

FURNITURE DESIGN AND REPAIR CENTER

The proposal is set in a **dying building**, one of historical significance, a construction that once symbolized **innovation, experimentation and play**. It's current decaying state serves as a metaphor for the goals proposed by the Center - **to repair and give new life to what is damaged, amongst which is the building itself**.

PROJECT OVERVIEW

The **Center** is a mixed-use, community-based creative hub, where **reuse, craftsmanship and innovation are celebrated**. The Center focuses on utilizing damaged, unwanted and salvaged furniture as a material, moulding it according to the needs and desires of the users. The space is amply multifunctional. It welcomes **furniture makers**, providing them with the space to create while also allowing them to sell their pieces. It supports **marginalised young people** (referred to as **young makers**) through hands-on training in furniture repair while giving them a place to live. It also engages with the **wider public** (referred to as **the visitors**), offering various furniture modifying services alongside experiential retail.

The concept is greatly informed by the building it is set in called **The Lion Chambers**. The construction of The Chamber began in 1904 and the building was completed in 1907 by the architects Salmon Son and Gillespie. During its construction, it became popular as the second in Glasgow reinforced concrete building that utilized the, coming to a great popularity, Hennebique system. The system was a method of strengthening concrete through reinforced steel bars.

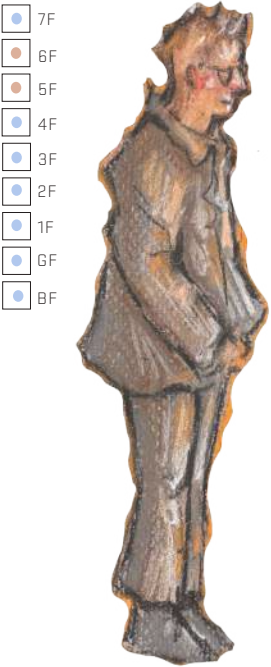
Despite its glory at the start of the 20th century, The Lion Chambers did not stand the test of time showing early signs of deterioration in 1991 and dwindling more rapidly from then on. Weathering of materials had their toll, resulting in a **deteriorating construction**. The project aims to also **preserve and expose the existing elements of the construction**, to highlight that even an initially failed system can spark new ideas and prompt the creation of new meaningful spaces. All parts of the Center - the workshops, the training facilities, the retail spaces, even the users - influence one another. The result is a dynamic space, a **merge of education, entertainment and community**.

THE USERS AND WHAT THEY CARE ABOUT

THE FURNITURE MAKERS

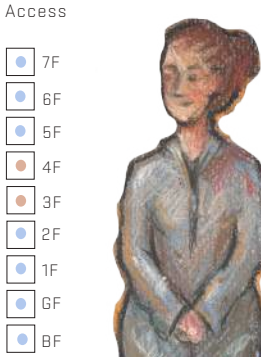
Active users - on-site 4-7 days a week

Access



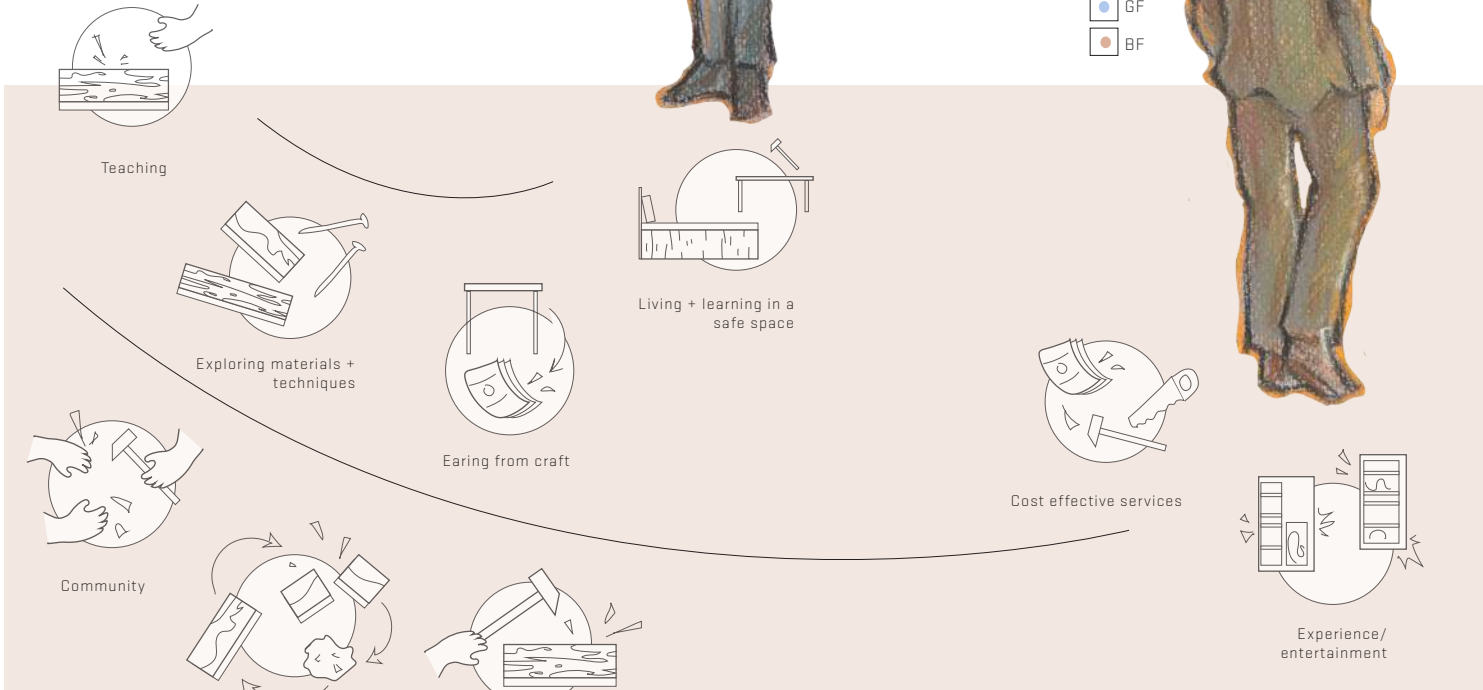
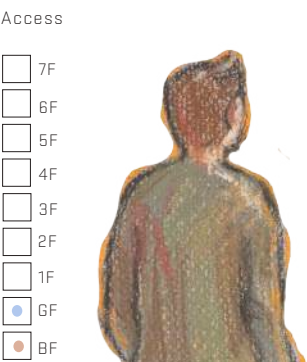
THE YOUNG MAKERS

Primary users - on-site every day



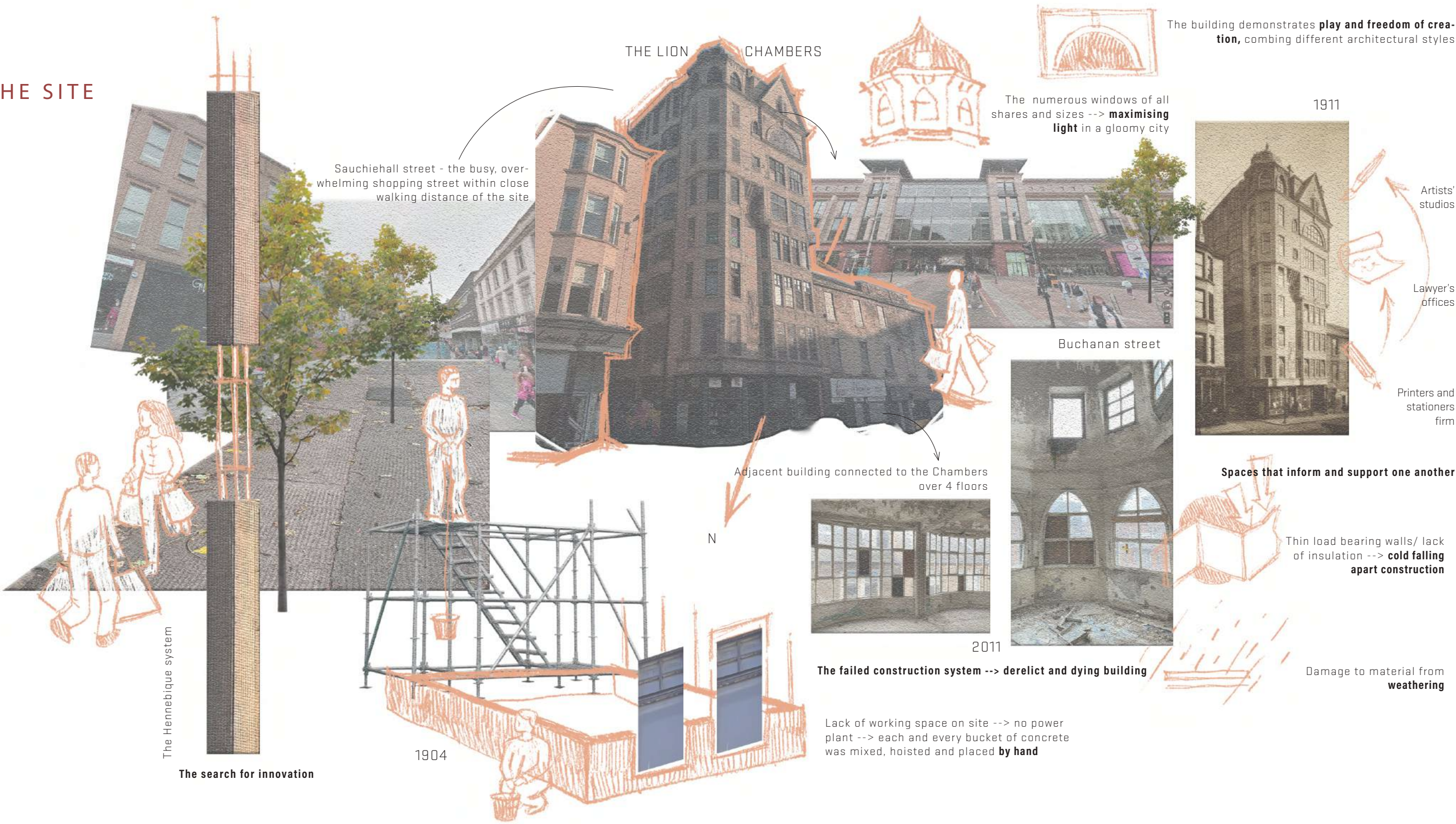
THE VISITORS

Occasional users - visit the site from time to time



**The users of the Center shape and define the space.** Therefore, the three types of users and their journeys across the areas of the space are demonstrated in further detail. This is done in different sections and formats as a way to better understand and showcase the workings of the Center (a small image and a user profile will be attached in those areas).

THE SITE



RESPONSE TO THE SITE

Amidst the buildings, tall and wide  
Reside the Chambers, that stand up  
high,  
They welcome all and ask to bring,  
A broken, left, unwanted thing,

You wish it fixed? Sure, we can do!  
Come, show us, and we will renew!  
You want it changed? What do you  
crave?  
A pop of colour or an ornate concave?  
We offer this and offer more  
Do browse for an item that you will  
adore.  
Those things are crafted, made with  
care  
By our artists, makers here.

So welcome to this place of play,  
Are you all ready? Come, this way...

As a strengthen the idea of the hands-on approach, a number of the visuals were done by hand (medium: soft pastel on card)



- craftsmanship
- experimentation
- preservation and re-use
- experience
- new behaviour in a familiar setting
- adaptability
- interdependent spaces



THE ZONING AND THE FACILITIES

A day in a life of a furniture maker

PROFILE

Name: Aaron

Age: 38

Occupation: repairs advisor at the Lion Chambers

KEY

This will show Aaron's timetable for a given day

THE CAFE

location: BF

8AM Aaron grabs his morning tea using his maker's discount card and spends some time in the sitting area of the cafe

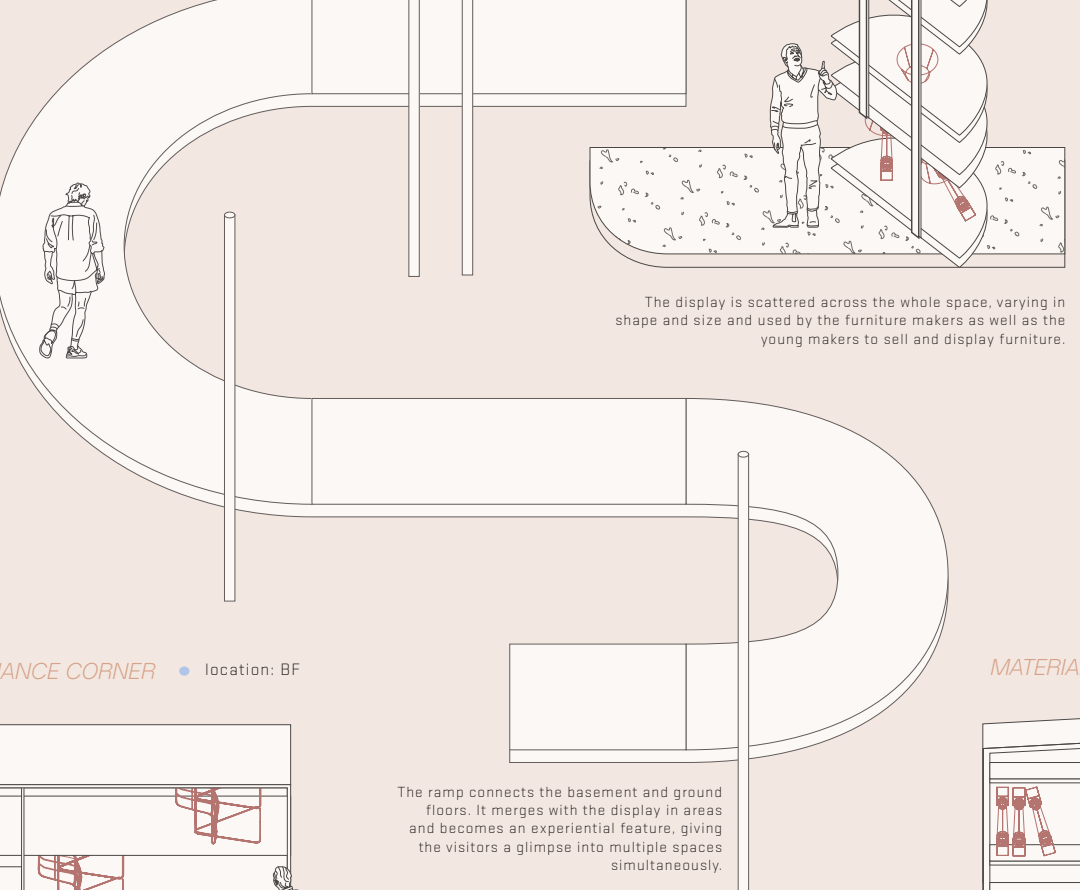
8:15AM He heads for his shift



Situated at the heart of the space. Has an on-site kitchen.

RETAIL AND THE RAMP

location: BF + GF

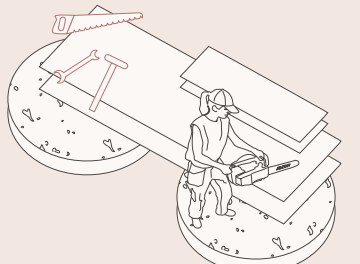


The display is scattered across the whole space, varying in shape and size and used by the furniture makers as well as the young makers to sell and display furniture.

MACHINERY WORKSHOPS

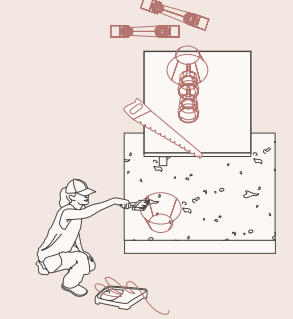
location: BF + 1F + 2F + 3F + 4F

The Center celebrates handcraft and aims to show that making does not have to be complex, needing many large machines and highly specialised spaces. Hence, a lot of the areas are targeted at creative making with easily carryable + accessible tools. However, machinery can become important and amplify the making experience which is why there are zones at the Center that have those specialised machines.



INDIVIDUAL MAKING SPACES

location: 1F + 2F + 3F + 4F



COLLABORATIVE MAKING SPACES

location: 1F + 2F + 3F + 4F



BREAKOUT SPACES

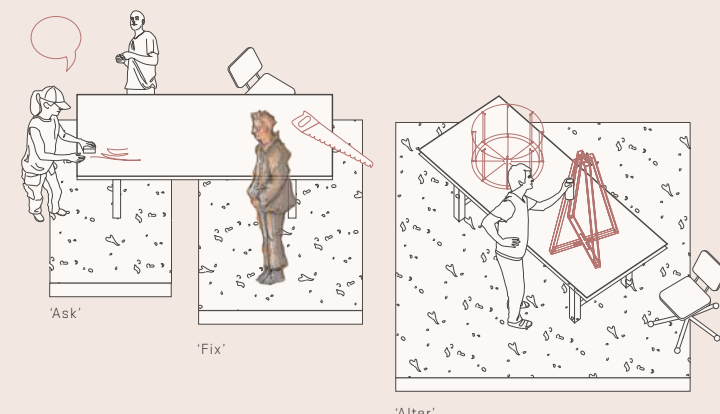
location: 1F + 2F + 3F + 4F + 5F + 6F + 7F



Includes shared kitchens, cinema room and a small library (7F)

THE THREE ZONES OF THE STATION

location: BF + GF



'Ask' - get advice on how to make/fix something/brainstorm design ideas

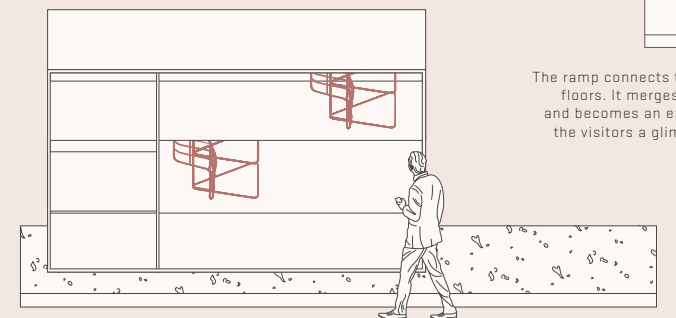
'Fix' - get your furniture back/as close to its original form

'Alter' - fully/partially change your furniture

The space operates on a **'bring what you can carry'** policy - working with small and medium repairs. This responds to the site's limited footprint while encouraging accessible, spontaneous and dynamic collaboration and making. For larger pieces however, the visitors can book special appointment/consultations.

SECOND CHANCE CORNER

location: BF

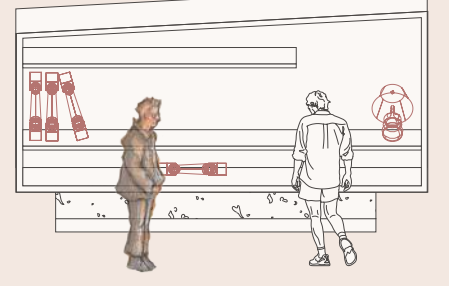


The ramp connects the basement and ground floors. It merges with the display in areas and becomes an experiential feature, giving the visitors a glimpse into multiple spaces simultaneously.

Furniture that is not suitable for up-cycling/material use/is not yet assessed so is available for free taking. Alternatively, the space can be used for additional storage.

MATERIAL BANK

location: 1F + 2F + 3F + 4F



Storage for materials - this can come in the form of dismantled furniture, the pieces of which are then re-used/whole furniture/any other material type.

10:40AM Aaron collects some materials for a bedside table he is repairing at the moment

12:30PM He finishes the repairs setting the product aside to be collected by a client

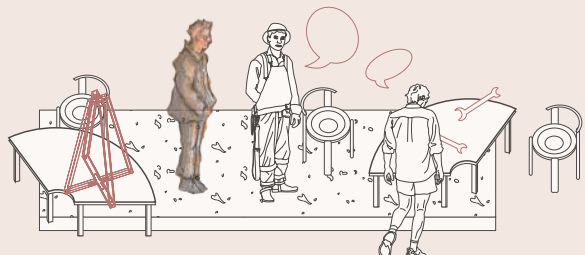
12:40PM Engages in a creative discussion with a visitor who wishes to redesign a few furniture pieces in his home

The main materials that the makers work with and are taught about (in the Academy) are **wood** and **textiles**. This is because those are the predominant materials that make-up furniture. At the same time they become the ones that get wasted the most while also having the higher potential for sustainable re-use.

However, the Center also welcomes guest makers, giving the makers of the Center an opportunity to explore other materials/forms of making.

DISCUSSION/ FLEXIBLE MAKING SPACES

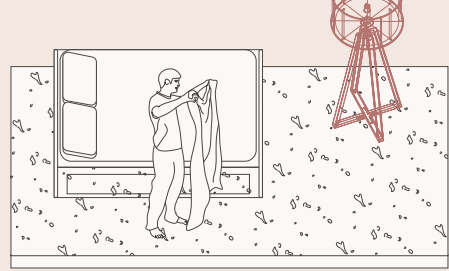
location: 1F + 2F + 3F + 4F + 7F



Large spaces where ideas get discussed, projects get proposed, interesting furniture gets explored and so forth.

LIVING QUARTERS

location: 5F + 6F



Accommodation rooms with shared bathrooms

THE 'MAKE AND BREAK' STATION

PUBLIC OPENING HOURS

Mon-Fri

9:00-18:00

Sat-Sun

10:00-15:00

YOUNG MAKERS' ACADEMY

MAKERS' STUDIOS

COMMON SPACE

RESIDENTIAL UNIT

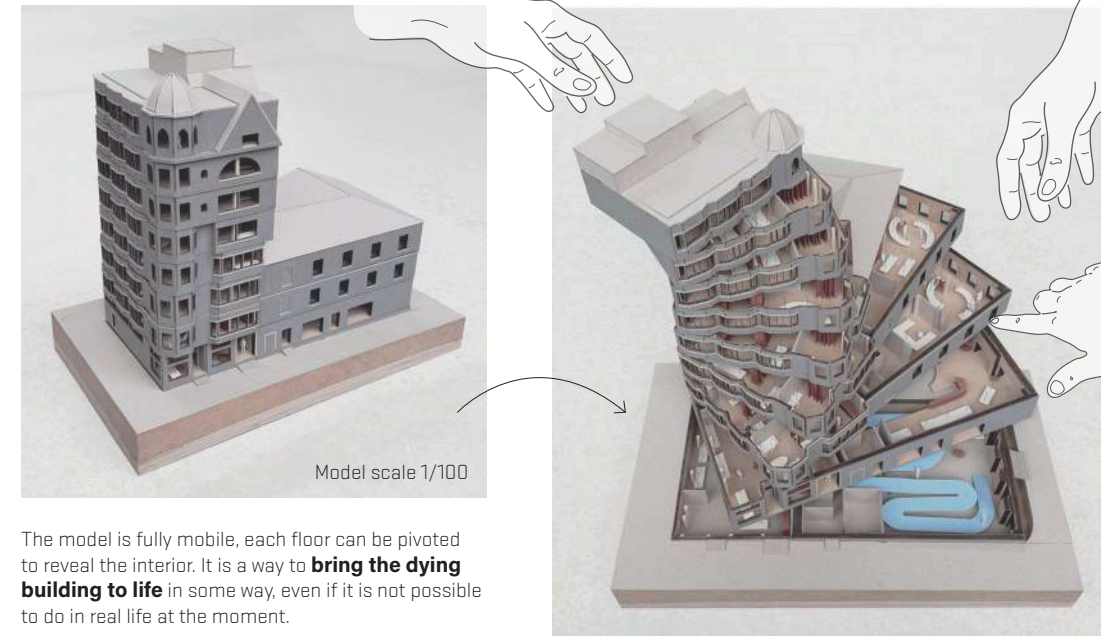


The first four floors of the Center become the prime focus of this proposal and are explored in greater detail. They serve as vivid representations of all the different user groups while also conveying the different spatial functions. They become the initial points of engagement with the building, translating the intent and experience of the Center.

THE SITE ON ONE WINTER EVENING



THE BUILDING MODEL



The model is fully mobile, each floor can be pivoted to reveal the interior. It is a way to **bring the dying building to life** in some way, even if it is not possible to do in real life at the moment.

This model was placed on the degree show for people to interact. With numerous interactions some part of the model fell off, some got damaged. I have put those parts back together, left others as they were. This became a further reinforcement of the idea that **things get damaged and that is okay**, they can always be put back together, changed to become something new, embraced. Such approach alludes to both the missions of the Center as well as the overall outlook on the building I am proposing, one of preservation and restoration.

Test logos

The building is known for its name, there is an already set association with the name, the look of the building and its location. Hence, I decided to build on that association, keeping the iconic name "The Lion Chambers" and incorporating part of the existing name panel into the logo of the Center.

- the lamp --> a representation of the desire of the architects to give more light to the building (the numerous windows)
- the shift from a lamp to a chair --> to show that the space deals with diverse types of furniture
- the lion --> a reference to the coat of arms of the building i.e. to the name of the construction

THE LOGO AND THE NAME

The building comes at the heart of my design, but this building is also a construction in a place, in Glasgow, so I thought I could give a subtle nod to the city and make the logo red (reference to the famous red sandstone). Furthermore, the logo is done using line printing reflecting the hands-on approach in which the Chambers were constructed.



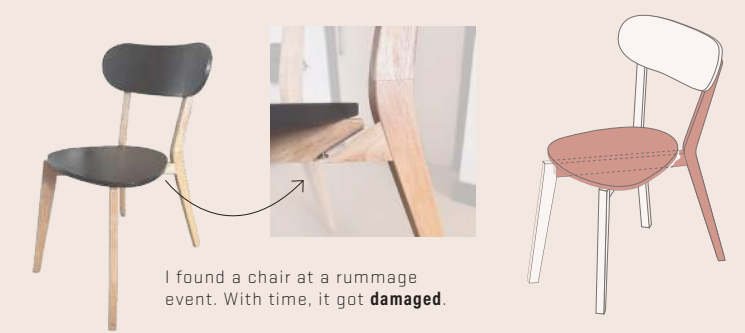
THE YOUNG MAKERS' ACADEMY

The Academy is set on the First and Second floors of the building. The First floor is allocated more towards woodwork and larger crafting with more individual workspaces in general. Meanwhile the Second floor is designed to be more textile oriented and is a more open space. Such design allows for diversity and ensures that each maker can experience all the different formats.

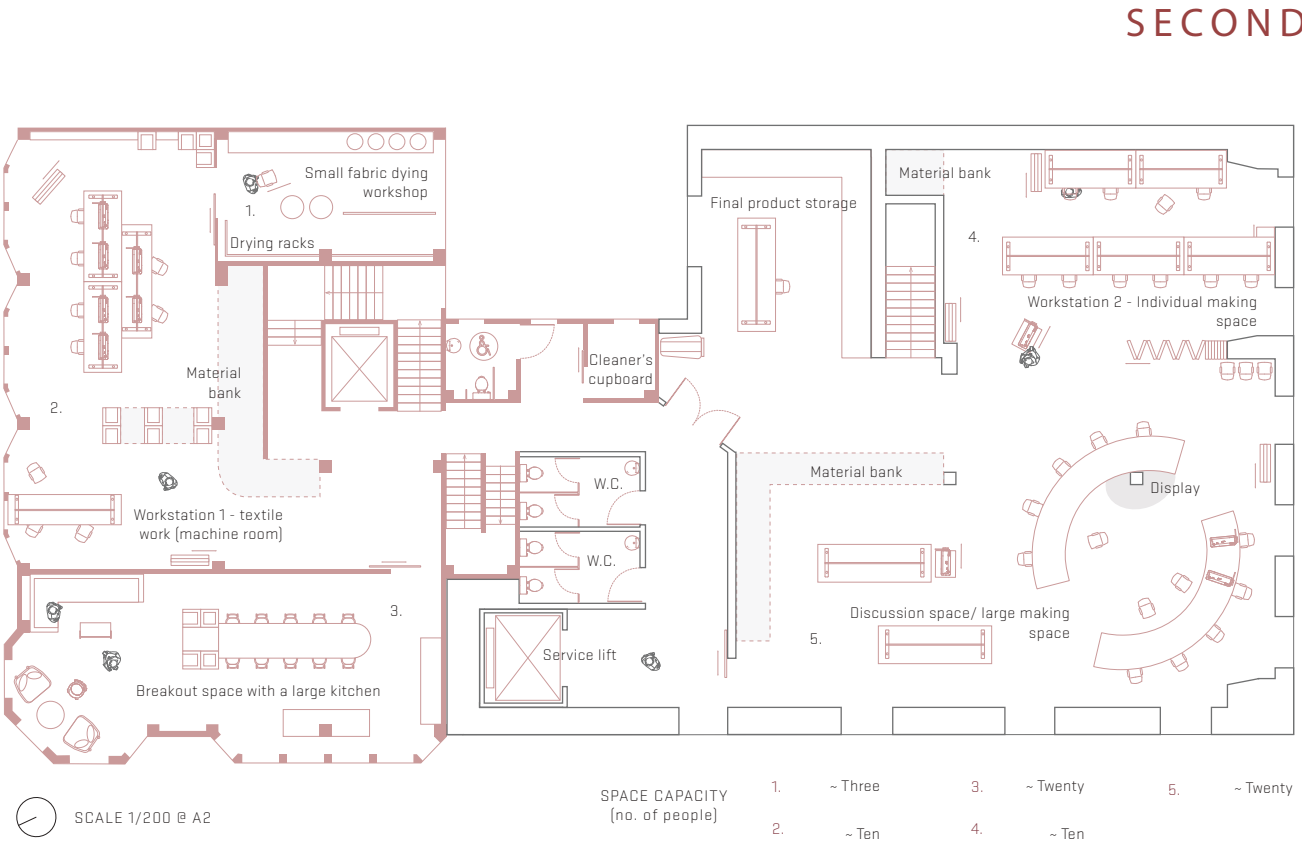
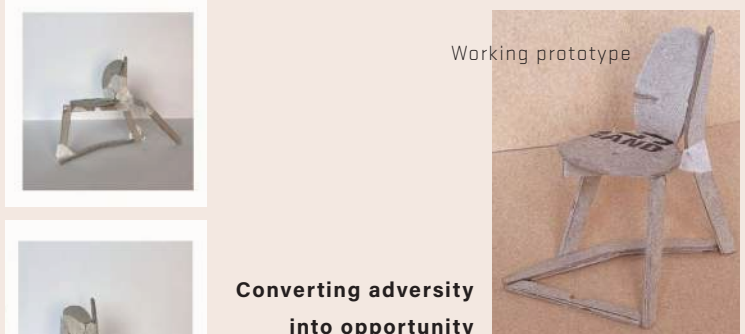
The Academy plays a role in the other spaces of the building, as the makers utilize the materials from the material banks situated in the Academy, participate in the meetings in the discussion spaces, make use of the tools and so forth. The result: **spaces that inform and support one another.**

WHAT WE CRAFT

As a way to better understand the inner workings of the space, I decided to explore the process of repairing a furniture item 'crafted' at the Center. This exploration links to the event brochure, assuming a potential approach taken by the young maker (Gwen) to create her furniture piece.

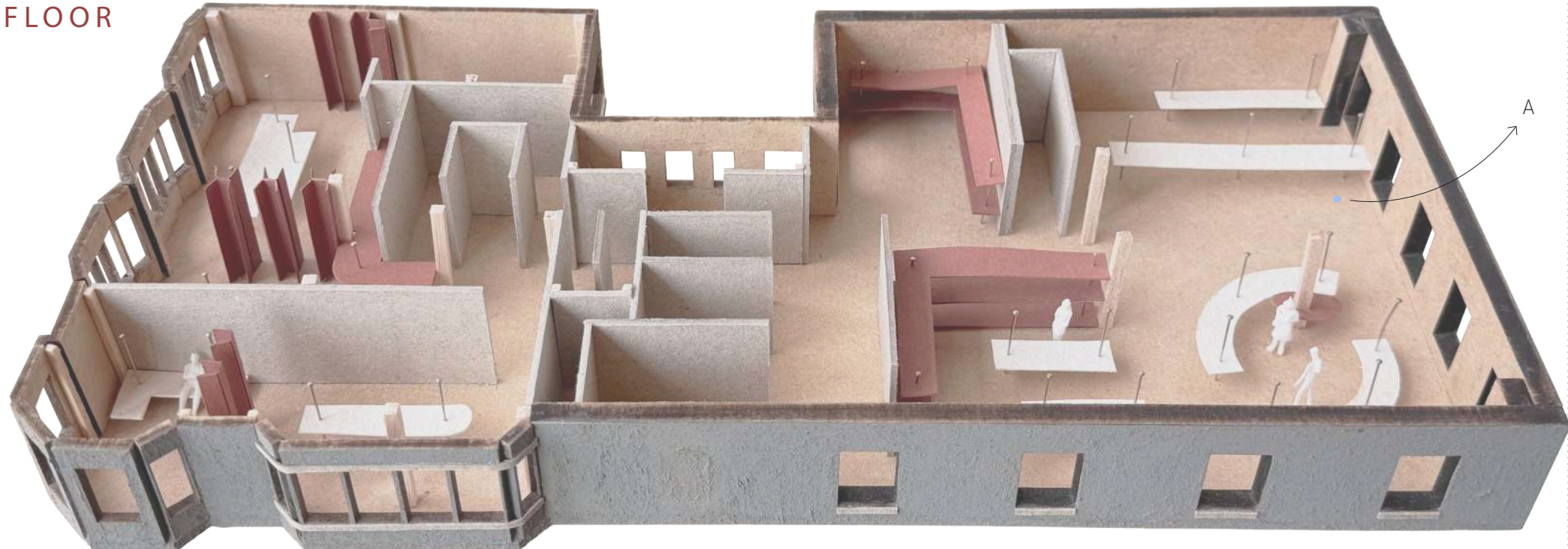


- Prototyping
- to keep items in red in place + as they are (**em-bracing and exposing the damage**)
  - the **position** of everything else (in white) is subjected to change (modification without full alteration --> sustainable approach)
  - goal: to create a **stable structure** without strain on elements in red. **To avoid/reuse any waste**



SCALE 1/200 @ A2

SPACE CAPACITY (no. of people)	1.	~ Three	3.	~ Twenty	5.	~ Twenty
	2.	~ Ten	4.	~ Ten		



KEY

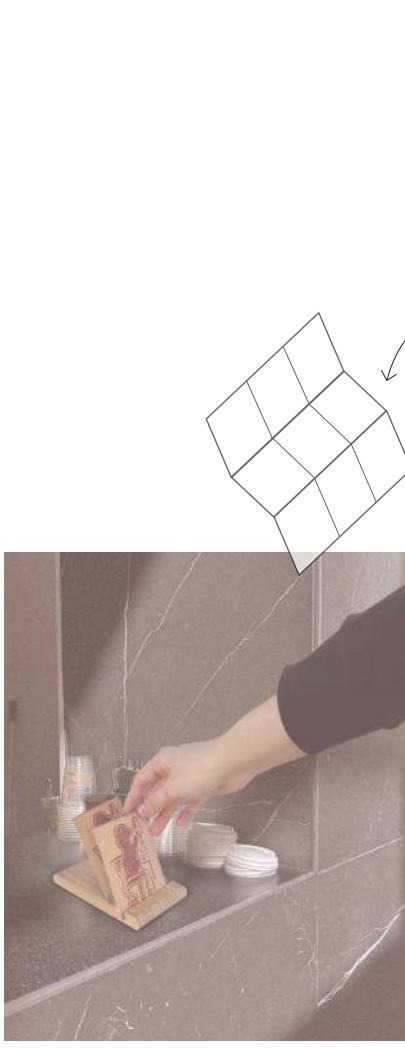
- Display, Material Bank and storage
- Furniture and fixtures

PROFILE

A day in a life of a **young maker**

Age: 18

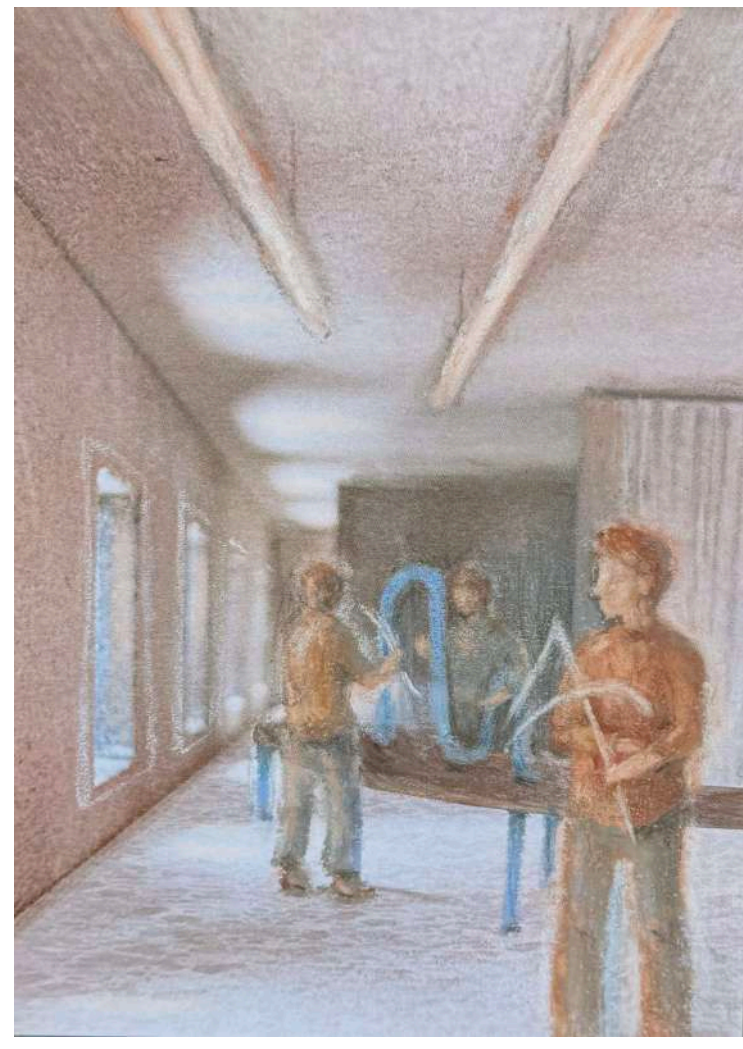
Name: Gwen Occupation: student at the Academy



The brochure at the local cafe (showing Center's logo when folded)



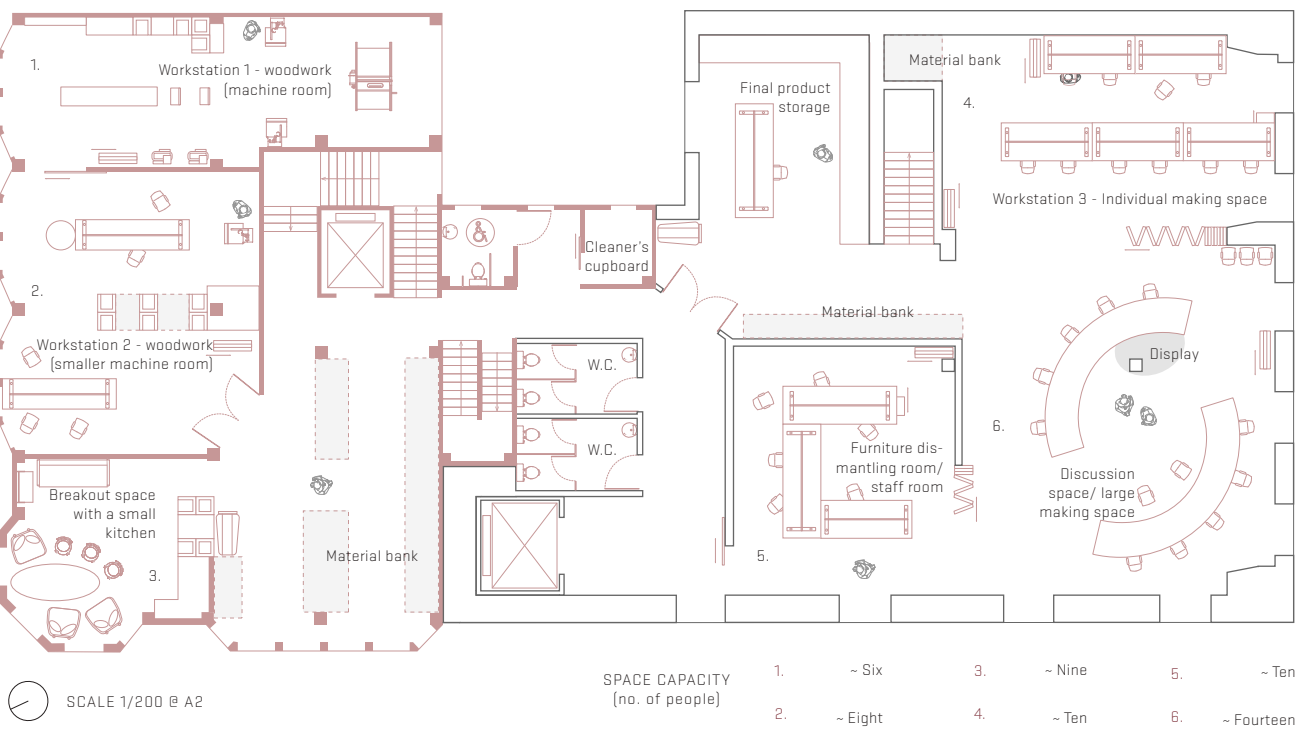
The Center gives any maker an opportunity to not only create but to **sell and promote their works** (Ground and Basement floors) through fun and playful events. This event brochure is a speculative advertisement for one of Gwen's final projects.



B In the afternoon she heads to the discussion space on the First floor, engaging in collaborative work and exploring new materials showcased by one of her tutors.



A Gwen spends the morning at Workstation 2 on the Second floor, finalizing a few things for her final project and seeking feedback from her course-mate.



SCALE 1/200 @ A2

SPACE CAPACITY (no. of people)	1.	~ Six	3.	~ Nine	5.	~ Ten
	2.	~ Eight	4.	~ Ten	6.	~ Fourteen



KEY

- Display, Material Bank and storage
- Furniture and fixtures
- Products of the Center - donated furniture, materials, pieces under restoration, etc.

FIRST FLOOR



THE 'MAKE AND BREAK' STATION

The station is an experiential and sustainable retail space. It constantly changes, as the makers display and sell their various works, as the different events are held, as the space itself gets damaged and repaired by the makers, shaped into something new. Located on the Ground and Basement floors, it is accessible to all of the user types. Here, the furniture makers repair things, earning for their service; the young makers get to do an internship, getting directly engulfed into the process; and the visitors experience, play and learn (amongst other things).

1.

Fire exit
2.

Access point to the ramp
3.

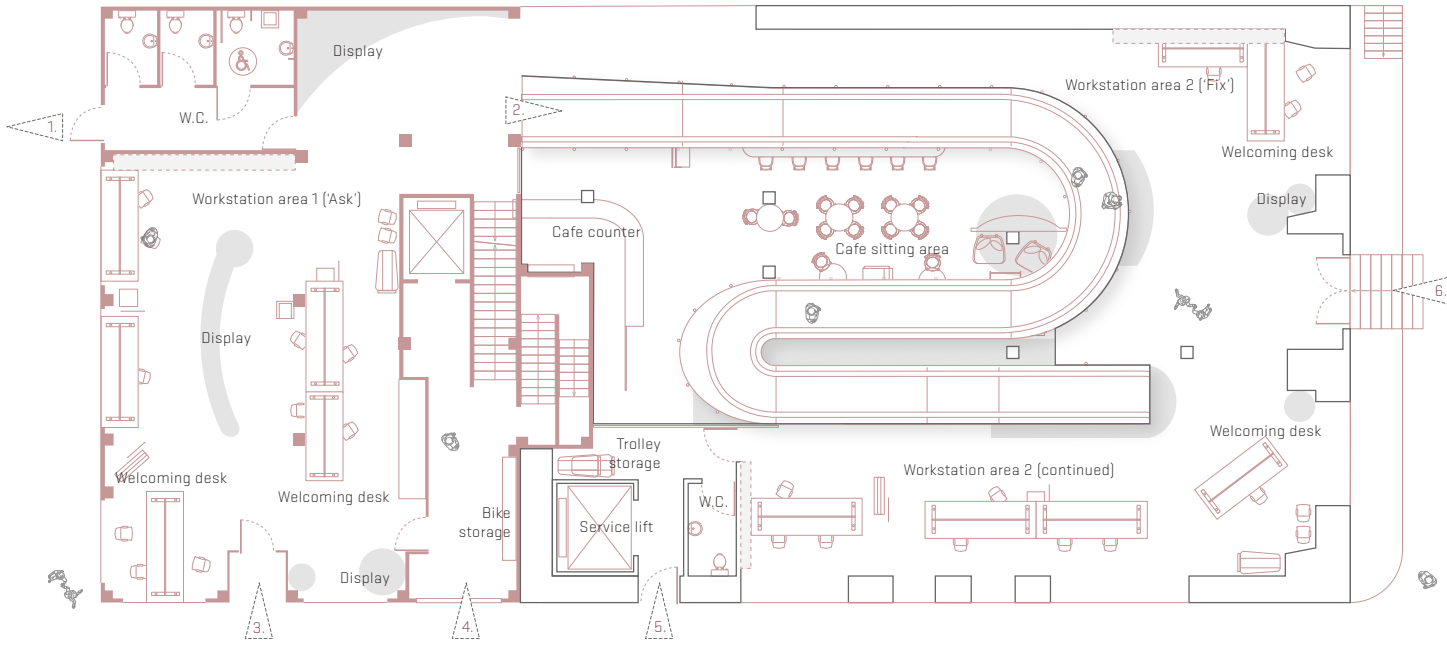
Main entrance 1 (visitors)
4.

Entrance for students and staff
5.

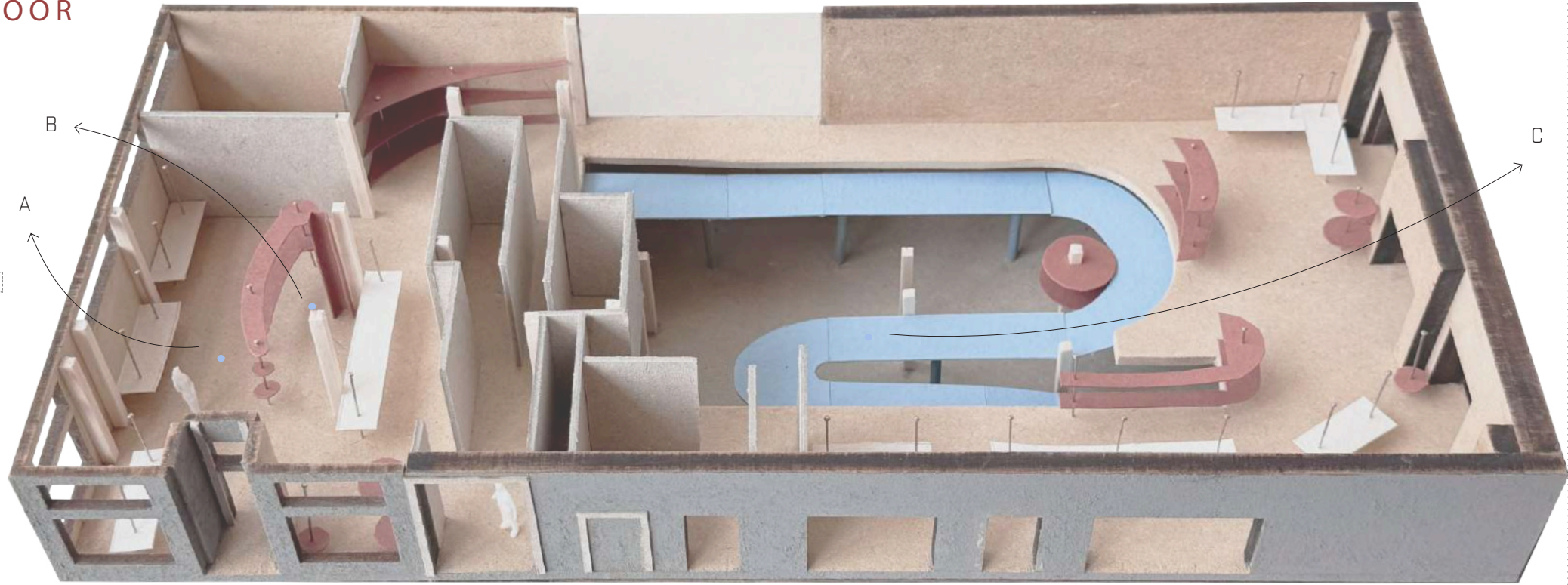
Entrance for staff/fire exit
6.

Main entrance 2 (visitors)

SCALE 1/200 @ A2

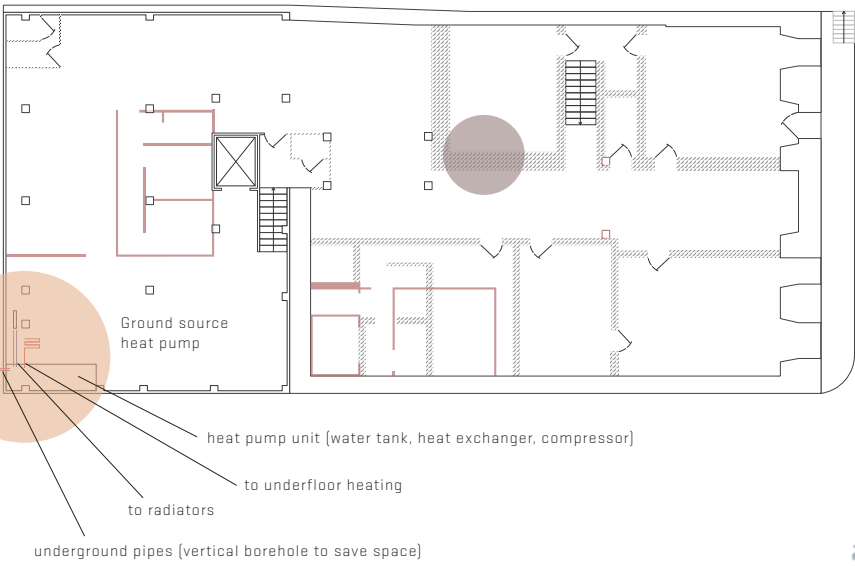


GROUND FLOOR



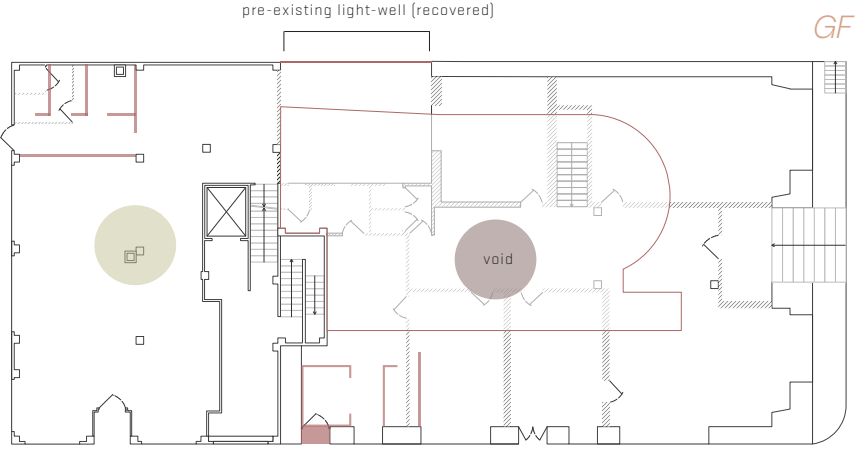
REPAIRING, RETAINING, DEMOLISHING AND PROPOSING NEW STRUCTURES

BF



- KEY
- Existing structures to be retained
- Existing structures to be removed/demolished
- New structures

NOT TO SCALE



GF

APPROACH TO REPAIRS

ASSESSING AND CLEANING

The extent of full damage has to be determined, including the investigation of the steel reinforcements in the concrete (can be checked via an electromagnetic cover-meter) and the concrete itself to determine the characteristics, extent of carbonation and so forth. After, cleaning should be done, removing damaged materials.

CRACK INJECTION

Depending on the size of a crack an appropriate material should be chosen for injection. For cracks of the size between 0mm and 0.1mm epoxy resin or polyurethane can be used. For ones between 0.05mm and 0.2mm, cement binders can be used and for crack openings over 0.02mm cement suspensions are appropriate. In the case of The Lion Chambers, it is important to consider which materials would complement the existing concrete without compromising the look or the structure.

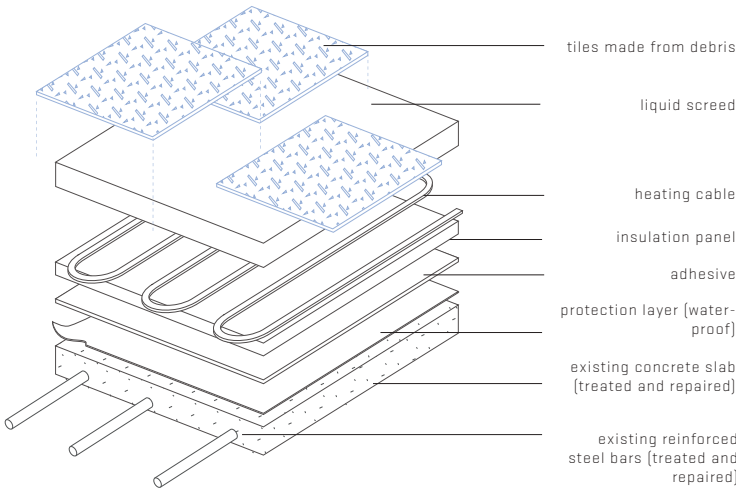
MATERIAL PROTECTION

To remove corrosion from the steel reinforcements migrating inhibitors can be utilized. Such inhibitors are applied to the surface which they then penetrate reaching the reinforcement and creating a protective, against moisture /chloride ions, layer. This method becomes effective for a construction like The Lion Chambers where the goal is to preserve as much as possible. Another method could be employing corrosion-inhibiting coating - a on the surface seal against weathering, the building.

1  
2  
3

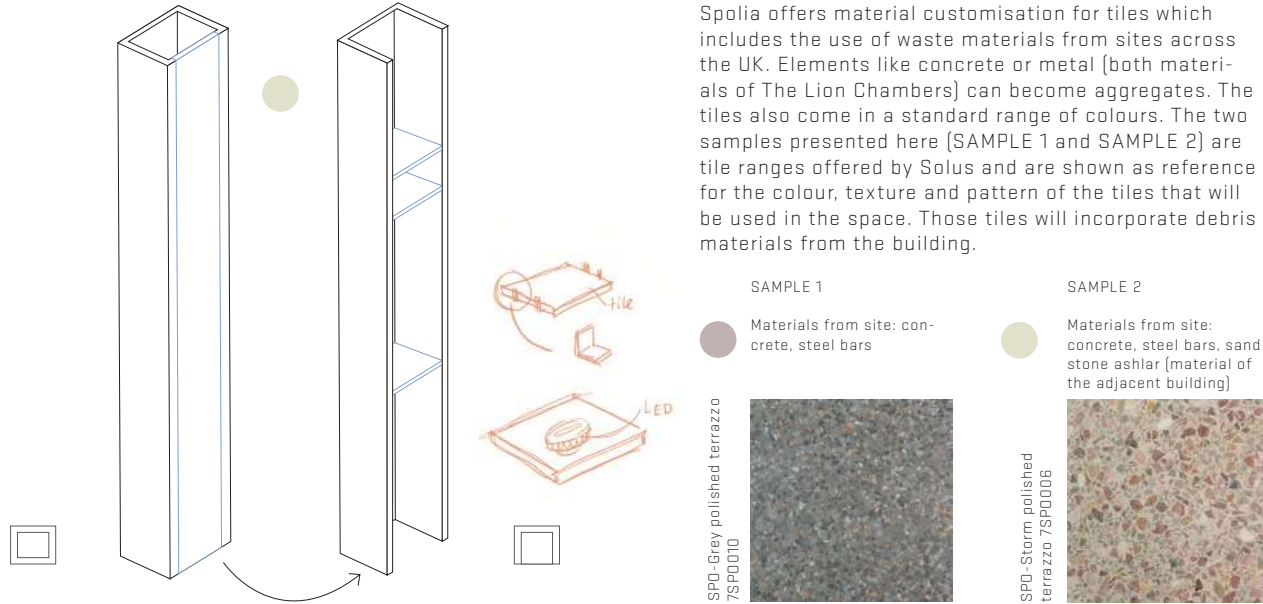
- KEY
- Display, Material Bank and storage
- Furniture and fixtures
- Ramp

APPROACH TO INSULATION AND HEATING



ADAPTIVE MATERIAL REUSE

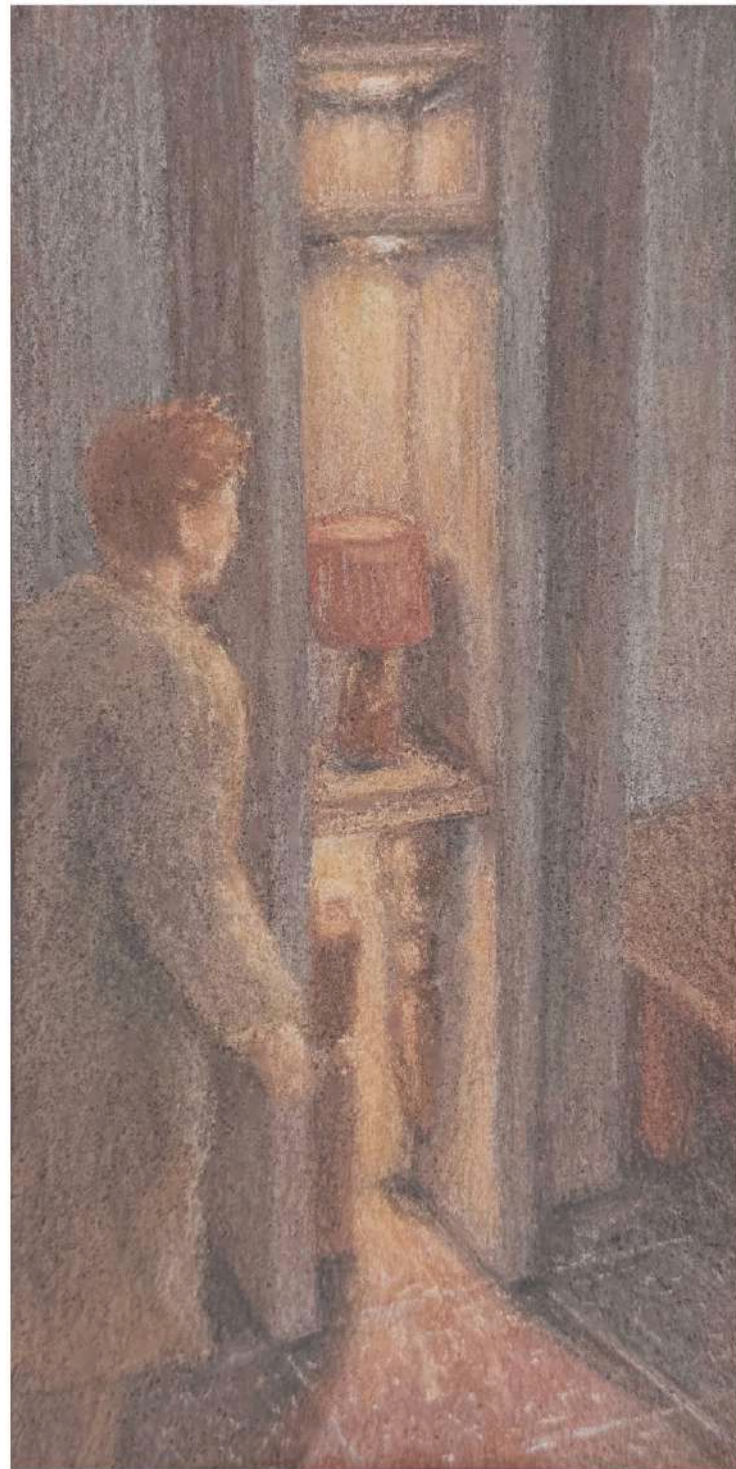
One of the goals of the project is to **amplify the flow in the space** to create an **experience**, a **multi-layered journey** that engages the users. Therefore, a void and a ramp connecting the basement and ground floors, were proposed. That, however, signifies demolition of a number of existing structures and with that, **waste**. To combat that issue the **debris can be utilized** to, for example, create floor tiles in the Center. Such tiles are made by a UK based company called Solus. One of the collections titled **Spolia** takes the **Design with debris** approach.



There are numerous existing **flue pipes** in The Lion Chambers that were used for fireplaces. They are no longer applicable for the modern building standards/needs, but are undoubtedly an interesting feature that should be kept and exposed.



A The beginning of the journey: Jack has just entered the space through main entrance 1. They were welcomed by a staff member at the first table to the right (one of the welcoming desks/information points). The space is flexible, hence there are a number of welcoming desks that double as working tables. This area also has movable tool boards, spare movable chairs, product displays, trolleys, working tables and storage.



B Jack stops by one of the displays, browsing through the items. The display is the opened up flue pipe with SAMPLE 2 tiles used as shelves and SAMPLE 1 tiles utilized for the flooring



C The journey continues. Jack walks down the ramp, exploring the different products that are on display. They can see the cafe now.



FF&E

The furniture and fixtures were chosen with interesting yet simple forms and overall neutral colours, set to evolve over time. As the Center grows and ages, so will the objects it houses. Much like the furniture that will be brought to the space, repaired and changed, the furniture of the Center will be mended if damaged, re-shaped if desired. With that, the Center becomes the reflection of its goals - **a space truly shaped by its inhabitants.**

NOTE: The little icons next to the furniture and equipment pieces correspond to those items on the floor plans at a 1/200 scale



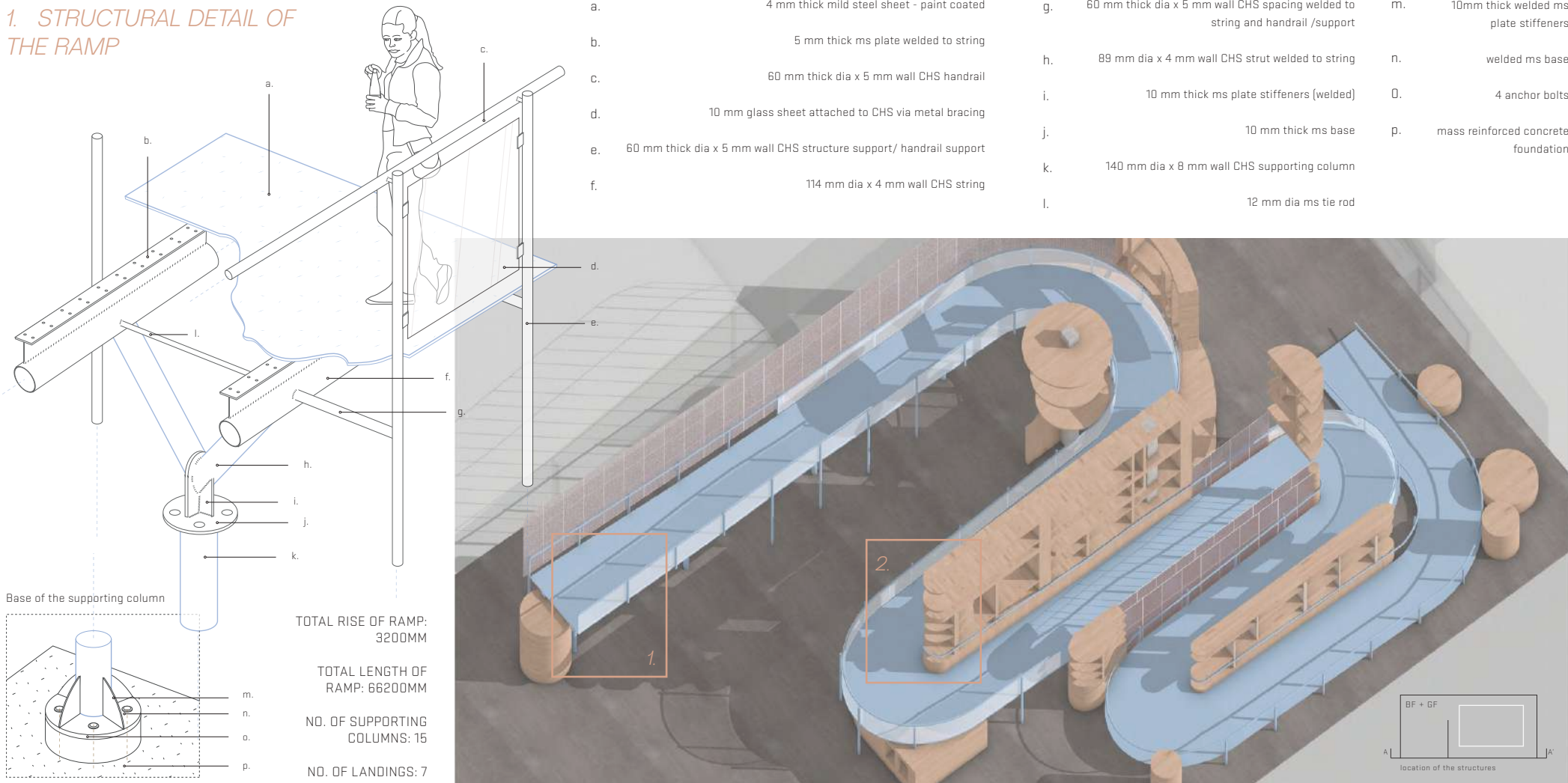
BESPOKE FURNITURES AND FIXTURES

In order to accommodate the spaces of the Center effectively, some of the furniture pieces were specifically designed to **blend** with the elements of the space, much like the bar table in the cafe that becomes part of the ramp, and to **foster collaboration**, like the circular tables in the Makers' Academy.

Made from the same materials and having a similar overall structure, the tables have a different purpose. Therefore, they have some differences in their design that make them **functional and adaptable for their specific location.**



1. STRUCTURAL DETAIL OF THE RAMP



THE RAMP AND THE DISPLAY

2. DISPLAY DETAIL

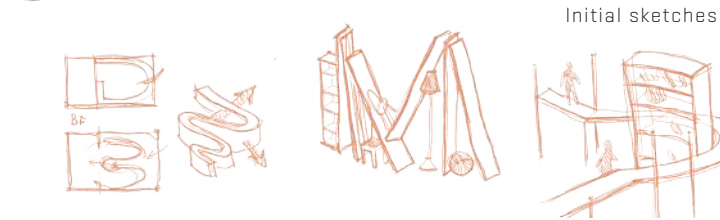
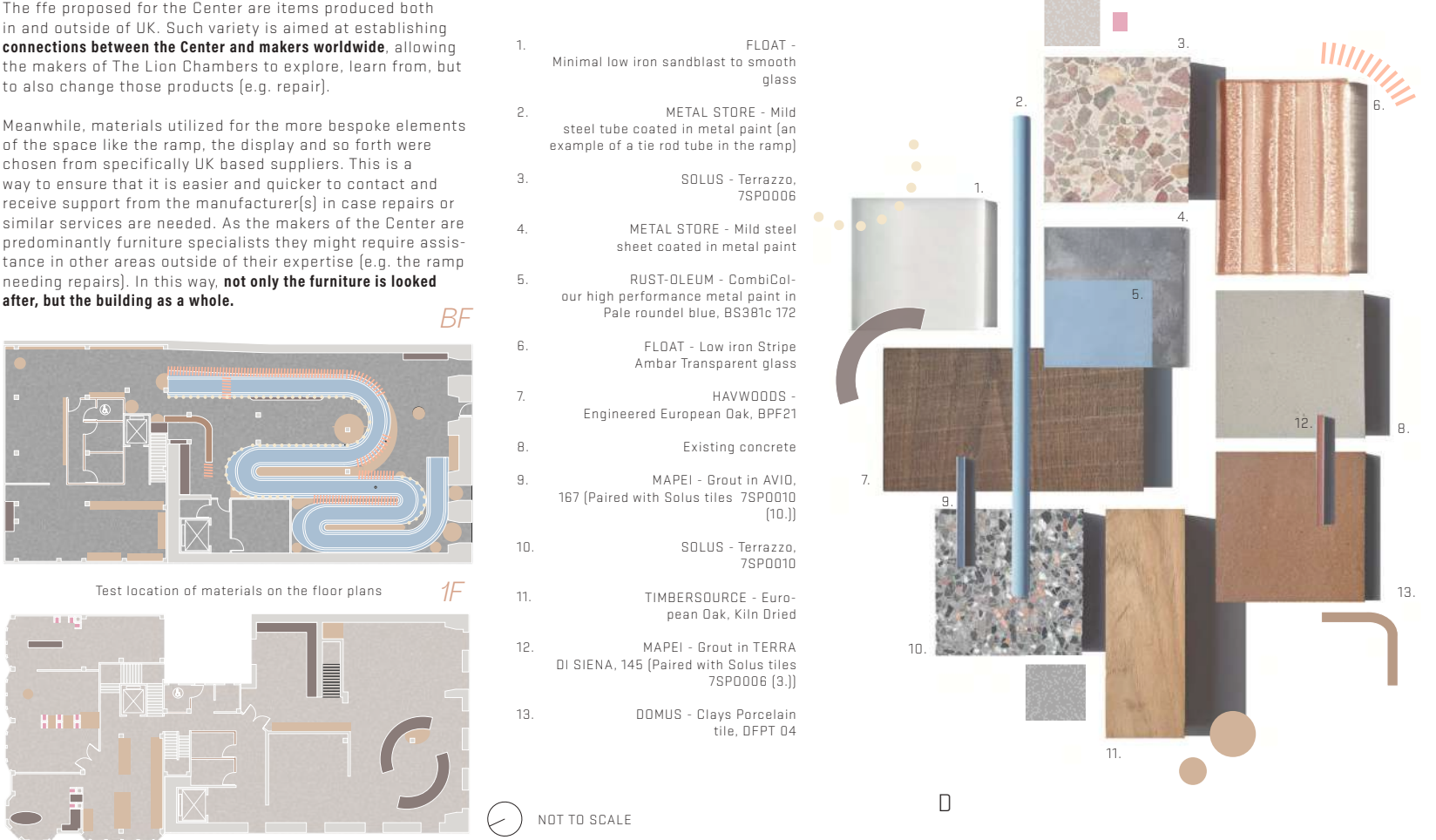


Echoing the **experimental and playful** approach to furniture making and repairs, the display is varied: large shelving spaces reside next to smaller ones, uniform structures next to scattered forms. In addition, to ensure that all types of products are catered for, the display has **modular elements**.

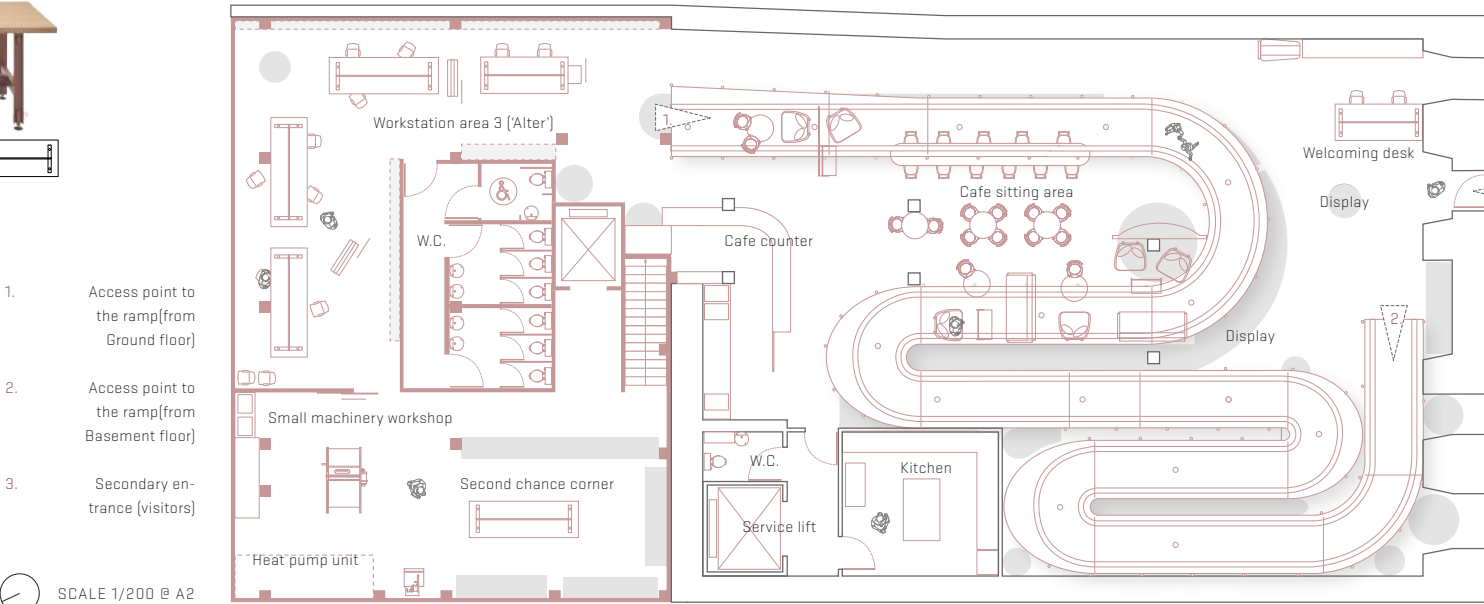
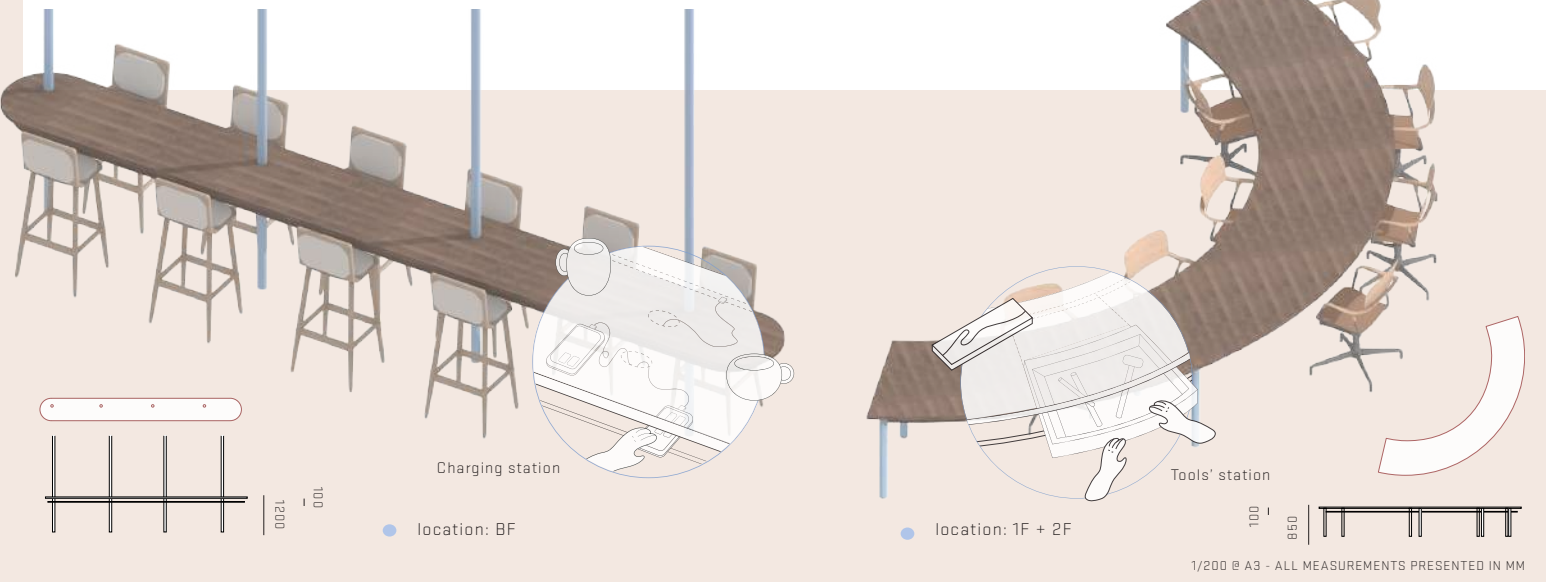


The end of the journey: Jack has reached their destination. Now they have made a coffee order, taken one of the tables and are observing the space.

MATERIALITY



The display is designed to be an extension of the building in a way. The tone of the wood was chosen to be similar to the existing concrete of the walls. Similarly, a lot of other elements and concepts tie back/ reflect the building. Despite this, I also wanted to build on the idea of **innovation** that made the building so compelling and historically significant. As such, I introduced a ramp connecting the Basement and Ground floors. The ramp is this bright "ribbon" that has a "weightless" feel to it, due to the use of thin materials and fluid forms. **It stands in contrast to the "heavy" concrete building, it is a look into the future, into new ideas.**



BASEMENT FLOOR

