

IT'S A WONDERFUL LIFE - MATERIALS BANK AT SILO D

The name 'It's a Wonderful Life' comes from the 1946 Frank Capra film – a story of a seemingly bleak future which becomes overwhelmingly optimistic when a different perspective is taken. The importance of a community coming together for the collective alongside individuals having momentous impact is exhibited beautifully.

In 2019, the UK produced 206,450 tonnes of textile waste. This is the equivalent of 16,320 London buses.

73% of UK waste is burned or sent to landfill

12% is reused

9% is recycled

It is no surprise that finding data on how much textile waste the UK exports is difficult, but we know it ends up in places like Ghana's Kantamanto Market in Accra. (The UK is the largest exporter to Ghana). The local economy is dependent on this market, however, there is still too much waste to handle.

The Magpie Project X Bethany Williams

The Magpie Project is based in Newham. They focus on supporting mothers of children under the age of 5, and keeping them out of homelessness. They collaborated with designer, Bethany Williams, who's work includes lines made from previous collection's off-cuts, ends of rolls, and dead-stock. This collaboration encourages a return to craft and skill building in a community driven environment.

New companies like **Evnu** and **Renewcell** are sourcing garments with a high cellulose content, such as cotton and wool, dissolving them using chemicals in a controlled and environmentally friendly way, and then processing them back into a fibre which is made into fabric.

This closes the loop, but still operates on a large industrial scale, which uses intensive machinery, and they do not accept donations from the public.

When researching precedents that utilise the garment to garment model, it is apparent the idea is proposed as an innovation to be taken up by existing industrial chains and established companies.

This shifts the responsibility to such parties and creates distance from the consumer - preventing their involvement. A new relationship between consumer habits and the products they buy needs to be encouraged.

Full involvement with the entire manufacturing process should be readily available; from donating the textiles to purchasing the yarn or fabric after processing it. Such a space should be social and collaborative, as well as provide a space for a reflective and critical thinking of consumer habits so the contextualised norm can be challenged.

Charity shops are overwhelmed with clothing donations - a lot of donations end up in landfill. Silo D could be a place for excess donations, or donations not fit for sale, to be sent instead of being sent landfill or to be burned.

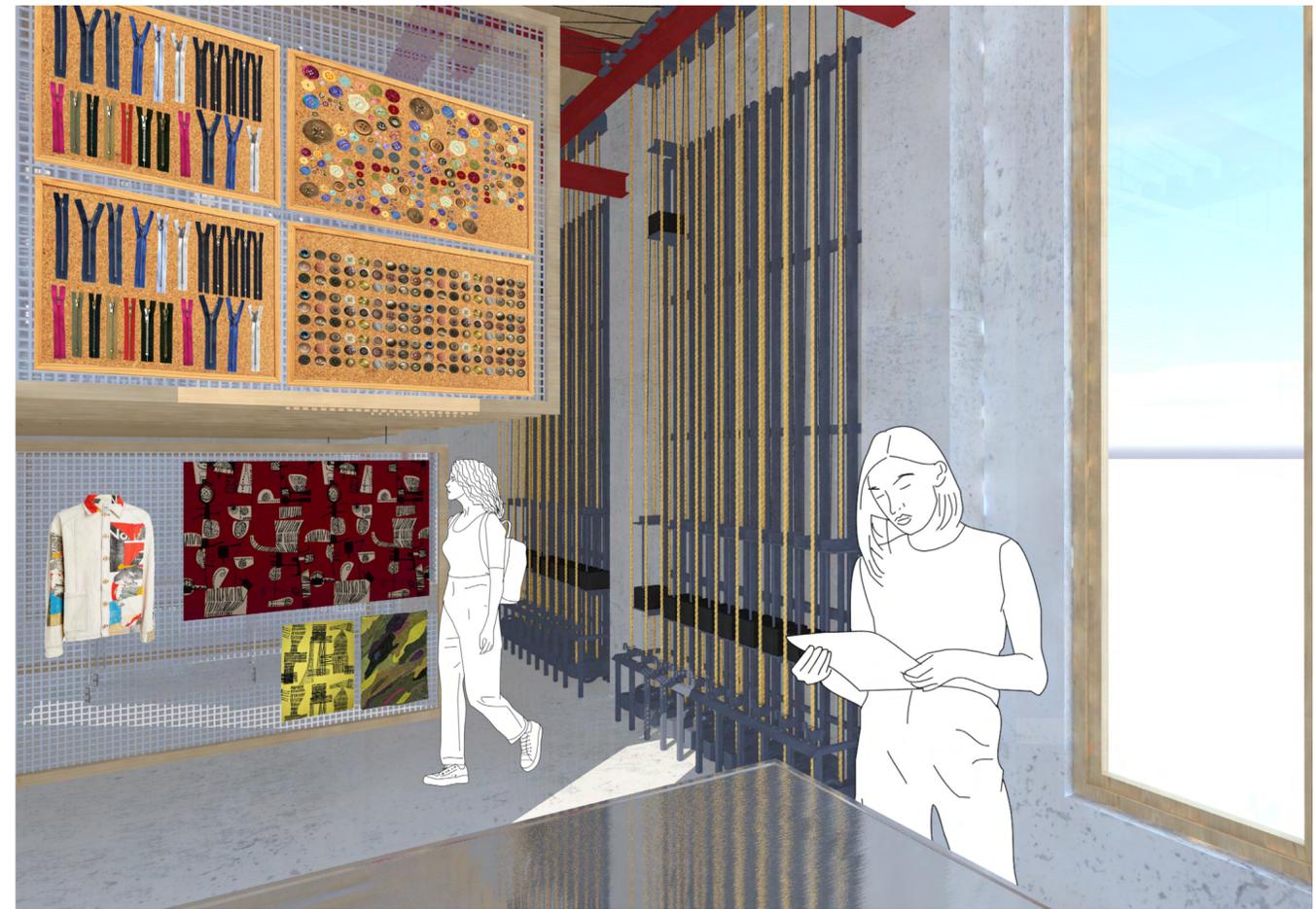
The Magpie Project, based in Newham, could source the fabric that their clients are taught to work with at Silo D. There will also be a space provided for community projects, and a workshop space for further development of skills

Both Ravensbourne University and UEL have fashion departments. The waste produced could be sent to Silo D. There is also an educational opportunity here; the proposal at Silo D will visualise closed loop design and address the issues of externalising our waste.

This scheme proposes that this is one example of many similar sites, and that the donation becomes a communal shift in behaviour towards a habitual and conscious effort to process waste.

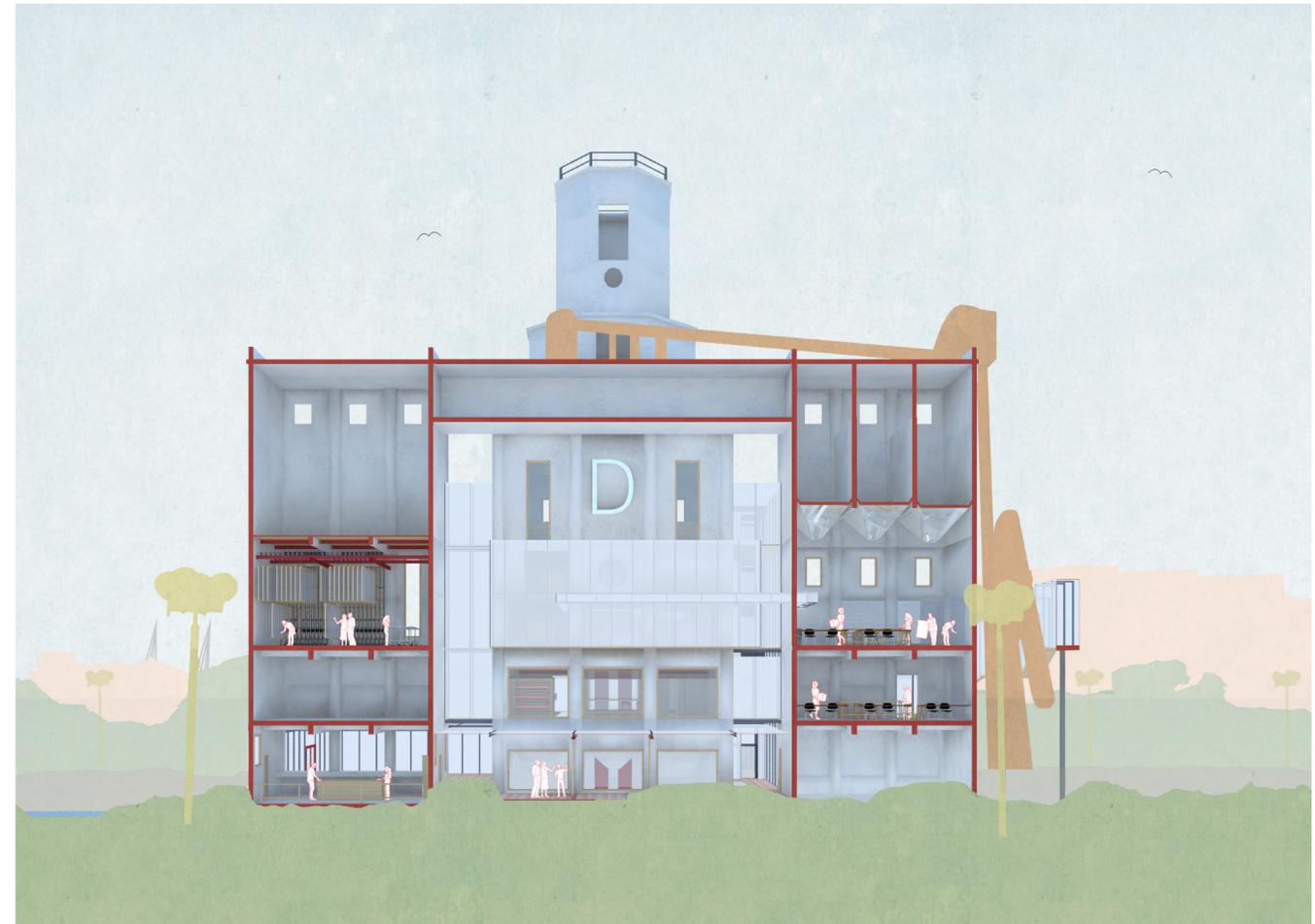


- 1 Hanson Pure Glue Plywood
- 2 An example of the fabric created on site.
- 3 Galvanised Steel painted with Lakeland Paints.
- 4 Welded Steel mesh
- 5 Original Steel
- 6 This is a Really product from Kvadrat.
- + Really boards are made from 70% textile waste and 30% binder.
- 8 Reinforced glass
- 9 Existing concrete polished and cleaned.
- 10 Terrazzo made from the concrete excavated from the site.
- 11 Kalwall Polycarbonate
- 12 Manilla Natural Fibre rope dyed with turmeric and citrus peels.
- 13 Example of an artwork created in the Up-Cycling and Knit workshops.



Archive on level 3 - Single-Purchase Pulley System In The Archive . Work exhibited here will be both amateur and professional. Buttons and zips will be stored here ready for client meetings.

Perspective Section - a view from across the dock.



Exhibition Spaces

- These spaces will include both amateur and professional work. The exhibited pieces will have been created on and off site.

WCs

Goods Lift

- The two goods lift operate like a main artery in the heart of the building. The garments donated in the Basement travel all the way up the site to Level 4 where the re-manufacturing stage begins.

Machine Pods

- There are 8 machines in the site - each have a different purpose. The order of progression goes from Level 4 to Level 2 when the new fabric will be taken to Level 1 to be sold.

Up-Cycling Workshop

- Some garments donated to the site will contain materials which are synthetic, leather or otherwise incompatible with the re-manufacturing process. They still have a multitude of uses and will be taken full advantage of by Creatives using the site.

Conveyor Belt

- The Conveyor belt pays homage to the conveyor system in the bridge of the original grain silo. It parades the garments around Level 3 before they reach the Up-Cycling workshops where they are taken off and stored before they are worked with. They are attached by simple recycled clothes hangers to a rail.

Archive

- The garments that are donated to the Basement will have to be de-buttoned and de-zipped before they are ready to be put into the machining processes or sent to the workshops. These products are not degradable and a huge part of the textile waste problem. They will be stored in the archive and workshops ready for designers and their clients to salvage, or for people working in the workshops to directly access.

Knit/ Natural fibre Workshop

- Visitors to the site can either buy rolls of re-manufactured fabric or spools of yarn to be worked with.

Entrance on Level 1

- Here visitors can browse the wholesale section, make their purchase and work with their sustainable materials elsewhere, or they can hire a desk in the workshops at reception.

Wholesale section

- This contains a movable storage system which sits on tracks, they are often seen in libraries or archives. They are familiar and easy for the public to use.

Storage/ Staff facilities

- This scheme has the potential to generate a lot of produce - there needs to be a space allocated that ensures an efficient maintenance.

Silos

- The Silos in the side towers will most likely be steel. Although their current state will be rusted, they could be polished to a point of acting as a mirrored ceiling to the Up-Cycling workshops.

- The Silos at ground level are concrete and likely structural. They are a homage to the original use of the building and therefore have been retained. They form the ceiling-scape of the Basement.

Kitchen + Cafe

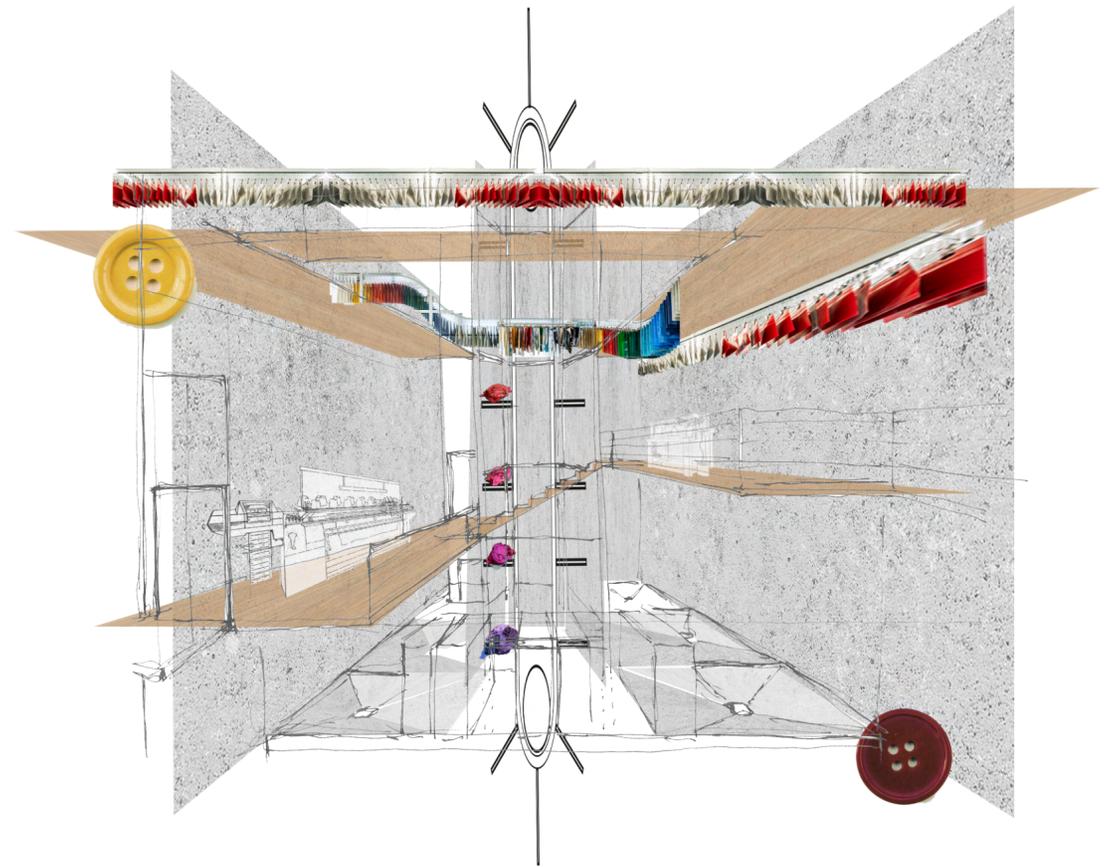
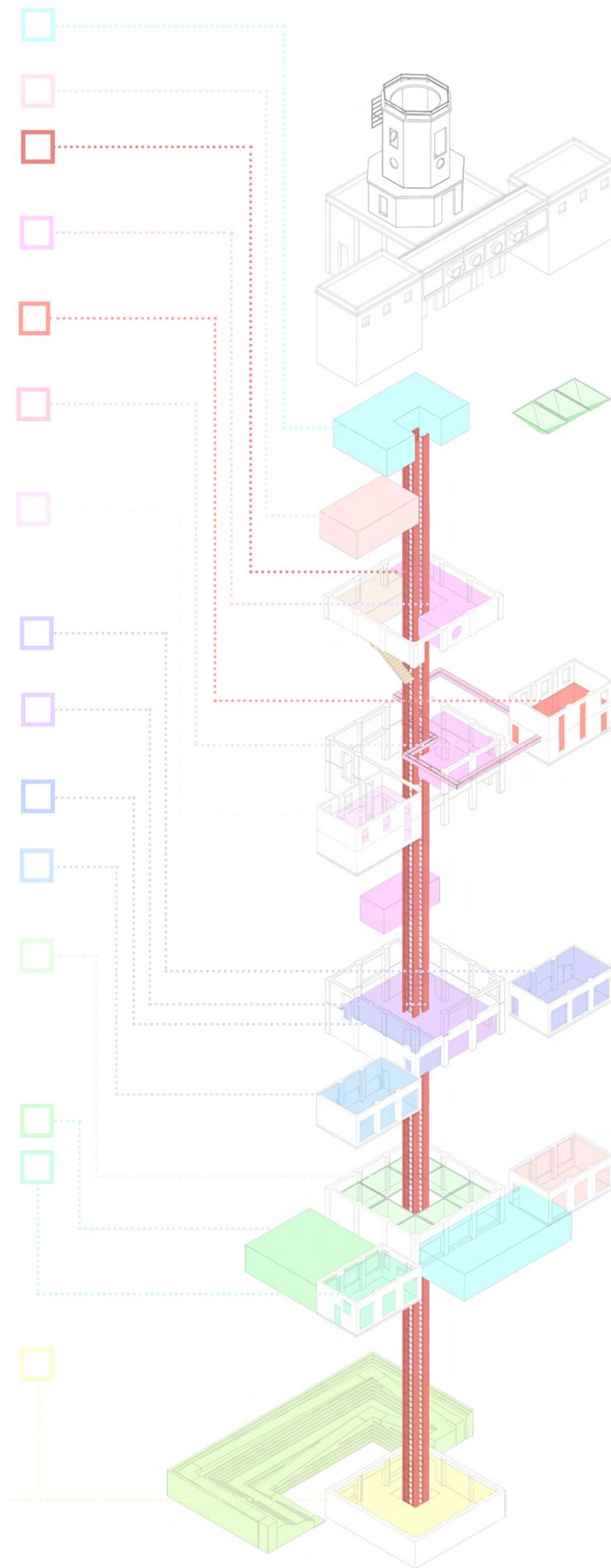
- This scheme is a place where a visitor could potentially spend the whole day; they may make regular visits and a community will start to form. There needs to be a space for relaxation and socialisation.

- The food will be prepared and then served through the original loading bays of the side tower.

- The thermal qualities of polycarbonate and the access to the ground from the cafe makes this a perfect space for a small herb garden which can supply the kitchen all year round. It is another example of small sustainable changes and involvement of the community.

Basement

- This is the main entrance to the site - made clear by the vast landscaped stair/ ramp hybrid. Here a visitor (company or individual) will make their donation.



OPERATIONS DIAGRAM
FROM THE GARMENT TO GARMENT MODEL
This system is completely waterless

01



Cleaning/ Sanitisation
- garments sprayed in an ozone chamber to remove any micro-organisms/ dirt.

02



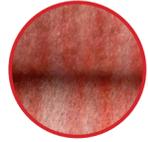
Shredding/ Opening
- initial breakdown of the garment helps to further remove impurities.

03



Filtering
- Virgin material is added to strengthen the fibre. (cellulose or lyocell)

04



Carding
- Separate fibre clumps into individual fibres and orient them into a sliver.

05



Drawing
- Elongate several slivers into one to straighten fibres and improve evenness.

06



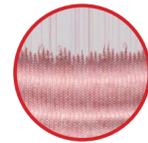
Spinning
- Feed sliver into spinning machine and twist fibres into single yarn.

07

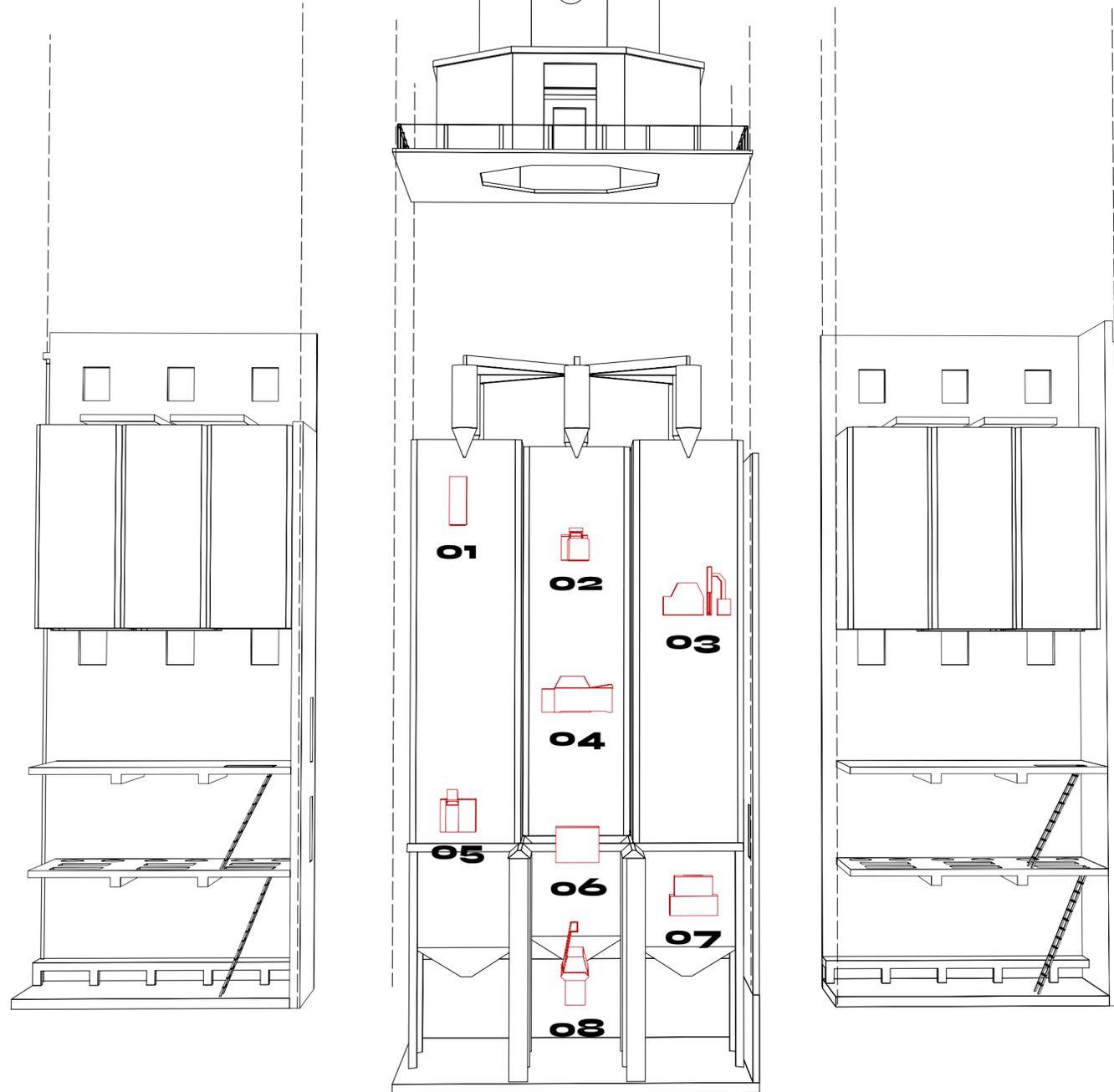


Doubling and Twisting
- Twist single yarns into ply yarn, to enhance strength and balance torque.

08



Knitting
- Knitting process with the options of knitted rolls or 3D fully fashioned pieces.



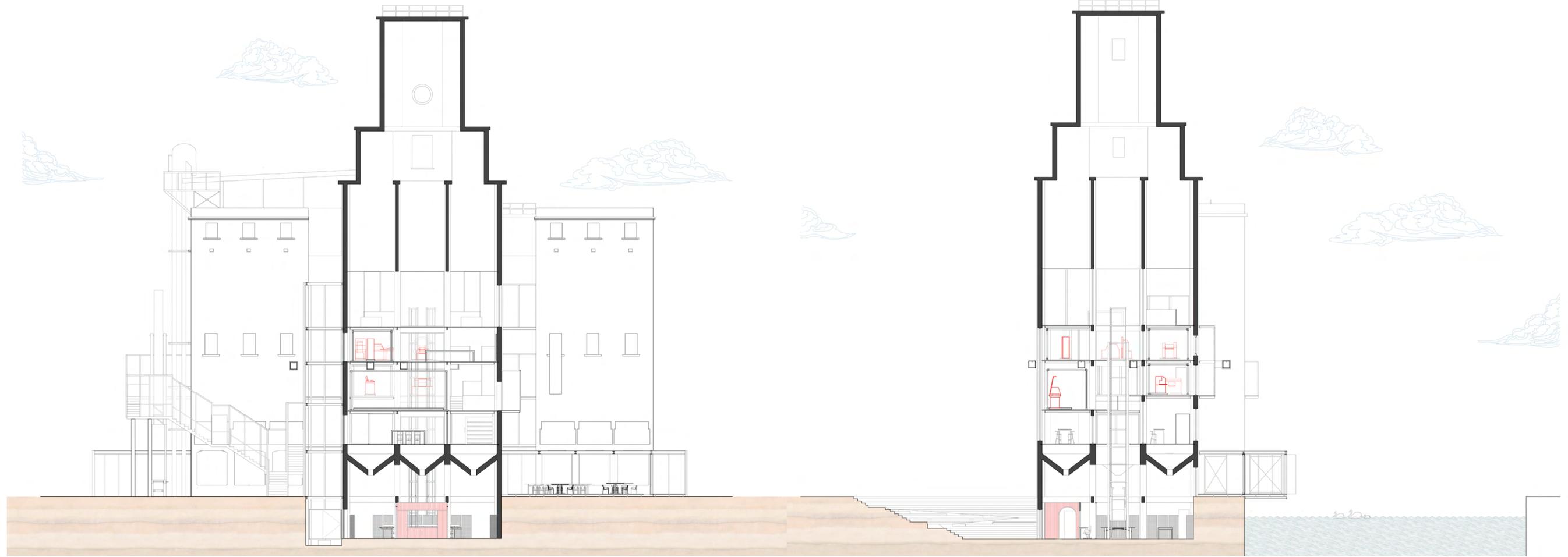
Level 3 Machine Pod



Level 2 Knit Machine Pod



Exterior View of North Elevation



NORTH (N) SECTION 1:200

WEST (W) SECTION 1:200



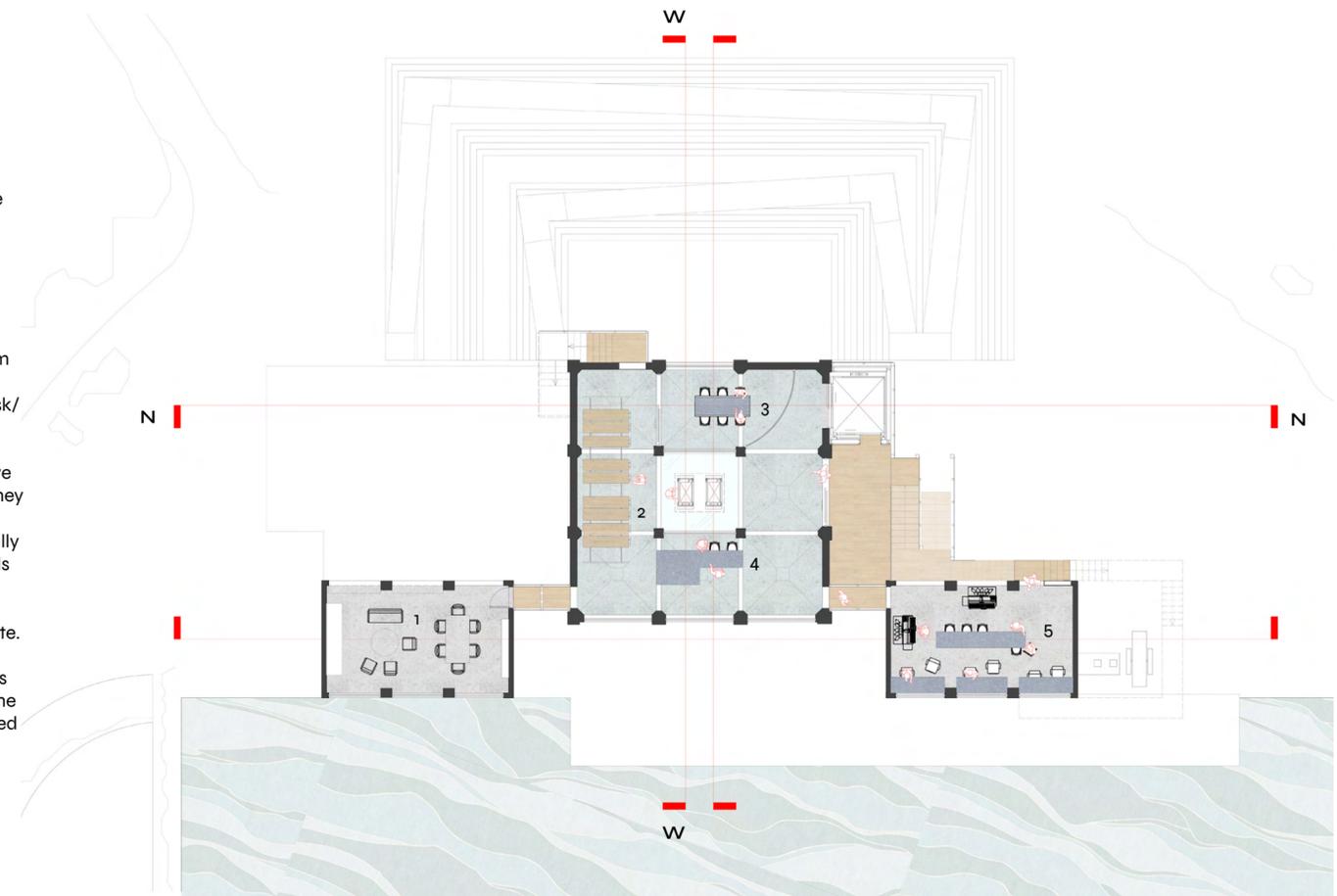
1st Level

- 1 Staff/ Storage Facilities
- 2 Wholesale movable shelves
- 3 Meeting room
- 4 Cutting desk
- 5 Knit Workshops

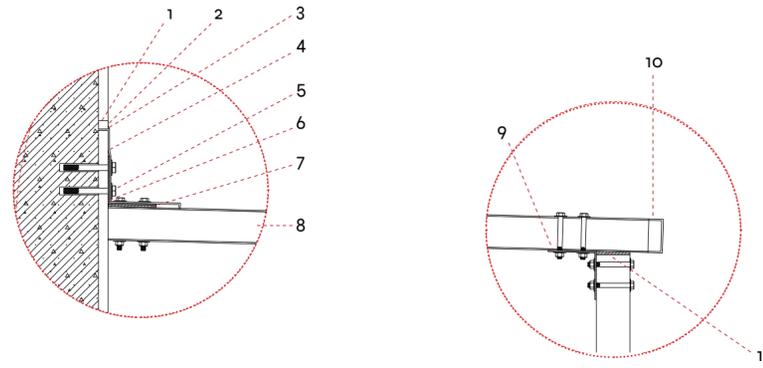
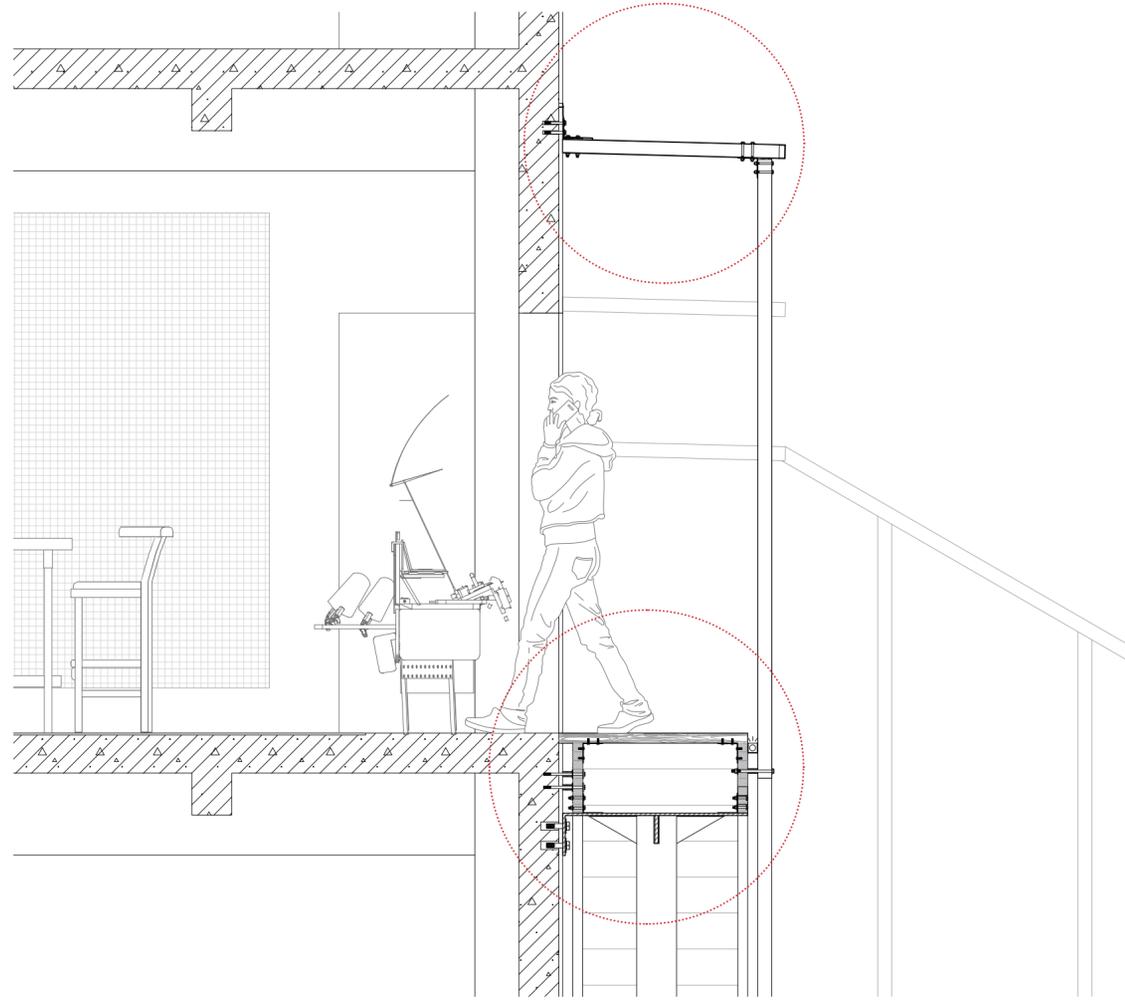
View over the dock from the Level 1 Wholesale section and cutting desk/ reception.

Once the materials have been fully processed, they will either arrive to the wholesale section as fully knitted rolls, or as spools of yarn. From here they can be purchased and worked with on or off site.

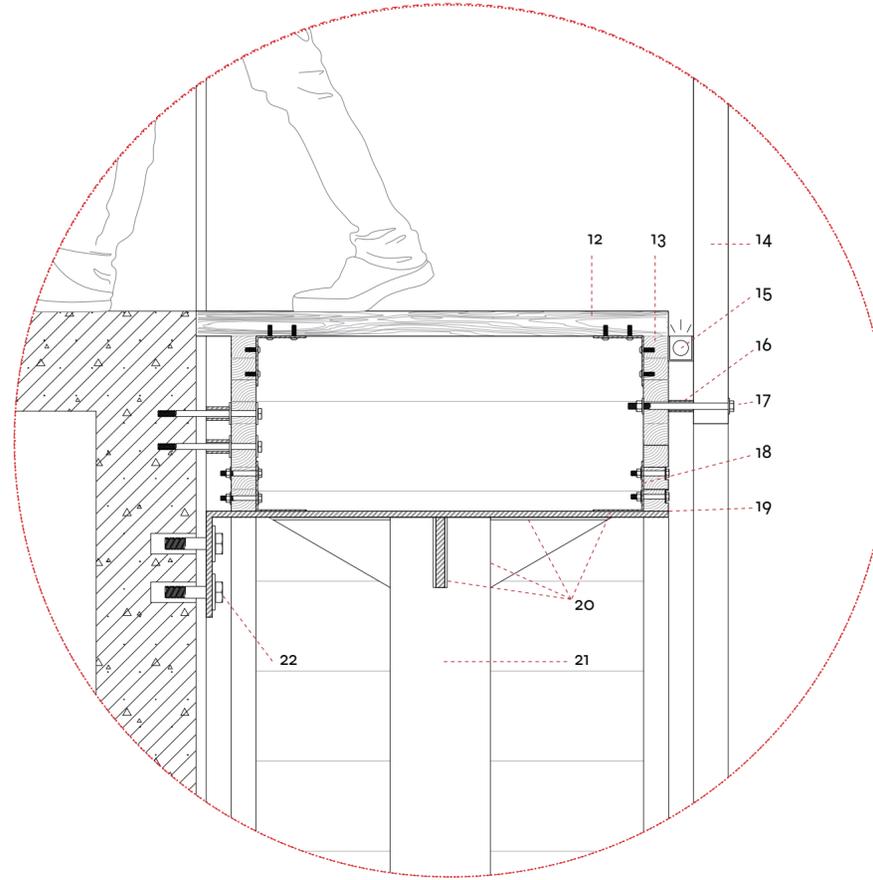
A desk in the workshops and/ or a time slot on the machines can be booked at reception.



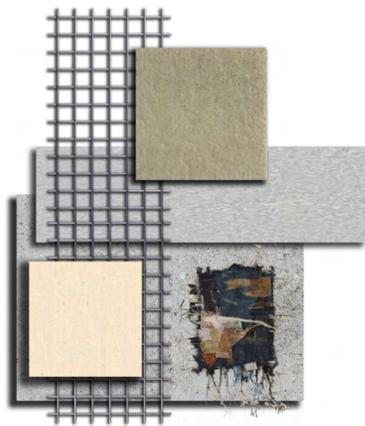
WORKSHOP PERSPECTIVE SECTION / CIRCULATION DETAIL



- 1 Chase cut into 20mm Render
- 2 Lead Tingle
- 3 3:1 Pointing
- 4 Code 4 Lead Flashing
- 5 M12 Resin Anchor Bolt
- 6 L bracket
- 7 Neoprene Casket
- 8 Kalwall Polycarbonate Channel
- 9 Eave Angle
- 10 Kalwall end cap
- 11 Neoprene Casket



- 12 CLT Tread
- 13 CLT Stringer
- 14 Kalwall Polycarbonate Frame
- 15 Light Fixture
- 16 Steel Sleeve spacer
- 17 Connection of stringer to Kalwall
- 18 L bracket connection to Steel plate
- 19 Fabricated Steel plate connecting CLT to Steel column
- 20 Weld
- 21 Steel Column
- 22 M24 Heavy Structure Resin Anchor Bolts



Workshop Material Palette

