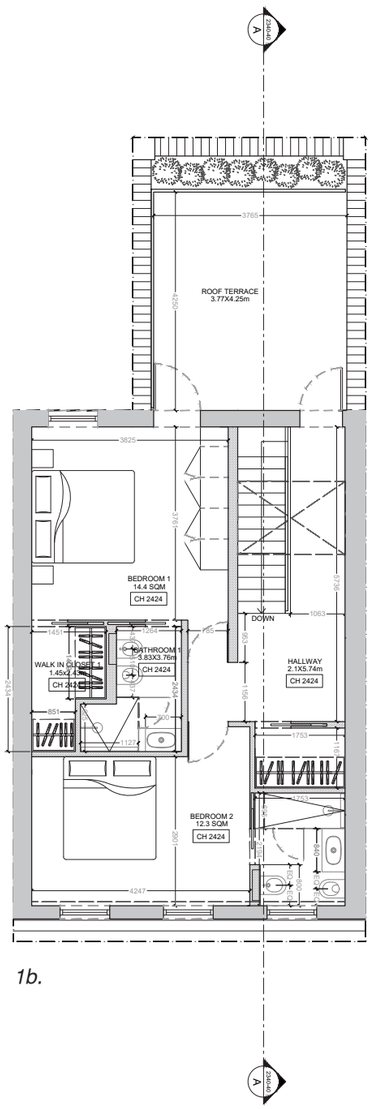

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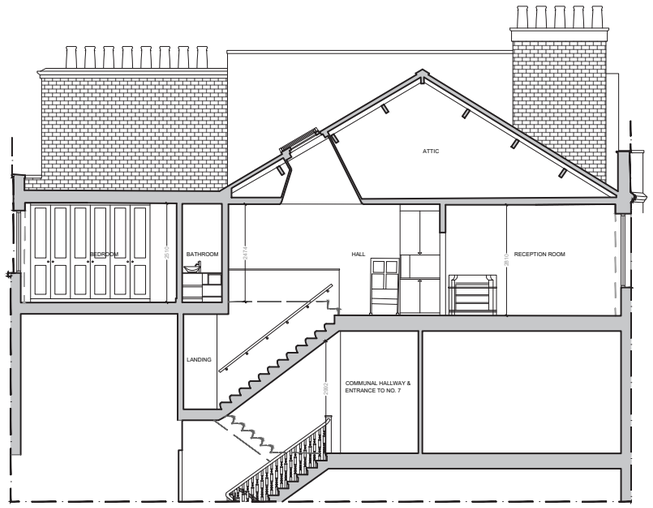

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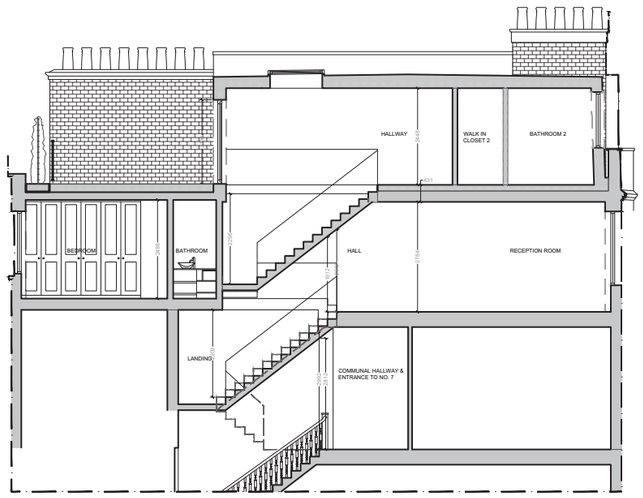

3.

4.

5.

1. Proposed Floor Plan
2. Existing Section AA
3. Proposed Section AA
5. Proposed Front Elevation of Building
5. Proposed Rear Elevation of Building

The Industry Plant

Projects_06 // Abstract

Acting as an extension of the city of Science and Arts in Valencia, Spain, this project aims to explore how industrial architecture can be incorporated into Valencian culture to address social and political issues within the education and research sectors of Biology.

The building uses the Pine Tree, a vernacular tree to Valencia, as a vessel to address these wider societal issues; to help us unlearn and re-understand any beurocracy which may of occured in the past.

In the past few years, Spain has attempted to make considerable efforts to reinvent it's research and development sector, which includes an external fund of €382 million, through an EU framework programme, outlining that Spain will need to strengthen industrial competitiveness and to meet research needs of other Community policies, thereby contributing to the creation of a knowledge-based society.

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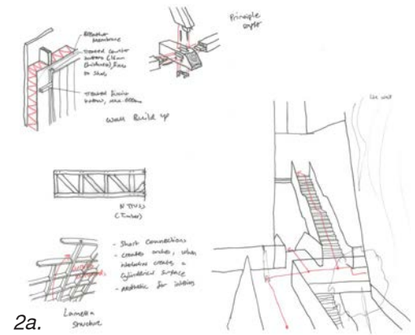

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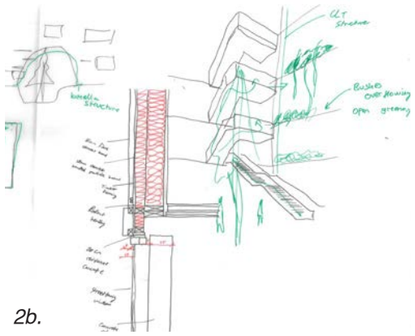

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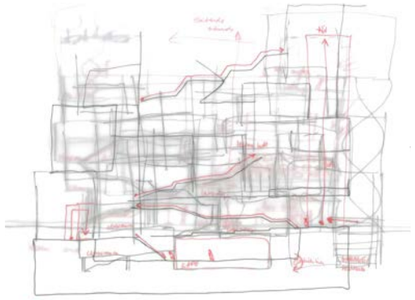

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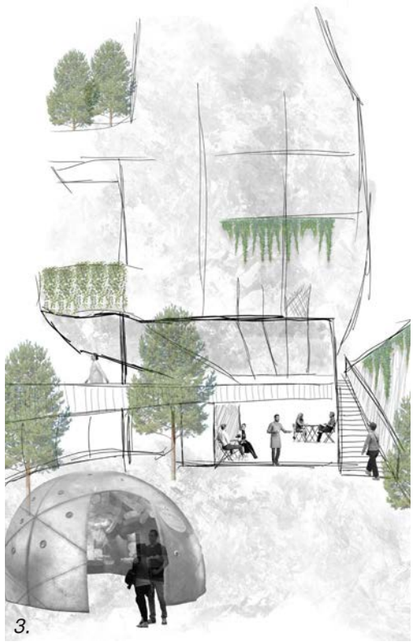


3.

4.

1. Map of Valencia
2. Early Sketches
3. Concept Collage
4. Proposed Building in Context

The Industry Plant

Projects_06 // Narrative Reading

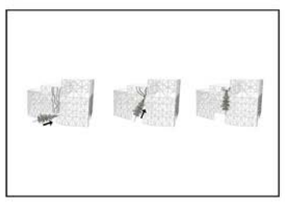
At the start of the project, it was crucial to understand the life cycle of the Pine Tree, as I would be able to craft my later programmes around the journey it took from start to finish. Essentially, the building receives 15 - 20 pine trees from a town called Rocafort, they get planted in a temporary tree nursery adjacent to the building, with one tree entering at a time to get researched and processed into different by-products by machines designed by me. Sustainability is a key factor in all of this, so seeds are preserved and sent back to Rocafort to get replanted, making the whole building carbon negative.

A) Collect trees from Rocafort

B) Uproot tree from ground

C) Transport trees to site, taking 15 - 20 at a time

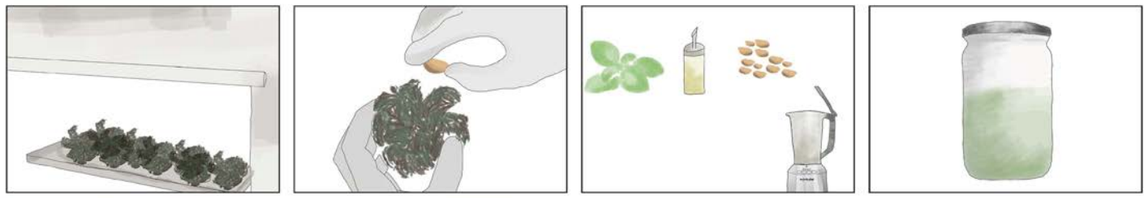
D) Plant excess trees in temporary tree nursery



E) When tree needs to be used, lift into building through pulley mechanism

F) Research parts of Tree

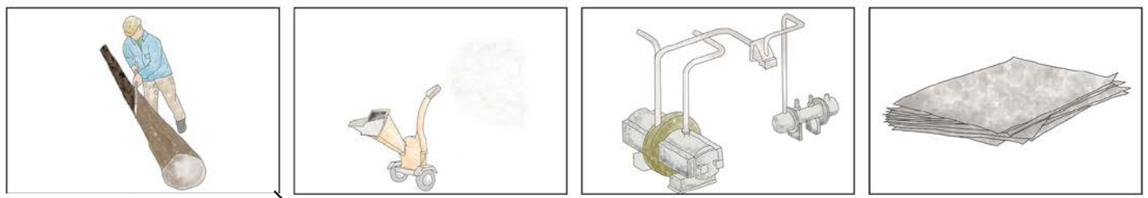
Pesto Production:
1) Collect pine cones and roast them
2) Extract pine seeds
3) Add other ingredients to a processor
4) Pour into container



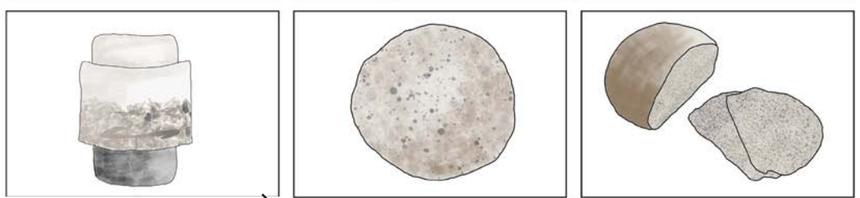
Rosin and Essential oils:
1) Tap tree to collect sap
2) When tree heals, rosin will form on the wound; this is to be collected
3) Heat rosin up; this will extract the essential oils, which will need to be condensed

Pine Needle Oil:
1) Collect pine leaves from tree
2) Sterilise leaves in boiling water
3) Extract ils through distillation
4) Store in air-tight jar

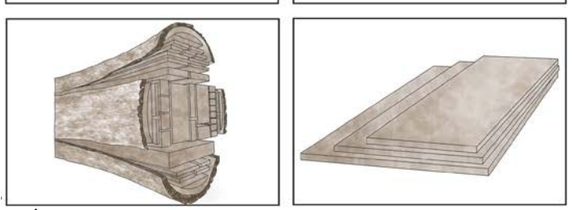
Paper:
1) Debark tree
2) Shed debarked tree
3) Put tree through thermo-mechanical refiner, adding water and chemicals accordingly
4) Cut paper into required sizes and collate



Bark Bread:
1) Heat bark in furnace to make it easier to process
2) Add other ingredients of bread to new bark flour
3) Bake as normal



Building Material:
1) Split lumbered tree into pieces according to diagram
2) Collect and distribute and such



1.

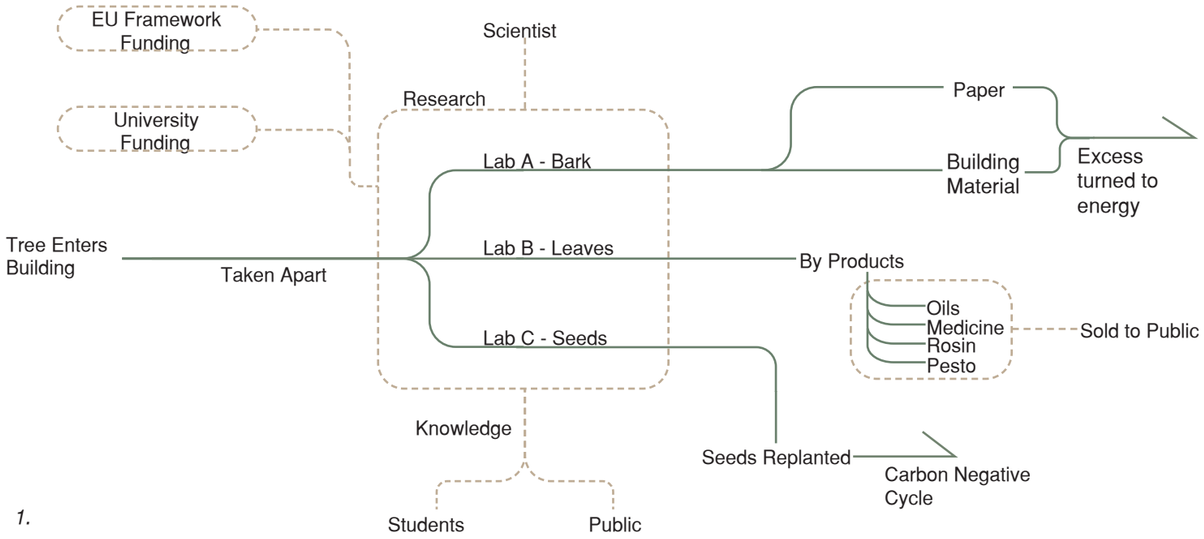
1. Journey of the Pine Tree

The Industry Plant

Projects_06 // Research and Planning

The design was influenced by industrial photography by Bernd and Hilla Becher, and the Japanese spatial theory of the inbetween (Ma; use of negative space).

Through this, I was able to design an array of machines which could be used to process the Pine Tree into it's many different by-products.



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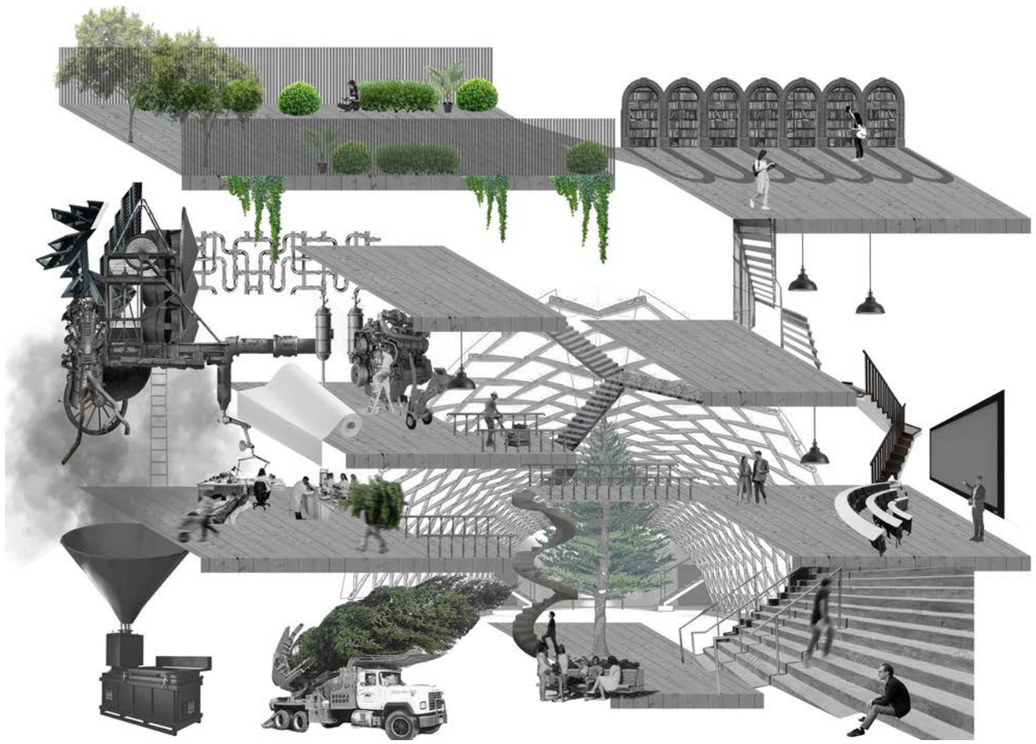

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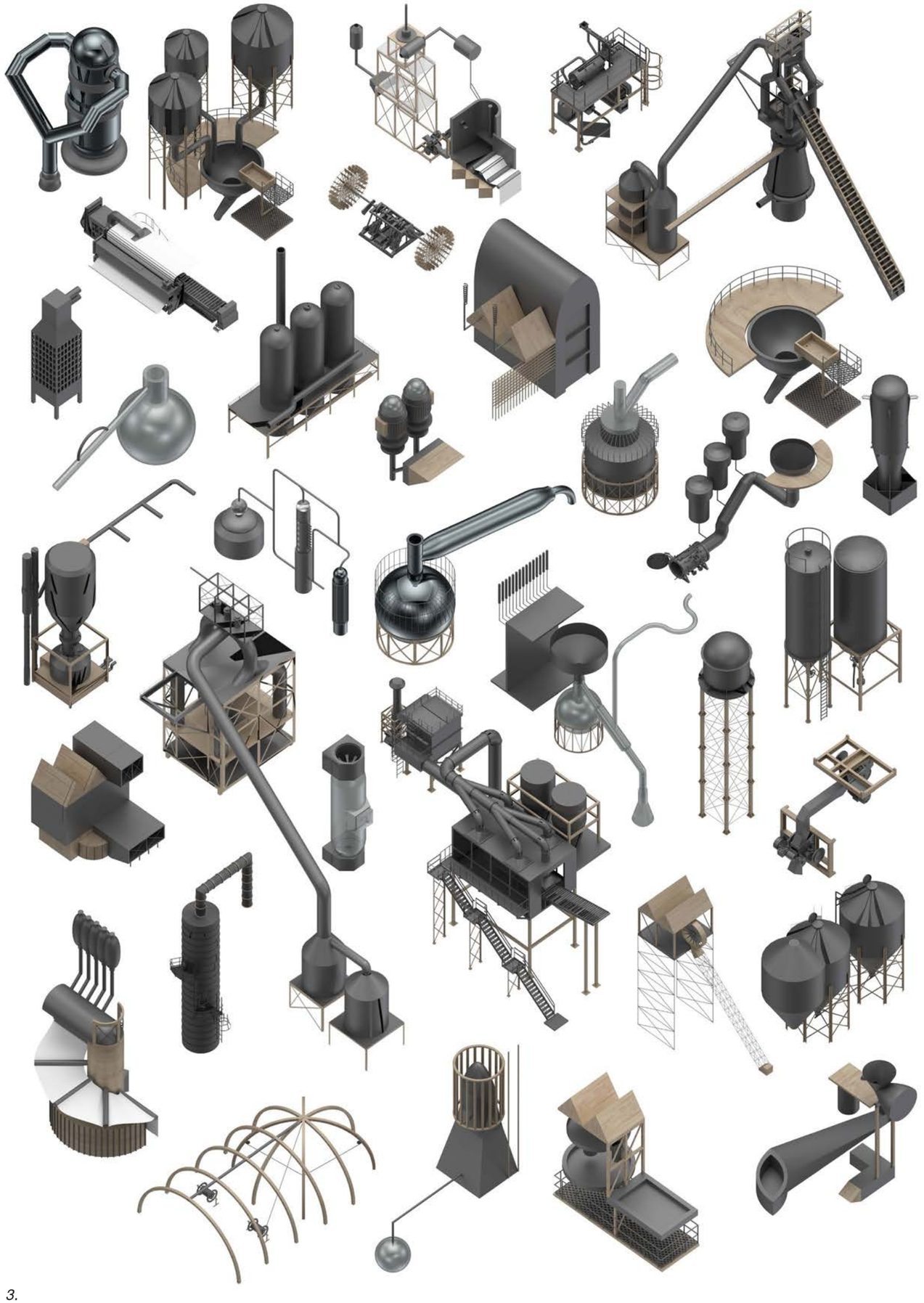


3.

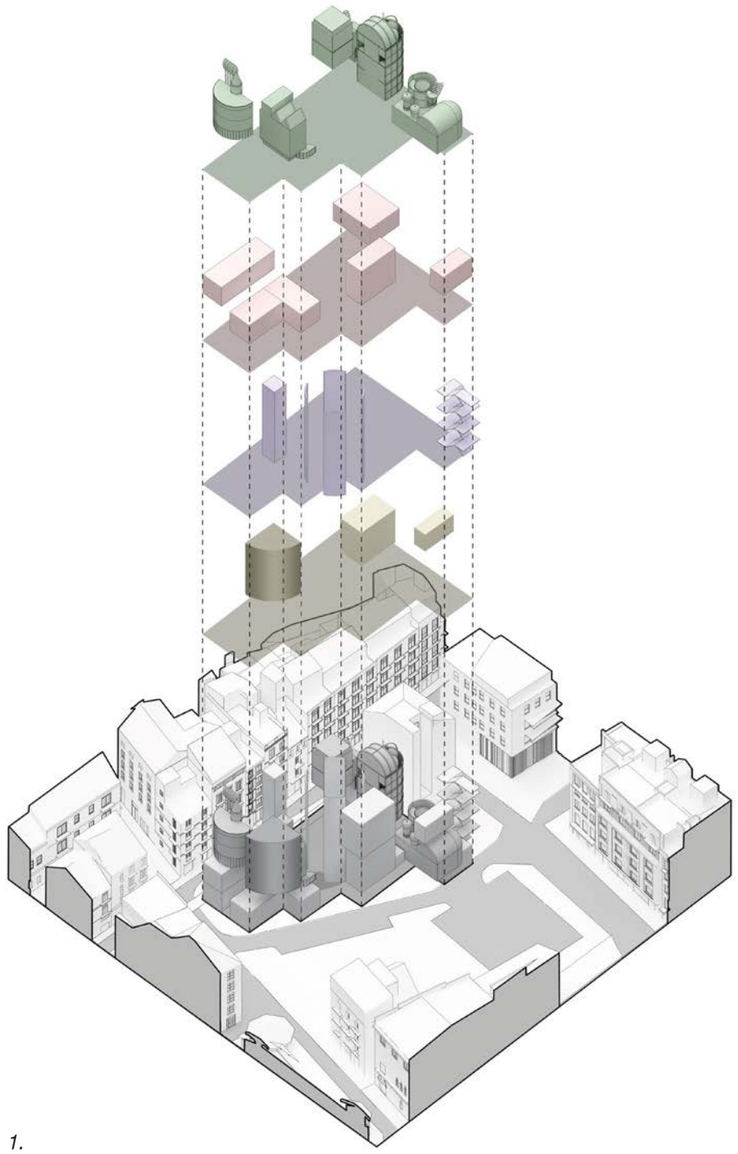
1. Diagramatic Version of the Project Brief
2. Collage of Design Intent
3. Machine Tectonics Study

The Industry Plant

Projects_06 // Diagrams

The structure is comprised of a cross-bracing timber pattern, following a modular grid. Following the theory of negative space, I have only put circulation patterns where it leads to a programmes, and as a result, it produces double, sometimes triple height spacing.

The sustainability strategy was resolved through understanding local climate implications. The central atrium has been left hollow intentionally, to allow hot air to rise and be regulated in a passive manner to combat Spain's hot climate. The cross bracing s also positioned in an alternating pattern to combat the winds the building may face, and redirects it to the ground.



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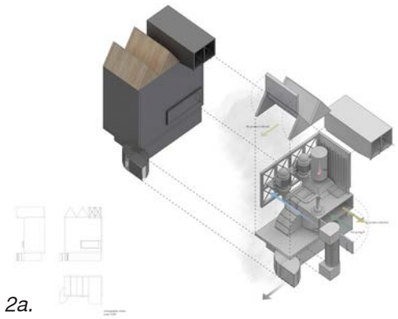

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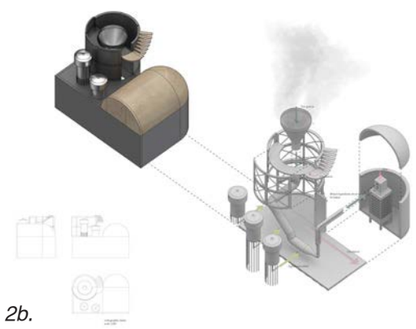

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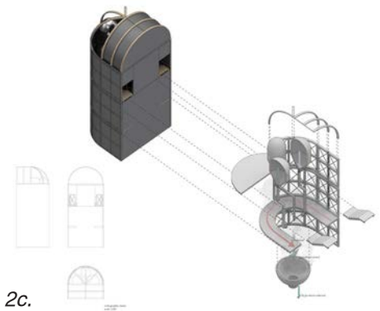

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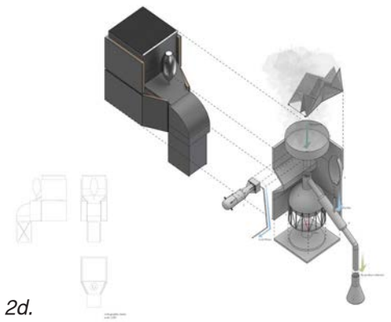

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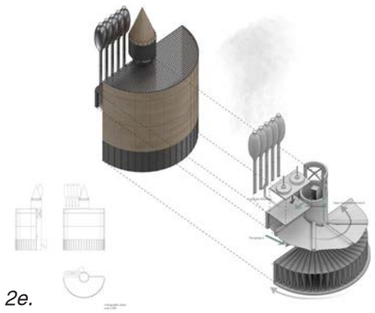

2e.

3.

1. Massing Diagram
2. Exploded Machine Drawings ("Patent Drawings")
3. Environmental Startegy

The Industry Plant

Projects_06 // Hierarchy and Drawings

The programmes were crafted after doing further research into the educational and research sectors of University programmes within the field of Biology, and are used to address these issues.

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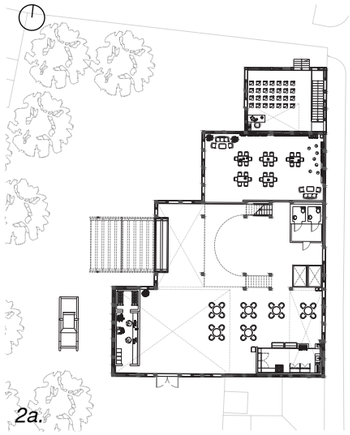

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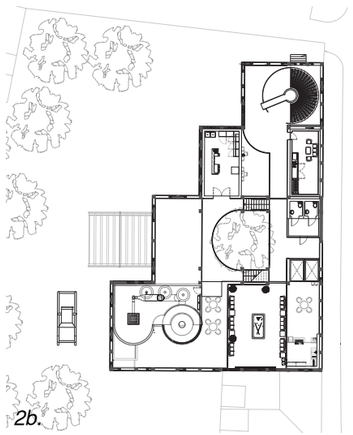

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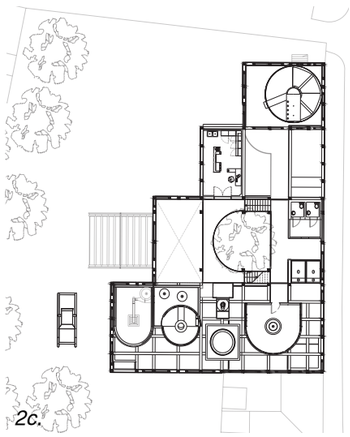

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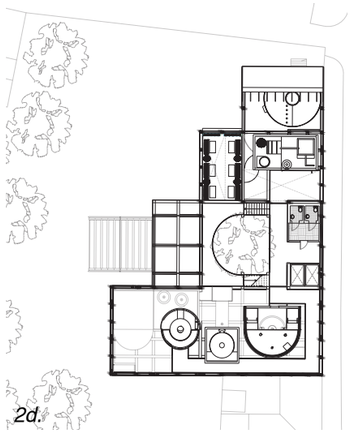

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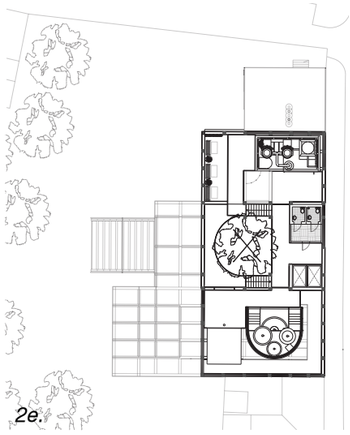

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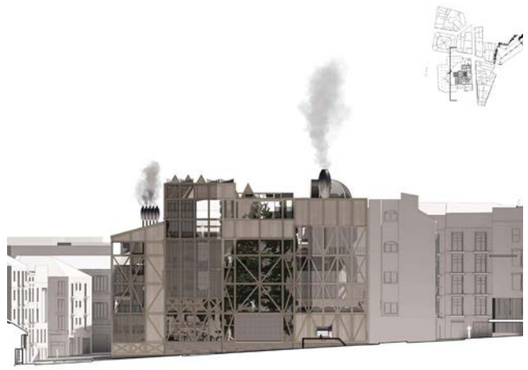

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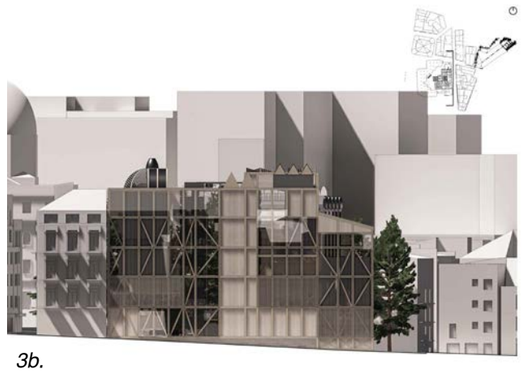
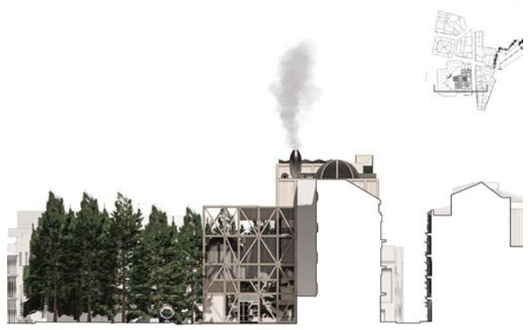
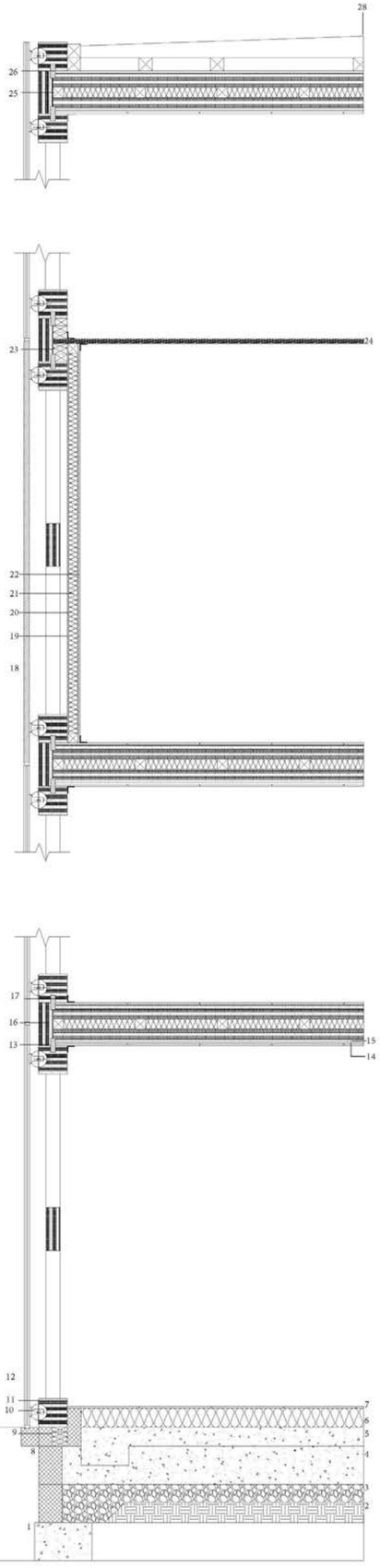


3b.



3c.

3d.

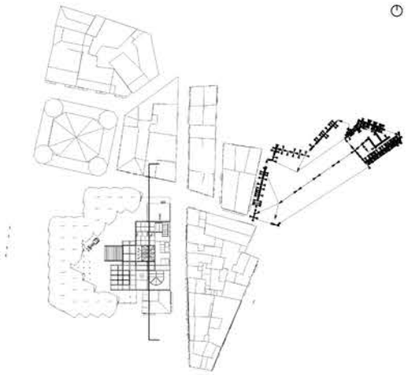


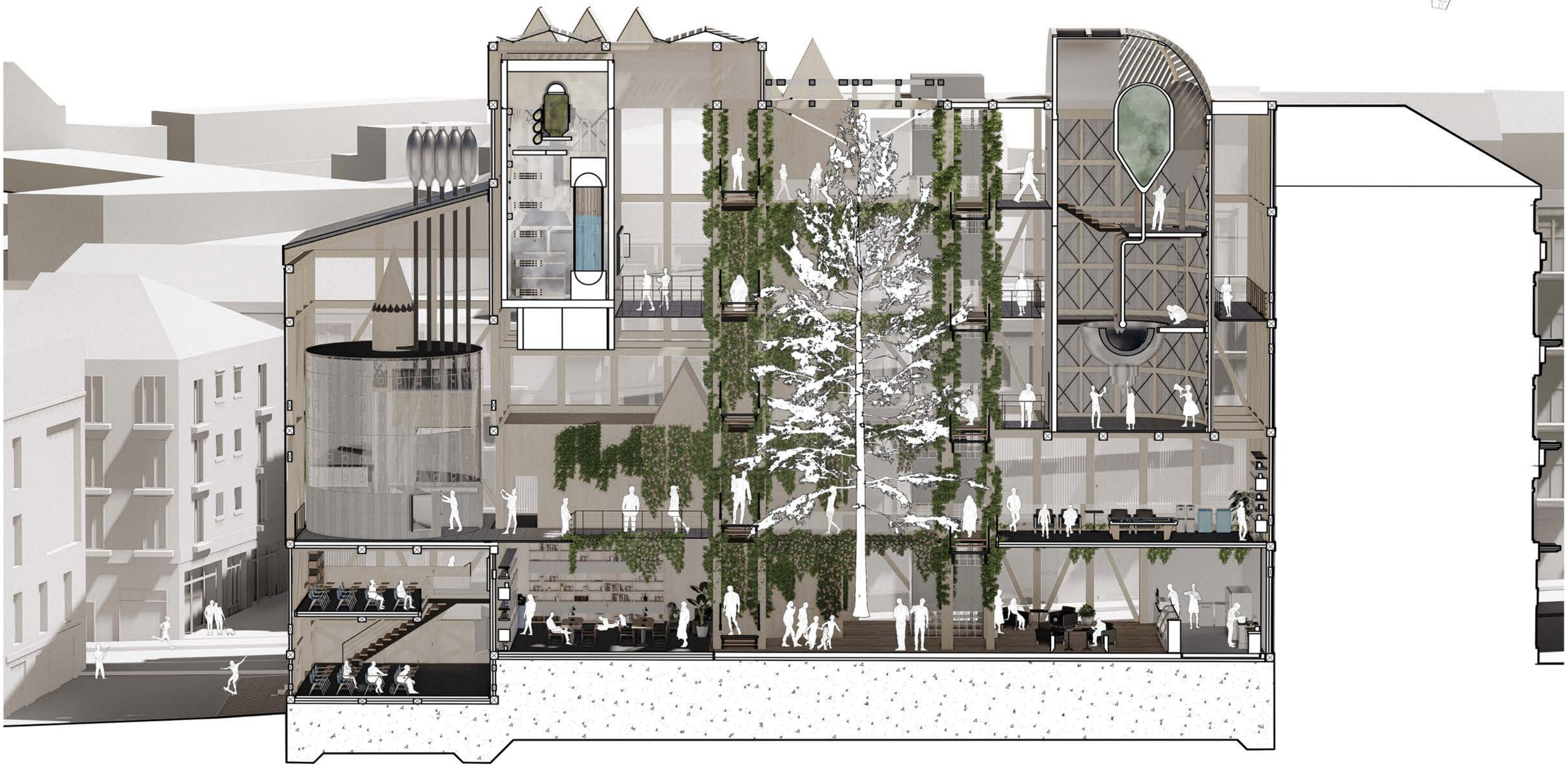
4.

1. *Aerial View of The Industry Plant*
2. *Floor Plans; ground floor --> fourth floor*
3. *Elevations of The Industry Plant*
4. *Technical Bay Study of The Industry Plant*

The Industry Plant

Projects_06 // Longitudinal Section





Programmes

1. Classroom
2. Classroom second floor
3. Library
4. Atriam
5. Cafe
6. Mezzanine
7. Paper Mill
8. Rosin and Essential Oil Machine

8a. Water Tank
8b. Turbine
8c. Condensing Unit
8d. Collection Unit

9. Pesto Tower

9a. Ingredient Storage and Dispencer
9b. Pesto Mixer and Dispenser

The Industry Plant

Projects_06 // 1:100 Model and Perspectives

To show a contrast between the structure and the machines, I opted to make a model intentionally using 2 different materials to make the differences apparent. The tree hung in the middle of the building is from a real pine tree, and I intentionally scattered the leaves across the model to give the vibe of urgency and hecticness.


1a.


1b.


1c.


2a.


2b.


2c.

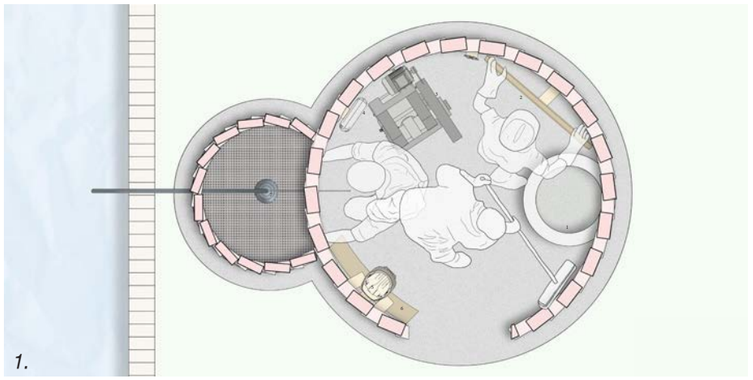

2d.

1. 1:100 Model Pictures
2. Perspectives

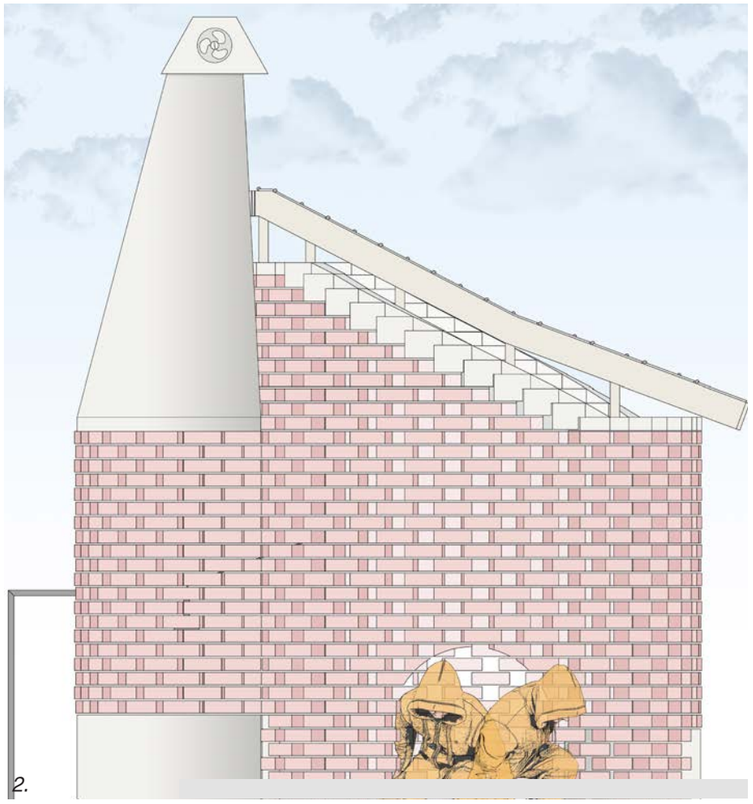
The Backyard Foundry

Projects_05a

The brief of this project was to design an outpost for a specialised worker, catering to their needs and interrogating how to use space efficiently. My chosen worker / client was a metal caster; someone who recycled aluminium cans by melting them down in a crucible and then making beautfiul, metal sculptures out of them.



1.



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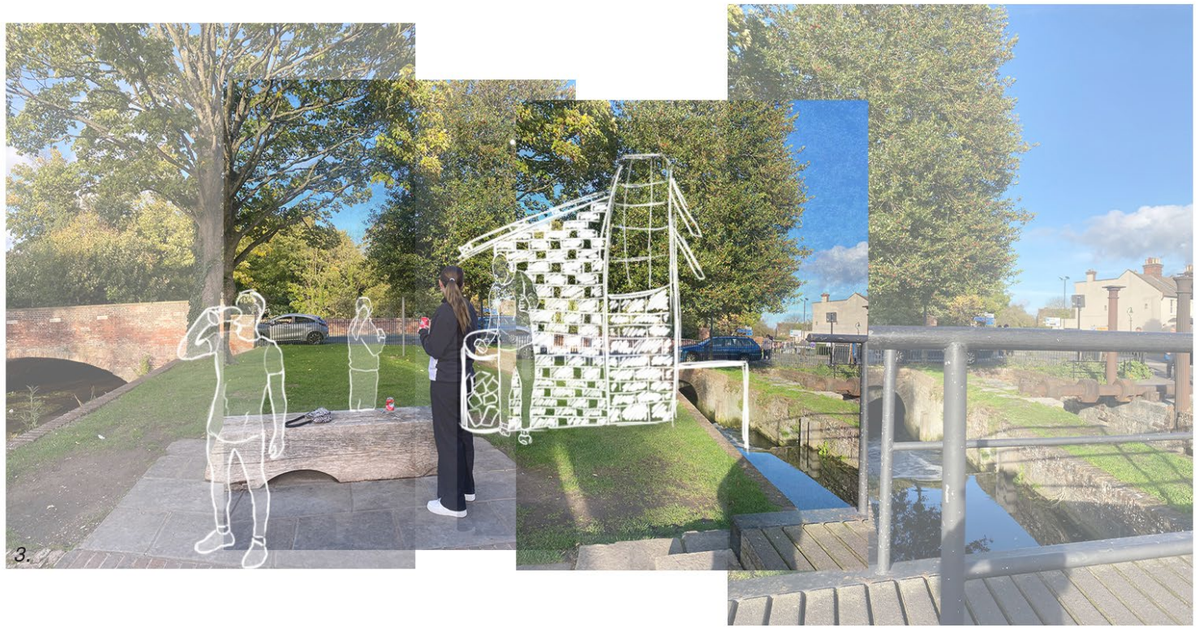

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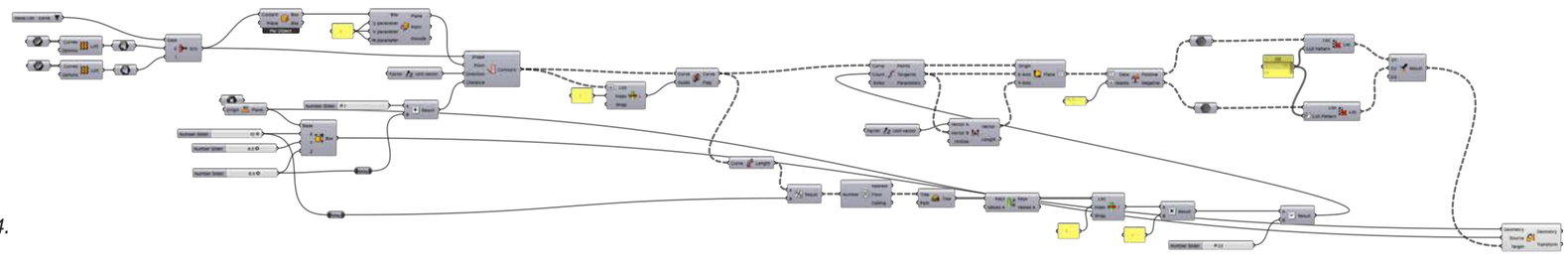

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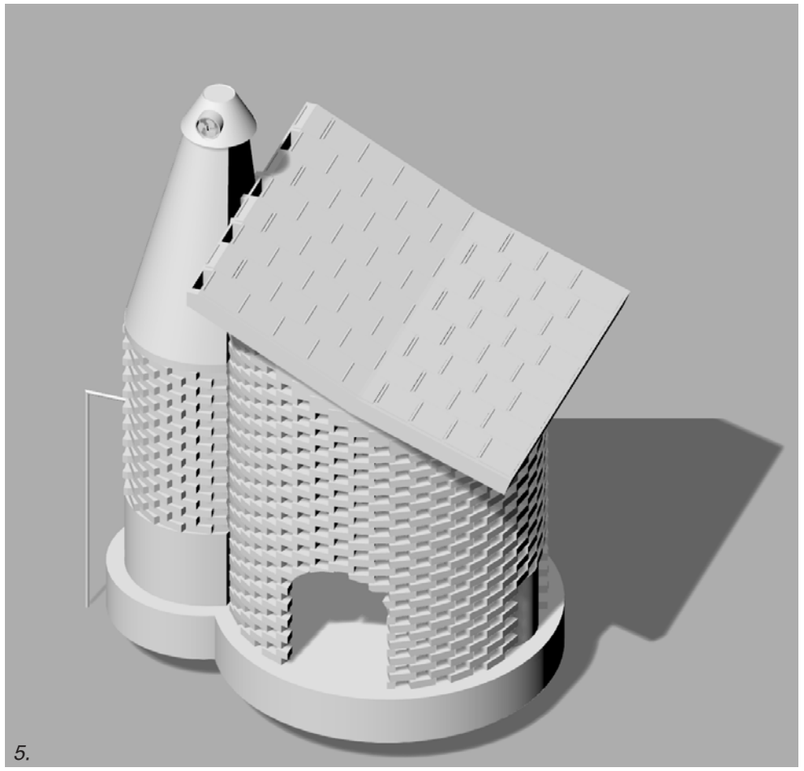


5.

6.

1. Plan fo The Backyard Foundry
2. Elevation of The Backyard Foundry
3. Early Concept Drawings
4. Grasshopper Code for Perforated Brick
5. Raw Render of Outpost
6. Test Render of Outpost

The Backyard Foundry

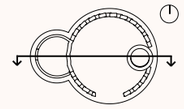
Projects_05a

The main body of the outpost was modelled in Grasshopper, utilising a perforated brick approach as the inside was thought to reach high temperatures due to aluminium having a melting point of 660.3 degrees celcius.

The shapes is also circular to emulate a repeating process; the thought of having corners felt jarring and disruptive.

1.

1. Contextual Axonometric
2. Detailed Section



Technical Detail
1 - Aluminium Roof Tiles, on fixed horizontal batons
2 - Timber Roof Ledge, with counter planks
3 - Timber Baton, 50mm x 50 mm
4 - Timber Baton, 25mm x 50mm
5 - Concrete Ring Beam, 200mm x 200mm
6 - Perforated Brick, 65mm x 100mm x 200mm
7 - Mortar, 10mm in height
8 - Concrete Foundation, also apart of the structure
9 - Hardcore
10 - Consolidated Earth

Programme
A - Steam Escaping
B - Metal Tile Opening (movement)
C - Smoke Escaping
D - Roof Tile Opening (movement)
E - Wheel to Open Roof Tiles (movement)
F - Water Pump
G - Water Pump in Action (movement)
H - Melting Area
I - Casting Area
J - Cooling Area

2.

Section
Scale 1:5

Zain Azhar

Portfolio

Selected Works
2022 - 2024