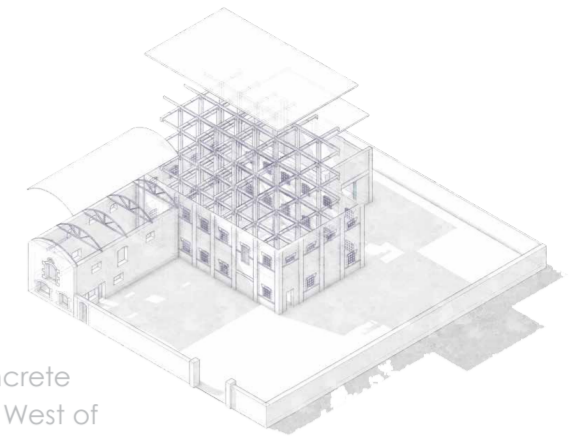


Existing building



Protected Hennebique structure- first reinforced concrete building in the West of Ireland

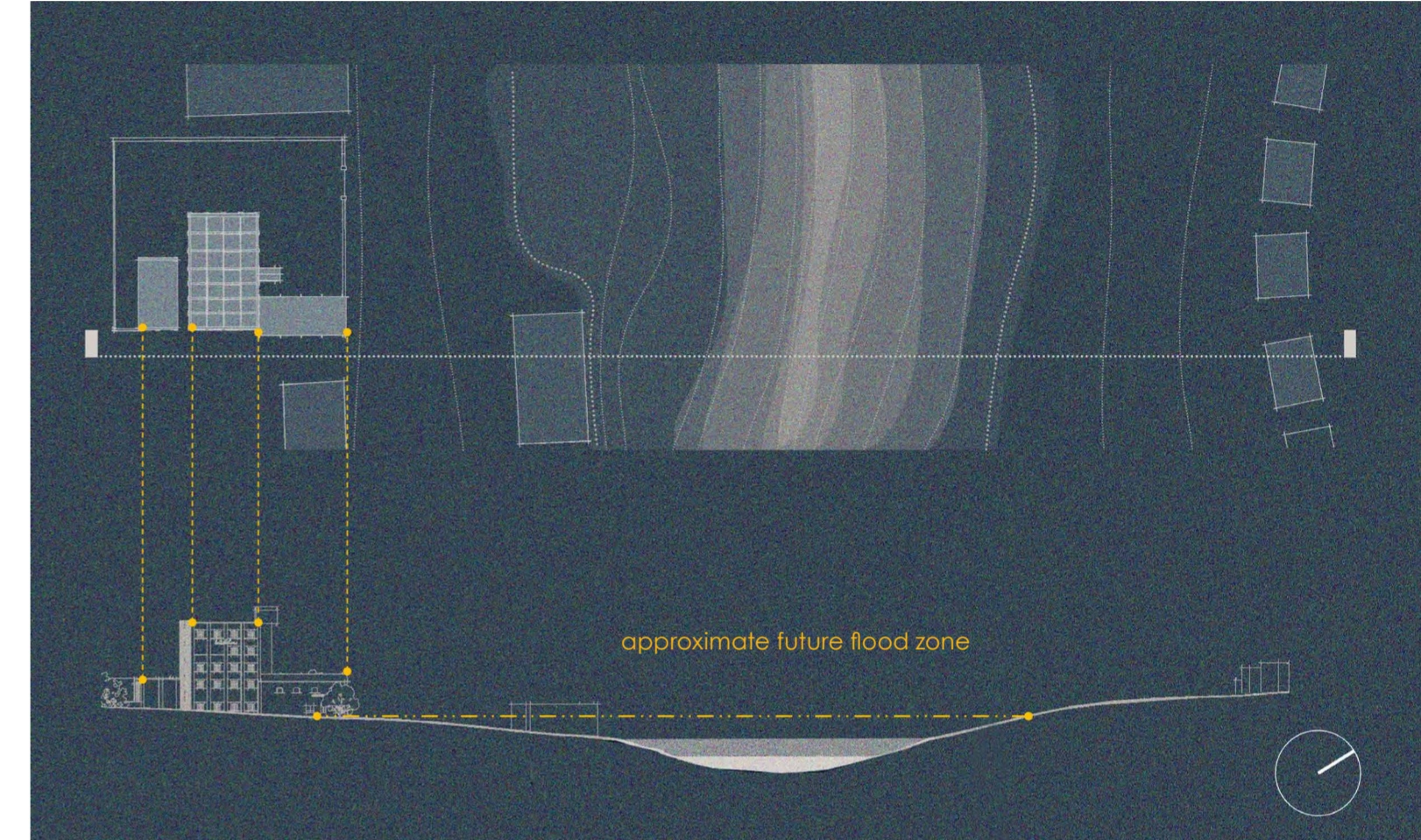
The project reimagines the former Harbour Mills at Deepwater Quay as a vibrant centre for environmental research and artistic collaboration – a flagship building of its own ethos - acting as a catalyst for environmental awareness.

By integrating Sligo's rich educational heritage and creative spirit, the Ark is designed to encourage meaningful connections among artists, researchers, and the wider public. The design approach embraces the site's unique characteristics, reflecting the inherent tensions between maritime and terrestrial landscapes, past and present, and natural and industrial environments. The adaptive reuse strategy places sustainability, flexibility, and resilience at its core, reimagining the neglected industrial building into a new social hub with placemaking in mind.

Located within a flood-prone area, the former grain mill demands a careful and responsive approach that acknowledges the site's sensitive context and the ever-changing dynamics of place. Furthermore, the protected Hennebique concrete structure necessitates a respectful intervention that prioritises reversibility and promotes long-term adaptability. Materiality was not an add-on; it was considered deeply from the start and evolved with context-specific possibilities and emerging identity tied to place.



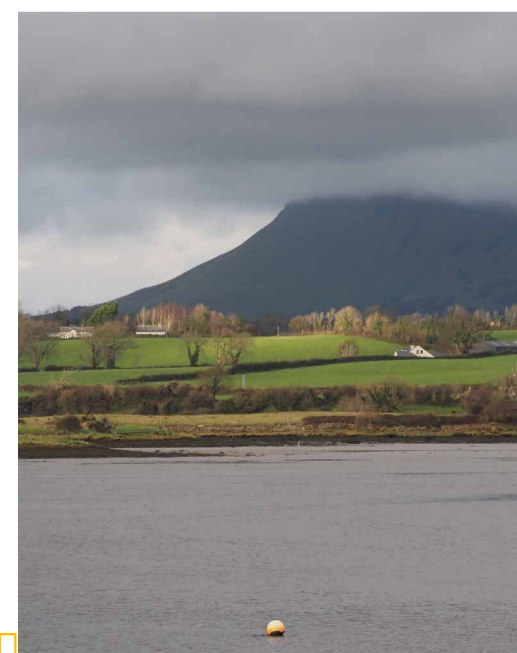
Concept sketch



Tidal section (NTS)

Context-driven design decisions -inspiration was drawn from the process of deep-mapping the area of the site as part of dissertation (own photos)

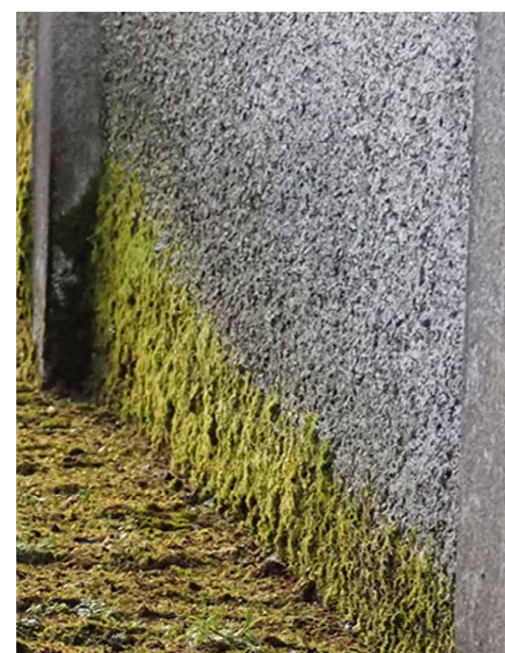
Natural landscape → enhancing views and connection with the outside
Views of Benbulbin and the Garavogue Estuary to North and Knocknarea mountain to South



Industrial townscape - strong sense of verticality and corrugated elements
→ fed into the shapes, forms and rhythms of the design



Nature's encroachment on the surrounding industrial infrastructure – small-scale reclamation
→ core ideas behind detail concept



Barnacles – marine crustaceans found around the site
→ parasite structures within the building that don't compromise the original structure



Seaweed and stone are the ultimate components of Irish shorelines
→ materiality carries the essence of the site



Sligo Port - related activities and export items - such as woodchip - found their way into the materiality
→ Context driven design

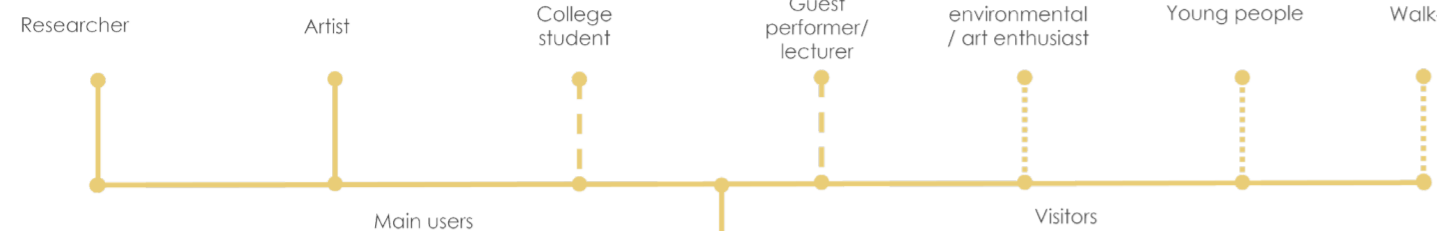


Ropes and knots – traditionally used for fastening in marine applications present in the area
→ Allows for easy assembly and disassembly

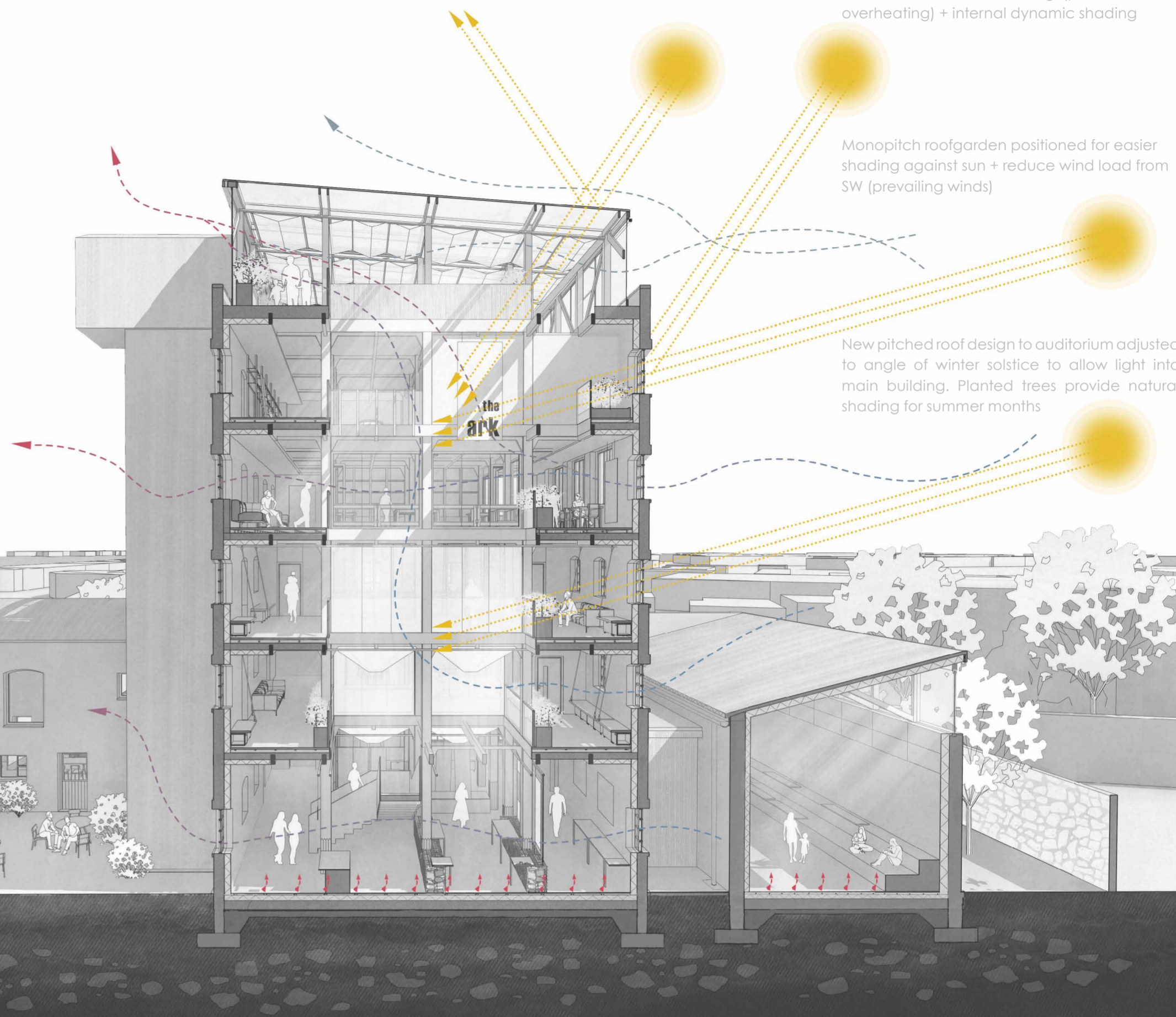


Colour yellow – repeatedly present in Sligo port : vivid and claims attention
→ Translated into a visual language that plays on curiosity and encourages exploration





The Ark is a relatively deep multistorey building, therefore getting light to penetrate deeper is quite a challenge. A small atrium forms part of the new design, allowing natural light to access lower levels and enhances natural ventilation with "chimney - effect". Vertical circulation forms a major part of the design, making use of transitional spaces. The aim was to create a route at the heart of the building that offers choices for people and acts as an invitation to explore. The journey through the building is an extension of the exhibition space, which allows visitors to see "behind the scenes" of research and making, while encourages participants to meet and collaborate.



Section at vertical circulation (NTS)



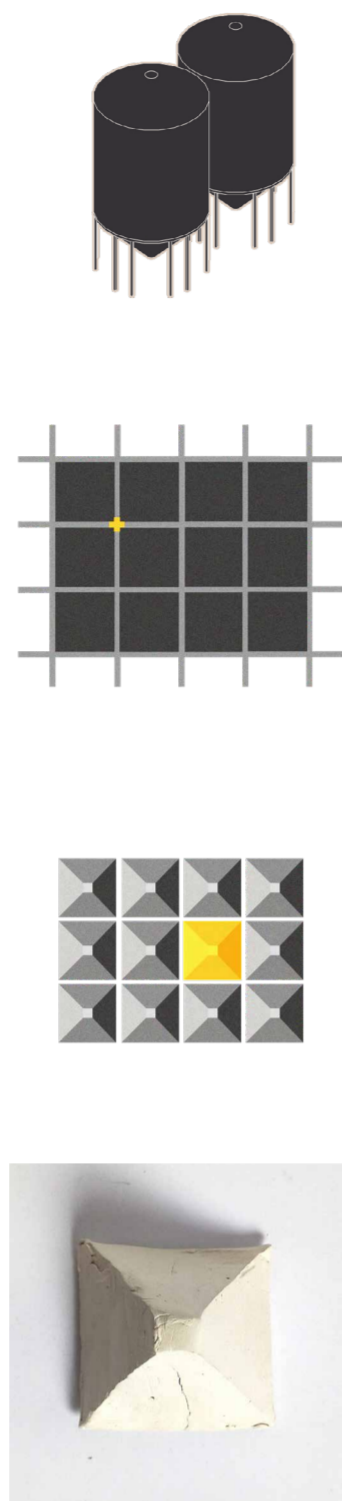
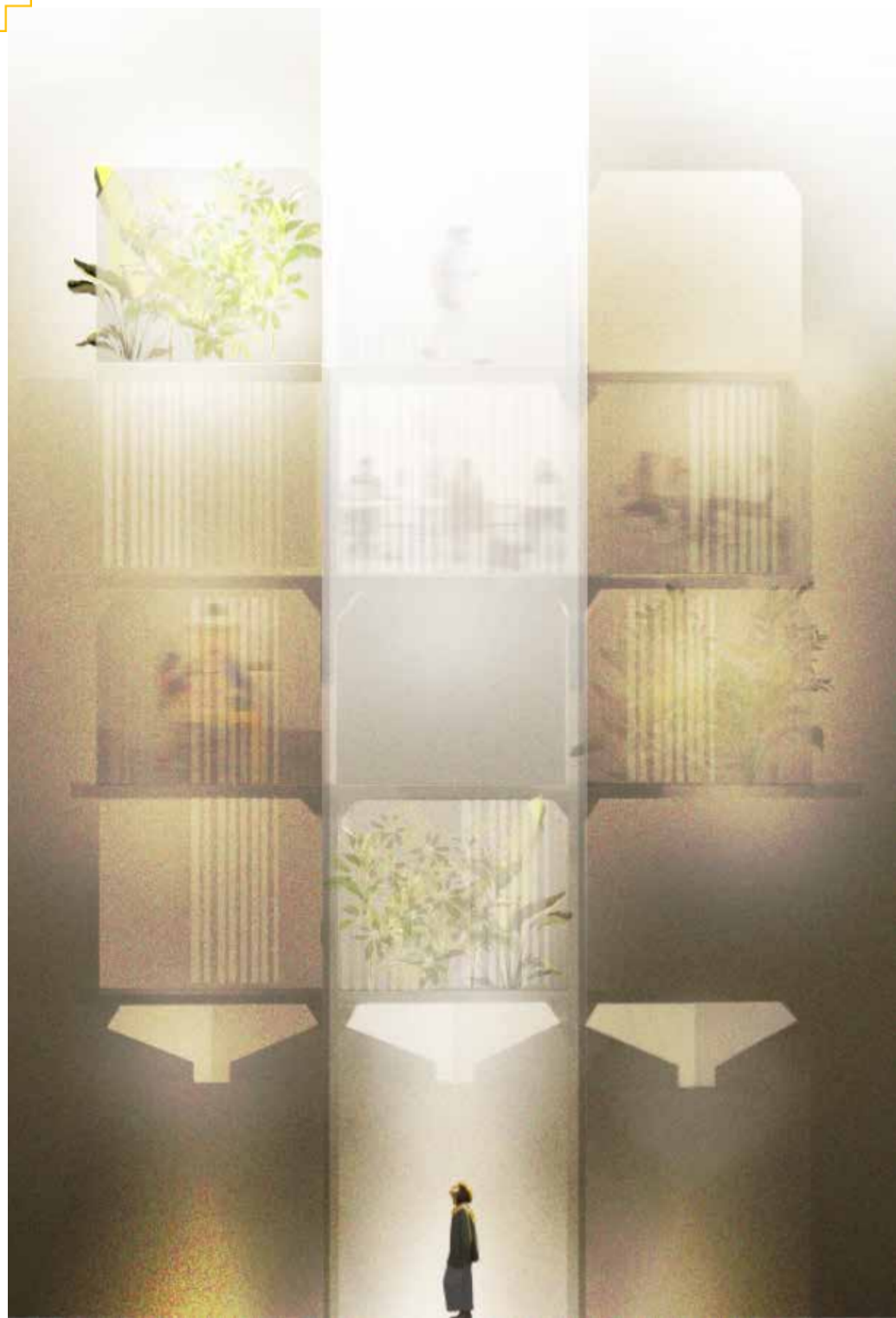
1. Roof garden with native species seed library (added structure)
2. Artist studios and library
3. Open and enclosed glazed workshop
4. Laboratory and cabinets of curiosities
5. Office
6. Street facing Cafe
7. Exhibition area
8. Auditorium (new pitched roof replacing flat roof with no windows)



Physical model of vertical circulation exploring spatial relationships between existing and new elements and materiality.

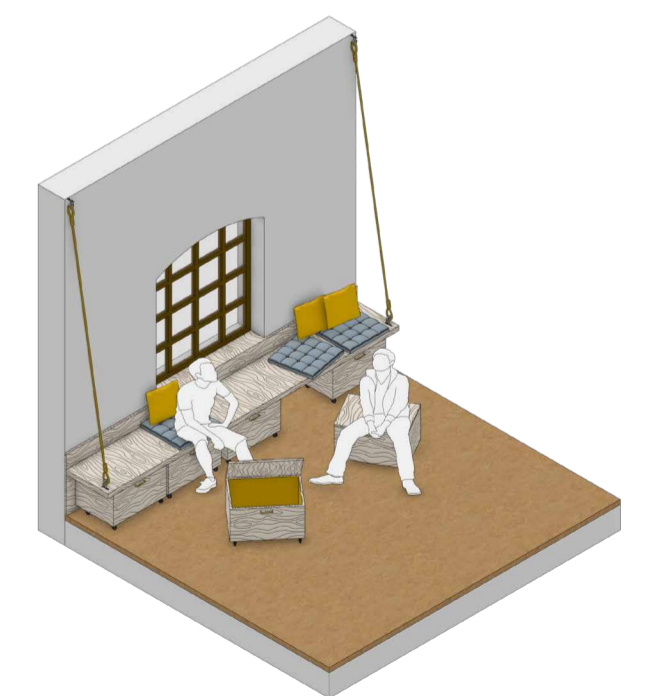
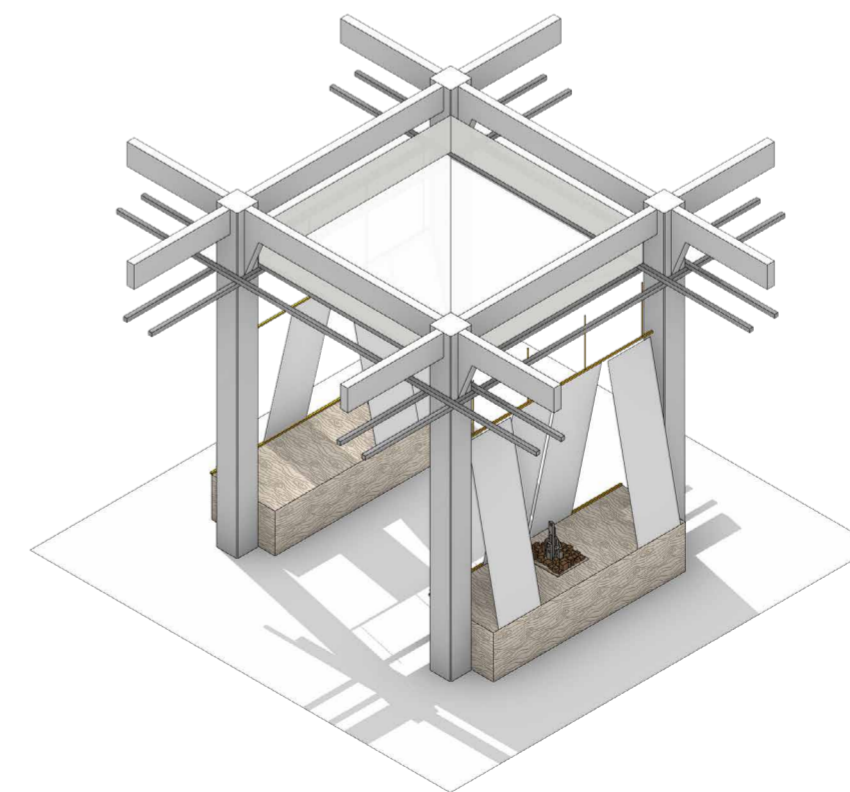
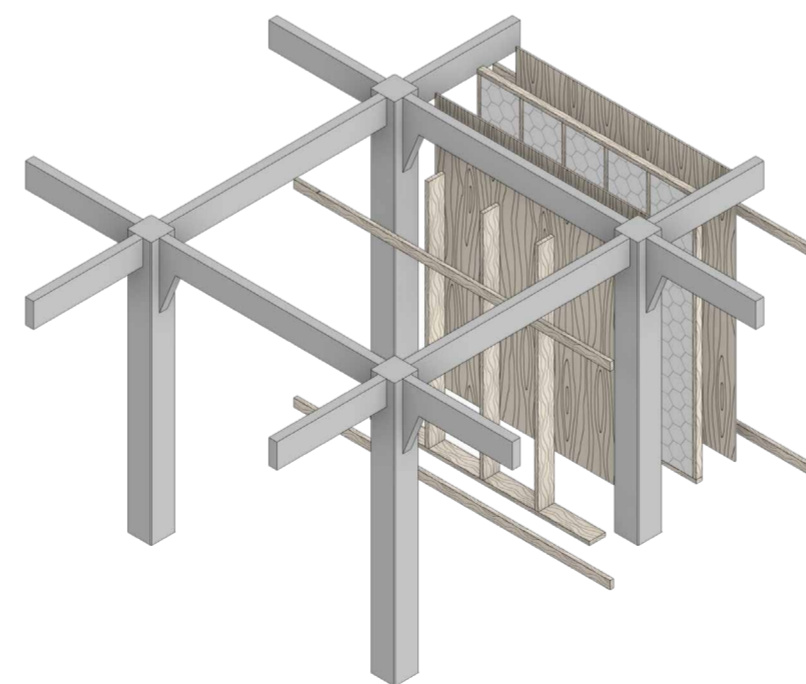
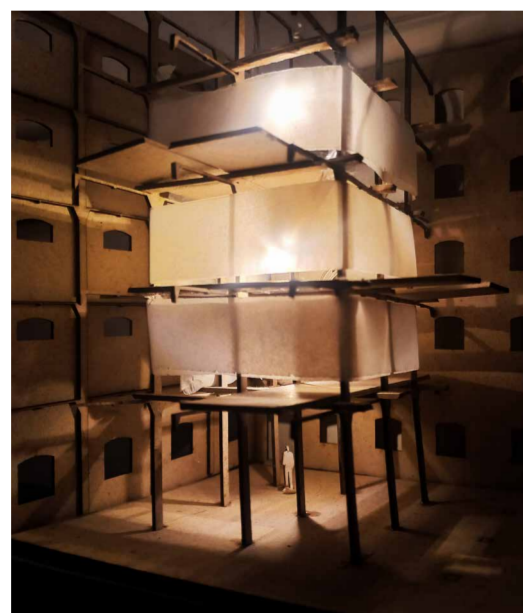


Non-toxic, natural materials and finishes selected with circularity in mind. Most of them sourced locally, some of them developed as part of the buildings new identity.



Exhibition space lit under the "hoppers"

Conceptual approach: Instead of fighting the original dark tone of the building, the design celebrates its distinct characteristics and emphasises atmospheric qualities by accomodating an immersive exhibition space lit under the "hoppers". 6 hoppers were originally present on the 3rd floor of the building. Their demolition results in more useable space, however I wanted to find a way of preserving their "essence" within the new design. Hoppers became a symbol of the collection of matter and creativity throughout the building, where the end product is the exhibition zone poetically lit by these bespoke lighting features – a nod to the building's history of grain mill and maize silo.



Intervention strategy: Parasite structures allowing for temporary assemblies that do not compromise the original structure and are easy to disassemble and relocate. Fixing and joining methods were inspired by the surrounding marine activities and were investigated through initial concept models and detail study.

Using reclaimed studs/ joists in standard sizes reduces costs and allows for ease of installation. The partition walls can be "sandwiched" together with studs that act as a factening strap, which leaves the original structure essentially untouched.

Exhibition stands - modular and easy to relocate, attaching to a rail system that houses adjustable track lighting.

Bench - type seating on perimeter of all floors -doubles as storage space with moveable crates on castors. When not used as seating, it offers additional display space.

The "problem"

The reinforced in-situ concrete structure has poor acoustic qualities. The rhythm of columns breaks the space, and the newly inserted timber partition wall systems help, but it still requires a solution that softens and improves acoustic qualities—particularly important in an open-plan work/ exhibition environment.

The opportunities:

Materiality and inspiration were directly "borrowed" from the site and surroundings. This allows the design to establish its own identity, feeding directly from the context. Due to the new function – a space for environmental research and artistic cross-collaboration - the materiality has an experimental aspect to it and aligns with the building's new ethos.



Woodchip/sawdust
primary export at Sligo port



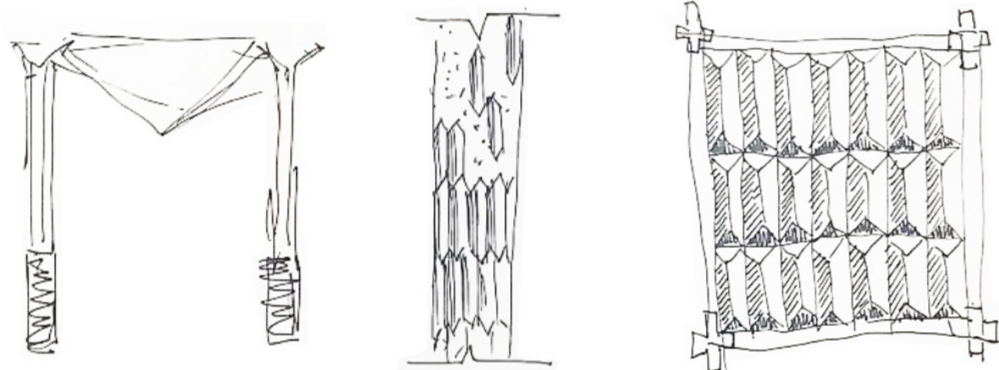
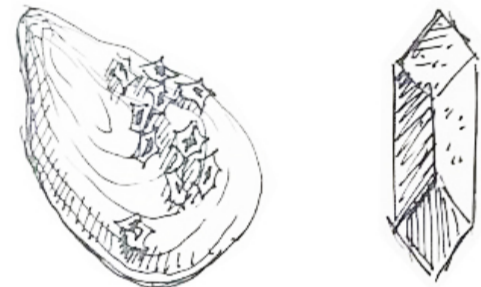
Seaweed
Brown algae species are abundant in the Garavogue Estuary



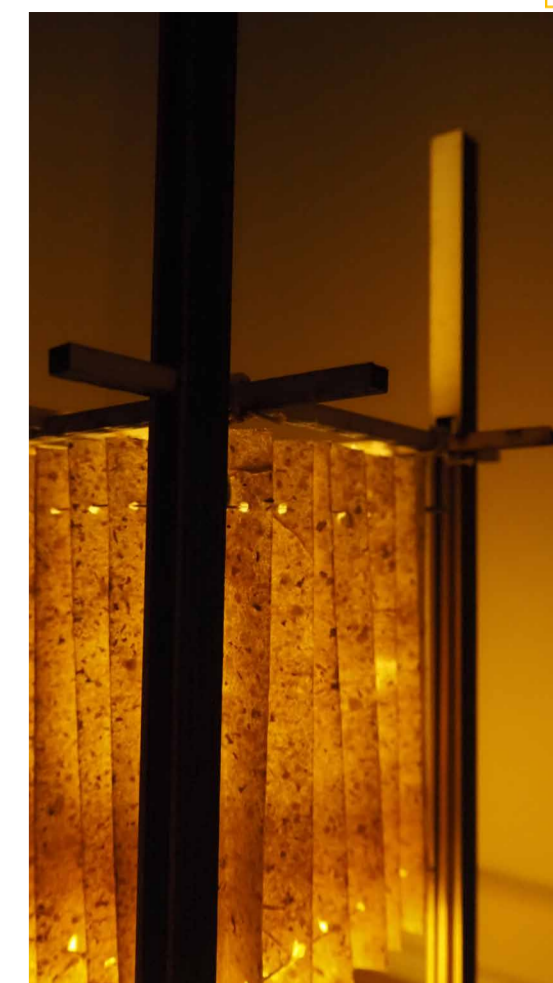
Mussel shells
Dropped by seagulls onto hard surfaces near the area

Seaweed paper: made from recycled content and seaweed fibres (using mold and deckle, then slow drying on flat surface)
Used to construct the shade of the lighting elements from small to large scale, temporary screens and shading units.

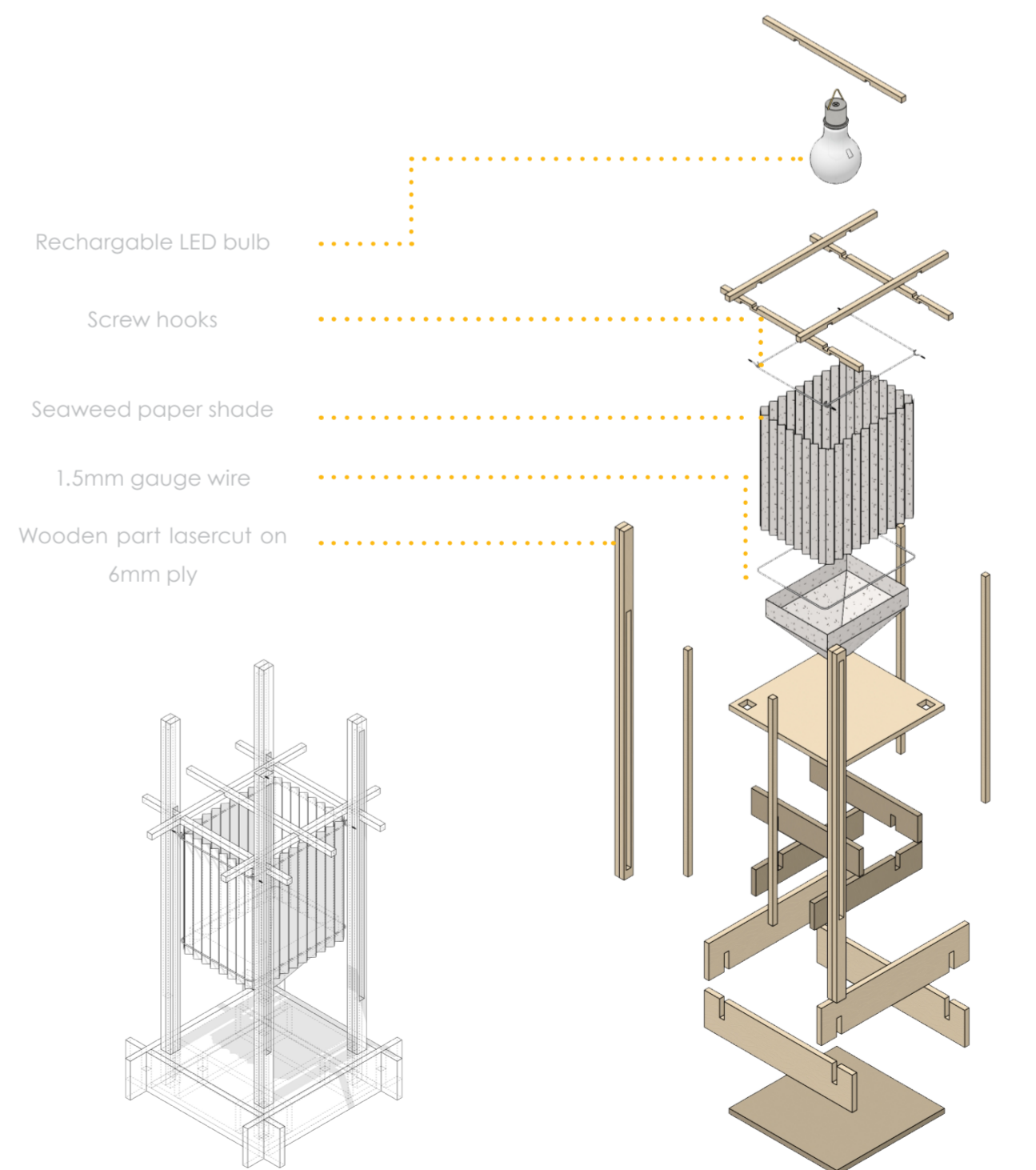
Acoustic tiles: Sawdust + seaweed fibres (cleaned, then heated and blended) + alginate as natural binder (derived from seaweed during heating process) + ground mussel shells to activate binder (high CaCO3 content).
The paste was then poured into handmade pre-shaped molds, frozen to slightly set, then air dried.



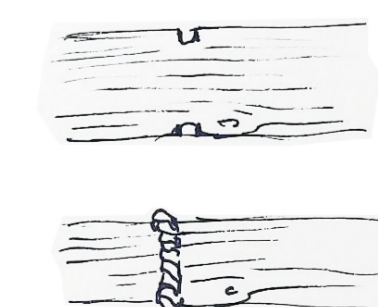
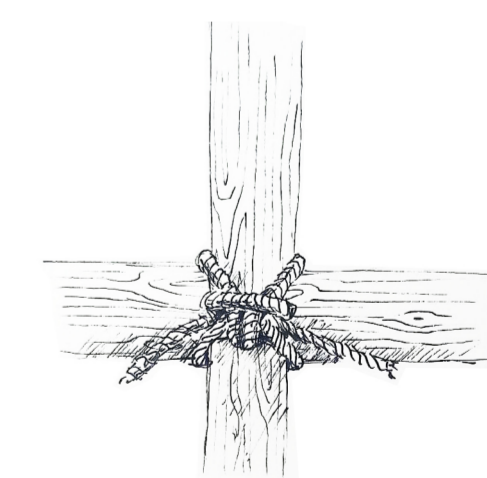
Detail study - Portable lamp
During the making of the light fitting I experimented with different materials, shapes and fixing methods, until the design was aligning with all the criteria shaped by the conceptual approach of the whole building.



Inspired by barnacles, the modular, stackable composite tiles provide a tactile experience and can be fixed with plant-based glue used as acoustic surface treatment.



The assembly of the detail element references construction methods throughout the building, that require no gluing or permanent fixing. Lap joints and yellow clove hitch derived from the investigation of marine knots give identity to the furniture systems.





Roof garden with native species seed library



Artist studios - customizable, well-lit spaces deliberately positioned to the quiet library zone

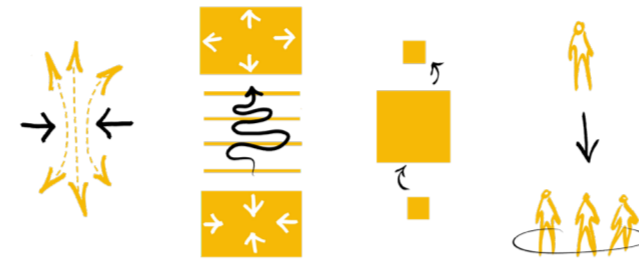


Cafe looking through street facing window
Clear sightline to exhibition space invites visitors in



Night view of the ARK, now filled with life

The building employs a sequence of compression and release, guiding visitors from atmospheric spaces into bright, open environments through an inward-focused vertical journey that culminates in a roof garden with 360-degree views. Shifts in scale and yellow details encourage exploration within a clear spatial layout, while spaces for reflection balance the building's emphasis on teamwork and social interaction.



Old discarded doors were found in the nearby municipal dump. These doors are often made from good solid wood, and after planing and refinishing they can be used again as folding partitions for studio spaces.

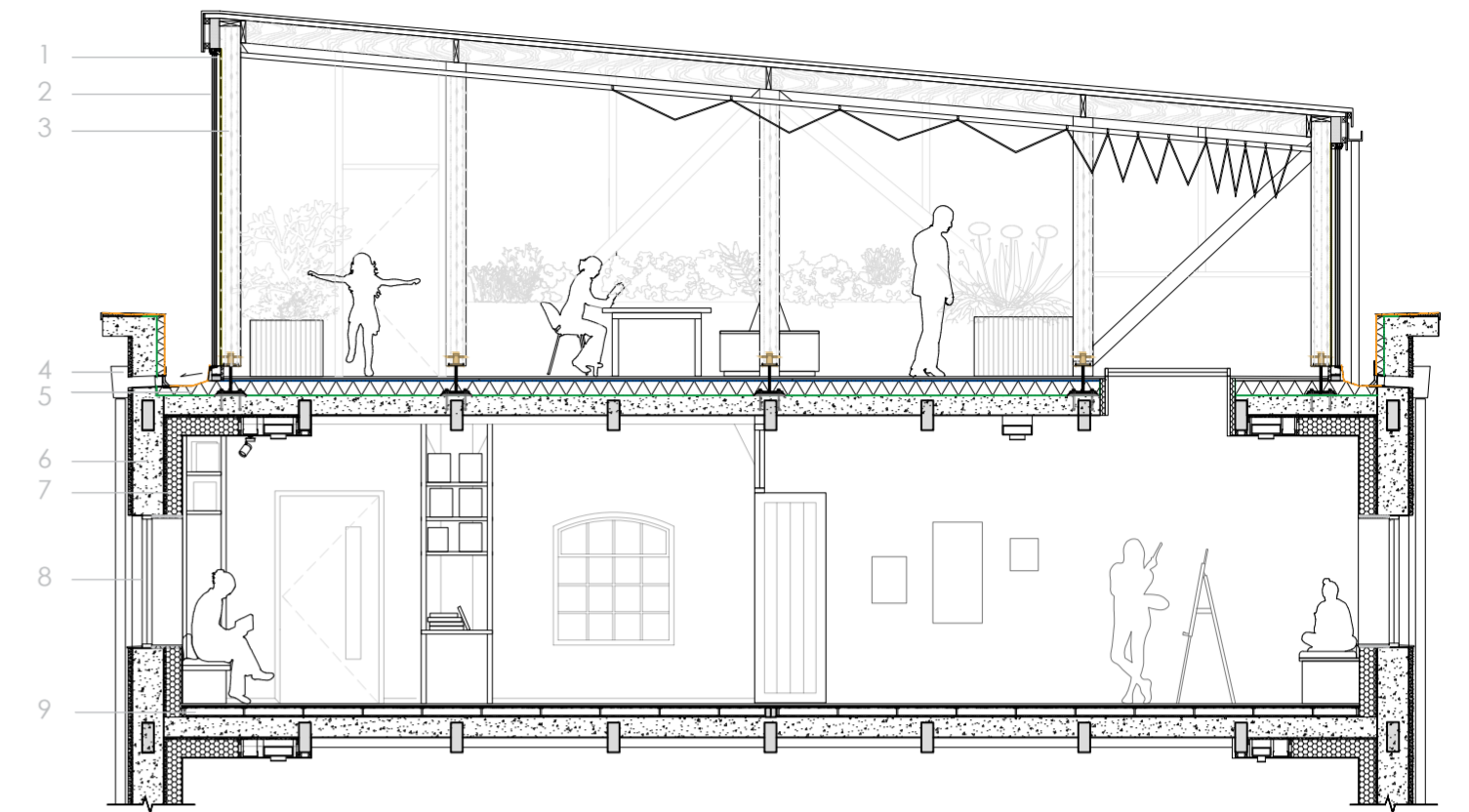


Furniture elements are proposed to be recovered and refurbished - aligning with the "maker" identity of users.

Temporary bird-hide on the Garavogue
an extension of the interior identity



Section at roof garden and studio below (NTS)



- | | | | |
|---|---|----|--|
| 1 | Timber-aluminium hybrid curtain wall fixed externally to timber frame | 5 | Scupper Drain |
| 2 | Class 1 Fire-rated 35mm multiwall polycarbonate | 6 | Rigid external insulation (Hybrid roof) |
| 3 | 200x200mm FSC certified Irish Sitka Spruce Glulam posts on Rhotoblaas T-Post base, interconnected with recessed Sherpa system | 7 | Existing RCC wall |
| | | 8 | Ecological Building Systems Retro EcoWall insulation system (moisture control, breathable) |
| | | 9 | New triple glazed windows |
| | | 10 | Raised Access floor |

