



The Instrument of The Unseen.
A Platform Stretching from Tower to Foyle
Angus Harrow

Using a 1:1000 model as a tool to explore what happens on the ground level, the project's intention is to create a platform that stretches from the tower to the Foyle, creating a new architectural instrument that connects the two. The model is a tool to explore what happens on the ground level, the project's intention is to create a platform that stretches from the tower to the Foyle, creating a new architectural instrument that connects the two.

1:100 Model from Semester 1 illustrating the initial concept of the Unseen. Where the Project's Frame Represents the Internal Unseen Elements of the Martello Tower

Angus Harrow Selected Pieces

CV and Portfolio Navigation

Sir John Lawes School (2013-2018)

GCSEs

Sir John Lawes School (2013-2018)

A Levels

Maths, Art, Biology

Extra Curricular

Grade 8 Clarinet (July 2019)

British Biathlon Finalist (2018)

Part I University of Liverpool (2020-2023)

Pages 3-11

2:1 Architecture, K100, BA (Hons)



Sept - Dec 2022

Liverpool Project for a Co-Living Development



Jan - May 2023

Liverpool Project for a Co-Living Development

I completed my BA Architecture (Part I) at University of Liverpool between 2020–2023, where I was first introduced to architecture as both a technical discipline and a way of thinking about people, place, and everyday life. Through projects including a co-living development for NHS workers in Liverpool's Georgian Quarter and a new film school for the university campus, I began developing an interest in socially conscious design, environmental strategies, and the relationship between buildings and public experience. The course established the foundations of my design approach and encouraged a reflective attitude toward construction, context, and spatial experience. Short listed for the 'Swedish Wood Student Architect Award' In recognition for dynamic timber shading fins in my final degree project.

Extra Curricular

University of Liverpool Swim Team Captain (Sept 2022 - June 2023)

As a member of the swim committee I have been required to develop my organisational and leadership skills.

Part I Architectural Assistant (2023-2025)

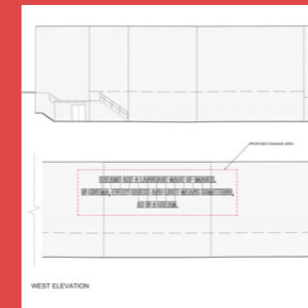
Pages 12-14

Mountford Pigott LLP

The Line



Sept 2023 - August 2024
Mountford Pigott LLP



June 2025
The Line

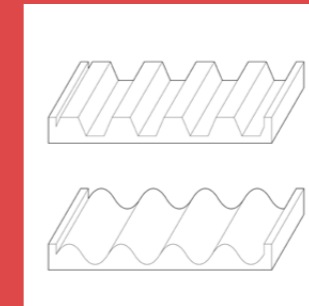
Following my Part I studies, I worked at Mountford Pigott LLP as a Part I Architectural Assistant between September 2023 and August 2024. Working across residential, industrial, commercial, and asset management projects gave me an important introduction to professional practice and the realities of delivering architecture across different RIBA stages. My role involved preparing planning drawings, feasibility studies, 3D models, visualisations, and Design & Access Statements using AutoCAD, SketchUp, and Enscape. The experience strengthened my understanding of planning processes, technical communication, and how design decisions are translated into deliverable proposals.

More recently, I worked with The Line on a planning application for a new public art installation in East London, where I created and edited drawings for submission. Drawing on my previous professional experience, I was able to advise on presentation and planning requirements, contributing toward the project successfully receiving approval the following month.

Part II University of Edinburgh (2024-2026)

Pages 15-27

MArch Architecture



Sept - Dec 2024

Architectural Technology
Research



Jan - May 2025

Breaking Ground



Sept 2025 - May 2026

The Instrument of the
Unseen: A Platform
Stretching from Tower to
Foyle

I completed my MArch Part II at The University of Edinburgh, where my work focused on architecture's relationship with ecology, material research, and contested landscapes. Through projects ranging from rammed earth retrofitting in Scottish housing to post-petroleum regeneration proposals in Aberdeen, I developed an approach grounded in site-specific research and technical experimentation. My thesis project, The Instrument of the Unseen, used LiDAR scanning and adaptive reuse to transform the defensive ruin of Magilligan Point's Martello Tower into a public music venue embedded within the dune landscape.

Extra Curricular

Virgin Hotels Edinburgh

During my MArch I worked part time at the Virgin Hotel Edinburgh as a meetings and events assistant

The University of Edinburgh Triathlon club

Software Skills Accumulated

AutoCAD
Sketchup
Rhino
Adobe Creative Suite
QGIS
Revit
Blender
VRAY
Leica Cyclone REGISTER 360
Leica G1&2 LiDAR Scanners
Recap
Cloud Compare

Part I (BA) - Liverpool Project For A Co-Living Development

Site Location *Liverpool, Merseyside, UK*
Building Use *Residential*

"Design a co-living development in Liverpool's Georgian Quarter. The building must house at least twenty residents and include two accessible rooms. Other requirements include co-working, social, and recreation spaces."

This project explored affordable co-living for young NHS workers within Liverpool's Georgian Quarter. The proposal combined private living pods with shared social, co-working, and recreational spaces organised around a central atrium, alongside a public café intended to activate the street frontage. The project became an early exploration into how architecture can balance community, privacy, and urban context while responding to sustainability, planning, and accessibility considerations.



1:100 model illustrating brick tower

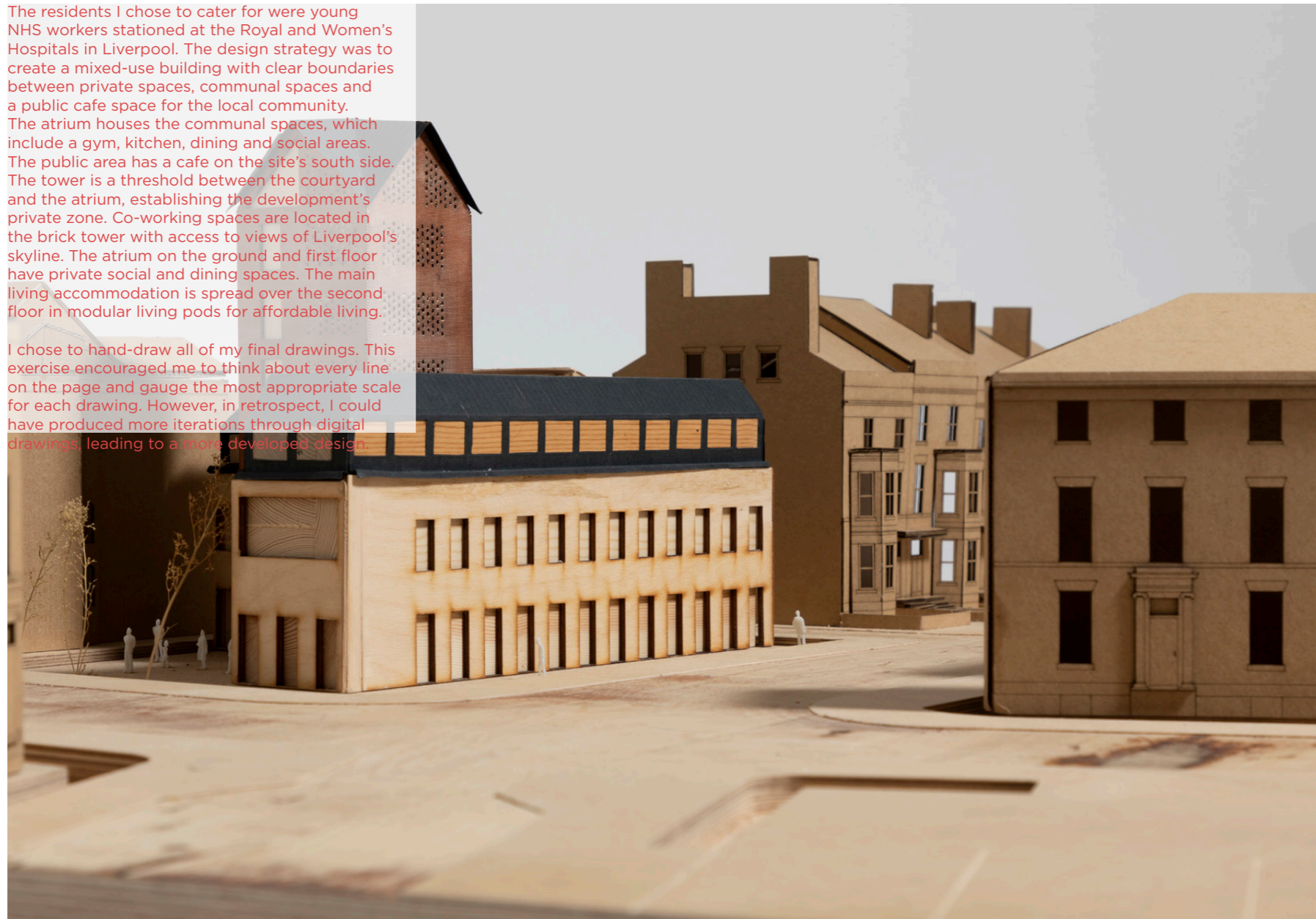


1:100 model showing public frontage

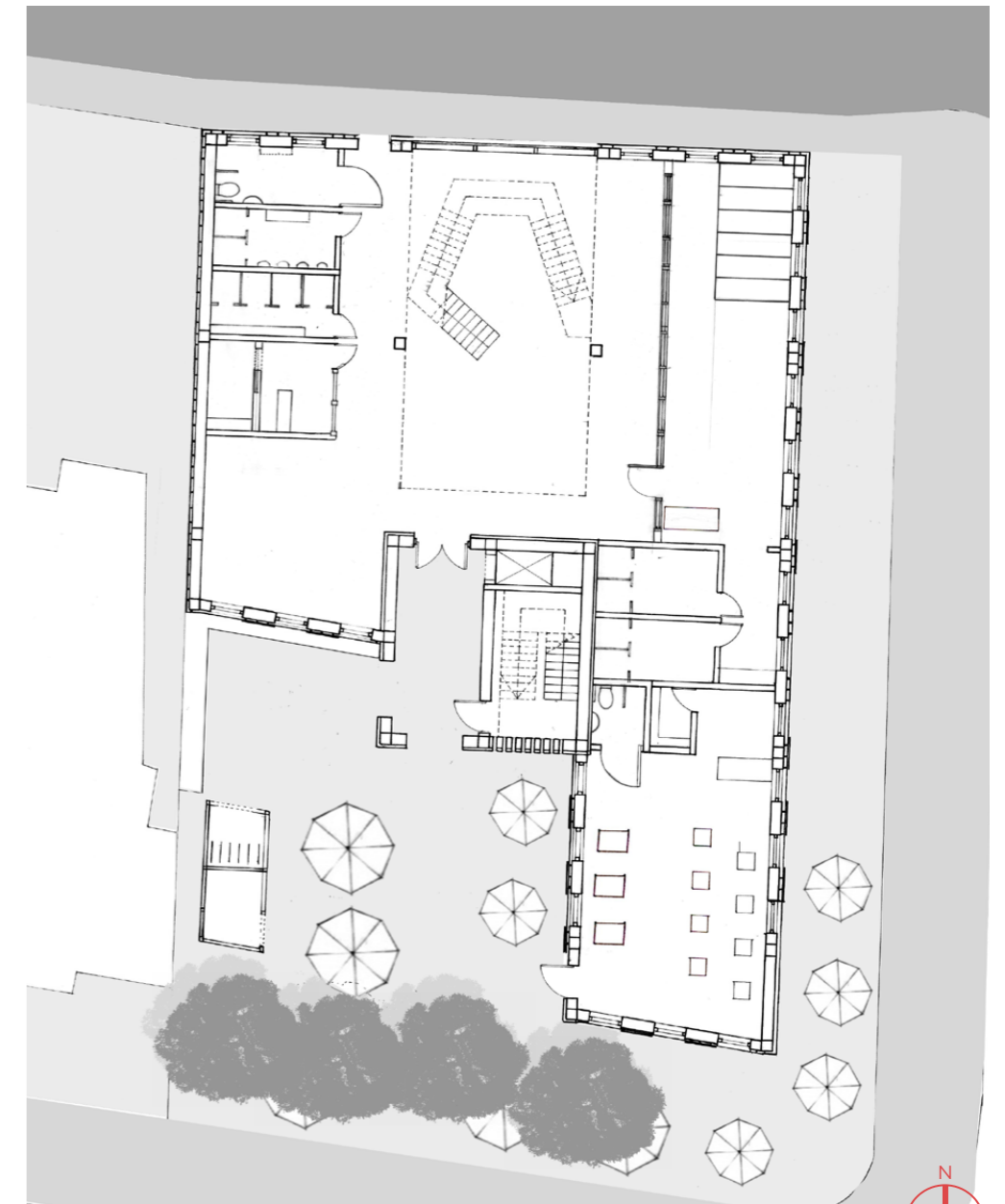
Design Approach

The residents I chose to cater for were young NHS workers stationed at the Royal and Women's Hospitals in Liverpool. The design strategy was to create a mixed-use building with clear boundaries between private spaces, communal spaces and a public cafe space for the local community. The atrium houses the communal spaces, which include a gym, kitchen, dining and social areas. The public area has a cafe on the site's south side. The tower is a threshold between the courtyard and the atrium, establishing the development's private zone. Co-working spaces are located in the brick tower with access to views of Liverpool's skyline. The atrium on the ground and first floor have private social and dining spaces. The main living accommodation is spread over the second floor in modular living pods for affordable living.

I chose to hand-draw all of my final drawings. This exercise encouraged me to think about every line on the page and gauge the most appropriate scale for each drawing. However, in retrospect, I could have produced more iterations through digital drawings, leading to a more developed design.



1:100 model illustrating proposals relationship to immediate context

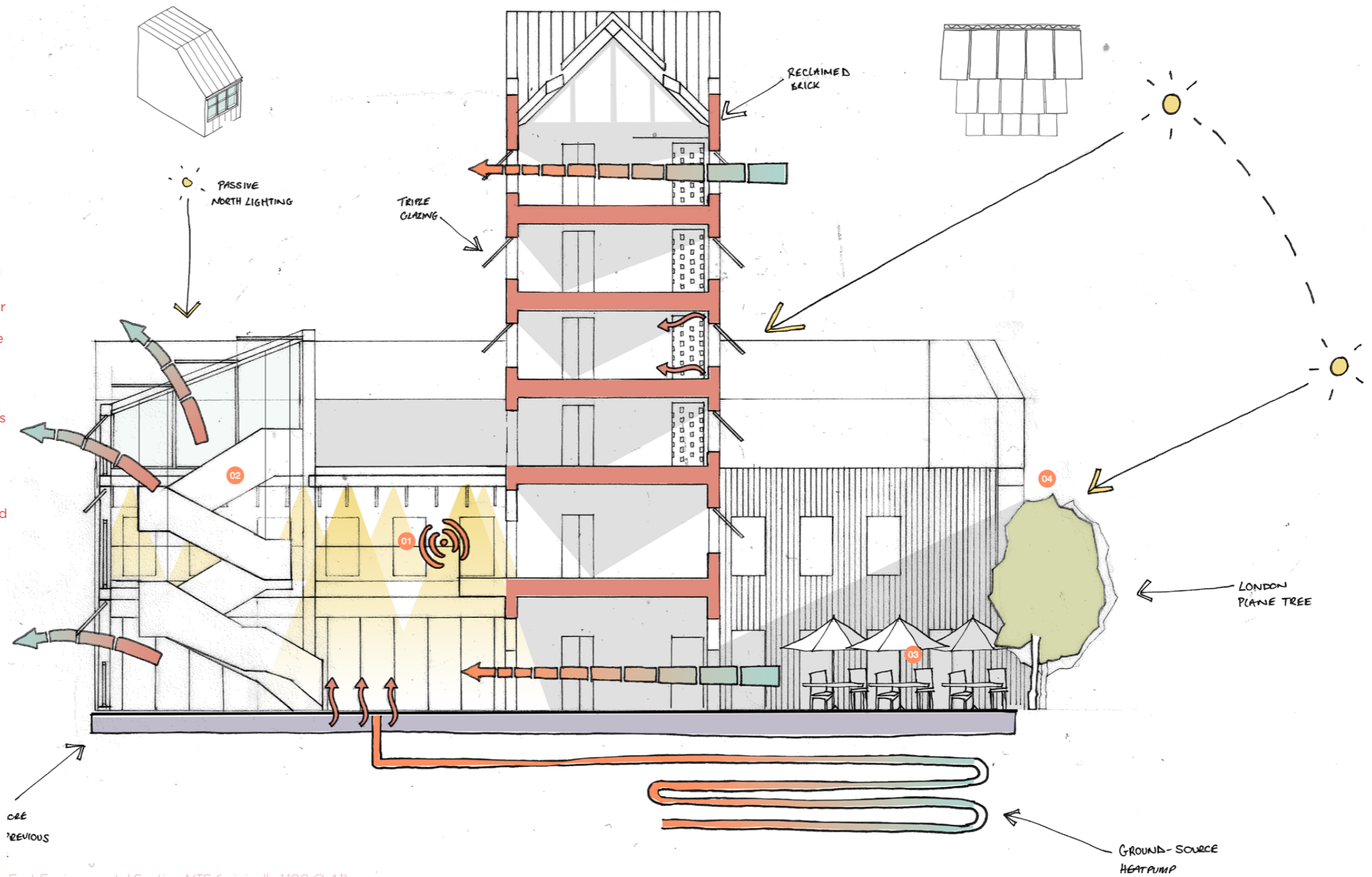


Ground Floor Plan NTS (originally 1:100 @ A1)

Site Response

The Georgian quarter is a protected area of Liverpool with a strong rhythm of Georgian terraced housing. Traditionally, these are formal and ordered at the front and more functional at the back. The quarter is punctuated at intervals by churches, monuments and squares. The most prominent examples are the Metropolitan and Anglican cathedrals. My response to this site was to add to the punctuation of the quarter and draw on the typologies of towers and churches in the area.

In response to the immediate context, the public cafe space and main entrance were positioned off the main road, on the south facade. The idea was to use the tower to draw people around the corner to Canning Street and activate the whole site frontage, not just its corner. The section shows the strategy for ventilation, lighting and heating. The drawing claims that passive north lighting from a saw tooth roof would light the communal atrium space. I now understand that there are better ways to design a saw tooth roof than this as it would need glazing on the vertical component facing the north, and a solid roof build up on the diagonal facing south. The Georgian quarter is a conservation area. In reality heritage consultants would play a significant role in establishing the design parameters. The site is also constrained and backs onto other properties meaning that DSL/ROL assessment would be necessary for the site.



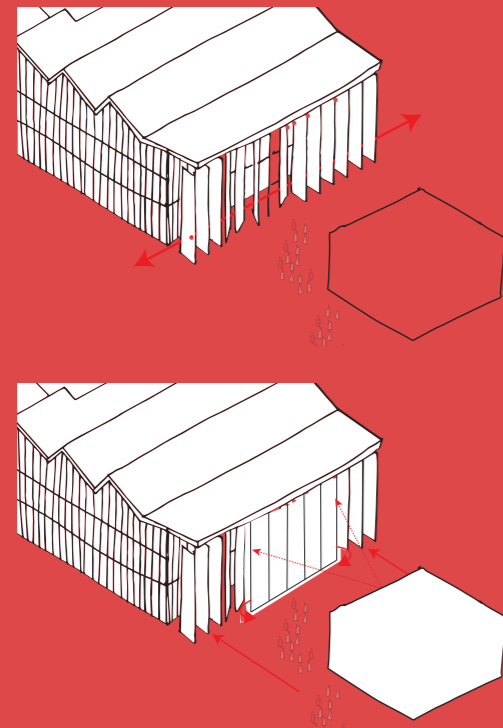
East Environmental Section NTS (originally 1:100 @ A1)

Part I (BA) - Liverpool University Campus Project for A New Film School

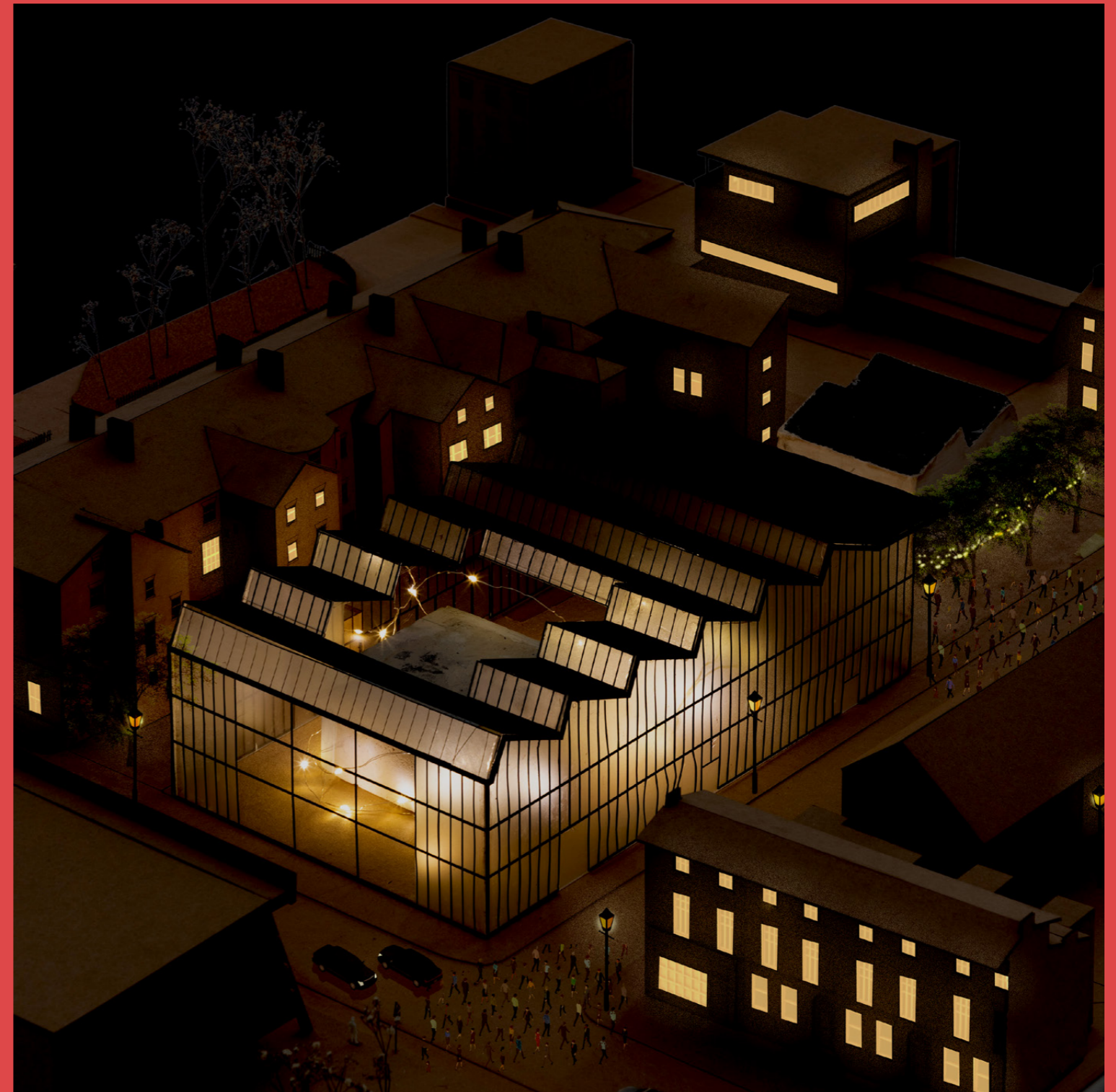
Site Location *University of Liverpool Campus, Merseyside, UK*
Building Use *Educational*

"Design a film school for the University of Liverpool. The university needs a mixed-use sustainable building that provide private and well thought spaces for film teaching and development, with facilities for hosting public meeting areas and events."

This project proposed a new film school for the University of Liverpool that explored the relationship between film production and public viewing through a combined studio and cinema building. The design used a glulam structure, CLT floor panels, and dynamic timber shading fins to reduce embodied carbon while responding to light, overheating, and public engagement. Positioned on a neglected edge of the campus, the proposal aimed to reconnect pedestrian routes and create a social focus for students and visitors through flexible indoor and outdoor cinema spaces.



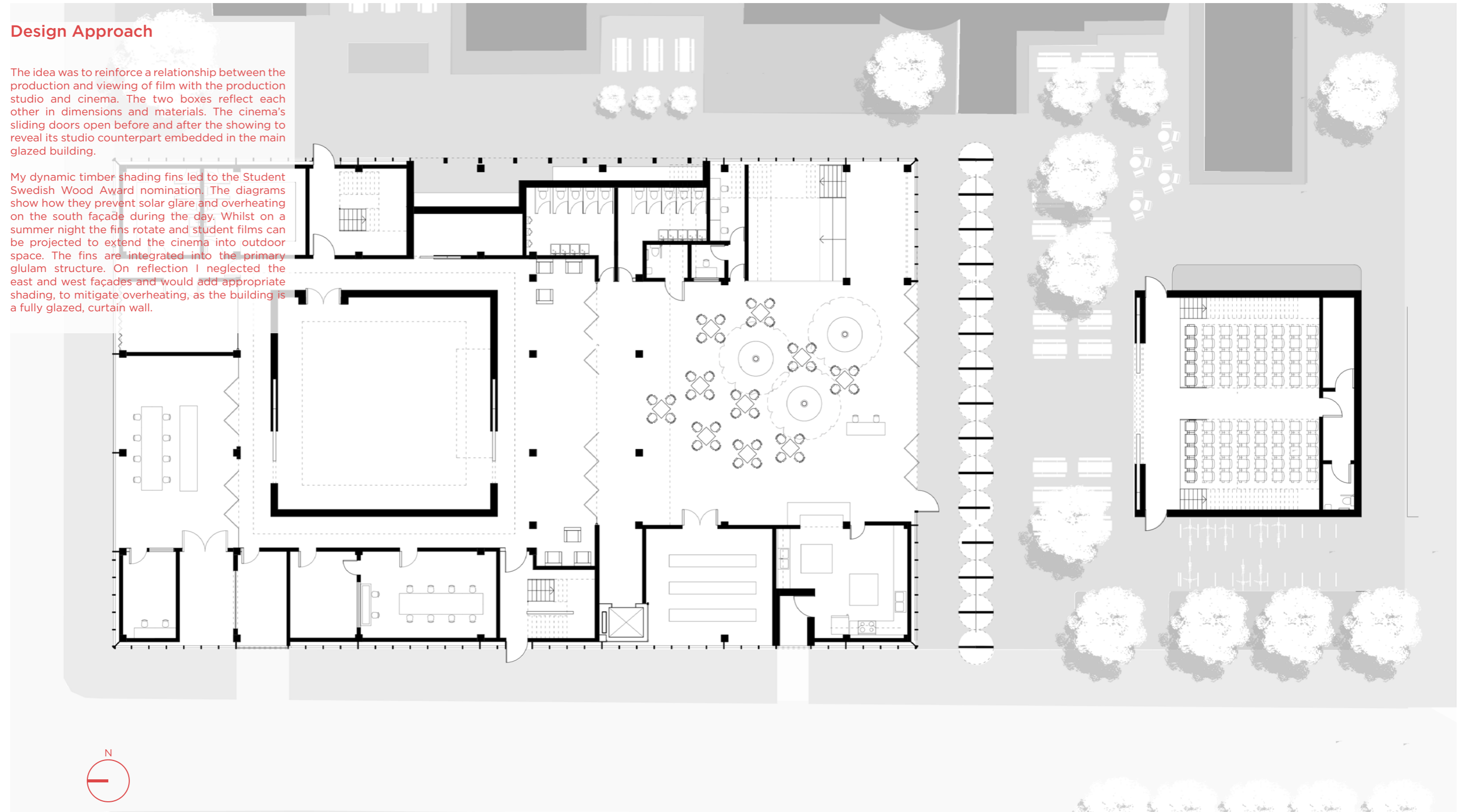
Development diagrams showing shading fins rotating for daylight sun orientation and night-time film projection



Design Approach

The idea was to reinforce a relationship between the production and viewing of film with the production studio and cinema. The two boxes reflect each other in dimensions and materials. The cinema's sliding doors open before and after the showing to reveal its studio counterpart embedded in the main glazed building.

My dynamic timber shading fins led to the Student Swedish Wood Award nomination. The diagrams show how they prevent solar glare and overheating on the south façade during the day. Whilst on a summer night the fins rotate and student films can be projected to extend the cinema into outdoor space. The fins are integrated into the primary glulam structure. On reflection I neglected the east and west façades and would add appropriate shading, to mitigate overheating, as the building is a fully glazed, curtain wall.



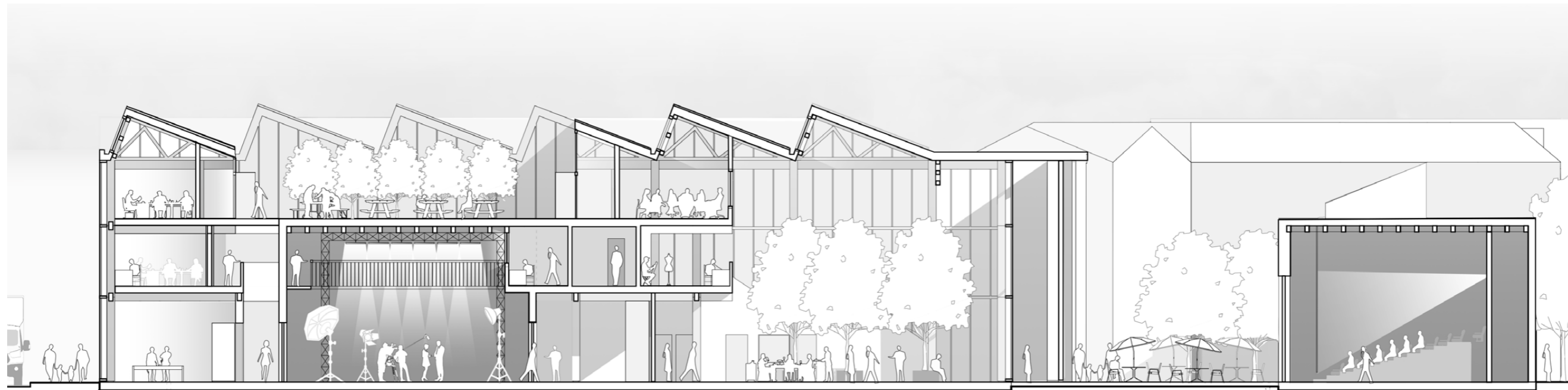
Site Response

On a large scale, the film school responded to the site by linking a marginalised south west corner of the university with social hubs such as the student union and sport complex. The development achieved this by re-establishing pedestrian links.

The film school sits on a linear site and a north-south axis. The saw-tooth roof lets in north light into studio rooms and takes advantage of solar gains on the south with photovoltaic panels. Solar gains are maximised in the glazed south-facing atrium for mechanical heat ventilation recovery. The building's orientation on the site is inward-facing, with its entrance on the south side. This is because of pedestrianisation on the southern side of the site and the heavy traffic on the north.



Ground floor key plan - NTS



East section - NTS (originally 1:200 @ A3)

Structure and Construction

Concrete pad foundations with CLT floor panels and finishes support a glulam primary structure. A 150mm timber truss system supports the broken sawtooth roof. The raft foundations support the limestone clad, concrete block studio cinema space. A glulam waffle truss system supports the services and roof that allows for heavy loads on the roof.

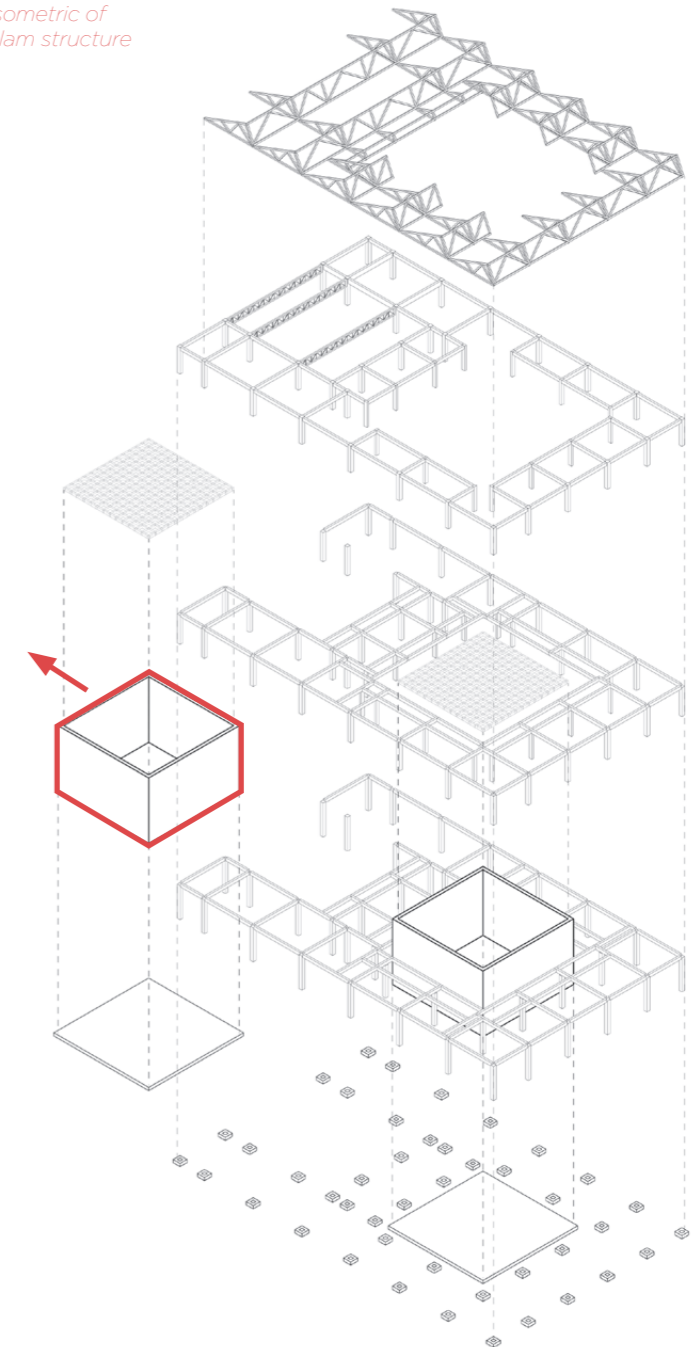
One of the reasons that the structure was glulam was to reduce the building's embodied carbon. The film school's total embodied carbon amounted to 255tCO₂e (tonnes of carbon dioxide equivalent). On reflection the material would need experienced specialist engineering and would introduce logistical issues with transportation and costs. I now understand that the structure and scheme would most likely be simplified to overcome these issues.

The 1:20 section shows the acoustically insulated, limestone cinema box. My practice has, in the past, worked on cinemas. I now know that the distance and height of the front row of seats from the cinema screen does not meet cinema audience standards. I would also include ventilation systems in the section.



1:20 detail of cinema box

Exploded isometric of primary glulam structure



Part I Architectural Assistant Professional Practice

This project is for new residential development in Surbiton, south-west London which was submitted for planning in December 2023. The building has 35 apartments, six houses and a communal garden space.

I joined the project in September 2023 after a planning pre-app consultation was not supportive of the proposal. The consultation raised concerns over the building's height and ground-floor commercial space. The partner-in-charge instructed me to remove the second storey and commercial space, with the intended outcome being a complete planning application by December. I initially amended the Sketchup model, which we use for all elevations and visuals.

While working on the project, I attended meetings with consultants, engineers, planning officers, and developers, which showed me the importance of cooperation between all consultants and stakeholders and how it informs design. For example, there was a push for the environment and well-being. As a result, we worked closely alongside landscape architects for the courtyard garden. We consulted daylight specialists to calculate internal lux levels for the flats on the ground floor of the courtyard. My role was to update these drawings and visuals and prepare a digital model for the DSL/ROL surveyors. The site is sensitive, so verified views were prepared by specialist visualisation consultants to support a TVHIA. My job was to prepare and send out the Sketchup model to these consultants.



NTS (originally 1:100 @ A3)

North facing elevation before plan pre planning opp - credit Mountford Pigott LLP



NTS (originally 1:100 @ A3)

North facing elevation submitted for planning which I updated



NTS (originally 1:100 @ A3)

Courtyard elevation submitted for planning which I updated



Visuals showing the interaction of the development on the street (included in the Design Access Statement)



Visuals showing landscaping in the courtyard (included in the Design Access Statement)

Project Outline and My Role

This project is a mixed -use, commerical storage and residential project in Wapping, East London. Planning approval was granted in September 2023 and we are currently assembling a signage proposal. Mountford Pigott designed the storage building with reference to the 19th century warehouses which reflect the site's docklands vernacular.

The client maintains the importance of visible, bold signage across all of its developments and on all elevations. We suggested to the client that they use traditional warehouse signage and provided them examples from the area. I was instructed to design several signage options across three elevations. To do this I used Sketchup and produced elevations and renders for their corresponding design.



North elevation with signage proposal



West elevation with signage proposal



South elevation with signage proposal



Visual showing signage on the north facade



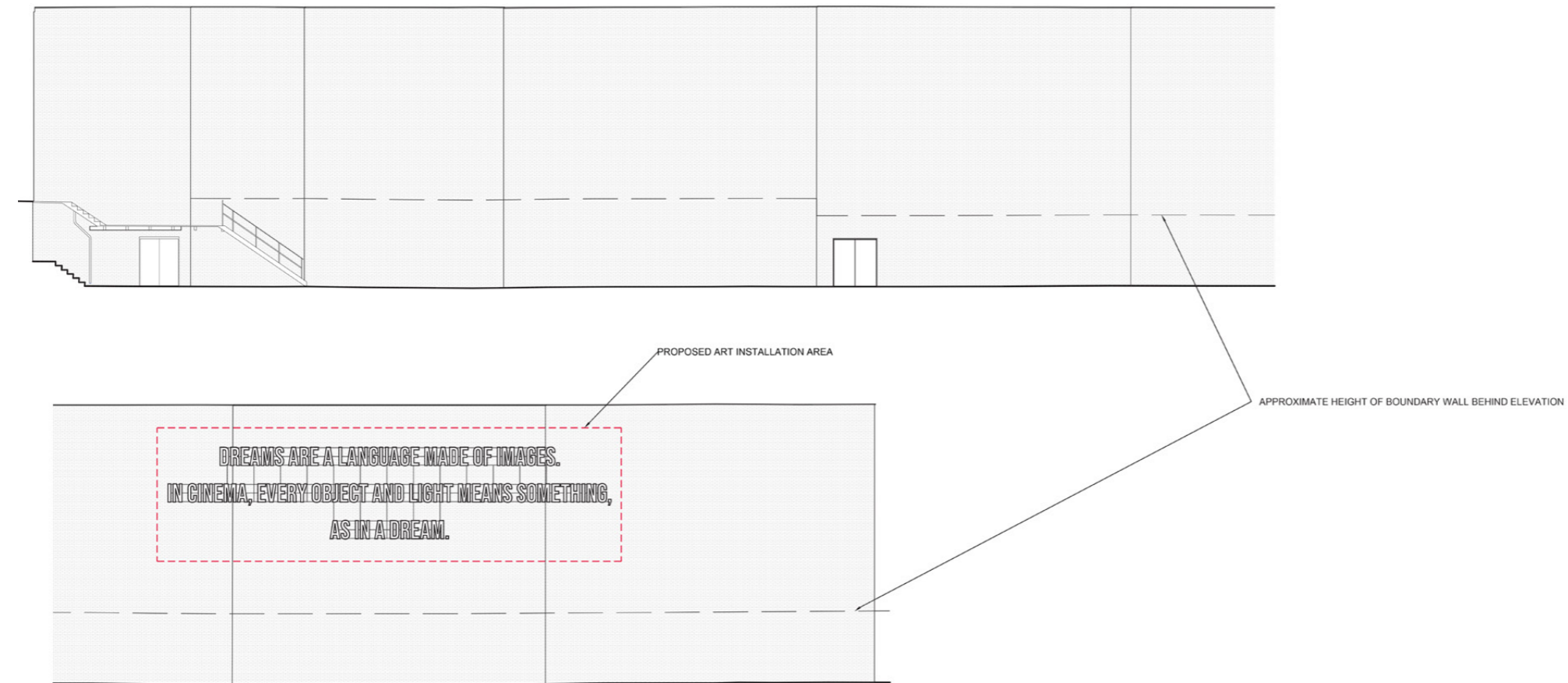
Visual showing signage on the east facade



Visual showing signage approaching north facade

Project Outline and My Role

I worked with The Line on a planning application for a new public art installation in East London, where I created and edited drawings for submission. Drawing on my previous professional experience, I was able to advise on presentation and planning requirements, contributing toward the project successfully receiving approval the following month



West elevation of art installation



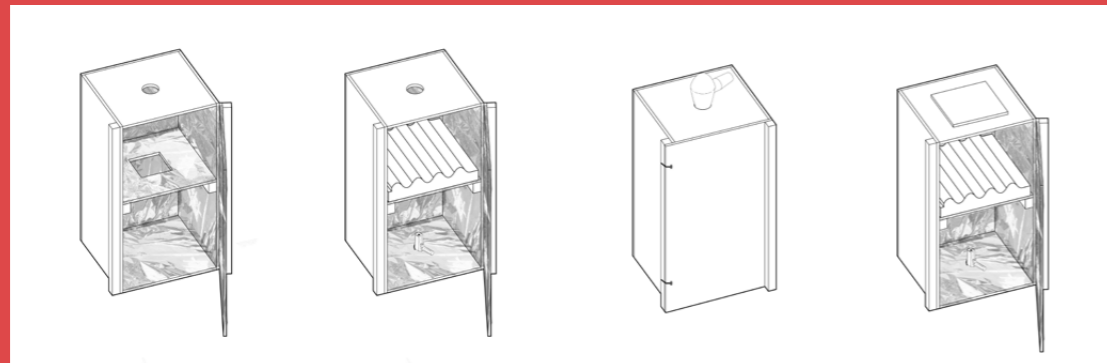
The completed proposal

Architectural Technology Research:

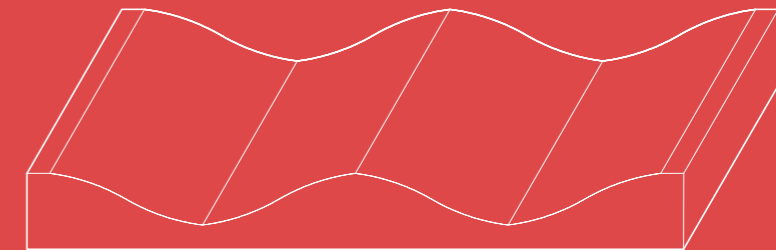
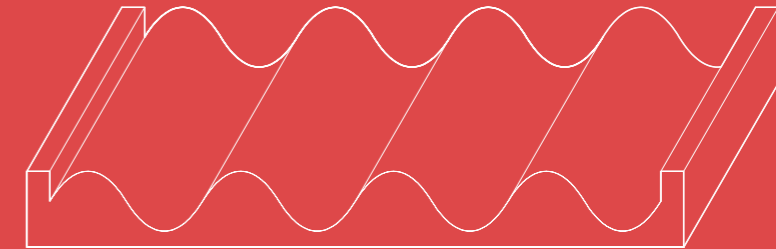
ATR Task 2 - How Does Surface Area Affect Rammed Earth's Thermal

Capacity in Cold Climates?

This task was a research role, this module allowed me to appreciate that to create successful low-carbon design requires depth in technological research. My research interrogated the viability of rammed earth as a thermal mass material for retrofitting Scottish housing blocks to combat fuel poverty and poor thermal comfort. As a pair we decided to look into rammed earth as we were also investigating mud ecologies over in our Aberdeen studio, we were interested in including this work in future design proposals. During this task, we conducted a controlled experiment testing how variations in surface area and texture affect thermal capacity. We used thermal imaging cameras and infrared thermometers to analyse the heat exchange of differing rammed earth blocks. We found that increasing the surface area enhanced the rate of thermal exchange. We concluded that the blocks could act as thermal batteries and be integrated into existing building envelopes as aesthetic furnishings. As a result, this proves that specific technological decisions can have a broader positive impact on occupant health and building performance. I must acknowledge that the rammed earth blocks were not as successful as expected, the use of the lime as a binder instead of concrete (while more sustainable) resulted in fragile samples which only worsened with complex geometries.



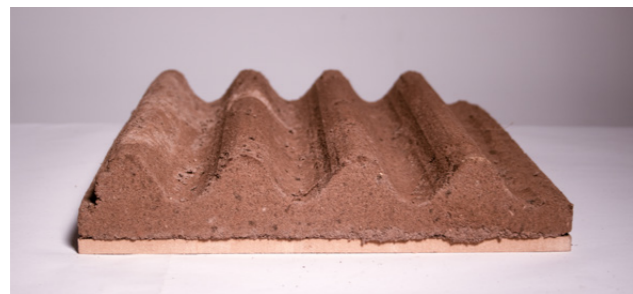
Experiment chamber



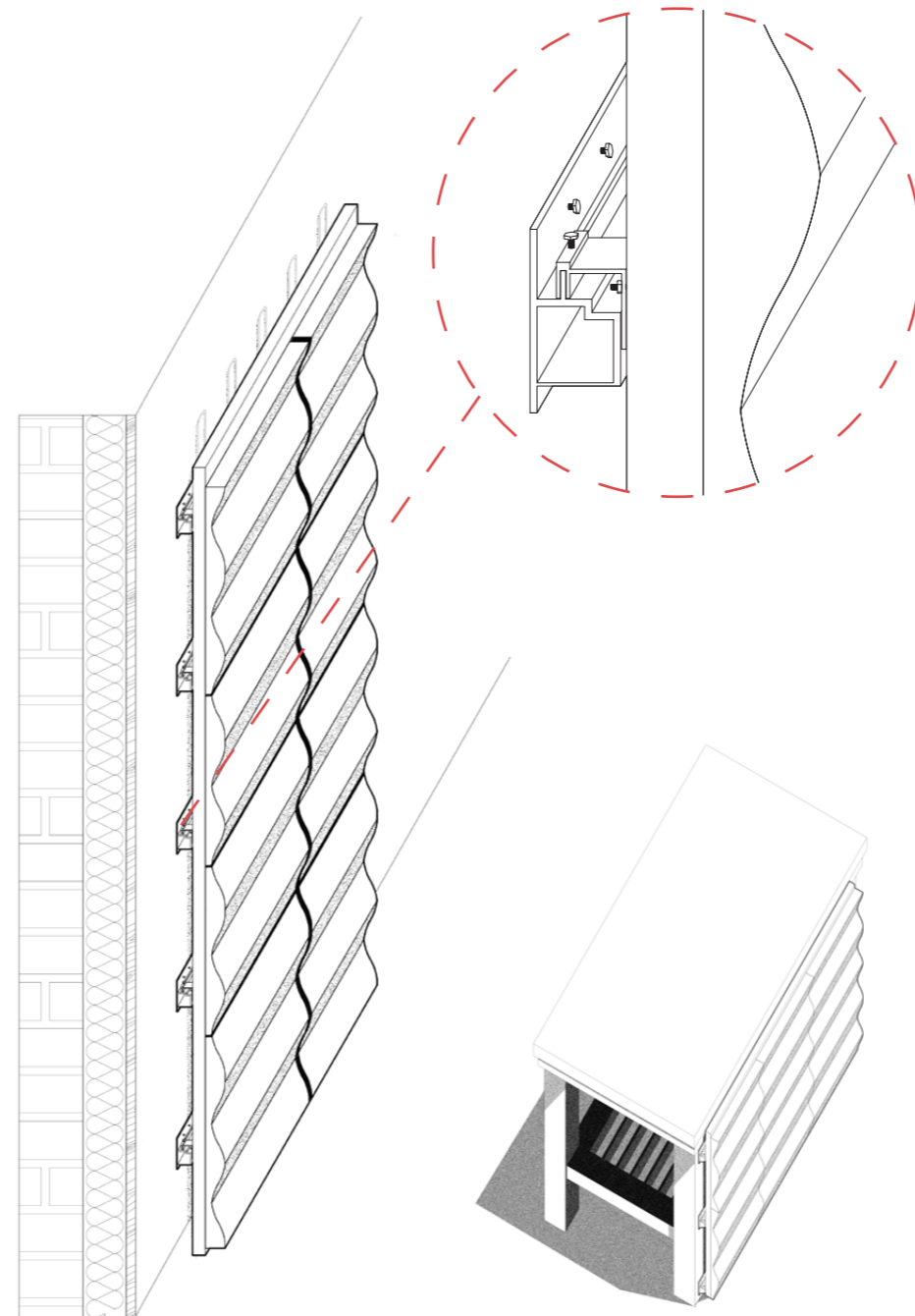
Rammed earth panelling shapes

The Study

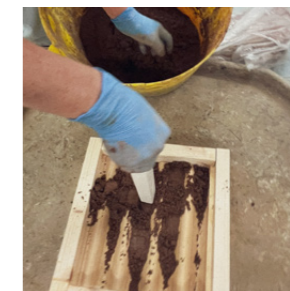
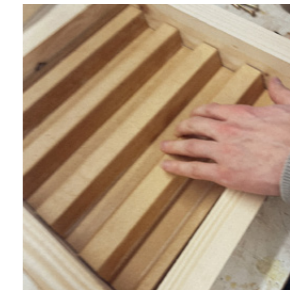
Our study was comprised of mainly primary data. However we did include a literature review where we discussed precedent examples. We designed three forms for the panels in rhino, all of which had completely different surface areas. We kept one panel flat to act as a control. The panel's form work was then CNC-milled and we packed rammed earth collected from a local sources (including my garden for the soil). To reduce the project's and eventual product's carbon footprint, a lime mix was used over a cement mix to bind the rammed earth.



Rammed earth panel samples



Section showing proposed rammed earth panels fixed to walls and kitchen units



Process of mixing rammed earth mixture and compressing it into the CNC milled formwork

Part II (MArch) Breaking Ground

Architecture as Support Structure: How to Construct a Post-Petroleum World

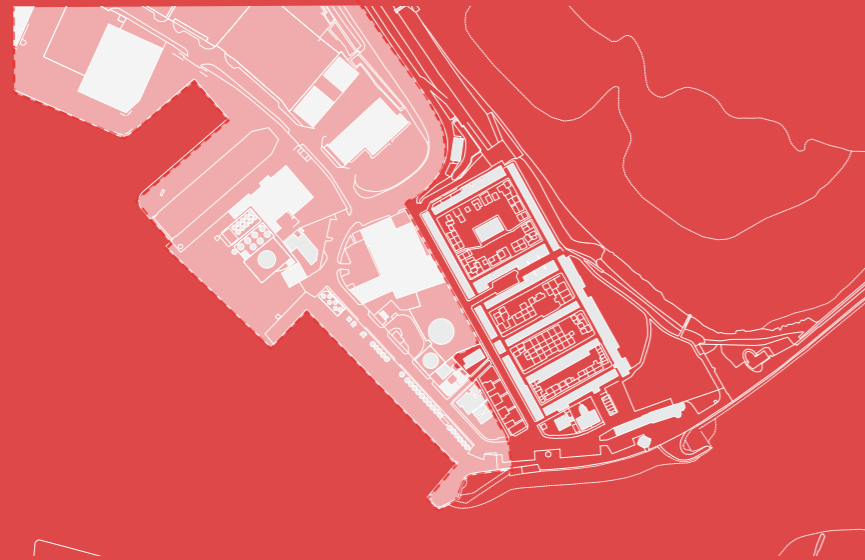
Site Location *Footdee, Aberdeen, Scotland, UK*

Building Use *Community Centre and Urban Regeneration*

Architecture as Support Structure addresses our society's petro-chemical culture, where we have been trapped in a perpetual cycle of consumerism and re-imagines a solution out of this dilemma. The studio looks at how ecologies have been shaped by the oil and petroleum industry and in particular focuses on Aberdeen. Known as "the oil capital of Europe", a significant amount of Aberdeen's identity has been shaped by the oil industry. However, with the oil fields in the North Sea gradually being decommissioned, Aberdeen's post petroleum future is uncertain. The studio's angle is imagining what a post petroleum world looks like, and how architecture can act as a support structure to facilitate this.

The semester served as an important continuation of my initial research into site and situation, transitioning from experimental 'methods of unknowing' toward the technical resolution of an architectural proposal. In response to the core theme of Architecture as Support Structure, I re-developed a petroleum infiltrated area of land in Footdee, to re-connect Footdee to the rest of Aberdeen.

My project, 'Breaking Ground', proposes an architectural intervention led by community members rather than industrial intervention. My practice evolved through the design of Ground Walkers; these slow-moving machines support a route out of petroleum dependency by decommissioning concrete ground into structural form work for new community assets. The machines establish much needed infrastructure to navigate a post-petroleum world.



The petroleum industry encroaching on Footdee, Aberdeen

Petroleum Industry



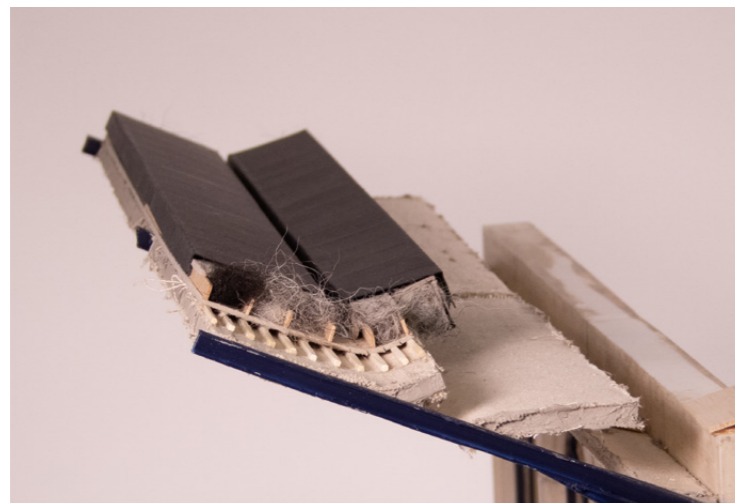
Aberdeen, Scotland

The Ground Walker: *Anatomy of the Machine*

The Ground Walker developed to become the catalyst for change in Footdee. The Ground Walker began as a test for a "support structure" in a post petroleum world. The architectural intervention became a guide for my design. Its assembly and use dictated the way in which the proposal formed. The design got me to consider how the structure could be passive, specifically minimising carbon impact, using wind and salt water with materials being re-used from decommissioned oil infrastructure within Aberdeen.



1:1 concrete fabric panel



1:20 model of concrete panelling in roofing

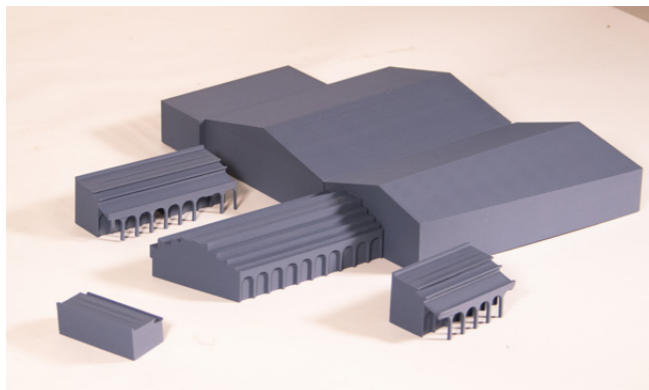


The ground walker

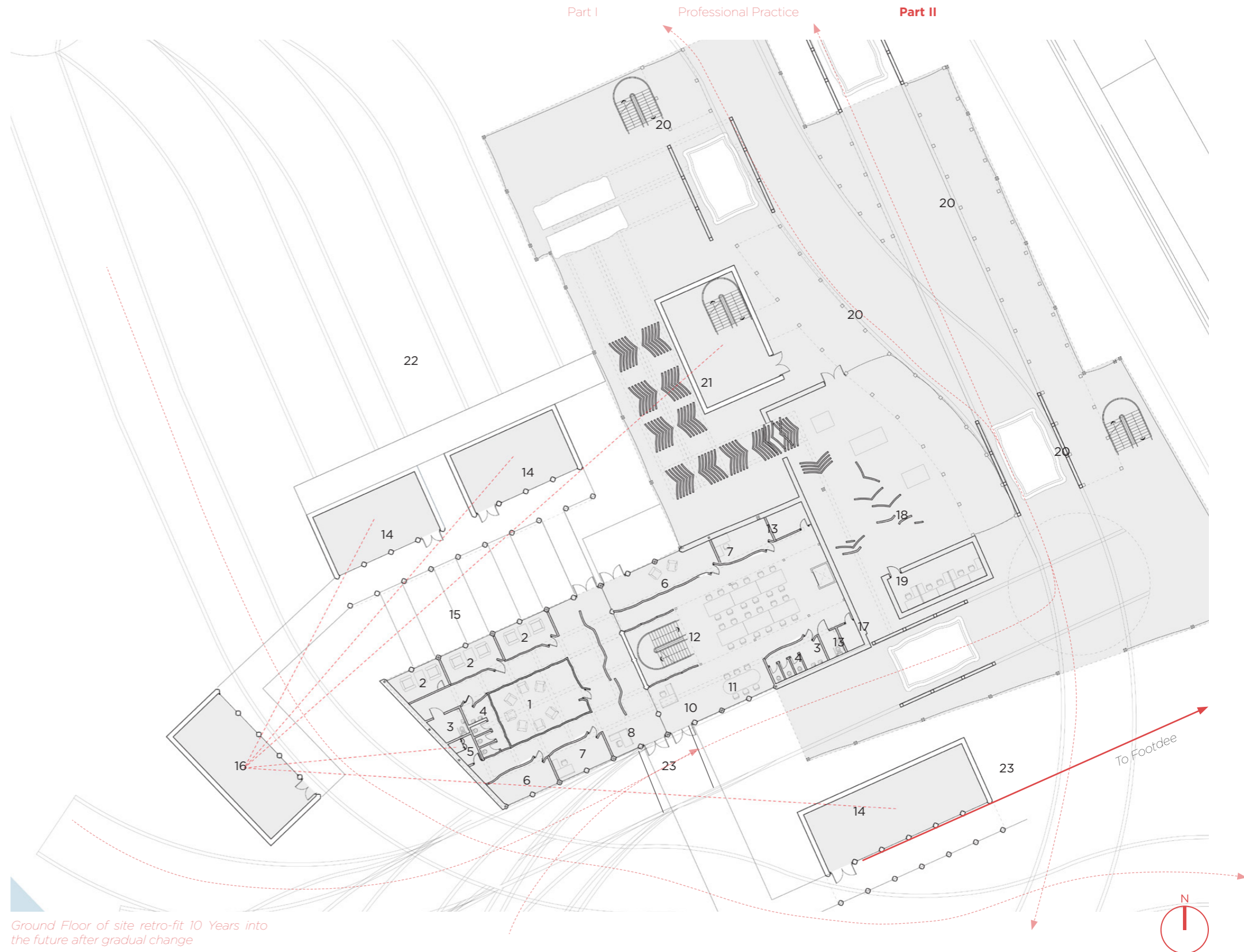
The Scheme

The final plan transforms industrial silos into a “porous community gateway” that relinks old Footdee to its harbour. My individual role focused on the programmatic assemblage, ensuring the hub supports both social healing and new site-specific industries.

- 1 Social Group Healing Space
- 2 Private Counselling
- 3 Accessible Toilets
- 4 Gender Neutral Toilets
- 5 Utilities Room and Servicing Cupboard
- 6 Staff Room
- 7 Offices
- 8 Lobby/Reception for Community Centre
- 9 Exhibition Space
- 10 Design Centre Lobby
- 11 Meeting Space
- 12 Design Studio
- 13 Storage
- 14 Indicative Shops
- 15 Communal Garden Space
- 16 Plant Room Building for Access to Water Source Heat Pump in Aberdeen Harbour
- 17 New Material Loading Bay For Processed Concrete Panels
- 18 Workshop for Concrete panelling Innovation and Testing
- 19 IT Suite for testing
- 20 Bays for Ground Walker Maintenance
- 21 Workers Spaces
- 22 Farming areas excavated and remediated by ground walkers
- 23 Paths over excavated ground linking Footdee to reclaimed post petroleum land



1:200 model of proposal



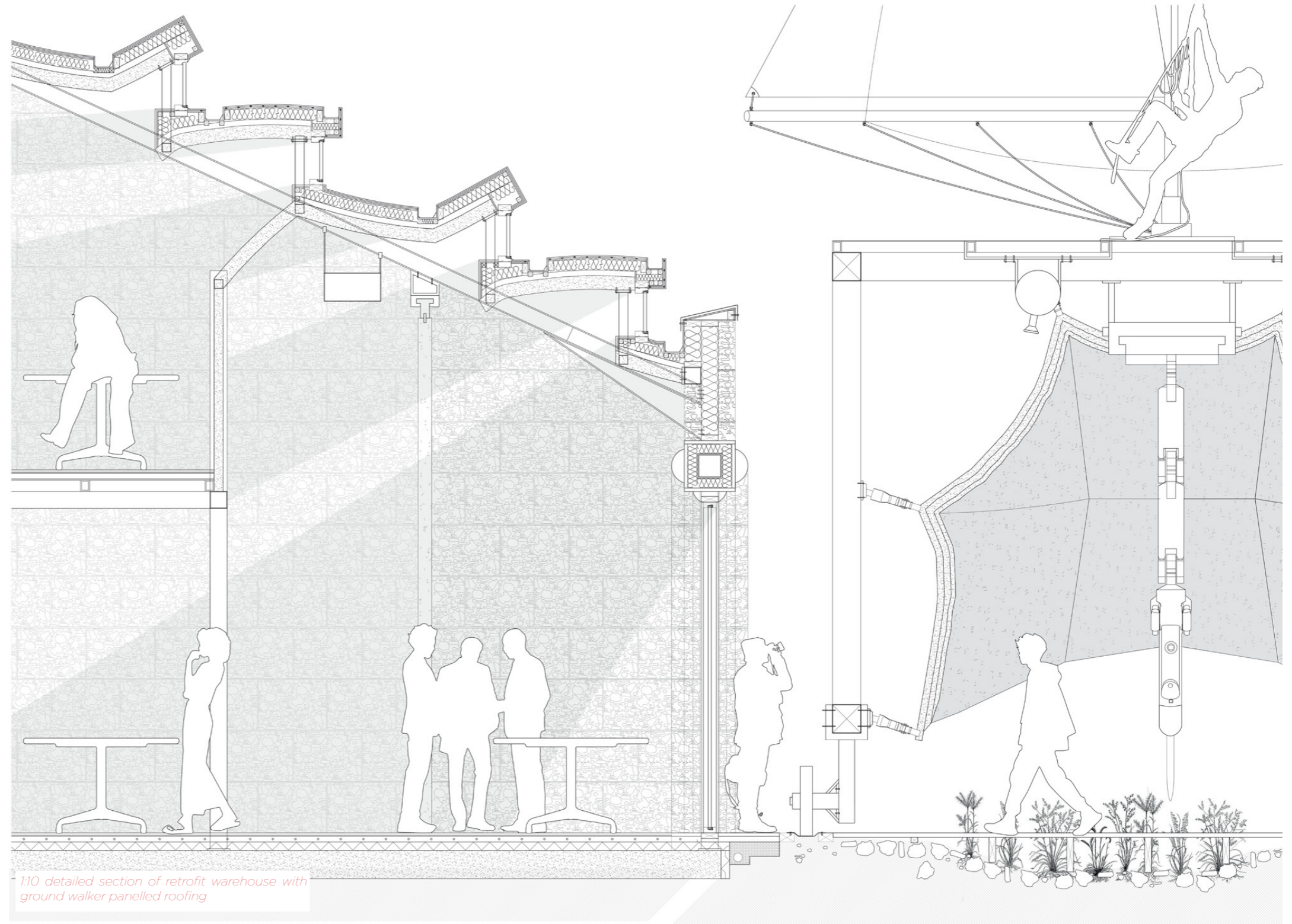
Ground Floor of site retro-fit 10 Years into the future after gradual change

Detailed Design: An Ecological Building

Image shows detailed build up of retrofit warehouse structure comprised of ground walker concrete form work and recycled block work accumulated from re-commissioning the site.



Fabric tests for concrete panelling. The concept is that the panels would have different panels depending on function.



1:10 detailed section of retrofit warehouse with ground walker panelled roofing



Part II (MArch) The Instrument of the Unseen: A Platform Stretching from Tower to Foyle

The Shared Island unit: Open architectures in a bordered world

Site Location Magilligan Point, County Londonderry, Northern Ireland, UK

Building Use Music Centre

The Shared Island studio visited Lough Foyle, a waterbody between the UK and Republic of Ireland. The brief explored the contested waters and watersheds of Lough Foyle, viewing borders as 'negotiated, unstable, and lived conditions'. It discussed 'wet ontologies' that shape the landscape through tidal, ecological, and political currents. The studio aimed to use experimental architectural 'operations' to conceive of a porous 'commons' and citizenship in an area prone to exclusion and division.

My thesis project, "The Instrument of the Unseen," acts upon a conceptual framework that redefines the defensive ruin of the Martello Tower as a protagonist for design. By using the LiDAR scanner as a primary research tool, I moved beyond typical, in situ site observation to reveal hidden geometries including erosion patterns, migrating sand paths, and internal building thicknesses, making the unseen measurable. In response to the brief's need of a larger program, I identified a series of tensions across Magilligan Point, such as military zones, frequent erosion, inaccessibility and a history of erosion. I felt that the site needed a way to celebrate such a rich history and metaphorically cut the hanging tensions. The architectural program, and thesis, as a result built upon the idea of "listening" to the dunes developed in semester 1 by evolving into a music venue. The proposal uses the dune landscape to provide both an ecologically and acoustically unique venue, re establishing Magilligan Point once again.

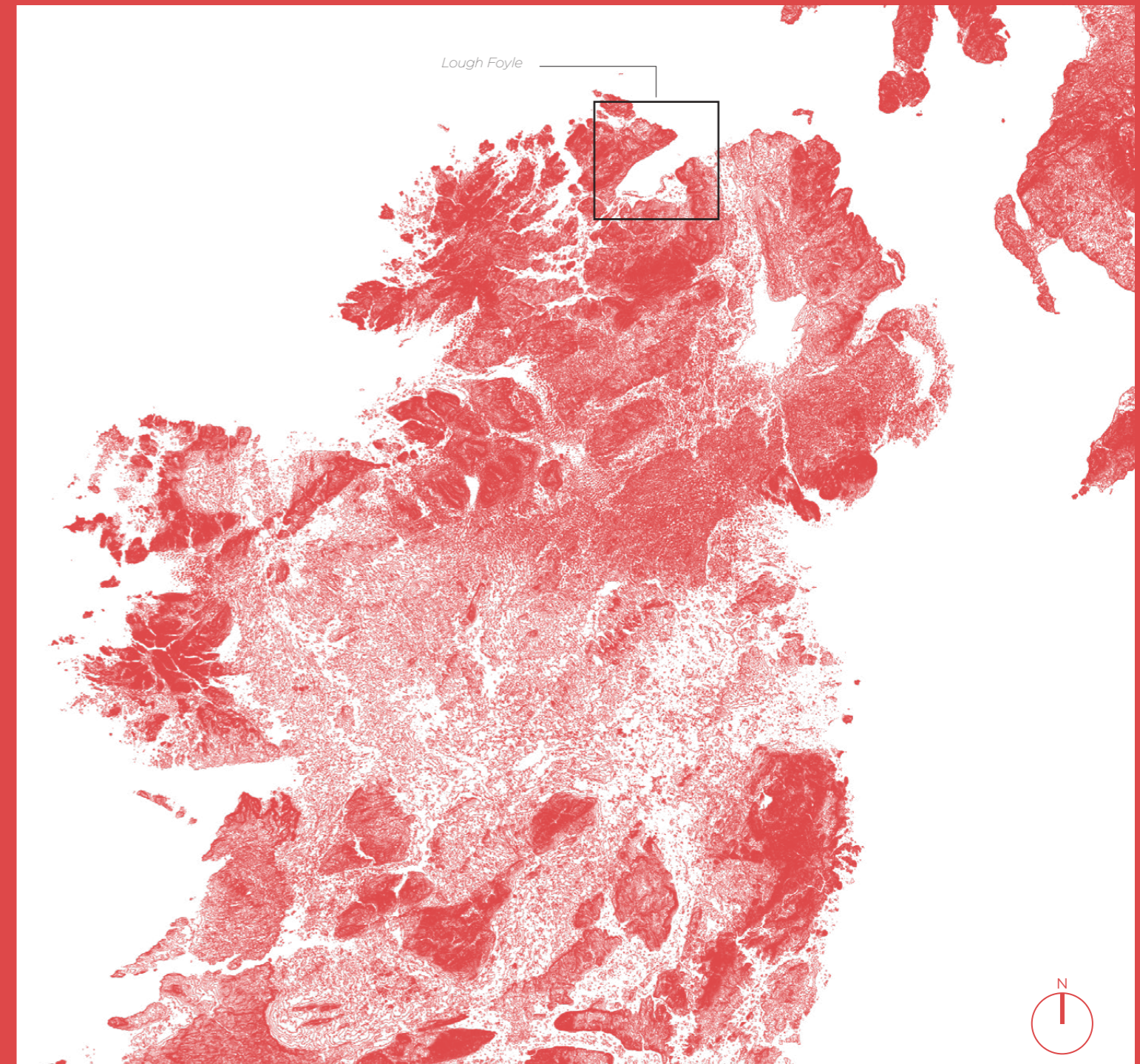
The resulting architectural language manifests as a 7-meter-radius spherical cut through the tower. The act of "sectioning" transforms a secret defensive structure into a witnessed, shared ground for public gathering. This project demonstrates my ability to develop a complex architectural and programmatic assemblage, integrating an amphitheatre and music practice rooms, that responds to the nuanced political and ecological context of Magilligan Point.



Drone shot of Magilligan Point



The Martello Tower at Magilligan Point



Lough Foyle in context with The United Kingdom and Republic of Ireland

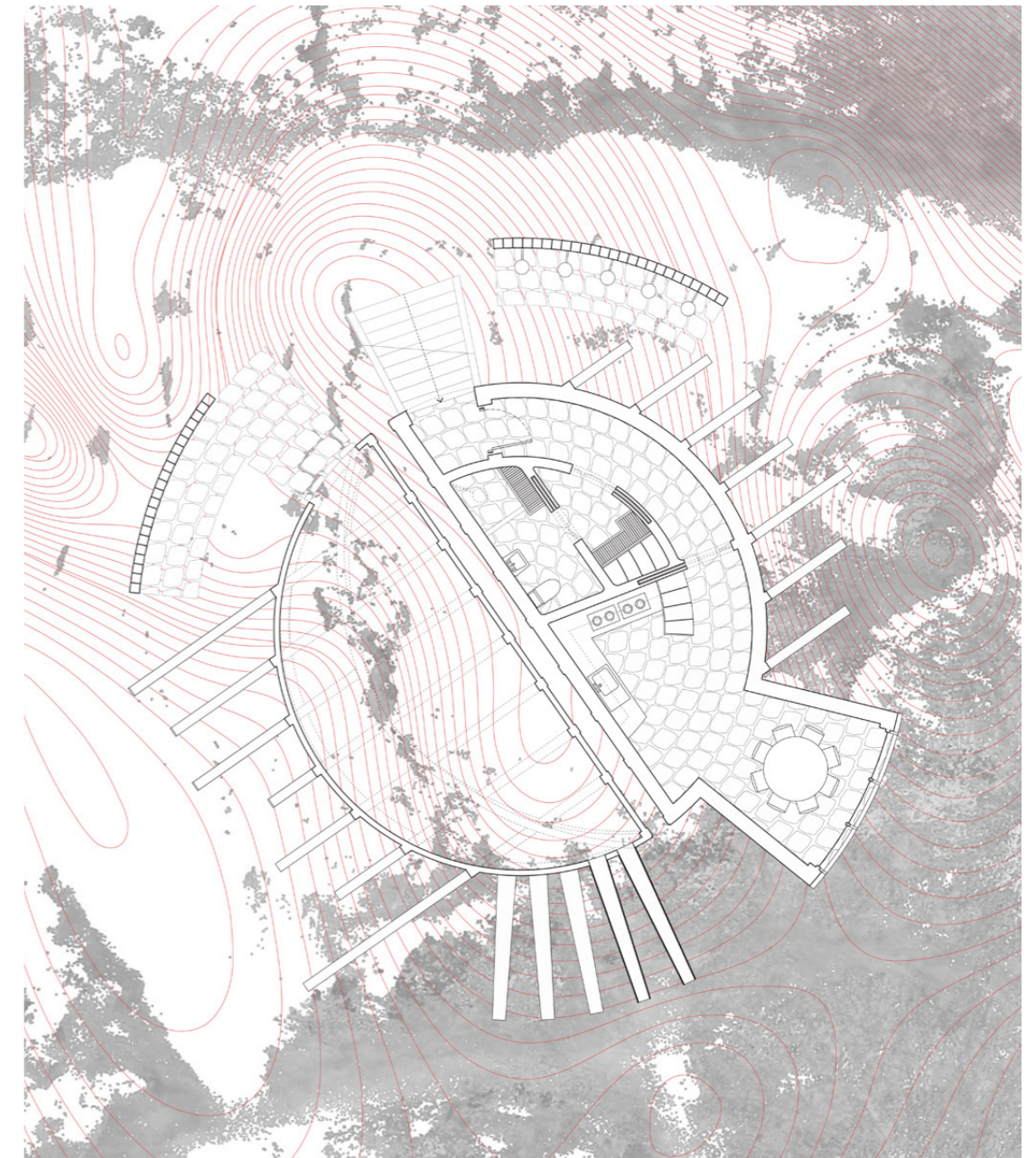
Tensions and Solutions

The site map identifies a history of tensions across the site. My semester 1 plan illustrates my initial concept of providing a cold space to "listen" to the dunes as well as a warmer space that acts as a beach hut for wanderers along the dunes.

- 1 British Military Zone
- 2 HMP Magilligan
- 3 1972 Magilligan Protests
- 4 Only public access to Magilligan Point by land
- 5 Ferry from Magilligan Point (UK) to Greencastle (Republic)
- 6 Bellarena train station connecting Derry to Belfast



Magilligan Point peninsula and its associated tensions

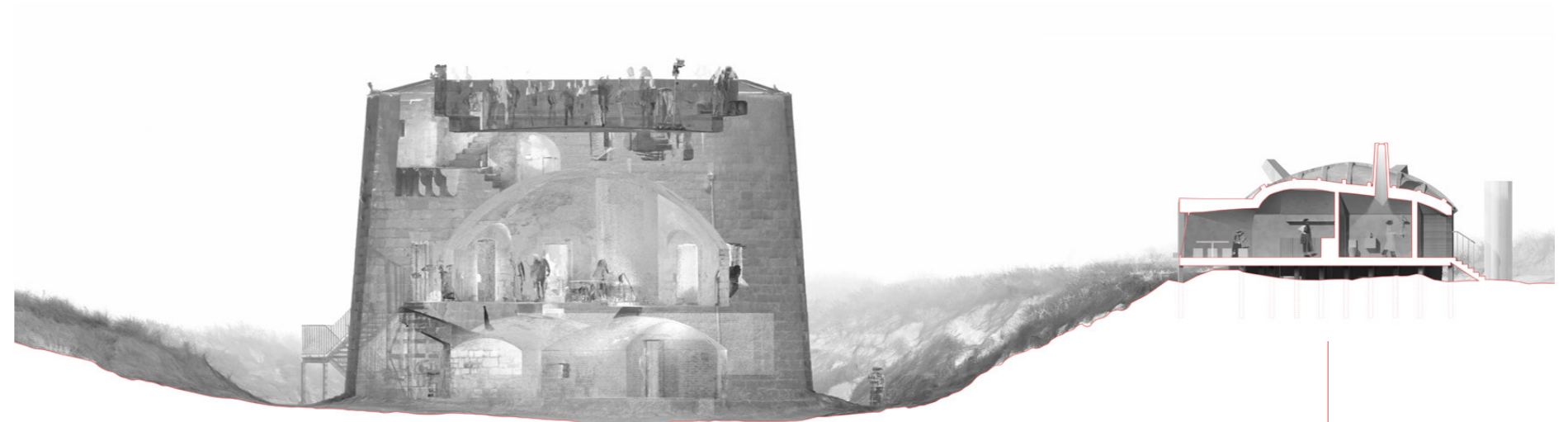
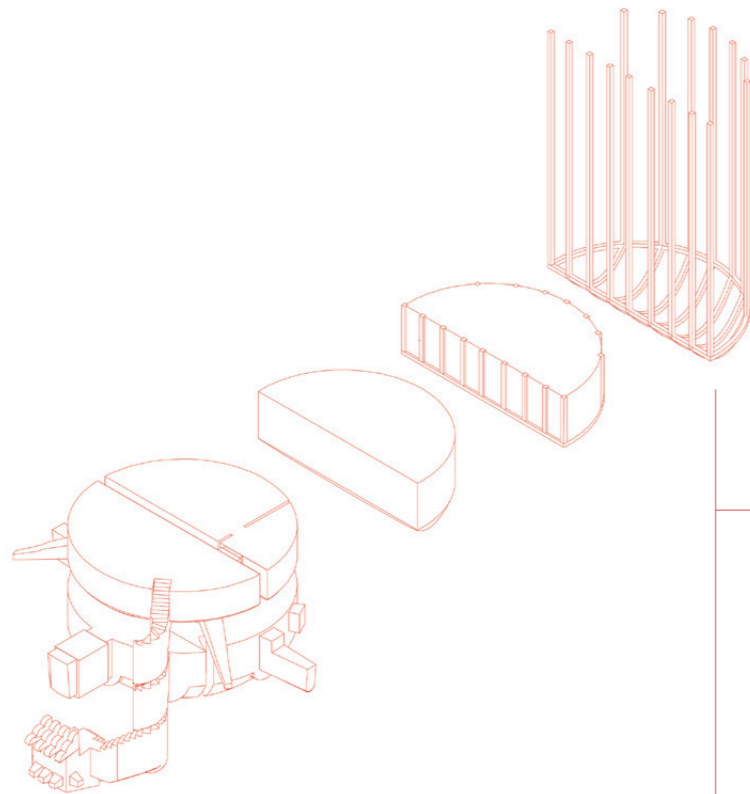


Beach hut and sensory chamber from semester 1 of thesis project

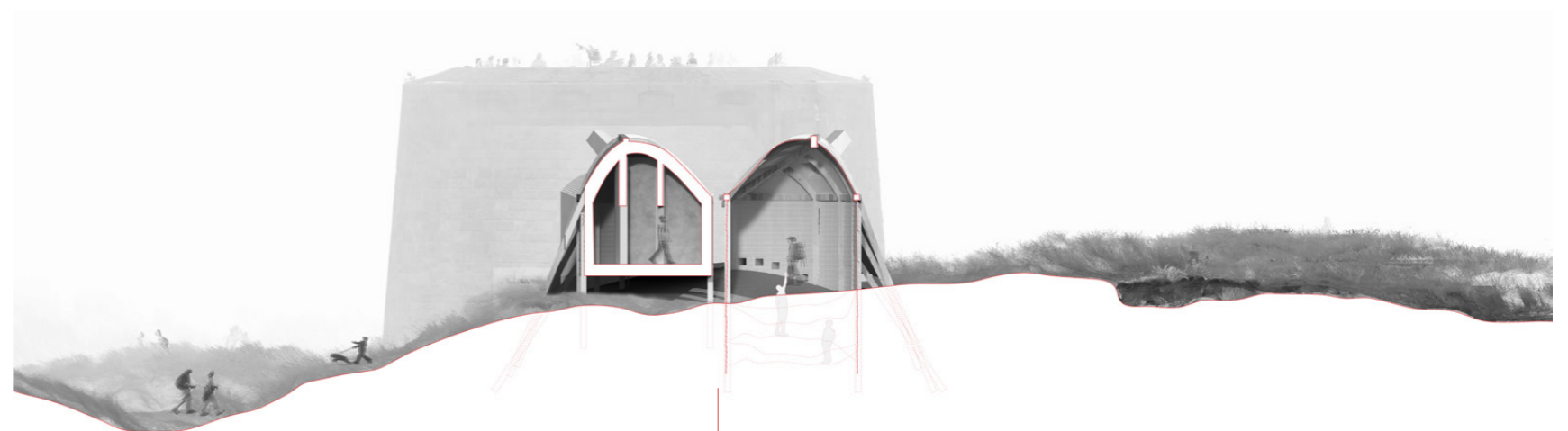
Developing an Architectural Language

My architectural language developed from scanning the Martello Tower. From this, a light timber structure formed.

Design development from forms found through LiDAR scanning



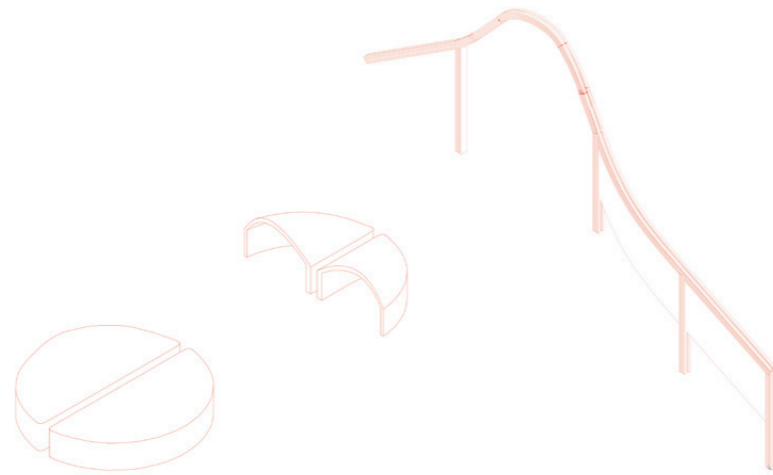
Section through beach hut in relation to the Martello Tower



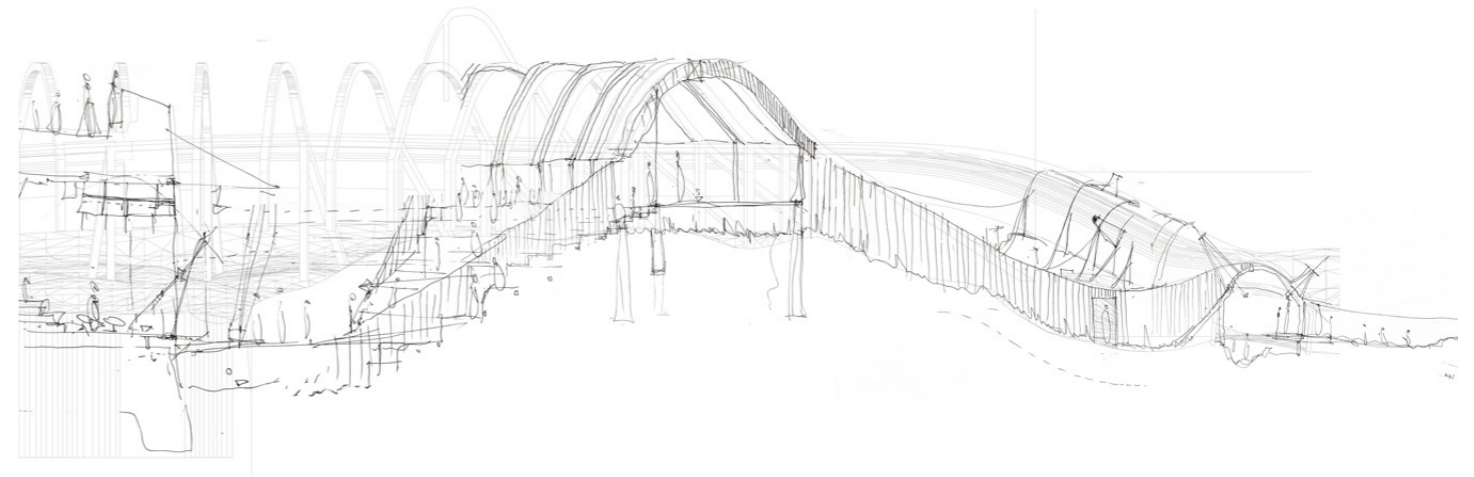
Section through beach hut and sensory chamber

An Architectural Program

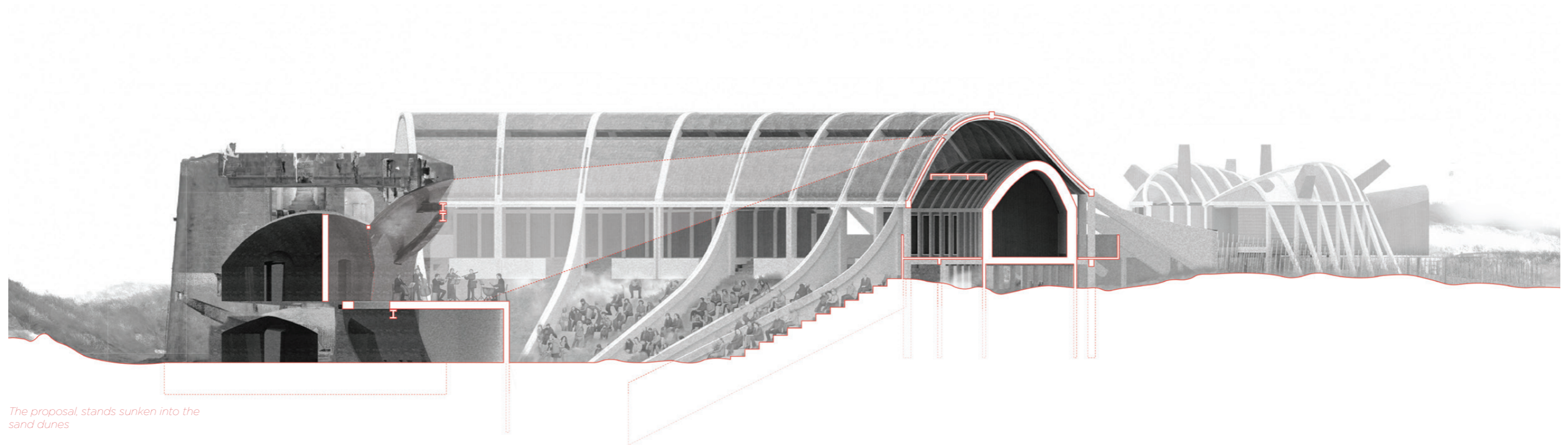
Semester 2's proposal developed into a music venue. The scheme fundamentally uses the same architectural language developed in semester 1 to make up buildings and a pavilion that service a performance stage, or protagonist (the Tower).



Development of glulam timber profiles which double up as groynes and erosion infrastructure



Concept sketch

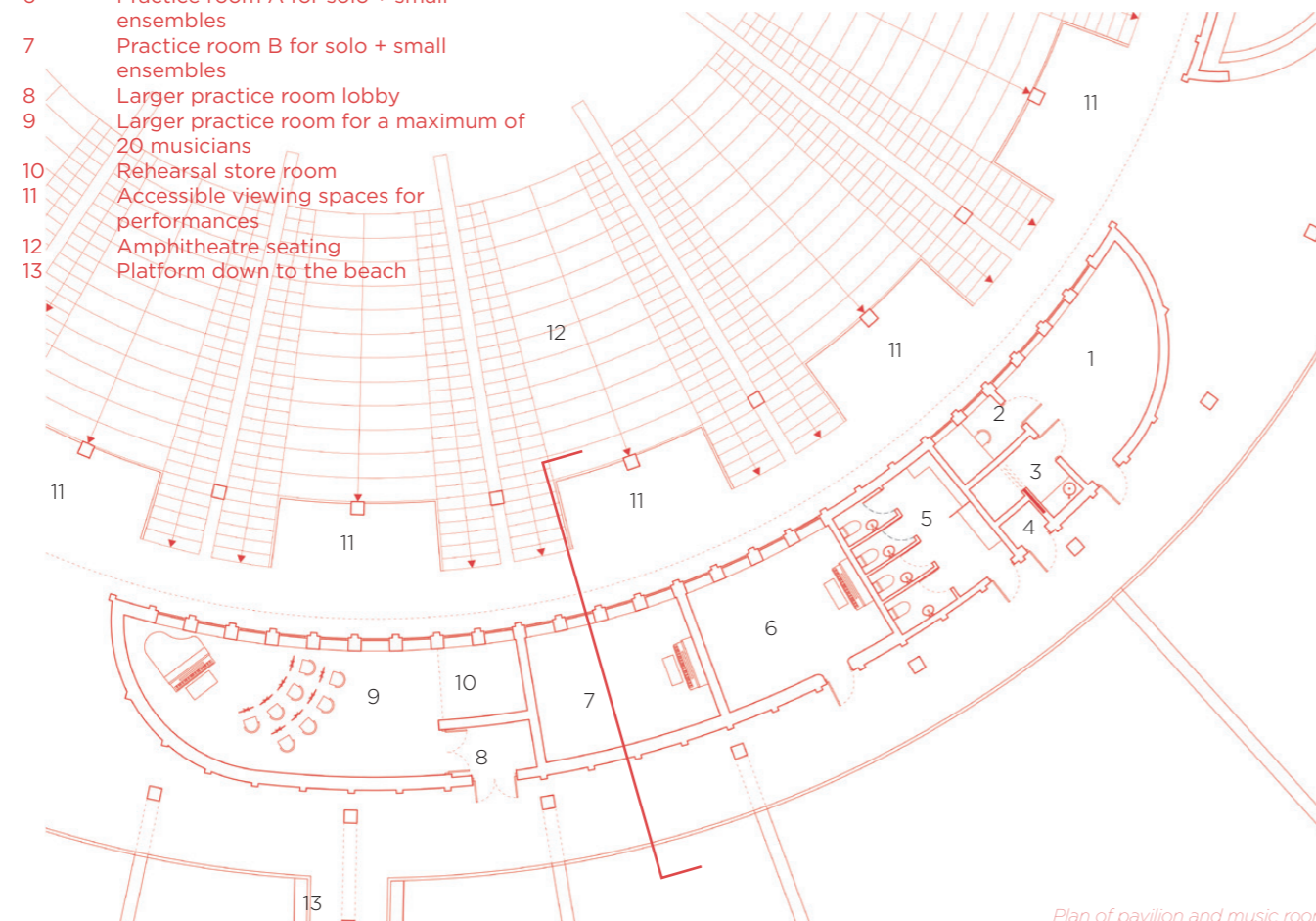


The proposal, stands sunken into the sand dunes

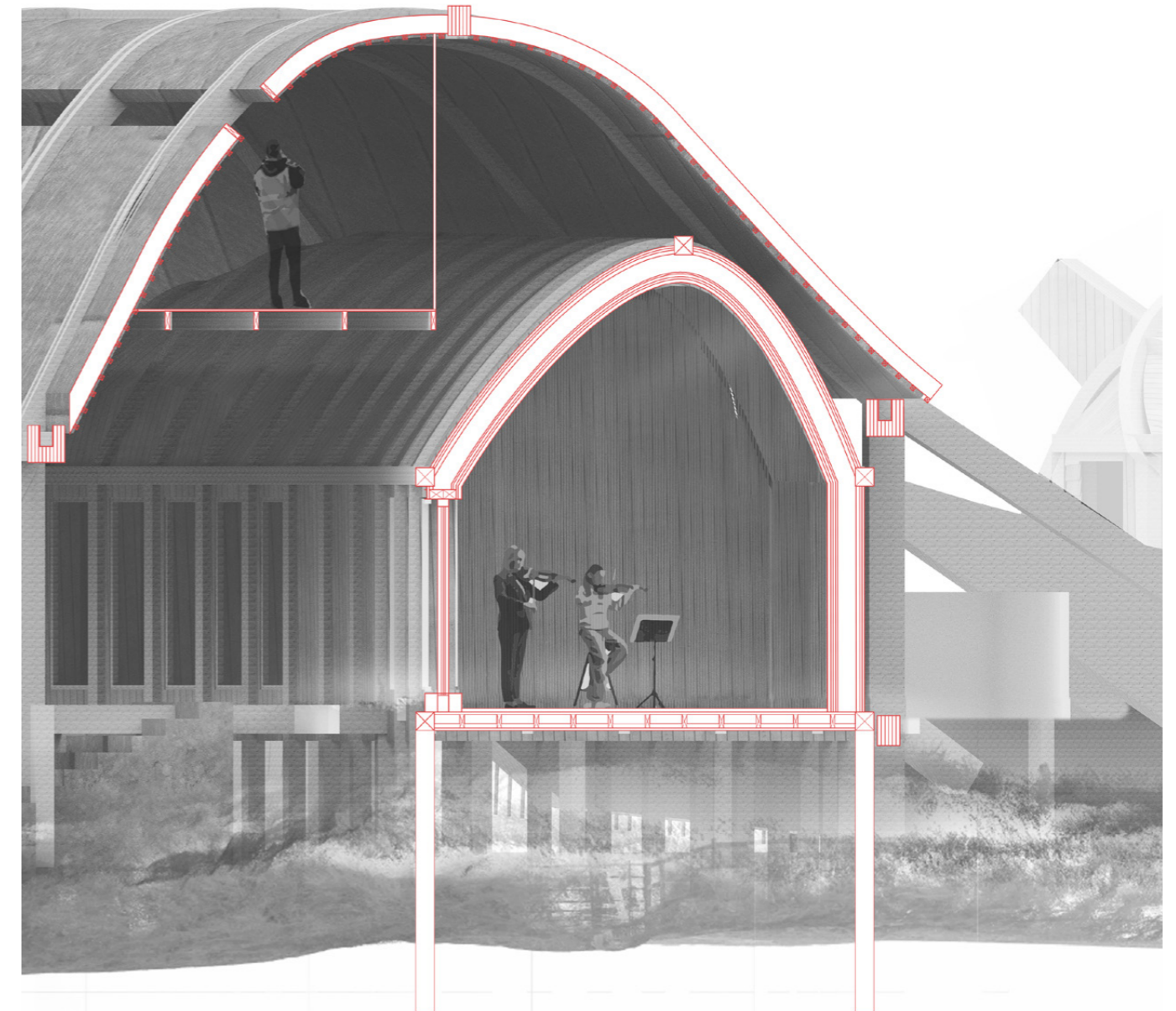
A Space to Listen

The program developed to provide practice spaces within a this large pavilion for both visiting musicians and the local community. Having looked at it in AMPL the previous semester, I decided to take programmatic elements from the Oglesby Centre at Hallé St. Peter's. I was particularly interested in the scheme's relationship between the performance space and practice space. I wanted to mimic this design choice with an acoustic box overlooking the performance stage, providing local performing groups with a place to practice and perform.

- 1 Visitor entry/lobby space for visiting musicians/general users
- 2 Manager office
- 3 Staff room
- 4 Cleaning cupboard
- 5 Toilets for music institution as well as overflow during busy performances
- 6 Practice room A for solo + small ensembles
- 7 Practice room B for solo + small ensembles
- 8 Larger practice room lobby
- 9 Larger practice room for a maximum of 20 musicians
- 10 Rehearsal store room
- 11 Accessible viewing spaces for performances
- 12 Amphitheatre seating
- 13 Platform down to the beach



Plan of pavilion and music rooms



Section through pavilion and music rooms

