

DEREK HILL

Course Director, BSc(Hons) Architectural Studies



University of
Strathclyde
Engineering

THE DEPARTMENT OF **ARCHITECTURE**

UNIVERSITY OF TURKU, FINLAND: COURSE MAPPING: 27.06.23

Architecture

The art or practice of designing and constructing buildings

Architect

Chief Builder

University of Strathclyde

The Place of Useful Learning



Architecture

The art or practice of designing and constructing buildings

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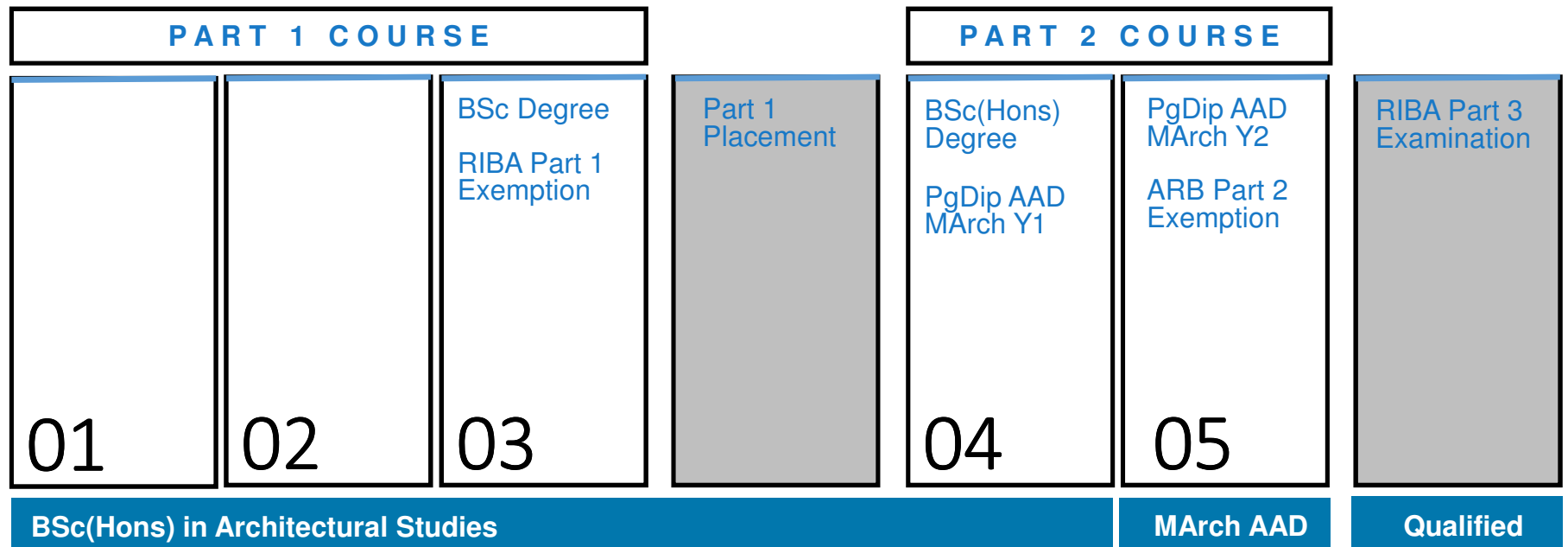
University of Strathclyde

The Place of Useful Learning



PATHWAY STRUCTURE

While it will take a minimum of seven years to become a qualified architect, that process is divided into both academic and practice based learning. Students will complete the Part 1 Course after three years and then have the opportunity to gain experience through a salaried placement year before returning to complete the Part 2 course over two years – achieving both a BSc(Hons) Degree and Post Graduate Diploma or March.



STUDY PROGRAMME

Full Time Course

5 Day Timetable

One Full Day of Studio Teaching

Workshops

Associated Classes and Seminars

Self Study Studio Time

Two Semesters



COURSE CURRICULUM

120 credits per academic year, awarded through a curriculum of continual assessment.

awarded through architectural design studio **projects** and associated class **assignments**

Students are required to maintain a portfolio to be assessed against RIBA Part 1 and Part 2 Criteria



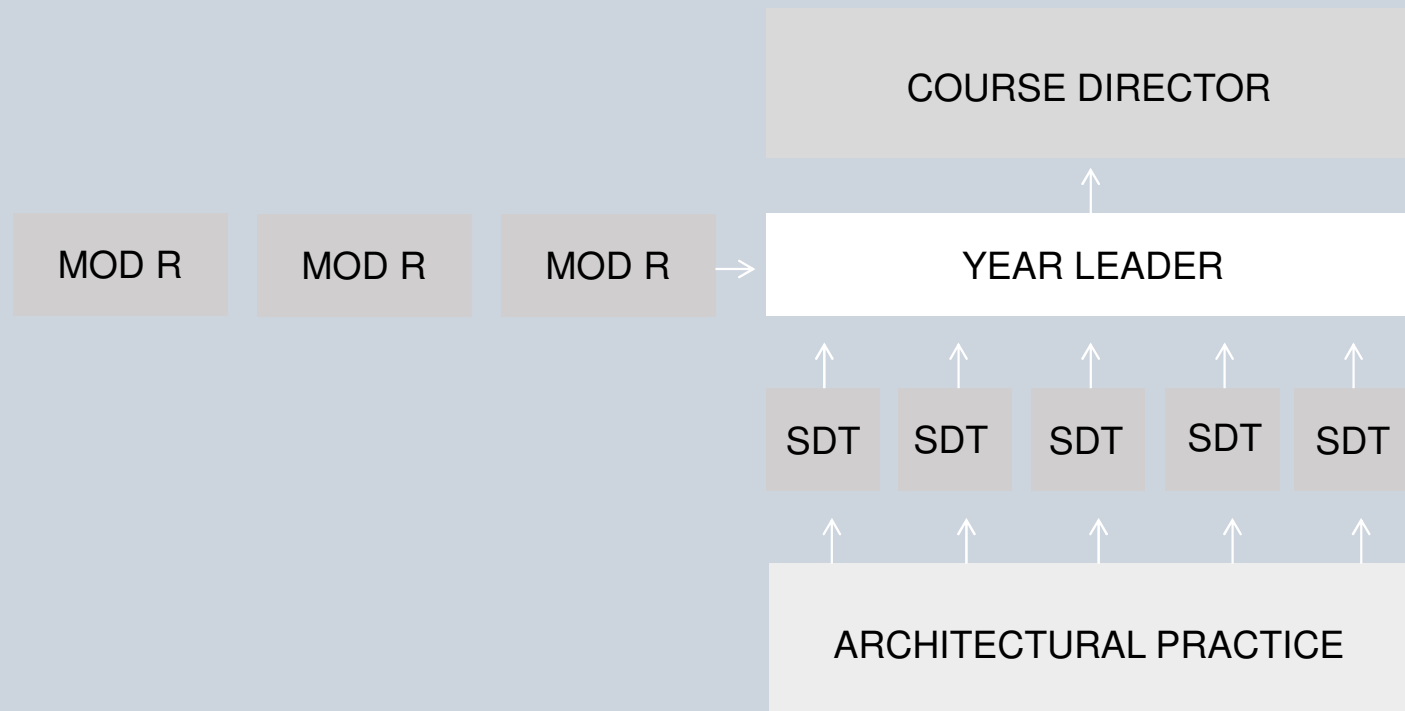
COURSE CLASSES

Studio Projects explore the **'verb'** rather than the 'noun' and include *To Settle, To Gather, To Live/Work* and *To Care*

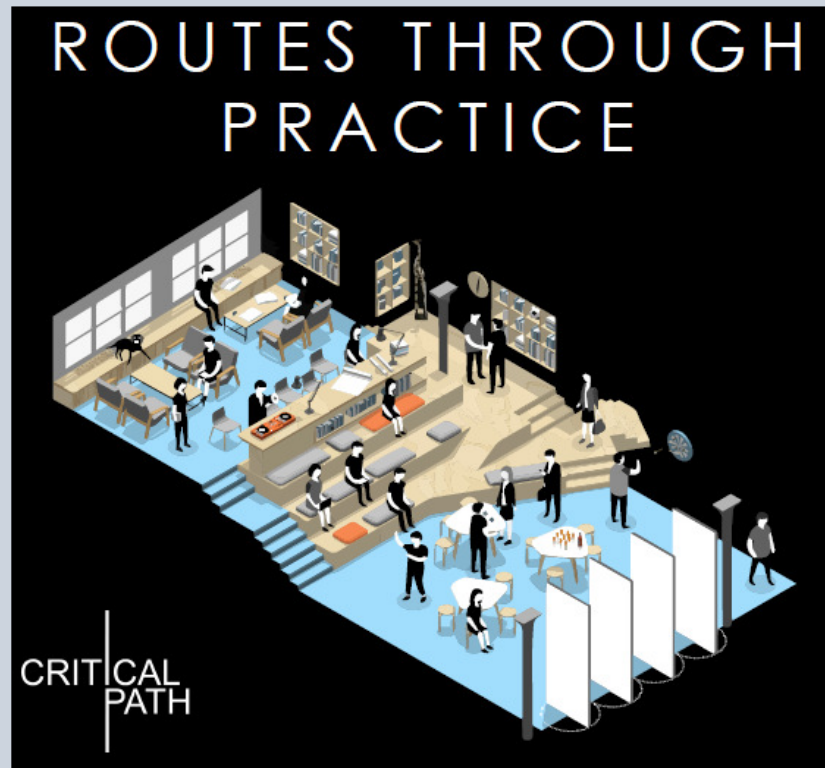
Associated Classes are seen as integrated learning and relate to Studio Projects through *Technology Studies & Live Build, Cultural Studies – History & Theory, Introduction to Practice, Urban Design* as well as *Dissertation and Research Methods*.



TEACHING STRUCTURE



PRACTICE NETWORK

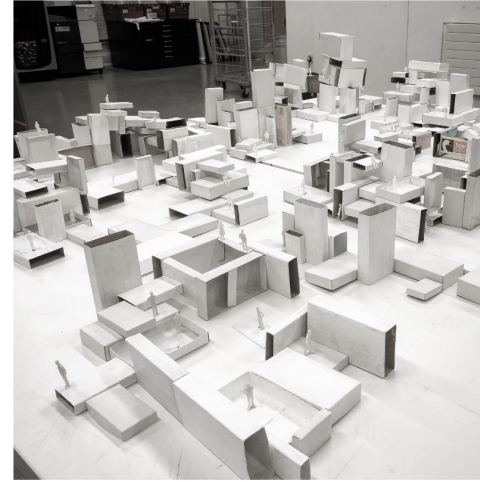


- Teaching is delivered through practice links
- Teaching is cutting edge – industry standard
- Employment Opportunities through study
- Practice Research through Design Teaching
- Continual Professional Development
- Alumni connection to the Department

Year Leader's Surgery



Introductory Project



Introductory Project



YEAR 1

AB106

DESIGN STUDIES 1A: Collaborative Working and Full Scale Build (S1 week 1-5).

Units of 12 students working on the design, testing, fabrication and construction of a small structure (2.4 x 2.4 x 2.4m for two people). Engagement with client, site and construction process. Assessed via documentary and verbal presentation.

AB107

DESIGN STUDIES 1B: A pavilion in the Park(S1 week 6-10).

Units of 12 students working on group site analysis and individual design project to consider a small pavilion in one of the city's parks. Development on in terms of scale and consideration of materials (carbon footprint and embodied energy). Assessed via design statement and verbal presentation / crit.

AB108

DESIGN STUDIES 1C: The Rules of the Street / The Rules of the City (S2 week 1-4).

Cohort wide analysis of 'place' through façade and block scales. One day model making workshop to produce the 'site' for the follow on project. Survey, research and draw facades of the city at 1:50. Understand the history of the place and why it came to be. Assessed via drawings and models at 1:50 + analysis research document.

AB109

DESIGN STUDIES 1D: The Rules of the Street / The Rules of the City (S2 week 5-10).

Unit of 12 students working on individual design responses through real client (artists of the city) engagement. The building serves to mediate between public and private spaces and introduces the building regulatory process. Assessed via design statement and verbal presentation / crit.

AB110

CULTURAL STUDIES 1: The History of Architecture / Anatomy of Architecture of Western Europe

Students are given a tour of the history of architecture through lectures and seminars which then leads on to discussion through various elements of architectural anatomy. Assessed via an essay in S1 (history) and an axonometric drawing in S2 (anatomy)

AB111

TECHNOLOGY STUDIES 1: Structure, Construction and Environment

Students are taught basic forms of construction and structural principles and assessed via submitted technical (architectural drawings/details). Students are taught and research alternative environmental strategies and are assessed via a group research paper.

YEAR 2

AB208

DESIGN STUDIES 2A: Adaptive Reuse (S1 week 1-10).

Units of 12 students working on the design of adaptive reuse proposals for a former boathouse. The programme calls for communal dining with students permitted to propose a small addition to the existing building – either to house the dining function or to provide service space for this. Assessed via design statement and verbal presentation/crit.

AB209

DESIGN STUDIES 2B: Research into Place and Material (S1 and S2 week 1-10).

A year long research project which looks at mapping 'place' in tandem with exploring 'material'. The place is St Andrews, the material is timber. A range of outputs including group town study and individual mapping combined with individual 'sitooterie' proposal and group timber construction research paper..

AB210

DESIGN STUDIES 2C: A Study Library in St Andrews (S2 week 1-10).

Units of 12 students working on the design of a Study Library on one of three studied sites. Linking with AB212 this project asks students to consider 1:20 scale of construction with 1:5 scale of detail. Strategically, students explore the structural and environmental solutions for the library with combined Learning Outcomes and Assessment processes through the complimentary lectures series in AB212.

AB211

CULTURAL STUDIES 2: The History of Architecture in Scotland / Architectural Typology

In the first semester we look at the architectural culture of Scotland and how it developed in relation to the Rest of the World. In the second semester we embark on an analytical journey into the typologies of architecture, discovered and debated in the previous semester. Assessed through submitted drawing work and essay.

AB212

TECHNOLOGY STUDIES 2: Structure, Construction and Environment

Using the library project under AB210, this module allows an integrated approach to design and architectural technology. Students consider structural and environmental strategies for their library as described in AB210 above.

ELECTIVE

Elective Modules from all four University Faculties

Students elect to study maximum of 20 credits from a variety of departments and faculties (not covered by ARB criteria).

YEAR 3

AB314

CULTURAL STUDIES 3: The History of Architecture in Scotland / Architectural Typology

The first semester focuses on the history of Glasgow's architecture, with particular reference to the developments in urban housing in the city up to present day. The second semester explores the process of urban culture through storytelling, using images and text.

AB315

PROFESSIONAL STUDIES 3: Introduction to Practice

The core aim of the ITP module is to develop understanding of good design practice specifically in relation to construction including satisfying legal, regulatory & performance requirements. Assessed via a Fire Strategy linked to the Urban Housing project under AB317 and a series of Case Study reports delivered through our Practice Network.

AB316

TECHNOLOGY STUDIES 3: Structure, Construction and Environment

Using the housing project under AB317, this module allows an integrated approach to design and architectural technology. Students develop design proposals to 1:5 and 1:20 scale for structure and construction and under take a reflective review of their design in an attempt to consider the environmental improvements that could be made to their design.

AB317

DESIGN STUDIES 3A: Urban Housing (S1 week 1-10).

Units of 12 students working on the design of live/work units on a city centre site in Glasgow. A brief masterplanning (group) element allows for a series of strategies (place, structure, programme, user, environment, life safety) to be considered. Notionally students take this project to Building Warrant level. Assessed via the submission of a design statement and verbal presentation/crit.

AB318

DESIGN STUDIES 3B: A Performance Building – The Undergraduate Thesis (S2 week 1-10).

Tutors present their own intended manifestos and allow students to select the unit within which they work. Students develop their own brief and consider appropriate site choice and scale/massing of their proposed building. Technical aspects remain focussed on the design of a suitable performance space. Assessed via the submission of a design statement and verbal presentation/crit.

YEAR 4

AB418

DESIGN STUDIES 4A: City Strategy / Preparing the Brief

The Design Studies Curriculum in Year 4 is conceived as a series of connected components of one 'To Care' project which will allow students to both develop and display a wide range of skills, processes and outputs. While each component will stand alone, requiring a differing set of outputs, they shall require to engage with a shared vision or strategy and should seek out opportunities to borrow from one another through a reflective and provocative series of processes. Working with 4 live clients, the year shall commence at the XL scale, working in groups of 3, on an 'Urban Strategy' which will run for three weeks (weeks 1-3). During this phase, student will respond to their allocated 'community' to develop one, or a series of strategies in relation to a particular hypothesis. These strategies will form the blueprint of your civic building and establish the brief that follows. From here we will individually develop urban strategies to promote a sustainable community, promote social values and demonstrate sustainable connectivity throughout the city. The urban strategies will further demonstrate sustainable land use and an enhanced ecology within their community, to promote health and wellbeing (weeks 4-6) Concluding the semester (weeks 7-12) will be the final development of your individual brief for 'To Care'.

AB419

DESIGN STUDIES 4B: A Civic Building

Your individual response to your allocated community will be presented as a manifesto, outlining how your Urban Strategy will support an architectural response. We will then explore and test the context of our communities by successfully demonstrating our proposed buildings within their local context. As part of the (M) proposal for the building envelope we will investigate a selection of façade constructional and material systems that promote sustainable design and address climate change.

AB420

CULTURAL STUDIES 4: Dissertation

Working with an allocated supervisor, students undertake a period of research into a topic of interest linked to key research silos within the Department: Architecture and the City; Architecture and Society; Architecture and the Environment and Architecture and Technology. With seminars and lectures delivered on research methods and how to develop a conceptual framework, students are assessed on the submission of a 7,500 word dissertation.

AB421

Special Study Class 4: Technology

A range of topics covered including Environmental Design Refresher, High Performance Buildings, Indoor Environmental Quality and Health, Mass Timber, Passivhaus and Retrofit and Assessed through an annotated poster (A2).

YEAR 5

AB964

DESIGN STUDIES 5A: Thesis: Research and Provocation

Students work in studios to determine their area of interest and to establish a research methodology and provocation through research aims and questions. Cohort wide meta theme allows for studio leaders to determine topics such as placemaking, assembly, experiment... Assessed through the submission of a research paper.

AB965

DESIGN STUDIES 5B: Thesis: Testing and Delivery

Students develop their thesis with studio tutors to consider a range of process testing and to establish the most appropriate methods through which to deliver and conclude their thesis.

AB966

SPECIAL STUDY CLASS 5: A Range of Choices

Sitting out with the ARB criteria for Part 2 this class can run in parallel with modules in the Department's other MSc Courses in ACTBIM, Urban Design and Architectural Design for the Conservation of the Built Heritage. Equally, this module offers students the chance to produce the Department's Yearbook, curate the End of Year Show and engage in Mentoring of UG students.

AB967

CULTURAL STUDIES 5: Field of Knowledge

Students will be introduced to a field of knowledge that is drawn from: the social sciences; architectural and construction history; political science; cultural studies; economic, and critical, theory. The first semester will focus on four areas in particular: Society; Technology; The Environment; and the City. The second semester will concentrate on the visual arts, and in particular how best to proselytise your ideas in a visual way. This module aims to widen the intellectual landscape within which architecture is studied.

AB968

Professional Studies 5: Practice

This module covers topics including Architecture Practice in Context, Architects' Appointment, Fee Bidding and Business Types, Procurement and Life Safety and the CDM Regulations. Assessed via a scenario based submission.

MArch

EXAMPLES OF STUDENT OUTPUT

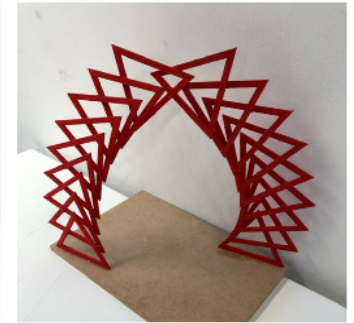
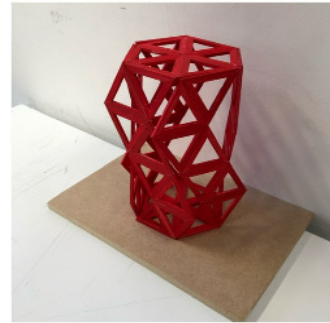
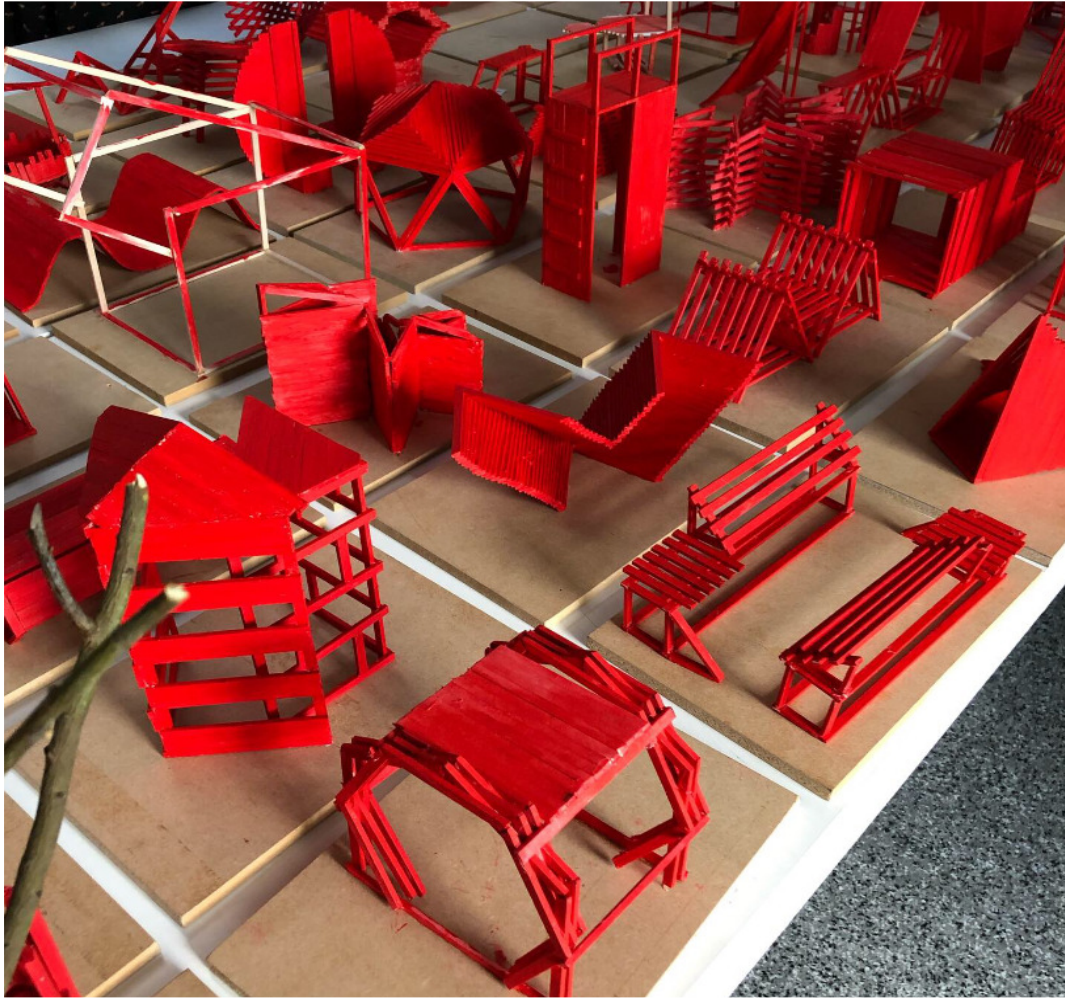
Individual Design Presentations



Exhibition of 1:10 Models



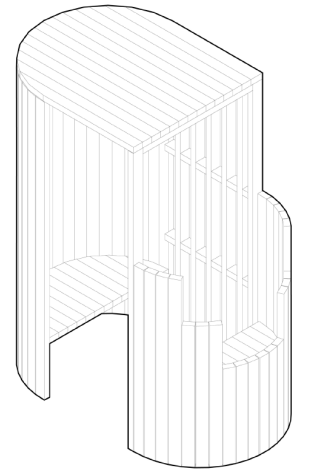
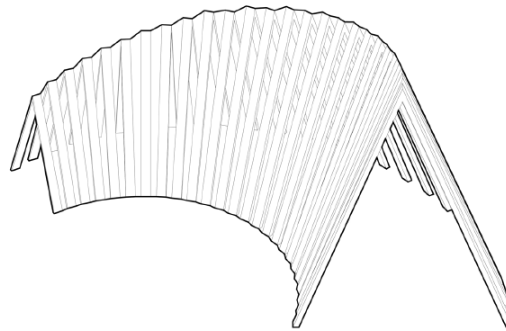
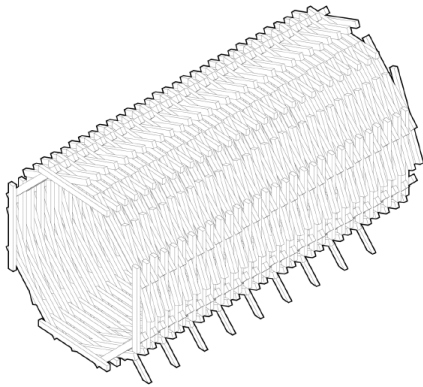
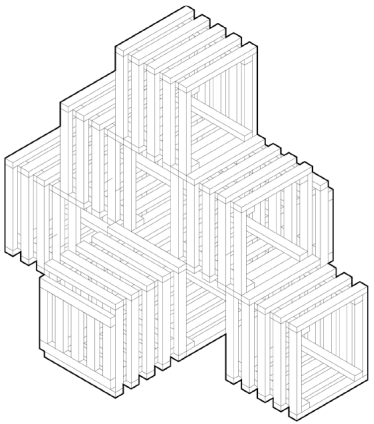
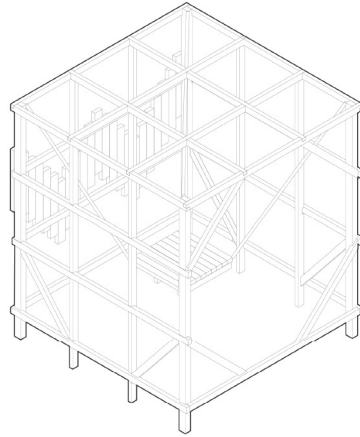
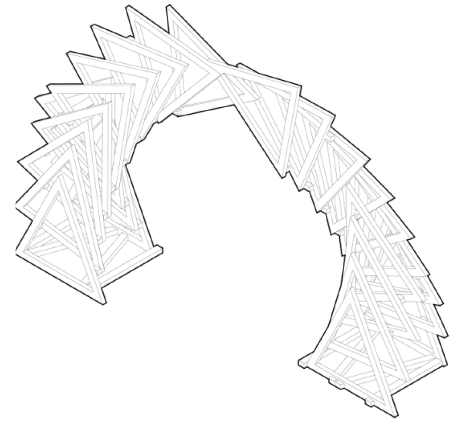
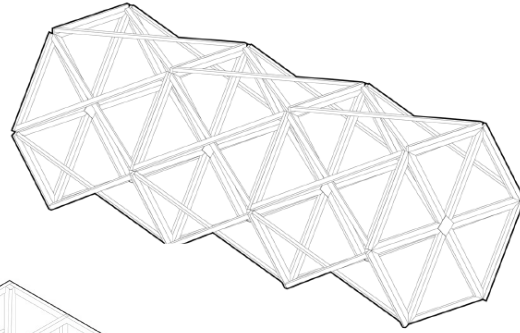
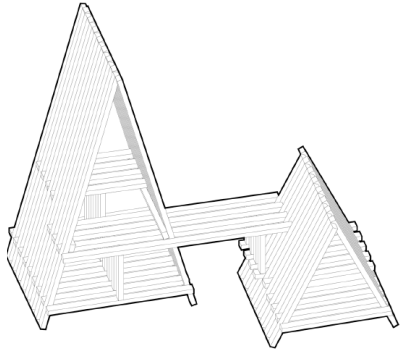
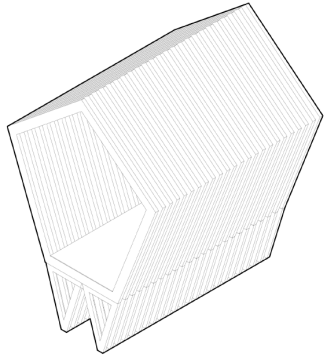
Selection of Final Designs



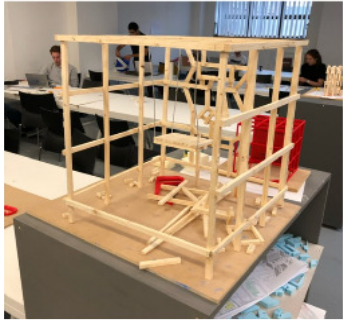
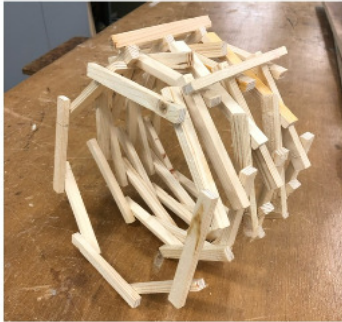
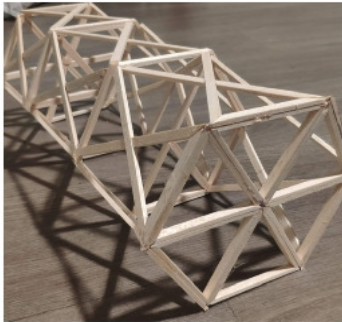
Introductory Project



Drawings – Final Selection



1:5 Prototyping



1:1 Fabrication



Transportation (Students and Structures)



Working on Site / Working with Clients



On Site Construction



Installation of Structures at Wiston Lodge



Installation of Structures at Wiston Lodge



Installation of Structures at Wiston Lodge



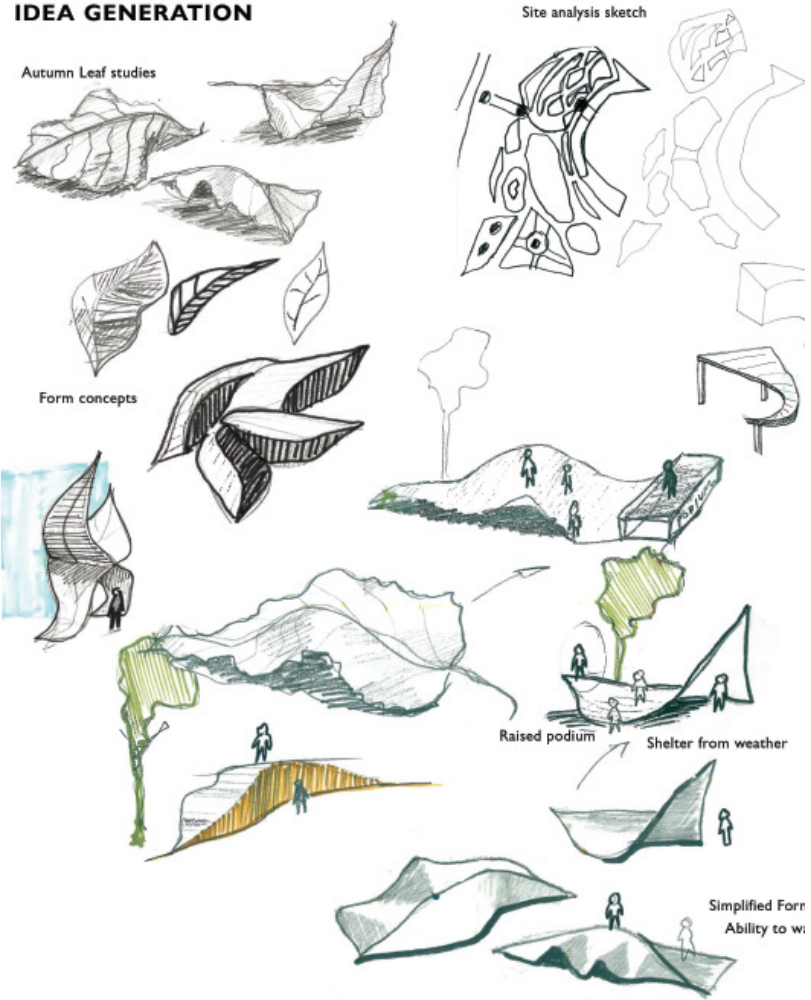
Installation of Structures at Wiston Lodge



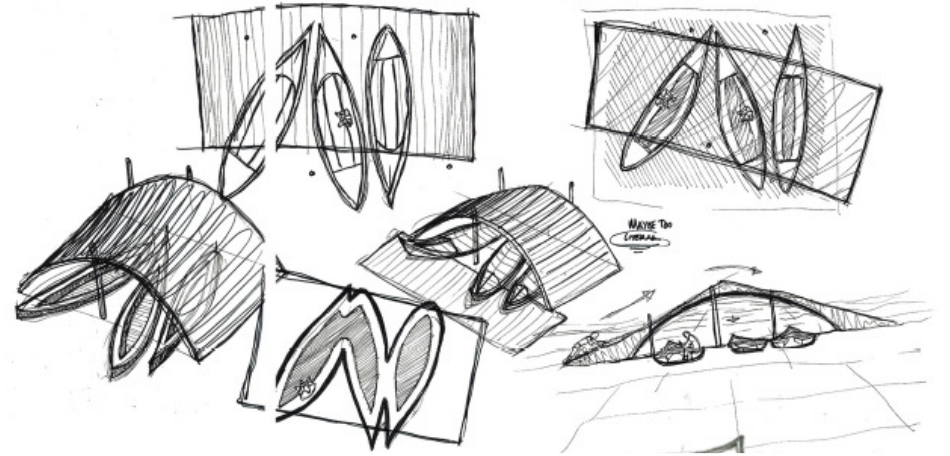
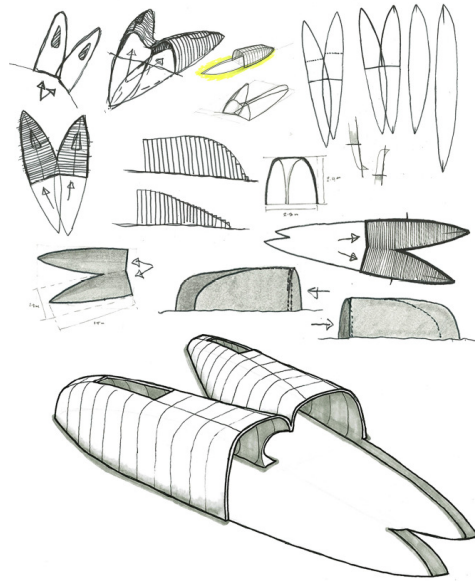
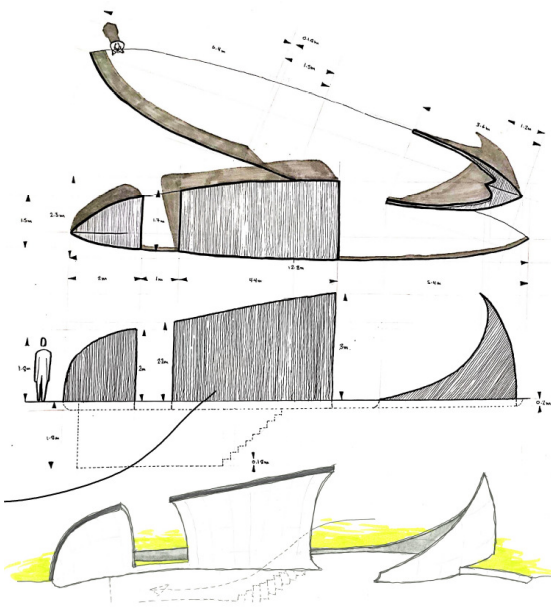
Wiktoria ROZEWSKA



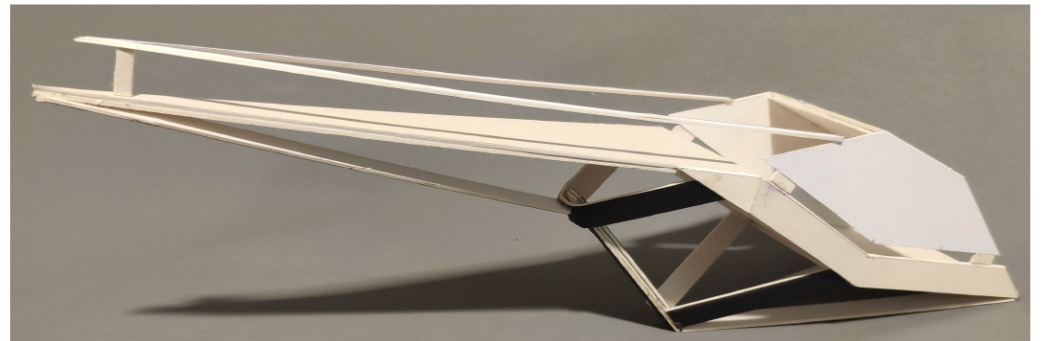
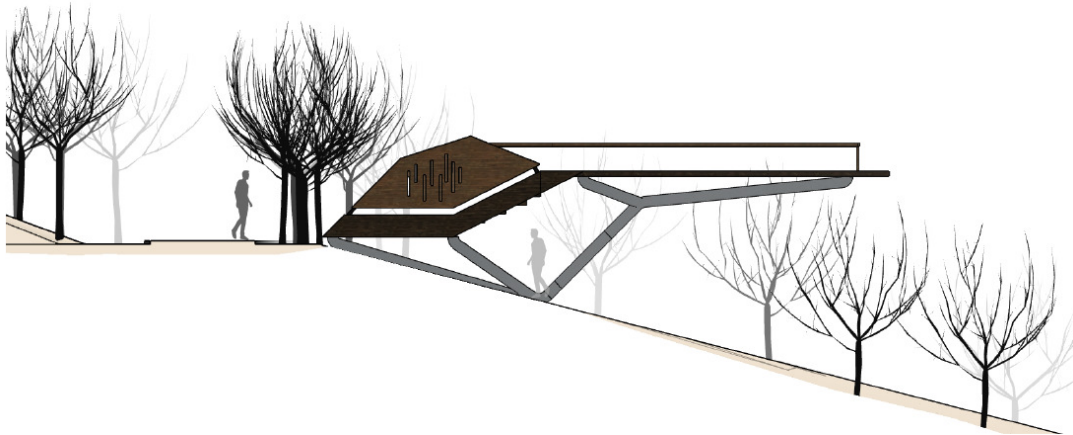
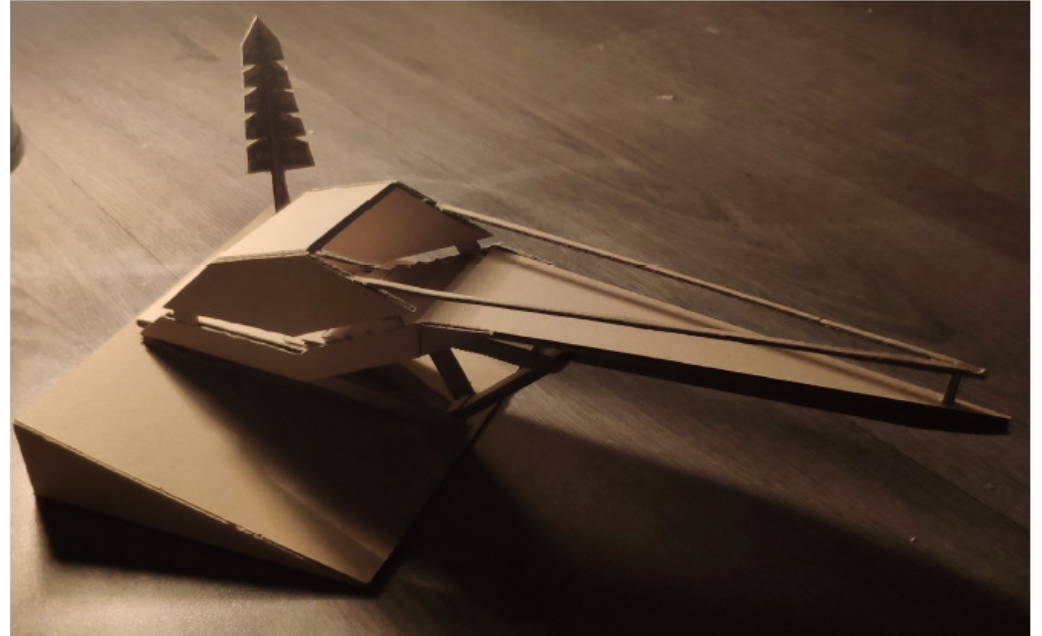
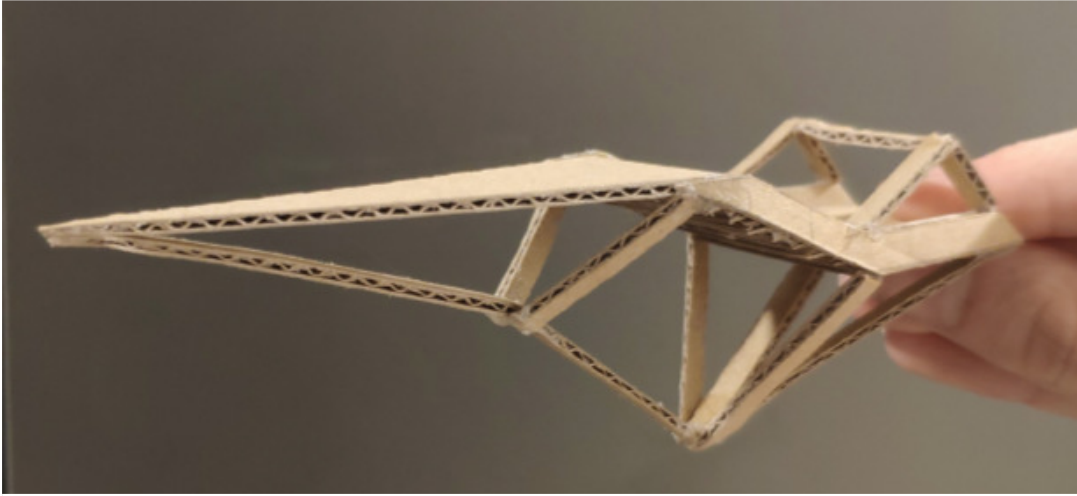
IDEA GENERATION



Cameron HEALY



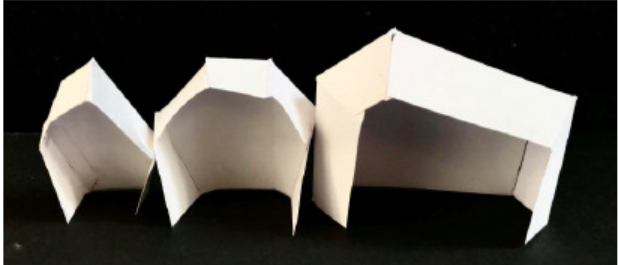
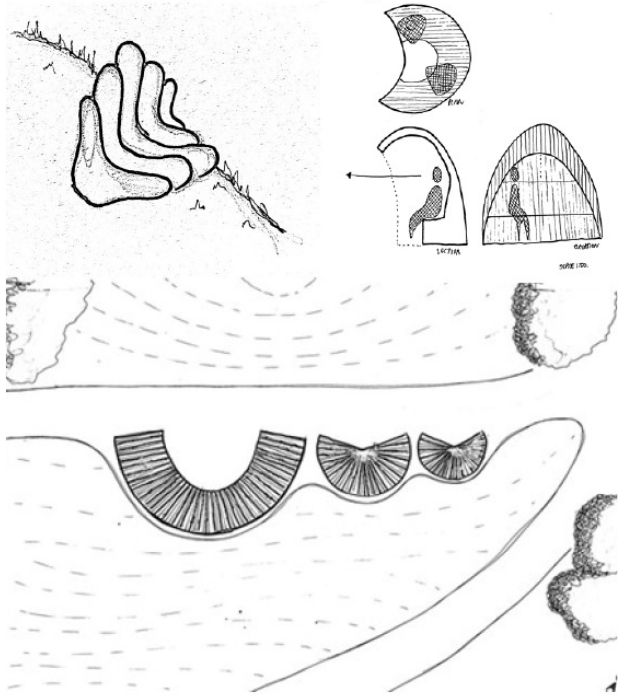
James HALLIDAY



Karolina **RACZKOWSKA**



Eilidh **McGUIGAN**



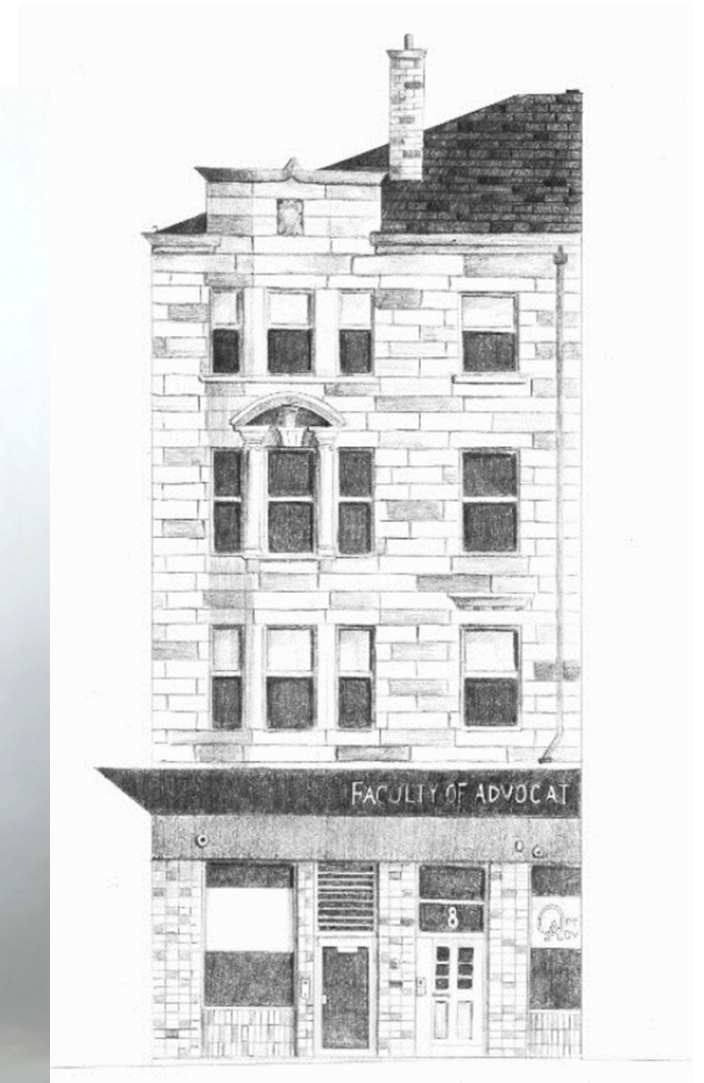
Surveying and Research



Alison **STOBIE**



Karolina **RACZKOWSKA**



Maria VASSILTCHENKOVA



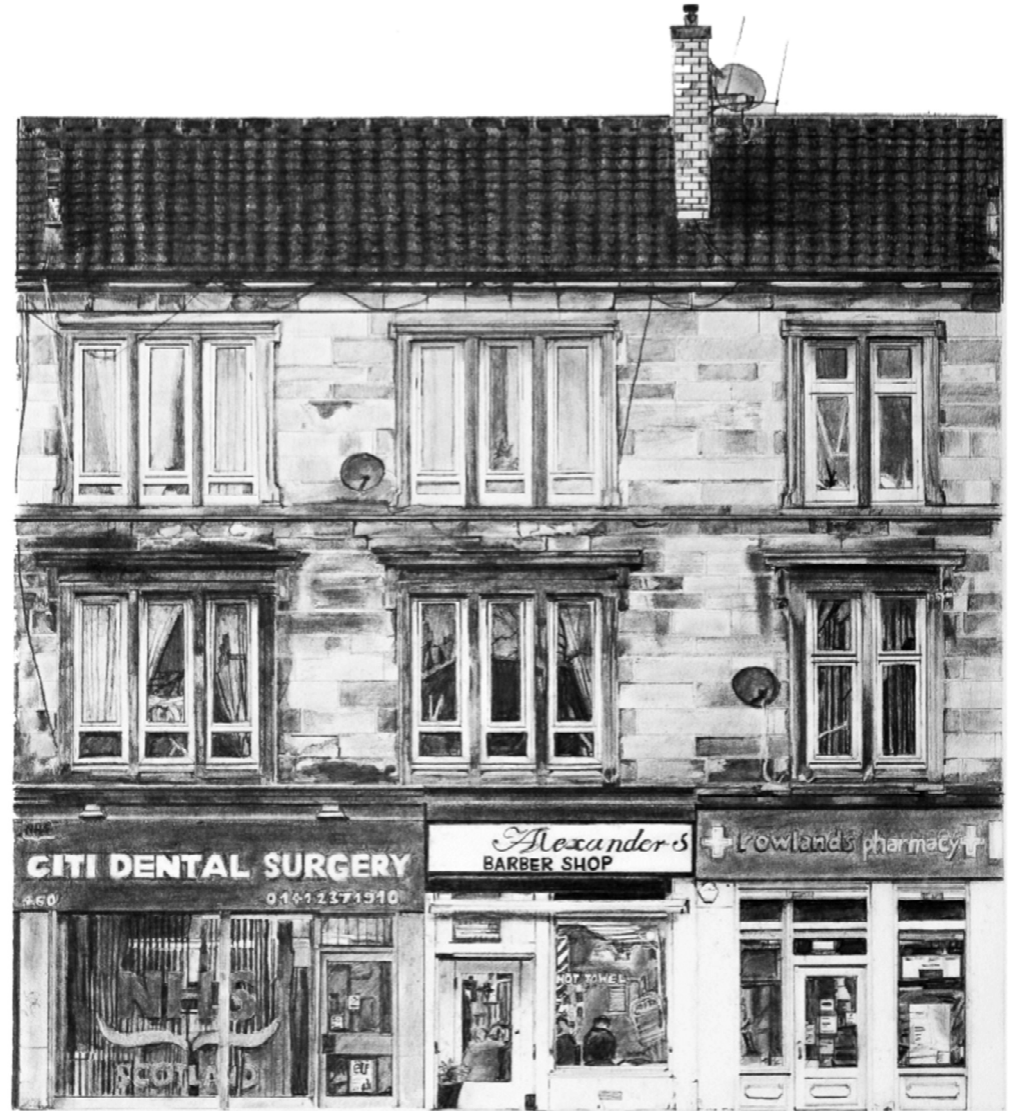
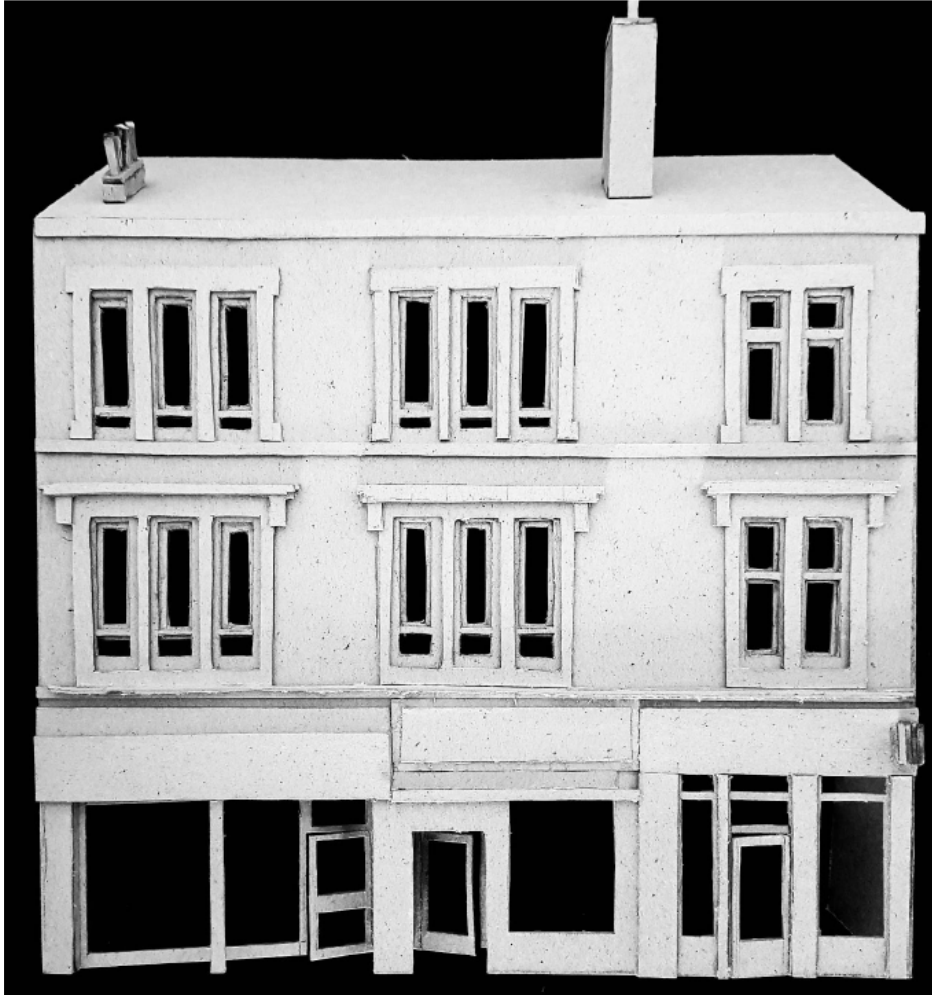
Jack LOUDON



Alex GEKOVA



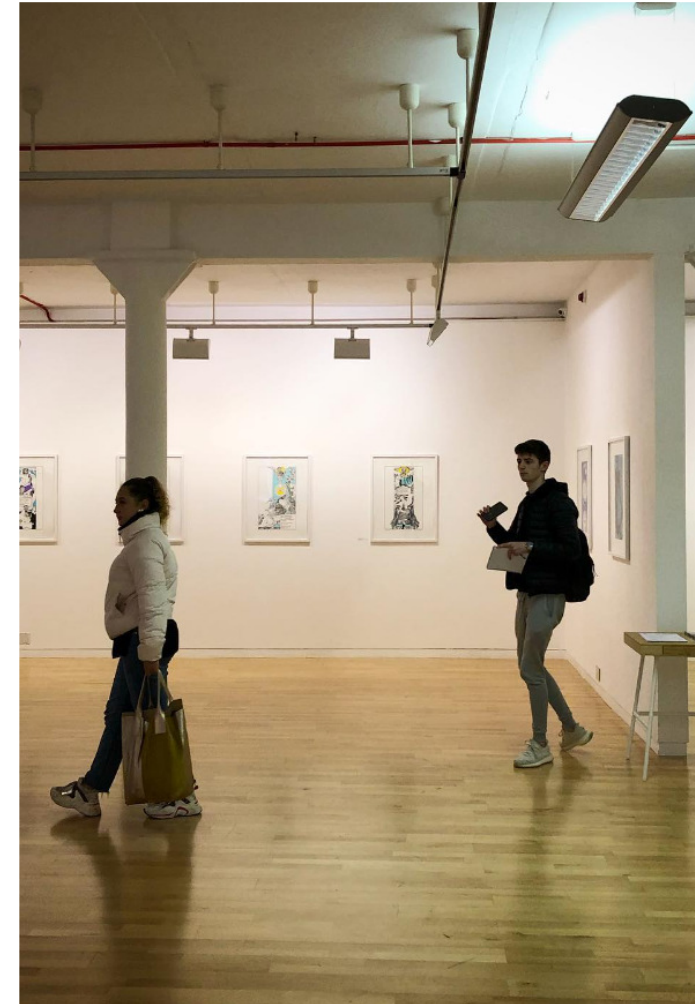
Wiktoria ROZEWSKA



Peer Review / Work in Progress



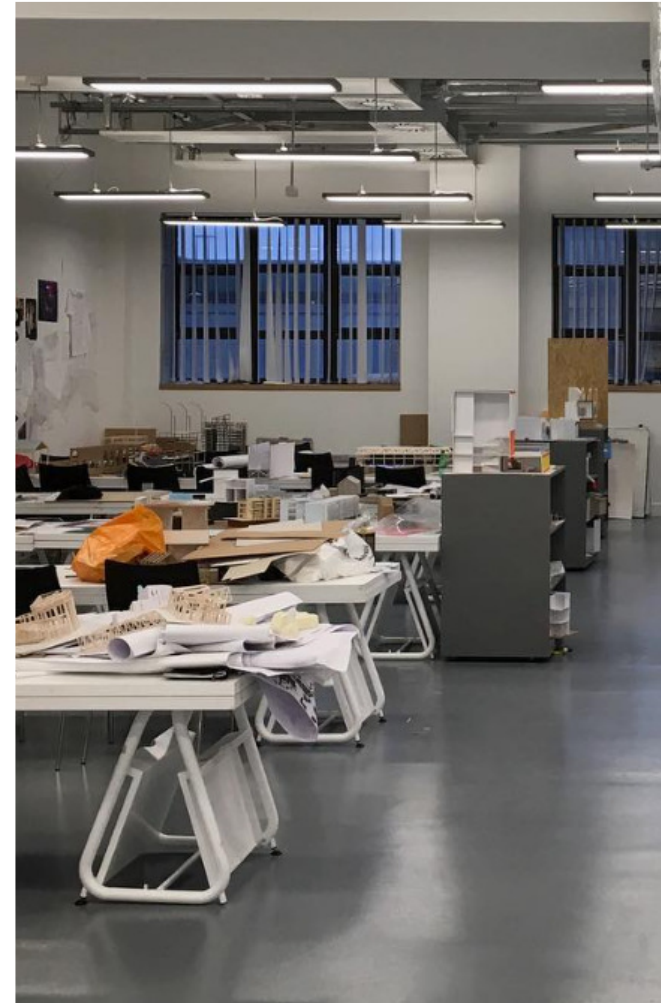
Gallery Visits / City as a Lab for Learning



Artist Visits / Client and End User Engagement



Experiment, Test, Discuss



Output



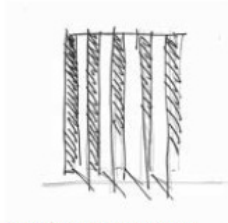


Model Making Workshop

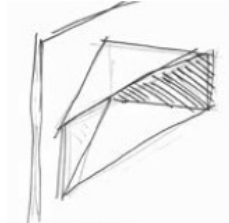
Reece ADAM



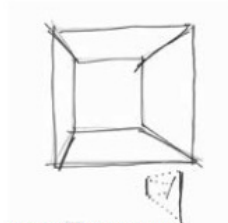
Sculptural themes initially studied



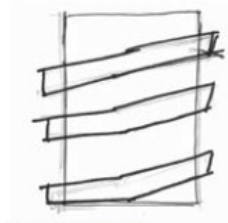
Superficial elements added



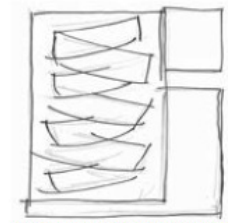
Intricate recesses



Recessed idea develops



Wrapping staircase



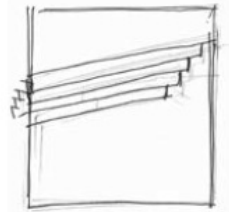
Stair develops into centrepiece



Stair and liftshaft to be a prominent feature



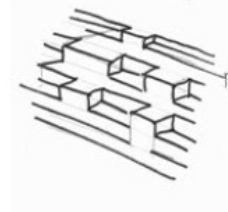
Sculptural elements continue rooftop



Start to think of stair as a significant part of the building



Stair as the gallery space?



Stepped theatre gallery space idea develops



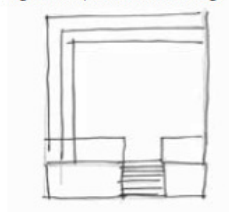
How might this protrude and step to create external features



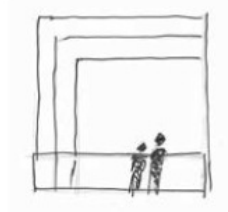
Externalised stairs to create a stepped facade



Horizontal and vertical steps



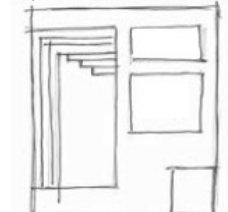
Geometries for front facade come together



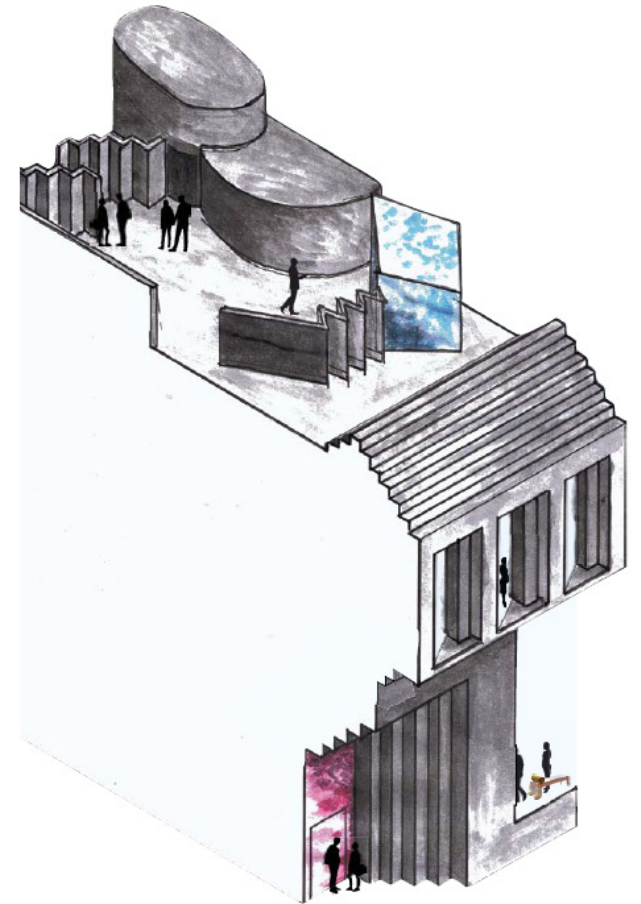
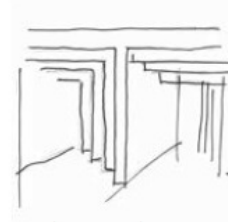
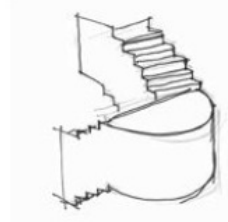
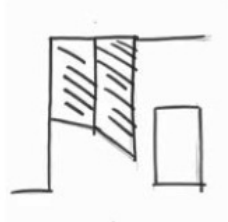
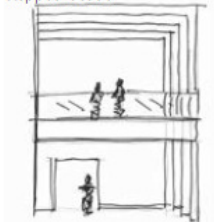
The created recess used as a balcony



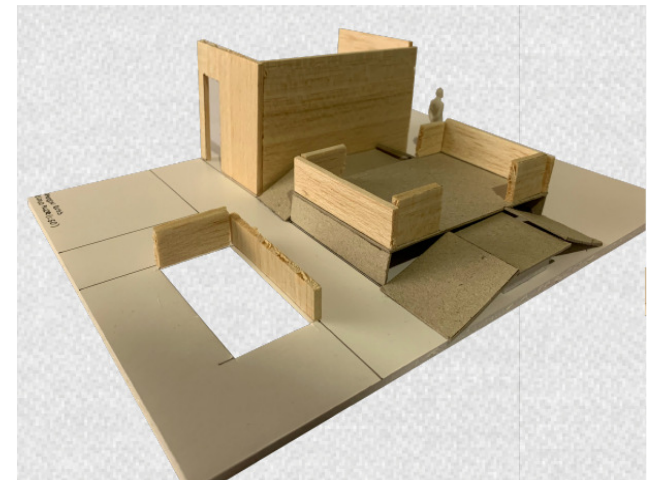
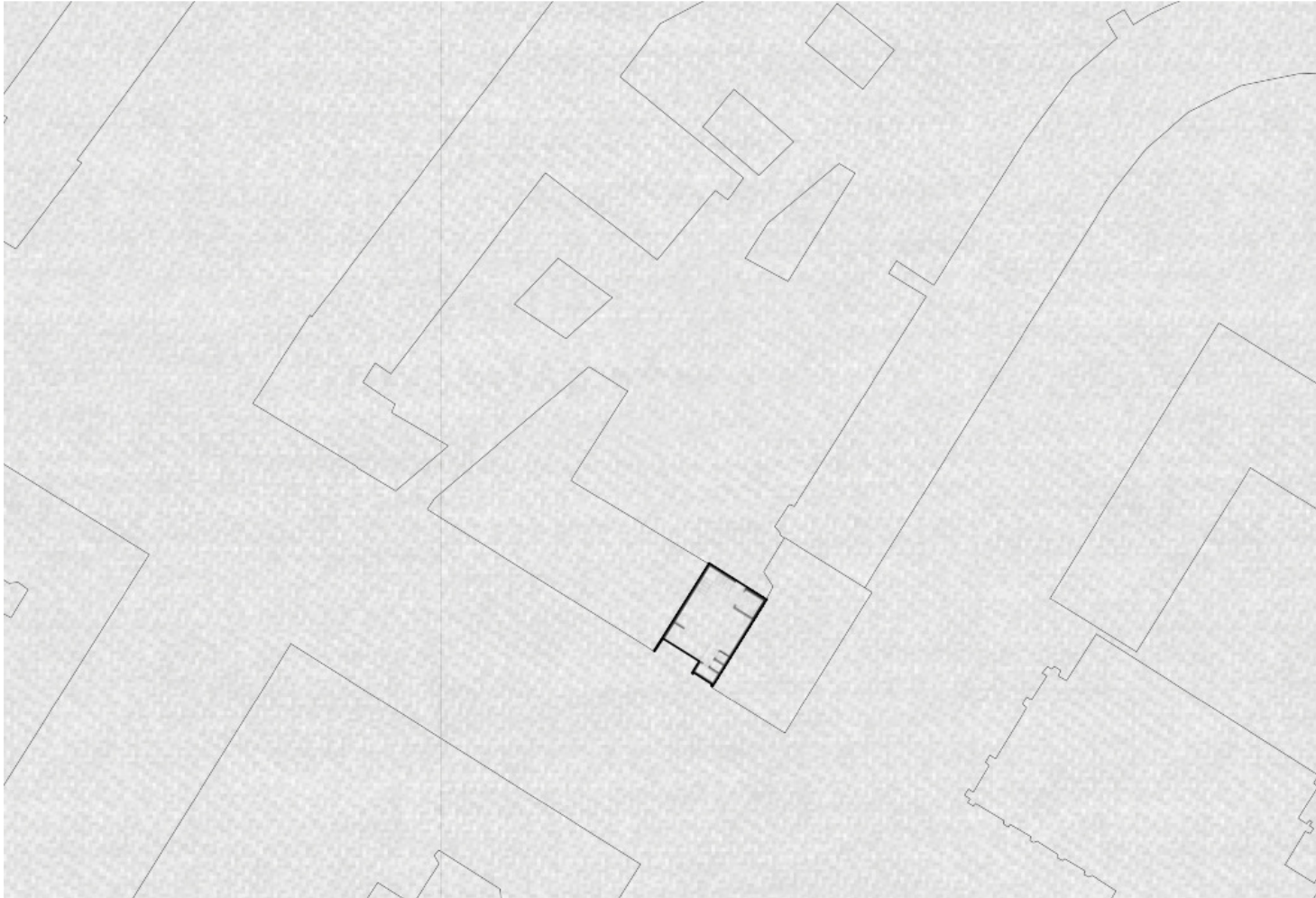
Multiple ideas come together



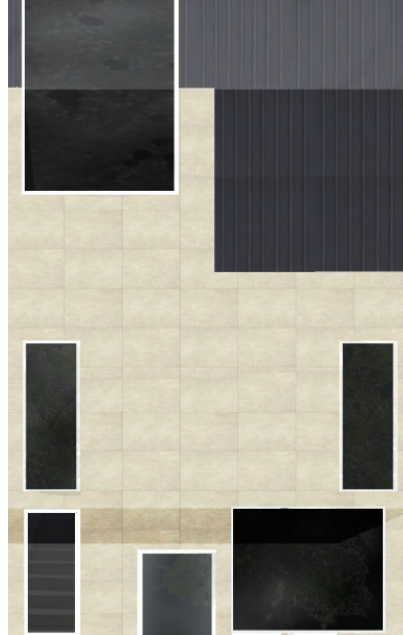
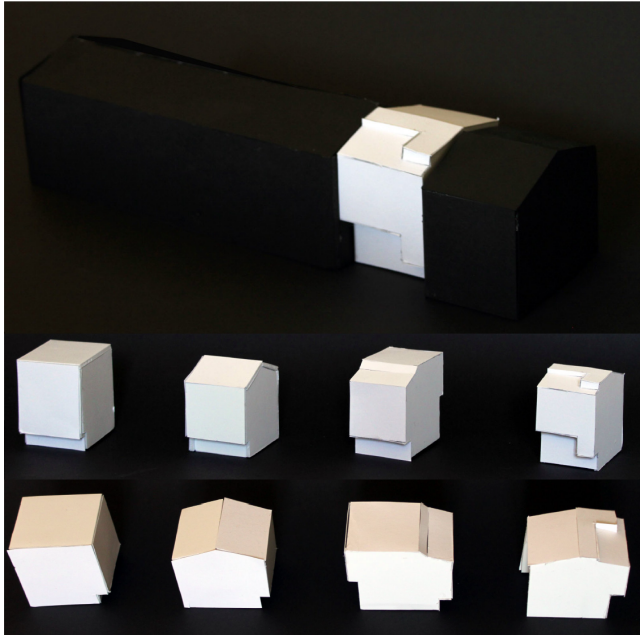
...Then refined



Cameron ROSS

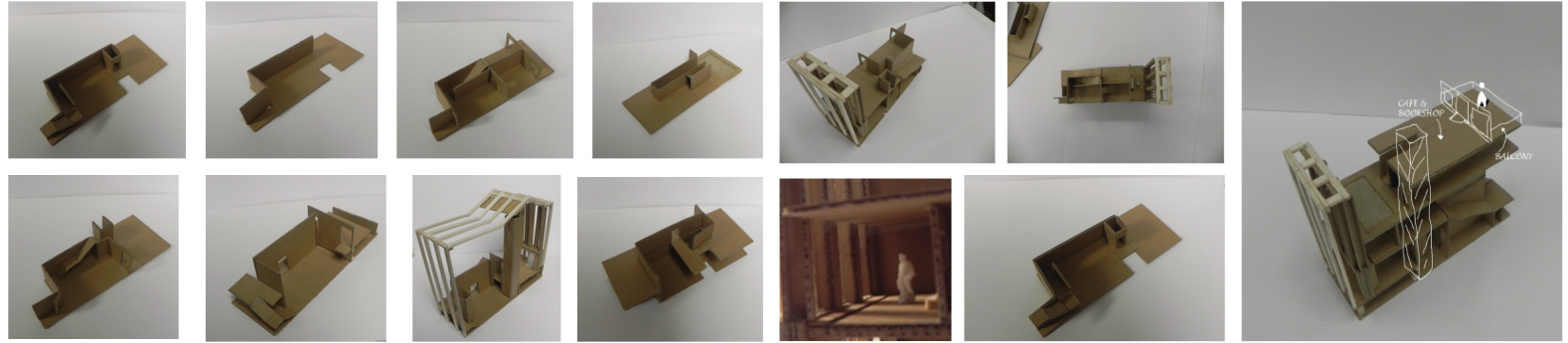
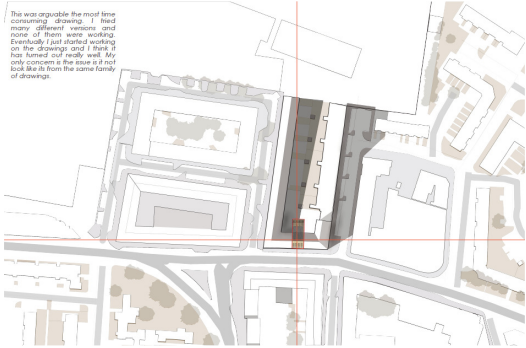


Wiktoria ROZEWSKA

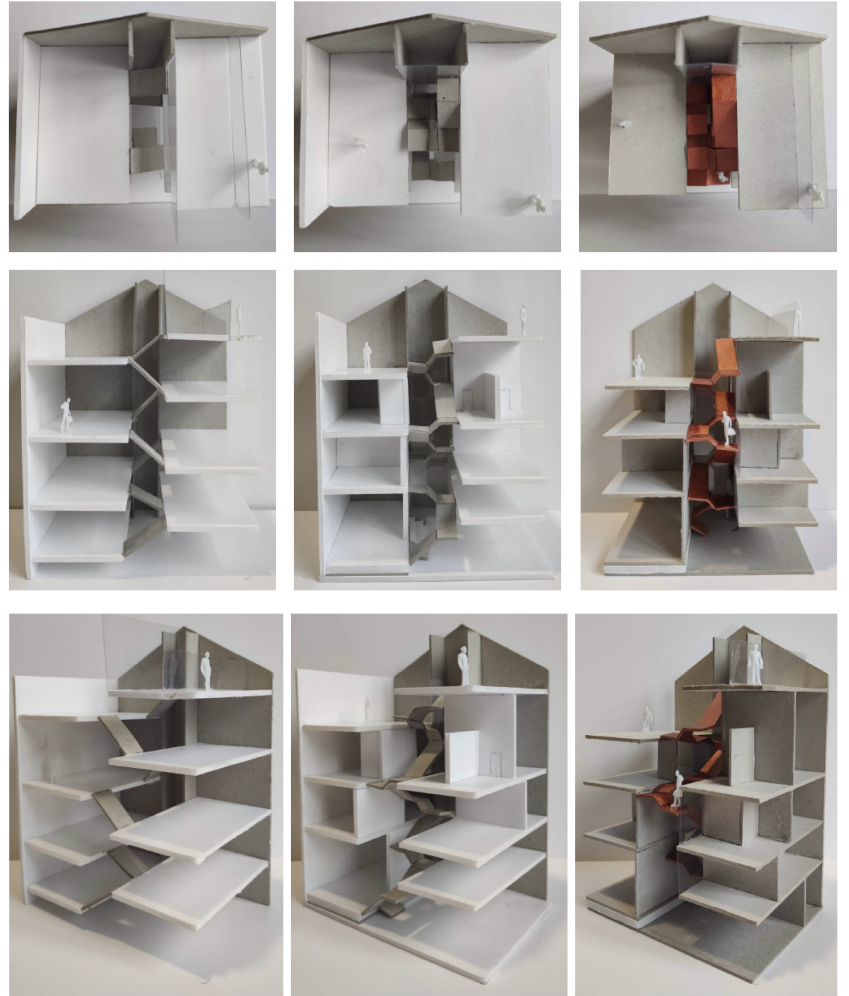
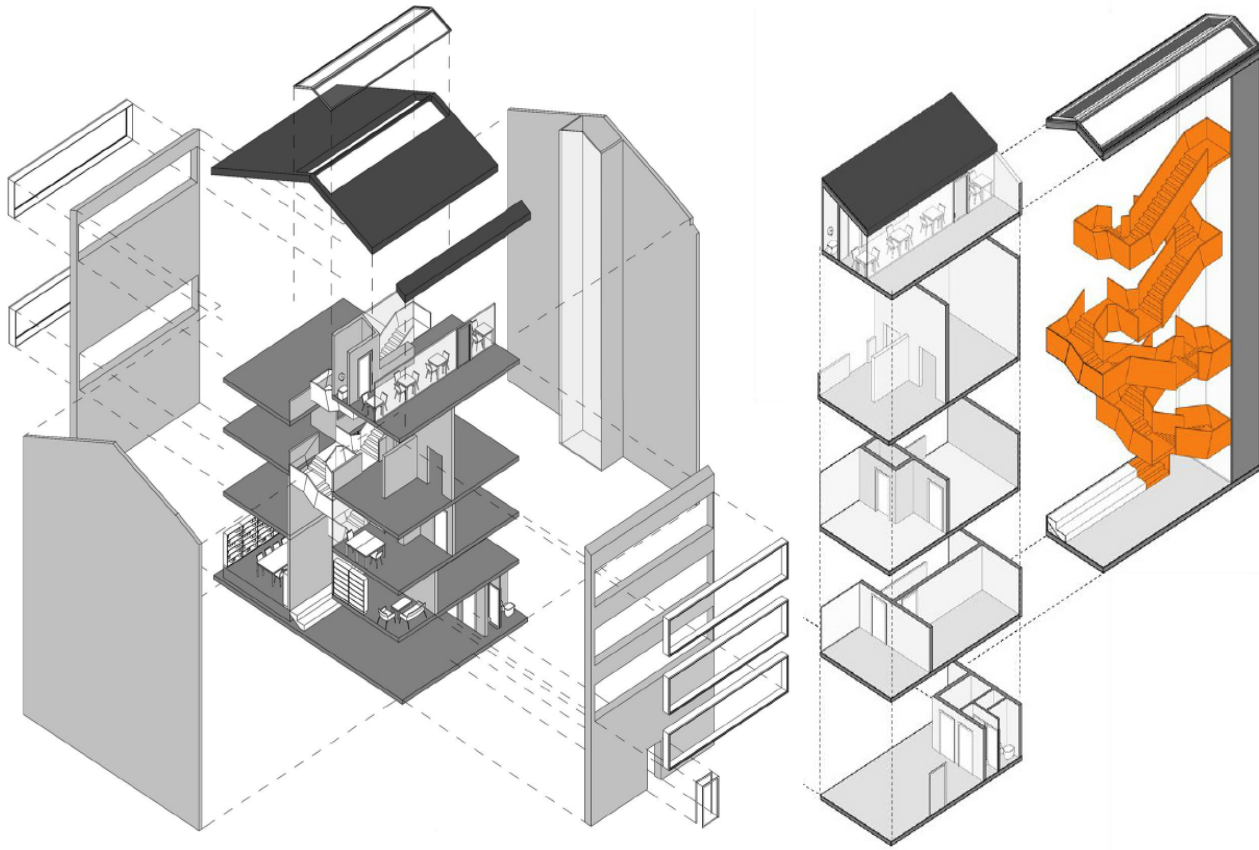


Struan MORRISON

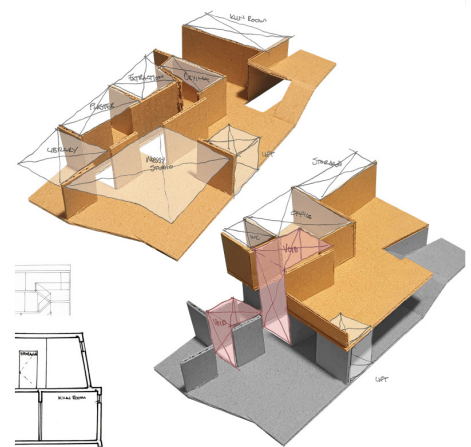
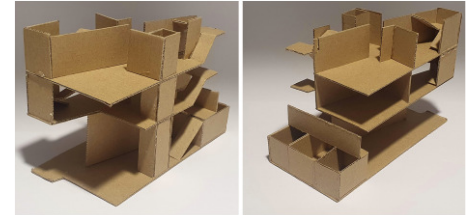
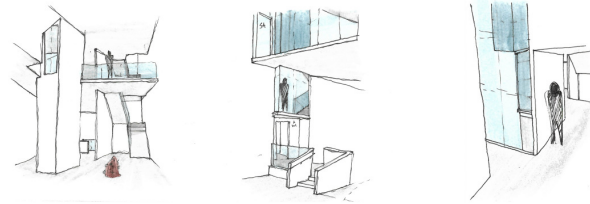
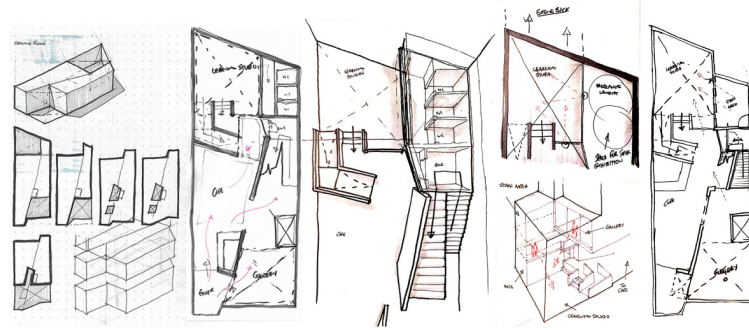
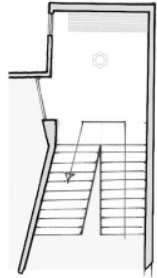
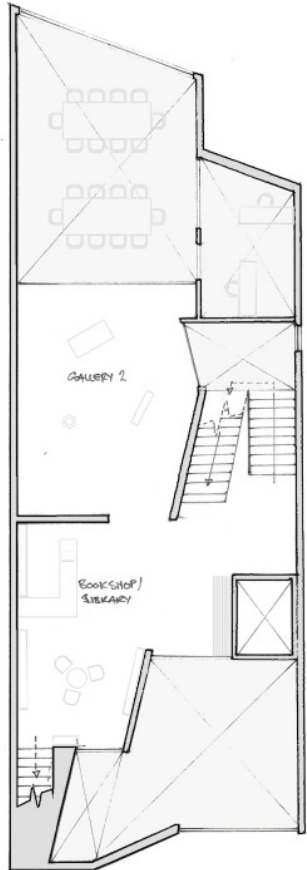
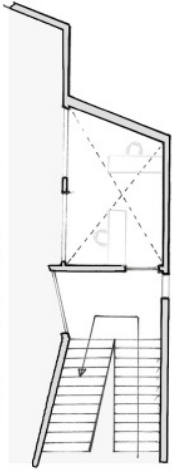
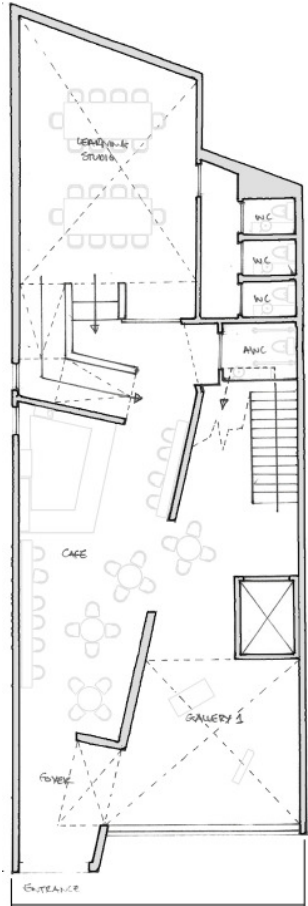
This was arguably the most time-consuming drawing. I tried many different versions and none of them were working. Eventually I just started working on the drawings and I think it has turned out really well. My only concern is the size as it not look like it from the same family of drawings.



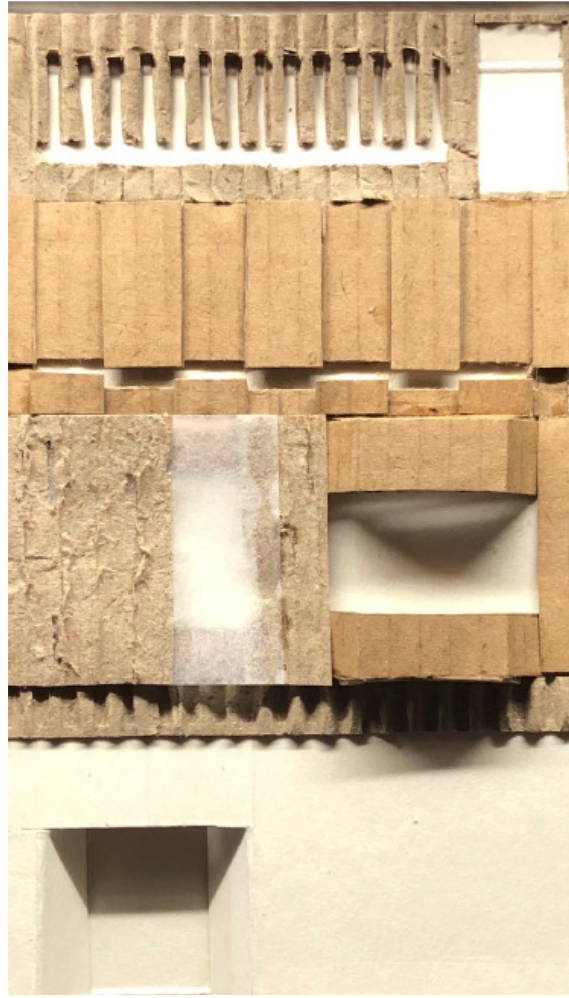
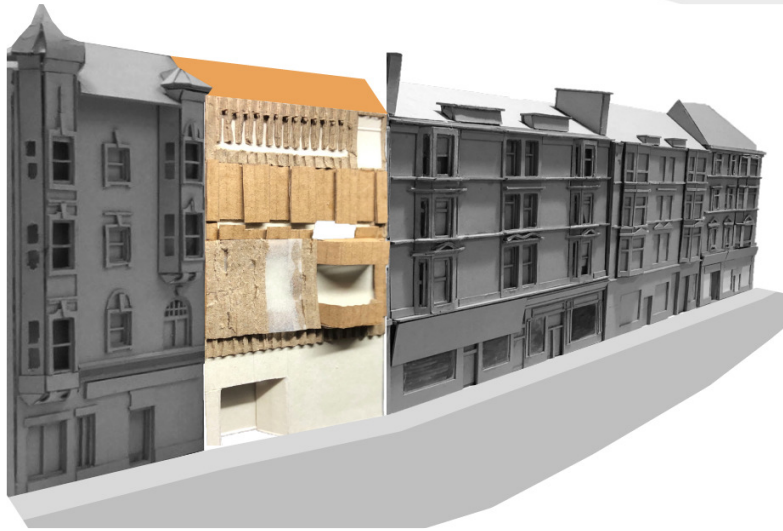
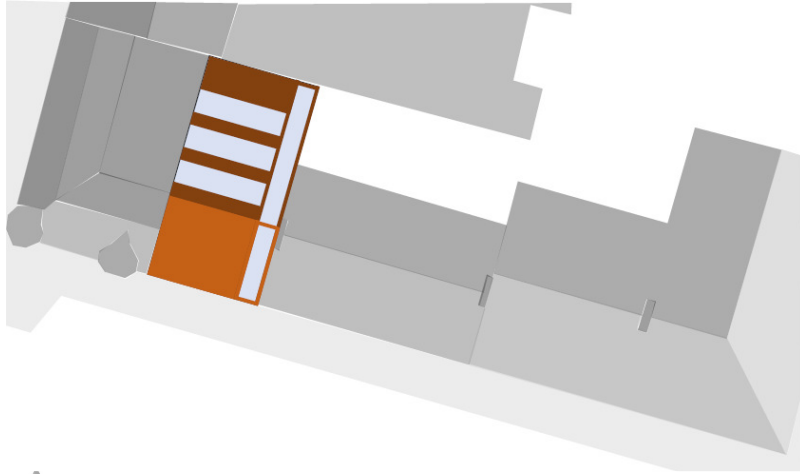
Eliza BICANE



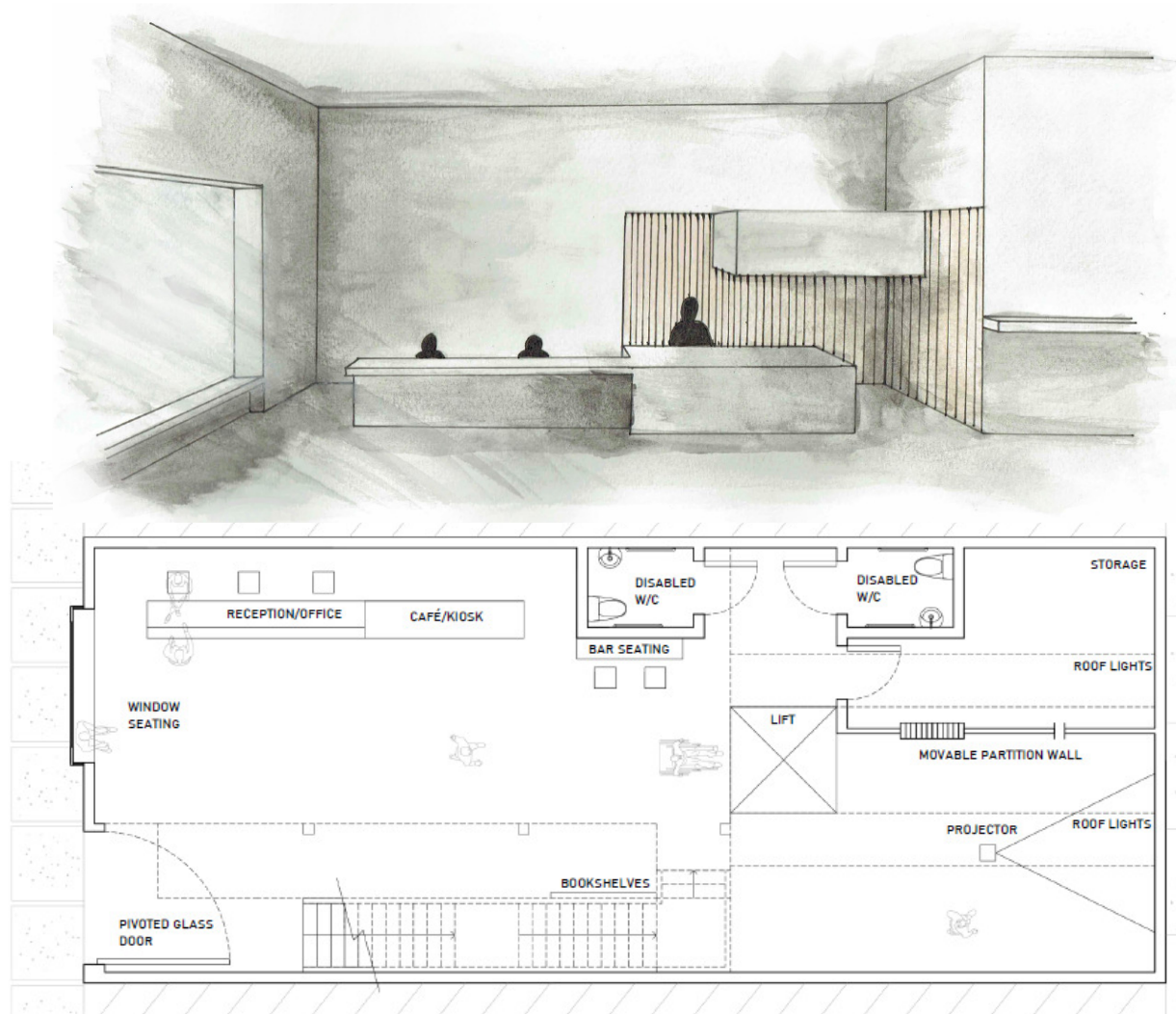
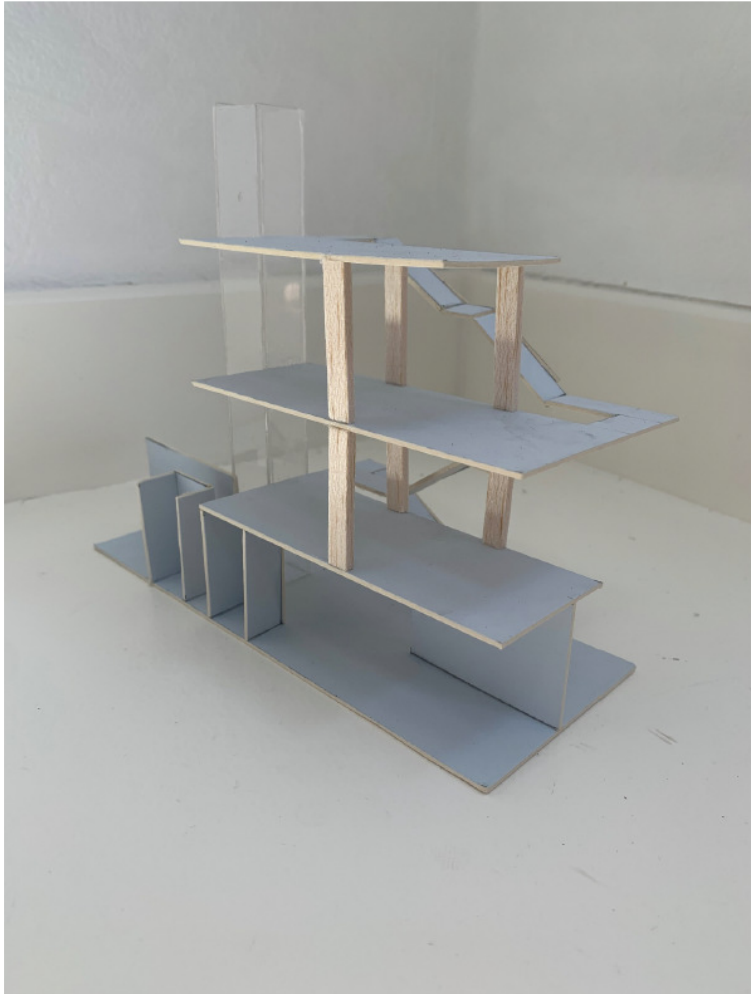
Cameron HEALY



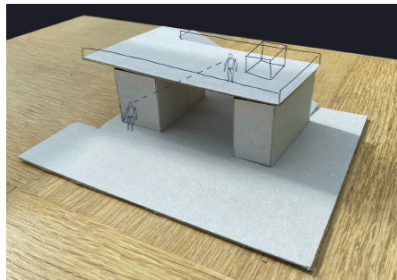
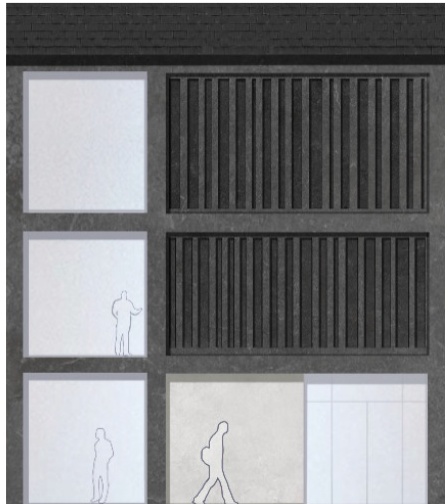
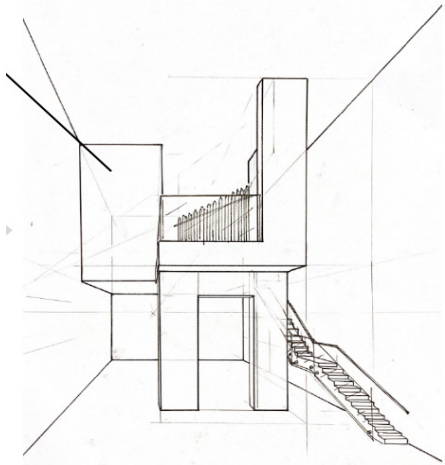
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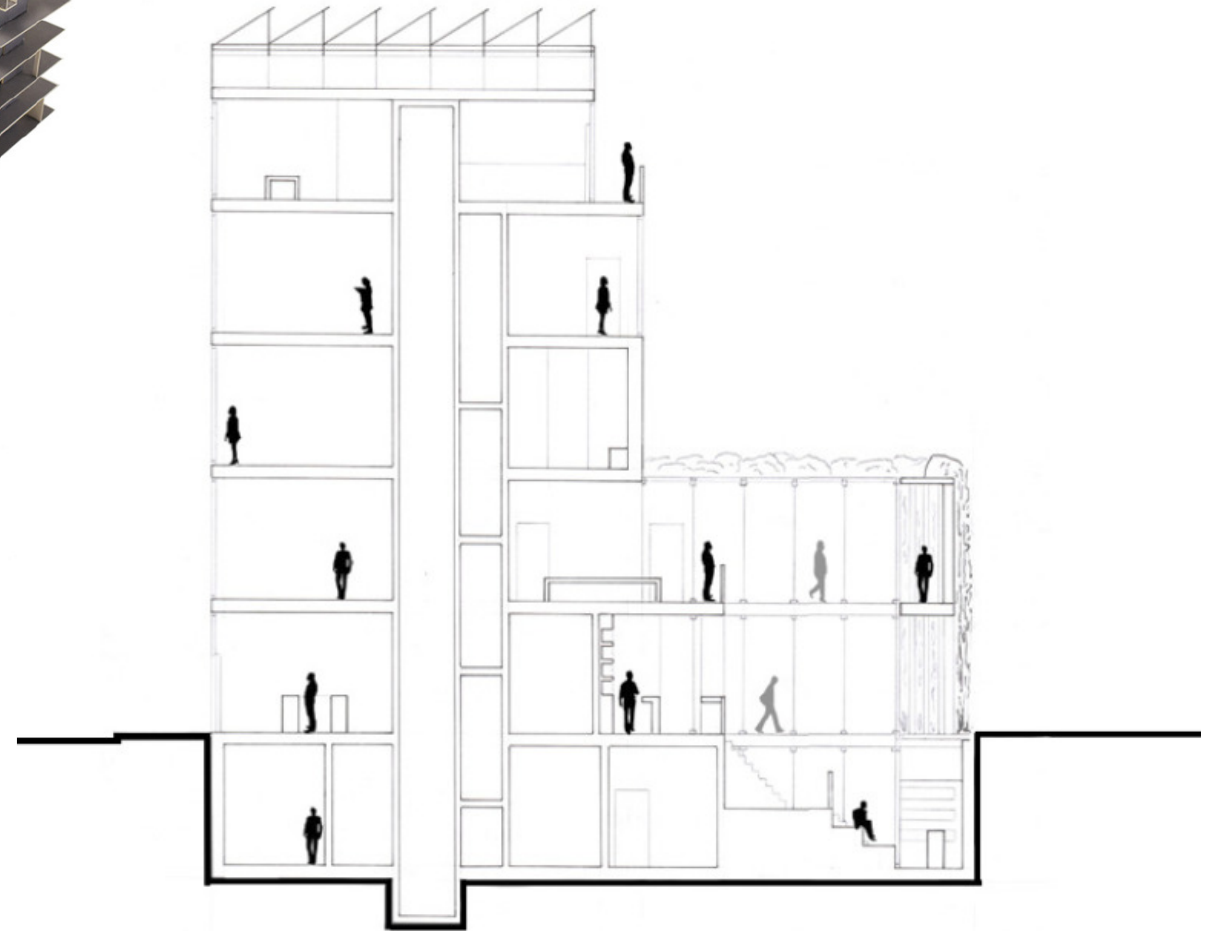
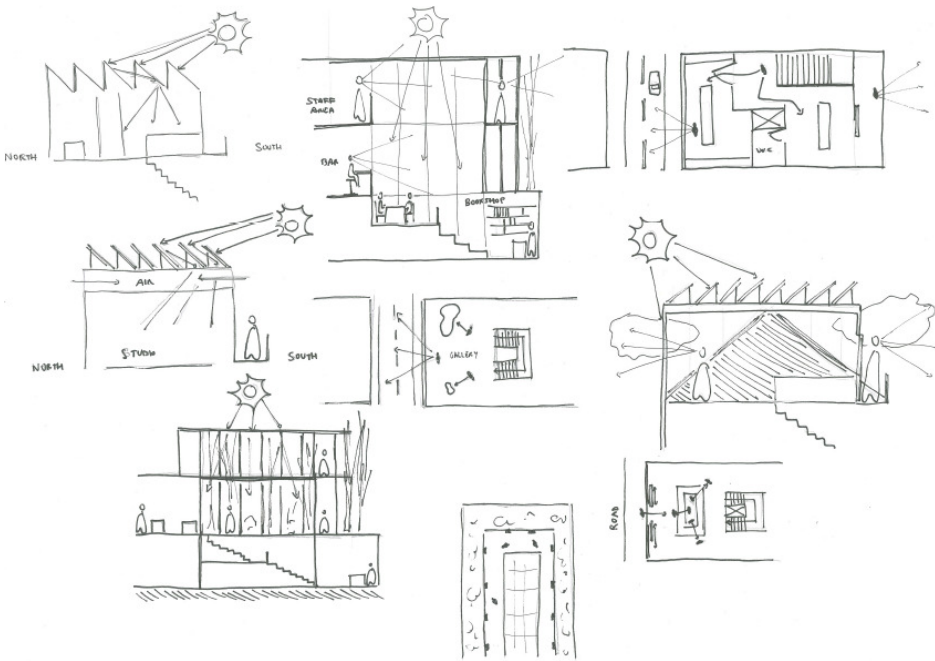
Taylor SWEDEN



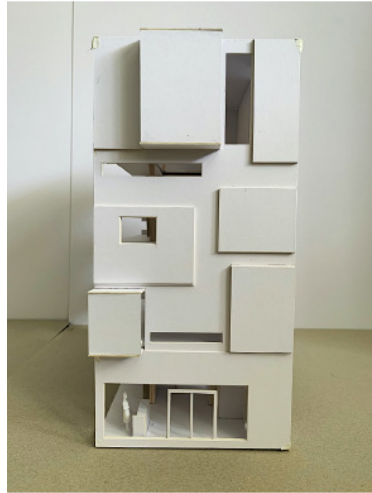
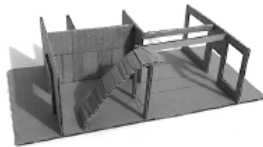
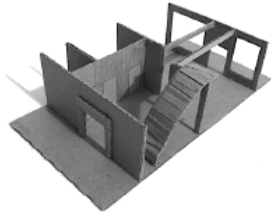
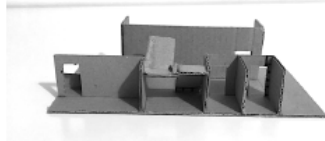
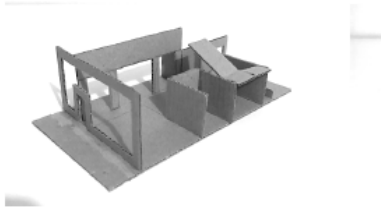
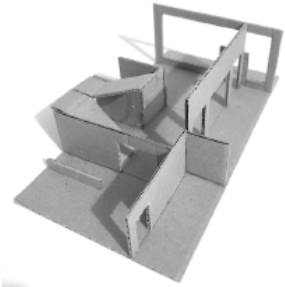
Alison STOBIE



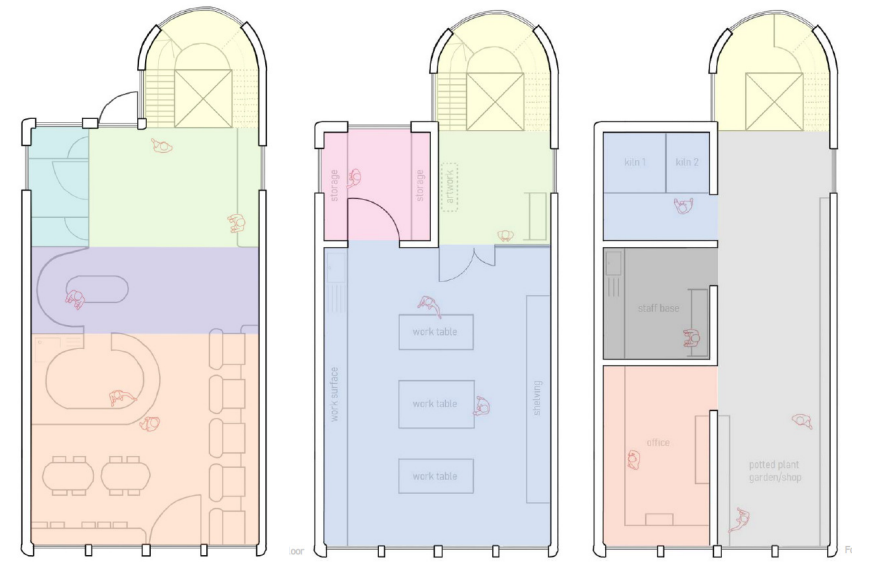
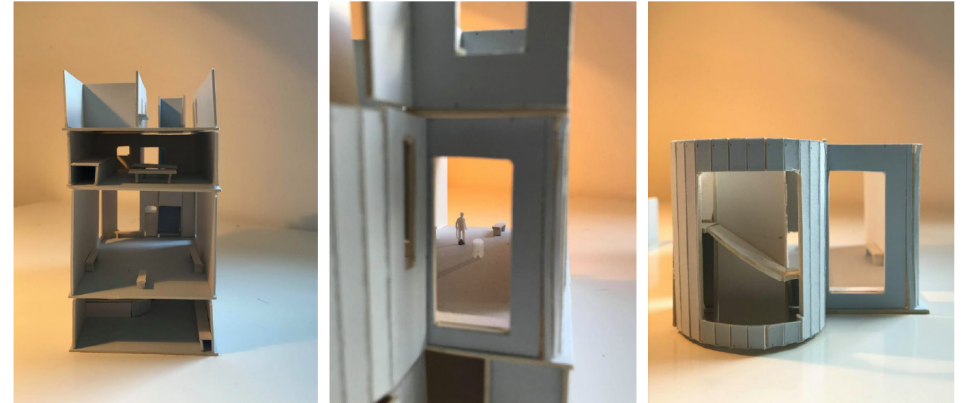
Seb NISOLI



Lewis McLynn



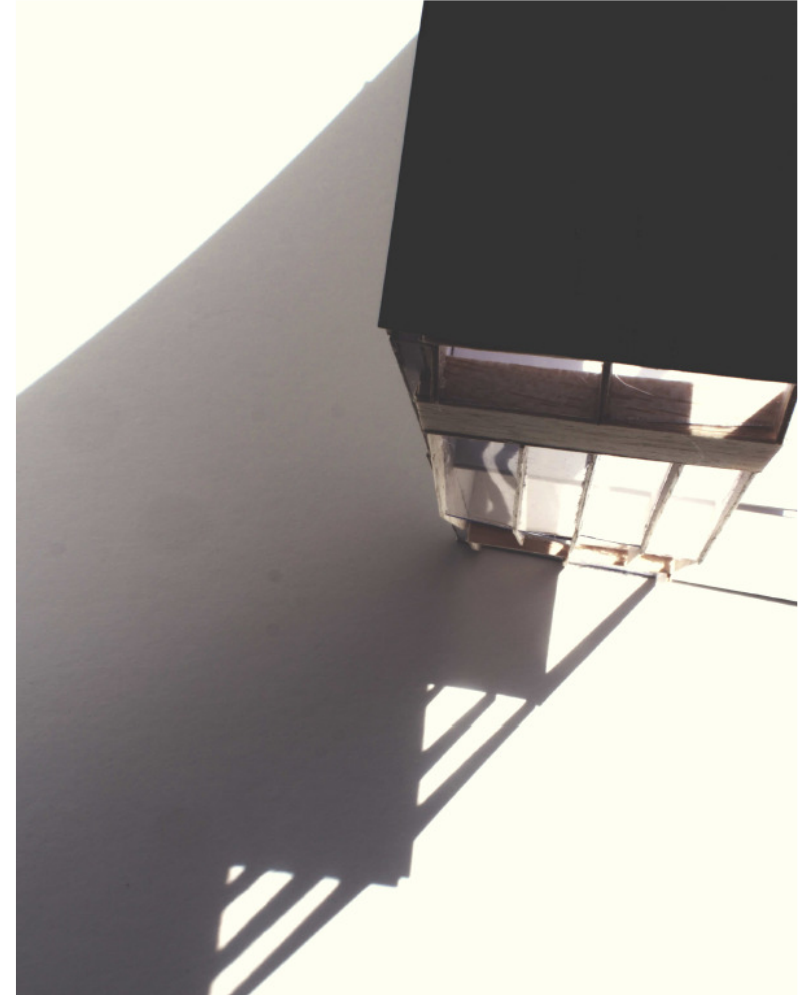
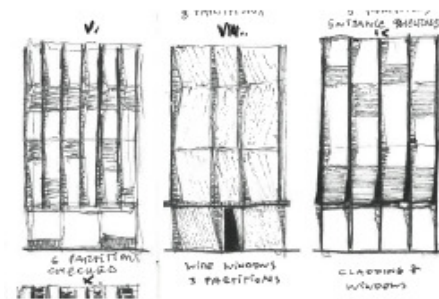
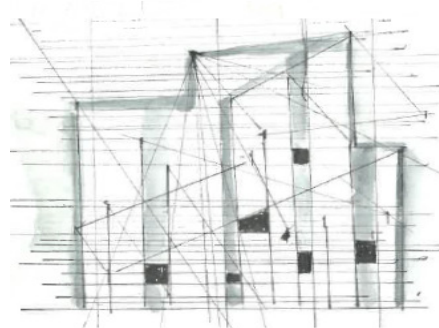
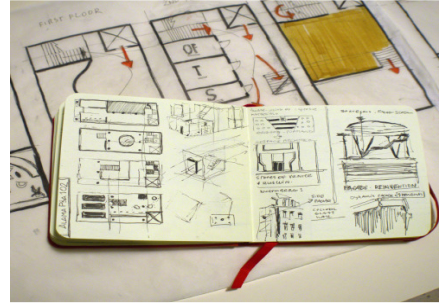
Eilidh McGUIGAN

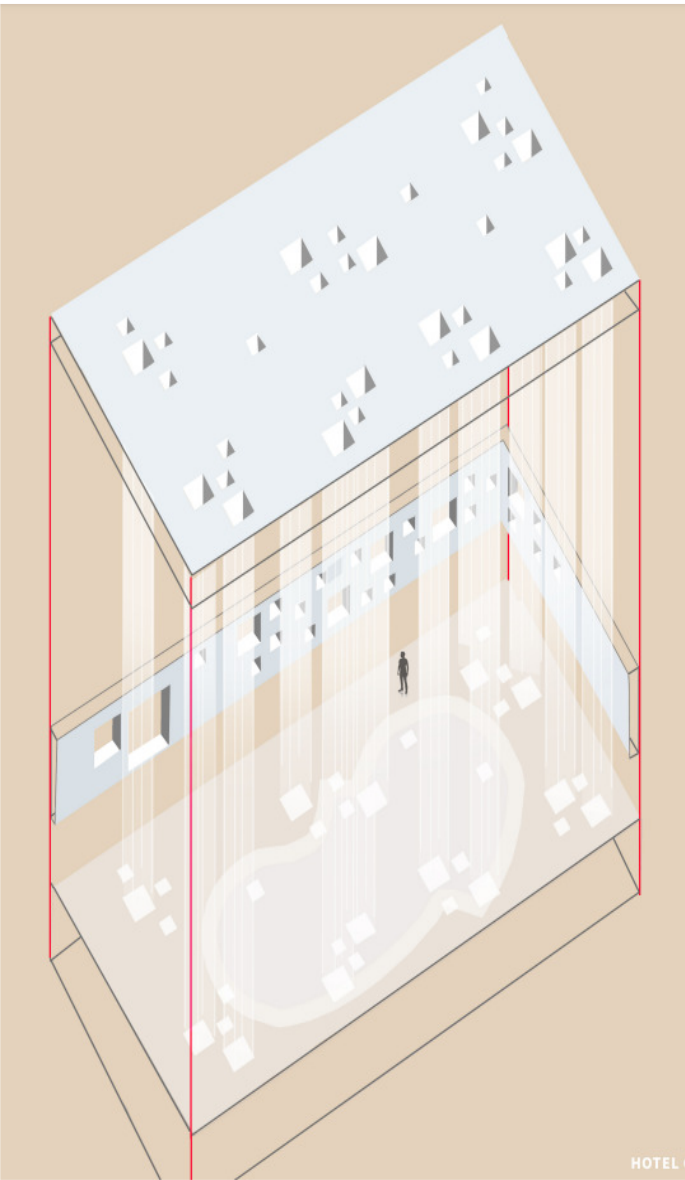


Oheneba **AGYEI-OKWA**

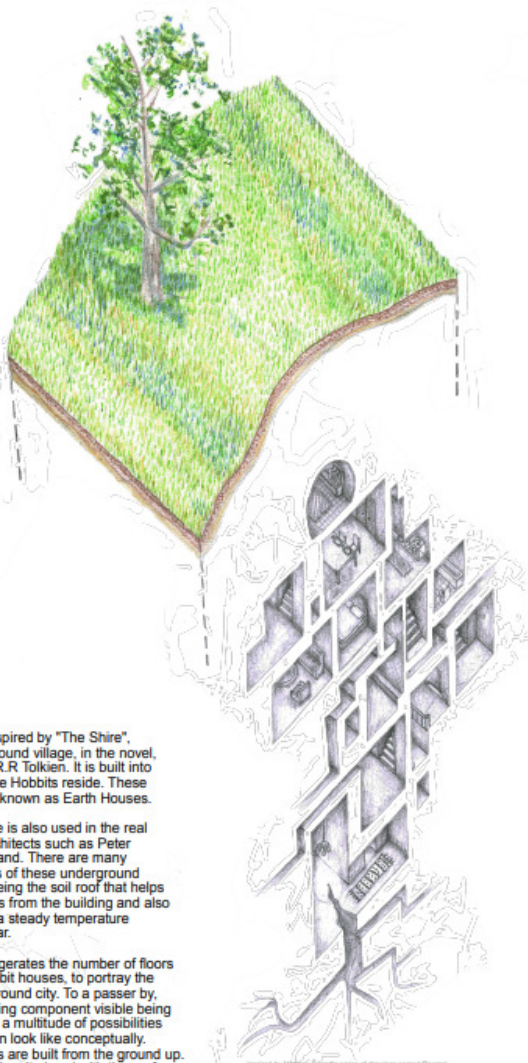


Milosz CWIKLINSKI





HOTEL



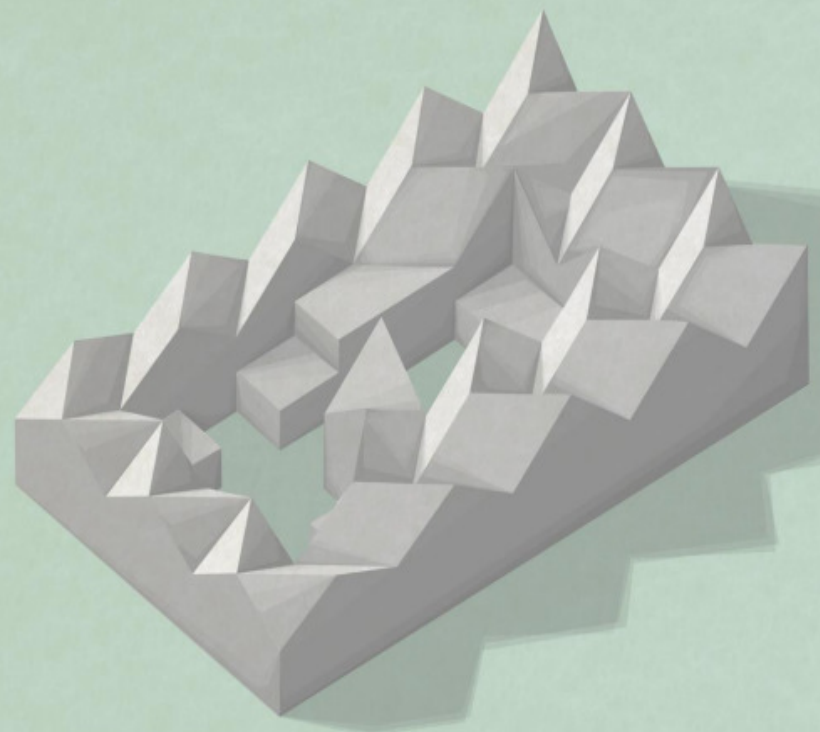
The Shire

This drawing is inspired by "The Shire", a fictional underground village, in the novel, "The Hobbit" by J.R.R Tolkien. It is built into a hillside where the Hobbits reside. These homes are widely known as Earth Houses.

This style of house is also used in the real world by many architects such as Peter Vetsch in Switzerland. There are many ecological benefits of these underground homes with one being the soil roof that helps to reduce heat loss from the building and also helps to maintain a steady temperature throughout the year.

The drawing exaggerates the number of floors actually in the hobbit houses, to portray the idea of an underground city. To a passer by, with the only building component visible being the roof, there are a multitude of possibilities that the interior can look like conceptually. Normally, buildings are built from the ground up. This idea is flipped on its head with the roof being at ground level. I believe this axonometric drawing epitomises that fundamentally roofs are used to protect the building and their inhabitants from the elements. This style of architecture takes inspiration from the very early times of the hunters and gatherers, when they resided in caves. This building uses nature to allow for minimal disruption to the landscape, whilst also incorporating modern architectural design and making use of advanced building techniques.

An Anatomy



Axonometric Drawing



West 10th Street, Greenwich Village, New York Rear Window

Alfred Hitchcock

My artworks depict the renowned Greenwich Village Courtyard which provides the set to the acclaimed film 'Rear Window (1954)' directed by the genius Sir Alfred Joseph Hitchcock KBE.

The film is set in Greenwich Village, New York, and the entire film takes place in the photographer L.B. Jeffries's apartment (James Stewart), where, confined to his wheelchair due to a leg fracture, he sits at his rear window and observes the goings on of his neighbours through their own windows in a brownstone apartment block across the courtyard. In this film, Jeffries's attention is drawn to the apartment of Mr Thorwald who – at least in Jeffries's interpretation of a series of events – he suspects has murdered his wife.

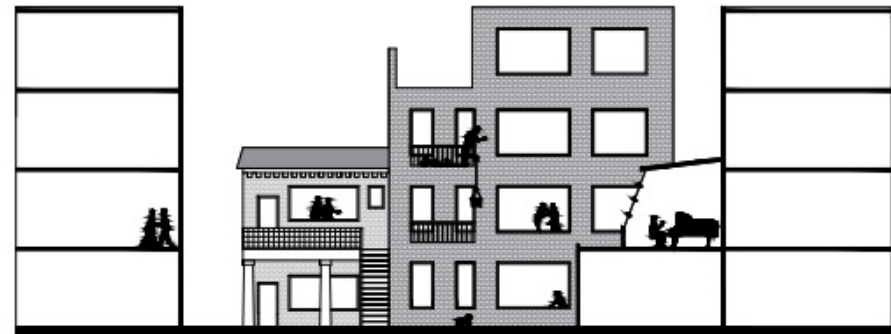
In this film, the architecture of the window resembles a camera obscura on an urban scale with each window providing a portal to the lives of the inhabitants within. Hitchcock's depiction of Greenwich Village shows a colourful metropolitan universe wherein the neighbouring inhabitants coexist – while in close quarters – as strangers. However, the film's characters not only exist within their own interiors but also have windows that open to the world and allow others to derive their opinions of them.

While this film is an extreme and undeniably disturbing example of how windows act as gateways to the most intimate parts of our lives it is still a poignant reminder that windows provide the transition from the cover of an urban exterior to the seclusion of an interior.

It is also important to acknowledge that while gazing out of any window and fabricating uninformed judgements about others based on small flashes of their lives through the glass of windows and gauze of curtains others can be doing the exact same to you.

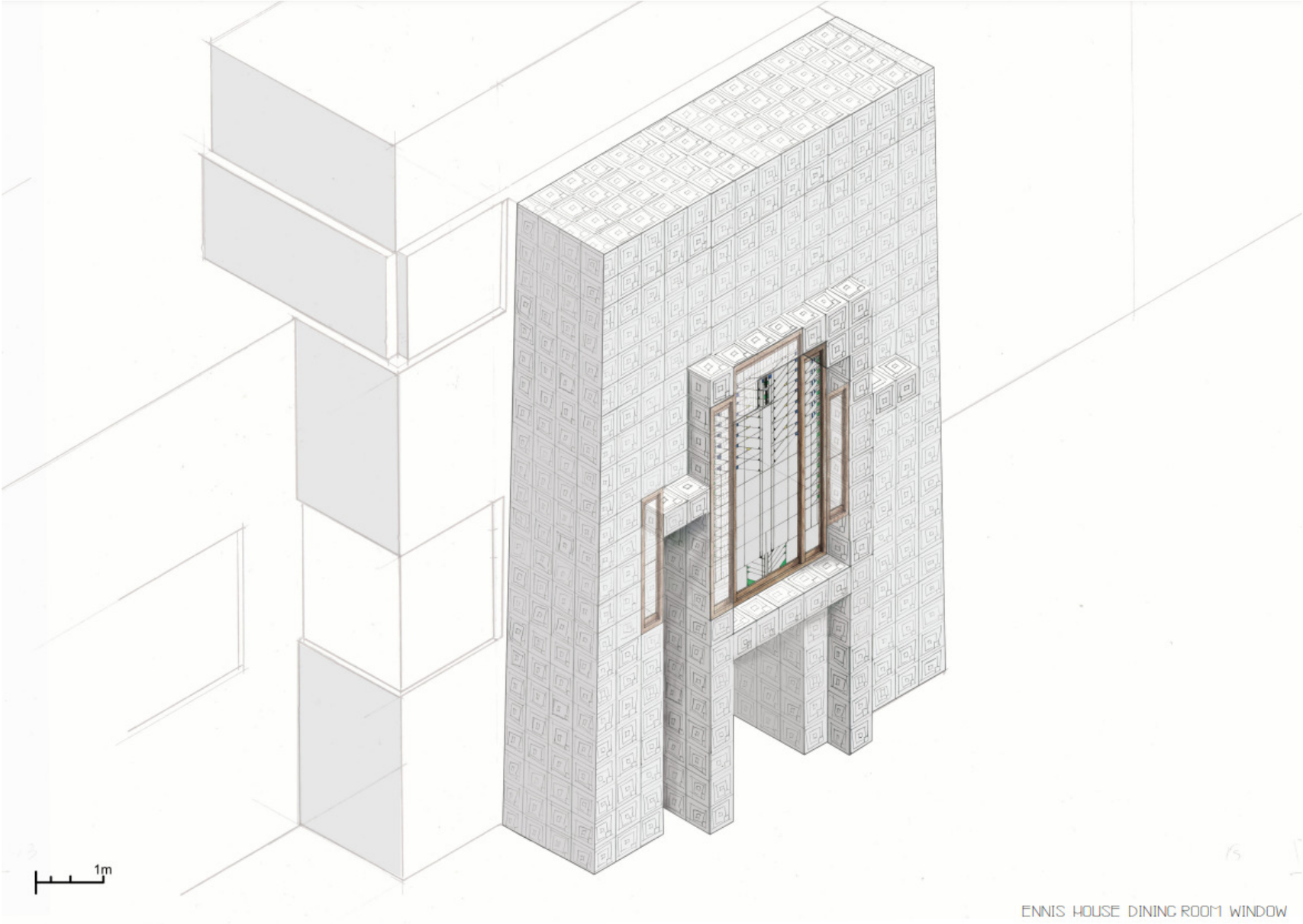
This links back to the film's key theme, and in my opinion, what makes it such a successful thriller, the tension between watching and being watched.

– Emily Wilson



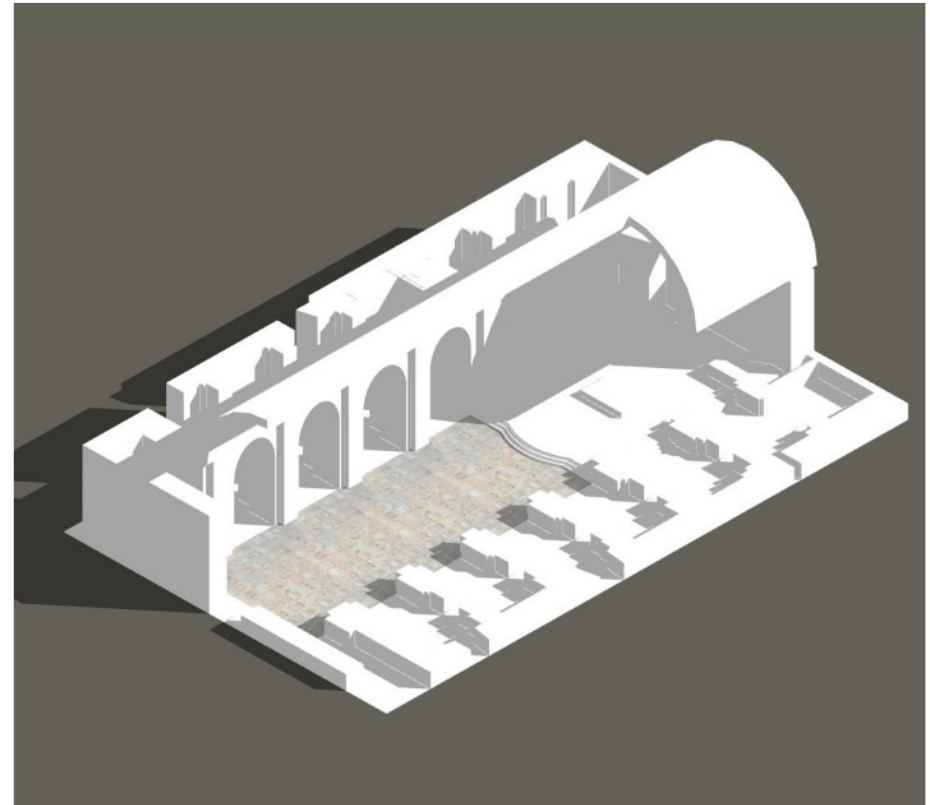
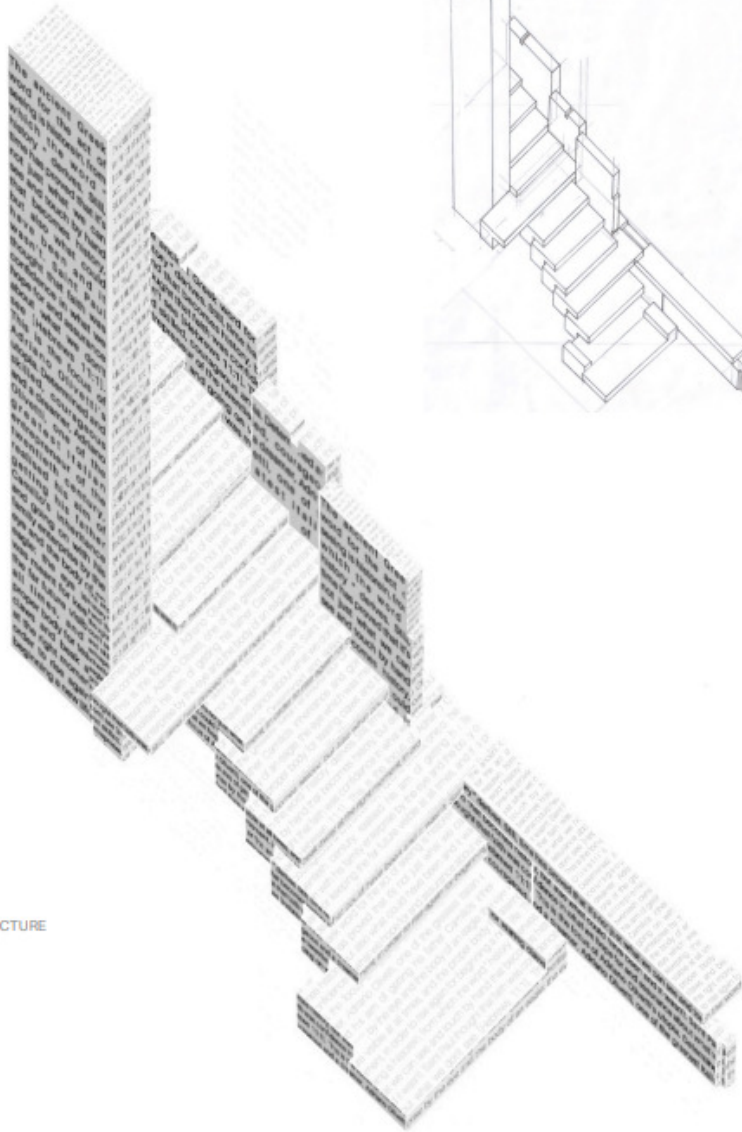
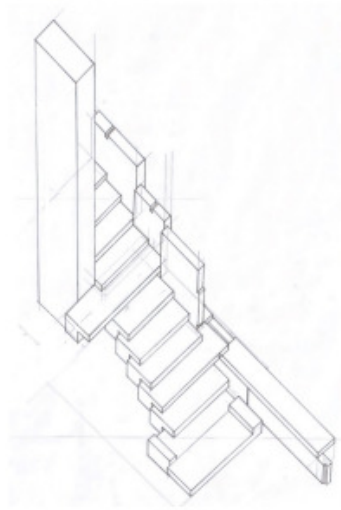
Simplified Section Drawing

An Anatomy



ENNIS HOUSE DINING ROOM WINDOW

An Anatomy



'OLIVETTI SHOWROOM' STAIRCASE,
CARLO SCARPA,
VENICE, 1957

AN ANATOMY OF ARCHITECTURE
ALISON STOBIE
CULTURAL STUDIES 1B
AB110

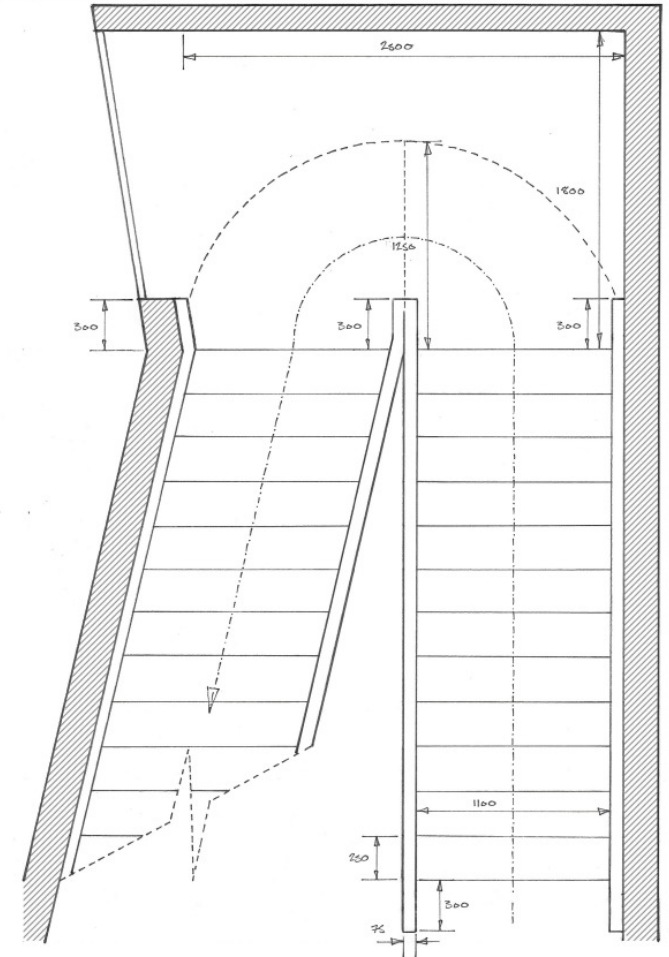
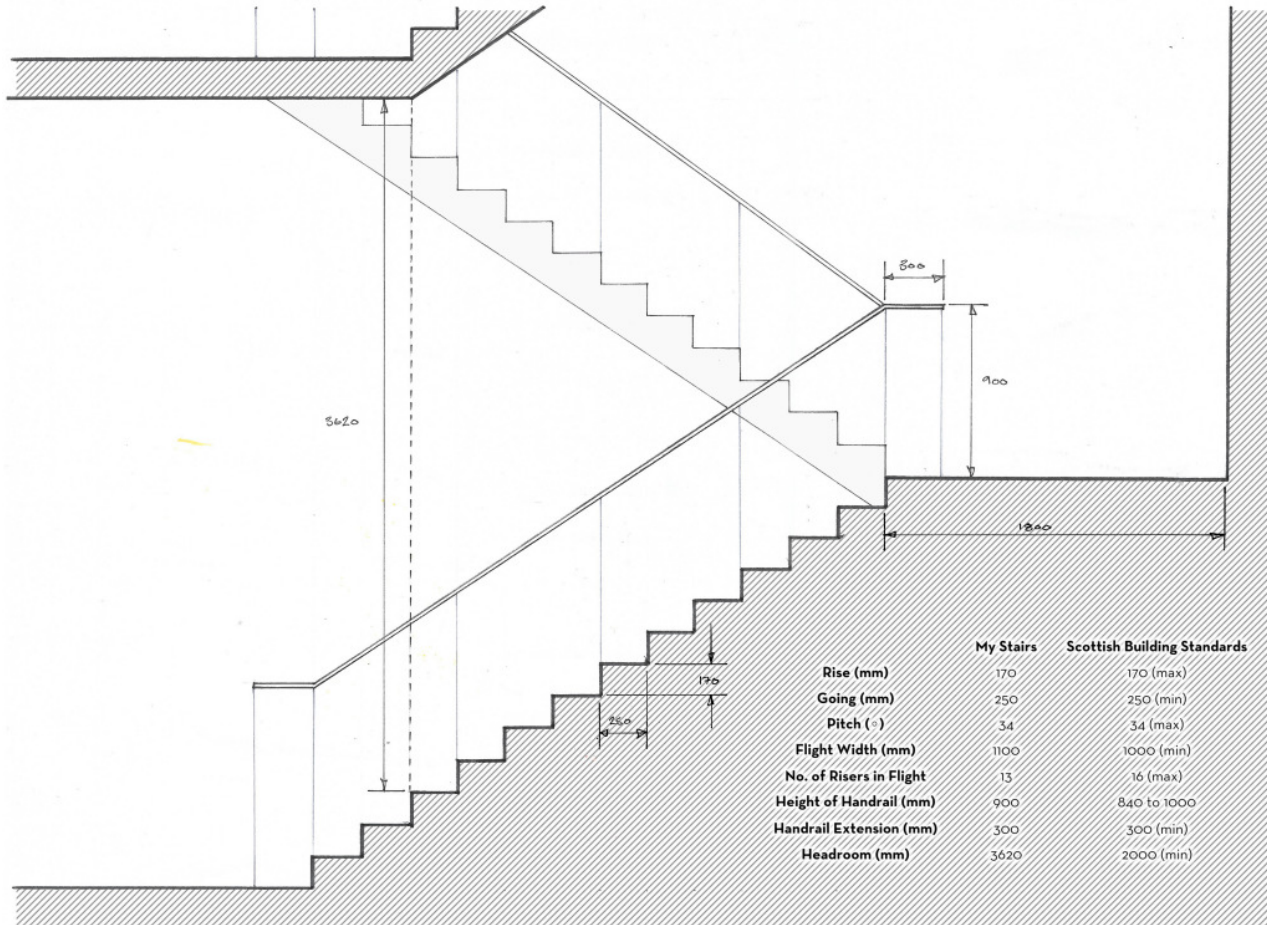
An Anatomy



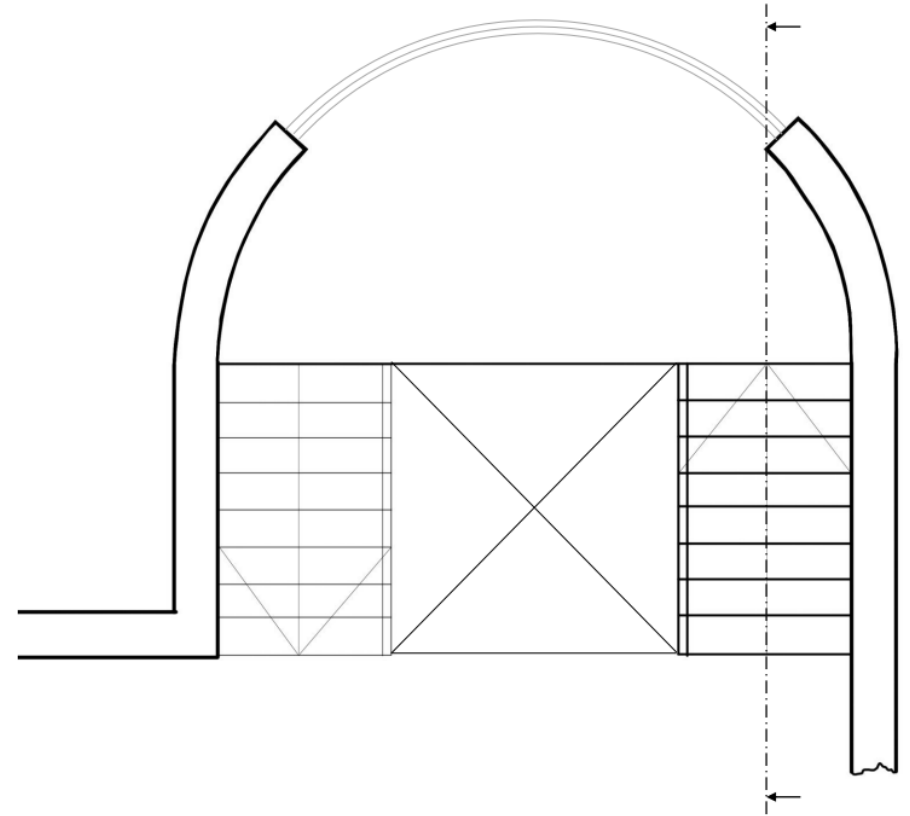
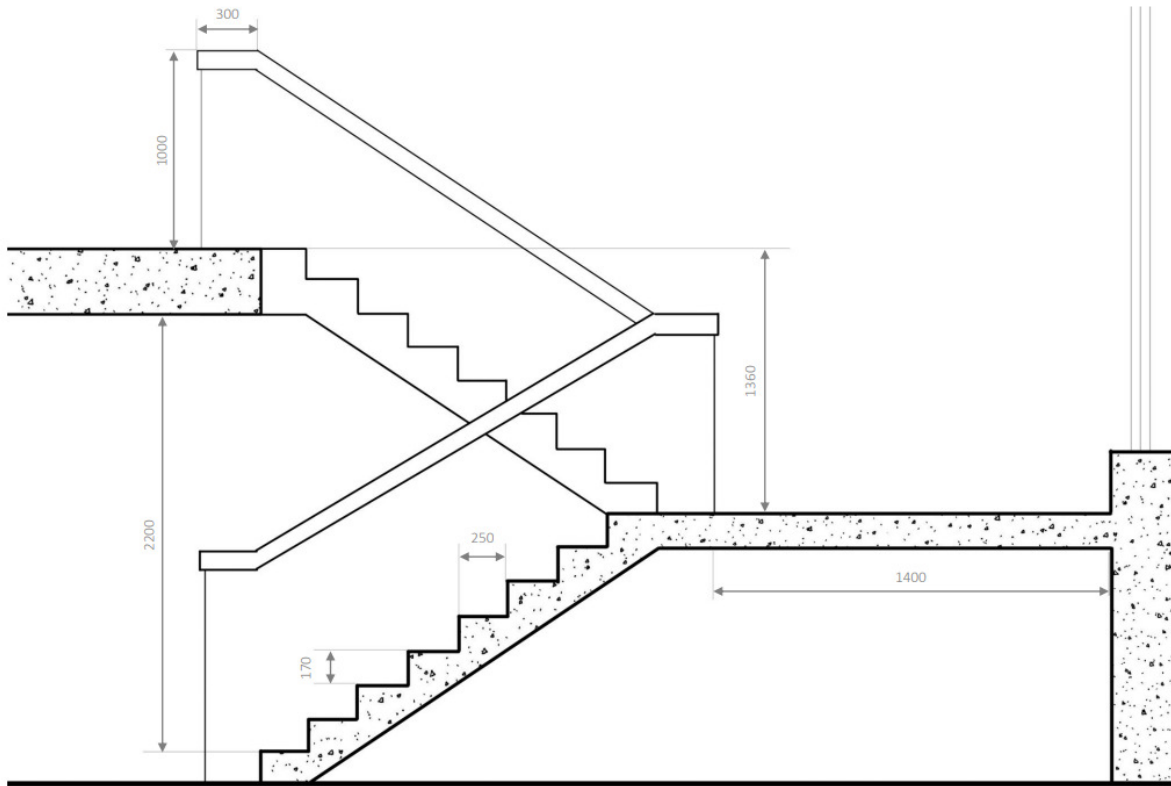
CS1b: New York Fire Escape

The New York fire-escapes are one of the key features that make NY so iconic. These chunky building accessories were stapled to the many facades of the City after a reform in building-code, but now, it is near impossible to imagine The Big Apple without these make-shift iron patios pulling life onto the streets, creating the evocative urban landscape that we all know today.

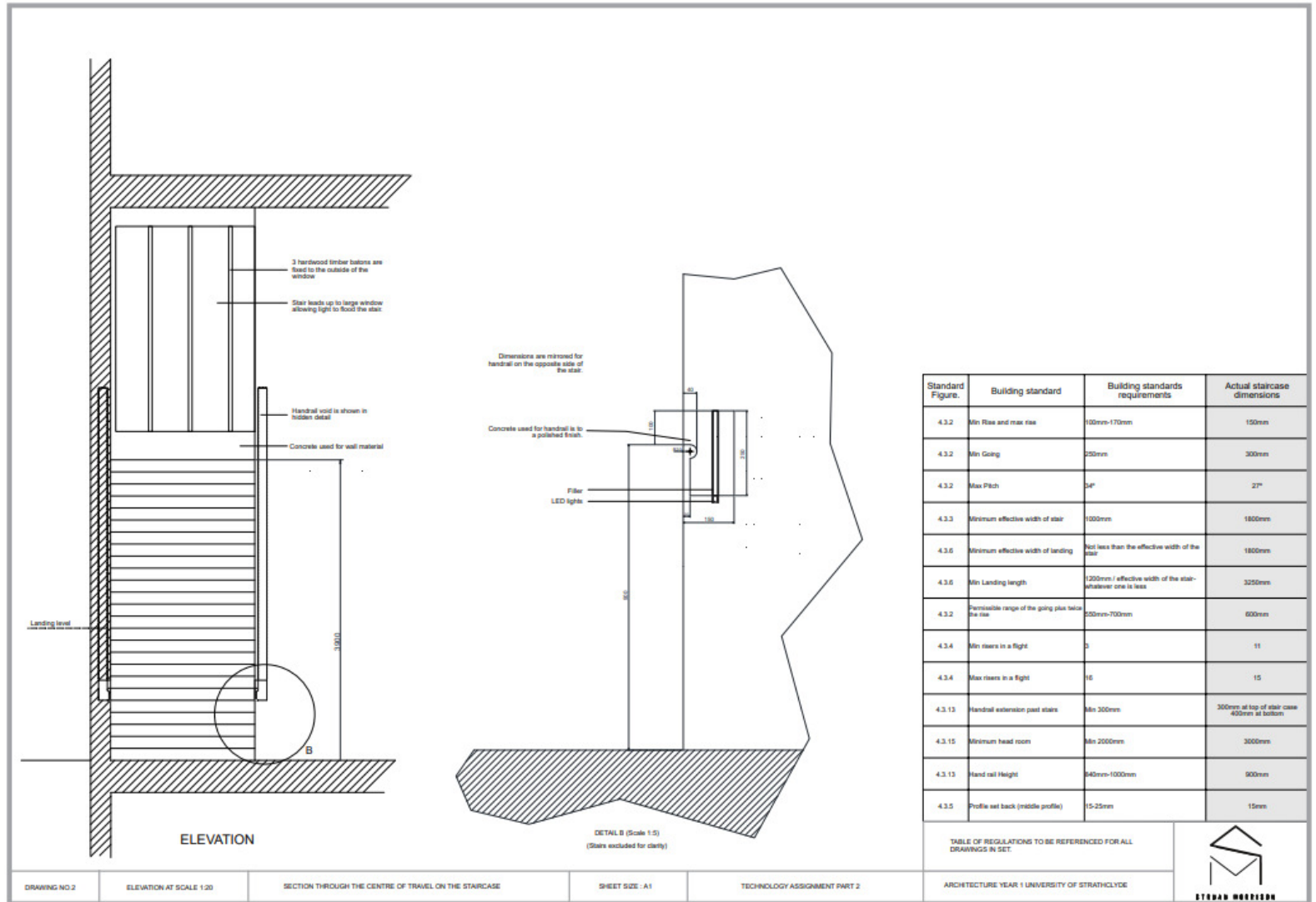
An Anatomy



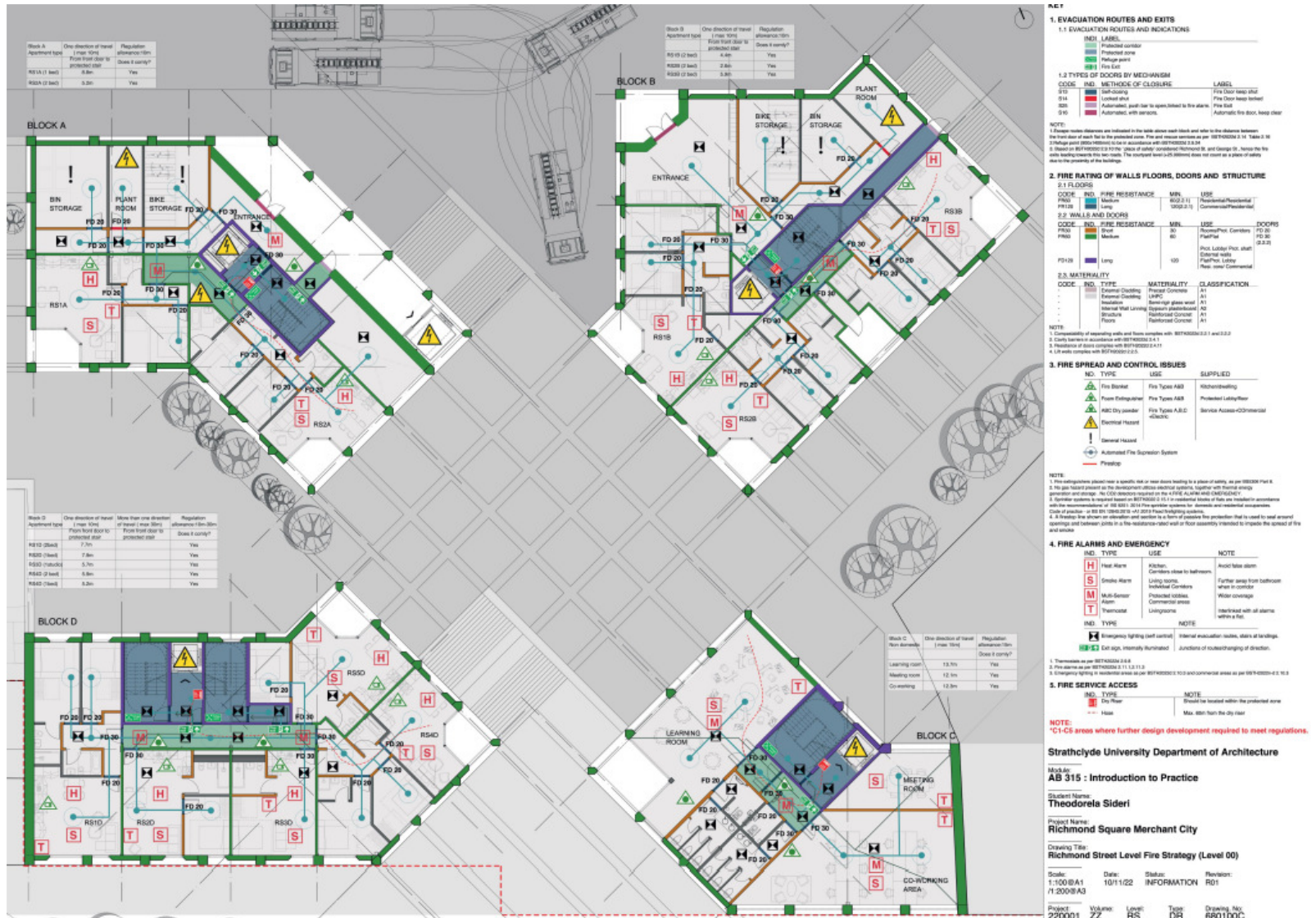
An Anatomy



An Anatomy

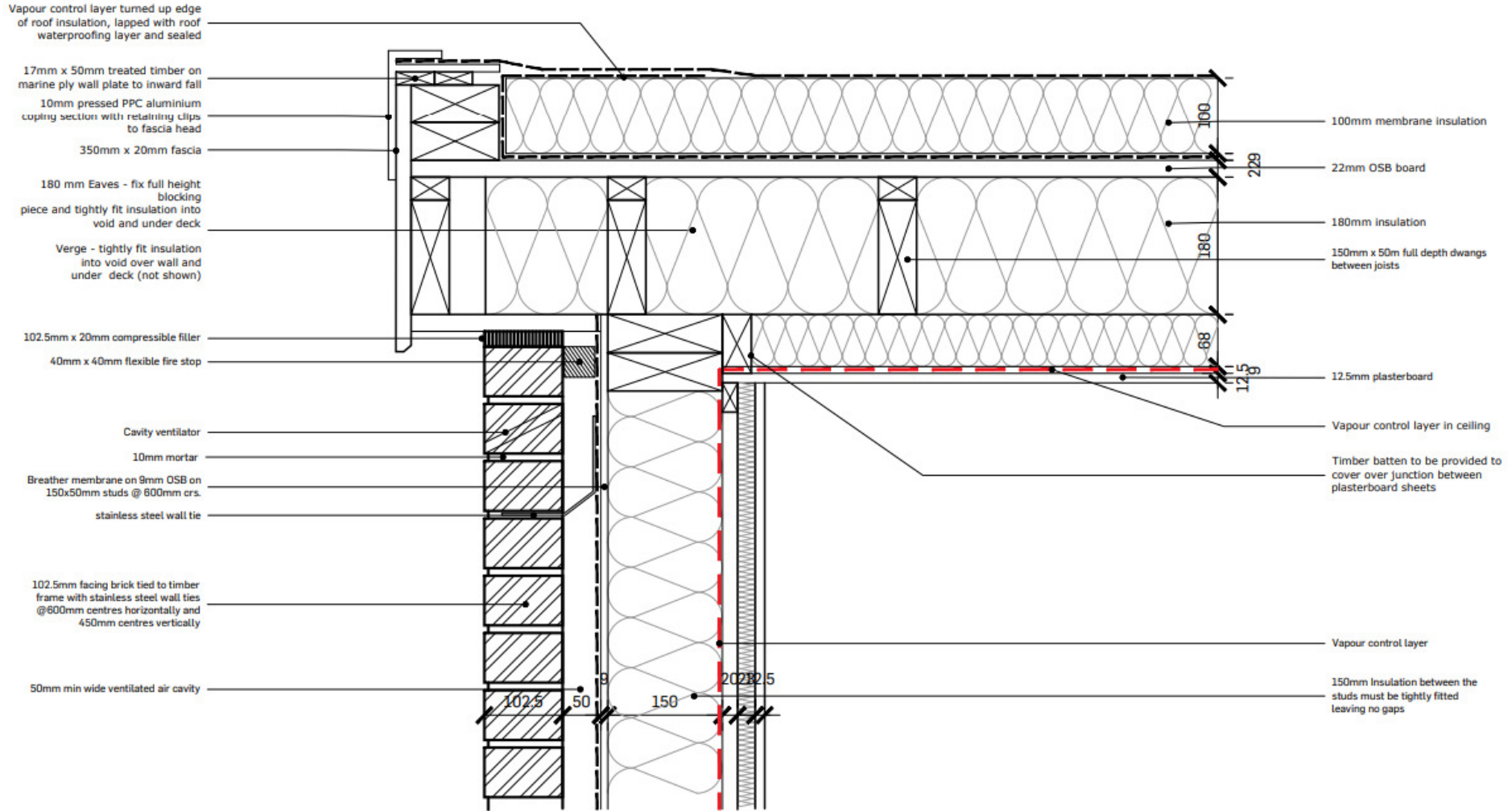


Year 3 Fire Strategy



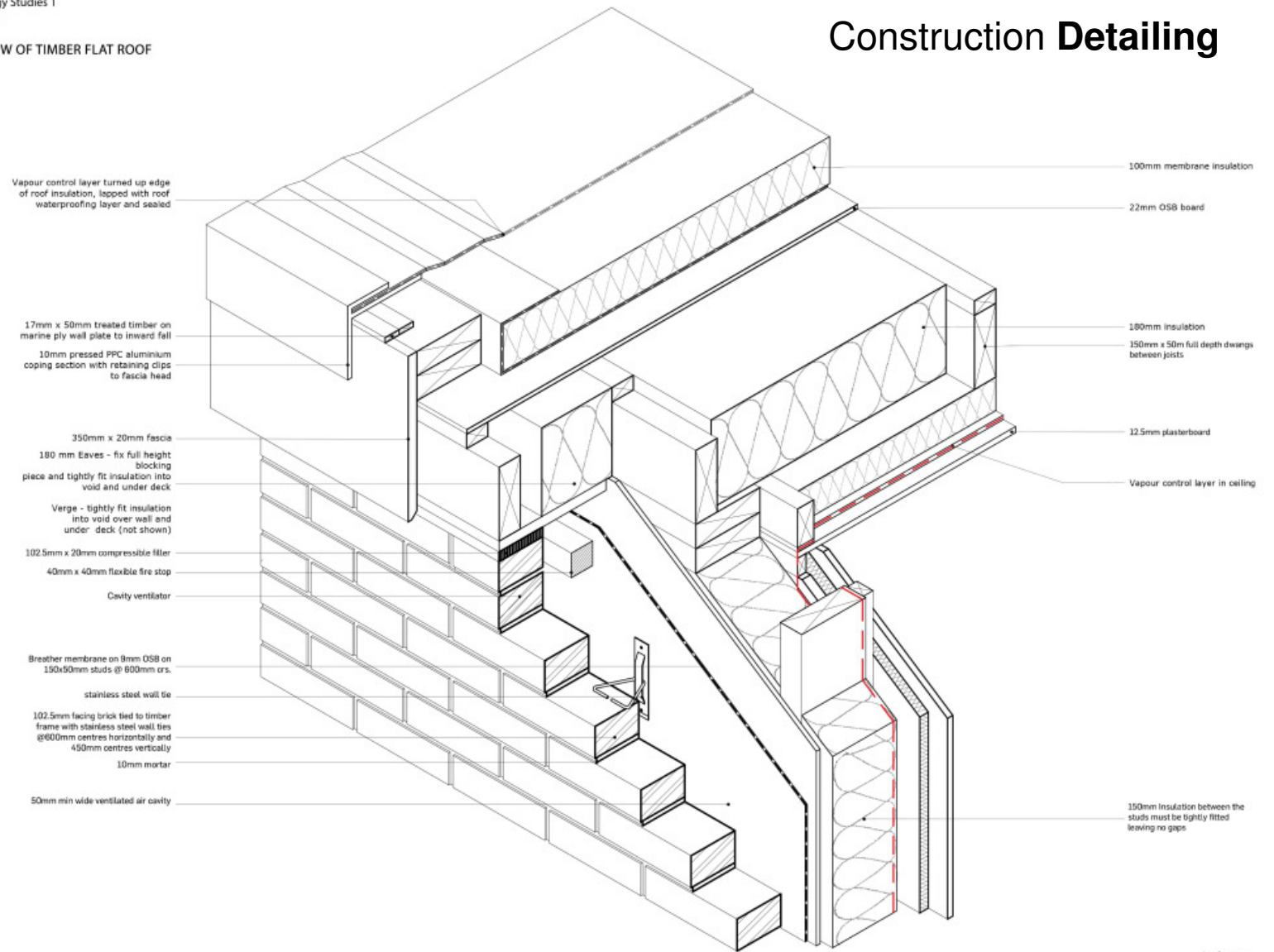
TIMBER FLAT ROOF

Construction Detailing

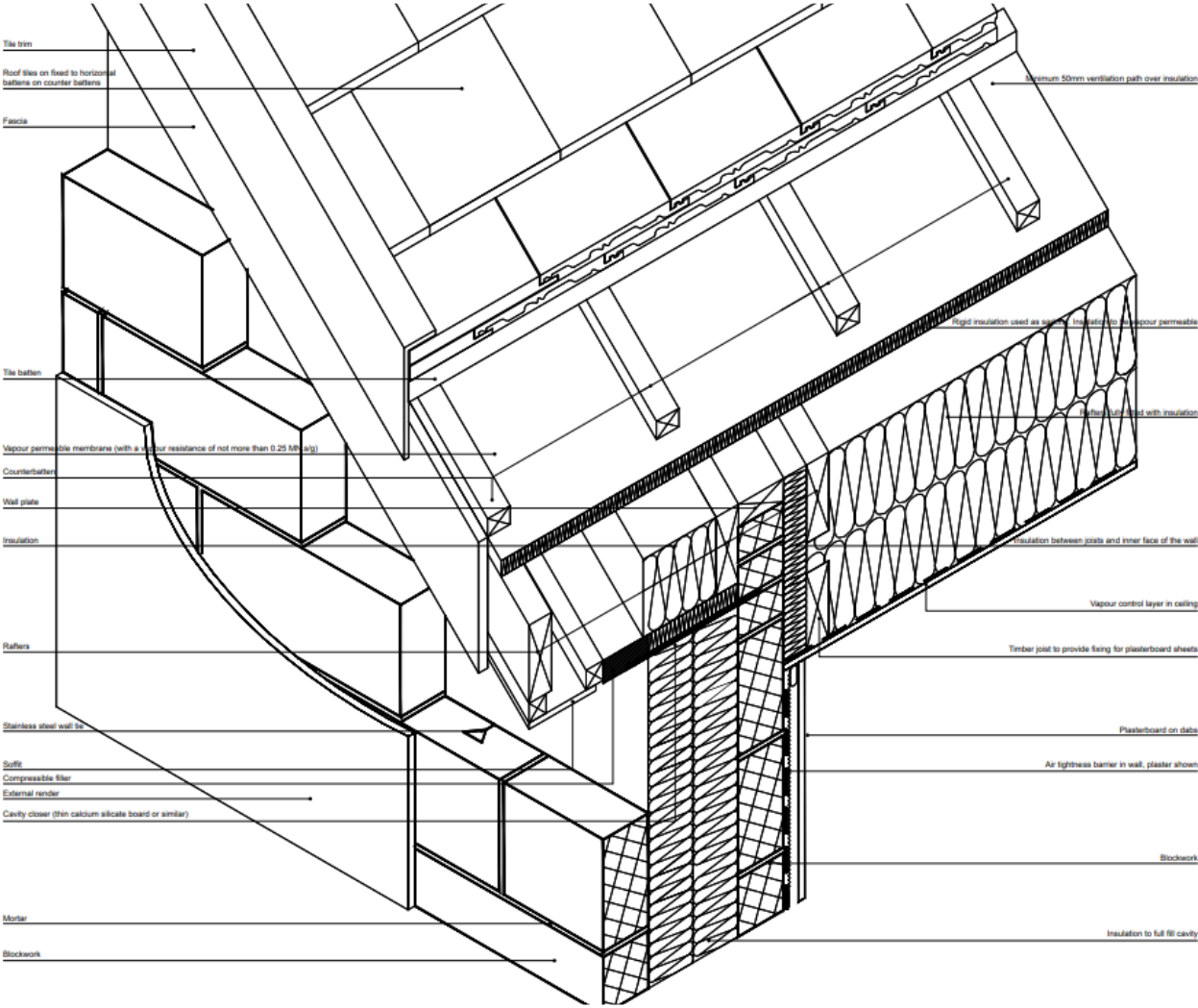


ISOMETRIC VIEW OF TIMBER FLAT ROOF

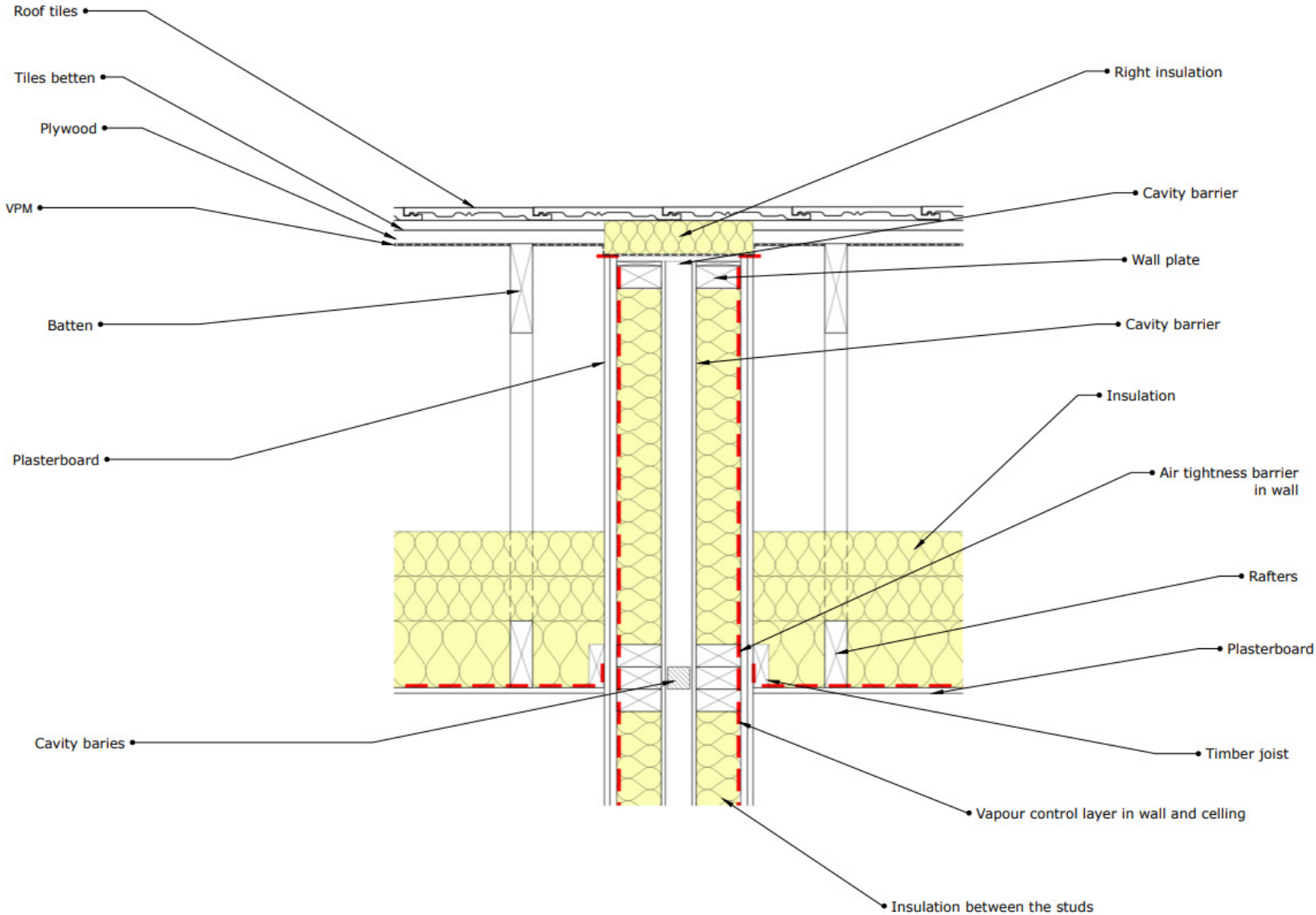
Construction Detailing



Construction Detailing



Construction Detailing



On Site Construction Reflection

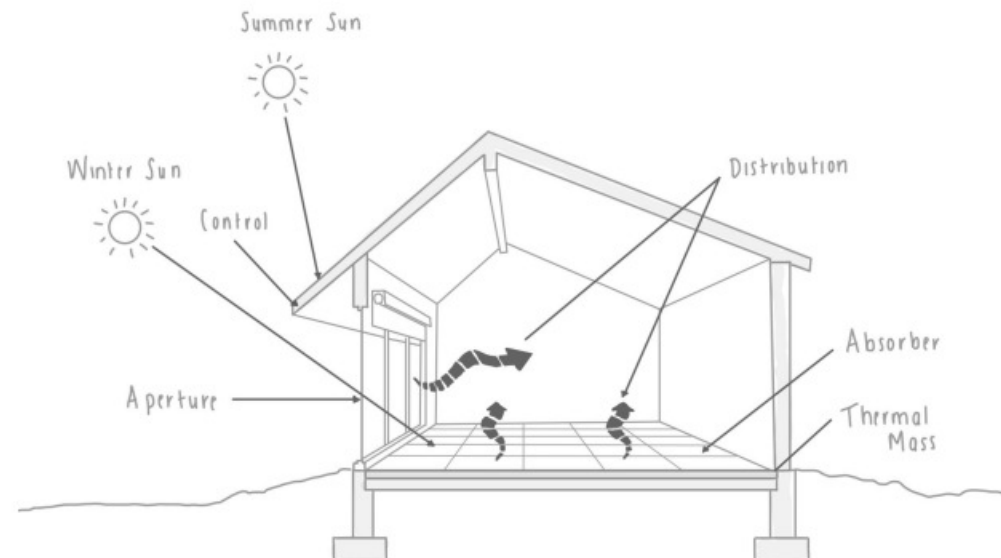




Key Areas of a Passive Solar Design House

In order to create a house with a passive solar design, you must look into 5 key areas:

- **Aperture:** The aperture is the large window that must be facing within 30 degrees of south and not be shaded by other objects between 9am –3pm. Those facing southeast will get more morning sun, whereas those facing southwest will gain more afternoon sun. This allows for as much sunlight as possible to enter.
- **Control:** As the days are warmer in the summer, less heating is needed. The sun sits higher in the sky during this time which is why in order to control the temperature of the house, the roof is overhanged to provide shade to the aperture.
- **Distribution:** For the whole house to be warm during the winter, there needs to be some sort of distribution method. With houses that are exclusively passive, they would rely on conduction (transferring heat from 1 material to the next without needing for objects to move), radiation (movement of heat energy through waves) and convection (transferring heat energy through the movement of a liquid).
- **Absorber:** Sitting where the sun can make the most contact for the longest time, it absorbs the heat from the sun beams.
- **Thermal Mass:** This sits under the absorber and stores the heat energy gained from the absorber.

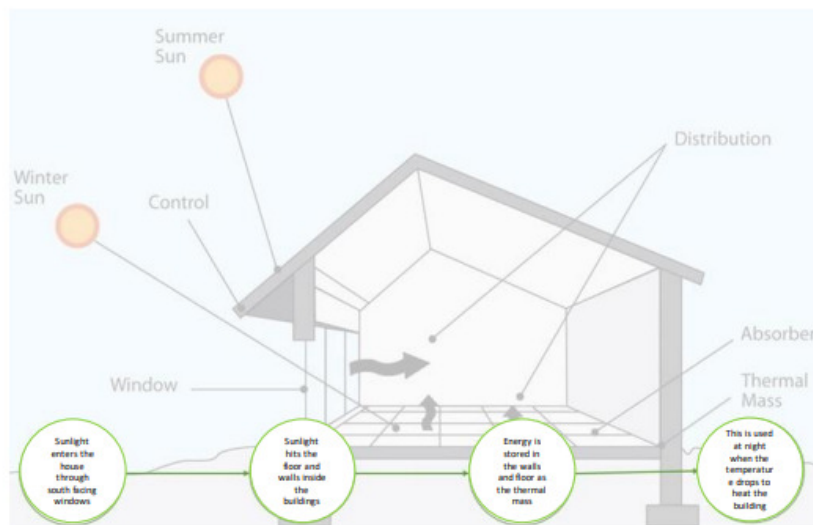


Other things that would be considered is:

- Insulation
- Glazing
- Type of thermal Mass

Passive Solar Design Techniques: DIRECT

Direct Gain designs work when sunlight enters the house through south facing windows and hits the floors and walls which then absorb and store the heat for later use. Then as the room cools during the night, the stored thermal mass is then released into the house to heat it back so ensure stable temperatures are maintained. The thermal mass materials are often dark in colour so that they can absorb as much heat as possible.

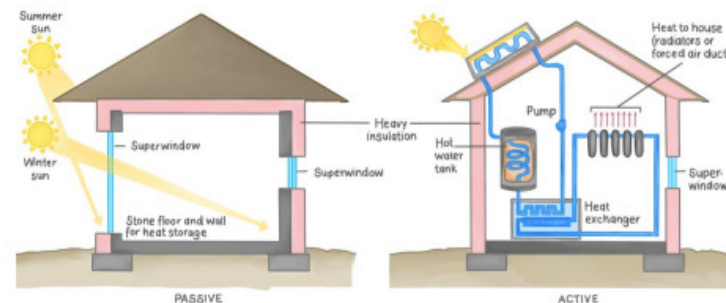


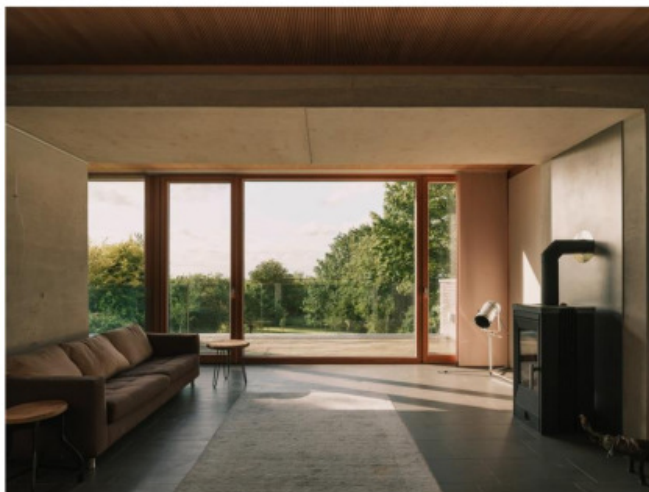
In some situations, water filled containers located inside the living space can absorb and store the solar heat. This water can store twice as much heat as the walls per cubic foot and it requires a lot more carefully designed structured supper meaning its harder to integrate into homes. However, they can be installed in the existing home if the structure can support the weight.

Direct gain can utilize 60-70% of the sun's energy hitting the windows but this only works well when the thermal mass is insulated from the outside so prevent the heat being lost and dissipating through them.

Active Solar vs. Passive Solar Design

- Although both active and passive solar design more or less have the same function; the ability to convert energy from the sun directly to electricity there are some slight differences.
- Active solar design is solely reliant on external energy sources like heat pumps and radiators. It aims to capture the sun's energy and store it before it is converted into electricity so it can heat or cool your home or supply a larger area with power using mainly mechanical and electrical components.
- Passive solar design differs to active solar systems as it is able to function without relying on an external device. Instead, they rely on the way the building has been or is going to be built. Just like greenhouses and sunrooms, the sunbeams are captured by solar panels through glass windows that are able to absorb and retain heat and can result in significant savings on power and cost for your dwelling.

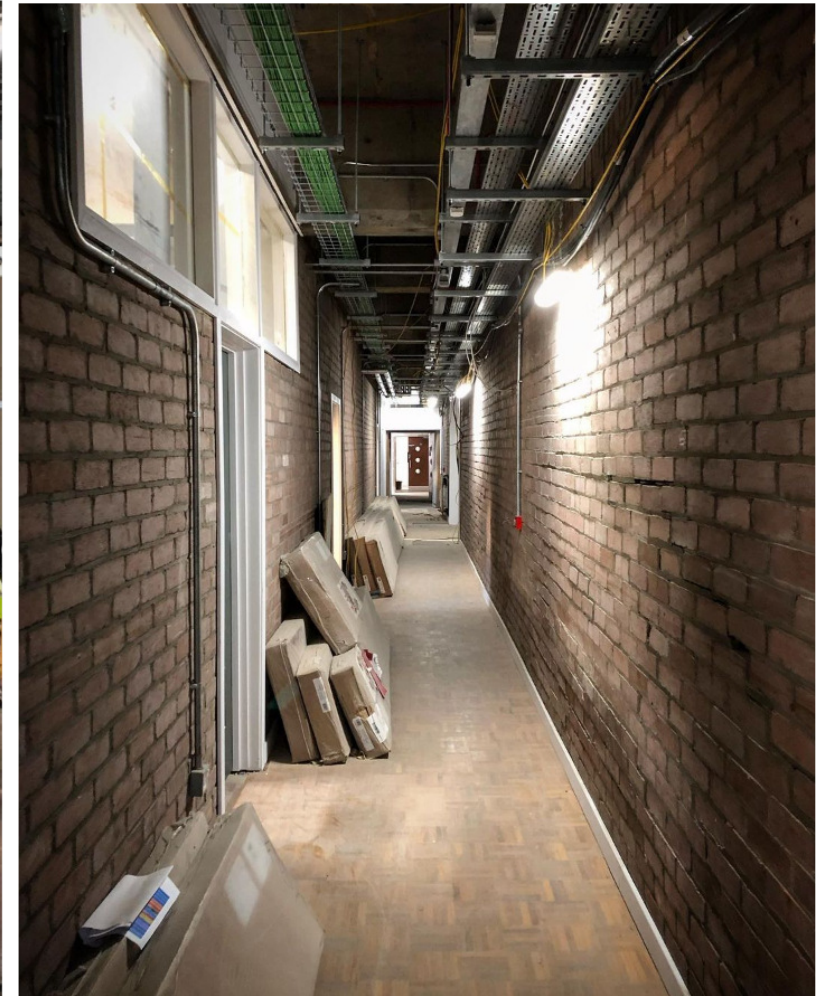




UK Passive House – Lark Rise

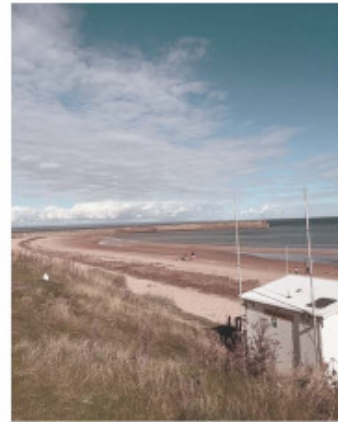
Location: Aylesbury, Buckinghamshire
Architect: bere:architects
Client: Private Client
Contractor: Sandwood Construction
Structural Engineer: Techniker
Environmental/ Mechanical and Electrical Engineer: ATC Chartered
Quantity Surveyors
Internal Area: 175 m²

Campus Site Visits / Campus as a Lab for Learning



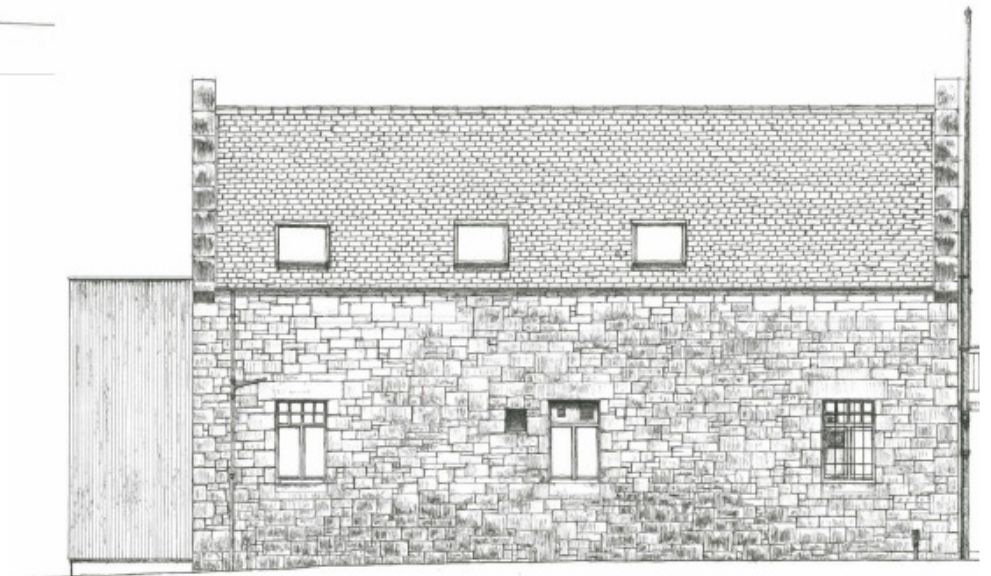
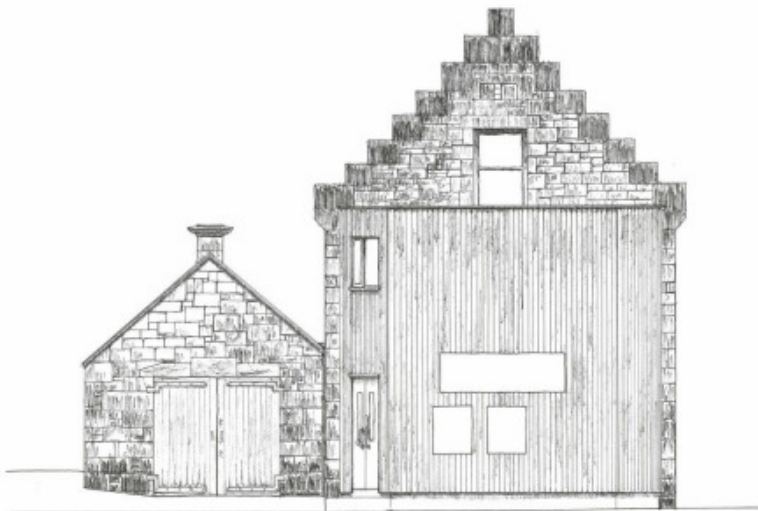
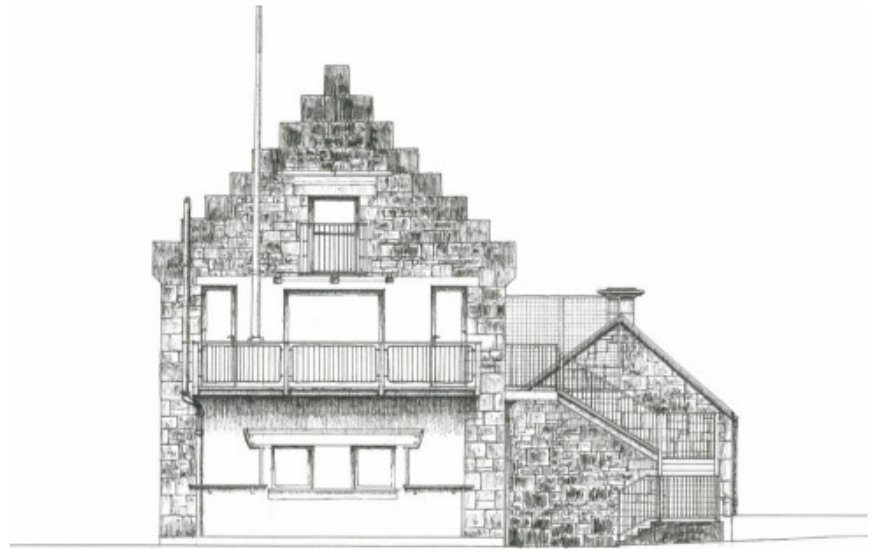
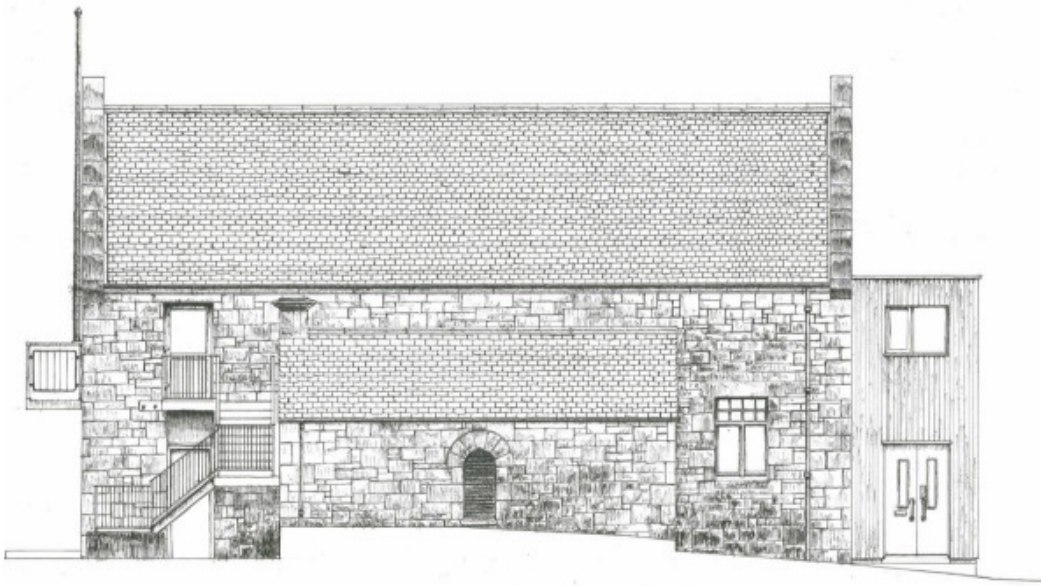


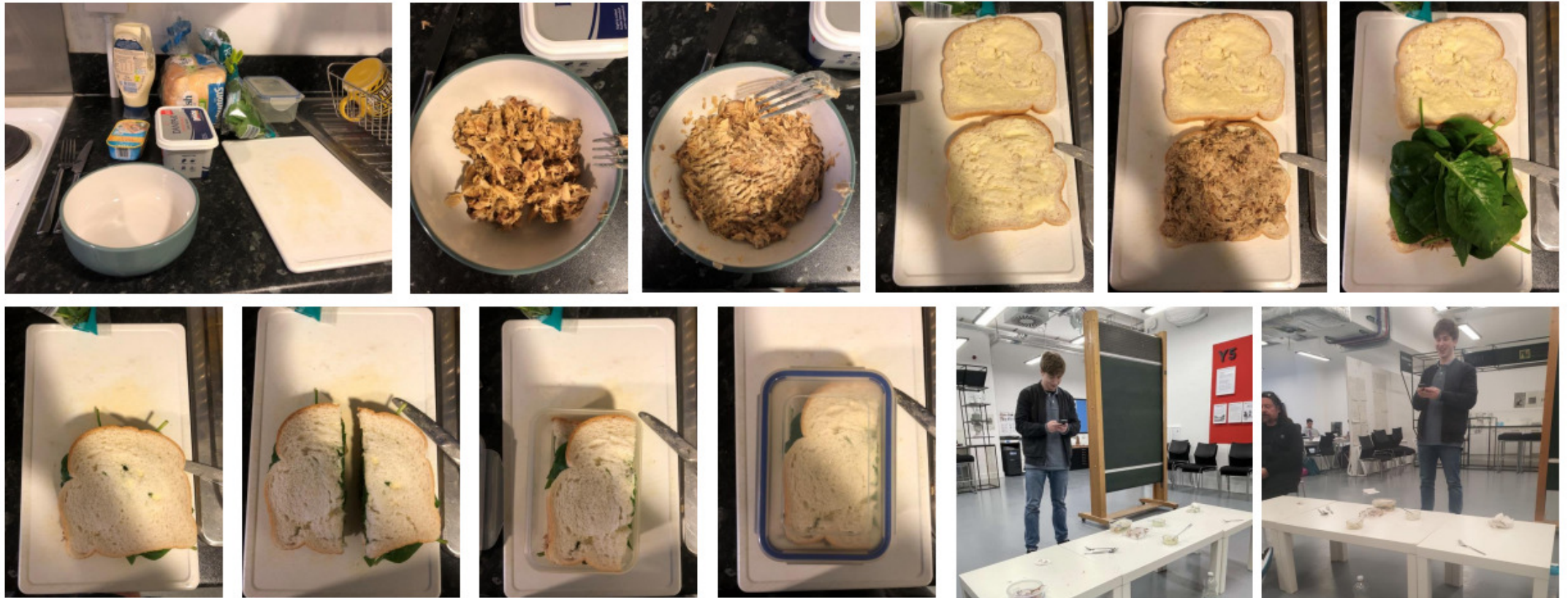
SITE ANALYSIS · ST. ANDREWS SAILING CLUB EXPERIENCE



THE ST ANDREWS SAILING CLUB THROUGH MY EYES

The sailing club in St. Andrews is known for selling the best cheesy toasties in Scotland, if not the UK. The Cheesy Toast Shack entices people to travel for miles around to try them. My experience was okay, but I would not travel just for the toasties. Although, for a cheese lover, it will be a great experience. The site is located just next to the beach, with great views. But watch out for the seagulls as they will try to still a bite or a whole toastie from you.





Holy Mackerel

To simulate the experience of dining in my proposal, I prepared a specialty tinned mackerel sandwich, which I usually consume as a packed lunch.

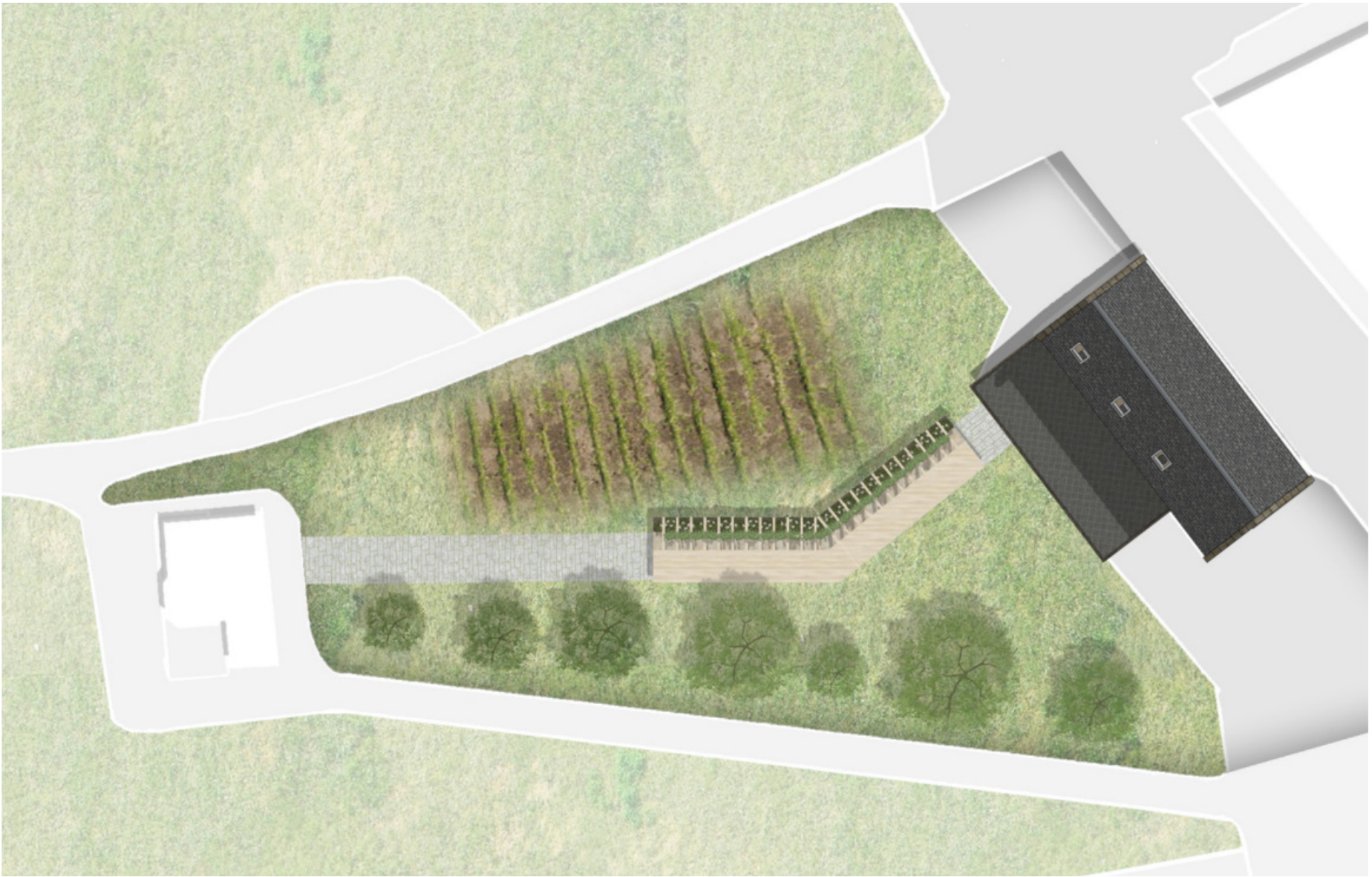
Befitting of the miracles of Jesus Christ, the sandwich, usually just enough for one, maybe two if they're not very hungry, miraculously split into 13 separate pieces – enough to feed the entire group and our tutor.

The sandwich is simple to prepare and suitable for those living in a state of self-imposed (or regular) poverty, like that of a monk.

I simulate the experience of a priest reading a sermon to the cohort before every set meal time.

Unfortunately I was not provided a raised pulpit to preach from, though the restaurant will have one.





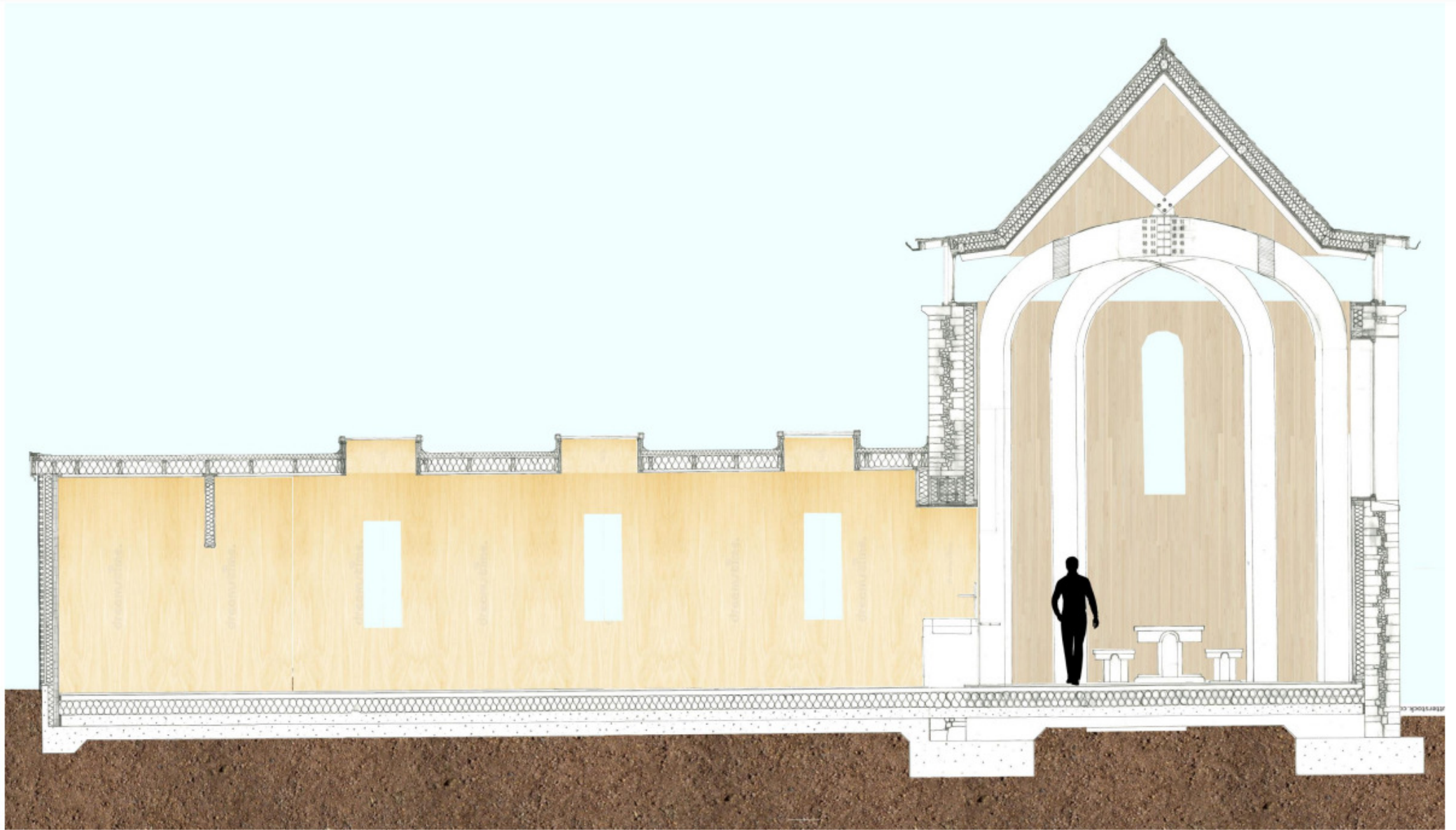
SERIES OF PROPOSAL DRAWINGS · ELEVATIONS



NORTH WEST ELEVATION
SCALE 1:100

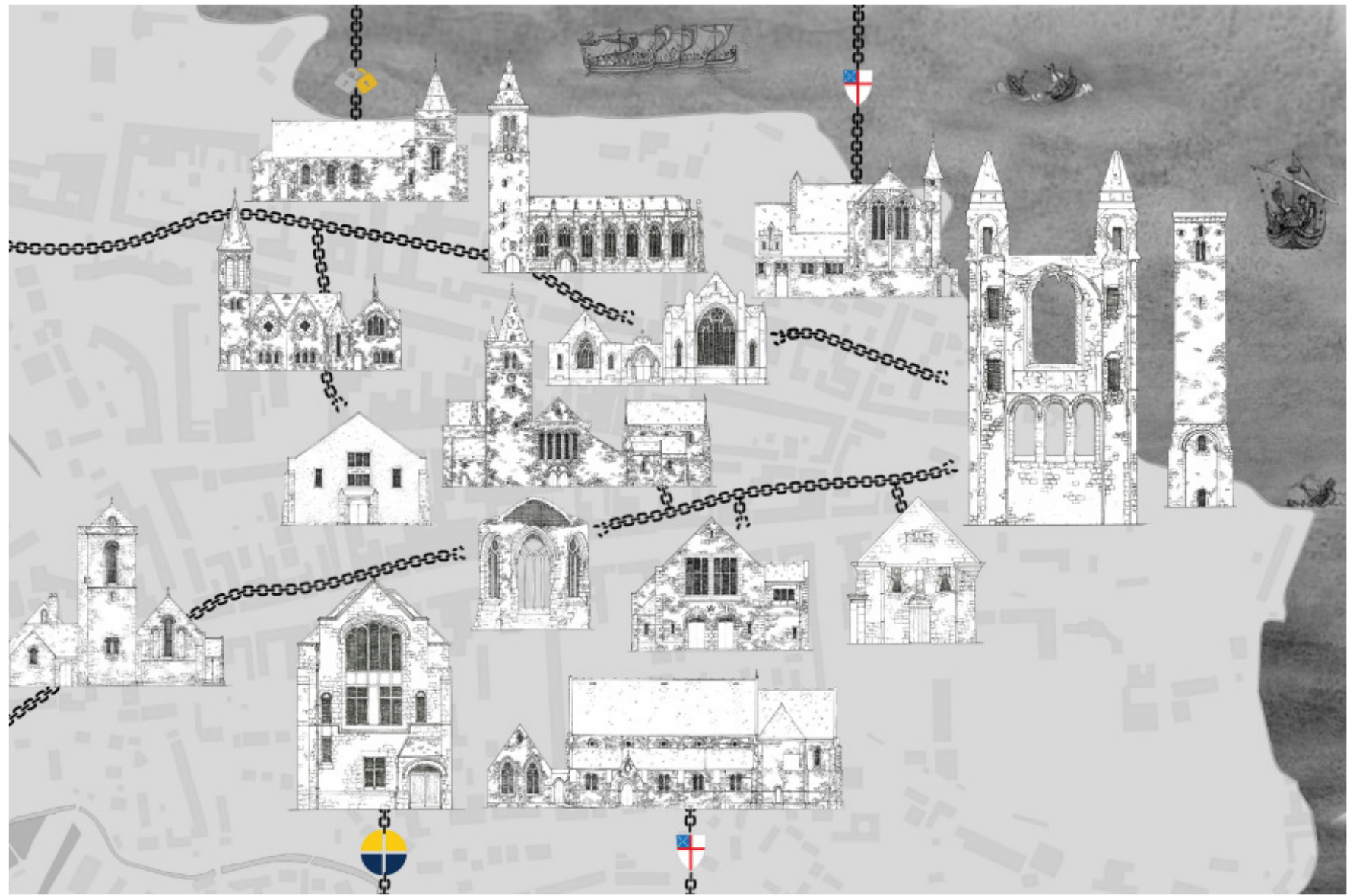


SOUTH EAST ELEVATION
SCALE 1:100





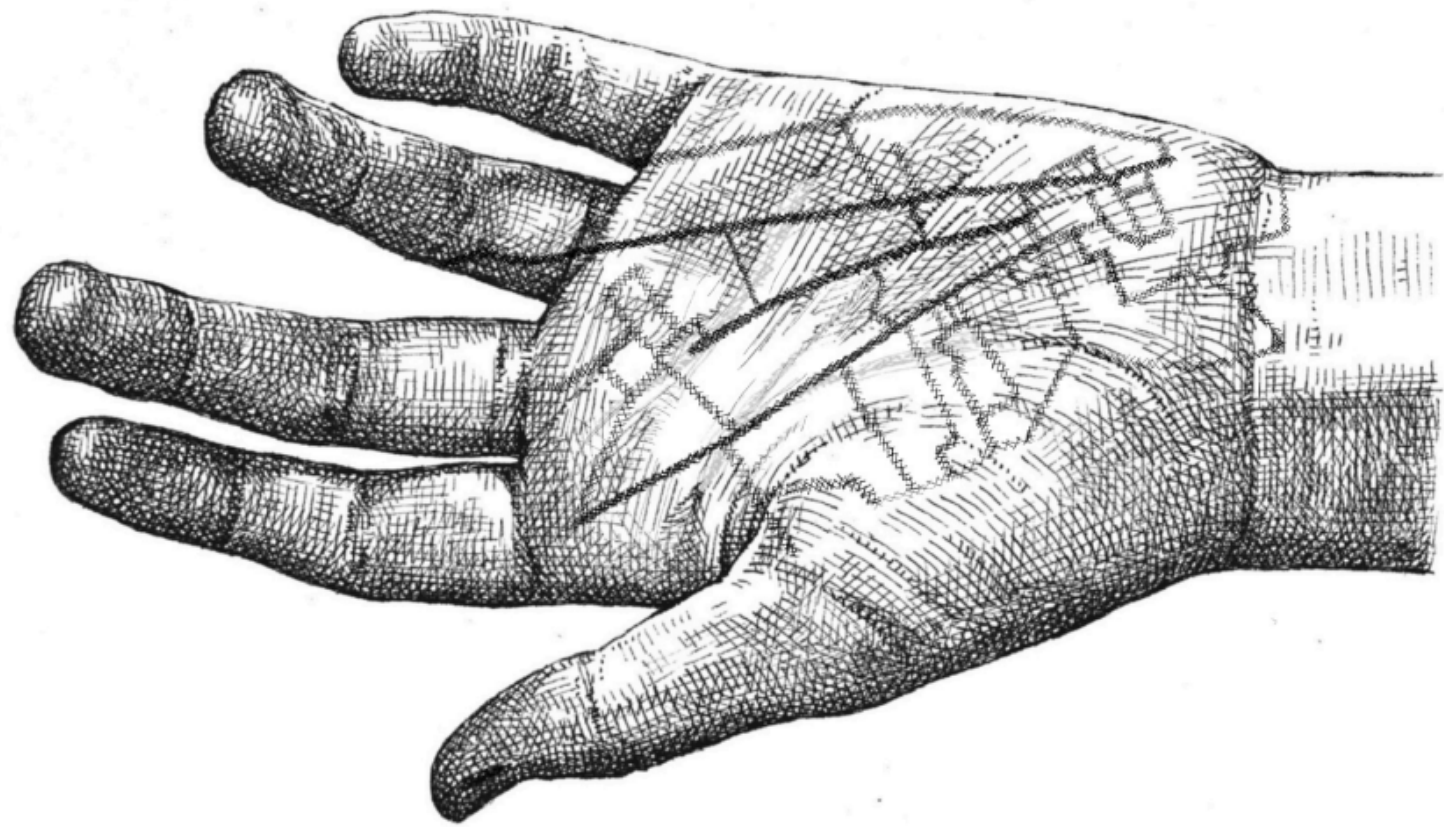






My map shows the natural and artificial colours, and additionally, the exaggerated topography of St Andrews and the surrounding area, in an abstract form. This emphasises the warm tones present in St Andrews, and the town's abundance of green spaces.

The map is made from acrylic paint, scrap card, and a canvas.



Royal Bank of Scotland

Twenty Pounds
Sterling

St. Andrews

£20

Mr Boyd

Lady Davidson's Close

£20

THE ROYAL BANK OF SCOTLAND

THE ROYAL BANK OF SCOTLAND

20

£20

NURSERY

HARBOR

BRASS

UNITED COLLEGE

THE CASTLE

St. Peter's

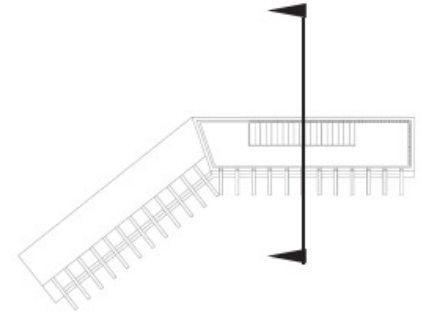
SOUTH STREET

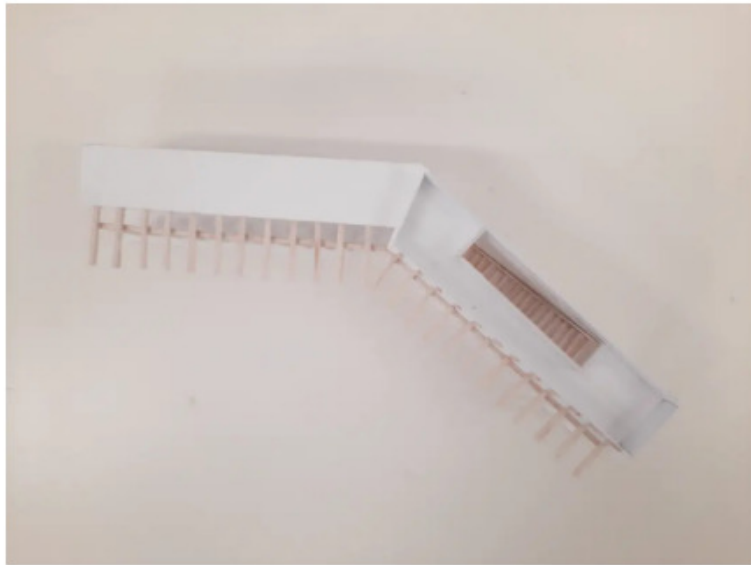
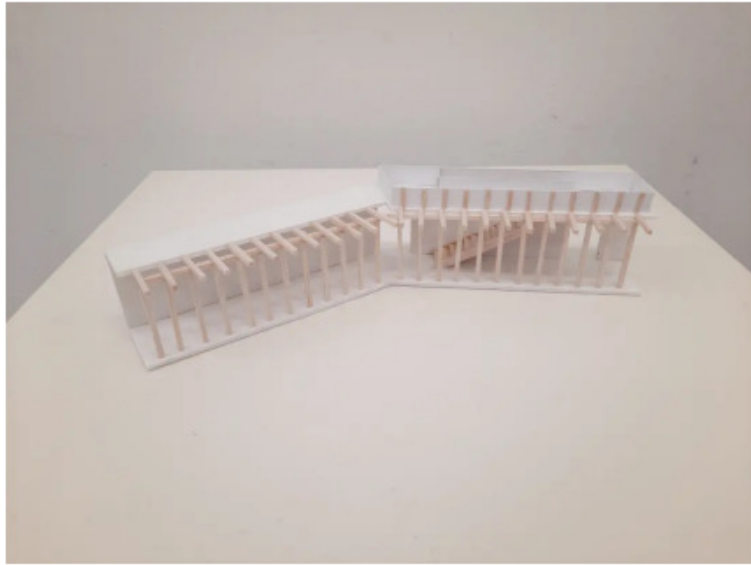
SYNCH

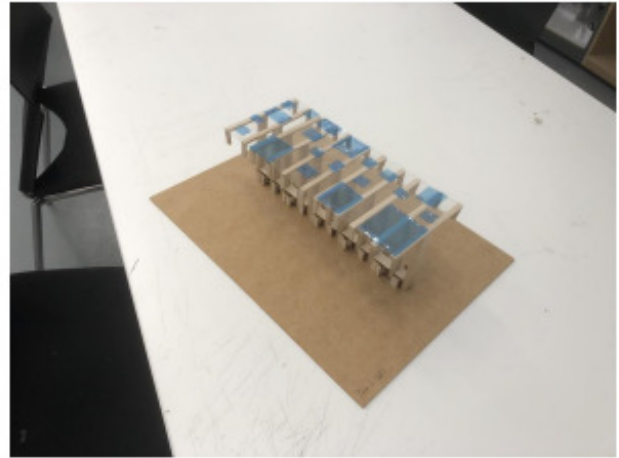
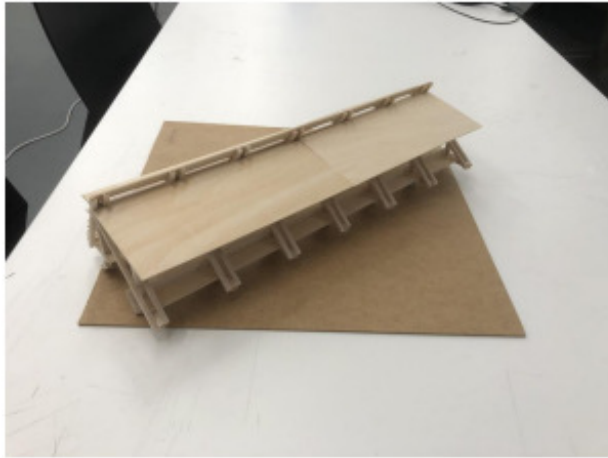
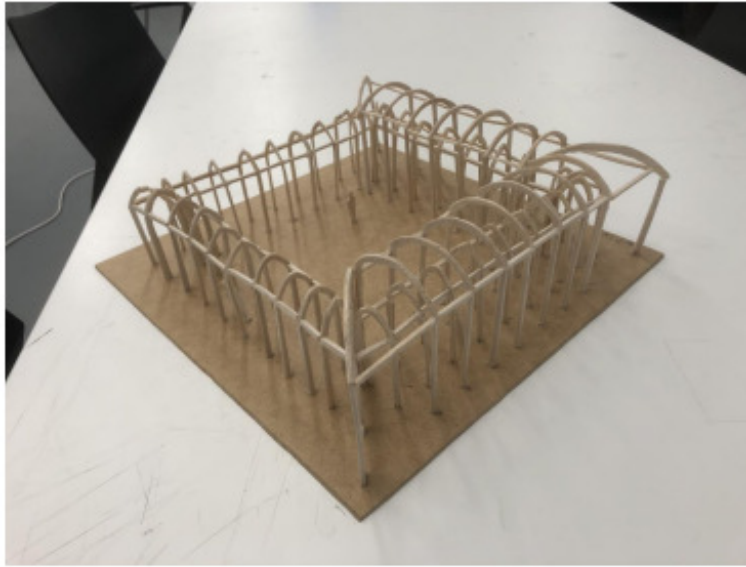
SEA FARM

SEA FARM

SECTION







PRECEDENT STUDY

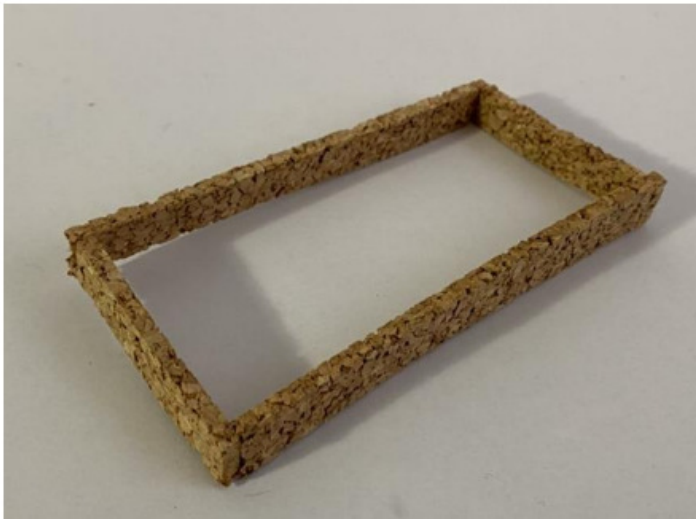
Bank of England Ruins Watercolour by John Soane

This drawing depicts Soanes' interpretation a bank of England building in ruins. This artwork links strongly to the site of the Cathedral as it shows the lasting pieces of a building that as eroded over time.

To tie the new library building to its environment, it is interesting to study what the building will look like if it is left to erode away in centuries to come.

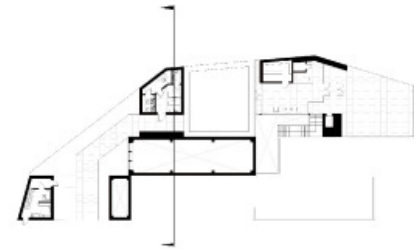
For the library to erode like the Cathedral, the foundations and base of the building must be built in a material that will stand the test of time, whereas the roof must be built in a more temporary material such as timber.

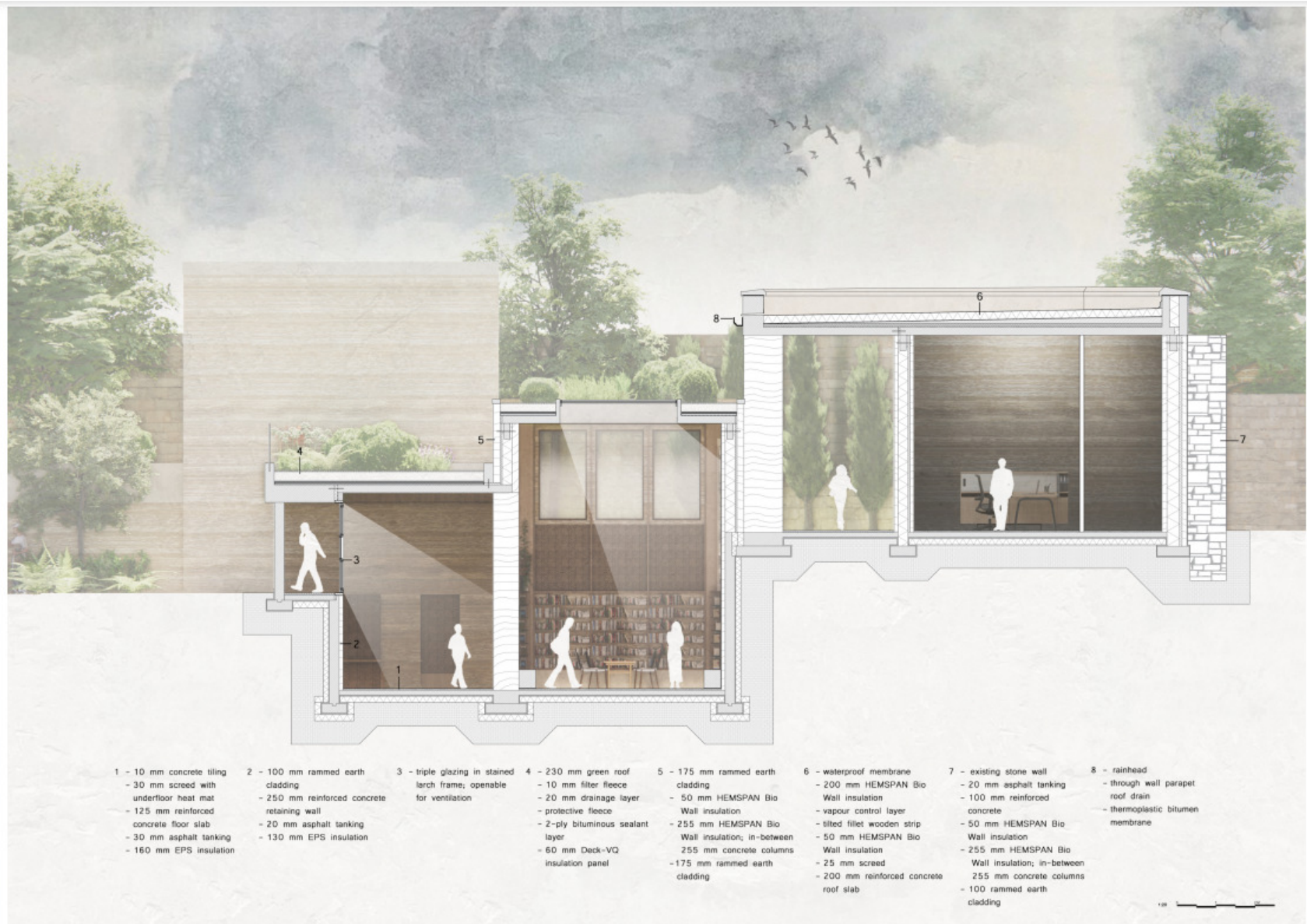
The model below shows the basic form of the remains of a library with a stone base.





1:100 0 2 4 6 8 10 M







the couple

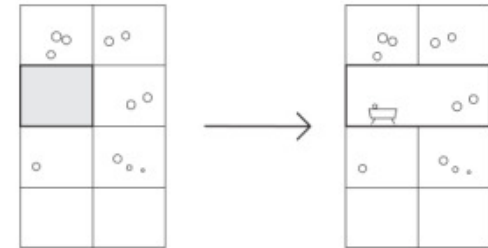


The couple live and work in Glasgow, but enjoy venturing out-with the city at weekends where they like to explore the National Parks with their two dogs.

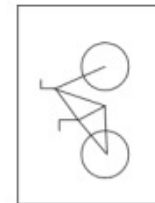
Due to their outdoor nature, they need somewhere to store their muddy gear and would prefer a home that feels **connected with nature**.

In addition to this, **flexible spaces** would be beneficial if they begin to expand.

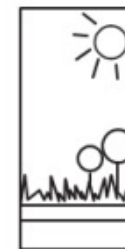
USER GROUP INFO
the couple



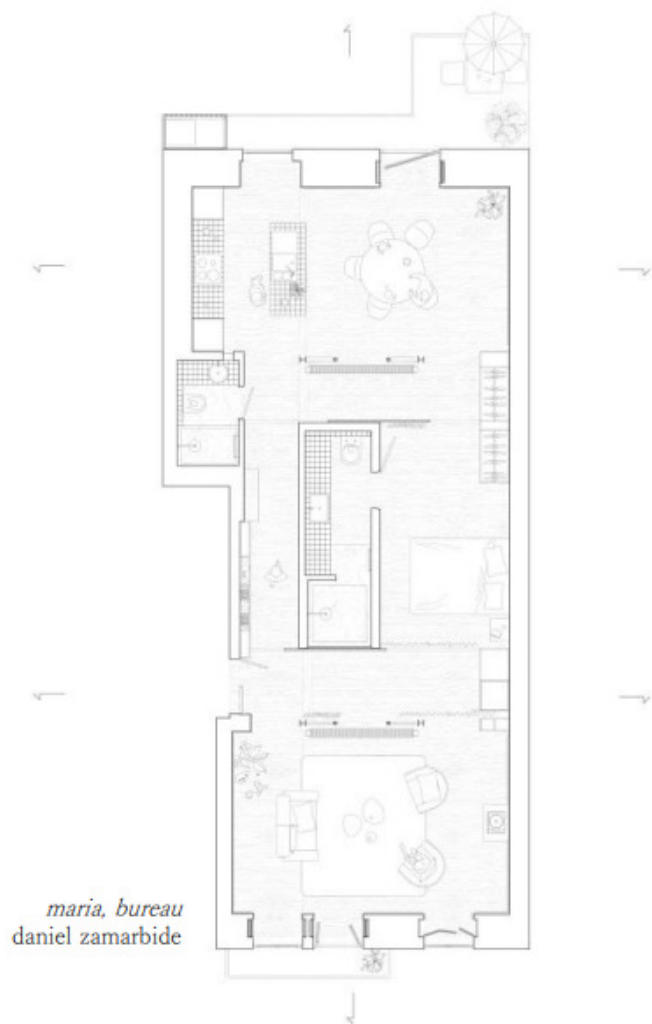
flexibility



bike storage

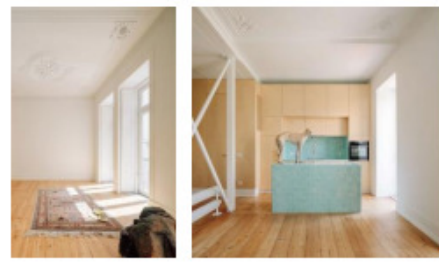


views

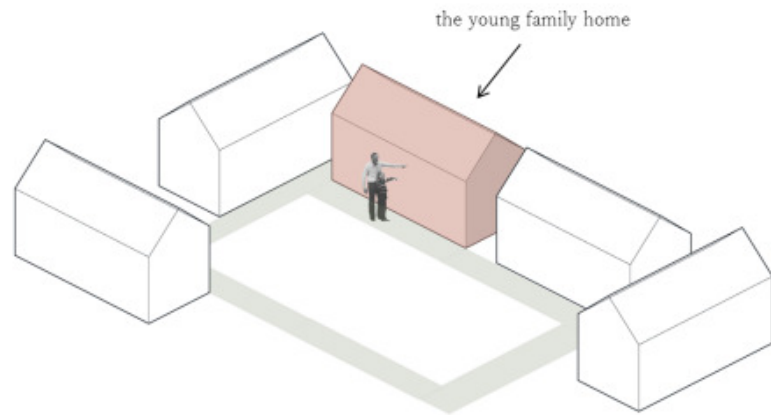


maria, bureau
daniel zamarbide

INITIAL IDEAS
precedent



Maria Bureau by Daniel Zamarbide is a notable precedent as he successfully uses thresholds between spaces to create a connection between users regardless of where they are in an apartment. He uses frosted glass to give the sense of **movement** from one room to the next which reduces the disconnect between residents. The floor plan of this apartment also focuses on a free flowing open plan design. I'd like to take forward their **sociable** approach to spaces like the kitchen dining room, and the illusion of movement into my design.



As many of the residents within this housing scheme are elderly people and young children, making the site easily negotiable was key to its success.

To achieve this, similar to the Co-Existence Village by NORD Architects, I decided to **code each housing block** with a colour or material finish to make them easy to **remember or locate**.



MATERIALITY DEVELOPMENT
diagrams



- FIELD MAPLE - ACER CAMPESTRE
- + WOOD ANEMONE - ANEMONE NEMOROSA
- LILY OF THE VALLEY - CONVALLARIA MAJALIS
- CHEDDAR PINK - DIANTHUS GRATIANOPOLITANUS
- GOLDEN SHIELD FERN - DRYOPTERIS AFFINIS
- SNAKE'S HEAD FRITILLARY - FRITILLARIA MELEAGRIS
- STINKING HELLBORE - HELLEBORUS FOETIDUS
- STINKING IRIS - IRIS FOETIDISSIMA
- PRIMROSE - PRIMULA VULGARIS
- PASQUE FLOWER - PULSATILLIA VULGARIS
- OX-EYE DAISY - BELLIS PERENNIS
- RAGGED ROBIN - LYCHNIS FLOS-CUCULI
- CORN MARIGOLD - GLEBIONIS SEGETUM
- CORN COCKLE - AGROSTEMMA GITHAGO
- BELLFLOWER - CAMPANULA
- BETONY - STACHYS OFFICINALIS
- HEMPAGRIMONY - EUPATORIUM CANNABINUM
- VIPER'S BUGLOSS - ECHIMUM VULGARE
- BUGLE - AJUGA REPTANS
- THISTLE - CENTAUREA
- HONEYSUCKLE - LONICERA
- FORGET ME KNOT - MYOSOTIS SYLVATICA
- FOX GLOVE - DIGITALIS PURPUREA

When looking at the landscaping in detail, I decided to reintroduce a number of species **native to Scotland** and the UK as the site is set in Glasgow.

By doing this, it connects the proposal to the site and its history whilst also rooting the design in situ.

It also encourages **native wildlife** to the site which will help maintain the Scottish species.

LANDSCAPE PRECEDENTS
analysis



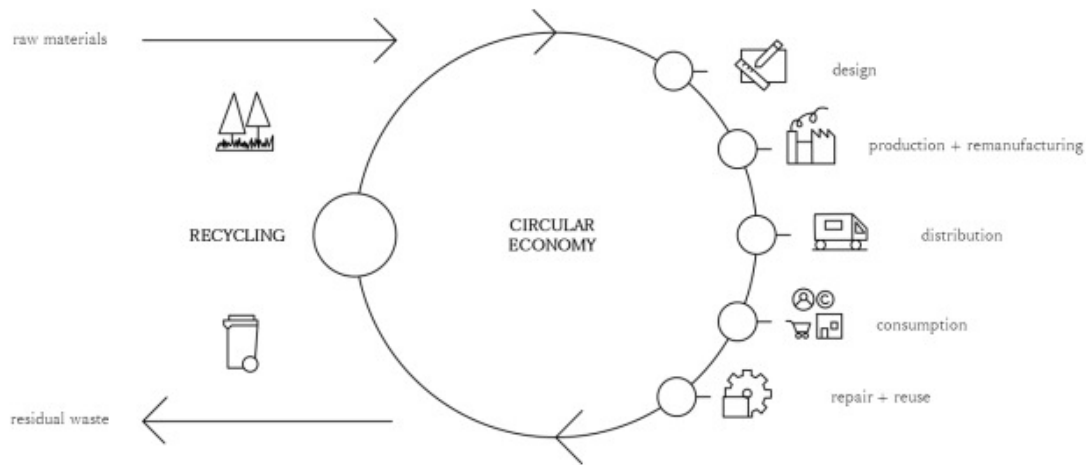
BLOCK PLAN
typical residential 1:200





BOOKEND SECTION
looking north 1:100





The use of copper cladding is sustainable as it is **100%** recyclable. It experiences no loss of physical properties when recycled, meaning it can be repurposed and reused **infinitely**. This follows the theory of **Circular Economy**.

The Circular Economy theory is continued in the use of the steel frame as it can be **dismantled and rebuilt or even melted down** to create new products when the building has expired.

In addition to material choice, the steel structure also allows for **flexible living** within each apartment. Many of the flats are able to be expanded when the need for extra space arises. By doing this, it prevents people from needing to move house.

SUSTAINABILITY STRATEGY
design

TO ADHERE TO REGULATION 2.14.2 NUMBER AND TYPE OF FACILITIES:

TABLE 2.6. FIRE AND RESCUE SERVICE FACILITIES

HEIGHT AND DEPTH OF STOREY ABOVE OR BELOW FIRE AND RESCUE SERVICE ACCESS LEVEL	TYPE OF FACILITIES
Topmost storey more than 7,5m but not more than 18m above access level	fire-fighting stair, fire-fighting lobby ventilation to stair and fire-fighting lobby, dry fire main located in fire-fighting lobby

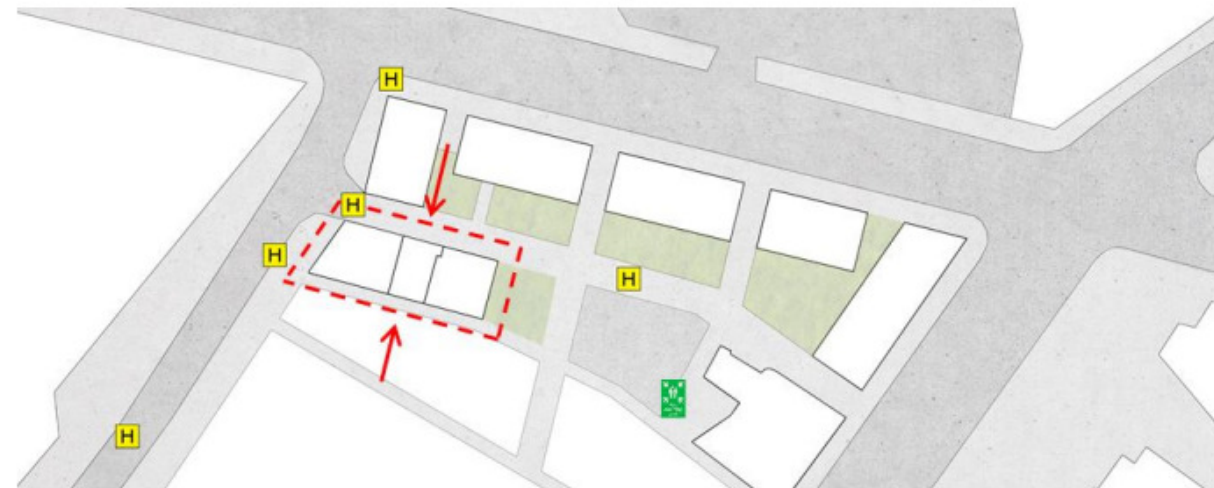
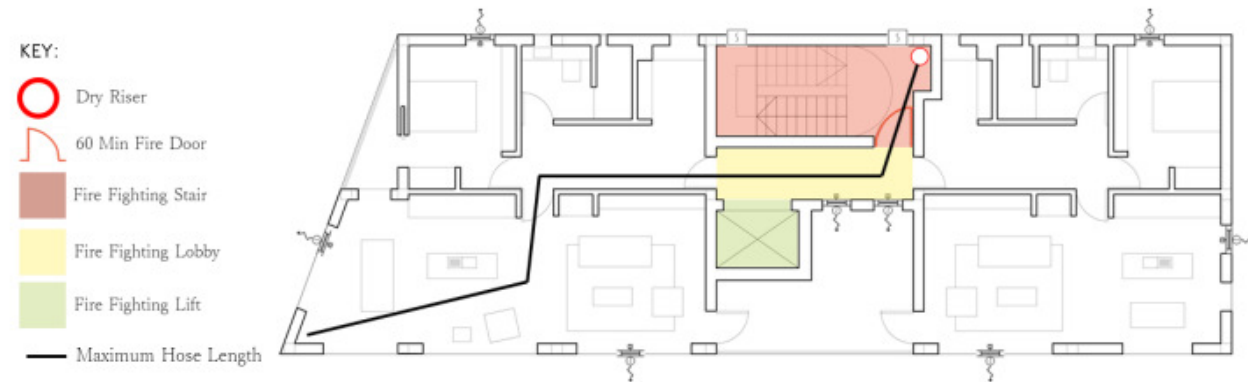
TO ADHERE TO REGULATION 2.14.3 FIRE-FIGHTING STAIRS

- At least 1 fire-fighting stair should be provided to assist fire-fighters to access the fire and if necessary escape from the fire in relative safety. The fire-fighting stair is 1.2m wide measured between handrails to provide fire and rescue service personnel sufficient room to carry fire-fighting and rescue equipment.
- A fire-fighting stair and where required a fire-fighting lobby and fire-fighting lift should be contained within a protected zone. The enclosing structure of the protected zone should have at least a medium fire resistance duration. A self-closing fire door in the enclosing structure of a protected zone should have a short fire resistance. A fire-fighting stair can also be used as an escape stair.

TO ADHERE TO REGULATION 2.14.7 FIRE MAINS

- Where there is an outbreak of fire high above the fire and rescue service access level, the time taken to set up a forward control point, assess the situation and carry hoses up several flights of stairs can be considerable. Therefore, in a building where the topmost storey is more than 7.5m, a fire main should be installed in the fire-fighting lobby to help reduce fire attack time.

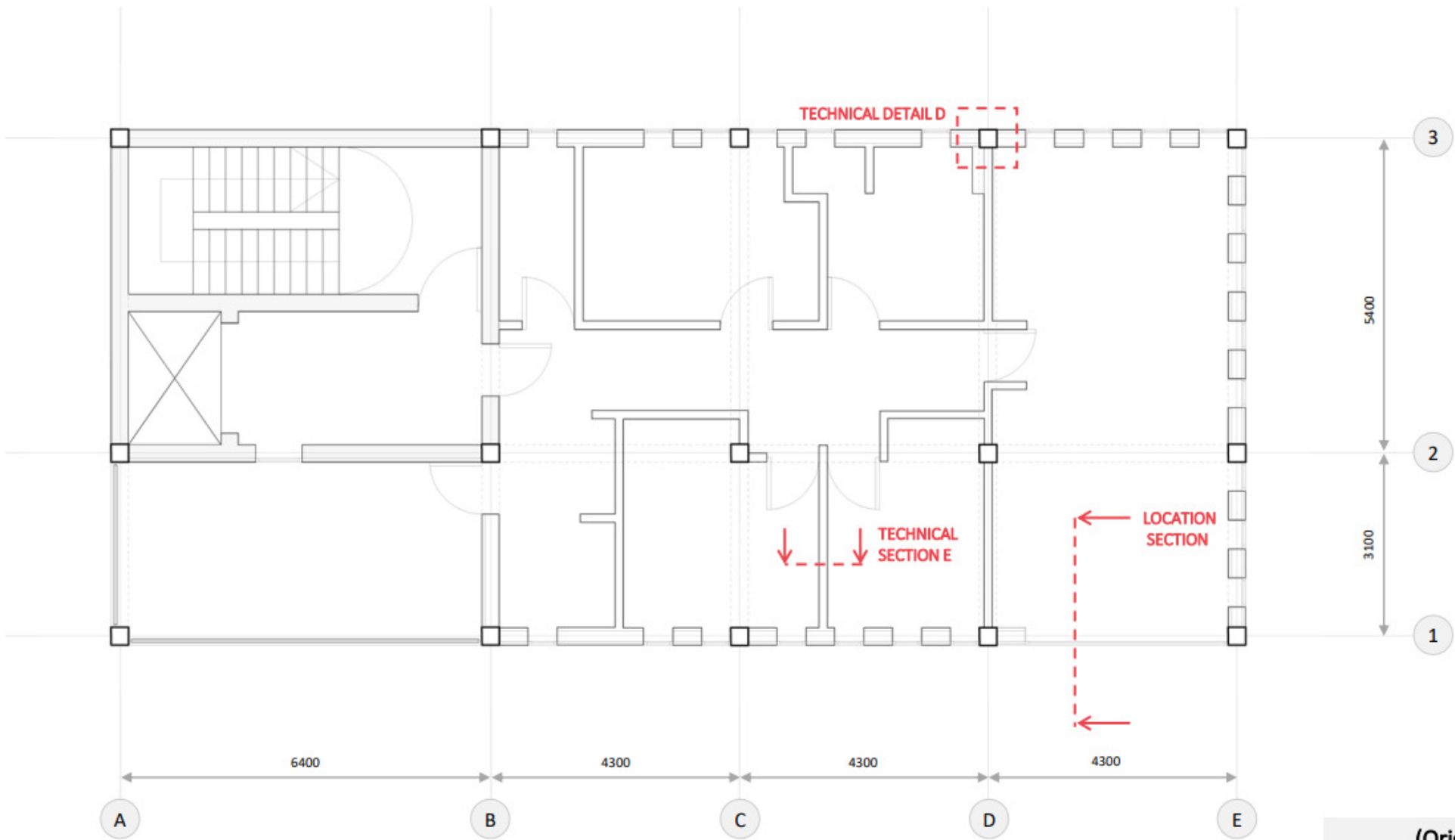
1.5 FIRE SERVICE ACCESS
site plan 1:200



1:500 SITE PLAN SHOWING FIRE HYDRANTS, 2.2M SAFE DISTANCE FOR FIRE FIGHTING SWING, FIRE FIGHTER ENTRY POINT AND ASSEMBLY POINT.

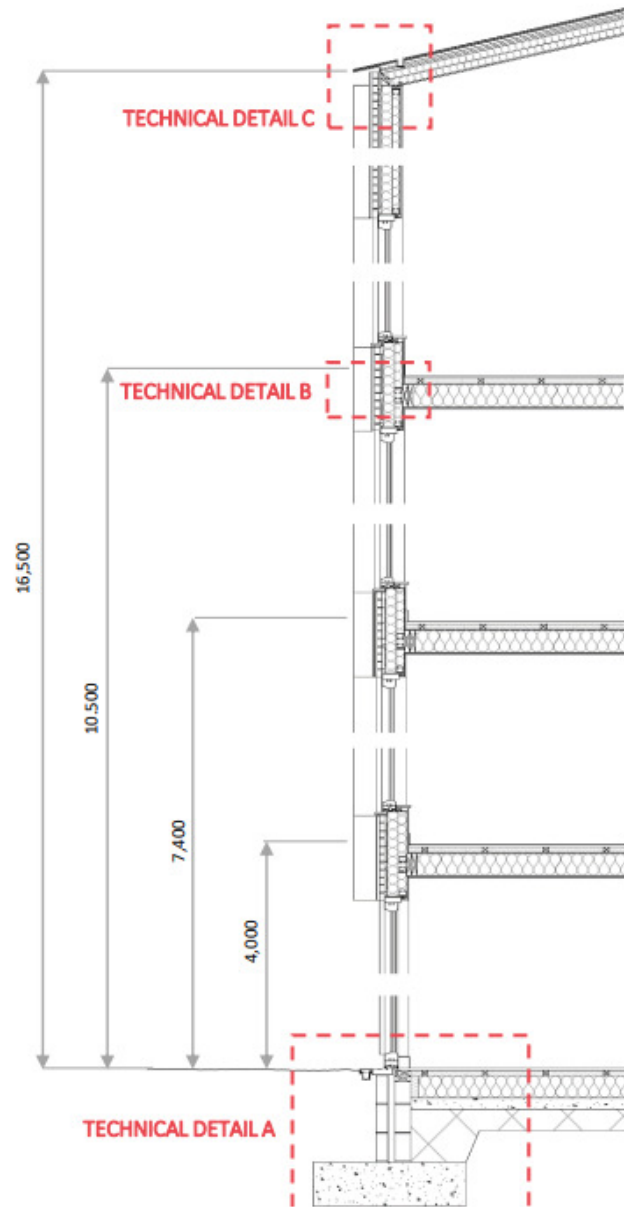
FIRE MAINS outlets should be provided on every storey of a building and the basement storey to permit fire-fighting operations to be conducted at any floor level when it is safe for fire and rescue service personnel to do so. If an automatic fire suppression system is installed in the building, no point on the storey should be more than 60m from the fire main outlet, measured along an unobstructed route for laying a fire hose.

Maximum hose length required is **22.5m** which is less than 60m.

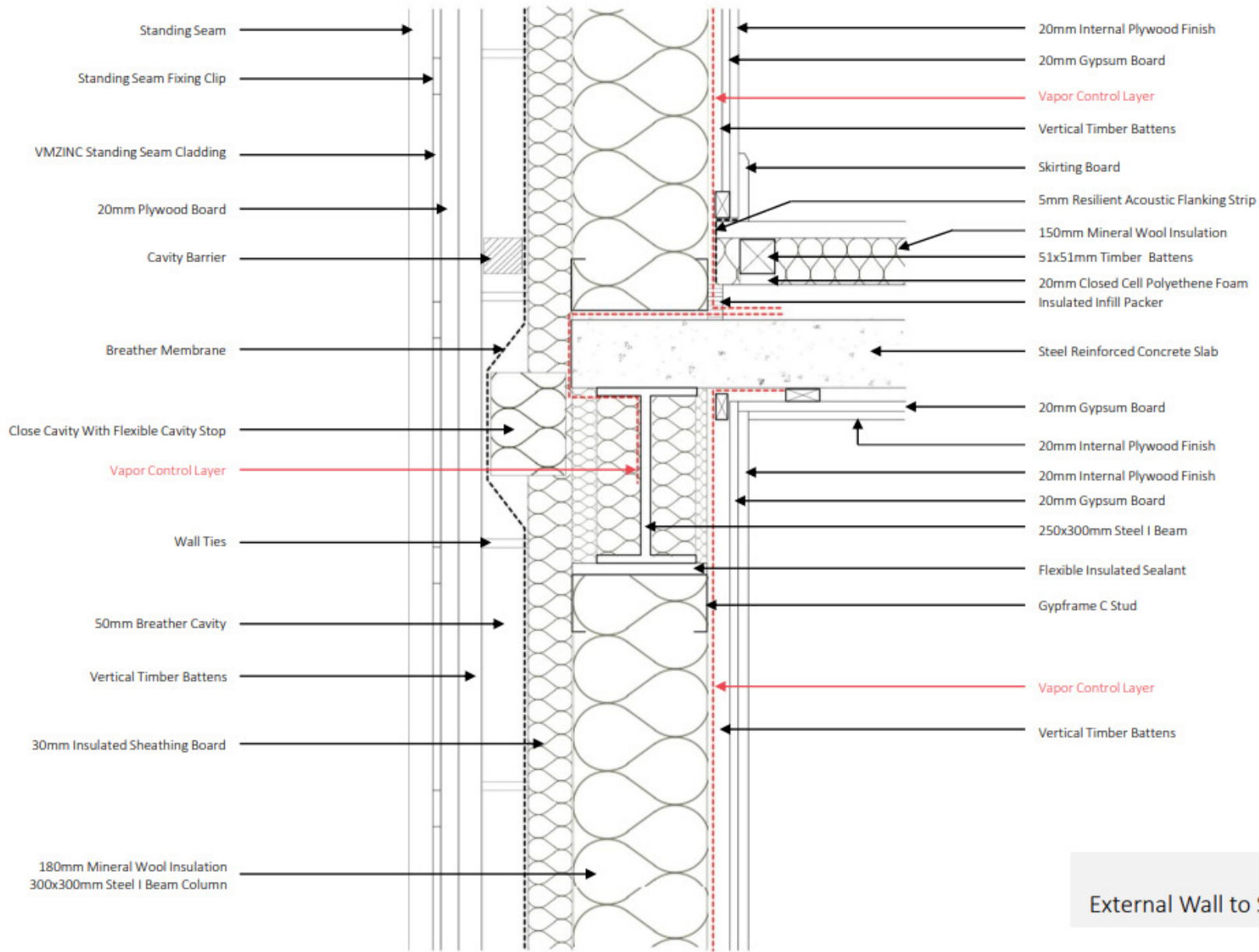


Sheer Wall

(Originally) 1:50 Part Plan
 All measurements in (mm)

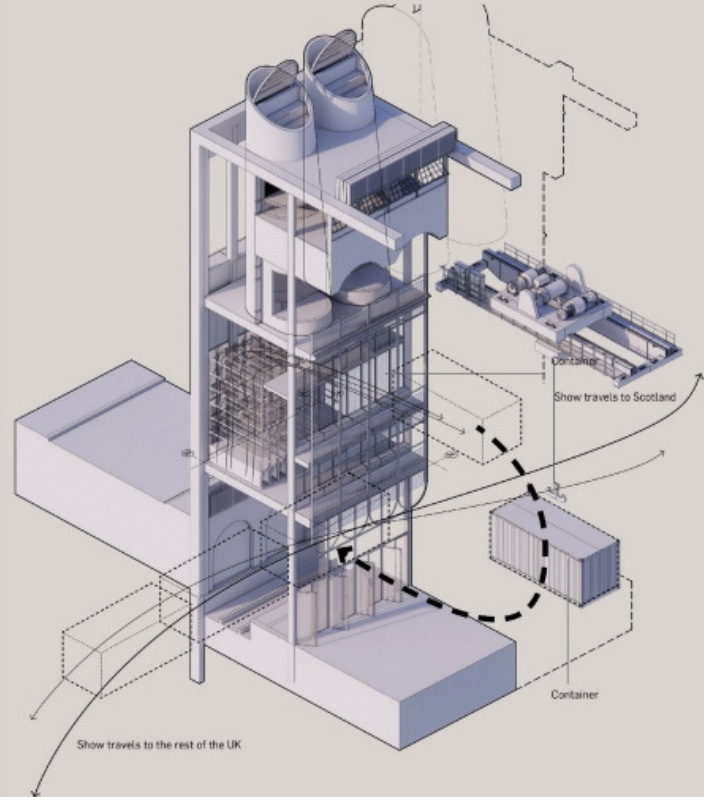


Location Section (Originally 1:20)
All measurements in (mm)



1:5 Technical Detail B
 External Wall to Separating Floor Junction

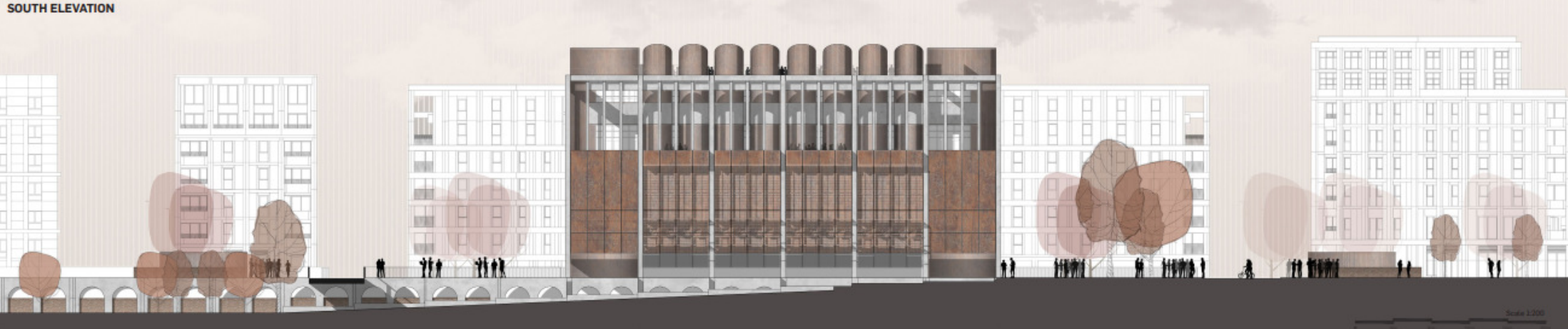
TRANSPORTATION OF DRONES



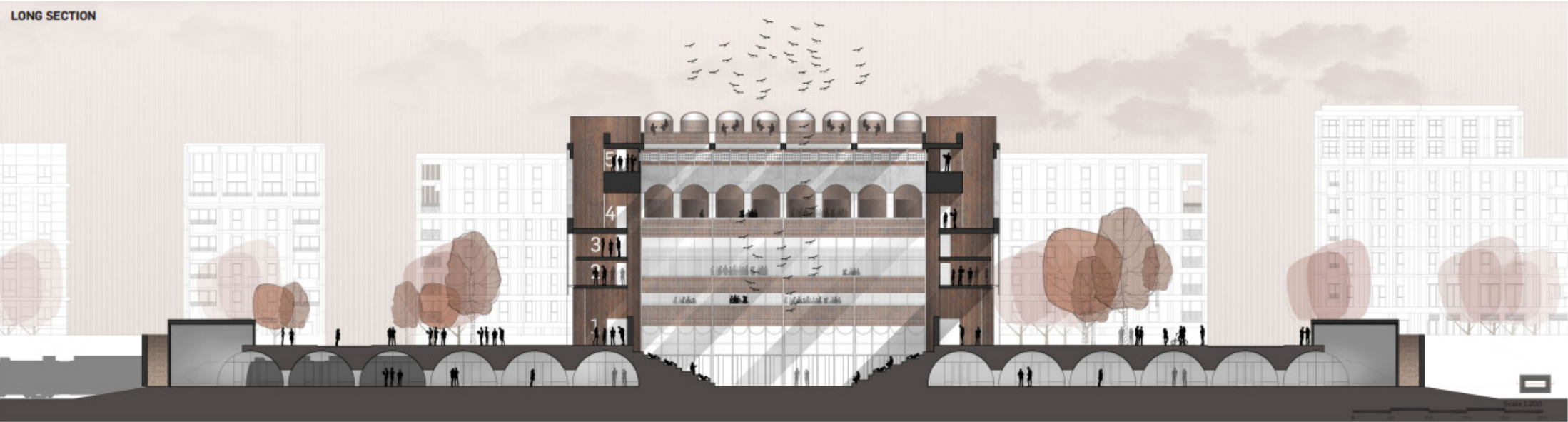
LOCATION PLAN



SOUTH ELEVATION

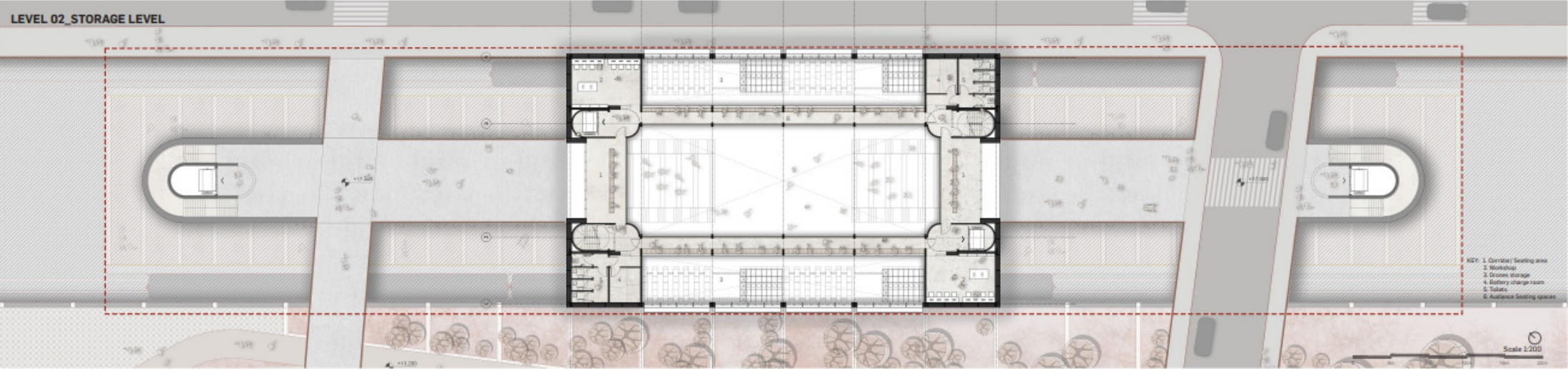


LONG SECTION



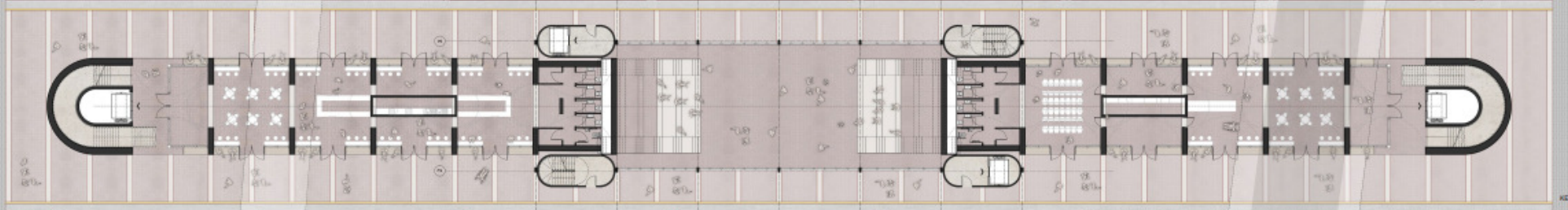
Scale 1:200

LEVEL 02 STORAGE LEVEL



Scale 1:200

LEVEL -01 PLATFORM LEVEL



KEY: 1. Train Station's Stairs, lift
2. Core
3. Platform
4. Ticket
5. Stair/Seating area
6. Waiting area

Scale 1:200







@tenementlife



999 likes
20th - 21st
Century
tenement

View all 3 comments
5 hours ago



The tenement we all know today is a vast cultural phenomenon, which went from working-class housing to slums and new middle-class hipster neighbourhoods.

COMMUNITY SELECTION:

GOVAN AT A GLANCE: SOCIAL & PHYSICAL CONTEXT

DEBRIS FROM THE INDUSTRIAL BOOM...

Historically, Govan's social landscape has been dictated by the river Clyde. It was at one point the centre of the world-renowned Clydeside shipbuilding industry, but few shipyards remain today. One of Govan's original yards is one of only two large shipyards to survive on the Upper River Clyde, the other being Yarrow Shipbuilders Limited based in Scotstoun.

The area has had a reputation for deprivation and poverty, partly due to the construction of housing estates in the 1930s to relieve the overcrowded slum district of The Gorbals, Glasgow. The most famous of these housing estates is Moorepark, sometimes referred to jocularly as "The Wine Alley" - this area was named by The Independent newspaper in April 1994 as one of the worst areas in Britain, with drug abuse being a widespread problem and unemployment standing at nearly 30% (up to three times the national average at the time)



A digital collage of important buildings within the Govan district



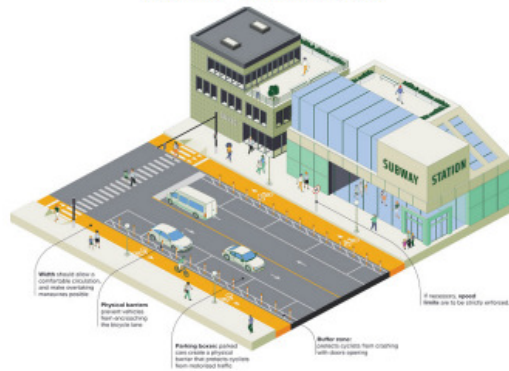
Even in a physical state of turmoil, there is still a sense of community, from children playing, to family life, Govan should be celebrated.



ECOLOGY RESEARCH:

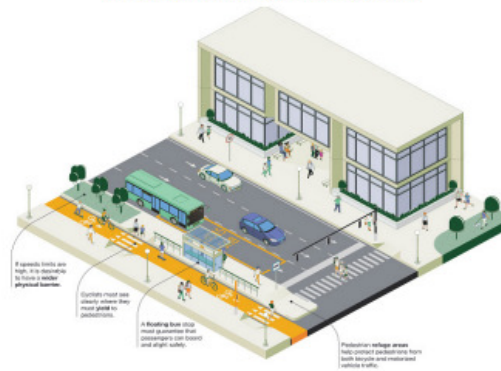
BIKE LANES & PRECEDENTS

POP-UP BIKE LANES



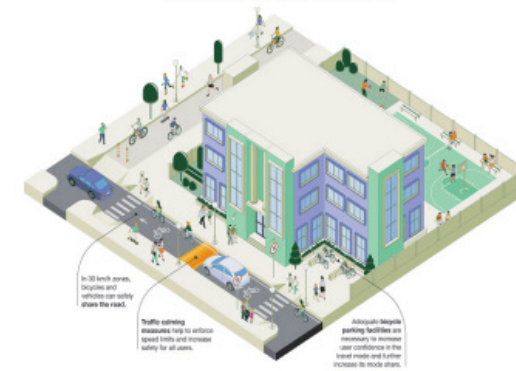
On streets with high speeds, pop-up bike lanes are a good first step towards developing something more permanent. Temporary elements such as visible paint, reflective plastic cones, free-standing barriers, and light-duty bollards should be placed between the bike lane and the vehicle lane. These bike lanes must be “one-way” only and follow the same direction of car traffic to avoid risk of collision.

SEGREGATED BIKE LANES



Where vehicular speeds are higher, bike lanes must be protected from car traffic with heavy-duty physical separators (curbs, bumpers, bollards or barriers). Any barriers used for segregation must not pose a safety hazard for cyclists in case of a crash; polyurethane, heavy-duty plastic or flexible rubber bollards are better than concrete, steel or other hard materials.

BIKE BOULEVARDS



Bicycle boulevards are streets with low motorized traffic volumes and speeds, designated and designed to give bicycle travel priority. Bicycle Boulevards use signs, pavement markings, and speed and volume management measures to discourage through trips by motor vehicles and create safe, convenient bicycle crossings of busy arterial streets.



RADBahn - BERLIN

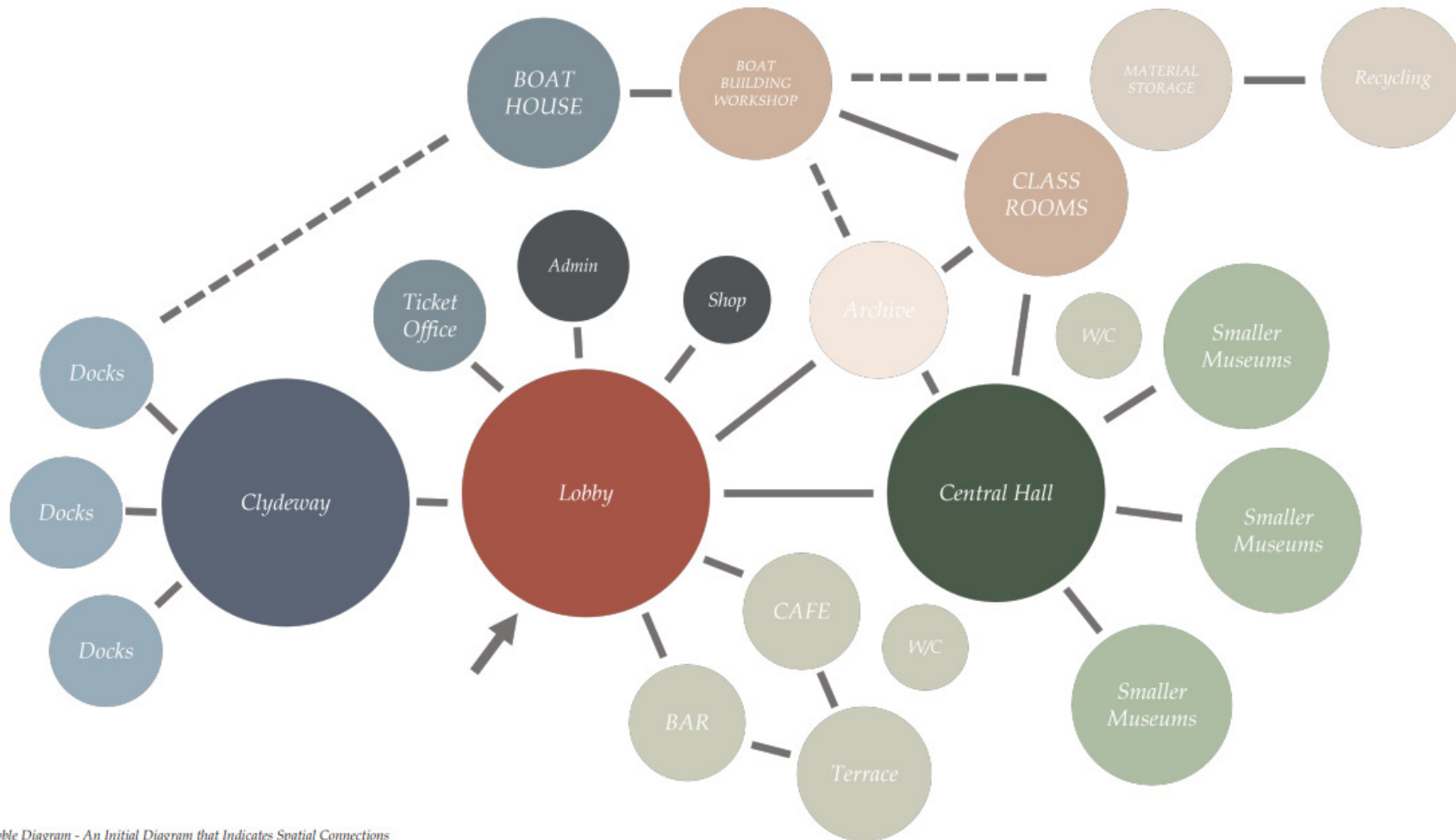


CYKELSLAGEN - COPENHAGEN



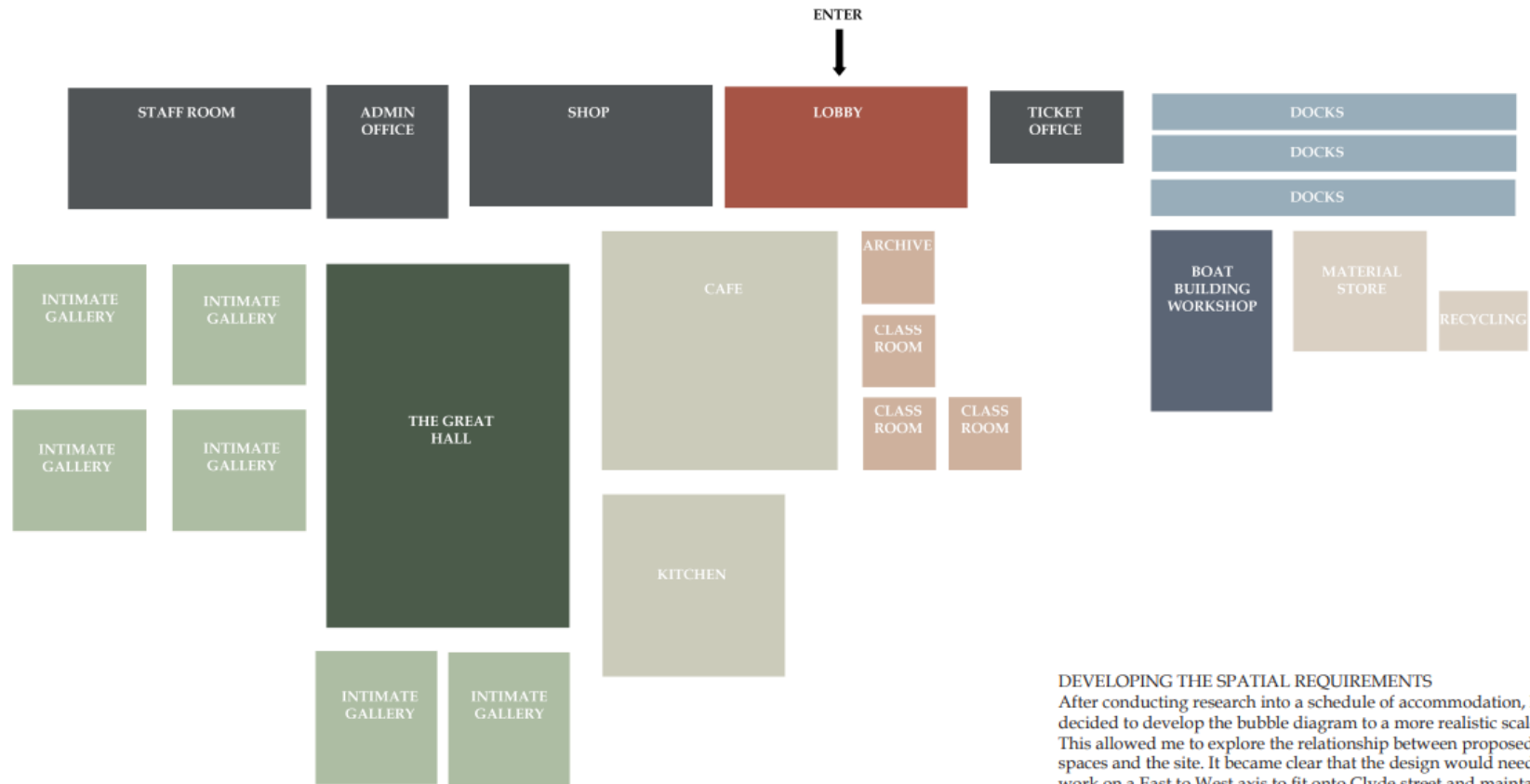
BIKE TUNNEL - SAN SEBASTIAN

SPATIAL REQUIREMENTS: INITIAL BUBBLE DIAGRAM



Bubble Diagram - An Initial Diagram that Indicates Spatial Connections

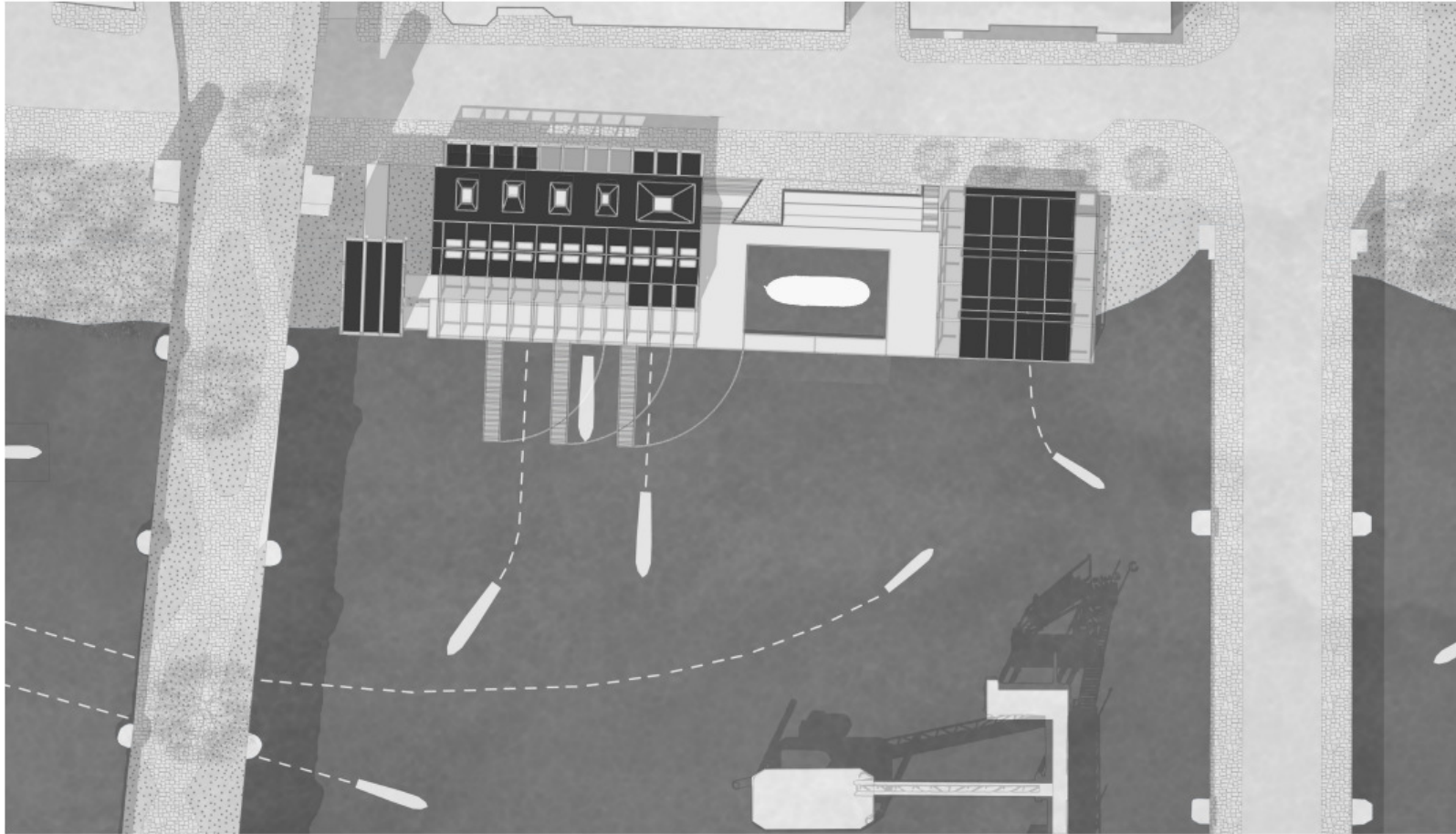
SPATIAL REQUIREMENTS: SCHEDULE OF ACCOMMODATION DIAGRAM (TO SCALE)



DEVELOPING THE SPATIAL REQUIREMENTS

After conducting research into a schedule of accommodation, I decided to develop the bubble diagram to a more realistic scale. This allowed me to explore the relationship between proposed spaces and the site. It became clear that the design would need to work on a East to West axis to fit onto Clyde street and maintain a relationship with the waterfront.

SITE PLAN WITH PROPOSED DESIGN: MASSING WITHIN CONTEXT



Site plan with Proposed Massing and Civic Courtyard

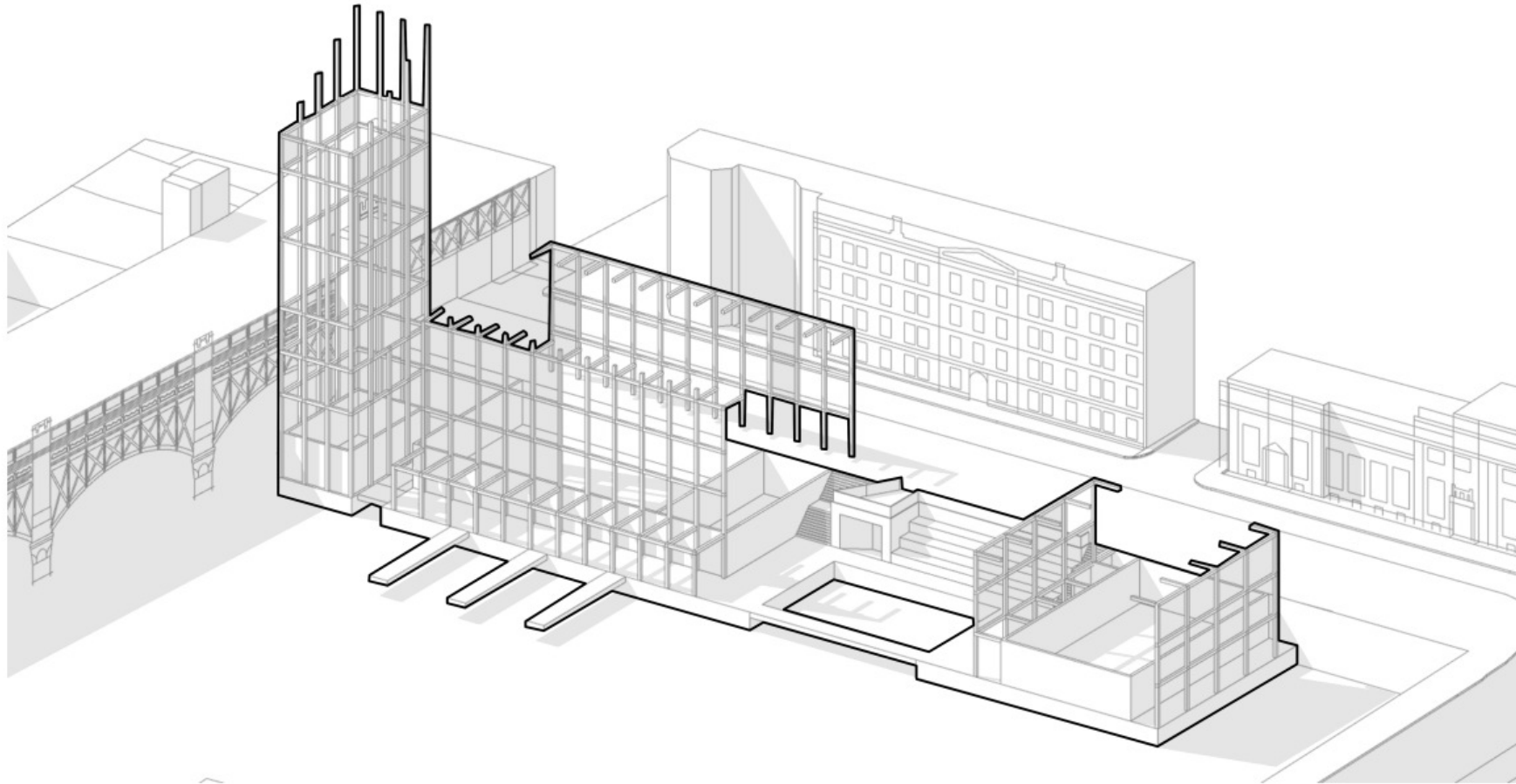
AXONOMETRIC VIEW: PROPOSED MASSING WITHIN CONTEXT



Axonometric view showing three key forms

DEVELOPMENT DIAGRAM: THE EXTERNAL FRAMEWORK

The external structure rises like scaffolding on a new ship. It not only holds the building together but connects the form to its function, the old and the new.



MATERIAL DEVELOPMENT: EXPERIMENTING WITH MATERIALITY (INTERIOR & EXTERIOR)

EXPERIMENTING WITH MATERIAL (THE ATRIUM)

Initially, the internal materiality plan involved incorporating vibrant colored panels to differentiate between various elements in the building. The design proposed a combination of concrete and glulam structure and a terrazzo floor. However, it soon became apparent that the design included an excessive number of materials and a large colour palette that did not complement each other.



Initial Ideas for materiality (atrium)



Developing Ideas for materiality (atrium)

EXPERIMENTING WITH MATERIAL (THE EXHIBITION)

My initial plan was to create a contrast between the external industrial structure and a cozy internal atmosphere. However, as the design progressed, it became apparent that this approach was disjointed. Therefore, the focus shifted to incorporating the black colour scheme from the exterior into the exhibition space to create a cohesive design.



Initial Ideas for materiality (exhibition space)



Developing Ideas for materiality (exhibition space)

EXPERIMENTING WITH MATERIAL (EXTERNAL)

Initially, the design brief called for exploration of industrial forms and languages for the proposal. To achieve this, I experimented with various colours and shapes of acoustic panels for the workshop. The diagram featured both yellow and black colours, but it became apparent that a more minimal and subdued colour scheme was preferable.



Initial Ideas for materiality (external cladding)



Developing Ideas for materiality (external cladding)

MATERIAL CONSTRUCTION: PRE-CAST CONCRETE PANELS (METHODOLOGY)

DESIGN AND BUILD OF A 1:1 CONCRETE PANEL:

I created a sample cast of the external wall cladding using corrugated sheeting to mimic the utilitarian aesthetic of Glasgow's shipyards. Although concrete is not the most sustainable option, it was necessary due to the location near the river while also providing excellent airtightness within the building envelope. The sample was relatively easy to make and could be replicated with a well-constructed shutter-work to save time and money. In reality, the larger panels will be fixed to the internal structure using Ancon wall brackets and reinforced with re-bar rather than a gridded mesh. However, the process was not error-free, and I suggest using a vibrating table to remove air bubbles during the drying process next time. I will now try and repeat the pattern put for an internal acoustic panel (see the next page).



Step 1: Creating the shutter-work with corrugated plastic panel



Step 2: Mixing the concrete to the right consistency



Step 3: Place reinforcing steel to act as re-bar



Step 4: Let it cure and dry over night



Step 5: Remove shutter-work



Step 6: Allow the moisture to remove and let the colour change

STRUCTURAL APPRAISAL: MODULAR CONSTRUCTION

SWAT ANALYSIS FOR MODULAR CONSTRUCTION:

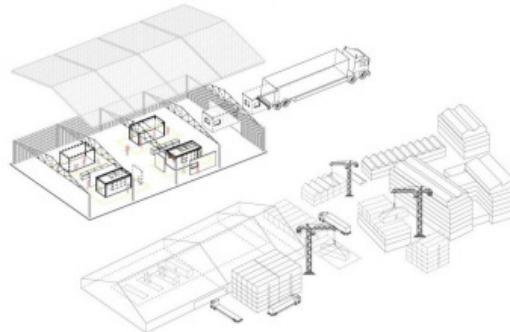
Prefab construction methods have strengths, weaknesses, opportunities, and threats. The strengths of prefab construction include faster construction time, cost-effectiveness, and sustainability benefits. Weaknesses include a lack of design flexibility and the need for highly skilled labor during the manufacturing process. Opportunities include increased demand for sustainable building methods and the ability to improve safety and quality control. Threats include market competition and potential negative perceptions of the quality of prefab buildings. As I develop the plans of the design, I will need to test if modular would be suitable for a complex programme.



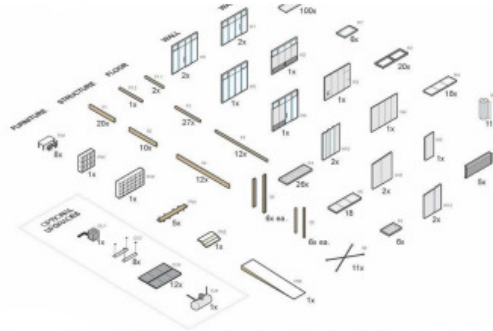
Construction Scotland Innovation Centre (overhead crane)



Construction Scotland Innovation Centre (prefab walls)



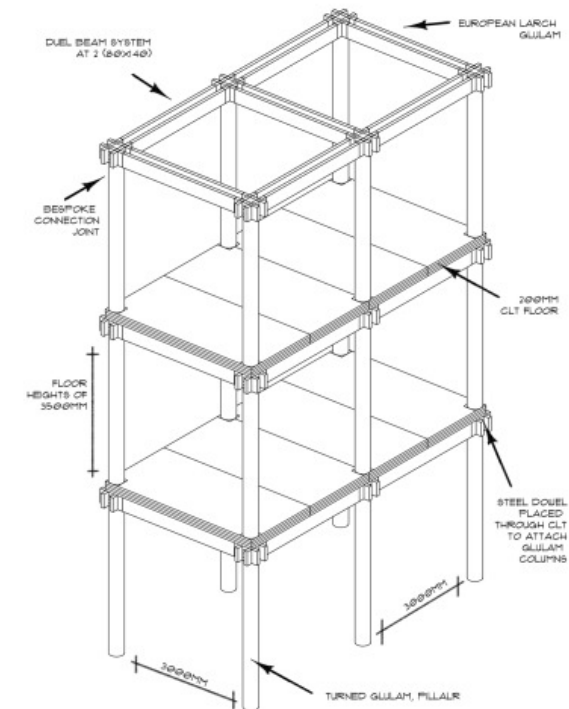
A diagram showing the methodology of pre-fabricated construction (google images)



A diagram of how a building can be de-constructed into a kit of parts (google images)

PRECEDENTS INFORMING DESIGN DECISIONS

After researching modular design, I developed an initial structural bay plan that utilizes prefabricated CLT and glulam panels. The grid was calculated for a 3m span and includes a 200mm CLT floor. However, additional research is needed for the column system which will be made of turned glulam (larch).

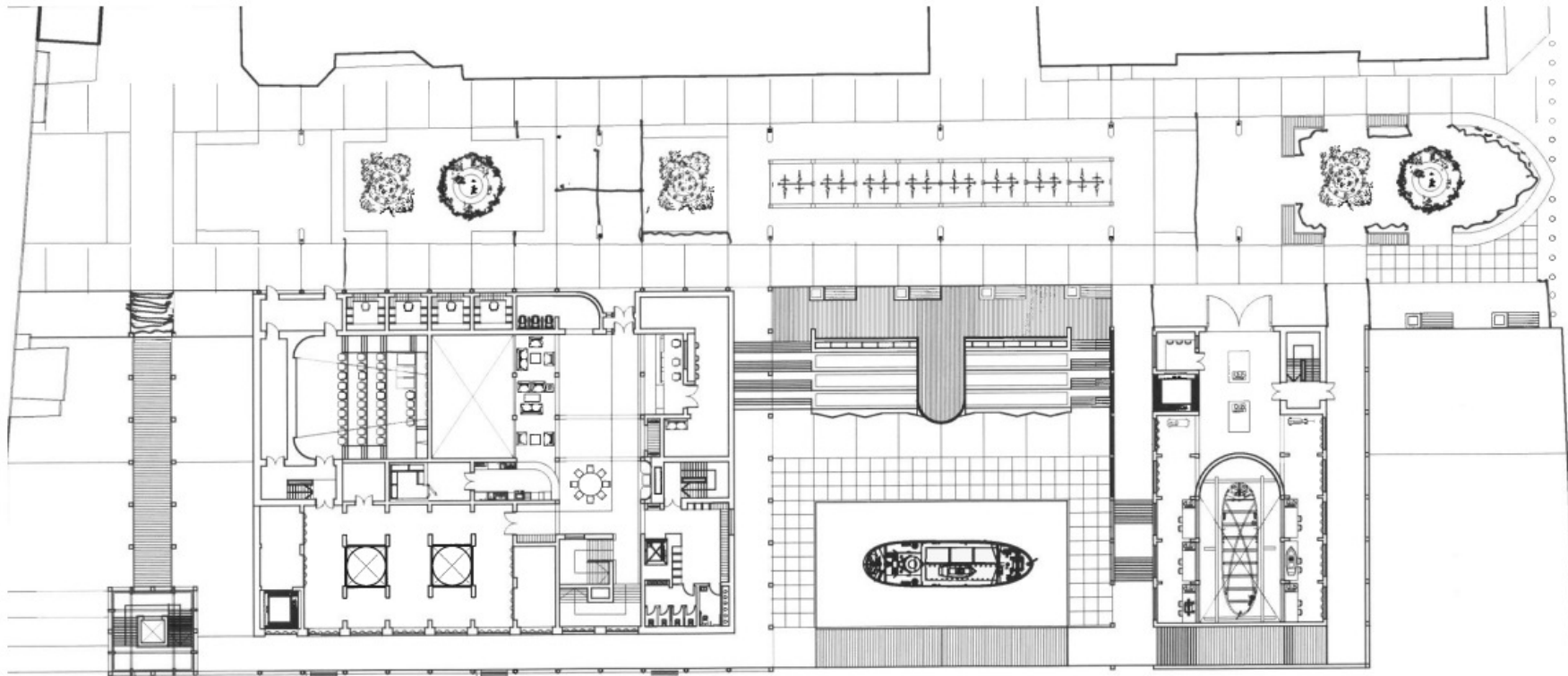


Initial pre-fabricated structural bay for the Vital Spark made from Glulam columns and beams and a CLT floor.

LANDSCAPE DEVELOPMENT: THE EXHIBITION SPACE

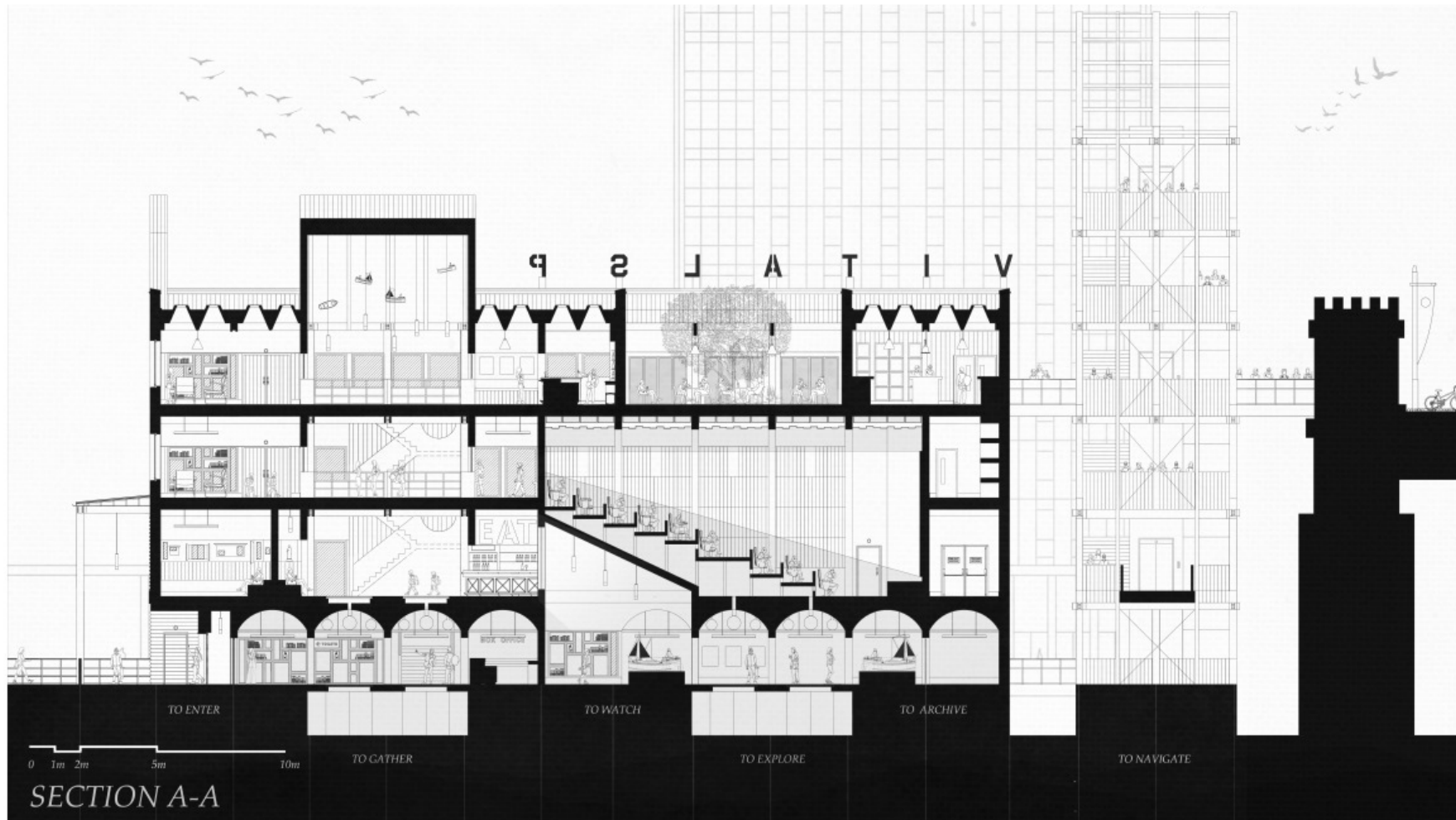
INITIAL IDEAS FOR CURTILAGE PLAN

When considering the landscape surrounding the civic buildings, my initial ideas focused on lighting, surfaces, safety, bikes, and rewilding. To address safety, the design incorporates elements such as well-lit pathways, clear sightlines, and a bike shed in the form of a classical temple that encourages alternative modes of transportation. The proposed park on Clyde Street to the north of the building includes benches that provide a place for people to stop and rest. The paving pays homage to the rigid grid structure within the building and extends to the external surfaces, creating a cohesive design. To enhance safety, I have also designed streetlights based on the porthole forms found within the museum, which provide additional lighting and visual interest. The grid structure contrasts with the natural, free-flowing form of the high-line, where the surrounding landscape also references the form of ships. Overall, the landscape design not only addresses safety concerns but also creates a functional space for people to enjoy.



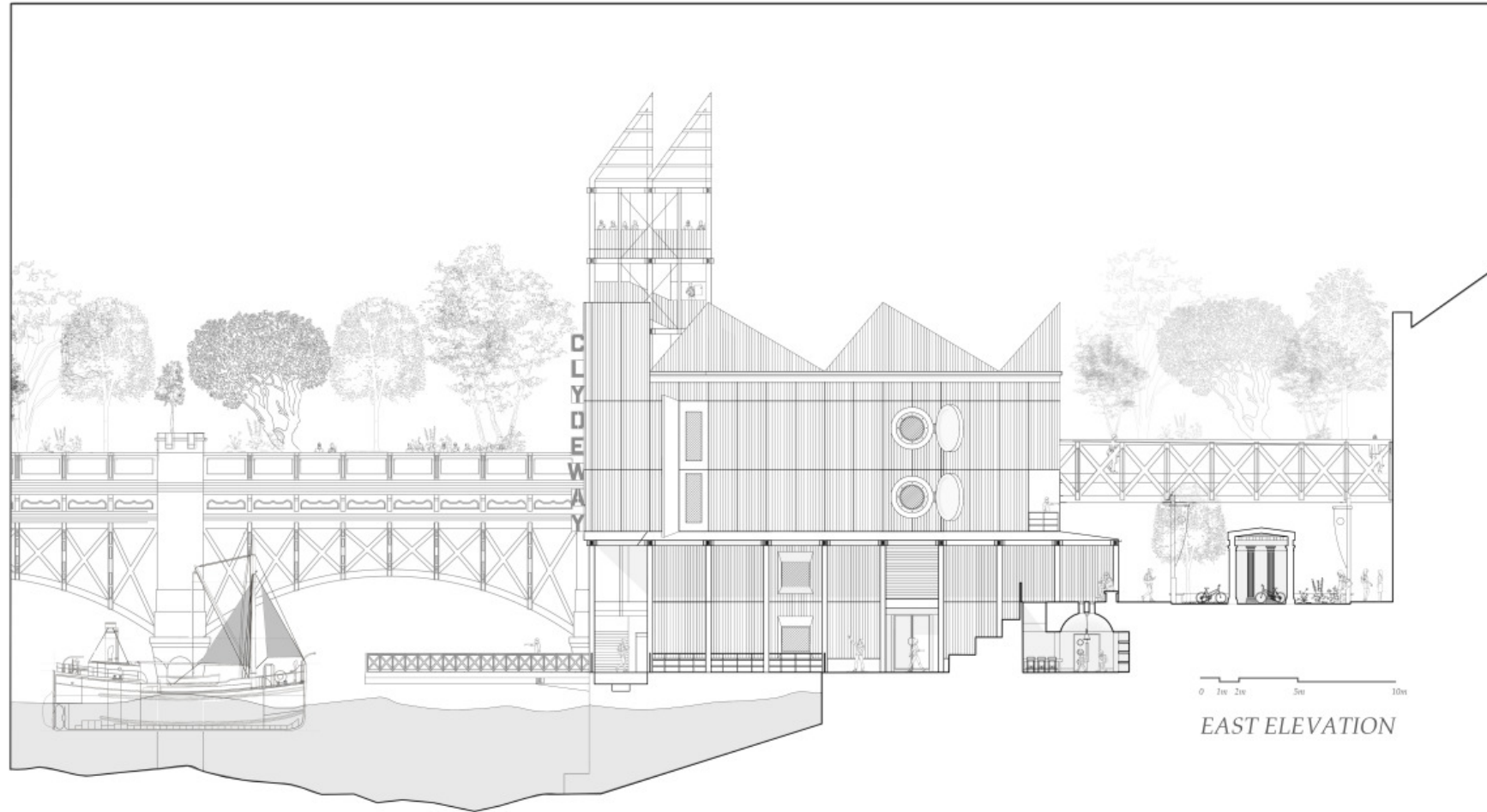
SECTION A-A:

DRAWN AT 1:150 - SECTION THROUGH THE CINEMA

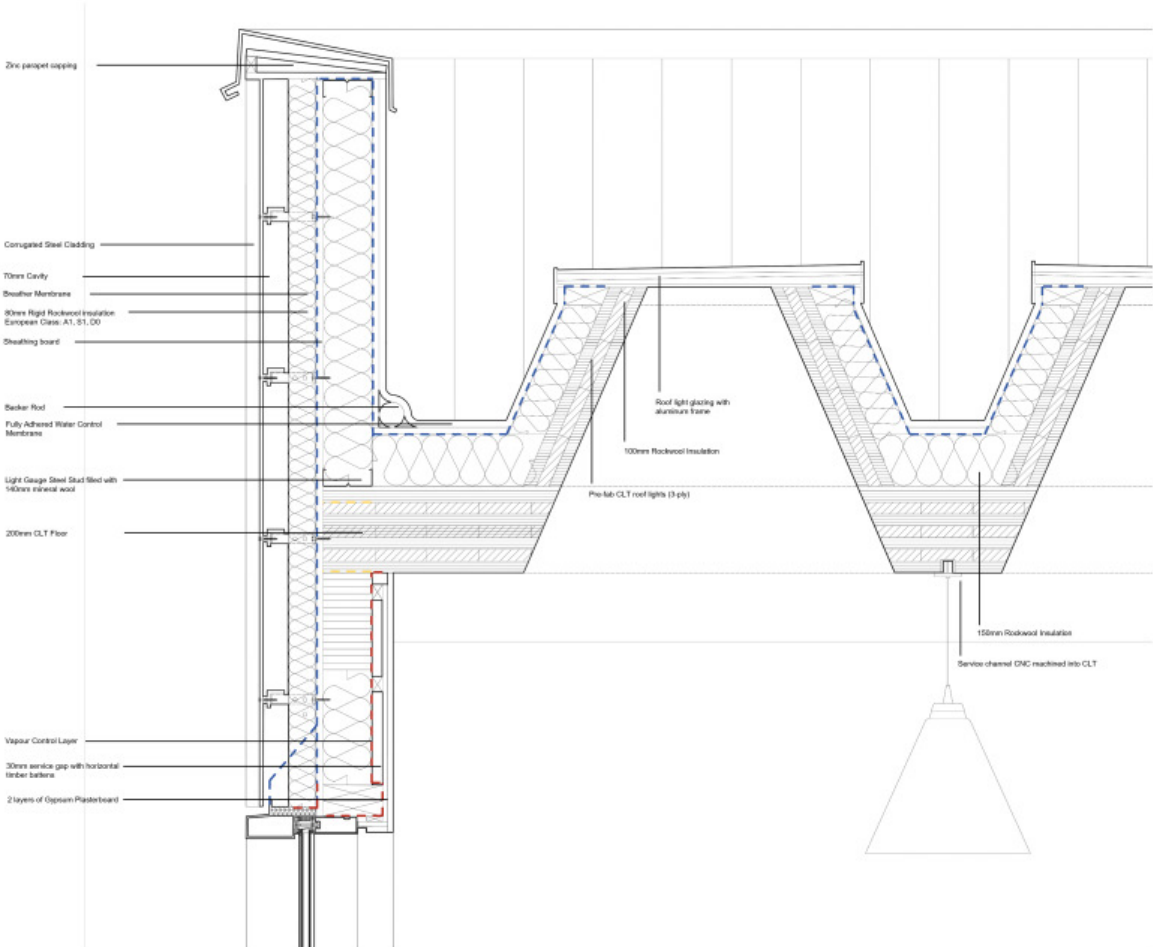
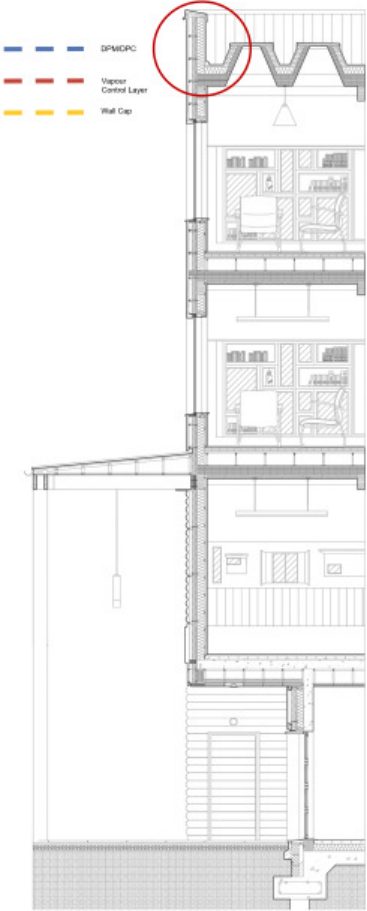


EAST ELEVATION:

DRAWN AT 1:150 A3



1:5 DETAILS: DEVELOPING IDEAS - VIEW FROM THE WORKSHOP



ESCAPE:

ESCAPE PRINCIPLES(2.9.1)

ESCAPE PRINCIPLES

The section of the building regulations being referred to here emphasizes the importance of ensuring that occupants of a building can escape from a fire without assistance from the fire and rescue service. This is achieved by providing independent routes of escape that lead directly to a place of safety or through adjacent compartments or protected zones.

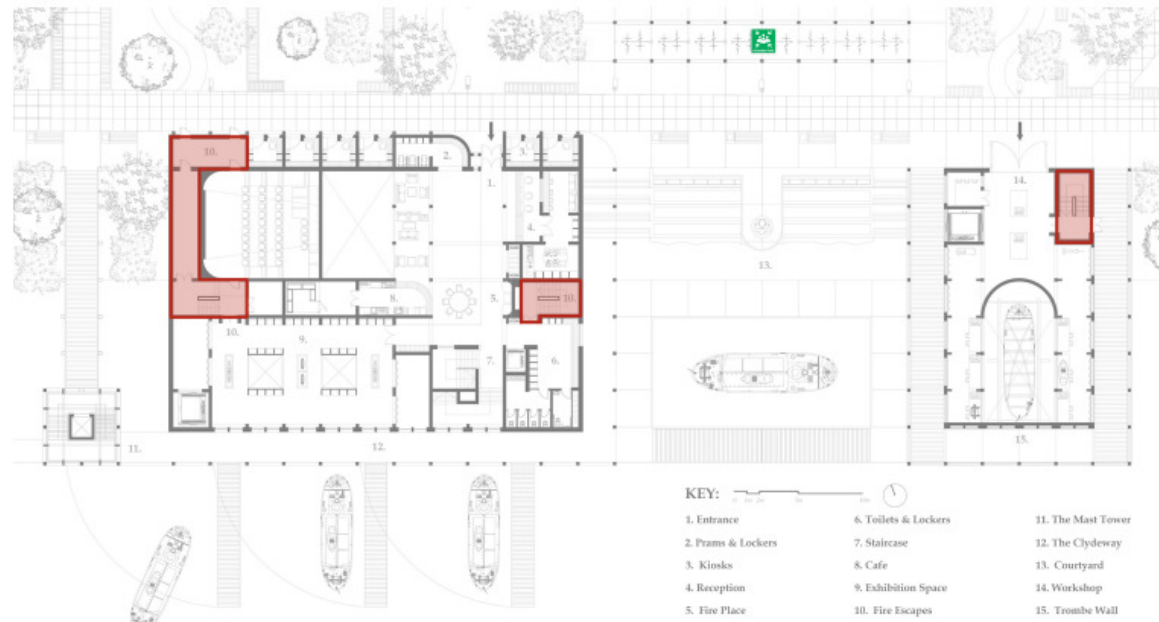
The time available for occupants to leave a room or compartment before being overcome by fire or smoke depends on various factors, including the number and mobility of occupants, the containment measures in place, the geometry of the room or compartment, means of early warning of fire, fire dynamics, distance to reach a place of safety or protected zone, and the number and width of exits.

APPLICATION OF THE REGULATIONS:

Within the design, there are three fire escape stairs/lobbies that are to be used in the event of a fire. Furthermore, the external access onto balconies and connecting tower allows for more escape routes on the upper levels. According to the building standards, travel distances should be calculated in accordance of the occupancy profile within the building. While this building may consist of different occupancy profiles, The common denominator uses 'Slow evacuation'. As this design uses a slow evacuation there are maximum travel distances, for one direction of travel it is 15m, for more than one directions of travel it is 32m.

The term "travel distance" refers to the distance that occupants must travel to reach a protected door from any point within a storey, following the actual route of escape. This includes measuring the distance across rooms.

The risk to occupants increases as they have to travel further within a building to reach a protected door. Therefore, the travel distance should be such that occupants can reach a protected door before being overcome by fire or smoke. The appropriate distance will depend on the specific nature of the fire and the characteristics of the occupants.



Floor plan showing escape routes and staircases (highlighted in red) and muster point on Clyde Street

OCCUPANCY PROFILE	BUILDING USE	ONE DIRECTION OF TRAVEL	MORE THAN ONE DIRECTION OF TRAVEL
VERY SLOW EVACUATION	Residential care buildings (e.g. nursing homes and residential schools for children etc). Buildings primarily for disabled people, or people with learning difficulties	9m	18m
SLOW EVACUATION	Residential buildings (other than residential care buildings and hospitals) (e.g. hotels, hostels etc), entertainment buildings, assembly buildings, shops, room or auditorium with provision for fixed seating, storage building (Class 1) other than a bonded warehouse containing spirituous liquor	15m	32m
MEDIUM EVACUATION	Offices, storage building (Class 2), open sided car parks, bonded warehouse containing spirituous liquor and factories	18m	45m
OTHER (area of special fire risk)	Within a place of special fire risk	9m	18m

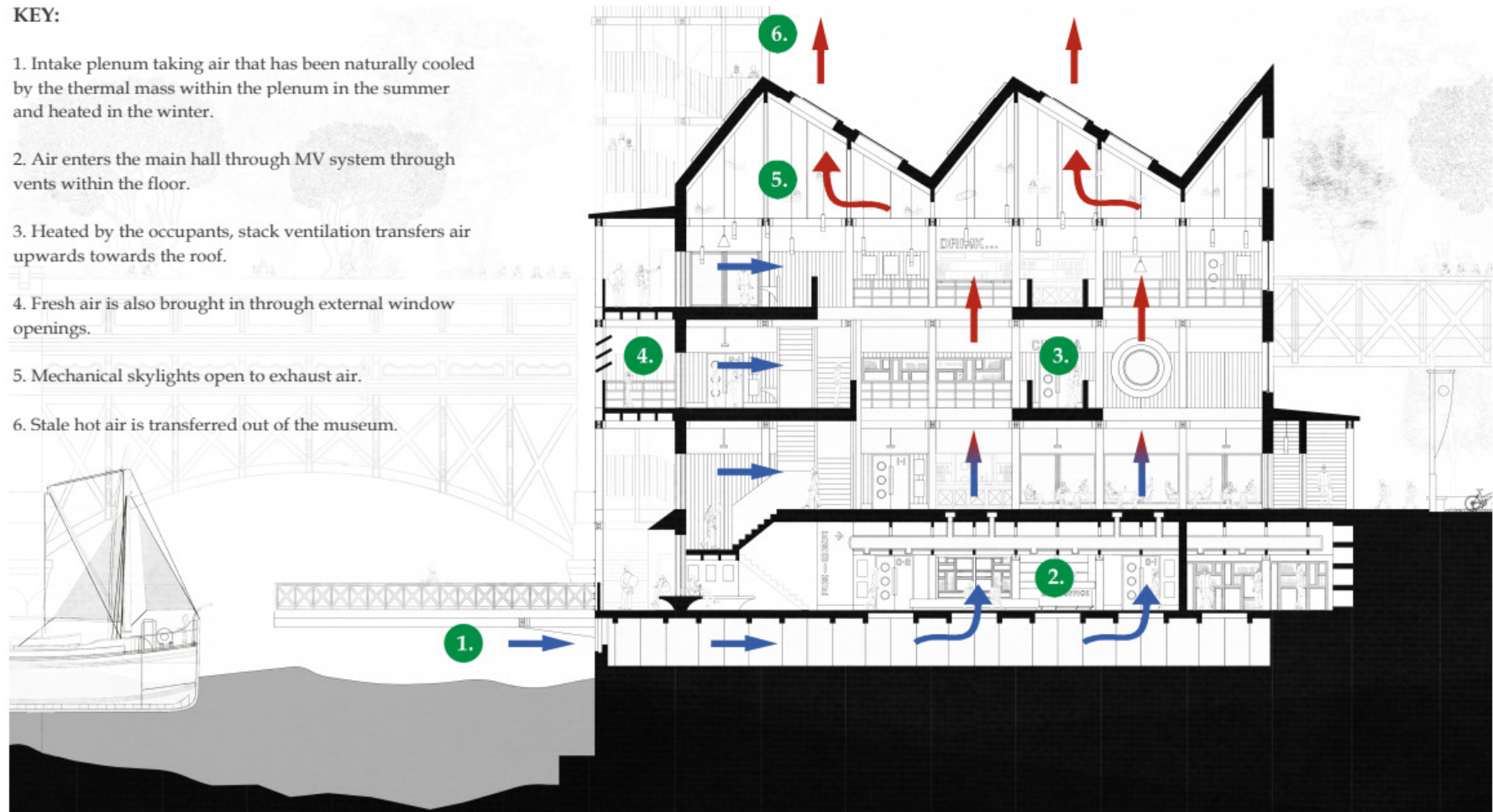
Table showing the occupancy profile and the travel distances used for escape

VENTILATION STRATEGY:

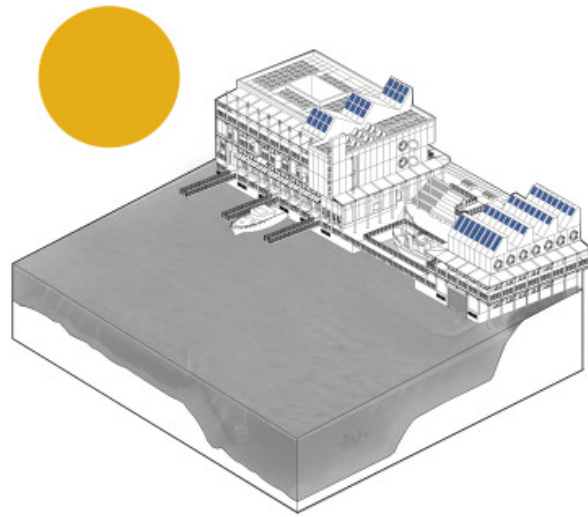
PASSIVE COOLING SYSTEM: FROM THE RIVER CLYDE

KEY:

1. Intake plenum taking air that has been naturally cooled by the thermal mass within the plenum in the summer and heated in the winter.
2. Air enters the main hall through MV system through vents within the floor.
3. Heated by the occupants, stack ventilation transfers air upwards towards the roof.
4. Fresh air is also brought in through external window openings.
5. Mechanical skylights open to exhaust air.
6. Stale hot air is transferred out of the museum.

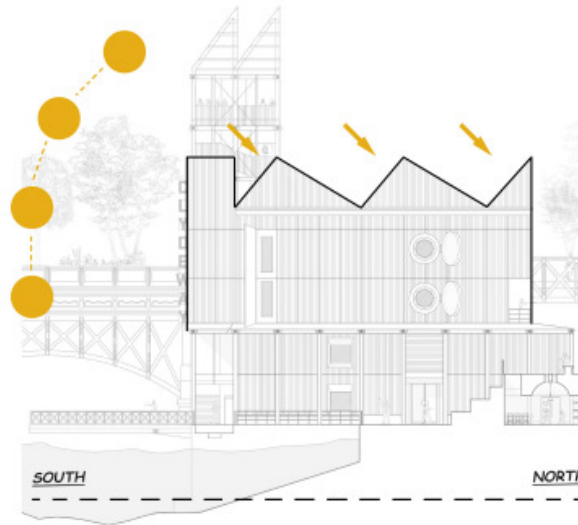


PASSIVE DESIGN: ROOF FORM & PHOTOVOLTAIC PANELS



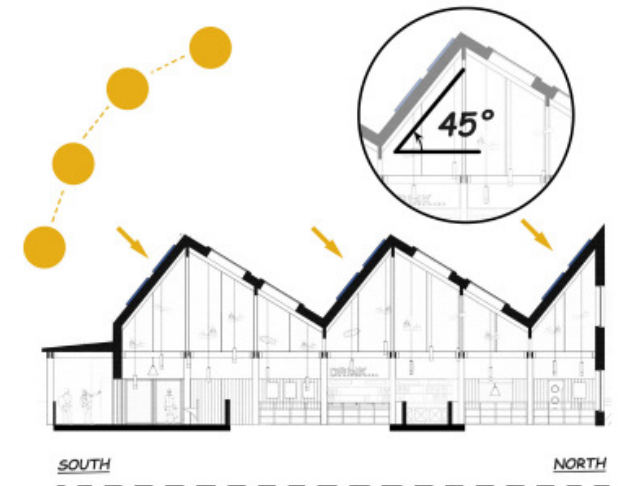
PHOTOVOLTAIC PANELS - POWERED BY THE SUN

Incorporating photovoltaic (PV) panels in the design of The Vital Spark would provide numerous benefits. First and foremost, using PV panels would significantly reduce the museum's carbon footprint by generating clean, renewable energy. This would not only save money on electricity costs, but also promote sustainability and environmental responsibility. Additionally, PV panels would help to establish The Vital Spark as a leader in innovative and eco-friendly design.



SOUTH FACING SAW-TOOTH ROOF:

The sawtooth design allows for multiple ridges that run parallel to each other, with one side of each ridge facing south. This orientation ensures that the panels receive maximum exposure to the sun throughout the day. Additionally, the angled design of the sawtooth roof helps to reduce shading, which can hinder the efficiency of the panels.



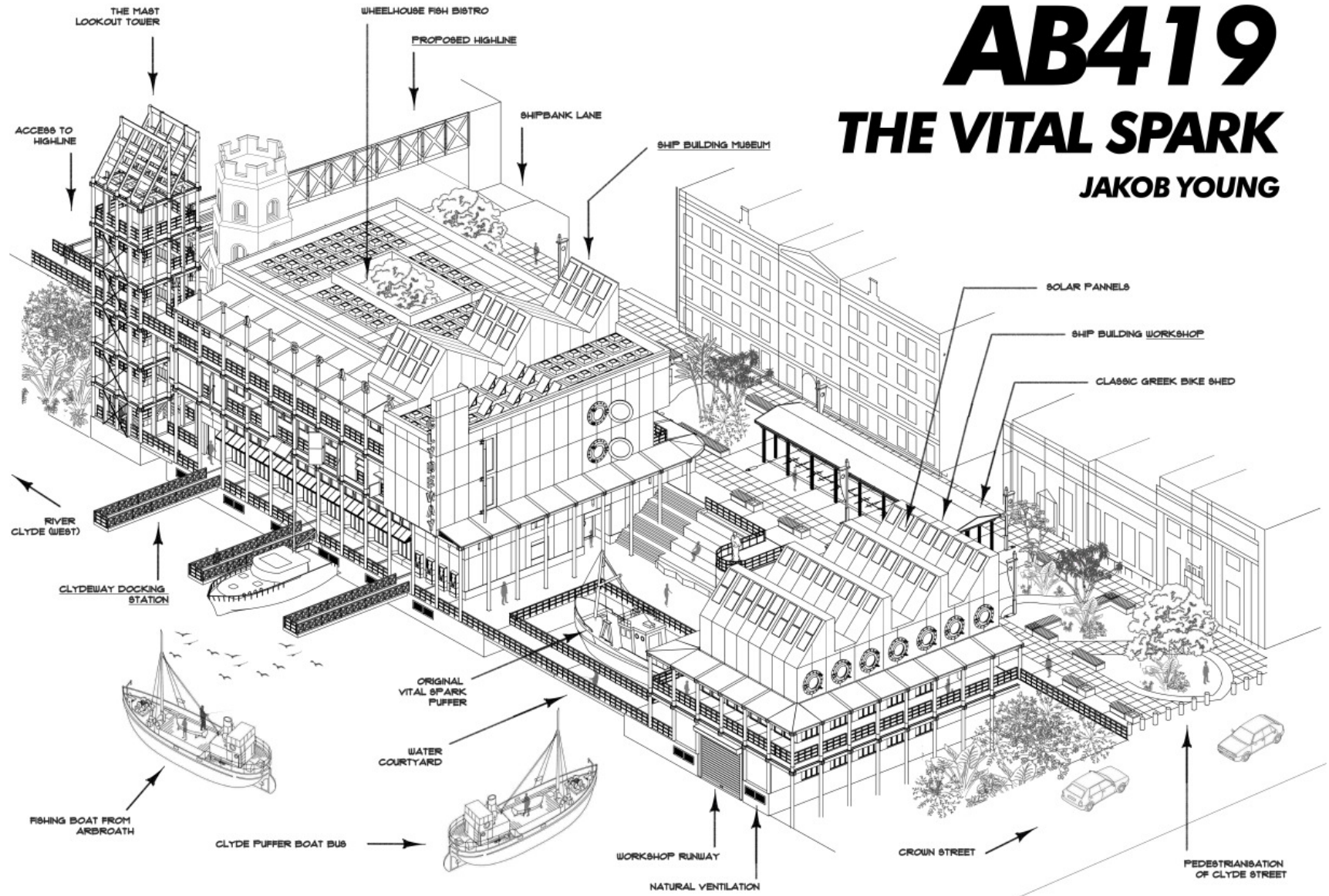
TO REFLECT:

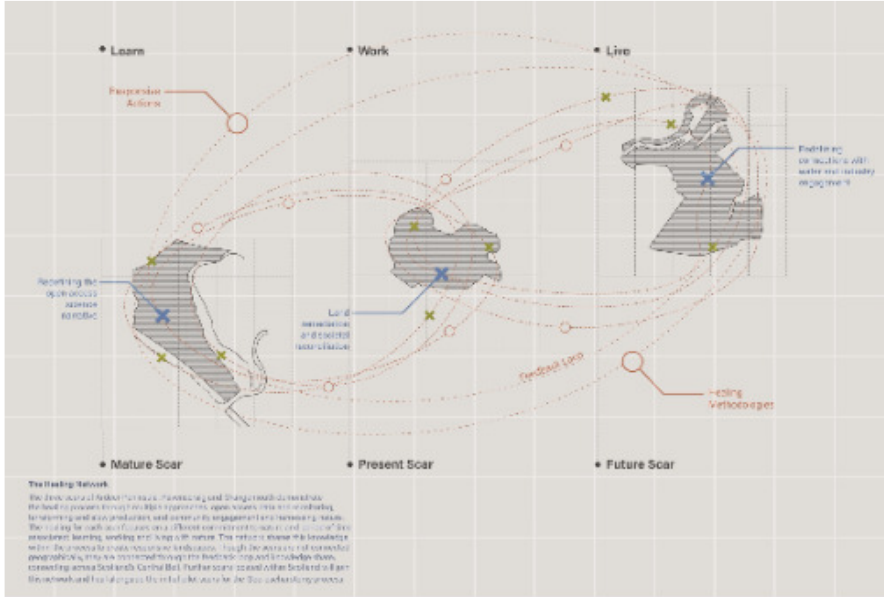
Angling solar panels at 45 degrees is considered optimal for maximizing energy production in many regions. This angle allows the panels to receive the most direct sunlight during peak daylight hours, which helps to maximize energy output. In addition, this angle helps to reduce the effects of shading from nearby objects such as trees or buildings, which can reduce panel efficiency.

AB419

THE VITAL SPARK

JAKOB YOUNG





Diagnose

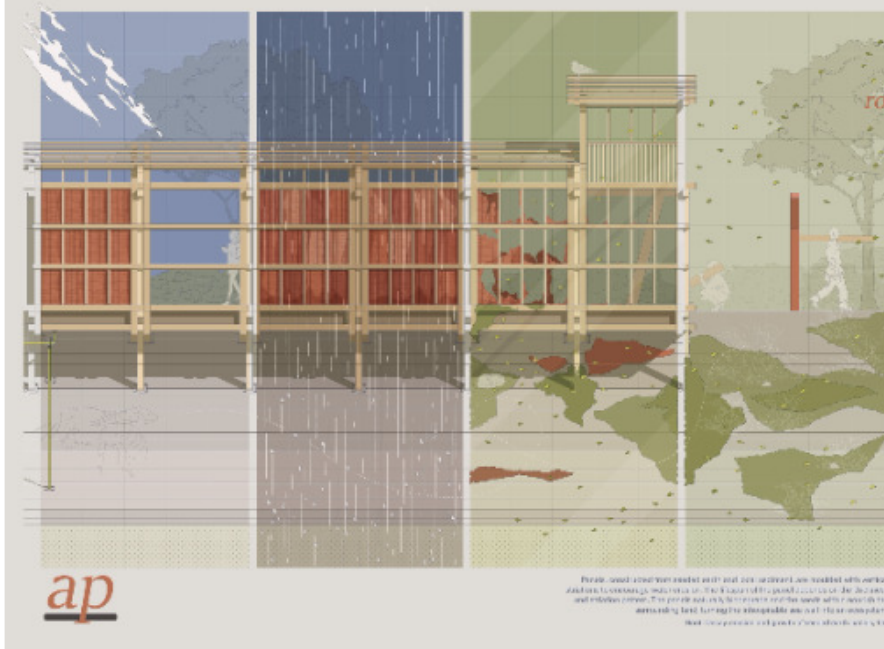
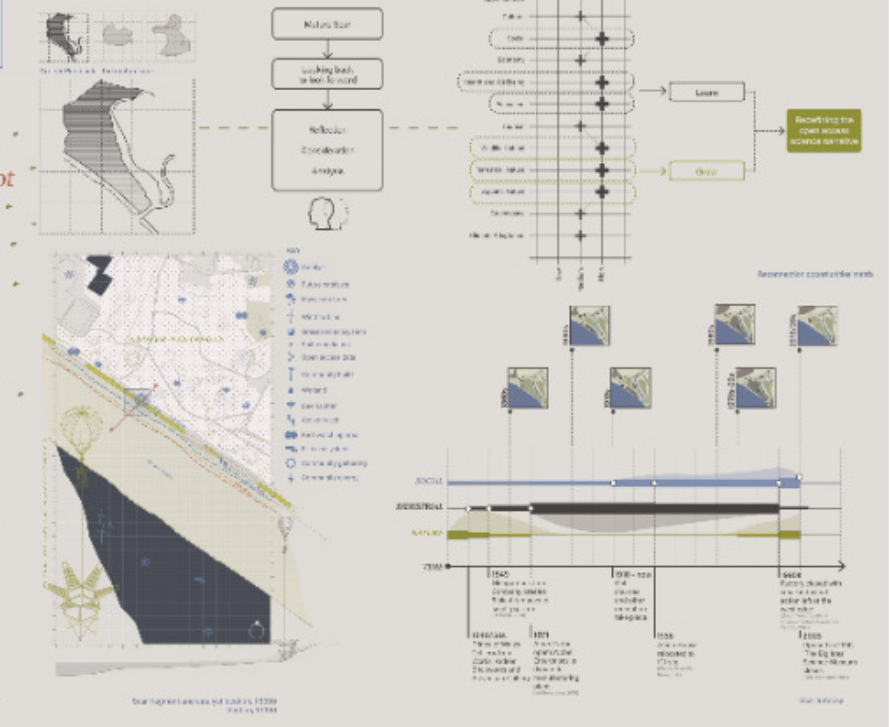
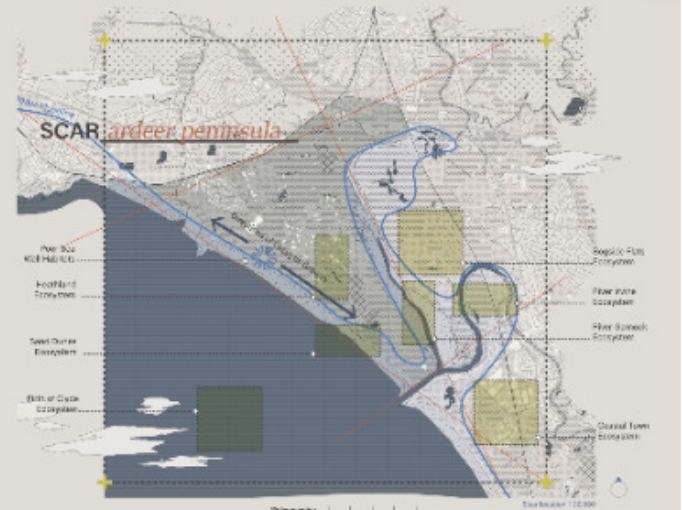
Identify the problem and its causes. This involves a thorough analysis of the current situation, including the physical environment, the social context, and the cultural values. The goal is to understand the underlying causes of the problem, rather than just the symptoms.

Healing Area and Program

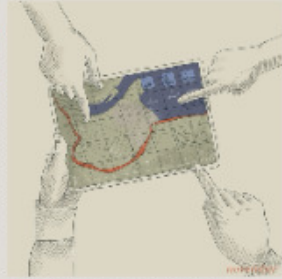
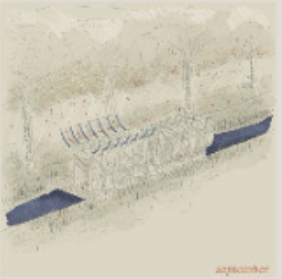
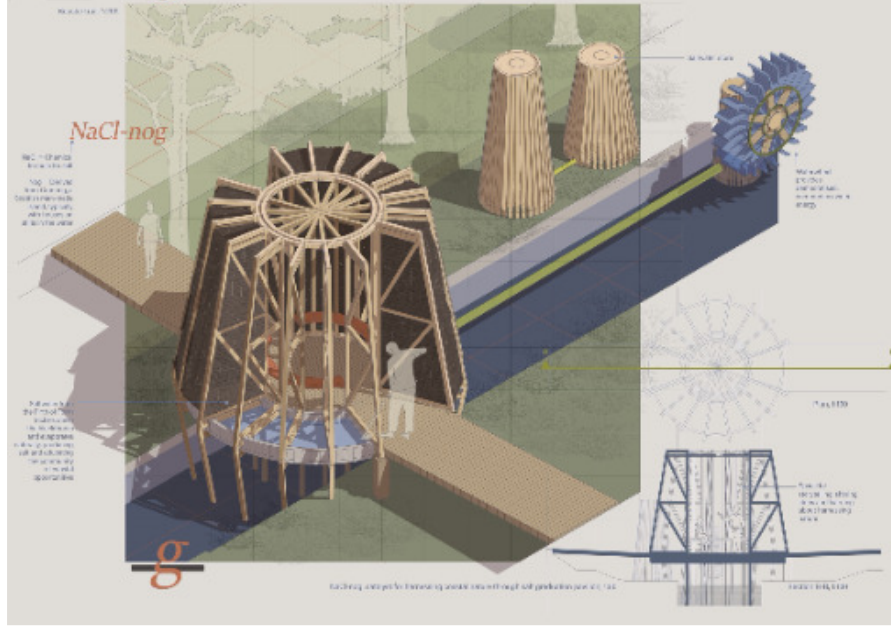
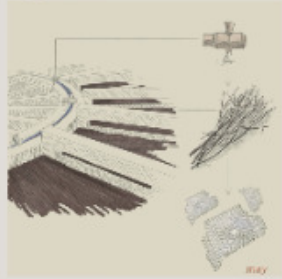
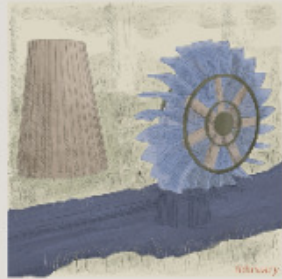
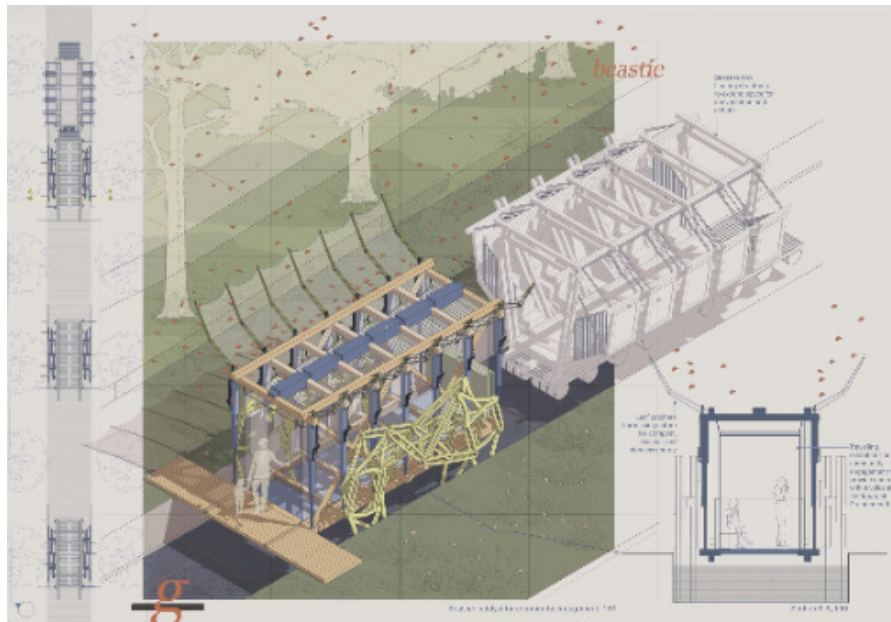
Define the area to be healed and the program of actions to be taken. This involves identifying the specific locations and activities that will be the focus of the healing process. The program should be tailored to the needs of the community and the characteristics of the healing area.

Analysis and Interpretation

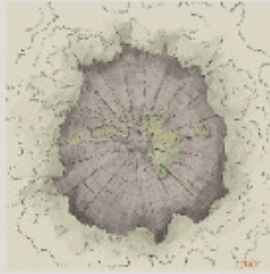
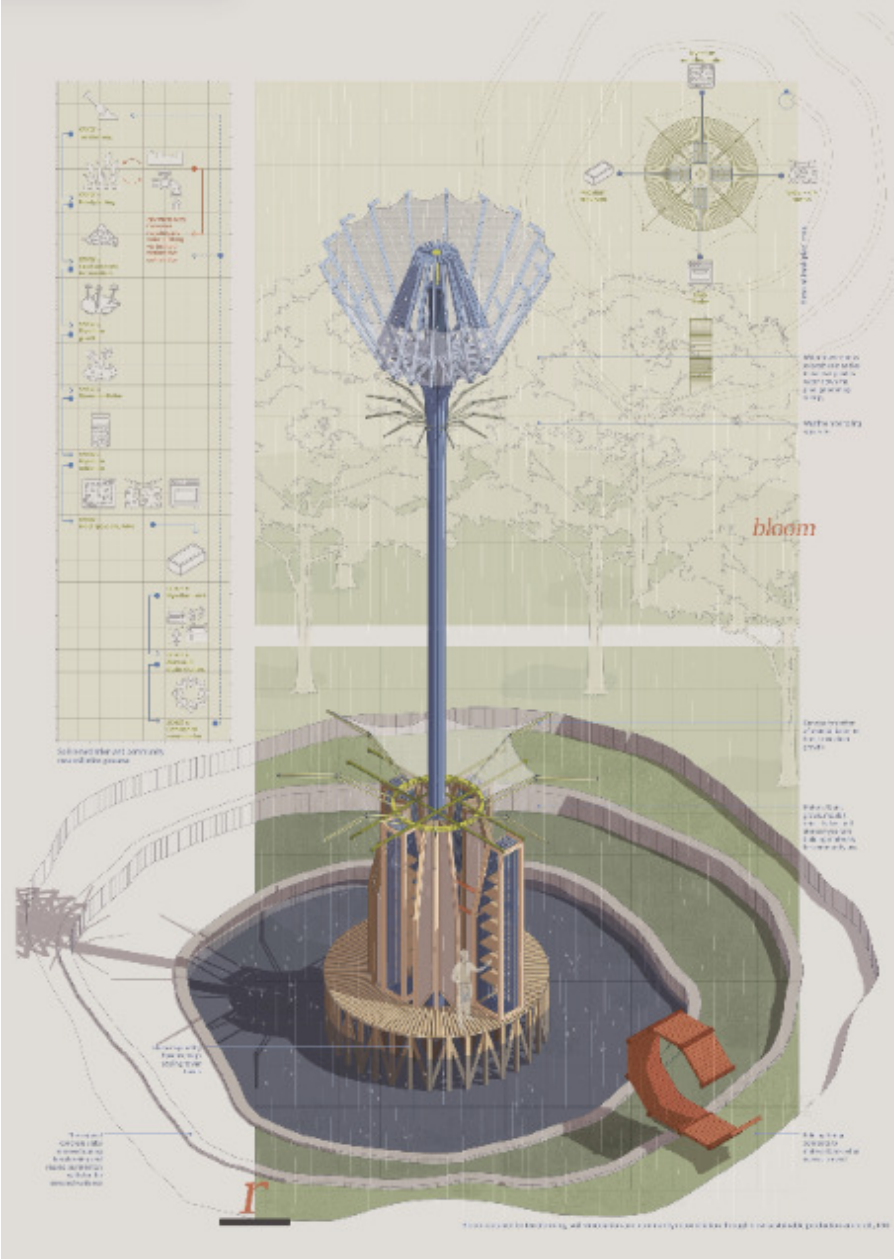
Analyze the data and interpret the results. This involves a careful examination of the information gathered during the diagnostic phase, and a synthesis of the findings into a coherent narrative. The goal is to identify the key issues and opportunities for action.



These views were created with our new digital tool, which allows us to create and share our designs and ideas. It's a powerful tool that helps us to communicate our vision and to work together to create a better future.



Division of the process...
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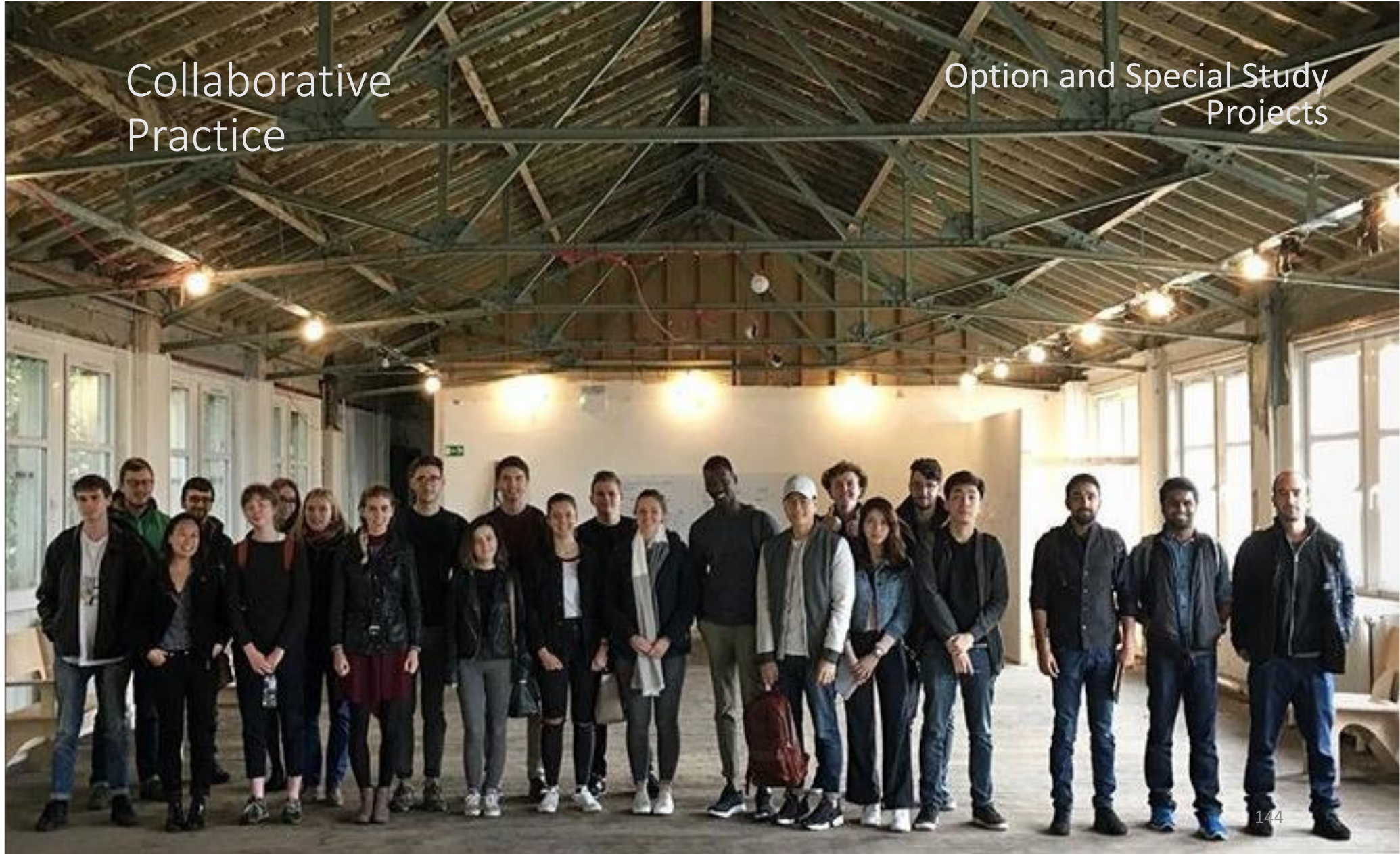
Between 2012 and 2014, the 'bloom' structure was built in a park in London. It is a sustainable water and energy structure that uses a central water tower to supply water to the surrounding area.

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Collaborative
Practice

Option and Special Study
Projects



Industry
Workshops

Option and Special Study
Projects

Study Visits



Study Visits

Madrid
Paris
Venice
Ghent
Berlin
Verona
San Jose
London
Dublin
Amsterdam
Copenhagen
Bilbao
Rotterdam
San Sebastian



Exhibitions

End of Year Show



Exhibitions



End of Year Show

Exhibitions

Project Process




Exhibitions



Real Clients



The image shows a modern, multi-level atrium. The upper level is a mezzanine with a metal mesh railing, where numerous people are gathered around various architectural models and display boards. The ground floor is visible through the railing, showing a bright, open-plan area with tables and chairs, also populated with people. The ceiling features exposed steel beams and large windows. The overall atmosphere is one of a busy, collaborative workspace or exhibition space.

Exhibitions

End of Year Show

End of Year Show

Architecture and the
City





End of Year Show