



DESIGN DISCOURSE

ABSTRACT

This chapter applies the theories discussed in Chapter 2, and the conceptual approach as defined in Chapter 5, towards the design of a retail skincare servicescape for Margaret Roberts. Biomimetic theories are applied towards the functional and sustainable aspects of the design, and Biophilic theories and patterns are applied towards creating a rejuvenating in-store experience.

06

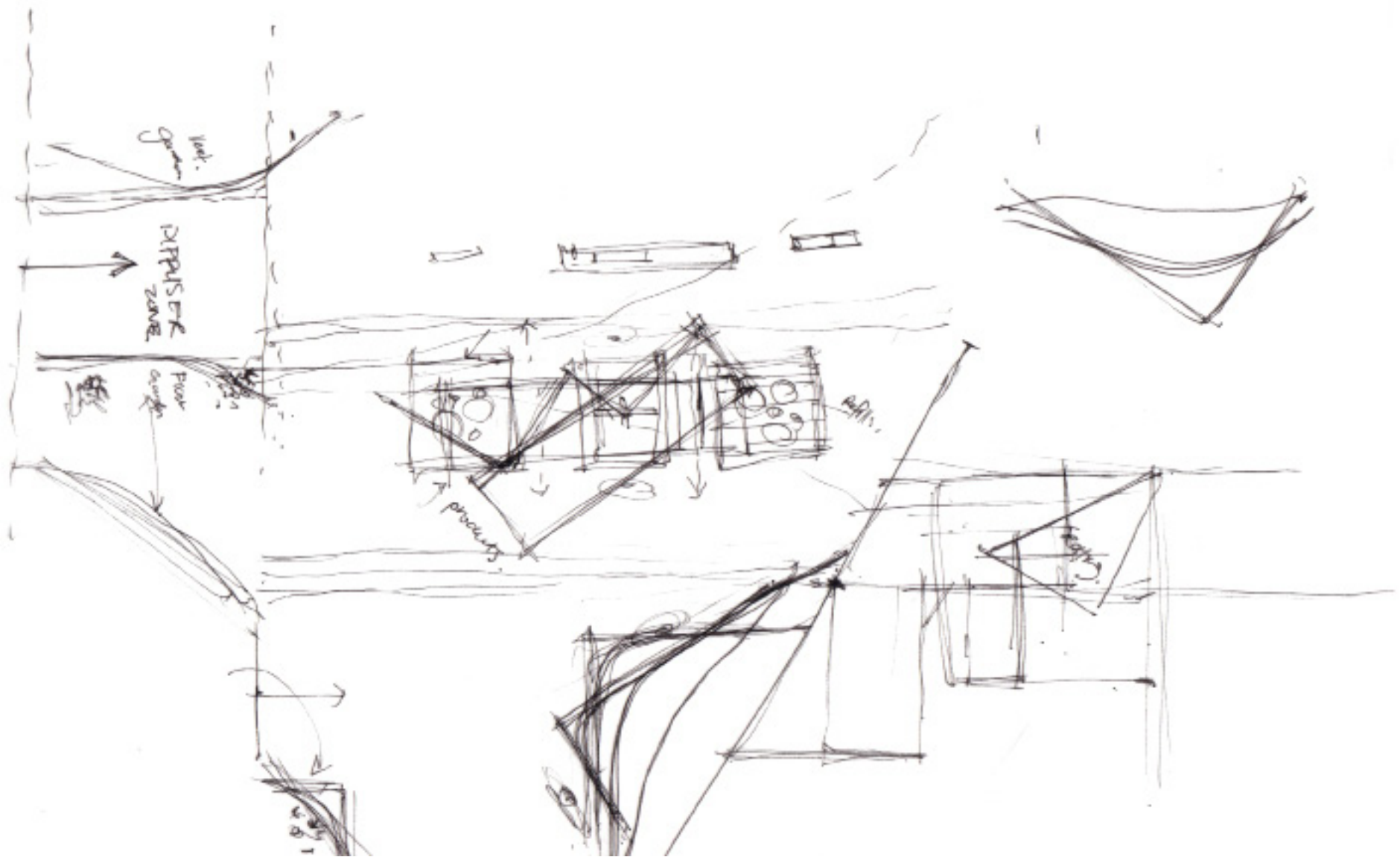


Figure 6.1 Concept development sketch
(Author, 2016).

DESIGN STRATEGY

Nature as a Model and Mentor

BIOMIMICRY DESIGN

BIOPHILIC DESIGN

Towards Sustainable Retail Design

Towards an In-store Retail Experience

RESOURCE EFFICIENCY

Life's Principles:

- > Design for adaptability
- > Combine modular and nested components
- > Use multifunctional design
- > Incorporate diversity
- > Replicate strategies that work

Minimum Inventory/
Maximum Diversity

Modular Kit of Parts

Resource Efficiency
through Form:
Triangulation Patterns

WASTE MANAGEMENT

Life's Principles:

- > Leverage cyclic processes
- > Use readily available materials
- > Recycle all materials
- > Break down products into benign constituents

Closed-Loop System

Use waste as a resource

SENSORY EXPERIENCE



Create a **visual connection** with nature through manipulation of plants, natural light, biomorphic forms and patterns, and complexity and order.



Create an **auditory connection** with nature through controlling noise and silence, and introducing nature sounds.



Create an **olfactory connection** with nature by introducing soft, natural and refreshing scents.



Create a **tactile connection** with nature through manipulating airflow and temperature variables and introducing raw and natural materials.



Create a **gustatory connection** with nature through providing natural and earthy refreshments to clients.

Figure 6.2. Diagram of Design Strategy (Author, 2016)

6.1 BIOMIMICRY DESIGN APPLICATION

6.1.1. RESOURCE EFFICIENCY THROUGH EMULATION OF BIOMIMETIC **FORM**

Chapter 2 discussed Pearce (1978) and Thompson's (1961) theory on forms and structures in nature that are resource efficient, which both highlighted the significance of triangulation patterns in nature. In Chapter 5, the lavender plant was identified as the biological organism used as a source for design inspiration. By dissecting the composition of the lavender plant, it was found that the microscopic cell structure shows evidence of triangulation patterns. Therefore, the design strategy aims to implement the use of triangulation patterns as a means of emulating resource efficient biomimetic forms.

It was decided to explore the application of triangulation patterns in a retail display system since retail displays can be resource intensive due to the fact that they are often changed or replaced to keep up with trends and seasonal changes.

The aim for the display system was to create a structure that would allow for adaptation, deconstruction and would display resource efficient qualities through its triangulated form and material application.

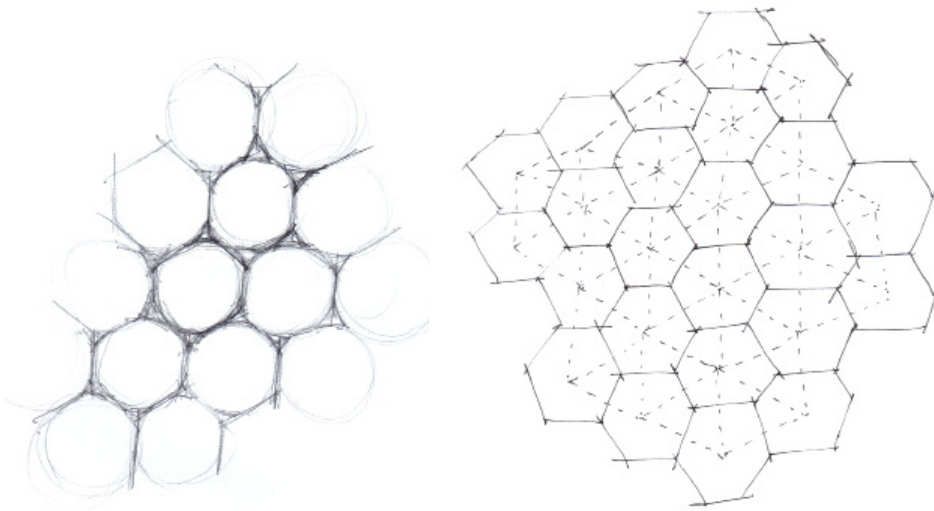


Figure 6.3. Sketch of triangulation patterns in lavender cell structure (Author, 2016)

TRIANGULATED GRID STRUCTURE

The sketch below shows development of a triangulated grid structure that emulates the triangulation patterns identified in the cell structure of the lavender plant.

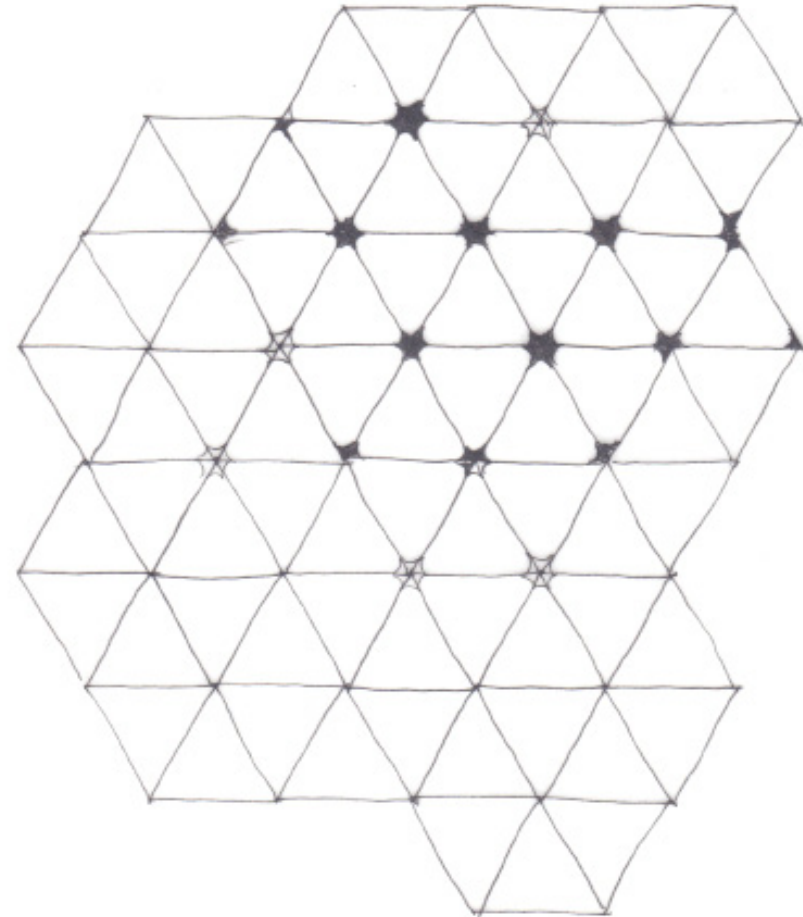


Figure 6.4. Triangulated grid structure (Author, 2016)

EXPLORATION OF FRACTAL PATTERNS IN THE TRIANGULATED GRID STRUCTURE

The sketch below shows how the triangulated grid structure can be manipulated to incorporate fractal patterns (see Chapter 2).

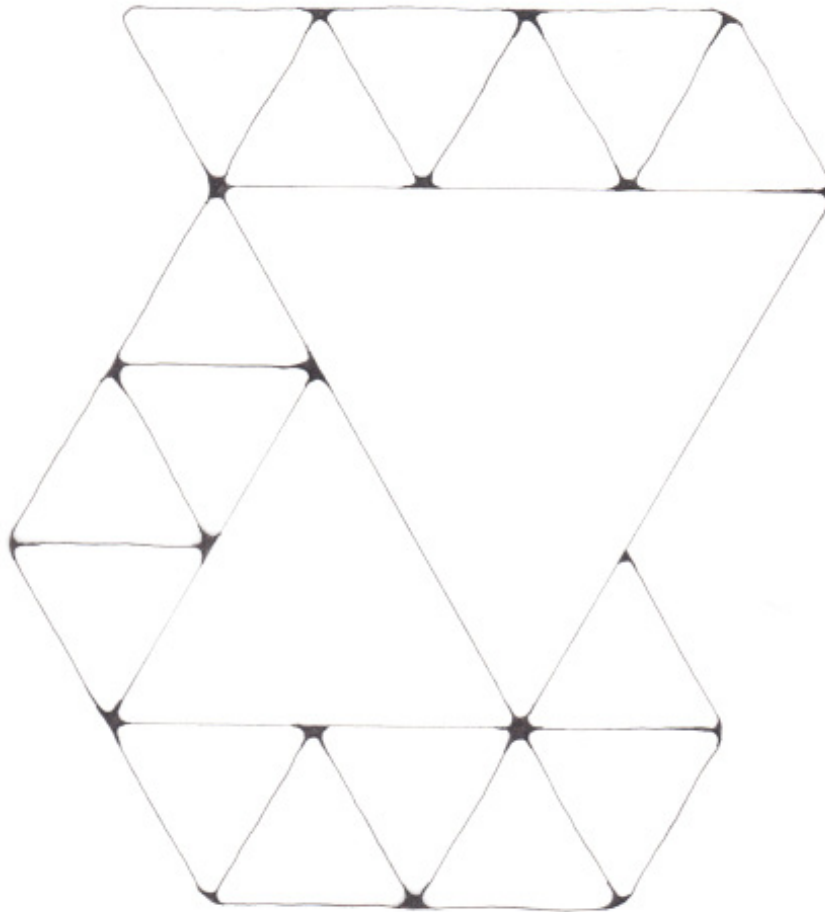


Figure 6.5. Triangulated grid structure - fractal patterns (Author, 2016)

EXPLORATION OF DISPLAY SYSTEM WITHIN TRIANGULATED GRID STRUCTURE

The sketch shows how a display system can be created with the triangulated grid structure, allowing room for product displays and information displays.

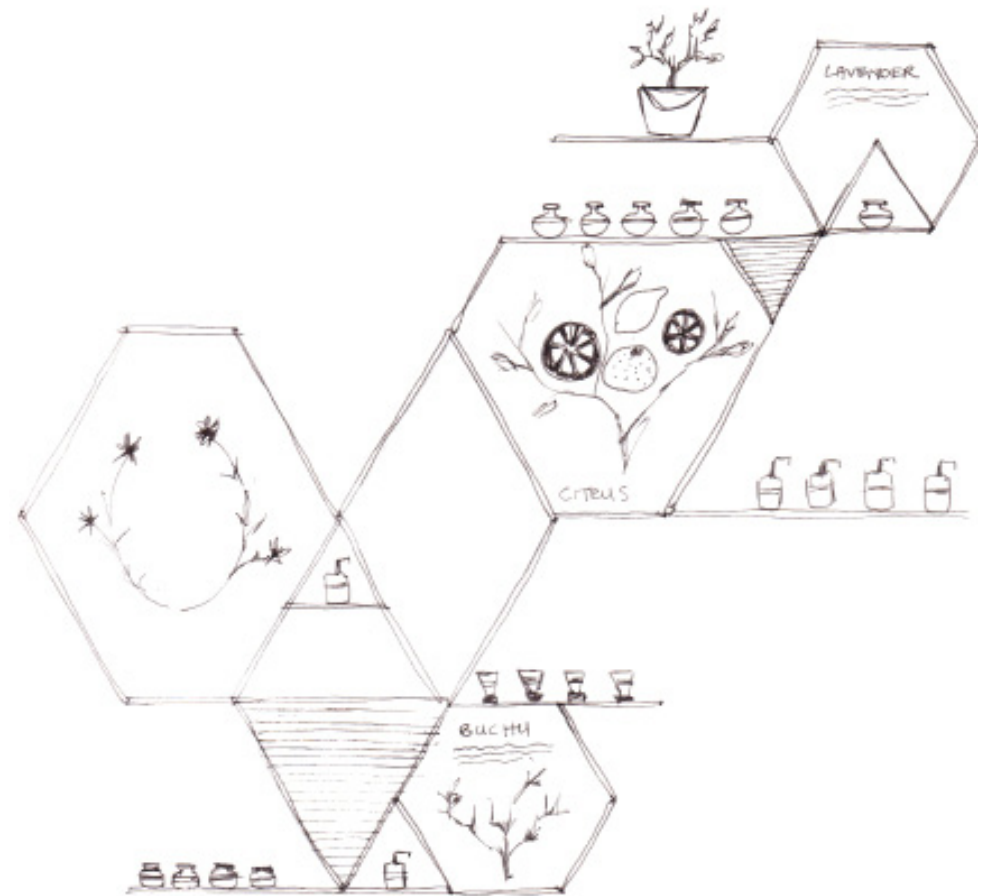


Figure 6.6. Triangulated grid structure - display design (Author, 2016)

Design of Triangulated Display System

The design of the display system is constructed according to the triangulated grid. These sketches show how the structure allows the creation of various design configurations – rendering the system highly adaptable.

The approach to the arrangement of products within the display was influenced by the ergonomical parameters for the design of a vertical display as defined in Chapter 4. Products and information displays are to be arranged between **stretch level** and **stoop level** to ensure visual and physical accessibility.

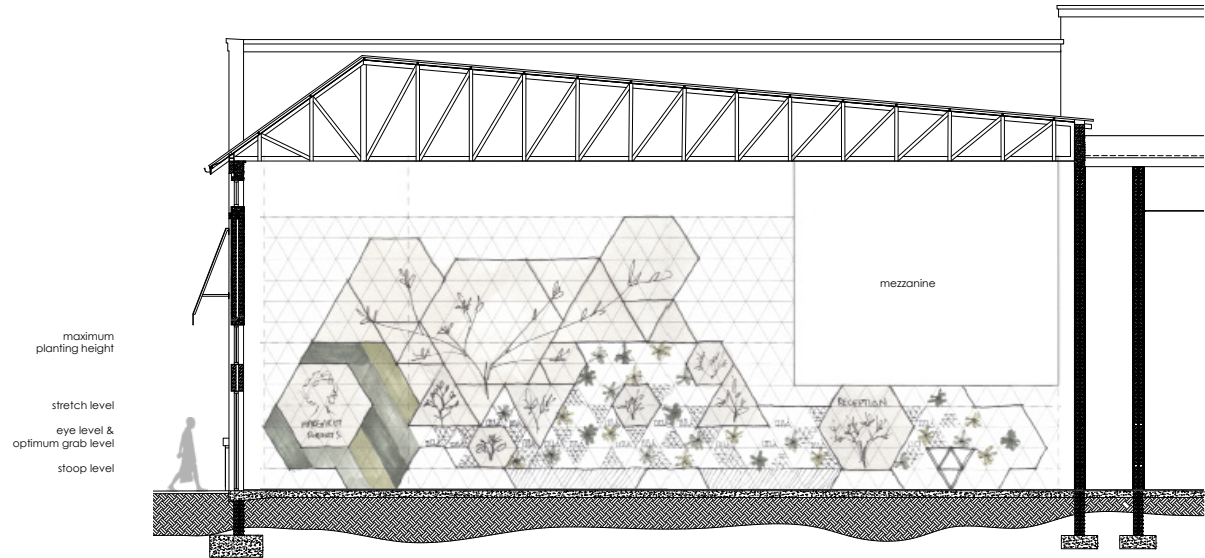


Figure 6.8. Triangulated vertical display configuration 1 (Author, 2016)

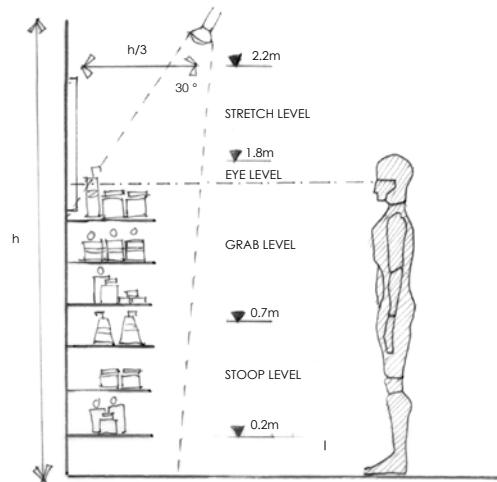


Figure 6.7. Vertical display ergonomics (Author, 2016) compare with (Panero & Zenik, 1979)

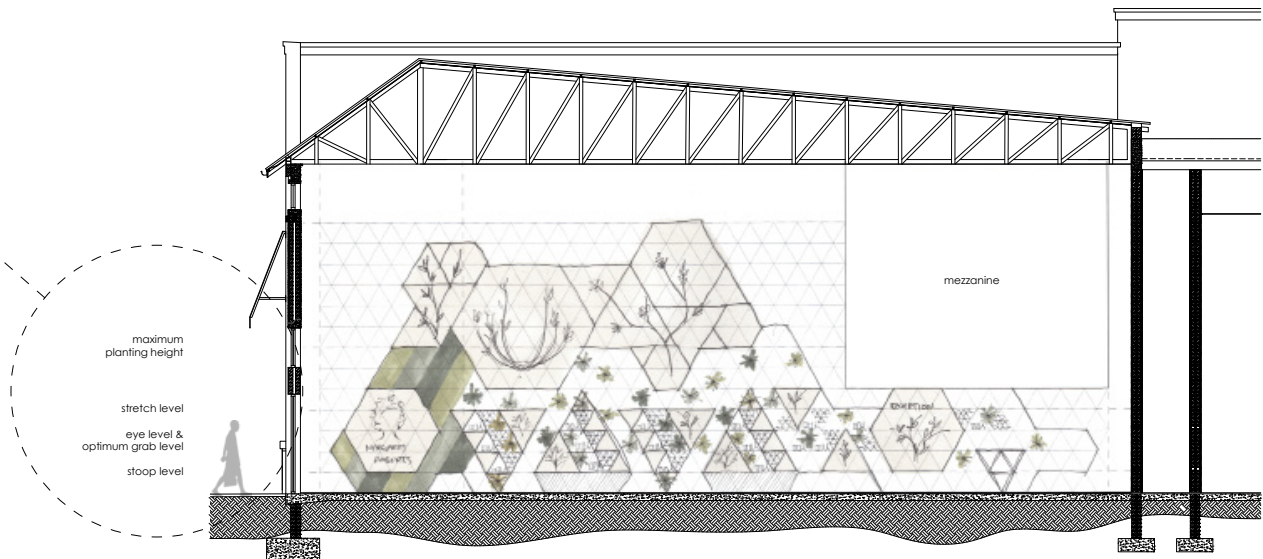


Figure 6.9. Triangulated vertical display configuration 2 (Author, 2016)



Figure 6.10. 3D visualisation of display system (Author, 2016).

Precedent Study : Deconstructable Joinery

Keystones Furniture

By *Minale-Maeda*

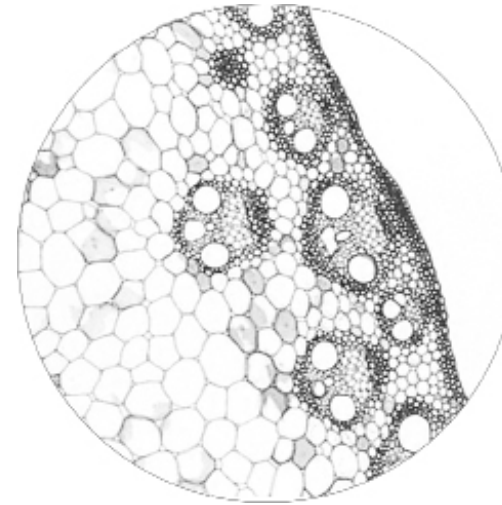
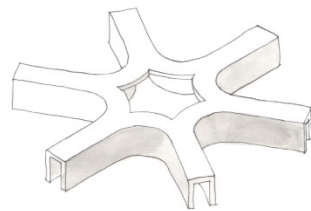
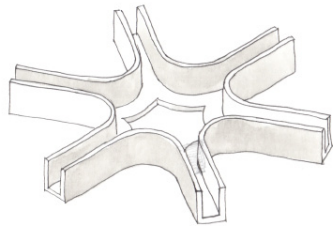
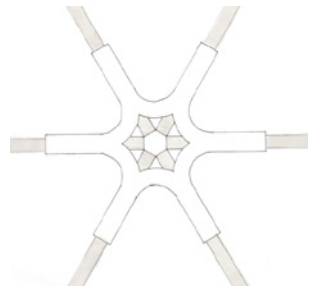
Dutch design studio Minale-Madae have created a series of furniture pieces that makes use of 3D printed connectors as an alternative to traditional joinery methods. These 3D printed connectors are designed to connect multiple ply wood components, which are assembled together to create the furniture pieces. The 3D printing technology allows the joints to be printed with minimal material and creates a joinery system that favours design for disassembly and adaptability (Homeli, 2016).



Figure 6.11. 3D Printed joinery by Minale-Madae (Homeli, 2016)

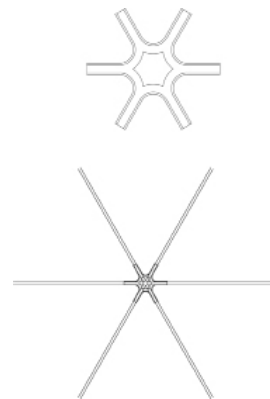
Design for Adaptability: Deconstructable Joinery

The 3D printed joinery designed by Minale-Madae (Homeli, 2016) inspired the design of joinery for the triangulated display system that allows for adaptability through deconstruction and disassembly. The structure of the joints mimics the material dispersal between the cellular structures of the lavender plant.

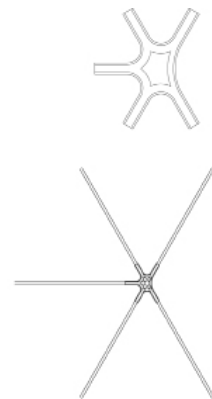


5 DIFFERENT JOINT COMPONENTS

Five different joint components have been designed in order to make provision for various design configurations of the display system within the triangulated grid structure.



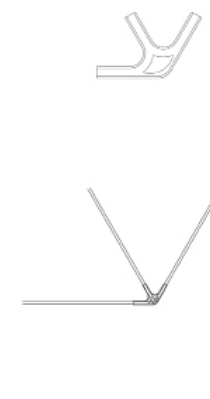
6 point joint



5 point joint



4 point joint



3 point joint



2 point joint

Figure 6.12. Joinery design (Author, 2016)

Figure 6.13. 5 Different joinery components (Author, 2016)



Precedent Study : Triangulated Ceiling Installation

Resonant Chambers

University of Michigan

The Resonant Chambers is an origami-inspired interior envelope system used to transform the acoustic qualities of a space. The triangular tessellated surface can be adjusted and configured to influence acoustic properties such as ‘reverberation time, absorption coefficient, directional amplification etc’ (Furuto, 2012).

This precedent study shows how triangulated structures provide various design applications within an interior space.



Figure 6.14. Resonant Chambers (Furuto, 2012).

Triangulated Membrane Design

The design of the resonant chambers inspired the creation of a tessellated membrane that resembles the softness and fluidity of human skin, which can be used as a ceiling installation in the design for Margaret Roberts’ skincare servicescape. The membrane was created through folding and ironing of triangulated creases to create a rigid yet fluid structure.

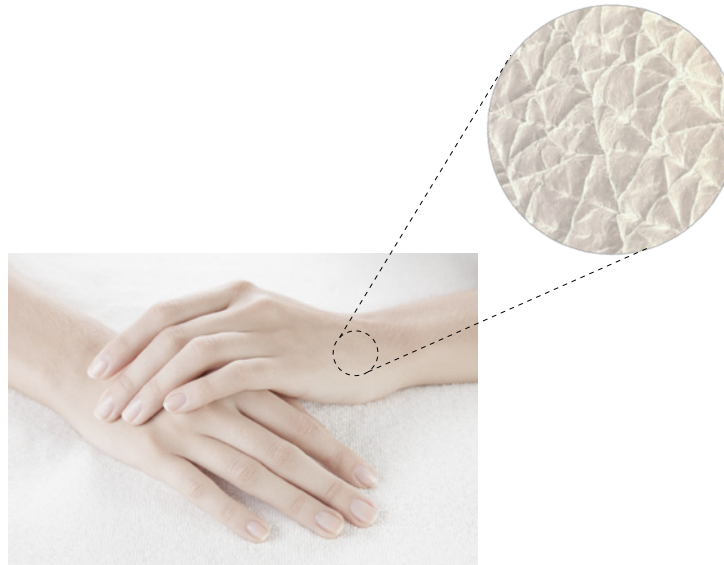


Figure 6.15. Human Skin cell structure (Author, 2016).



Figure 6.16. Triangulated membrane (Author, 2016).



Precedent Study : Triangulated Packaging Design

SHIZEN Packaging

By In-Young Bae

The SHIZEN packaging design; inspired by the principle of Japanese gardens - “creating miniature idealized landscapes”, showcases the clever use of triangulation. The triangular shape of the packaging allows 5 separate boxes to be stacked together to create one unified package (Lin, 2014).



Figure 6.17. SHIZEN Packaging (Lin, 2014).

Concept Development of Packaging Design

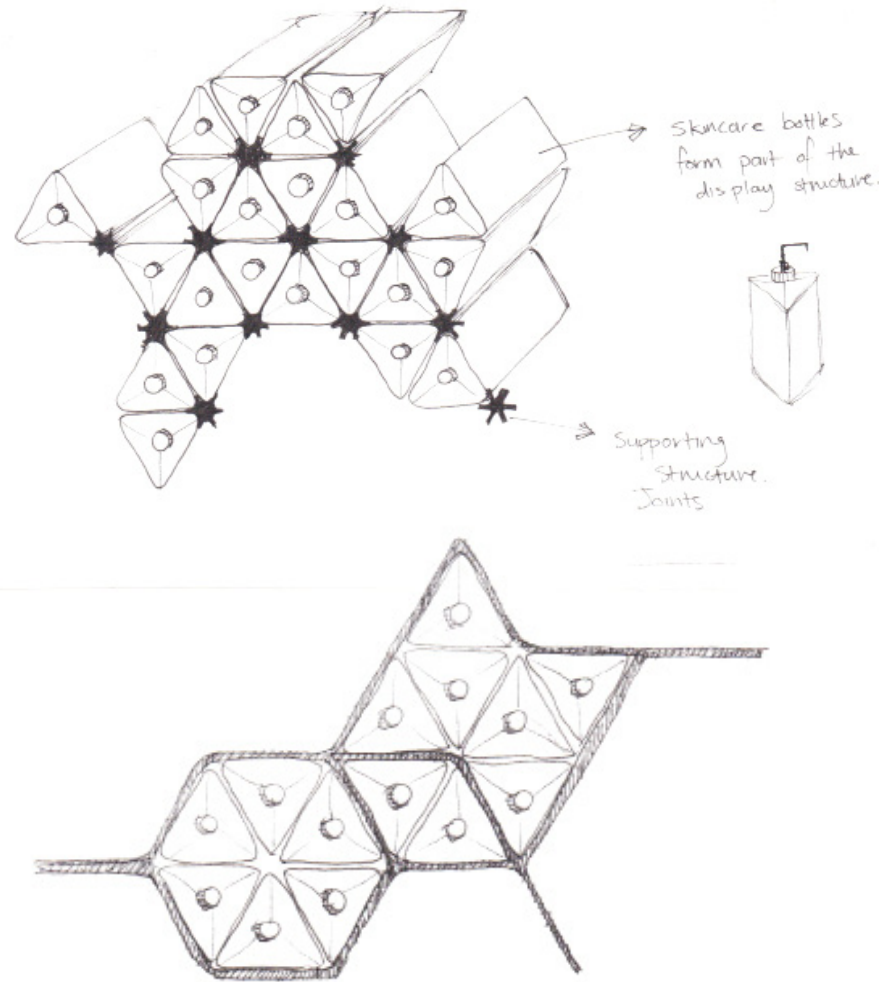
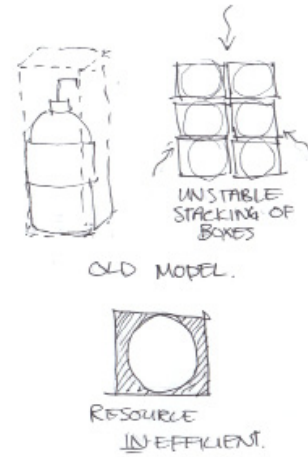


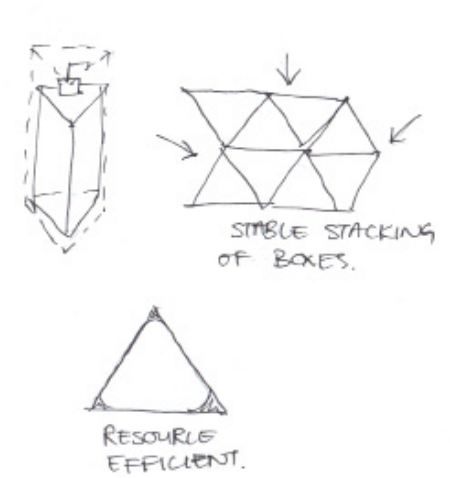
Figure 6.18. Triangulated packaging design (Author, 2016).

SQUARE PACKAGING



V.S.

TRIANGULAR PACKAGING



FRACTALS OF PACKAGING

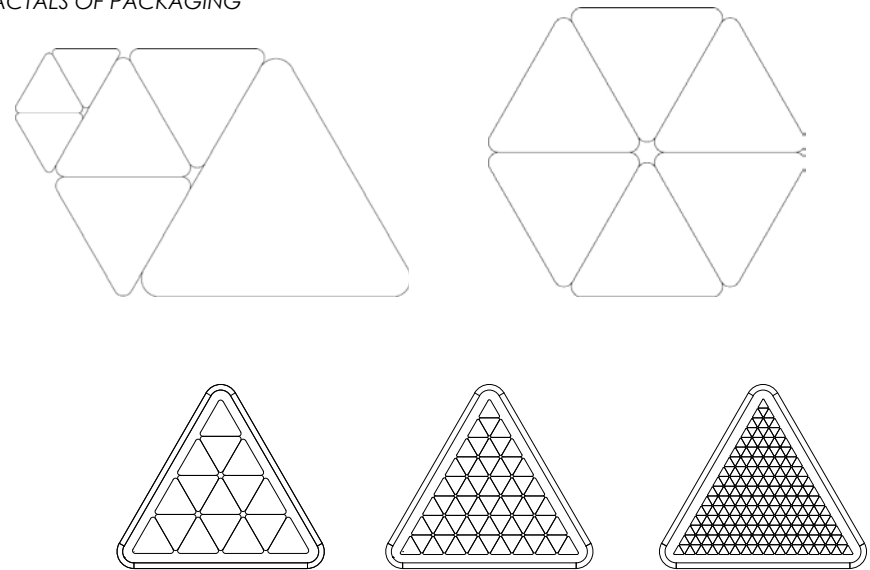


Figure 6.19. Triangulated packaging design (Author, 2016).

Packaging Die Lines

ITERATION 1

The first iteration of packaging design proved to create a lot of waste in the form of off-cuts and did not provide any support in the bottom of the packaging.

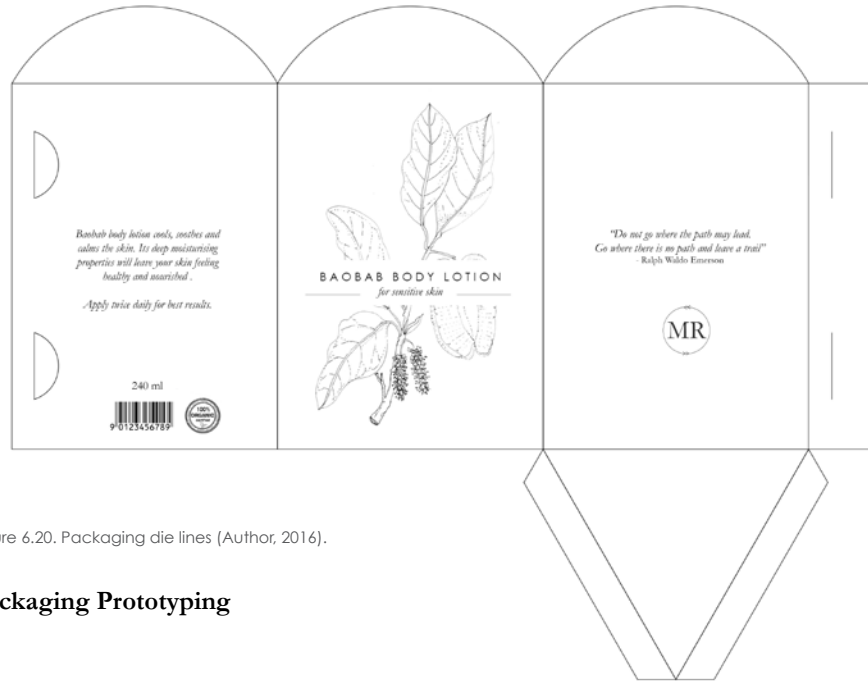


Figure 6.20. Packaging die lines (Author, 2016).

Packaging Prototyping

ITERATION 2

The second iteration aimed to use the 'off-cuts' to create reinforcement for the base of the packaging.

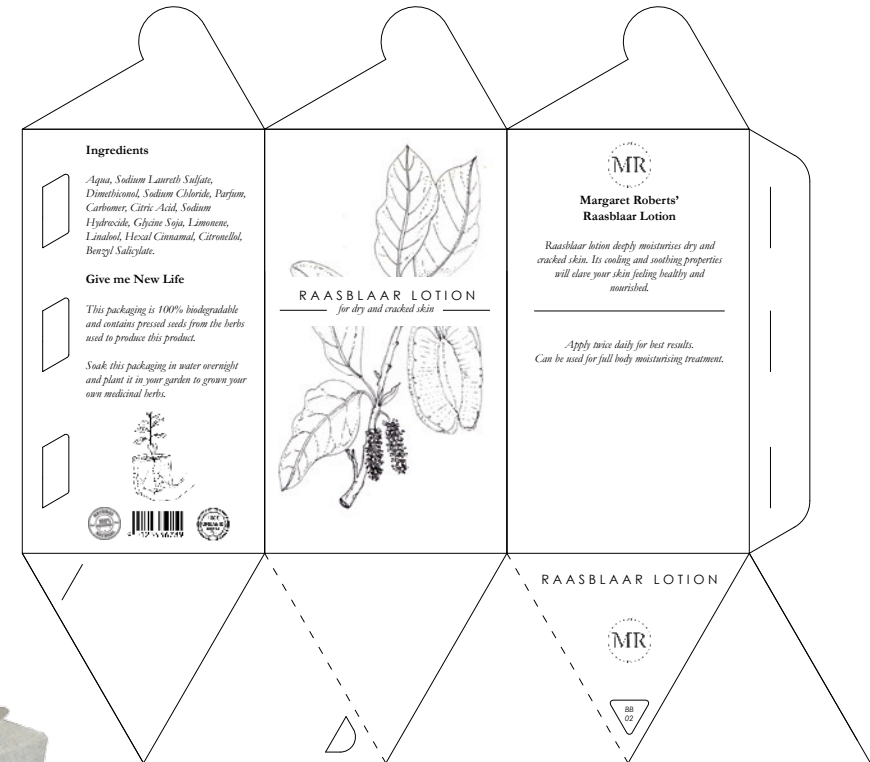


Figure 6.21. Product packaging design (Author, 2016).



Figure 6.22. Product label design (Author, 2016).

6.1.2 WASTE MANAGEMENT THROUGH EMULATION OF BIOMIMETIC SYSTEMS

Using Waste as a Resource

McDonough and Braungart's theory (2002) on cradle-to-cradle design discussed in Chapter 2 inspired the creation of a closed-loop model that emulates nature's ecosystems.

The design of the closed loop model is based around the waste produced as a byproduct of the essential oil distillation process carried out to manufacture Margaret Roberts' skincare products (see Chapter 3). It was established that the distillation process had a very low yield of 0.1% and as a result produced a large volume of waste in the form of organic lavender straw. An opportunity was recognized to create a biological metabolism (McDonough & Braungart, 2012) which recycles the lavender straw and uses it as a resource for developing biodegradable packaging and organic fibre composite boards for the display system.



Lavender Straw



Organic Fiber Composite Board



Natural paper for biodegradable packaging

Figure 6.23. Lavender straw to create fiber composite boards and biodegradable packaging material (Author, 2016).

Precedent Study : Compostable Packaging

Biodegradable Food Bowl

By Michal Marko

Michal Marko's vision for the design of his Biodegradable Food Bowl was to create an alternative packaging material with minimum impact on the environment. The packaging contains small seeds underneath the label which can be planted within the packaging in order to grow your own herbs (DesignandPaper, 2013).



Figure 6.24 Biodegradable Food Packaging (DesignandPaper, 2013)

Existing Organic Fiber Composites

Coconut Fiber Composite



Figure 6.25. Coconut fiber composite (Sharpe, 2013)

Bamboo Fiber Composite



Figure 6.26. Bamboo fiber composite column (Hartford, 2012)

6.1.2.1 Closed-Loop System Design

- > Lavender plant is harvested to produce essential oils for Margaret Roberts' skincare products
- > The organic waste (lavender straw) is collected and processed to produce formaldehyde-free biodegradable packaging and organic composite boards for display system (containing lavender seeds)
- > The skincare products in biodegradable packaging is purchased by consumers
- > Biodegradable packaging (containing pressed lavender seeds) can be buried in soil, which will germinate the pressed seeds and allow the growth of a new lavender plant
- > Once at the end of their lifecycle, the organic fiber composite boards used for the display system will be broken down and used as a composting material to support the growth of lavender crops
- > The lavender crops will then be harvested for essential oil production purposes

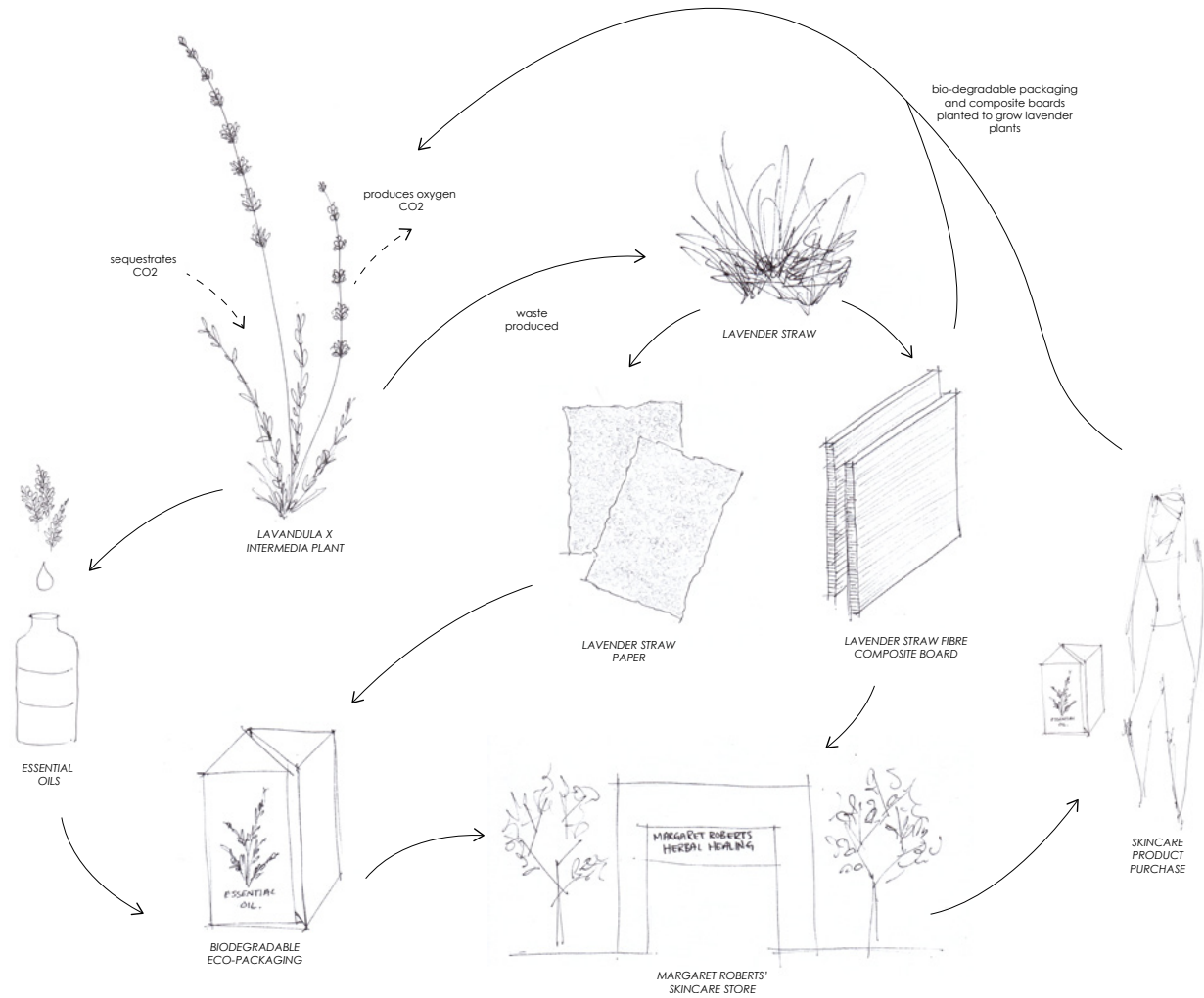


Figure 6.27. Closed-loop system design (Author, 2016).



Making of Lavender Fiber Paper

Part of the conceptual development of packaging design involved the exploration of using lavender straw to create an organic lavender fiber paper. This process was carried out using no binding agents and simply relied on the natural composition of the lavender fibers to create a bond strong enough to form a paper-like material.

The process of making the lavender fiber paper is as follows:

STEP 1:

Harvest fresh lavender and cut into small pieces

STEP 2:

Boil lavender and extract lavender oils through distillation process

STEP 3:

Blend leftover plant material (waste) and water to form a pulp like consistency

STEP 4:

Rinse and strain lavender pulp to remove impurities

STEP 5:

Strain lavender pulp over a fine mesh that is framed according to the desired paper size and leave in a cool dry place to dry slowly

STEP 6:

Gently remove lavender sheet from mesh and frame

STEP 7:

Lavender paper making process is complete.

The resulting lavender fiber paper is surprisingly rigid but will not be strong enough to create packaging without a binding agent. Therefore it is recommended to use a protein glue and NOT formaldehyde as a binding agent for creating the packaging material from lavender fibers.



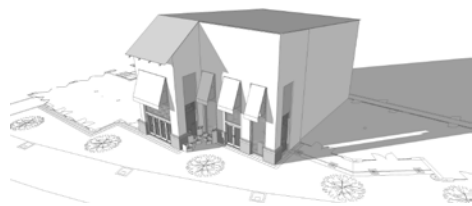
Figure 6.29. Lavender paper making process (Author, 2016).

6.1.3 ENERGY EFFICIENCY THROUGH EMULATION OF BIOMIMETIC PROCESSES

Shadow Study

A shadow study was carried out analyzing the movement of the sun during winter (June) and summer (December). The study showed that natural light does filter into the interior space through the large shopfront windows, and provides more exposure to sunlight in winter than in summer. It was also found that the natural light does not travel into the full-extended depth of the building, which is why provision for additional natural lighting/artificial lighting is required.

JUNE (Winter Solstice)



08:00



11:00



14:00



17:00

DECEMBER (Summer Solstice)



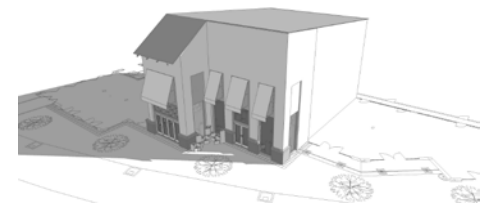
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17:00

Figure 6.30. Shadow study (Author, 2016).

Passive Systems

The existing shell of Shop 150 allows for the design of passive systems, which emulates nature's processes as discussed in Chapter 2.

PASSIVE VENTILATION

The design and layout of the interior space was strategized in order to create a cross ventilation and stack ventilation effect that would ultimately draw fresh air from outside into the interior space and pull hot air out through the roof ventilators. A sloped ceiling forms part of this strategy, which will direct the flow of air towards the highest point of the roof structure (where hot air will naturally accumulate) towards a roof ventilator that will exhaust the hot air.

SOLAR ENERGY

Provision has been made for the installation of a photovoltaic solar panel, which will harvest energy from the sun to be used to supply power for interior activities..

DAYLIGHT

The design strategy also makes provision for solar tubes to be installed on the roof that will channel natural lighting into the interior space. These solar tubes reflect infrared radiation from the sun therefore it does not transmit any heat through the tubes. By introducing these solar tubes, the interior benefits from the advantages of natural light (as discussed in Chapter 2) and will reduce the quantity of artificial lighting required. It is important for the design of the suspended ceiling installation to be fitted in such a way as not to obstruct the natural light from entering the interior space.

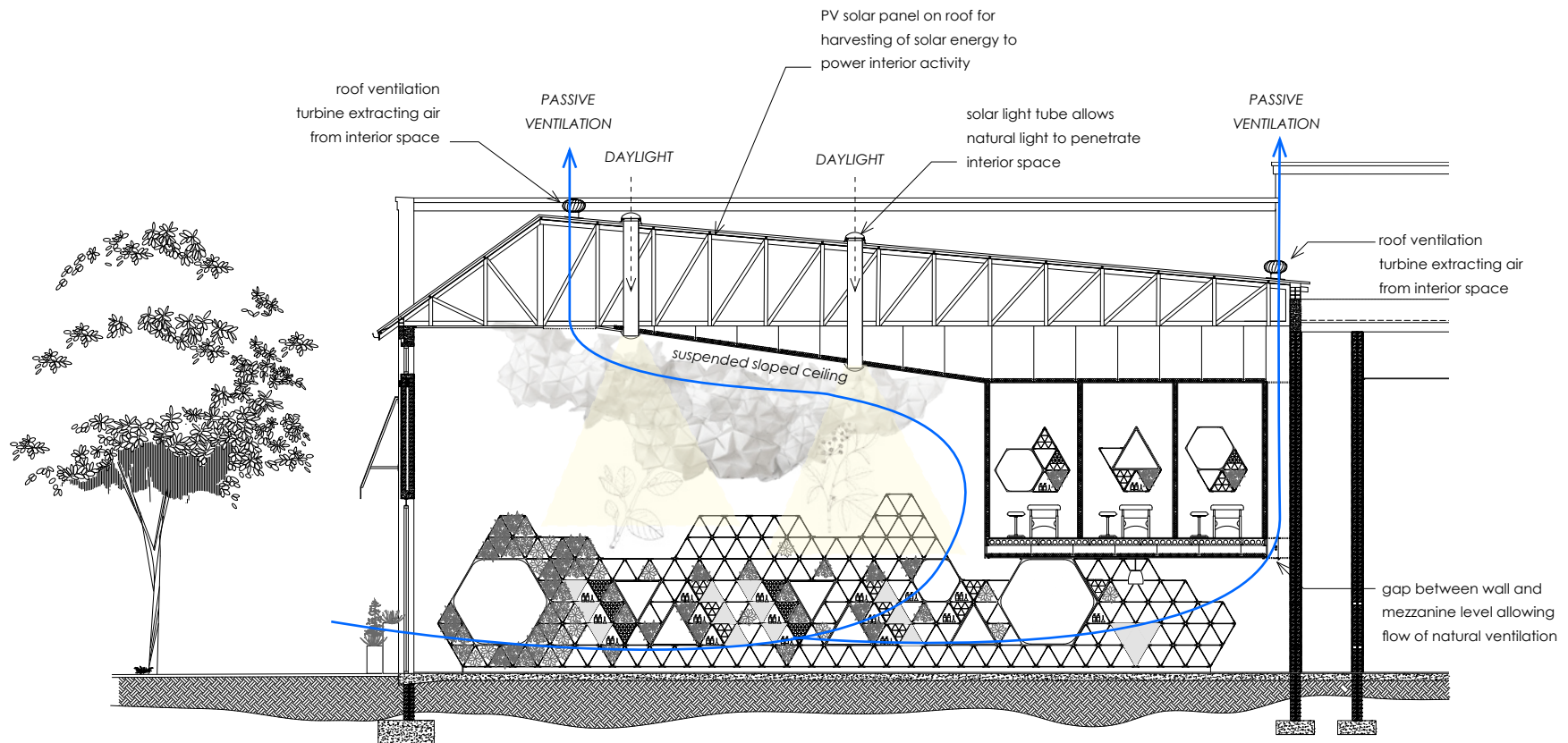


Figure 6.31. Diagram showing passive systems design (Author, 2016).

6.2 BIOPHILIC DESIGN APPLICATION

6.2.1 EXPERIENTIAL DESIGN STRATEGY OUTLINE

As previously discussed in Chapter 5, the experiential design strategy is influenced by the Biophilic design patterns (identified in Chapter 2). The design of Margaret Roberts' servicescape applies these patterns throughout the different retail zones with the aim of creating a rejuvenating and healing experience that mimics the atmospheric qualities of nature.

The application of Biophilic patterns in each of the different zones is summarized in Table 6.1 and will discuss a selection of zones in further depth throughout this chapter. Zone 12 (storage) is excluded from the experiential design strategy since it is not accessible to the public and does not contribute to the overall experience.

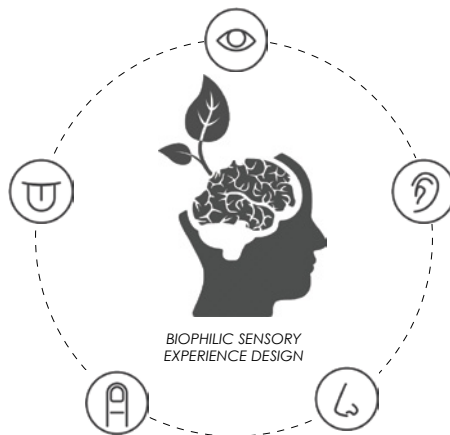
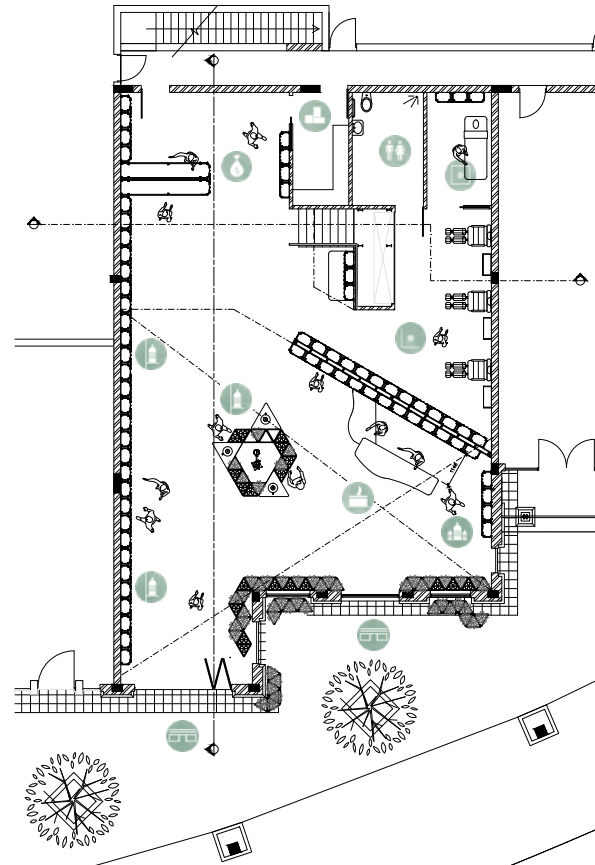


Figure 6.32. Biophilic sensory experience (Author, 2016).

GROUND FLOOR PLAN



MEZZANINE PLAN

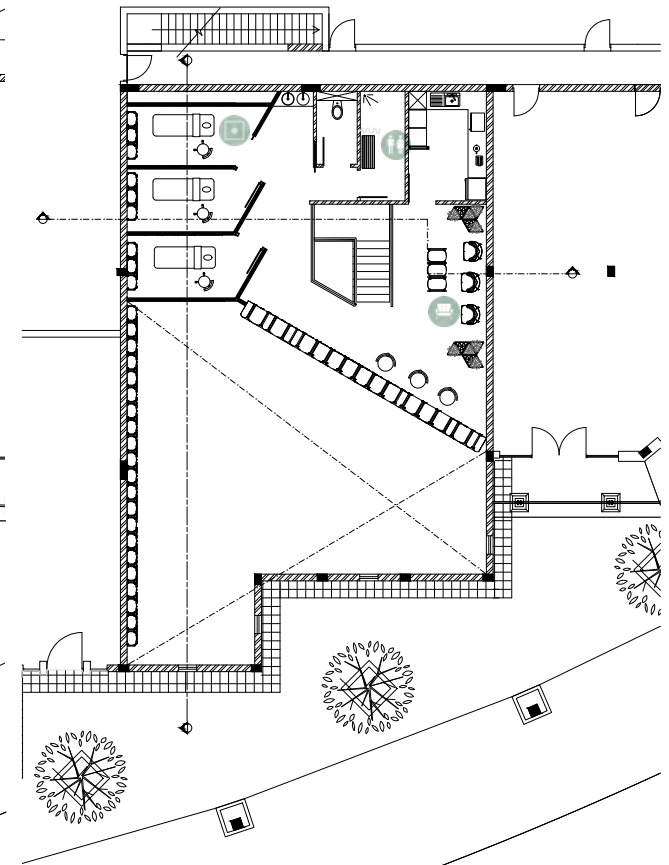


Figure 6.33. Diagram showing layout of retail zones for referral with Table 6.1 (Author, 2016).
















					
 ZONE 1: FACADE / ENTRANCE	<ul style="list-style-type: none"> > [P1] Trees and herbal plants outside entrance creates visual connection with nature > [P6] Natural light filtering into store 	<ul style="list-style-type: none"> > [P2] Rustling of leaves and birds chirping heard outside store creates calming atmosphere 	<ul style="list-style-type: none"> > [P2] Plants displayed outside store can be touched creating a tactile connection with nature > [P4] Natural airflow outside store 	<ul style="list-style-type: none"> > [P2] Plants outside store give off fresh scents 	N/A
 ZONE 2: VERTICAL DISPLAY	<ul style="list-style-type: none"> > [P1] Plants within display creates visual connection with nature > [P6] Natural light illuminating display > [P8] Display resembles biomorphic forms and patterns > [P10] Complexity and order of display creates visual interest 	<ul style="list-style-type: none"> > [P2] Close proximity to exterior therefore allowing auditory connection with nature outside store > [P2] Soothing background music with nature sounds played in retail section creating a relaxing shopping experience 	<ul style="list-style-type: none"> > [P2] Plants within display can be touched creating a tactile connection with nature > [P4] Natural airflow through passive ventilation system 	<ul style="list-style-type: none"> > [P2] Plants within vertical display give off fresh scents > [P2] Scent from essential oil distillation inside store diffuses throughout the retail section creating an olfactory connection with nature 	N/A
 ZONE 3: FLOOR DISPLAY	<ul style="list-style-type: none"> > [P10] Complexity and order of display creates visual interest > [P1] Plants within display creates visual connection with nature > [P8] Display resembles biomorphic forms and patterns 	<ul style="list-style-type: none"> > [P2] Close proximity to exterior therefore allowing auditory connection with nature outside store > [P2] Soothing background music with nature sounds played in retail section creating a relaxing shopping experience 	<ul style="list-style-type: none"> > [P2] Plants within display can be touched creating a tactile connection with nature > [P4] Natural airflow through passive ventilation system > [P9] Natural materials creates material connection with nature 	<ul style="list-style-type: none"> > [P2] Plants within floor display give off fresh scents > [P2] Scent from essential oil distillation inside store diffuses throughout the retail section creating an olfactory connection with nature 	N/A
 ZONE 3: PRODUCT TESTING	<ul style="list-style-type: none"> > [P1] Plants within display creates visual connection with nature > [P8] Display resembles biomorphic forms and patterns 	<ul style="list-style-type: none"> > [P2] Soothing background music with nature sounds played in retail section creating a relaxing shopping experience 	<ul style="list-style-type: none"> > [P4] Natural airflow through passive ventilation system > [P9] Natural materials creates material connection with nature 	<ul style="list-style-type: none"> > [P2] Scent from essential oil distillation inside store diffuses throughout the retail section creating an olfactory connection with nature 	N/A
 ZONE 5: SKIN BAR	<ul style="list-style-type: none"> > [P8] Counter design resembles biomorphic forms and patterns > [P10] Complexity and order of display behind skin bar creates visual interest 	<ul style="list-style-type: none"> > [P2] Soothing background music with nature sounds played in retail section creating a relaxing shopping experience 	<ul style="list-style-type: none"> > [P4] Natural airflow through passive ventilation system > [P9] Natural materials creates material connection with nature 	<ul style="list-style-type: none"> > [P2] Plants within POS display give off fresh scents > [P2] Scent from essential oil distillation inside store diffuses throughout the retail section creating an olfactory connection with nature 	N/A
 ZONE 6: POS / RECEPTION	<ul style="list-style-type: none"> > [P1] Plants within POS display creates visual connection with nature > [P8] Counter design resembles biomorphic forms and patterns > [P10] Complexity and order of display next to POS creates visual interest 	<ul style="list-style-type: none"> > [P2] Soothing background music with nature sounds played in retail section creating a relaxing shopping experience 	<ul style="list-style-type: none"> > [P2] Plants within display can be touched creating a tactile connection with nature > [P4] Natural airflow through passive ventilation system > [P9] Natural materials creates material connection with nature 	<ul style="list-style-type: none"> > [P2] Scent from essential oil distillation inside store diffuses throughout the retail section creating an olfactory connection with nature 	N/A
 ZONE 7: WAITING AREA	<ul style="list-style-type: none"> > [P1] Pot plants in waiting area creates visual connection with nature > [P6] Natural light illuminating seating area 	<ul style="list-style-type: none"> > [P2] Soothing background music with nature sounds played in waiting area creating a relaxing shopping experience 	<ul style="list-style-type: none"> > [P2] Plants within display can be touched creating a tactile connection with nature > [P9] Natural materials creates material connection with nature 	<ul style="list-style-type: none"> > [P2] Pot plants in waiting area give off fresh scents 	<ul style="list-style-type: none"> > [P2] Non-visual connection with nature (gustatory) created by serving clients with food and drinks with natural and fresh ingredients
 ZONE 8: SEMI-PRIVATE TREATMENT	<ul style="list-style-type: none"> > [P1] Vertical plants creates visual connection with nature > [P8] Display resembles biomorphic forms and patterns 	<ul style="list-style-type: none"> > [P2] Therapeutic nature sounds played in semi-private treatment area 	<ul style="list-style-type: none"> > [P2] Plants within display can be touched creating a tactile connection with nature > [P9] Natural materials creates material connection with nature 	<ul style="list-style-type: none"> > [P2] Plants within vertical display give off fresh scents 	N/A
 ZONE 9: PRIVATE TREATMENT	<ul style="list-style-type: none"> > [P1] Vertical plants creates visual connection with nature > [P8] Display resembles biomorphic forms and patterns 	<ul style="list-style-type: none"> > [P2] Therapeutic nature sounds played in private treatment area 	<ul style="list-style-type: none"> > [P2] Plants within display can be touched creating a tactile connection with nature > [P9] Natural materials creates material connection with nature 	<ul style="list-style-type: none"> > [P2] Plants within vertical display give off fresh scents 	N/A
 ZONE 11: ABLUTION	<ul style="list-style-type: none"> > [P1] Pot plants to be used in ablution facilities to create visual connection with nature 	<ul style="list-style-type: none"> > [P2] Soothing background music with nature sounds played in bathroom/ changing facilities 	N/A	<ul style="list-style-type: none"> > [P2] Pot plants in ablution facilities to give off fresh scent to help mask unpleasant odours 	N/A

Table 6.1. Summary of biophilic patterns application towards experiential design (Author, 2016).



ZONE 01

Entrance / Facade

The design of the shopfront (Zone 1) is the starting point for the consumer experience and essentially aims to soften the threshold between the exterior and interior of the shop to make people feel comfortable to enter the space. Pot plants containing medicinal herbs associated with Margaret Roberts' skincare products are displayed outside the shopfront to create a visual, tactile and olfactory connection with nature. These pot plants filter into the entrance of the space, essentially blurring the lines between the exterior and interior of the shop.

Branding is included on the awnings that frame the window displays. Branding is also included within the window displays themselves, which provides a glimpse of the products provided in the store – hopefully just enough to catch attention and to entice customers to enter the store.

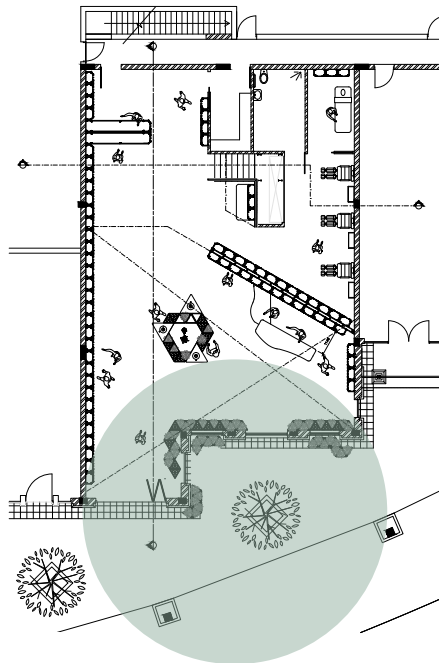


Figure 6.34. Diagram showing zoning of facade (Author, 2016).

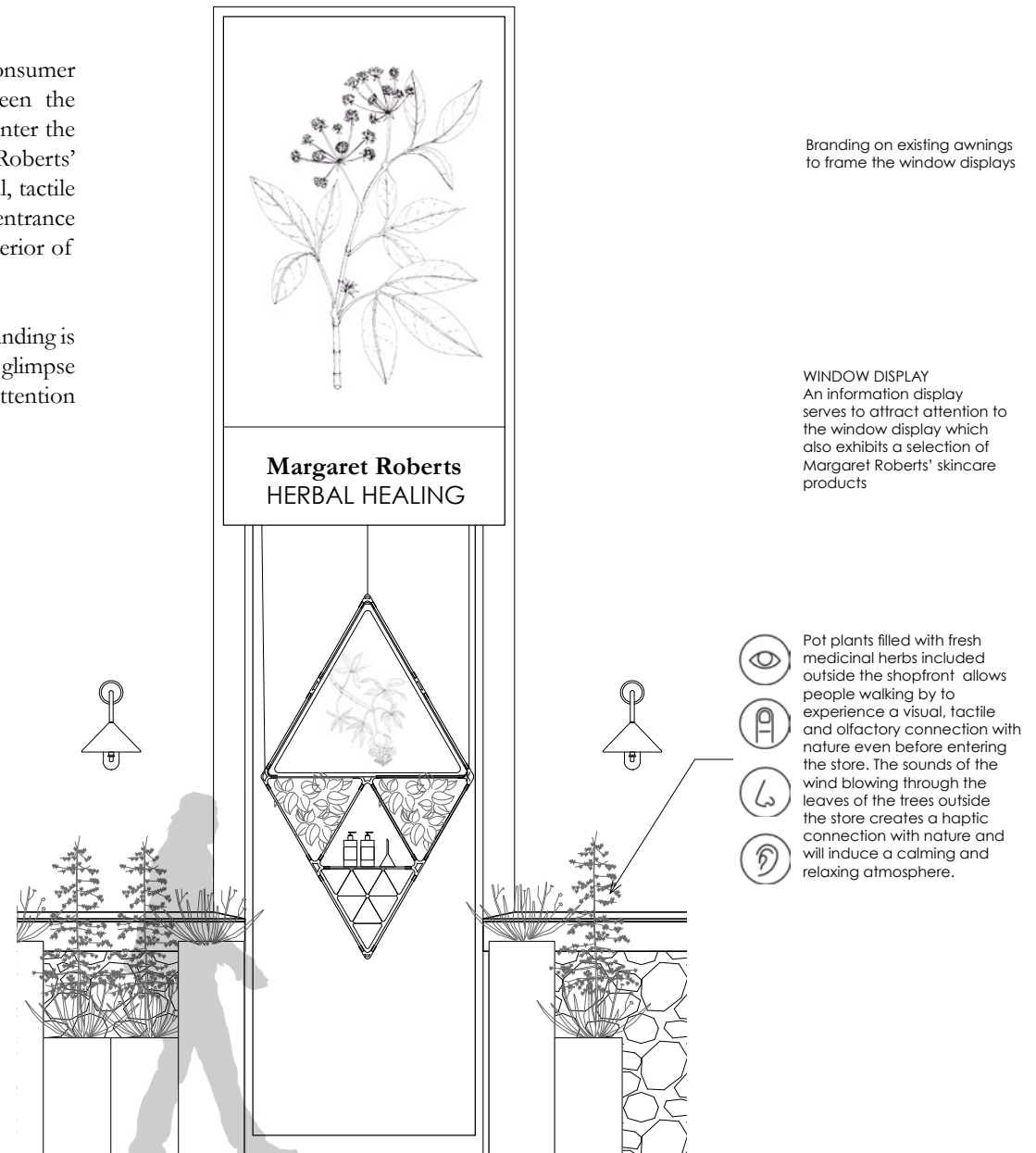


Figure 6.35. Window display design (Author, 2016).







ZONE 03

Floor Display

The design of the floor display showcases the essential oil distillation process, allowing clients to see the authentic nature behind the creation of Margaret Roberts' skincare products. Herbal plants and skincare products are displayed around the distillation process to encourage clients to "pick" skincare from the display - mimicking the process of picking medicinal herbs. The display also includes 3 'replenish stations' that allows clients to refill their empty skincare bottles with essential oils to promote recycling.

This zone contributes to the overall rejuvenation experience within the retail space through creating a visual, tactile and olfactory connection with nature.

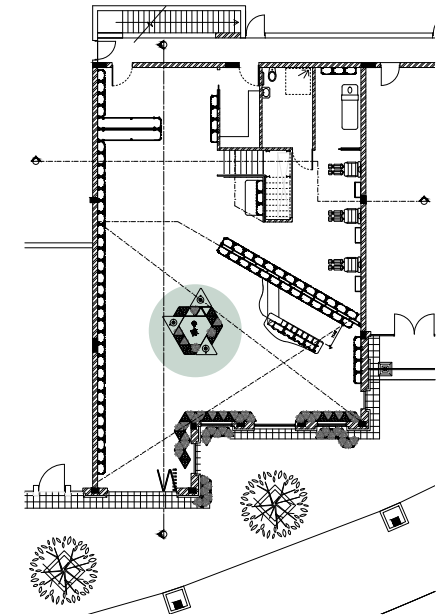


Figure 6.38. Diagram showing zoning of floor display area (Author, 2016).

Precedent Study : Laboratory Glassware (Aesop)

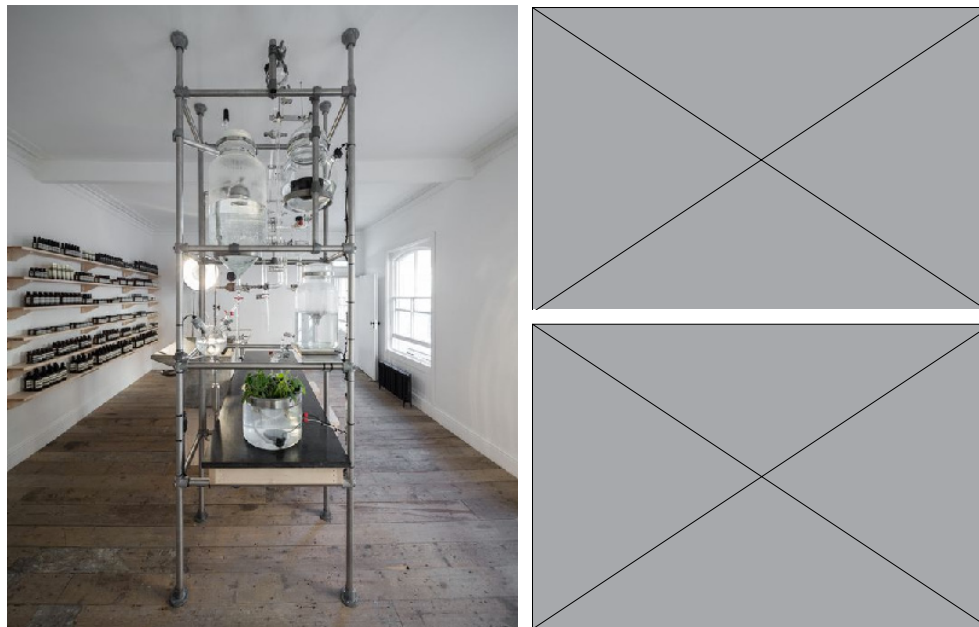


Figure 6.39. Precedent Study: Aesop laboratory glassware in store design (Aesop, 2016).

Aesop

Many of Aesop store designs include the use of laboratory glassware that carry out various functions within the interior space. For instance, custom made laboratory-inspired glassware has been used to create taps and water dispensers in Aesop stores, which creates a scientific association with the brand.

This precedent study shows how the use of laboratory glassware and equipment can be successfully used in the design of Margaret Roberts' skincare servicescape.





ZONE 05

Skin Bar

The Skin Bar is a designated area where clients can consult with skincare professionals regarding the product range best suited for their skin type. The design of this zone also relies on the same 'kit of parts' used to construct the vertical display system and therefore offers similar experiential qualities.

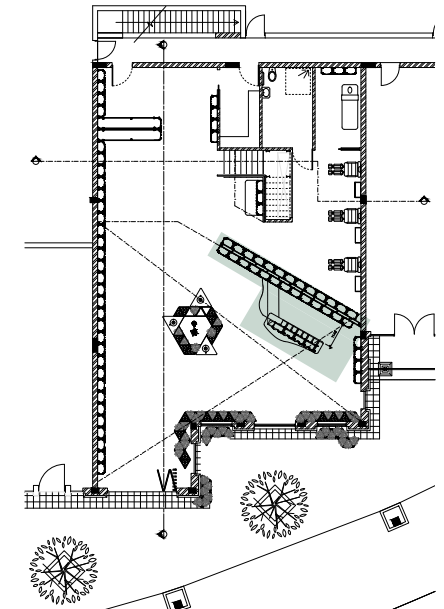
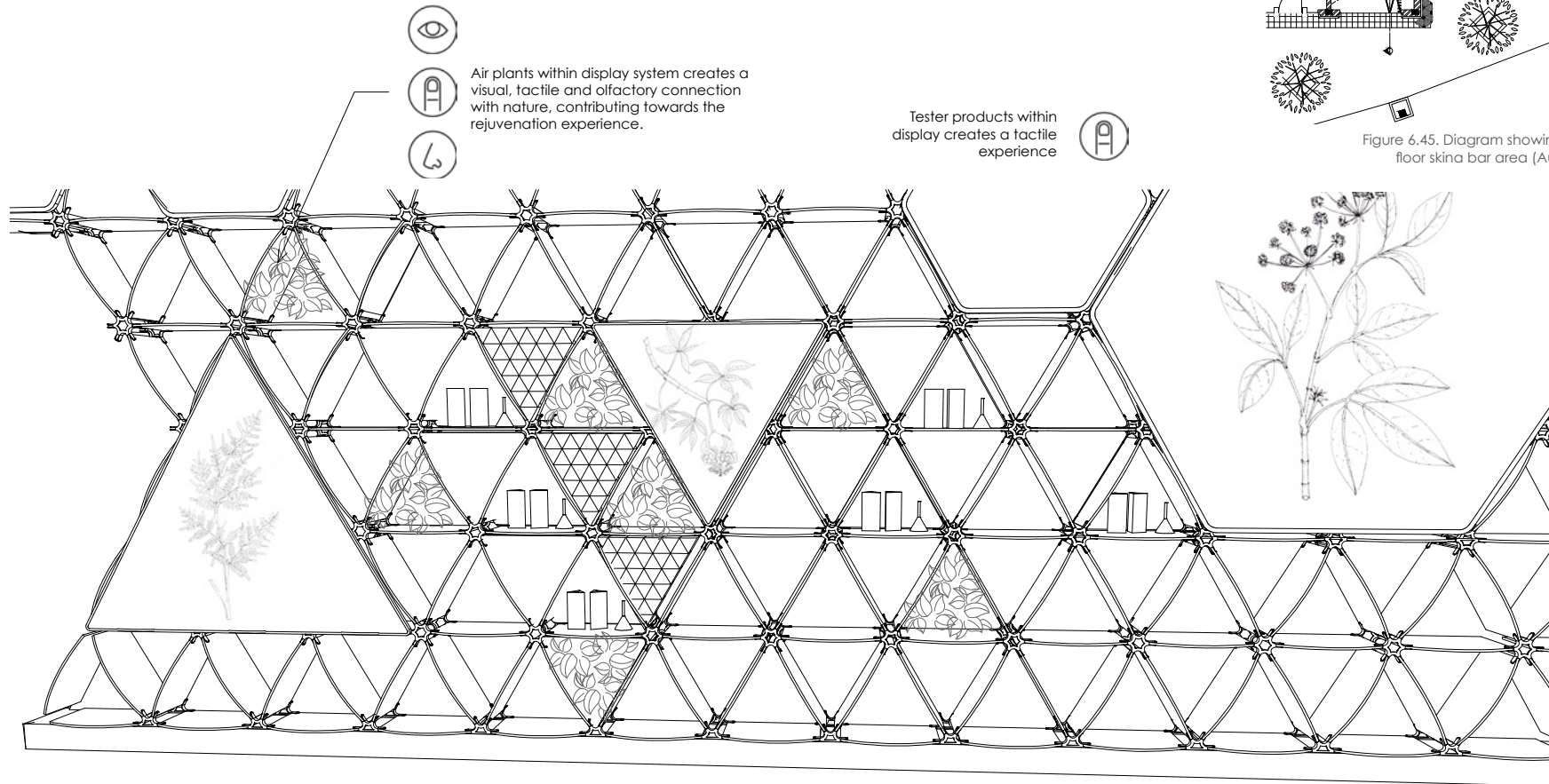
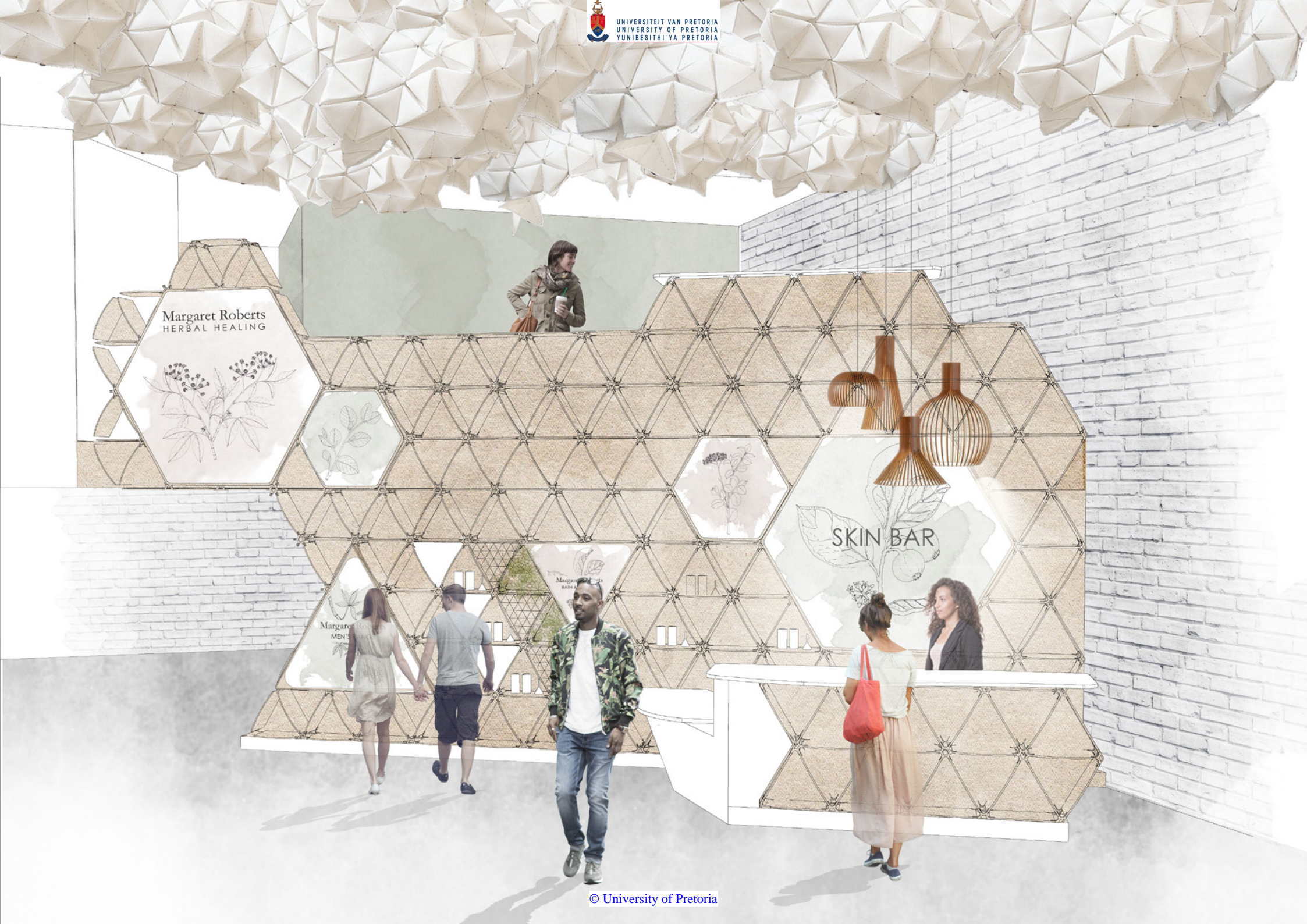


Figure 6.45. Diagram showing zoning of floor skina bar area (Author, 2016).

Figure 6.46. Call out of vertical display design behind Skin Bar (Author, 2016).





ZONE 06

POS/ Reception Area

Zone 6 combines the Point of Sale and Reception area into one, and marks the end of the 'retail experience' and the beginning of the 'service experience' in Margaret Roberts servicescape. The point of sale/reception area was positioned near the back of the store to force customers to walk through the whole interior space before completing a purchase. The counter has been designed as an extrusion of the vertical display system to remain with the concept of one unified structure.

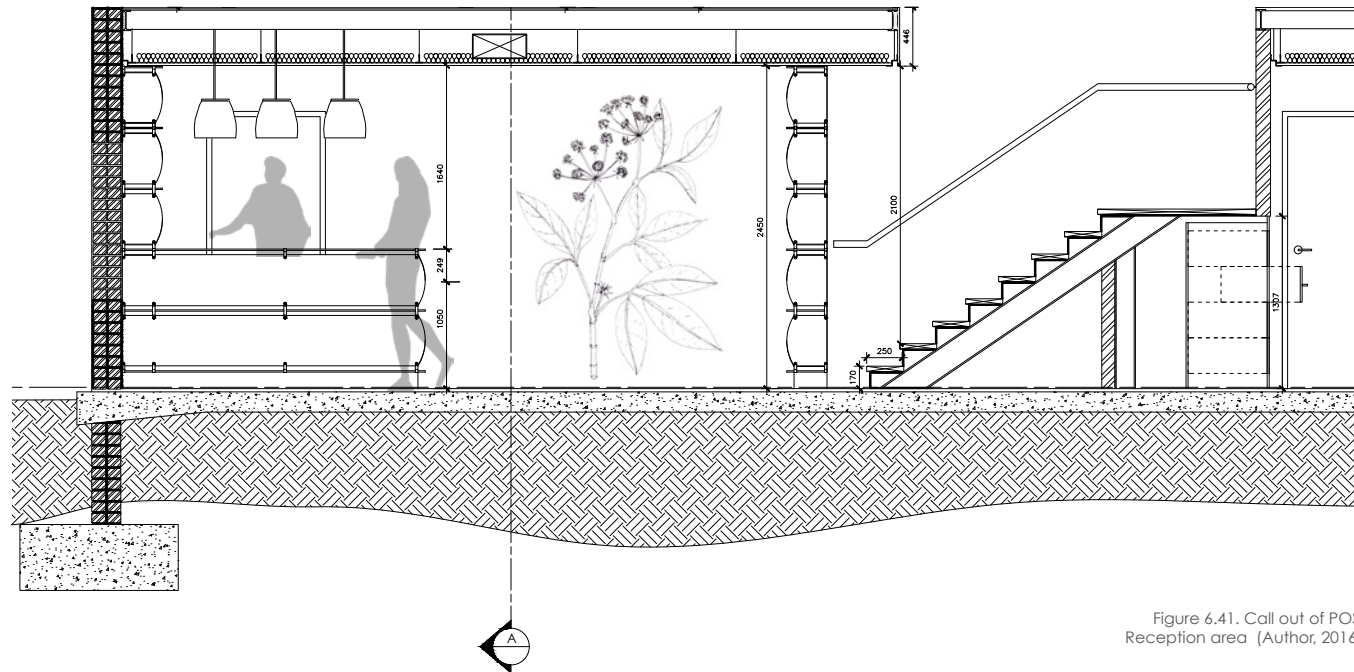


Figure 6.41. Call out of POS/ Reception area (Author, 2016).

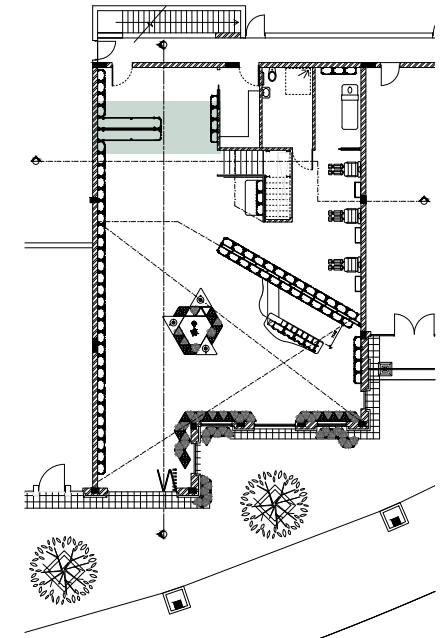


Figure 6.40. Diagram showing zoning of POS/Reception area (Author, 2016).



Margaret Roberts
HERBAL HEALING

PLEASE PAY HERE

EMERGENCY
EXIT

Margaret Roberts
TISSUE SALTS

6.3 SPATIAL LAYOUT DESIGN

6.3.1 FLOOR PLAN LAYOUT_ITERATION 1

Model building was used as a method for design exploration of spatial layouts. The initial spatial layout was governed by the dynamic lines and shapes to reflect the characteristics of a triangulated design; but later evolved to a much more simplified and structured spatial layout as seen in the final design.

It was important for the spatial configuration to consider the circulation through the space and to ensure access from the mezzanine is within close proximity to the existing fire escape located at the back of the site. Due to required access to the service alley, it was also necessary for the storage space and ablution facilities to be located near the back wall.

The design introduced a mezzanine structure into the rear end of the retail space to allocate a private area for treatment services.

The first iteration of spatial layout design did not prove to be an effective design solution since the retail space was not utilized to its best potential.

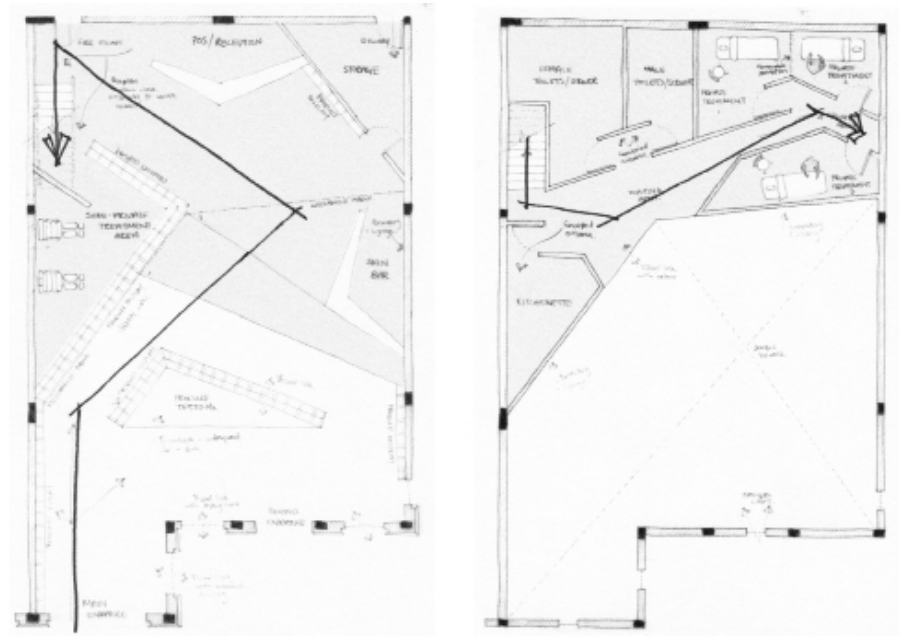


Figure 6.42. Diagram of circulation through space of Spatial Layout Iteration 1 (Author, 2016).



Figure 6.43. Spatial layout design iteration 1 (Author, 2016).

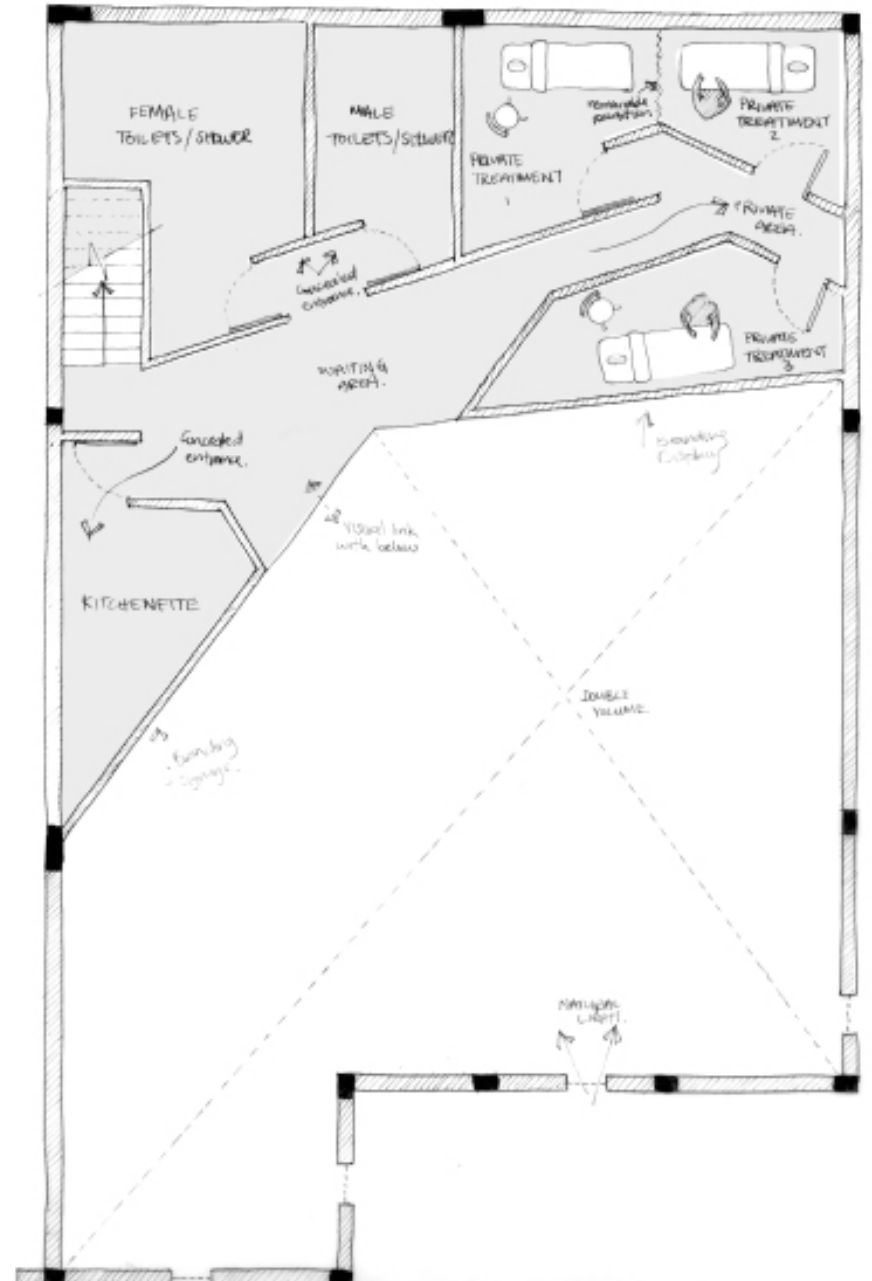
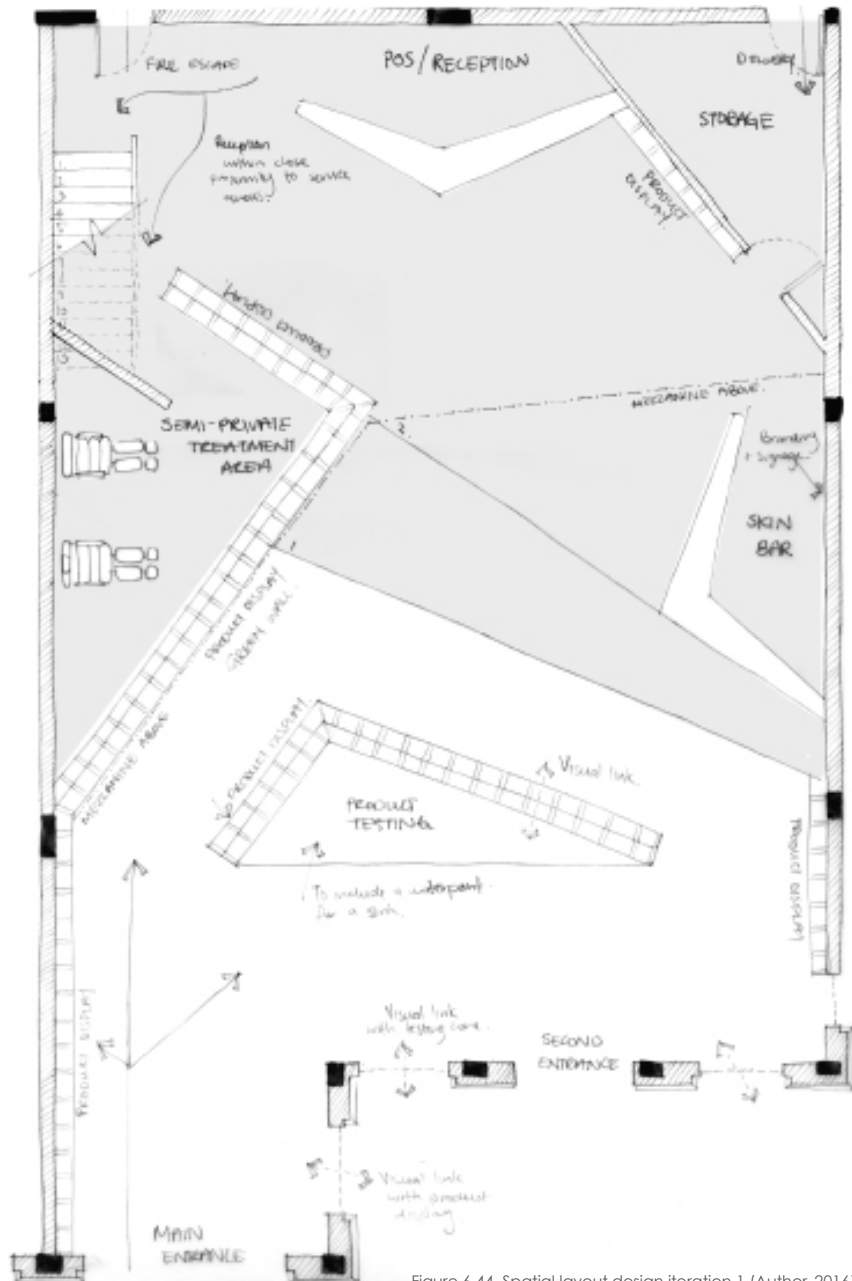


Figure 6.44. Spatial layout design iteration 1 (Author, 2016).

6.3.2 FLOOR PLAN LAYOUT _ ITERATION 2

The second iteration of spatial layouts also employed the use of dynamic lines and shapes to section off the zones and attempted to utilize the retail space more efficiently. However, the use of these dynamic lines in both the first and second iteration proved to be problematic and was therefore discarded and not applied in the final layout design.

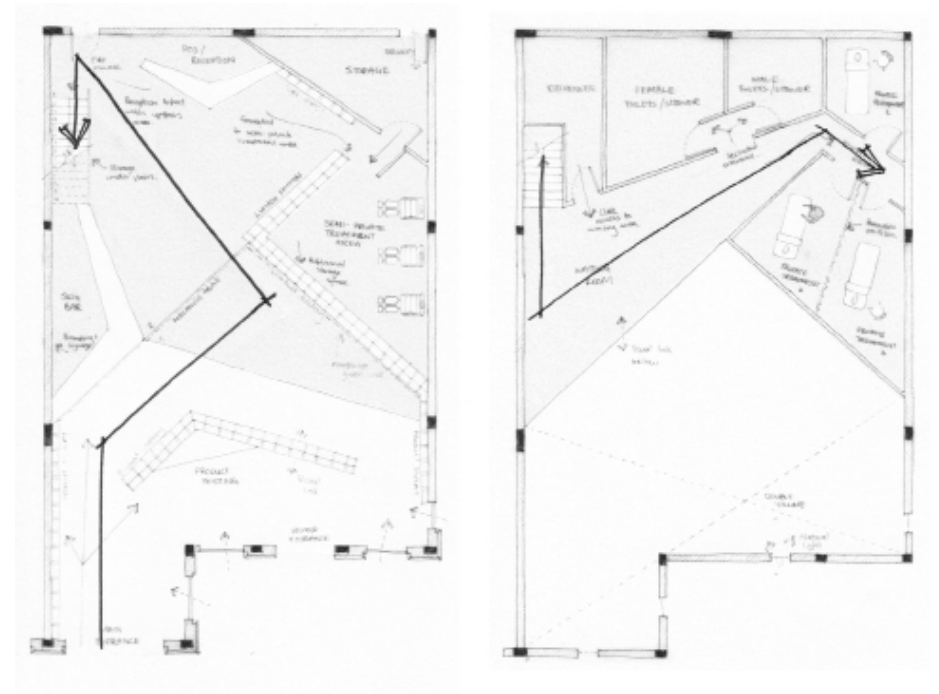


Figure 6.45. Spatial layout design iteration 2 (Author, 2016).

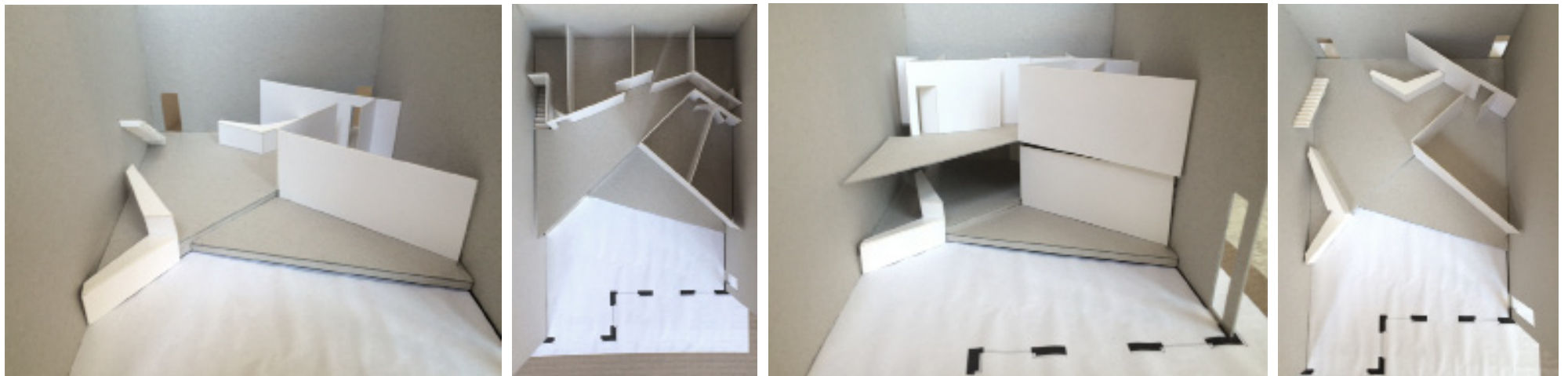


Figure 6.46. Spatial layout design iteration 2 (Author, 2016).

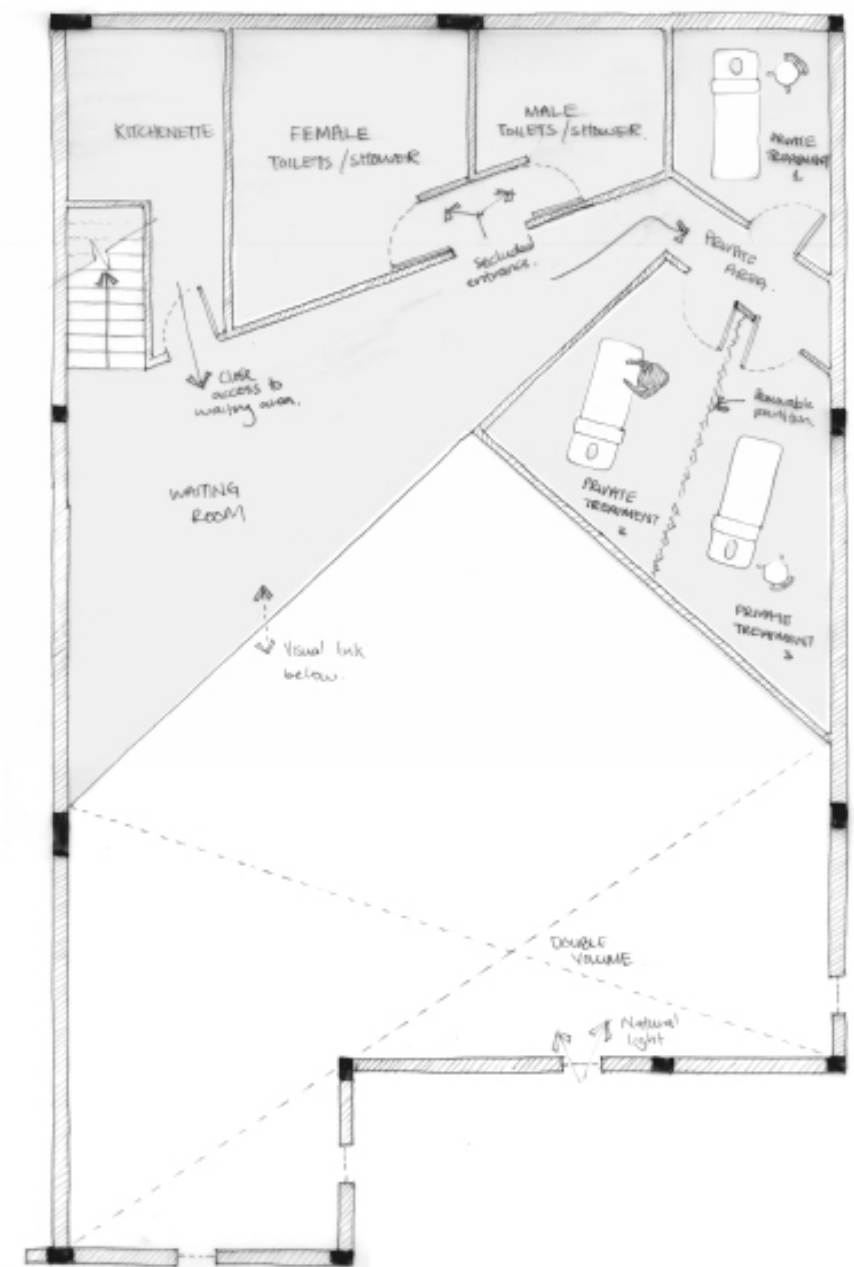
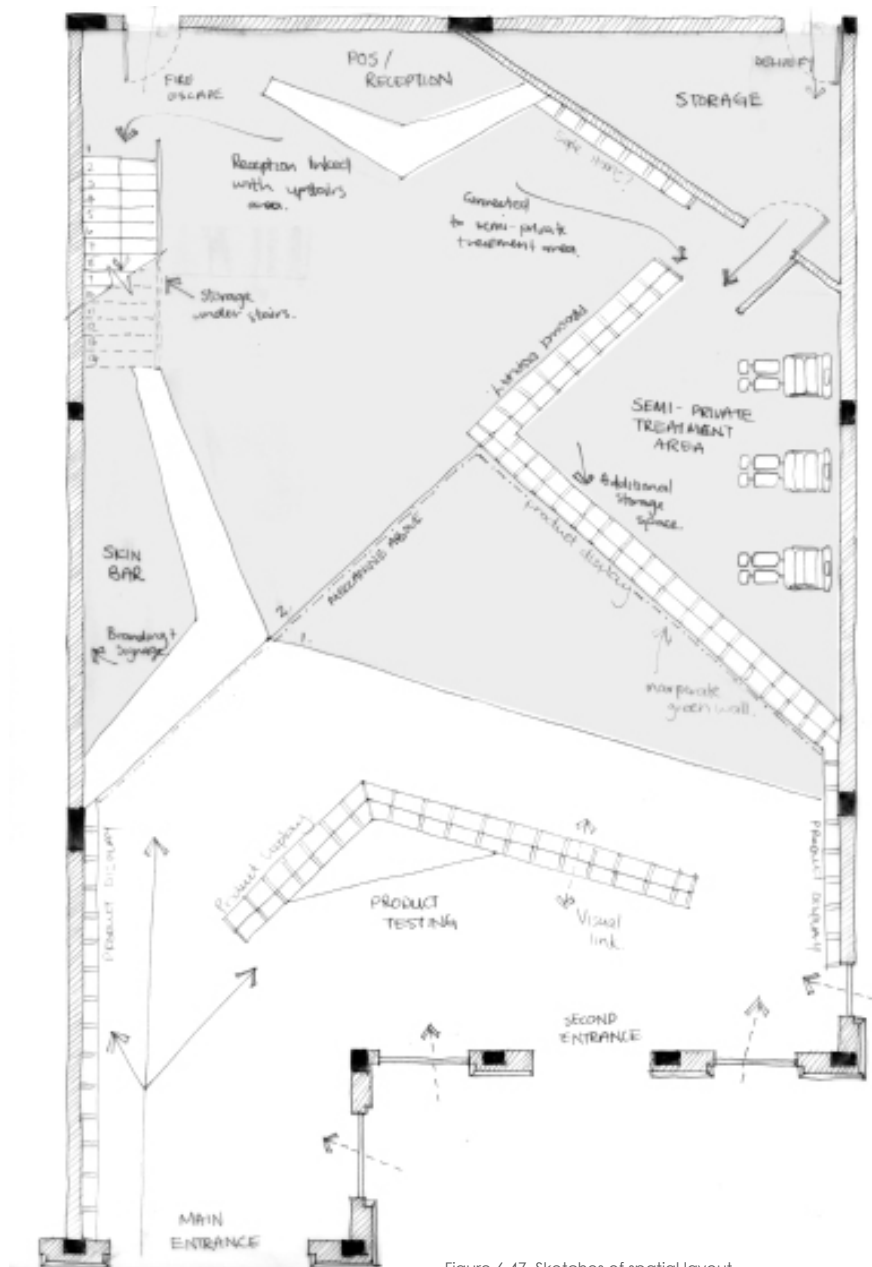
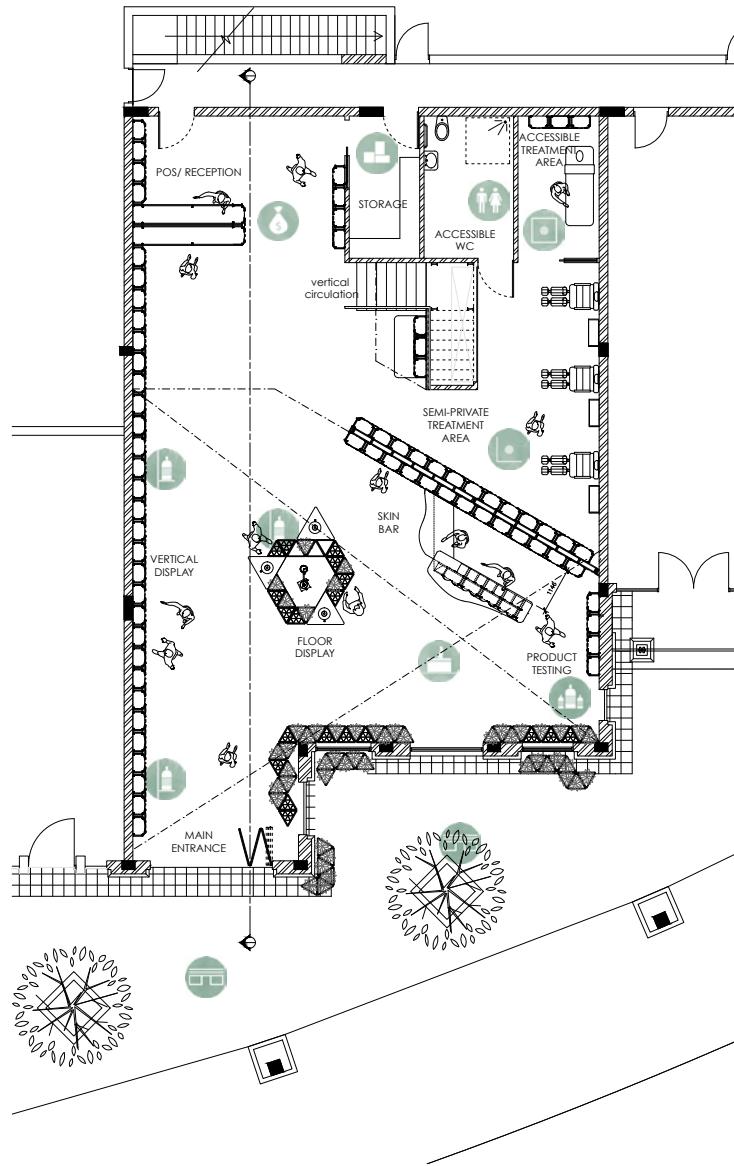


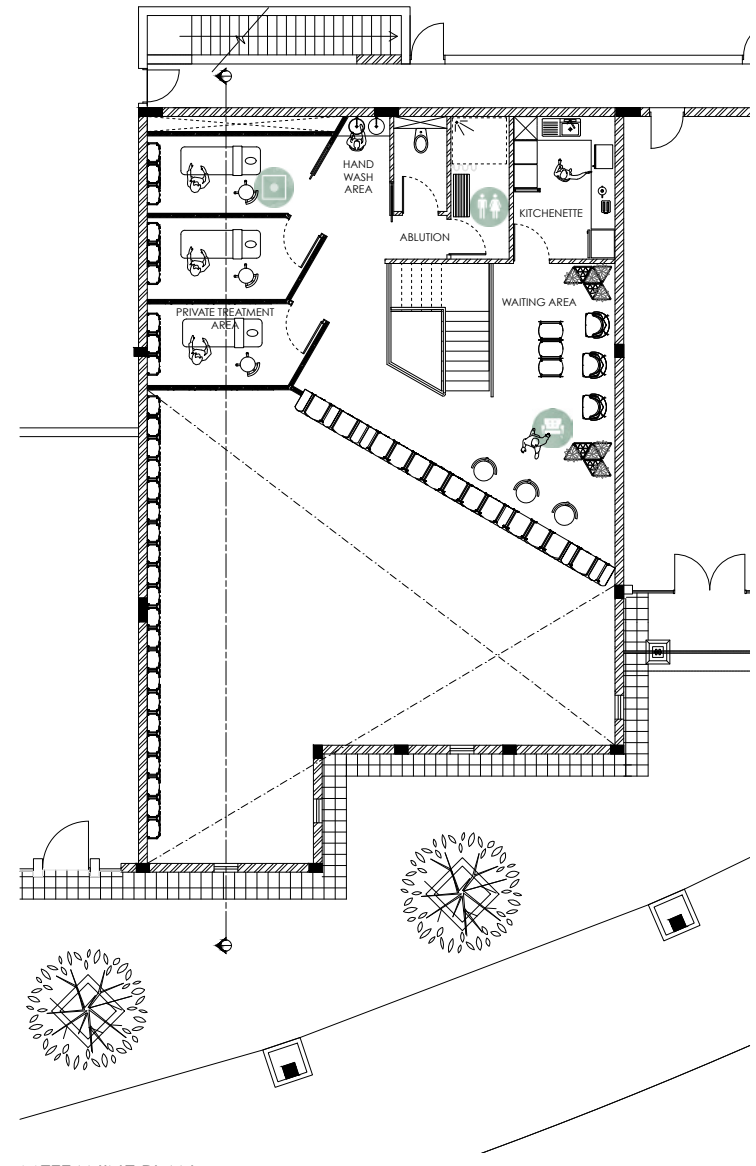
Figure 6.47. Sketches of spatial layout design iteration 2 (Author, 2016).

6.3.3 FINAL FLOOR PLAN LAYOUT

-  FACADE
-  VERTICAL DISPLAY
-  FLOOR DISPLAY
-  PRODUCT TESTING AREA
-  SKIN BAR
-  POS/RECEPTION
-  WAITING AREA
-  SEMI-PRIVATE TREATMENT
-  PRIVATE TREATMENT
-  ABLUTION
-  STORAGE
-  KITCHENETTE



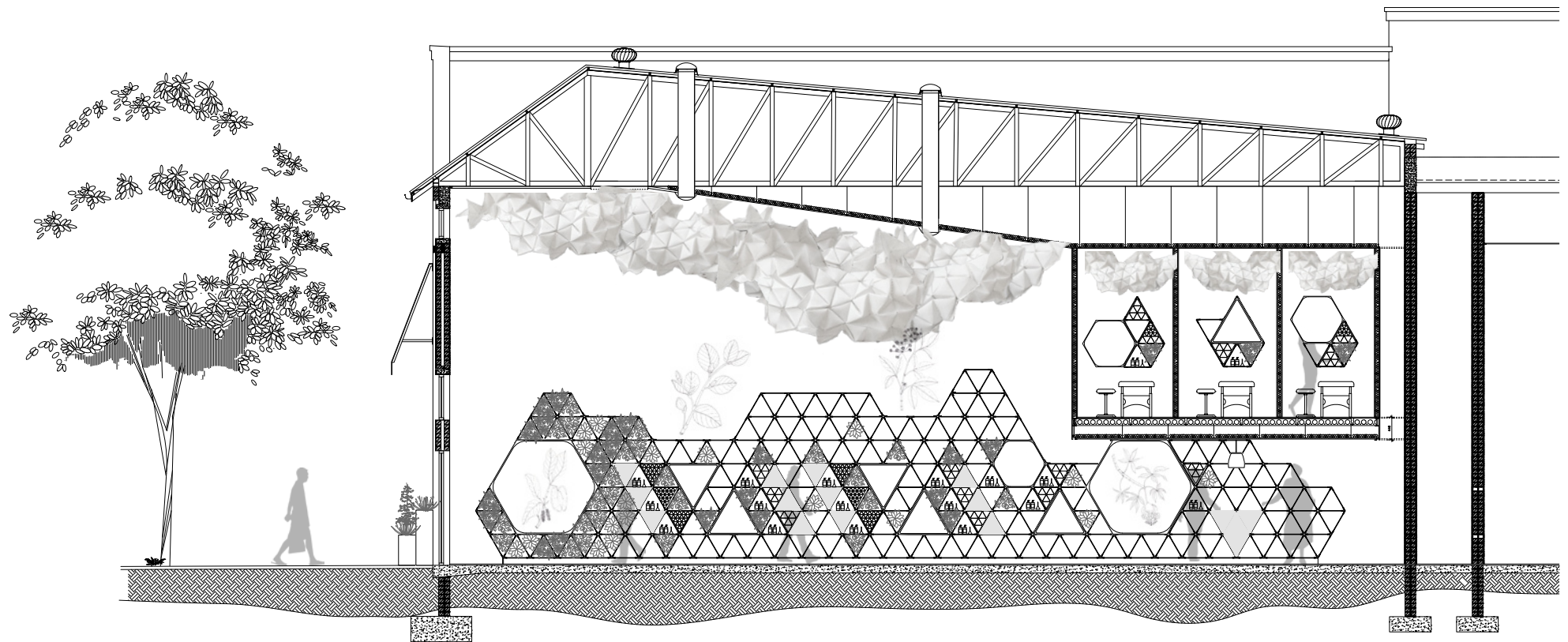
GROUND FLOOR PLAN
not to scale



MEZZANINE PLAN
not to scale

Figure 6.48. Iterated Ground Floor and Mezzanine Plans (Author, 2016).

6.3.4 SECTION A-A



SECTION A-A
not to scale

Figure 6.49. Section A-A
Design(Author, 2016).