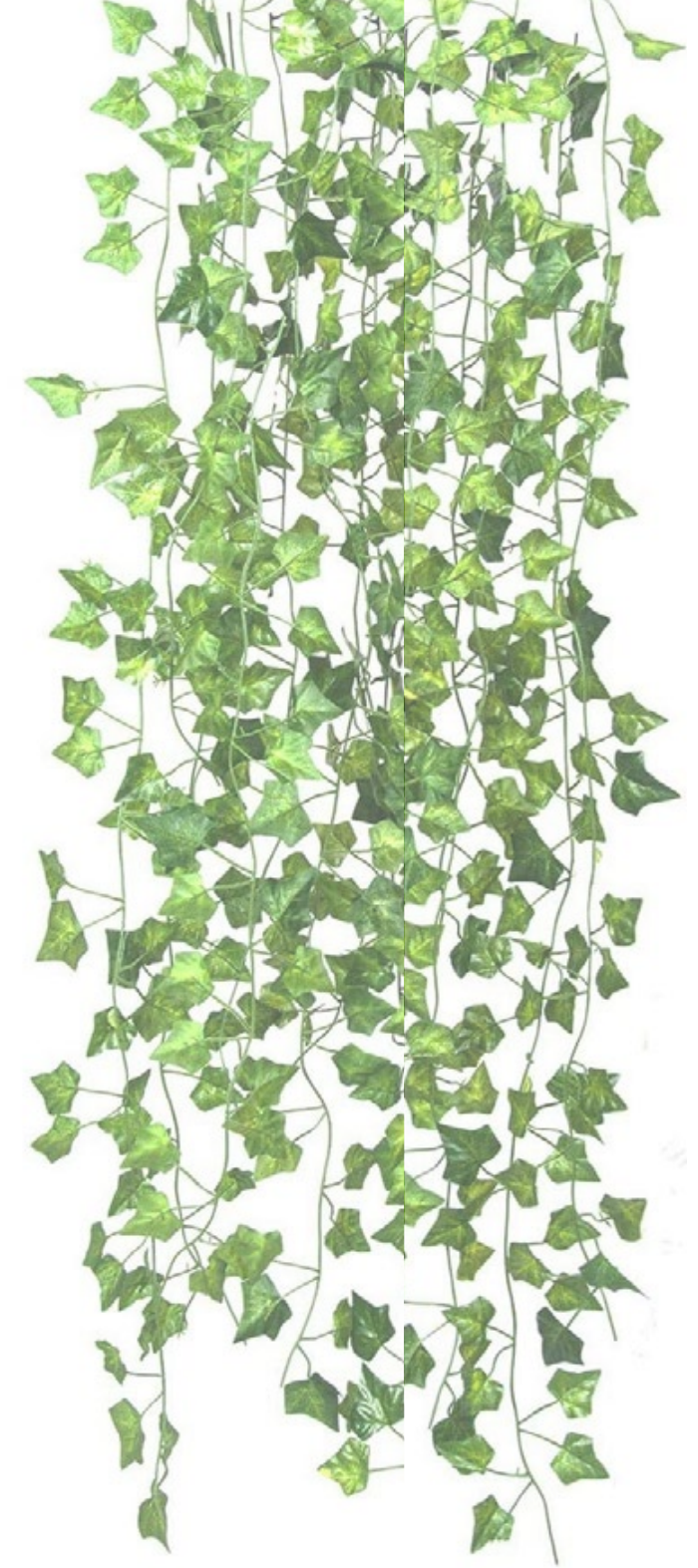


LAURA HOST
DESIGN PORTFOLIO

SUAKA
LEISURE CENTRE



CONTENT PAGE

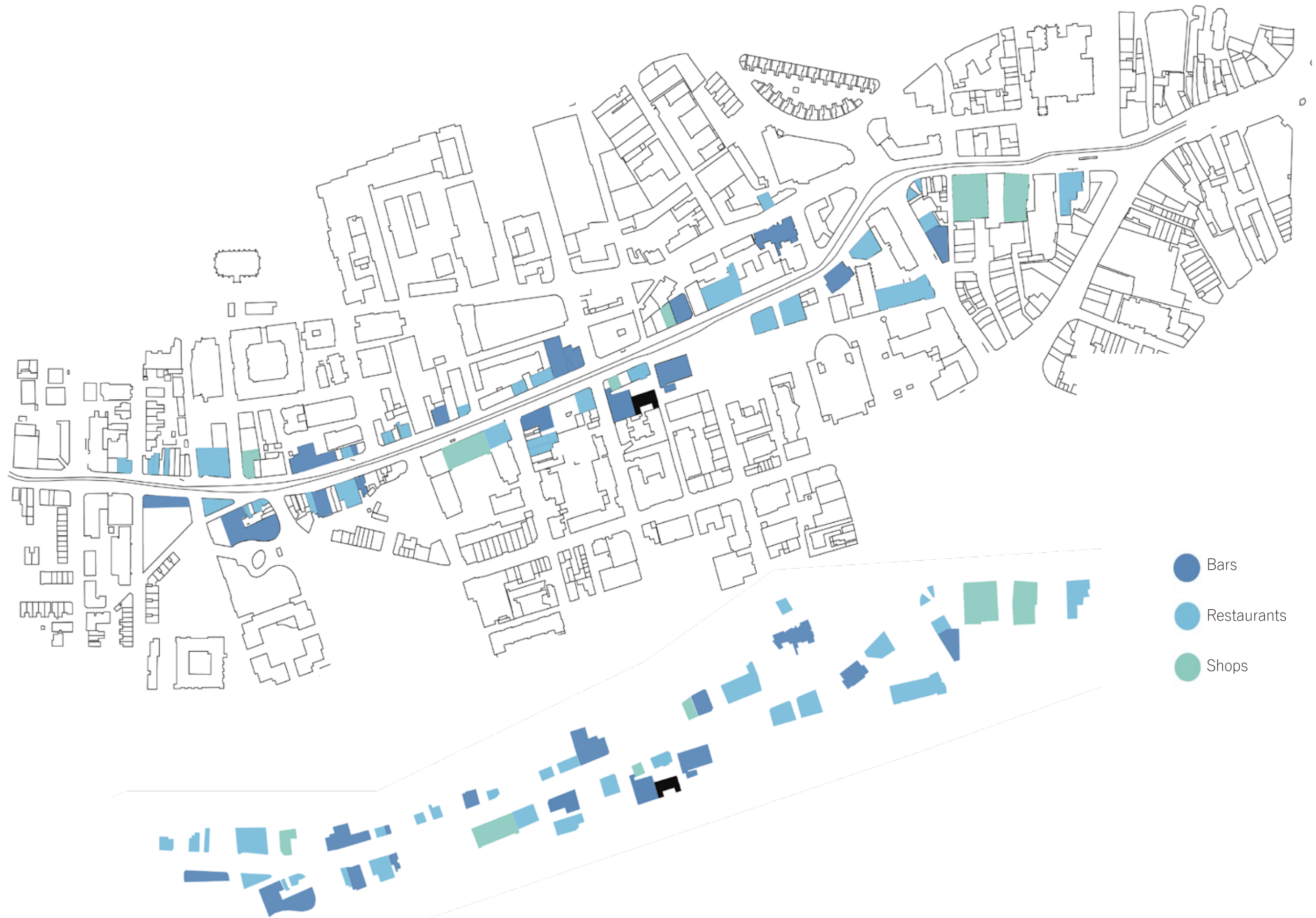
SITE ANALYSIS.....	4-12
CONCEPT.....	13-21
DEVELOPMENT SKETCHES.....	22-26
PROPOSED DESIGN.....	27-49

SITE ANALYSIS

SITE ANALYSIS



Above is presented a map of the UK, which shows the location of the Bishops Lodge on the Sheffield city centre map.



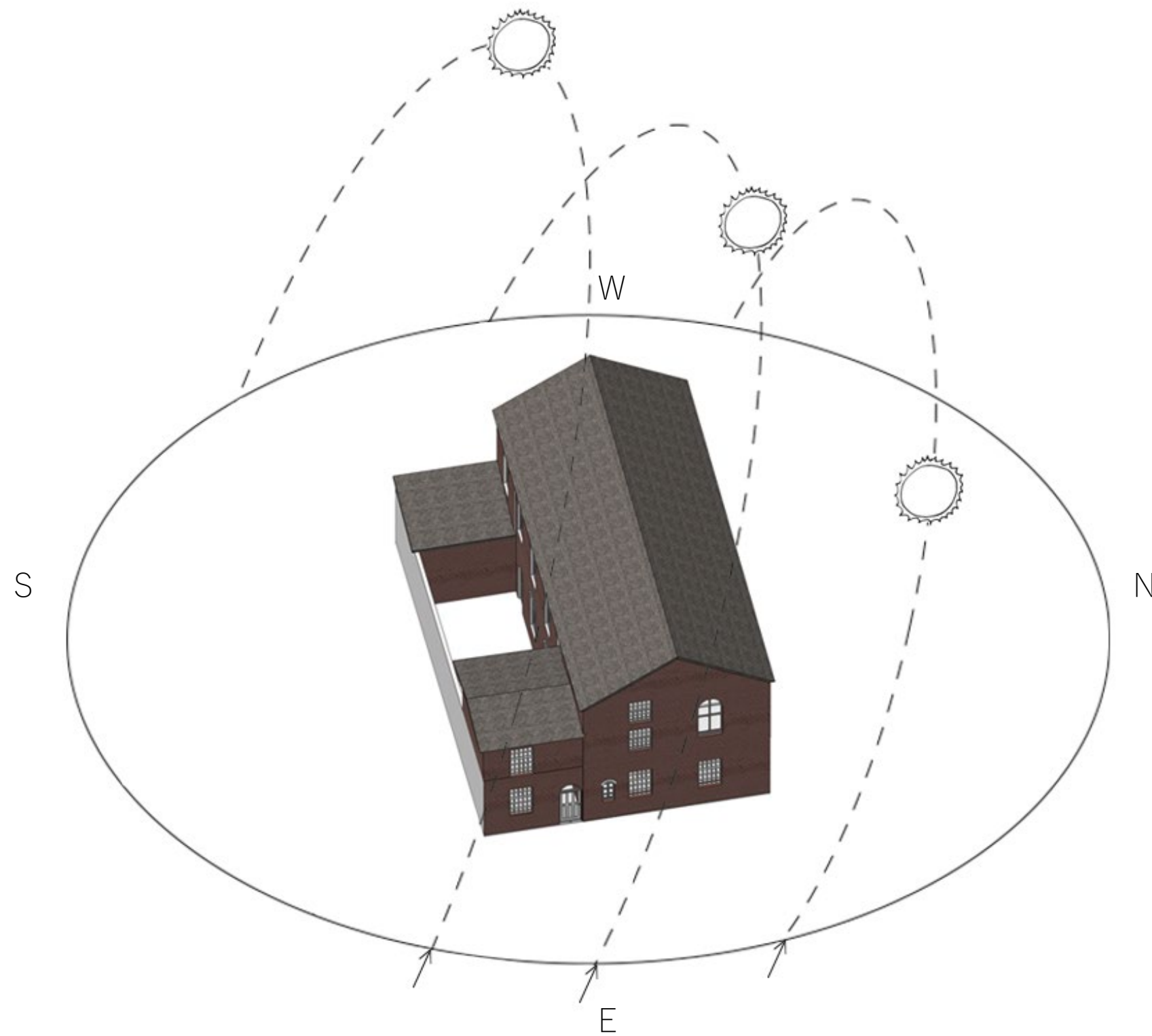
The above map shows the proposed site in relation to surrounding bars and restaurants. Most of these establishments are situated on West Street, (only a moments' walk from 117 Rockingham Street).

SITE ANALYSIS



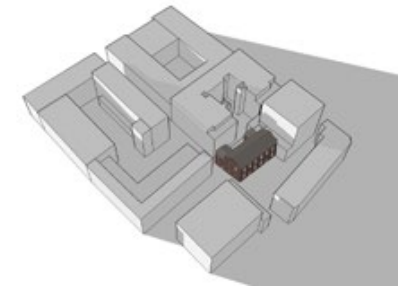
The maps of Sheffield, presented above, show the locations of yoga studios, gyms, green spaces, and counselling offices in Sheffield city centre. This information has been analysed because my project combines all the mentioned 4 in one. Through analysing this information, I have concluded that this site is perfect for my project as there is nothing like it in a close context.

SUN ANALYSIS

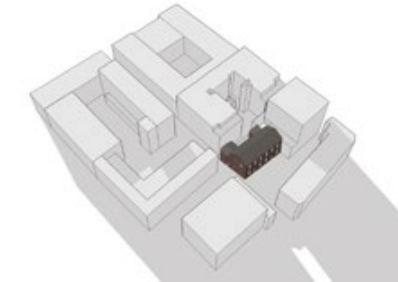


SHADOW ANALYSIS

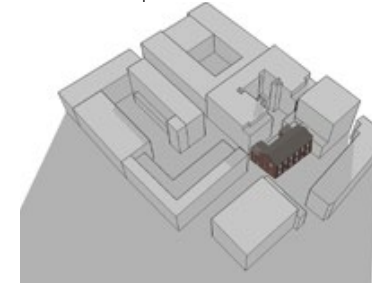
21.12 9am



21.12 12pm



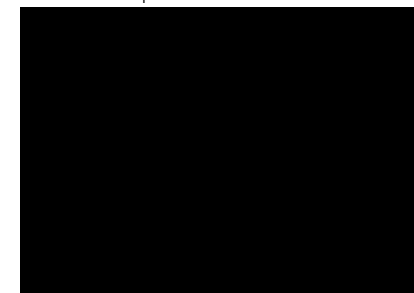
21.12 3pm



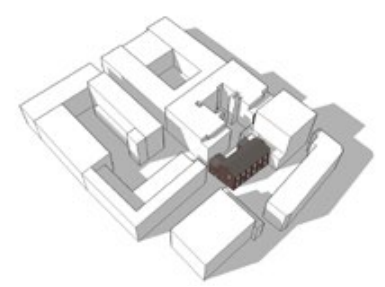
21.12 6pm



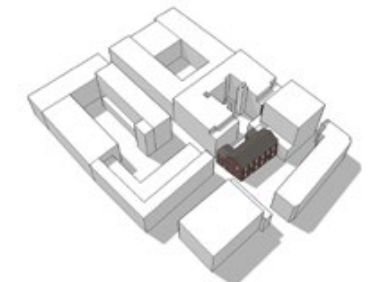
21.12 9pm



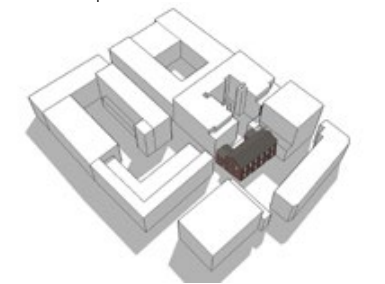
21.06 9am



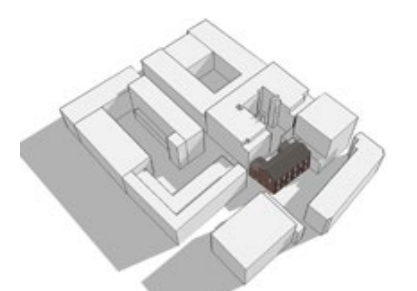
21.06 12pm



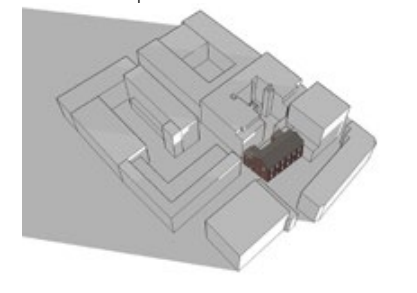
21.06 3pm



21.06 6pm



21.06 9pm



Through analysing the buildings navigation and its surrounding buildings, I have been able to gather information about how the sun influences the site and how the shadows exist and move within the site. As the pictures on the side demonstrate, I have studied the shadows movement on the 21st of December, which is the shortest day of the year, and the 21st of June, which is the longest day of the year. This study 8 informed my design decision of making an opening on the building in order to allow natural light in, nonetheless, to prevent direct sunlight and overheating, the opening would be made on the north facing side of the building.

BISHOPS LODGE EXTERIOR | MATERIALITY

Front elevation



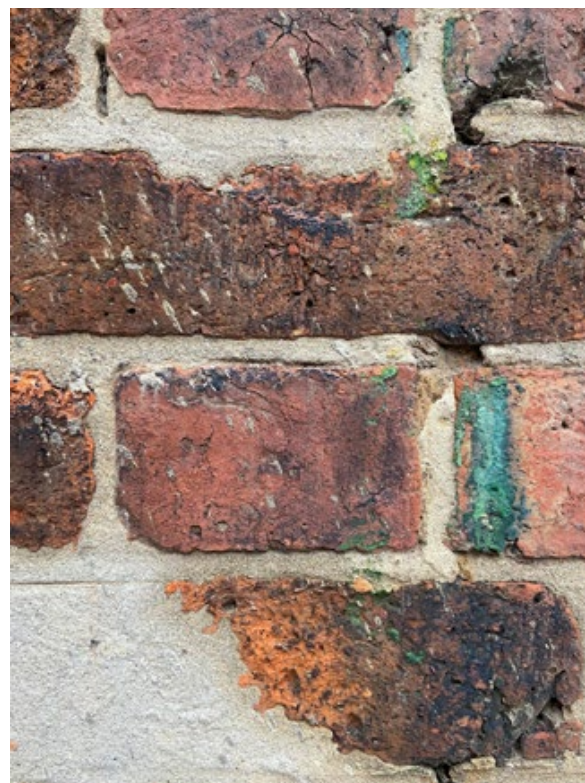
Right side elevation



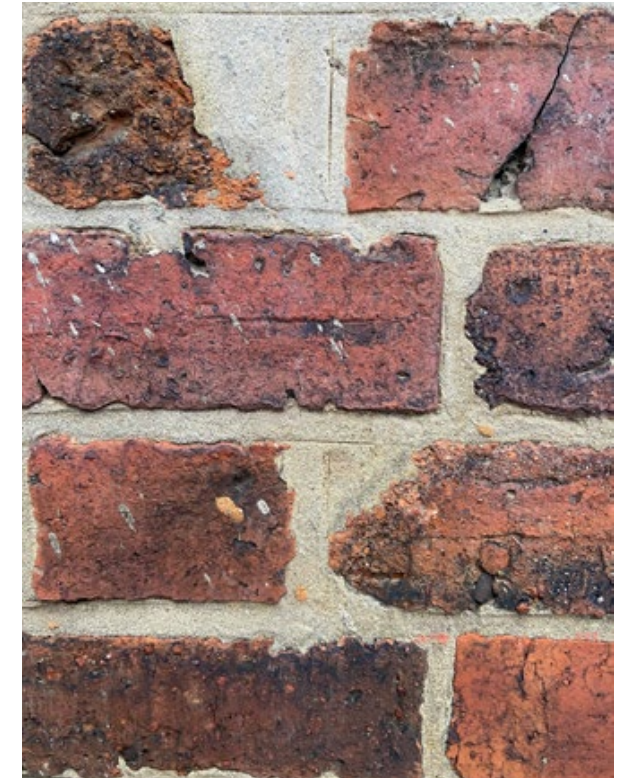
Front elevation | close up window



Materiality | Close up bricks



Materiality | Close up bricks

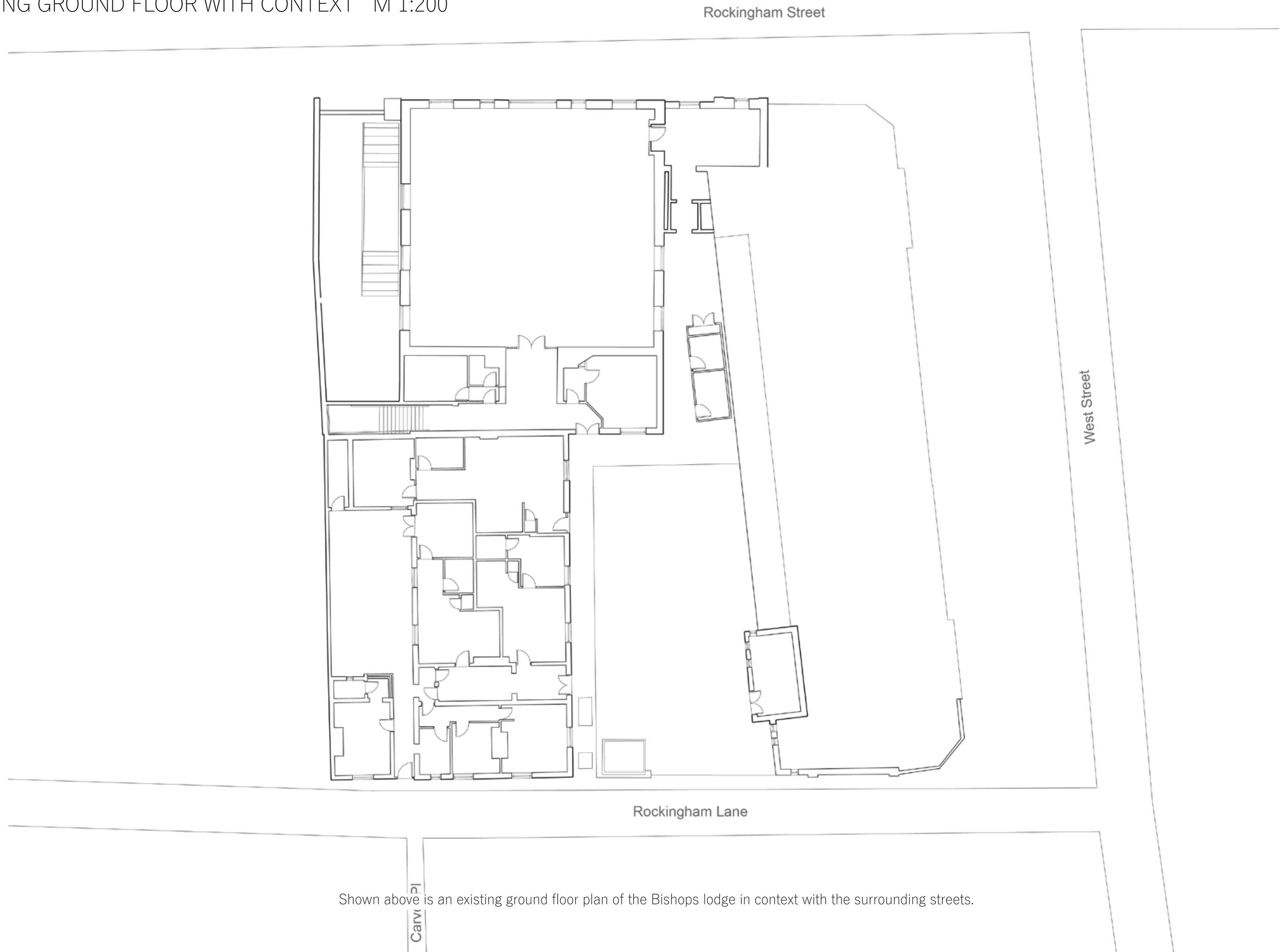


Front elevation | close up windows



The photographs presented above show the Bishops Lodge exterior from various perspectives and take a closer look into its details, looking at the bricks and the windows.

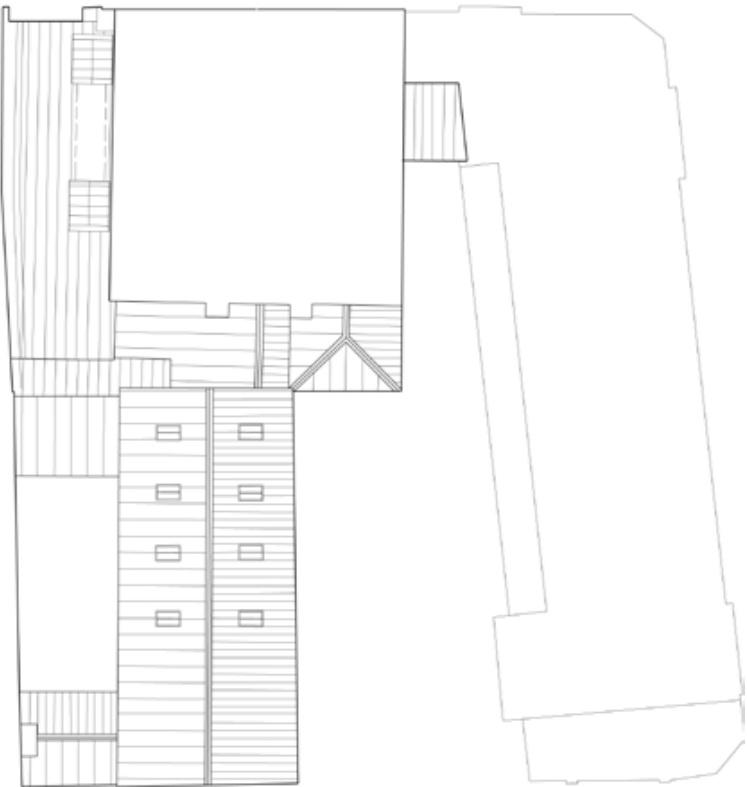
EXISTING GROUND FLOOR WITH CONTEXT M 1:200



Shown above is an existing ground floor plan of the Bishops lodge in context with the surrounding streets.

EXISTING PLANS M 1:400

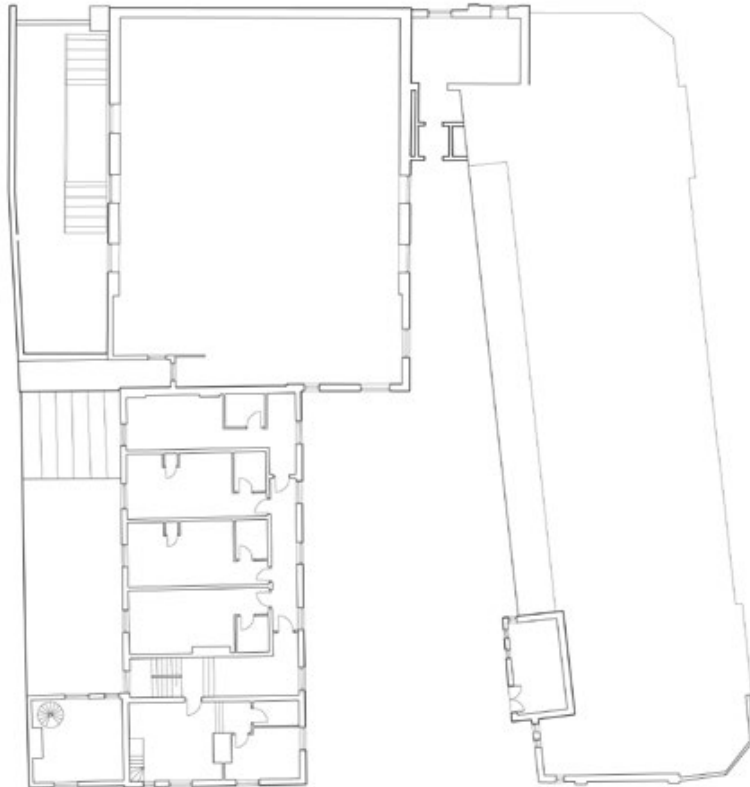
ROOF



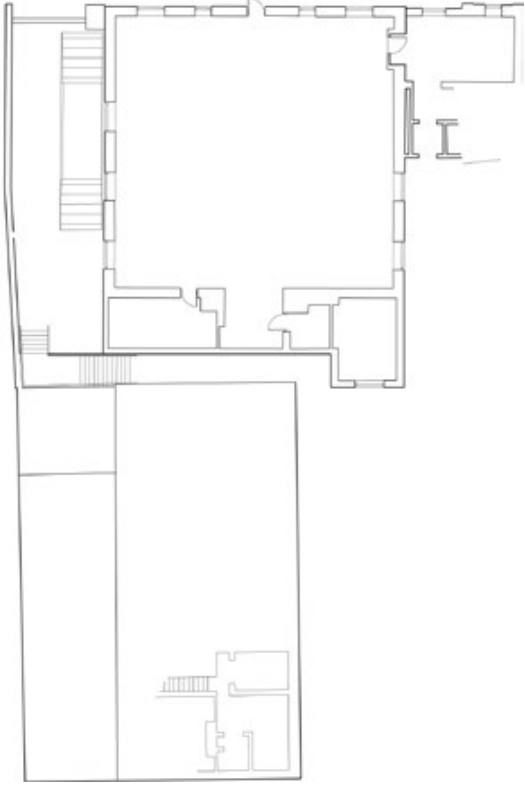
TOP FLOOR



GROUND FLOOR



BASEMENT

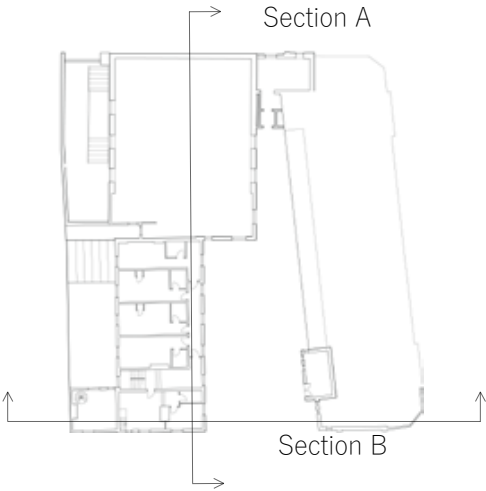


EXISTING SECTION M 1:200

Section A



EXISTING PLAN M 1:800



Section B



Presented above are the existing side and a front section of the Bishops lodge building, supported by a ground floor plan that demonstrates where the sections were made.

CONCEPT

WHAT?

A leasure centre



WHERE?

Bishops Lodge, Sheffield



WHY?



Because the fitness industry is in a need of something different, a place where working on mental health is as important as working on physical health, and they are worked together, hand in hand.



Physical helps the psychological and other way around.



Combining Physical and Psychological to work on overall wellbeing.

Specialists helping you become your best self through physical acitivity and therapy.

In therapy working through any issues including food disorders and body image issues.

FOR WHO?

Young professionals, professionals.



HOW?

By using the research of how light, colours and foliage infuence us psychologically, and using aspects of it in the Design of the centre.



DESIGN STRATEGY | Design research

In my Design research, I have gathered information about how different colours, lighting, and foliage influence our psychology and create a certain atmosphere in a space. My design strategy for designing my leisure centre has been taking this information and adapting it to what type of atmosphere needs to be accomplished in each room. Firstly, I have analysed all the rooms within my leisure centre, what activities that room will host, and what type of atmosphere that room should have according to the target audience and market needs. Secondly, I have integrated a certain colour, type of lighting, and foliage to each room, according to the type of atmosphere that room should have.

TYPES OF LIGHTING	
Artificial lighting	Natural lighting Sunlight
Brightness	
Brighter light intensifies emotions.	When we are exposed to sunlight our brain produces more serotonin (mood- enhancing hormone)
Low light balances emotions.	
Saturation	
Grey tone (no saturation) reduces and dampens emotions.	
Pure, vivid colour (high saturation) intensifys emotions.	
Blue/white light	
Makes us energetic and focused, but due to the fact that it supresses melatonin levels (hormone that controls sleep-wake cycle) it can interrupt sleep patterns if we are exposed to it around bedtime.	
Red/amber light	
Red light in the evening helps increase the separation of melatonin which leads to better sleep at night.	

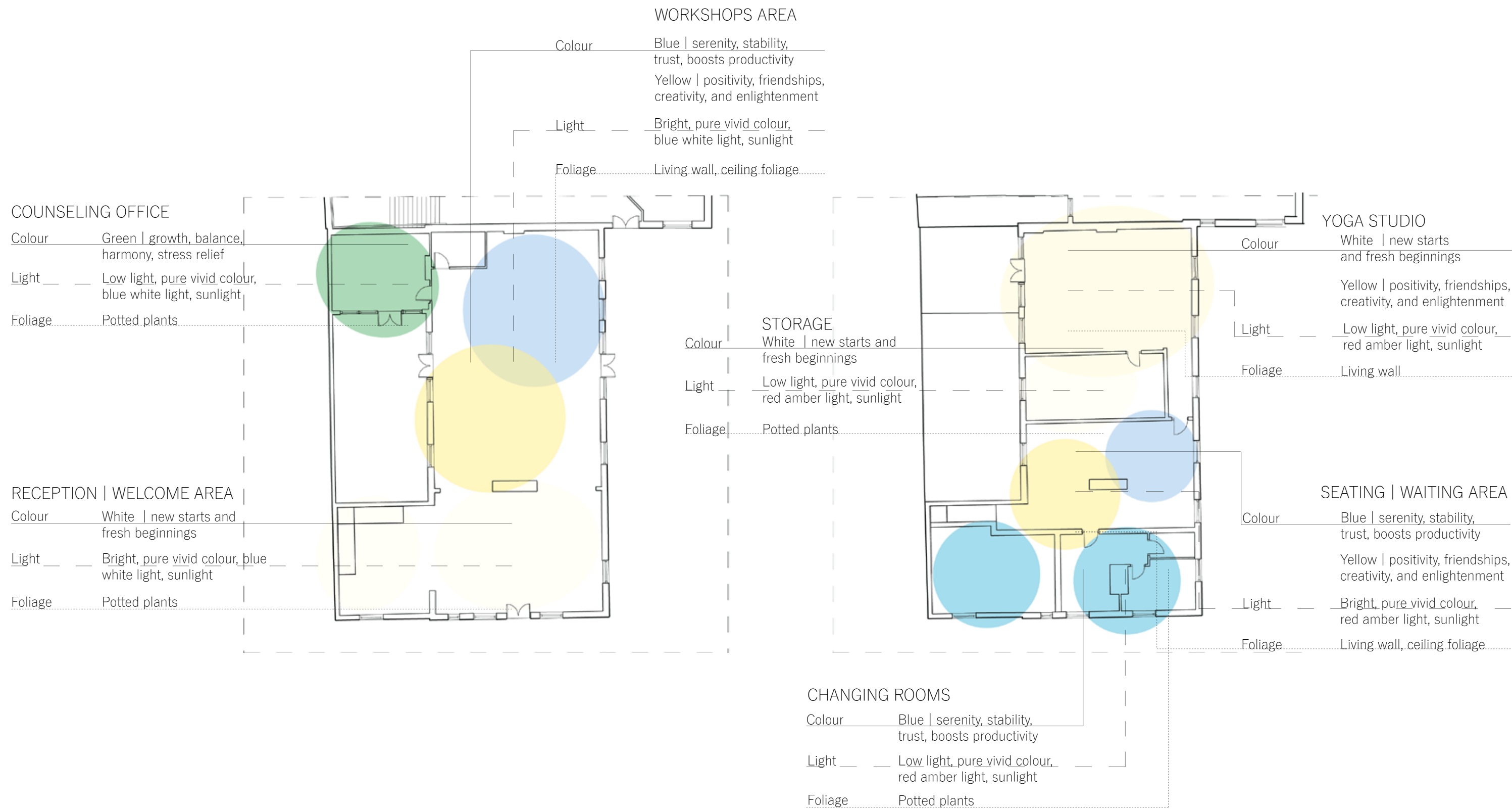
Artificial lighting was analysed, and a few different factors were looked at and chosen from. These are brightness, saturation, and blue/white light or a red/amber light. As mentioned previously, before deciding what type of lighting the rooms should have, the rooms were analysed, and according to that, each room got a certain type of lighting.

Natural lighting is the main lighting source; due to an added opening on the north facing side of the building, a great deal of lighting will fill up the building. Naturally, when natural lighting does not suffice, artificial lighting would be used.

COLOUR PSYCHOLOGY
'Colour psychology is the study of colours in relation to human behaviour. It aims to determine how colours affects our day-to-day decisions.'
Emotional responses to colours can be subjective, but generally speaking, certain types of colours receive specific responses.
Blue is a calm colour, it represents serenity, stability, and trust and it boosts productivity.
Green is the colour of nature and it represents growth, balance, harmony, stress relief, safety, and freshness. It is considered to be the most calming colour.
White is a colour of new starts and fresh beginnings. Colour white represents freshness, cleanliness, and simplicity.
Yellow is a colour of happiness and positivity. Colour yellow represents friendships, sunshine, creativity, and enlightenment.

Through researching colour psychology, I have connected colours to specific rooms to create the needed atmosphere in the room. For instance, the counsellings' office main colour is the colour green; this is because of the colours' characteristics which are explained above.

CONCEPT | DESIGN STRATEGY



BRAND DEVELOPMENT



TARGET AUDIENCE

The ‘leisure centre’ is created and designed for a target audience of young professionals and professionals.

WHY?

This target audience has a disposable income and the Yoga houses/ resorts in Bali that the design of the leisure centre is inspired from, are mostly visited by this age group.

Current young professionals and professionals are people in their 20s and 30s, the millennial generation which are also called the therapy generation. According to research, people this age group are most likely to seek therapy.

‘People in their 20s and 30s seek mental-health help more often, and they are changing the nature of treatment. ‘

‘Many people that fall into the millennial generation seem to be seeking out some form of therapy, life coaching, or mentoring - it seems that millennials are perhaps after some form of guidance or structure as they progress through life.’



FITNESS LEVELS

Unexperienced / beginners

More likely to want 1 to 1, personal trainer sessions due to lack of confidence or technique. A possible reason of signing in with this leisure centre could be the offer to work on physical health simultaneously with the mental health, and an opportunity to engage on the educational workshops.

Experienced/ fitness lovers

Will join for the new fitness experiences and for new knowledge.



MOTIVATORS FOR TRAINING / JOINING THIS STUDIO

Social
Mental
Physical
they are all offered

This page presents my analysis of brand development. I have analysed brand development to develop a clear concept and offer of the Leisure centre. A target audience was chosen in order to make the design decisions more effectively and with a clear purpose. As explained above, I have also thought about what fitness levels the leisure centre would attract, depending on my business offer along with what some of the motivators are to join a gym, concluding that all of them would be offered.

BRAND DEVELOPMENT



WHAT DO WE OFFER?



ANALYSING THE COMPETITION



QUALITIES THAT DEFINE THE BRAND



MAIN OBJECTIVE

The leisure centre would offer:

Physical personal trainings and group training (Yoga and Pilates),

Counselling/ therapy and educational workshops and presentations where the members and non-members would be able to learn about nutrition, anatomy, psychology...



Tone: Friendly, casual
For: 'The locals'
Marketed as: Non-expensive, for everyone, community, a place to make friends



-Big company
-Serious,less personal,professional,cold, straight to the point marketing



-Offers yoga courses and workshops as well as classes

Marketing: confusing, uninformative

Thoughtfulness
Kindness
Successful
Serenity
Hope
Warmth
Acceptance
Determination
Trust
Strenght

Working on overall wellbeing.

This page presents the rest of my brand development. Due to the mentioned target audience, their fitness levels and motivators to join the centre, the centres' offer was concluded and is explained above. I have also researched other gyms and yoga studios in the area and their branding. If I were to develop the branding further (logo, marketing), I would use my analysis and think about how I can make 'Suaka' stand out amongst the competition. In the branding process, I have also considered qualities that define the brand, which pushed me to develop a brand essence mood board. Finally, I have concluded the main objective of the leisure centre, which is to work on overall wellbeing.

BRAND ESSENCE MOOD BOARD

INSPIRATION

Strenght

care

TOGETHERNESS

MNTSTUDIO

MOVEMENT

Presented above is a brand essence mood board which shows the main colours and materials used in the interior. Moreover, it presents some of the brand qualities and an exploration with different fonts that could be used for the branding.

PRECEDENT STUDY

‘YOGA BARN’ , Bali



Presented above is ‘Yoga Barn’, located in Bali. This yoga house has one large yoga studio inside and multiple outdoors spots where one can do yoga or meditate. The large, wall high windows connects the outdoors green gardens with the interior, making the space more open and seem bigger than it is. They also allow a good deal of natural light to come in through the windows, increasing productivity and serotonin production, making us happy while practising yoga. The space looks warm and inviting thanks to the materials and colours used. Warm dark polished wood both on the ceiling and the floor, connects us to the outdoors even further. The yellow walls bring together the mood of the space, as yellow represents optimism and enlightenment. This precedent study directed me to research big windows that would let more light into the space and connect the exterior foliage with the interior. It also inspired me to look into wooden ceiling constructions due to the significant presence of wood in the interior.

WALL / CEILING STRUCTURE



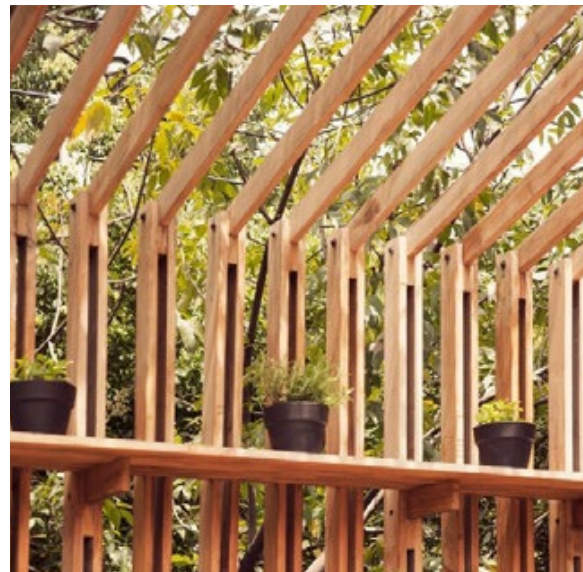
Hou de sousa, Sticks



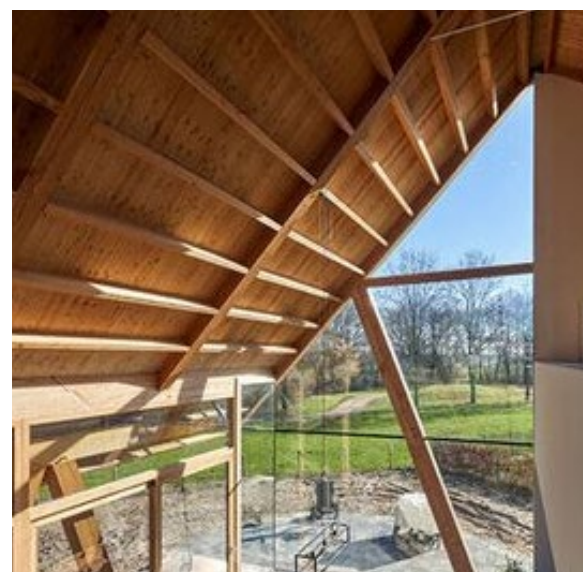
Xu Liang Leon, Growing up Pavilion



Bengt Mattias Carlsson, Guesthouse



Jaime Navarro , Casa del Agua



Ruud Visse, 'Barnhouse Werkhoven'



Paul Archer Design, Jax House

Photographs presented above are various structures that inspired my timber-glass construction. The photographs illustrate different ways to open up a building. I was also considering the way they join together, how thick the pieces of wood are, and what the distance between each column of wood is.

DEVELOPMENT SKETCHES

DEVELOPMENT SKETCHES

This page presents a collection of development sketches I drew whilst developing the stairs, timber-glass construction, and the Leisure centre's overall design.

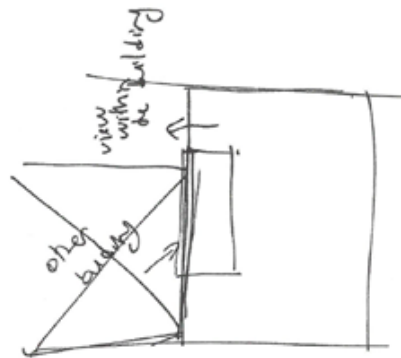
PLANNING THE PLANS



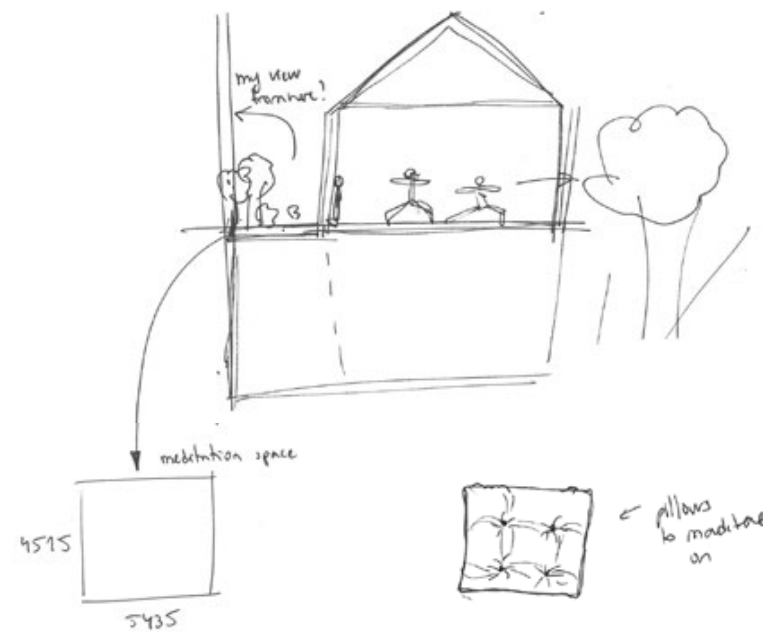
The offer and the concept of the leisure centre informed what rooms the leisure centre must have. The rooms and communication within them are demonstrated above (1). Sketches 2 explore possible positions of the rooms, focusing on the location of the stairs and the entrance. The initial proposed plan (3) demonstrates the final positions of the rooms; however, the sizes of the rooms are edited in the final plan. When positioning the rooms, I utilised as many as possible of the existing walls to save the building from any needless construction work.

DEVELOPMENT SKETCHES

PLAN



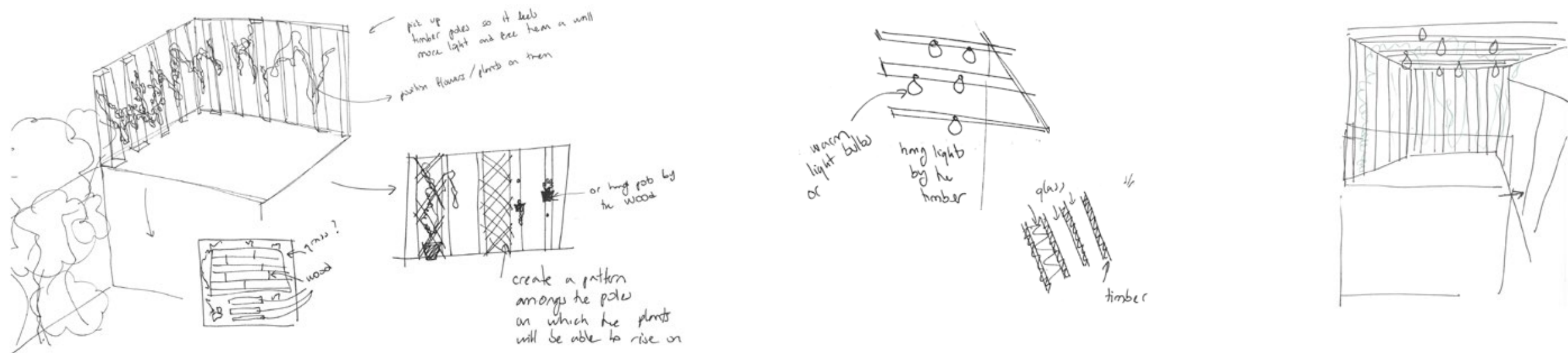
FRONT SECTION



SIDE SECTION

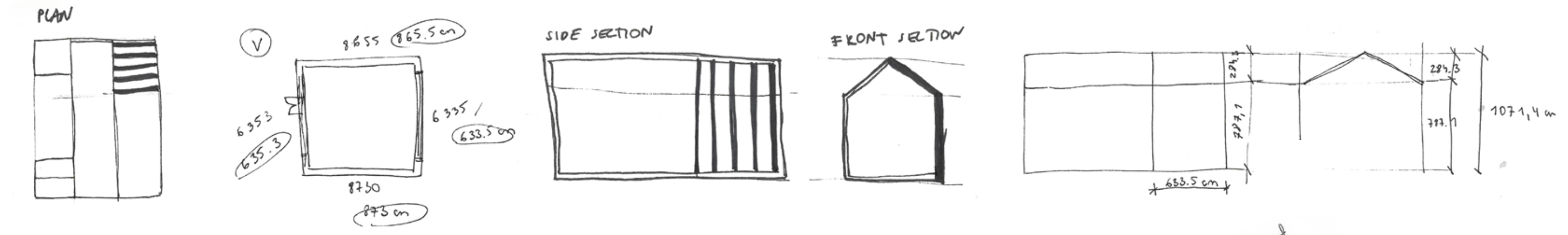


The sketches above demonstrate a plan and section sketches of the yoga studio. The sketches show the existing building and explore the views that people see when practising yoga. The view on the right side is into the courtyard, displaying trees and greenery; however, the view to the left is an unkept building that decays the experience of bonding with nature whilst doing yoga. To create the whole experience of being surrounded by nature, I've constructed a timber-glass construction replacing the existing roof and creating a meditation green roof garden, accessible through the yoga studio. The sketches above also illustrate that people would sit on pillows to meditate, and the pillows can be easily stored in the storage room.



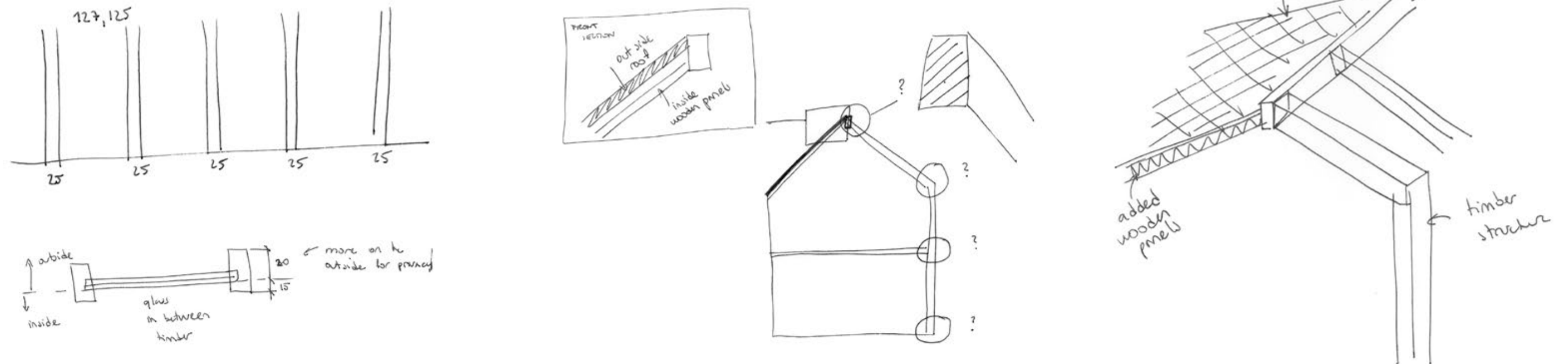
The sketches above illustrate the timber-glass construction. The construction is fully closed and has lighting and heating, which allows it to be used at any point of the year or day. The interior of the construction is filled with potted plants, which are hung on the timber poles and create a green garden.

DEVELOPMENT SKETCHES



The sketches shown above illustrate the north-facing timber- glass construction, which is made to allow more natural light into the building and to create an experience of being one with nature for the yoga practitioners.

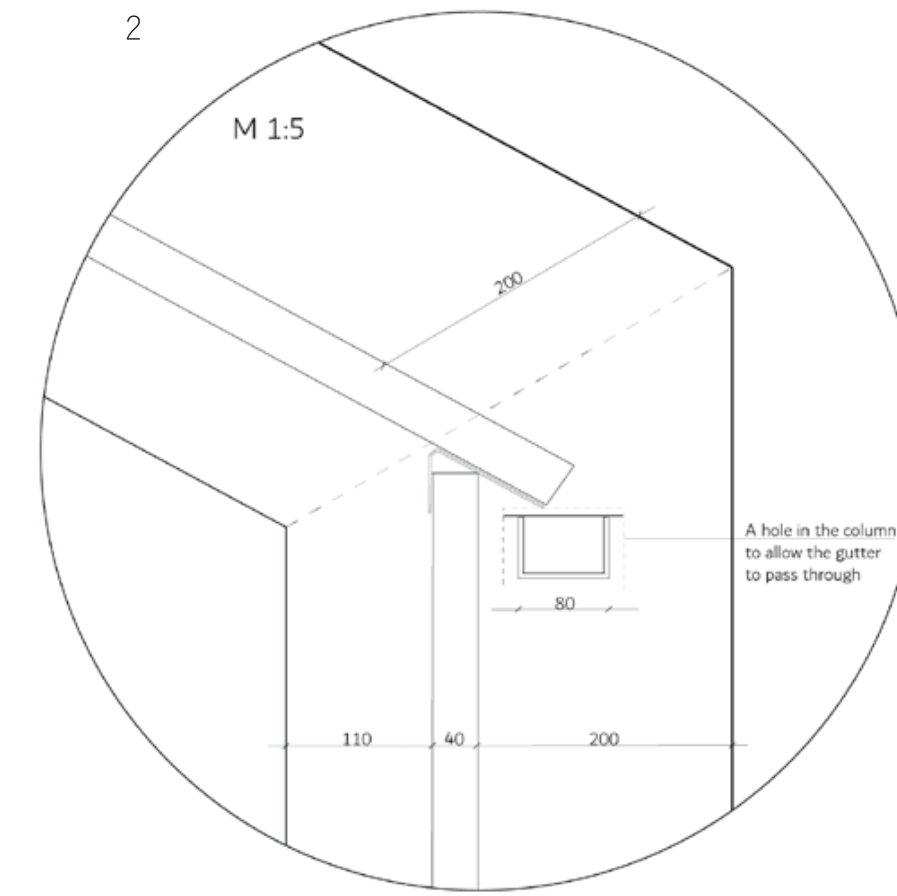
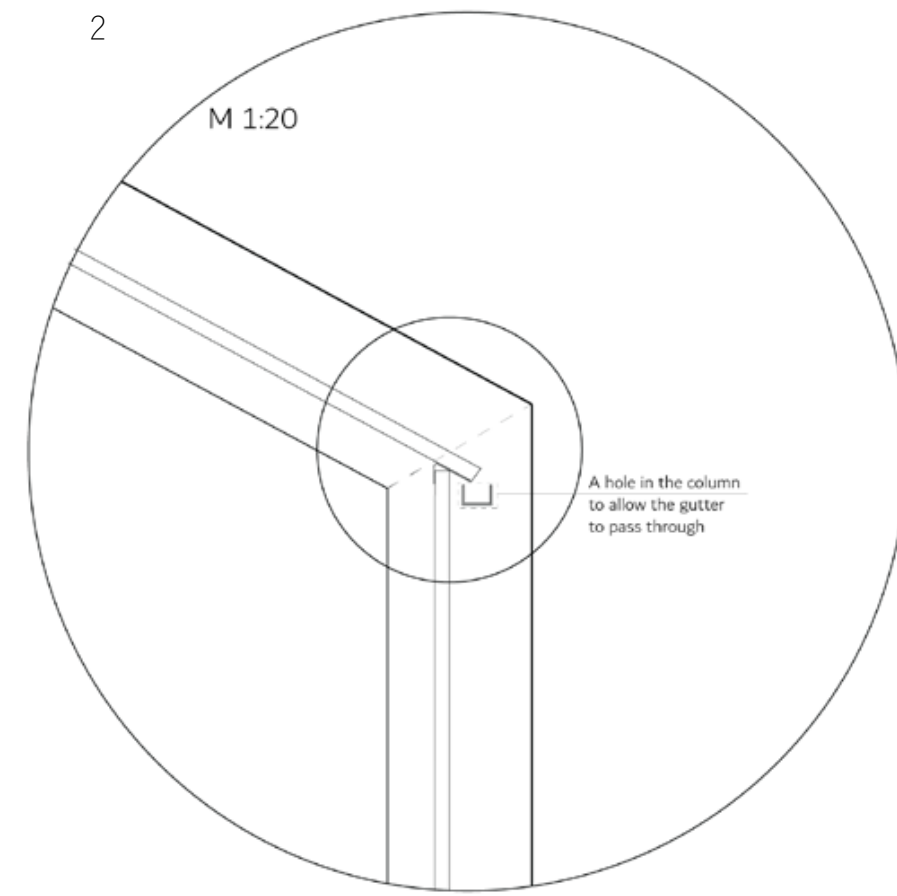
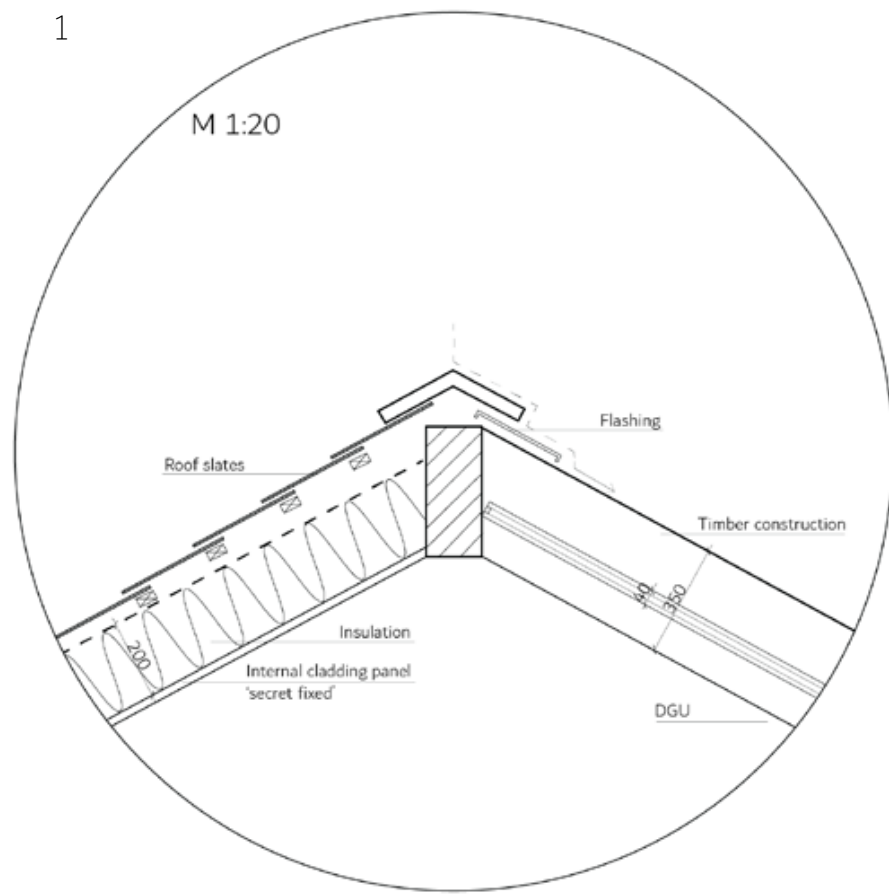
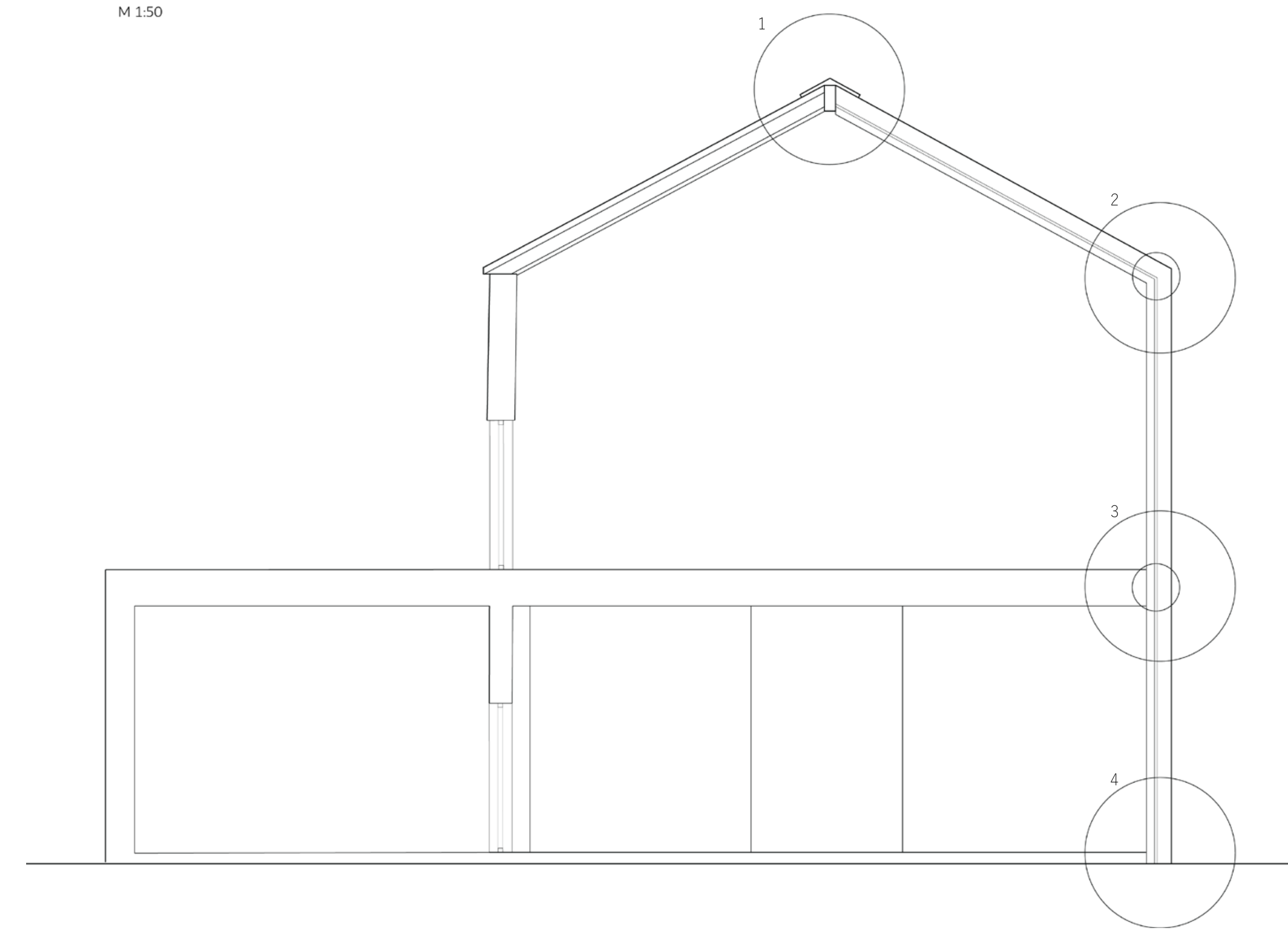
The sketches presented above demonstrate several steps I took whilst designing this construction. Firstly, I have decided the structure has to be north-facing to prevent direct sunlight and overheating in the interior. Secondly, I have decided that the structure will go down the side of the building in order to allow natural light to come into the building, even on the ground floor. The structure also goes over the roof to create a certain experience for the members of the leisure centre. The experience is essentially the leisure centre members connection with nature. The structure allows the member when doing yoga to look on either side of the yoga studio out of the window, and see nature and trees. The roof opening allows the members to look up and see the sky.



Thirdly I have researched how thick the timber poles must be and the glass between them to be structurally secure. The final dimensions as demonstrated above, are that the timber poles are 25 by 35 cm thick, and the glass is 633 cm long secured by the timber blocks. Finally, I have drawn out 4 details that explain some of the fixtures and fittings of the timber-glass construction and these are presented on the following page.

PROPOSED DESIGN

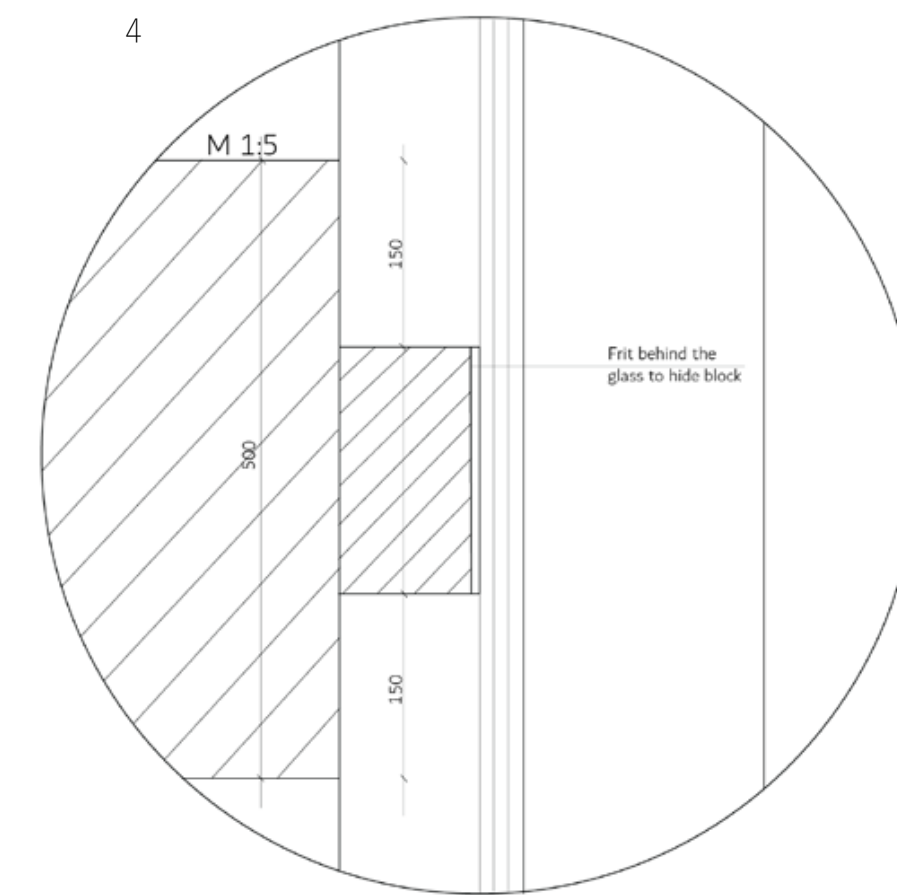
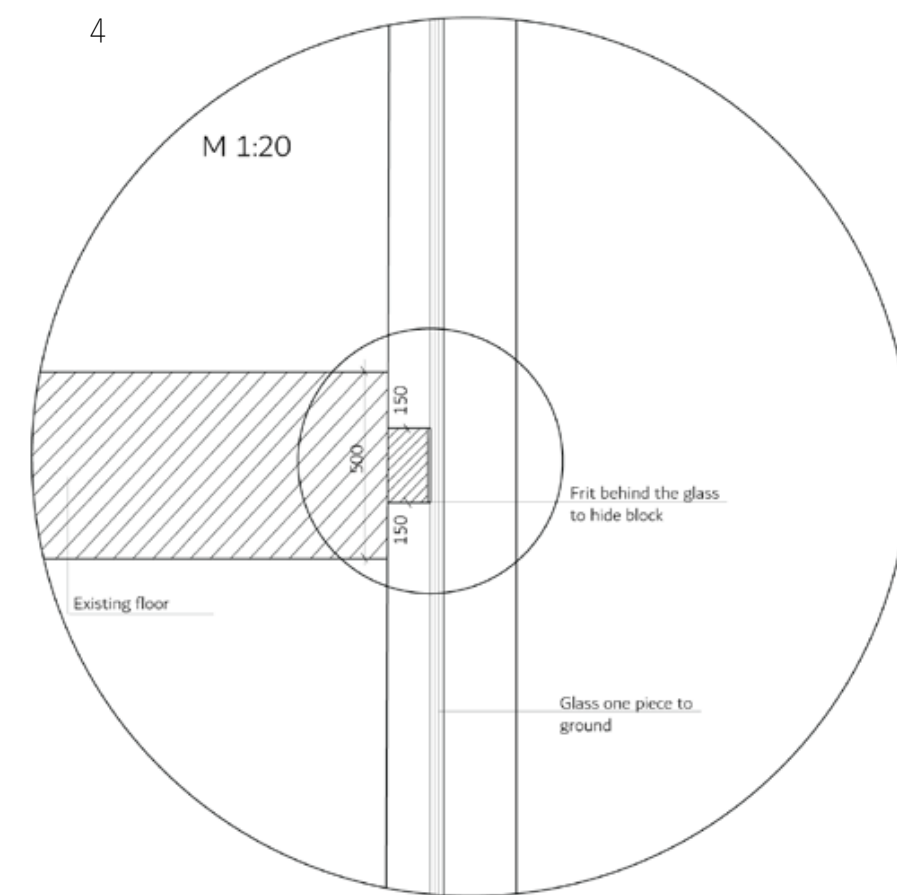
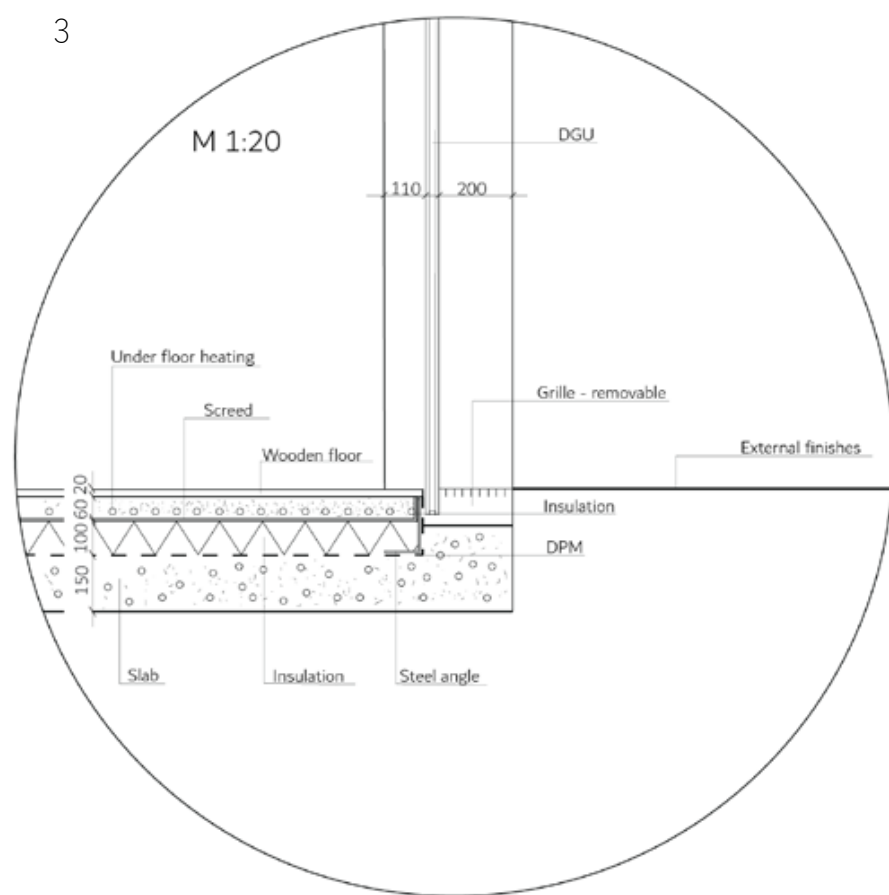
TIMBER- GLASS CONSTRUCTION DETAILS



Presented on the left is a section of the Bishops lodge building in a scale of 1 to 50, and 4 details explaining some of the fixtures and fittings of the timber-glass construction.

1 The 1st detail takes a closer look into the construction of the top of the roof. As presented in the detail, the ridge of the roof stands on roof slates on the left side and on a flashing (thin metal material that direct water down the timber construction), located on the right side of the roof. This detail also explains the placement and the thickness of the insulation and describes the location of the internal cladding panel which has a secret fix (meaning that it cannot be seen).

2 The 2nd detail as show on the left provides a more detailed inspection of the junction of the roof timber-glass construction and the wall timber-glass construction. This detail is presented in a scale of 1:20 and in a closer scale of 1:5 which shows the fixtures within the detail in closer proximity. This detail shows a hole in the column that allows the gutter to pass through and a joint of the two Double Glass Units in between which stands a thin piece of metal that stops the water from going in a wrong direction.



3 The 3rd detail takes a closer look into the connection of the wall timber-glass construction with the existing 1st floor. This detail explains the solution to a hole in between the glass of the construction and the existing floor. The solution was to place a segment of timber between the existing floor and the DGU to fill up the hole. In between of this segment of timber and the DGU is a frit that essentially hides the timber block, so it is not visible from the outside.

4 And finally, the 4th detail provides a closer examination of the conjunction of the wall timber-glass construction with the ground floor. Explained here are the whereabouts of the ground floor elements showing the wooden floor as a finisher, the underfloor heating which stands on top of a screed, insulation, damp proof membrane (DPM) and a slab. The wall timber- glass construction stands on the top of the slab separated from the wooden floor, underfloor heating, screed, insulation and DPM by a steel angle. On the base of the timber-glass construction is a grille that allows water to leave.

TIMBER-GLASS CONSTRUCTION

Timber



DGU glass



Timber-glass construction detail



Timber-glass construction plan



This page presents and examines the materials of the timber glass construction. This page also shows a construction detail and a plan of the timber-glass construction, which demonstrates how the glass stands within the timber blocks. One timber column is made of 2 halves of timber in between which the DGU glass stands.

THE ROOF

- The north-facing timber-glass construction
- The original roof
- Full lenght roof beam
- Queen Post Truss

THE NORTH-FACING TIMBER-GLASS CONSTRUCTION DETAIL

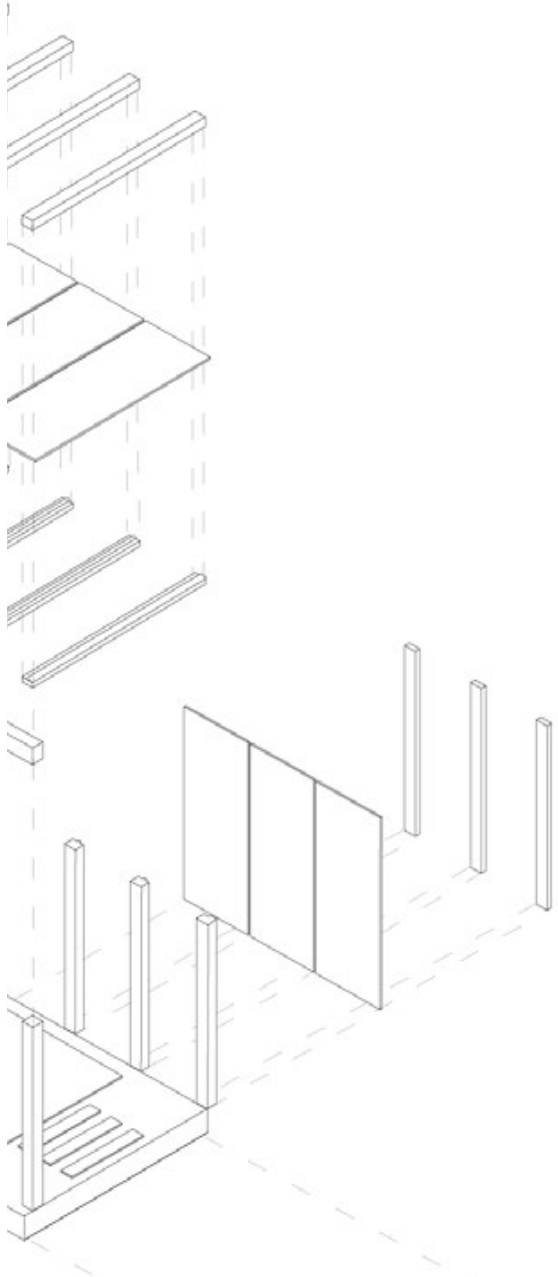
THE SOUTH-FACING CONSTRUCTION
The meditation roof green garden

- The timber-glass roof
- The timber glass walls
- The timber glass wall with the vertical sliding windows
- The meditation roof green garden floor

THE SOUTH-FACING TIMBER-GLASS CONSTRUCTION DETAIL

TOP FLOOR

- Stairs
- Dressing room female
- Dressing room male
- Sitting area
- Storage
- Yoga studio
- Meditation green roof

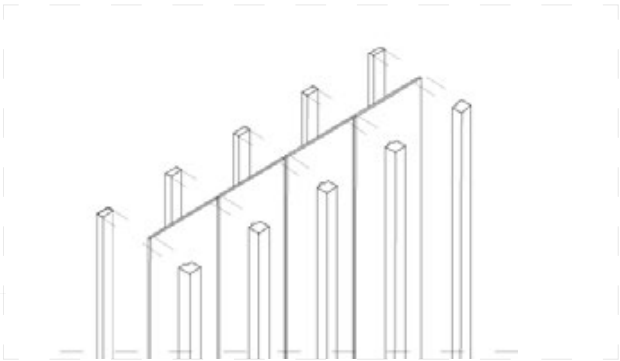


GROUND FLOOR

- Stairs
- Reception
- Workshop area
- Counceling office
- Toilet
- Courtyard south
- Courtyard north

THE NORTH-FACING TIMBER-GLASS CONSTRUCTION DETAIL

THE NORTH-FACING CONSTRUCTION



LOCALLY SOURCED TIMBER



Sustainable advantages of locally sourced timber

Reduced embodied carbon

The building sector is accountable for nearly 40% of annual greenhouse gas emissions. Over a quarter of that is due to embodied carbon created by extracting, manufacturing, and transporting construction materials. If the materials were sourced locally, less transporting happens, hence reduced embodied carbon.



Sustainable advantages of a living wall:

Purifies the air

'The plants in a living wall filter particulate matter from the air and convert CO₂ into oxygen. 1 m² of living wall extracts 2.3 kg of CO₂ per annum from the air and produces 1.7 kg of oxygen.' (Emma Matson, 2019)

Saves energy

Plants absorb sunlight, 50% is absorbed, and 30% reflected, which helps create a cooler and more pleasant climate. This means that 33% less air conditioning is required, which in turn means energy savings.

Reduces ambient noise inside and outside

'A living wall acts as a sound barrier to your building. It absorbs 41% more sound than a traditional facade and this means that the environment is much quieter, both inside and outside your building. This results in a reduction of 8 dB, which means that ambient noise is halved.' (Sempergreen)

Increases the feeling of well-being

Living and working in a green environment has a positive effect on the well-being of people. Greenery offers relaxation and reduces stress which directly connects to the Leisure centres main objective.

Adds value to the building

'The natural and sustainable appearance, combined with a reduction in energy costs, means an increase in value of your property.' (Sempergreen)

It brings together the community

Every few weeks, when the wall needs maintenance, the community volunteers gather and take care of the wall together; this gives people a feeling of contributing and building something together.



Sustainable advantages of natural light

Free renewable resource

Reduces the energy bills

Reduces carbon dioxide emissions

‘Lighting accounts for around 15% of the energy bill in most homes, and around 25% in commercial buildings. It is supplied by electrical power plants using fossil fuels, and is responsible for a significant percentage of carbon dioxide emissions, a leading cause of global climate change.’
(Jeniffer Gray, 2020)

Offers health benefits, such as:

boosting your body’s Vitamin D storage

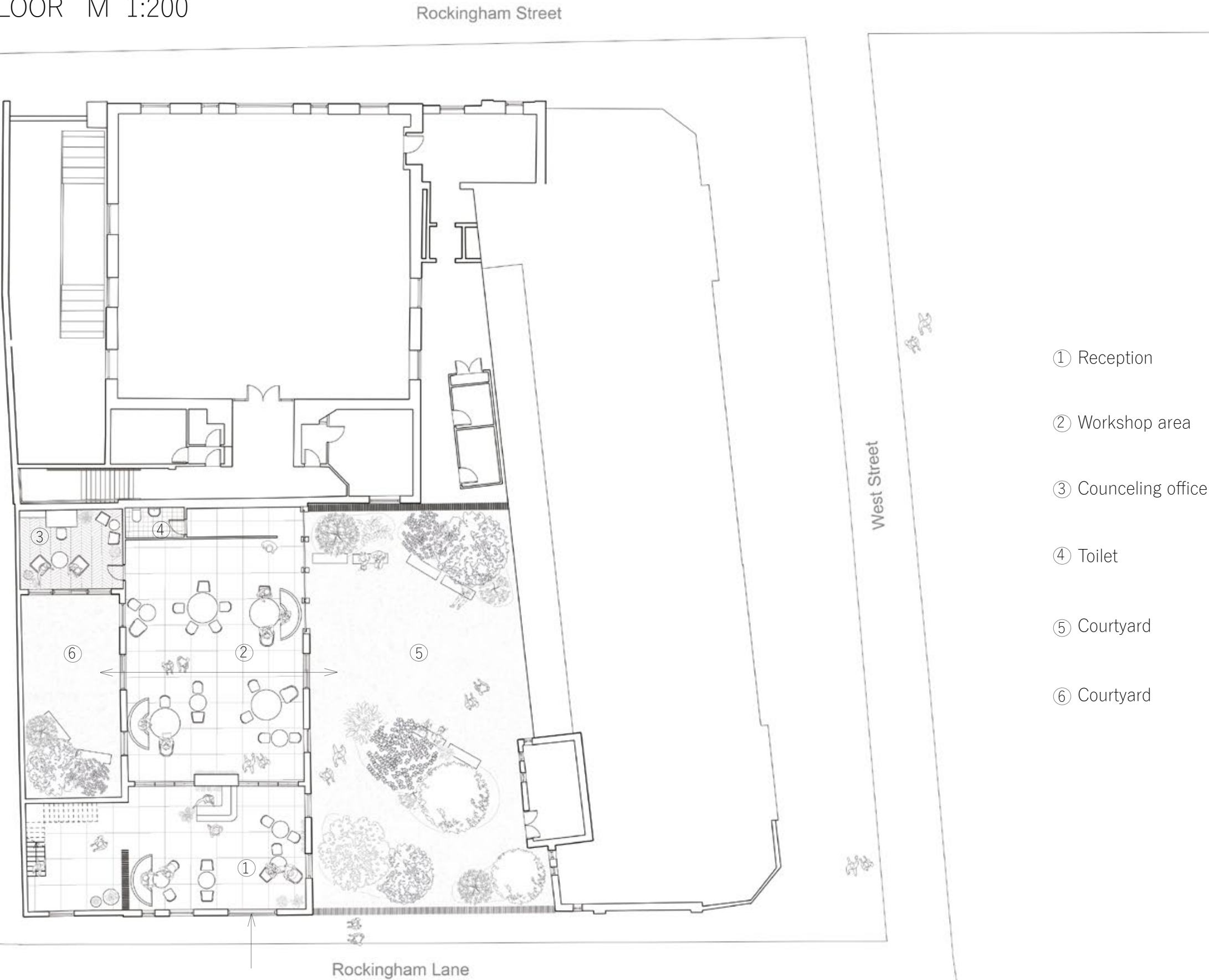
higher productivity

better vision

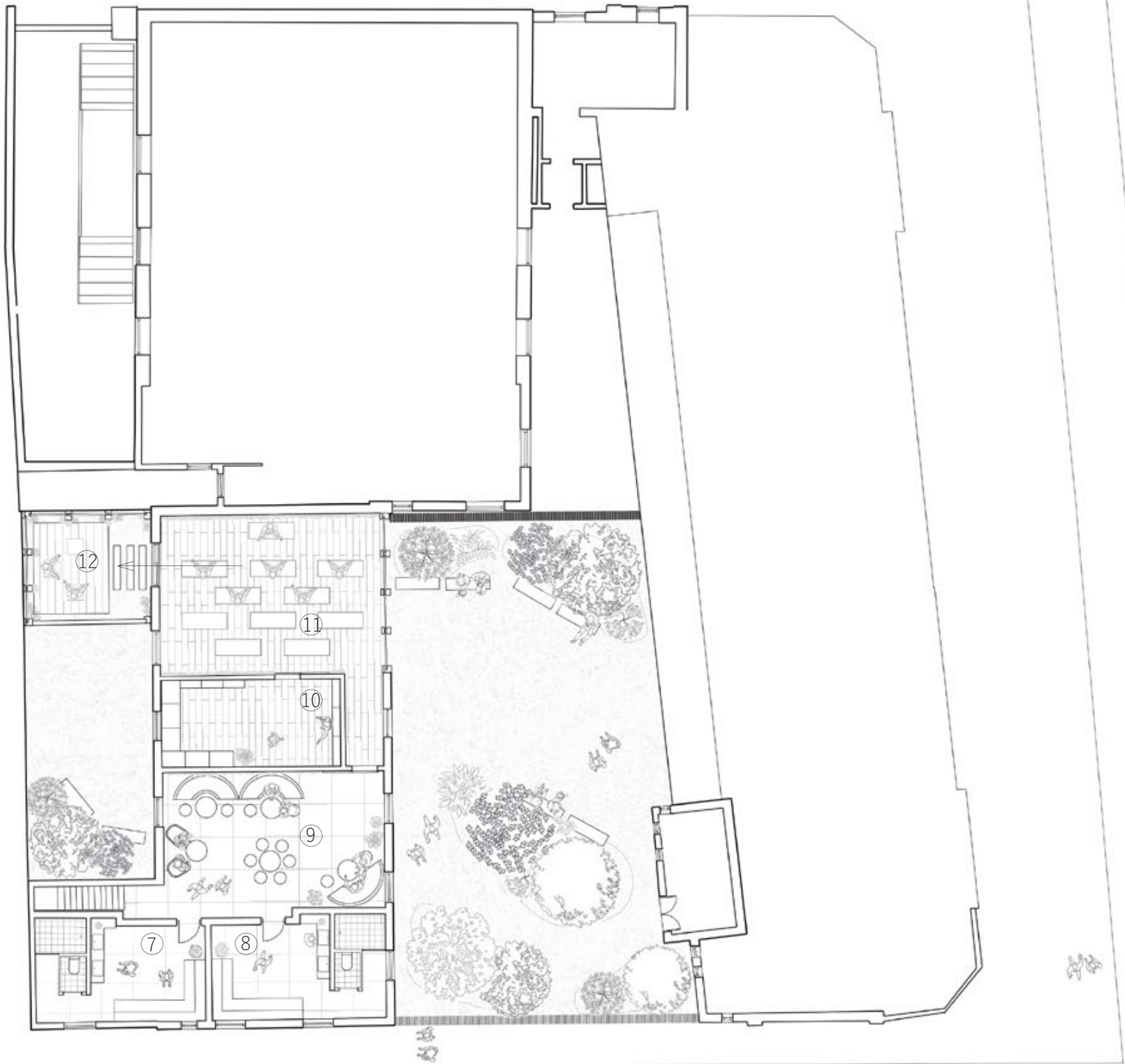
better sleep quality

improved mood

The timber-glass constructions creates a 6 metre wide opening on the north-facing side of the building and the north-facing side of the roof. This opening allows a great deal of natural lighting into the building, the top floor, and the ground floor. This page presents the importance of natural light in terms of sustainability.



Presented above is a final proposed ground floor plan with context illustrating the rooms located within the ground floor.



- ⑦ Dressing room female
- ⑧ Dressing room male
- ⑨ Sitting area
- ⑩ Storage
- ⑪ Yoga studio
- ⑫ Meditation green roof

arver Pl

Presented above is a final proposed first-floor plan with context illustrating the rooms located within the plan.



Presented above is a final proposed roof plan of the Bishops lodge with context.

PROPOSED SECTION M 1:200

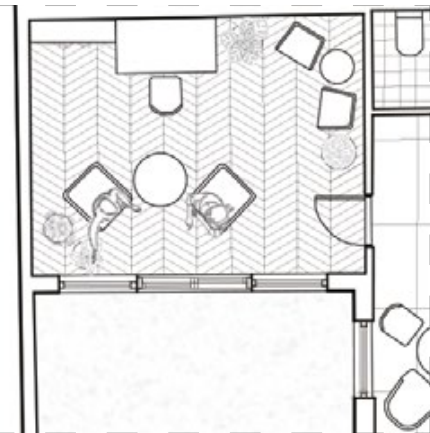
EXISTING PLAN M 1:800



Presented above is a final proposed section of the Bishops lodge, supported by plans demonstrating where the section is made. The proposed section shows two floors of the building and the content within. 37

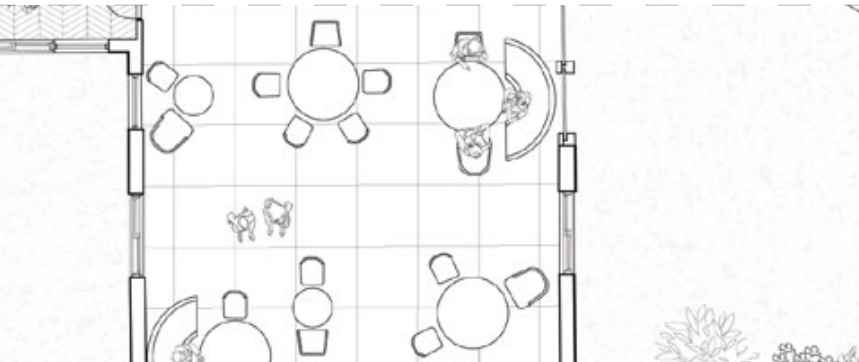
PROPOSED GROUND FLOOR PLAN M 1:200 | A closer look into design

Counselling office

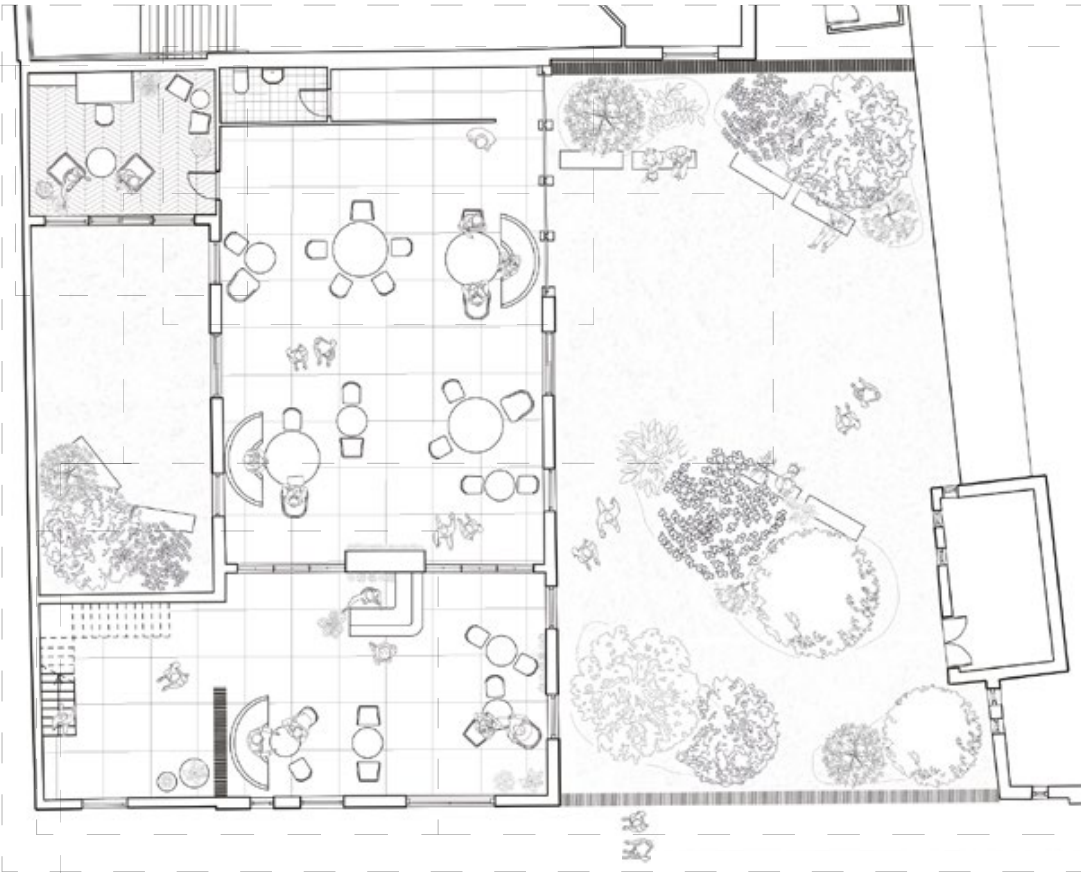


The wooden sliding doors and two large glass windows open up the interior and create communication with the south-facing courtyard, bringing the exterior greenery into the interior.

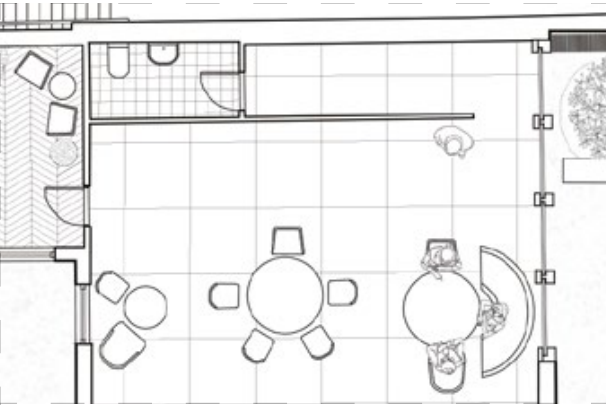
Workshop area



The position of the wooden sliding doors creates direct communication of the interior and the exterior. When an event is on in the workshop area, the doors can be open, and the workshop area and courtyard gardens can be used together as one space. When no events are on, the workshop area serves as a lounge area for the members.

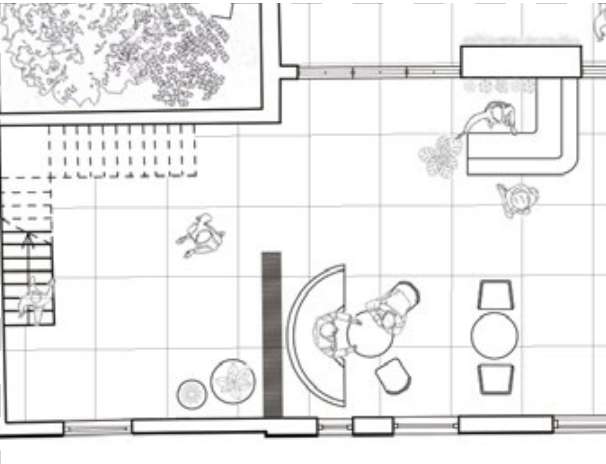


Toilet



The toilet on the ground floor is located in the workshop area. The toilet entrance is 'hidden' behind a wall that serves as a presentation wall when an event is on. Having a toilet on the ground floor also enables the first floor to be closed when no classes are on, and it allows the ground floor to function individually for lounging and counselling or for workshops and presentations when an event is organised.

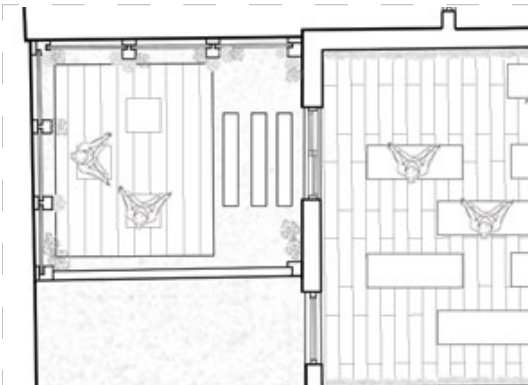
Reception table and stairs location



The placement of the reception table allows simple communication through space. If somebody comes for a class, they can turn left, go up the stairs to the dressing room and the yoga studio. In the same way, if somebody comes just for a counselling session or a workshop, they go straight through the doors.

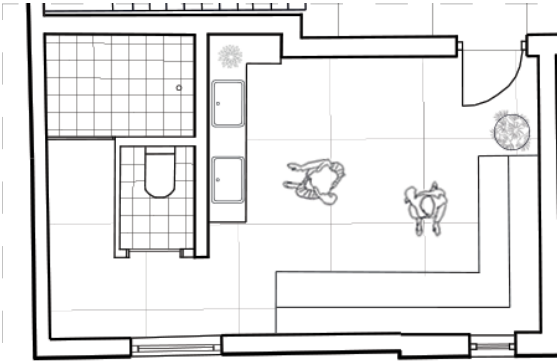
PROPOSED FIRST FLOOR PLAN M 1:200 | A closer look into design

Meditation corner

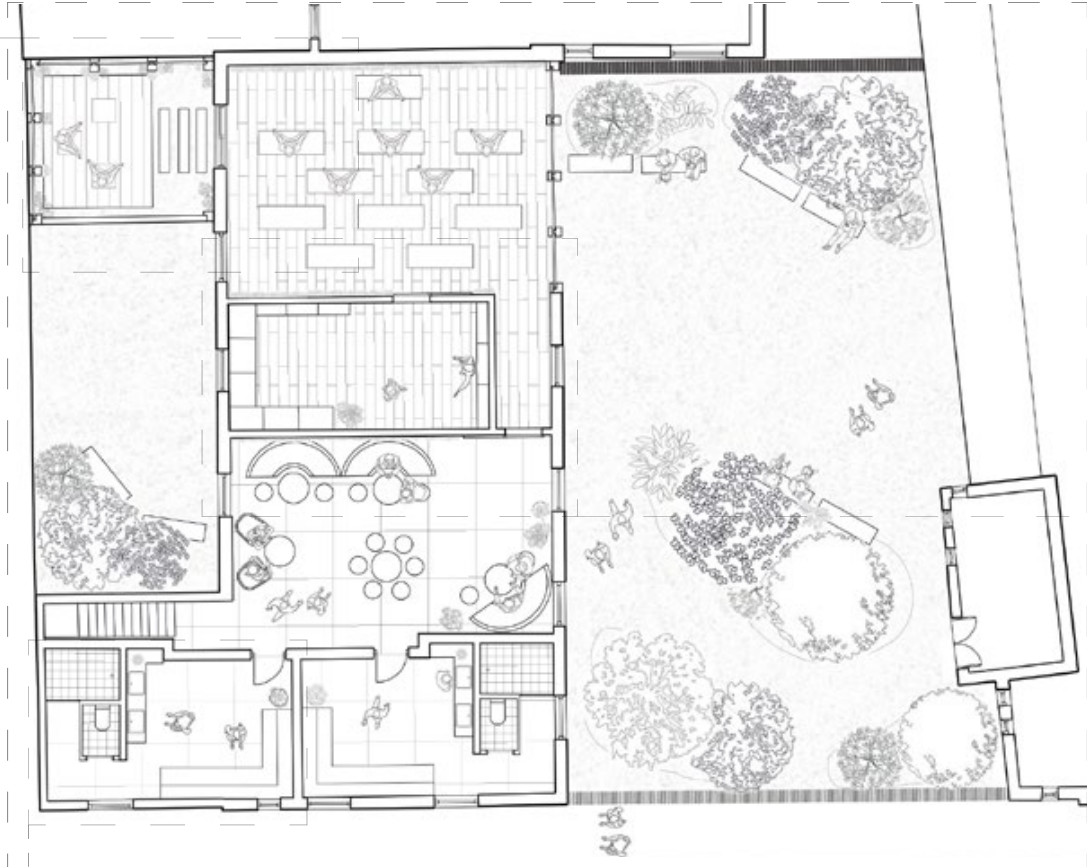


The wooden sliding doors provide easy access to the meditation green garden through the yoga studio.

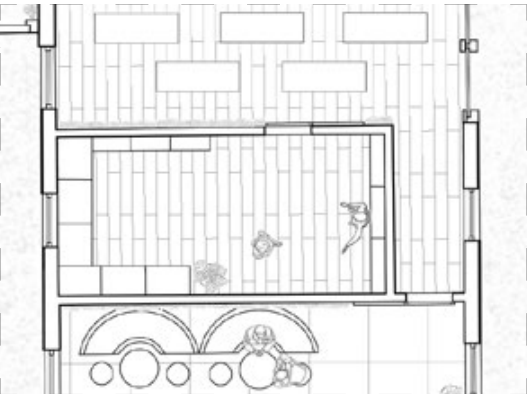
Meditation corner



The dressing rooms are separated by a dry and a wet area. The one shower per dressing room is positioned in the corner for complete privacy. The dressing room has 20 lockers, as the yoga studio can fit up to 15 people and five extra lockers for staff.



The storage



The storage is located between the sitting/waiting area and the yoga studio and acts as a buffer zone. The storage room essentially tones down the sound of people talking while waiting for a class in the sitting area, from people training in the yoga studio.

FRONT DESK AREA



Presented above is a style board collage of the front desk area, illustrating the main design elements such as the materials and the off-centre pivot doors.

OFF CENTRE PIVOT DOORS

INSPIRATION



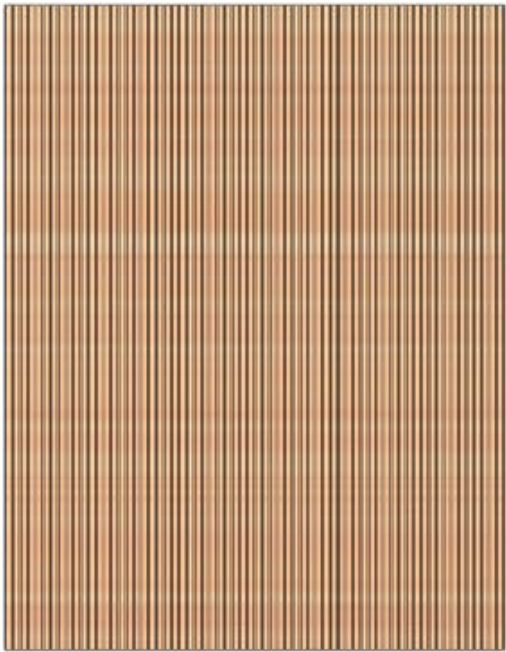
Sliding doors with vertical wood slats



Off-centre pivot doors with horizontal wood slats

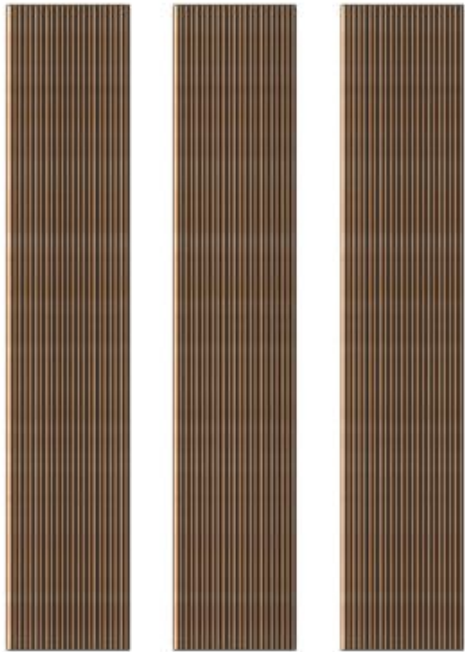
FINAL DESIGN

FRONT VIEW



Off-centre pivot doors with vertical wood slats closed

SIDE VIEW



Off-centre pivot doors with vertical wood slats open

This page presents the initial inspiration for doors in the front desk area and the final design of the off-centre pivot doors. The off-centre pivot doors allow easy communication from the front desk area into the workshop area when the workshop area is open for the members as a lounge area. However, when there is an event in the workshop area, the doors fully close for privacy.

STAIRS

INSPIRATION



Gallery of VY ANH House / Khuon Studio
One stringer wooden stairs with descening foliage



Two stringer wooden stairs with potted foliage
fixed to the side surface

FINAL DESIGN



One stringer wooden stairs with descening foliage

This page presents the initial inspiration for stairs exploring one stringer and two stringer, wooden stairs and their possible relationship with foliage. Shown on the right is the final one stringer wooden staircase with descending foliage on the open side of the staircase.

CEILING PLANT POTS

INSPIRATION



Gallery of An'garden Café / Le House



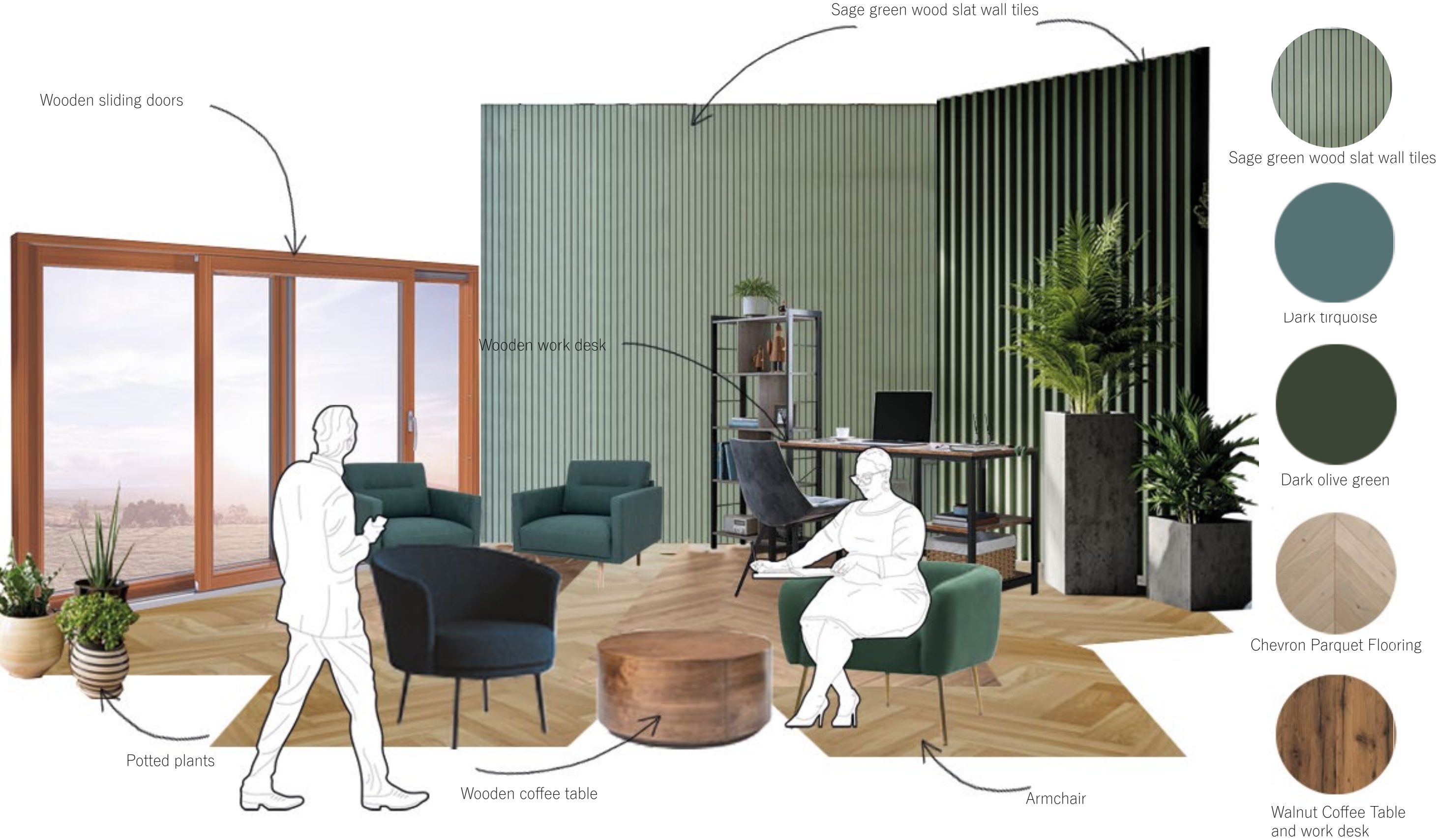
Gallery of An'garden Café / Le House

FINAL DESIGN



This page presents the inspiration for ceiling plant pots and the final wooden plant pots supported by black steel poles.

COUNSELING OFFICE



Presented above is a style board collage of the counselling office, illustrating the main design elements such as the furniture, materials and colours used in the interior.

CHANGING ROOM



Presented above is a style board collage of the changing rooms, illustrating the main design elements such as the furniture, materials, colours and design details used in the interior.



PROPOSED EXTERIOR VISUALISATION



PROPOSED WORKSHOP AREA VISUALISATION



PROPOSED YOGA STUDIO VISUALISATION



PROPOSED MEDITATION GREEN GARDEN VISUALISATION