



07

DESIGN EXPLORATION

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Figure 7.1 Conceptual sketch of design intentions. (Author)



7.1 ARCHITECTURAL INTENT

The architectural design was influenced by a series of design generators. These include the architectural intent (Chapter 3), theoretical premise, contextual conditions and conceptual intent (to be discussed in chapter 7.4). These generators were then used in the methodology to generate the new approach towards retail design that formulated not only the architecture, but client and programmatic requirements. The design process was then used to redress “the mall” typology from the urban context down to technification.

The spatial intent and theoretical premise is summarised into the primary objective of “Exploding the Mall” that is subdivided into the secondary objectives of Contextualise and Include. It is a concise method to the critique and methods as explained in chapter 3. The architectural intent aims to move away from the notion where the “mall” is seen as an Internalist, Monolith, Autonomist and Imploder.

“Exploding the Mall”

The intent will be to produce a design typology that will externalise the “mall” in its spatiality and programme. In addition to this, the intent will be to produce an “expressed” design typology that integrates the urban context on physical and social levels. It will redress the mall from a space of consumption to a space of civic importance.

Contextualise the Mall

The new “mall” should be contextual in its form, scale, composition, materiality and structure. The architectural language should be a translation from contextual informants and responses. It should respond to context in terms of scale, form, composition and material use.

Include the Mall

The new retail typology aims to be inclusive as far as possible in reflecting the authenticity of Silverton, the merchant and the consumer through architecture and programmatic approaches.

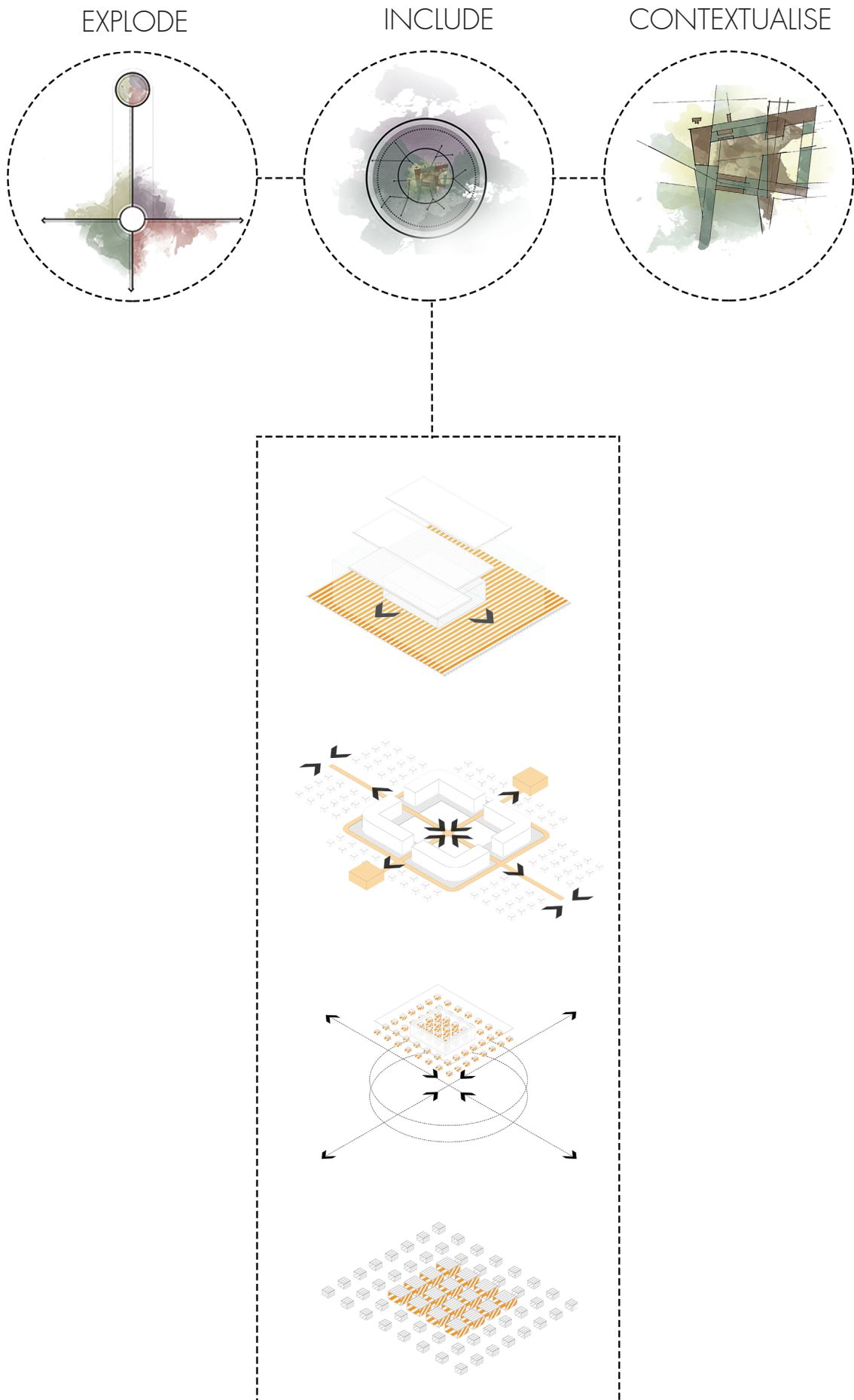


Figure 7.2 Diagram of architectural intentions. (Author)



7.2 DESIGN PRECEDENT STUDIES

7.2.1 THE NEW LAB

Architects: Marvel Architects

Location: New York, USA

The New Lab at the Navy Yard in Brooklyn New York by Marvel Architects is a communal mixed used co-work facility designed to express the innovative nature of a manufacturing and research. It consists of translucent office pods that function independently from the historic hangar that serves as a container. The pods are in contrast to the industrial skeleton of the Navy Yard that is left throughout. Public meeting rooms and interior courts on both floors highlight the developer's intention to create a collaborative design and fabrication centre (Marvel Architects 2016).

Facilities include offices, private studios and lofts, as well as shared amenity spaces like lounges, communal worktables, advanced prototyping shops and meeting areas. The lounges and open meeting areas sit on top of metal boxes scattered around the floor plate, which house the offices and workshops. The design reflects the authenticity of free plan under a controlled environment.

“We took an archaeological approach to futurism in creating a dignified space that reflects the ingenuity and integrity of the people working in it.” Nicko Elliot (Dezeen Magazine 2016)

This precedent was studied and the following conclusion was made that will serve as design informants:

The design of individual pods that function independently from the primary structure.

The architectural language that successfully reflects the historic and industrial context.

The materials that successfully translate the authenticity of the context.

The layers of spatiality that is produced by the free plan design that is contained by the roof as structure.



Figure 7.3 Interior space showing the pods functioning under a "shed" (Marvel Architects 2016)



Figure 7.4 Pod design (Marvel Architects 2016)

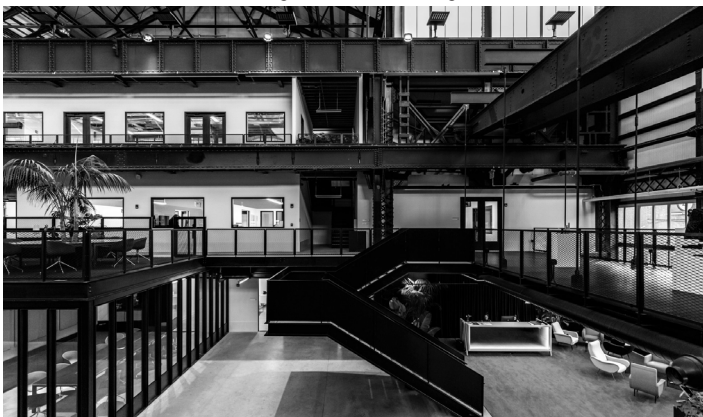


Figure 7.5 Construction of interior as a continuation of context (Marvel Architects 2016)



Figure 7.6 Interior workshop space (Marvel Architects 2016)



7.2

7.2.2 ARENA DO MORRO

Architects: Herzog & de Meuron

Location: Mae Luiz, Brazil

Arena do Moro is a public gymnasium designed by Herzog & de Meuron in the Mae Luiz, Brazil. The building occupies a vacant lot at the edge of a quarter in Mae Luiza, a typical favela in the Natal, Barzil. It defines and completes the lot in order to create a generous new civic place that is visible throughout the community. The two ends of the pitched roof creates and inviting edge that open towards the neighbourhood. The volume and scale of the structure visually disintegrates through its architectural detailing and materiality. The geometry is extruded over the entire, creating a single roof that is visually distinguishable from the spaces below.

Arena do Moro is a public gymnasium designed by Herzog & de Meuron in the Mae Luiz, Brazil. The building occupies a vacant lot at the edge of a quarter in Mae Luiza, a typical favela in the Natal, Barzil. It defines and completes the lot in order to create a generous new civic place that is visible throughout the community. The two ends of the pitched roof creates and inviting edge that open towards the neighbourhood. The volume and scale of the structure visually disintegrates through its architectural detailing and materiality. The geometry is extruded over the entire, creating a single roof that is visually distinguishable from the spaces below.

This precedent swas studied and the follwing conclusion was made that will serve as design infomants:

The design of the roof structure that allow for optimum daylighting and natural ventilation.

The structure that successfully responds to the surrounding context through scale and form.

The design that frames public space.

The permeability of the structure that still shelters and contains the programme.



Figure 7.7 Interior public space sheltered by roof. (Frearson 2014)



Figure 7.8 Structure as part of context (Frearson 2014)



Figure 7.9 Edge condition (Frearson 2014)



Figure 7.10 Interior space of Arena do Moro (Frearson 2014)



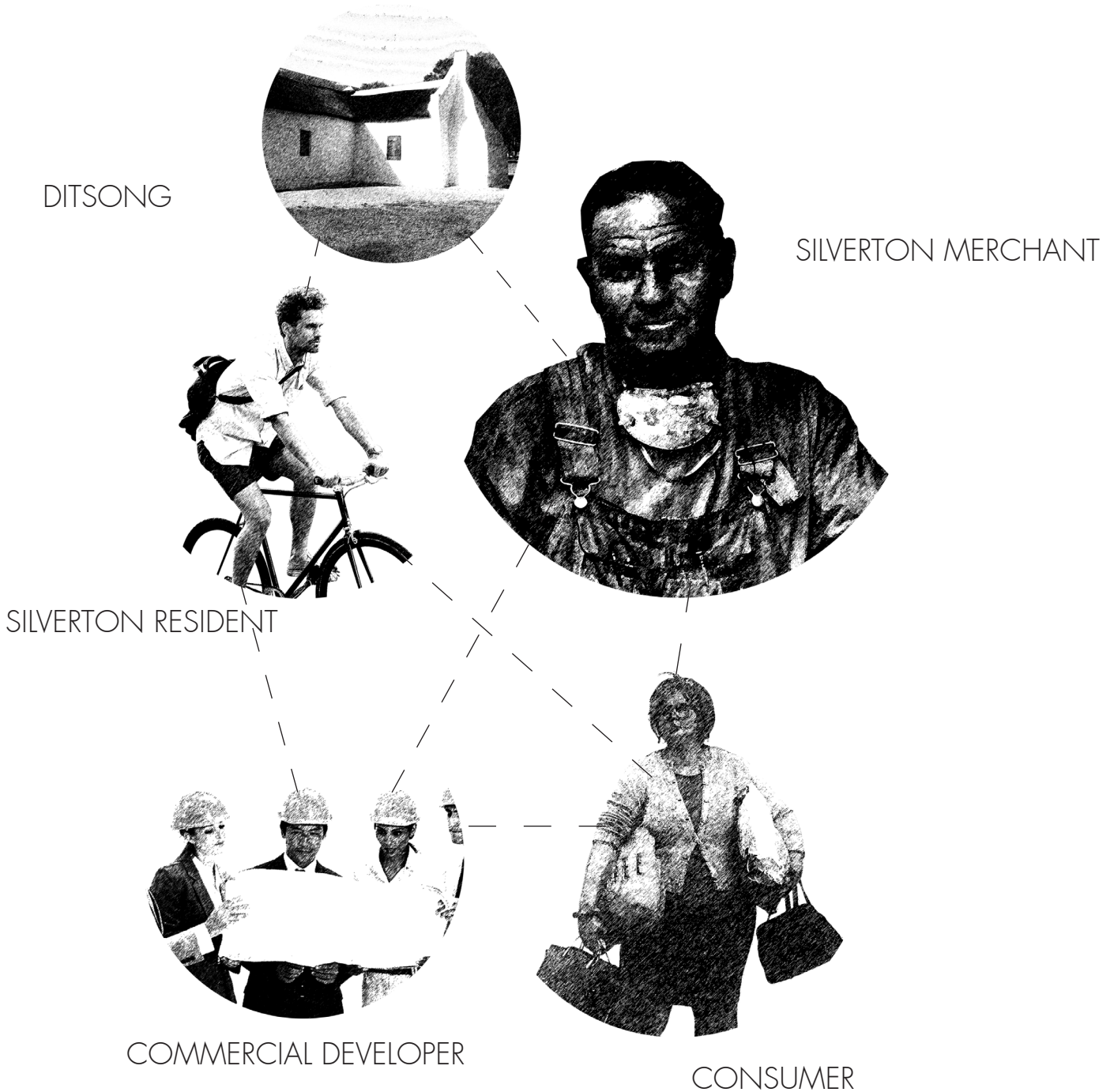
7.3 CLIENT

“...successful development can take place only when local communities assume a stewardship role in defining and maintaining their open spaces, their streets, and their commercial infrastructure. This is perhaps the essential element in the repositioning of shopping malls.” Marilyn Jordan Taylor (Smiley 2006: 28)

According to Smiley et al (2006: 7), it is becoming increasingly important for retail developments to explore new approaches and innovative partnerships between the public sector, private sector and the communities they serve in order for these sites to become viable assets to their communities. As previously mentioned, Jon Goss (1993: 18) argued that one detriment of retail spaces is that they are public spaces that are privately owned entities and run for profit. William Ivey proposes that the solution is that the public sector needs to play bigger role in the development of these spaces as they are a vital necessity to public life.

The proposed client will be a partnership between the local community, a retail developer and the public sector. It will contradict the traditional method where the developer dictates the requirements based on capital turnover. The Silverton merchants and residents will be the primary patrons. Space will be designed in a way that provides for the needs and requirements of the surrounding community in order for the project to have an economic and social asset.

The proposed site is currently owned by Ditsong Museums, an amalgamation of museums and a government owned entity. The objective is for the Ditsong as owner and public entity to be the secondary patron. As the site currently hosts an underutilised space that it is fenced off and neglected, the first aim will be to activate the space as a potential social space through the addition of a commercial programme. Secondly, as the site will be publicly owned it will intend to generate a retail and public space that is publicly owned. The tertiary client will be a commercial developer that will serve as an investor to the project. With the intention of a development consisting of appropriate civic architecture that takes the “mall” as its starting place and would offer realistic designs to committed developers.



7.4 PROGRAMMATIC INTENT

The programme is categorized under two approaches that will aim to include the authenticity of the surrounding neighbourhood of Silverton and that will react to the theoretical approach of what is required programmatically to design for contemporary retail typologies. Firstly to Expose and secondly to “Respond”.

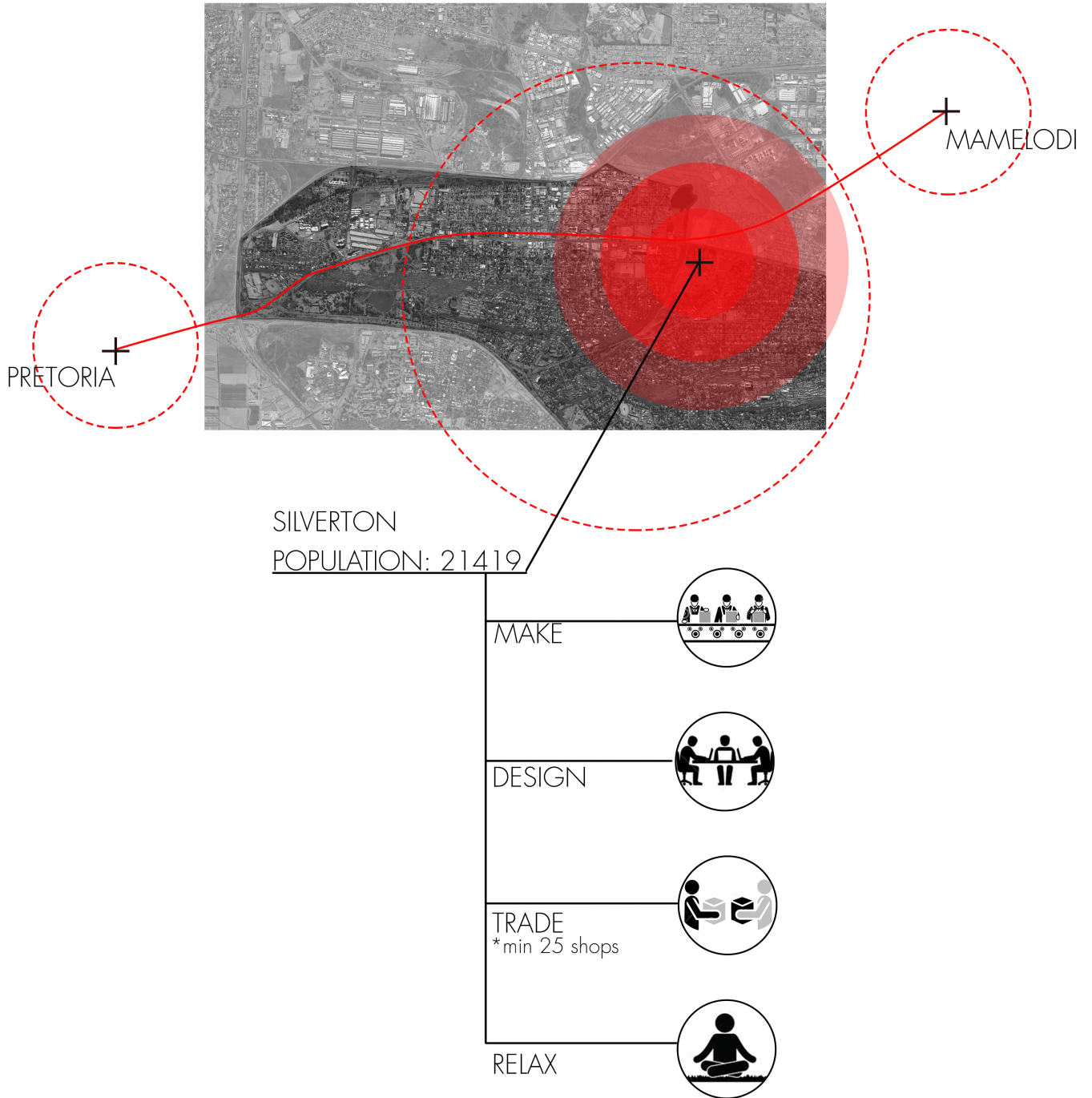
As mentioned in Chapter 2, the urban fabric of Silverton allowed for a unique unseen retail typology to develop. A typology of trade and craft that takes place in the backyards of merchants houses hidden from exposure and economic opportunities. Through including the legitimacy of the community of Silverton, the aim will be to expose this hidden retail typology through the provision of a unique retail typology of small scale shops where the merchants of Silverton can set up and trade.

It will reflect to the culture of trade and craft in to change the stereotypical retail typology from not only a space of consumption but also a space of production. Thus the programme is required to provide spaces where small scale craft to take place. The aim will be not only to expose the “Unseen” but also to expose the production line of commodities and to allow customers to have a collaborative input to the products they buy.

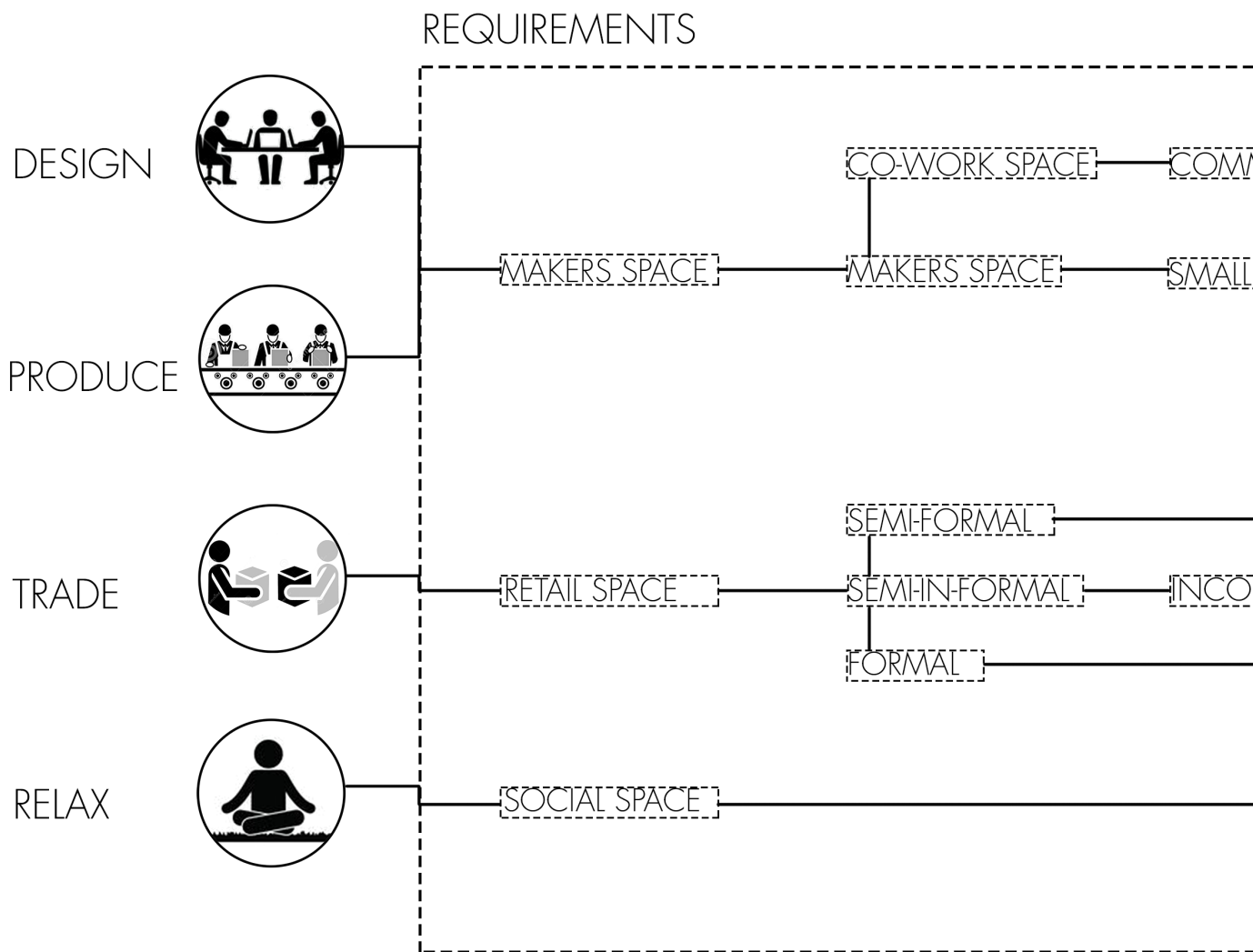
In order to determine the floor area or number of shops required to make a retail space economically viable, one need to respond to the population of the area the retail spaces will aim to serve (Prinsloo 2010: 3). This will categorize the space accordingly. The population of the immediate surrounding neighbourhoods which include Silverton, Silvertondale, Meyerspark, Val de Grace, Waltloo and Murrayfield has a combined population of 21419 (Census 2011). A retail space that serve a population of this size is categorized as a “Neighbourhood centre” (Prinsloo 2010:11). In order for a typical neighbourhood centre to be viable it will require a minimum of 25 shops or retail spaces (Prinsloo 2010: 12).

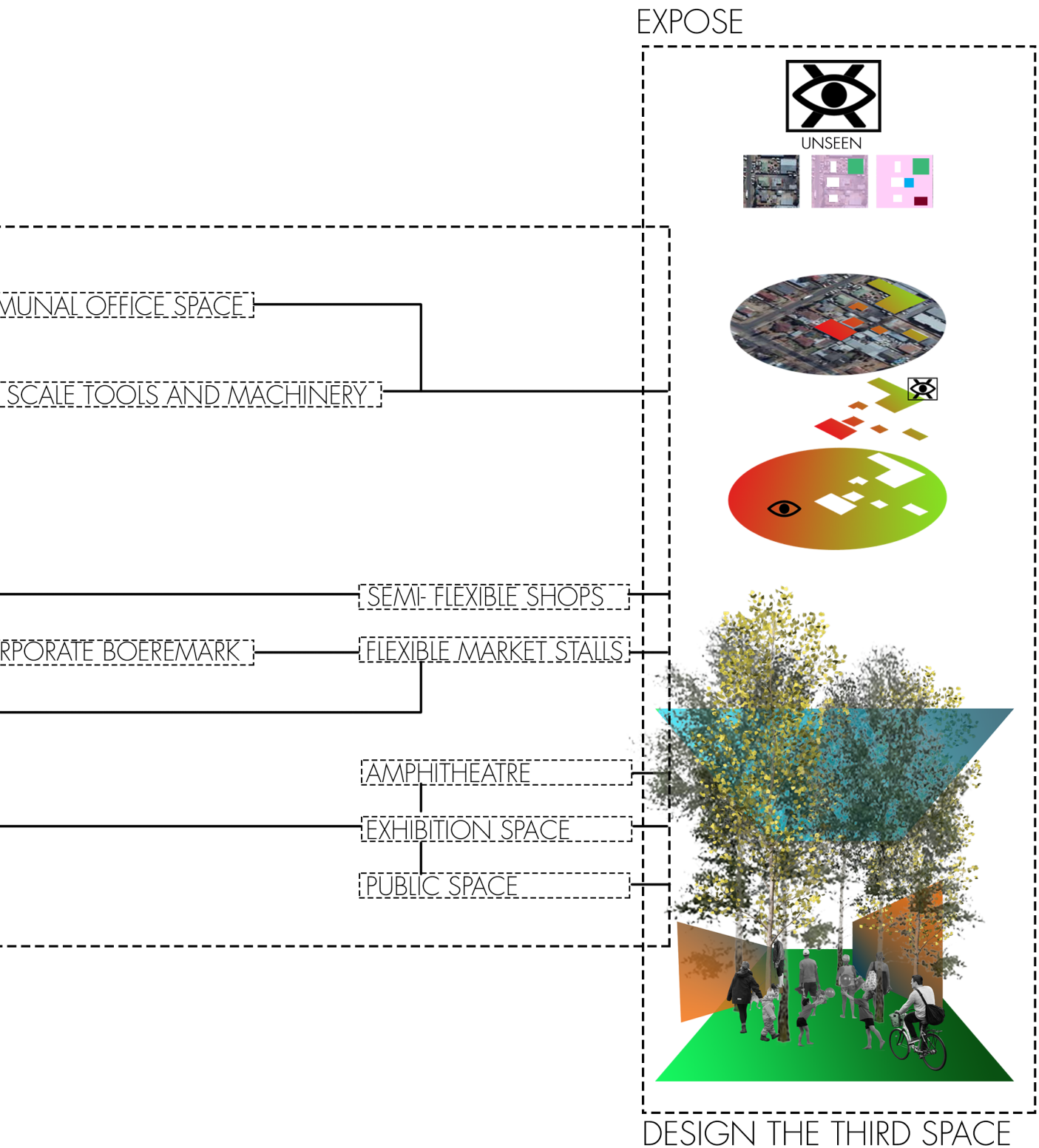
The addition of collaboration and production soaces
The space in its essence will become an amalgamation of things Silverton, Cities and Retail Spaces are vying for. It will include a co-working space, a maker’s space, and fabrication and prototyping shops equipped with 3D printers, a laser cutter, welding equipment and milling machines.

The space will aim to “Respond” to contemporary retail trends discussed in chapter 3 through a programme of small and flexible retail spaces that will integrate the existing programmes of Silverton, while creating spaces of collaboration and craft production. The building will also recreate the “Third space” as a primary requirement to retail space. Thus to produce an inclusive typology that will not only be seen as an imploding structure but as centre that can be seen as the anchor, gathering space and a civic space for Silverton.



7.4







7.5 REDEFINING THE RETAIL SPACE

The aim is to resolve the mall and produce a new typology that redefines and is innovative through being an all-inclusive and contextual typology. As response to the theoretical and contextual premises, a new approach was determined that is a continuation of the existing retail of Silverton and to expose the hidden retail of Silverton as previously mentioned. The programmatic response is then translated into three retail typologies that redefines the stereotypical, and includes and expose the existing retail. The Flexible, The semi flexible and the informal. These three typologies are contextual response to the Silverton Merchant and the Boeremark.

THE SEMI-FLEXIBLE:

The semi flexible retail space is small scale retail pods that will be rented out to “The Silverton Merchants” on short term lease agreements of three months. This in contrast to shopping malls with lease average lease agreements of between two and five years (Source). This pods is rented out with basic services such as power points and water connections. It provides shelter that can be adjusted over time if tenants like to expand or require more space. Its purpose is to serve as a space where the "Silverton Merchant" can come and exhibit work that he/she produced.

In its spatial layout, the semi-flexible pods intends to redefine stereotypical retail layout. The semi-flexible explored a new approach towards handling the shopfront to produce a more visual connection between product and consumer. It also explore the possibility where the shop is a storage space and retail is extended beyond the shop boundary where it form part of the circulation and public space.

THE FLEXIBLE:

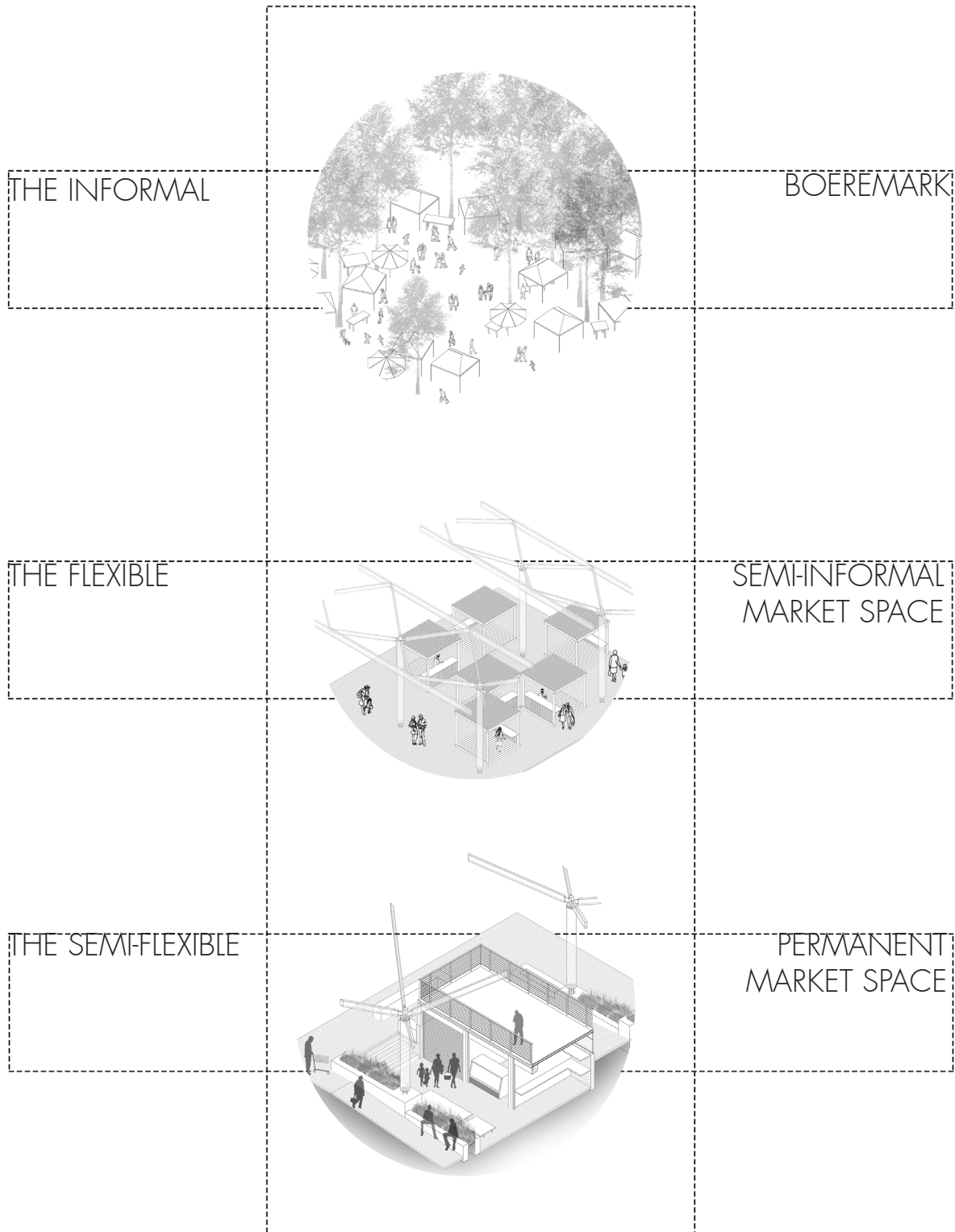
The flexible retail adjustable and moveable retail space that is an in-between typology for the semi-flexible and informal retail of the Boeremark. These spaces will be rented out on a weekly basis. It will serve traders that wants to function on the same principle as the Boeremark, but wants to trade for a longer and more permanent period. It consist of a basic structure that is partially complete. This gives more freedom and informality as the tenants can complete and arrange the stalls according to their needs.

THE INFORMAL:

The Informal is the continuation of the Boeremark. The Boeremark will continue in programme on a weekly basis with the aim to make it a regular event. The poplar trees will continue to serve as primary informal space. As previously mentioned, the Semi-Informal space will then serve as a threshold between the structure and the space that hosts the informal.



[de] BOX
THE SILVERTON RETAIL SPACE





7.6 CONCEPTUAL THINKING

The conceptual development derived from the intention of constructing a contextual and inclusive design typology. A concept that will explode the mall as building and distort its impression as monolith, autonomist and internalised space. The concept proposes to produce a continual relationship between the existing and new, as well as the inside and outside space. A persistence of both Silverton and the “Boeremark” from existing “space” into new “space” is used to translate context into architecture.

When responding to the objectives of explode, contextualise and include, the theoretical approach shaped a retail typology that recreates the mall as a retail typology and in essence represents it as a contemporary market space. The conceptual approach derives from the assessment of a contextual market typology: The “Boeremark”. The concept is to symbolise the market as a contextual and an inclusive approach towards producing space.

As discussed earlier in Chapter 2, the “Boeremark” is an informal market that takes place on a weekly basis on the proposed site. The assessment of the “Boeremark” analysed the spatial layout and informants that organises the workings of the market. The “Boeremark” takes place beneath the poplar trees. The trees serve a multifunctional role for the market through its spatial qualities. The canopy of the trees not only serves as shelter but also as container. It contains the informality of the market while the tree trunks structure the market. It distinguishes the spaces of civic, circulation and trade from each other. The ground then organises these spaces that are filled with temporary informal structures and the shops are placed organically around the structure and ground planes. The trees are representative of the spirit of place.

The concept then translates the spatial qualities of the tree, ground and infill into design elements. These three elements are seen as entities that will function independently from each other. They are translated into a hierarchy that developed into diagram. As the project intends to break barriers between the building and context, the element of wall will not be included as component, as it is in this case regarded as creating barriers that support autonomy.

1) PRIMARY: THE ROOF

The Tree: The tree serve as device that contains informality and flexibility. It creates shelter through its canopy and structure through its trunks.

2) SECONDARY: THE FLOOR

The Ground: The ground plane is the organiser that is influenced by the structural placement of the trees. It creates order through “flexible grid” that produce the space that host and distinguishes spatial programmes.

3) TERTIARY: THE INFILL

The Stalls: The stall is temporary and informal. It is arranged around the flexible grid and accommodates the market.

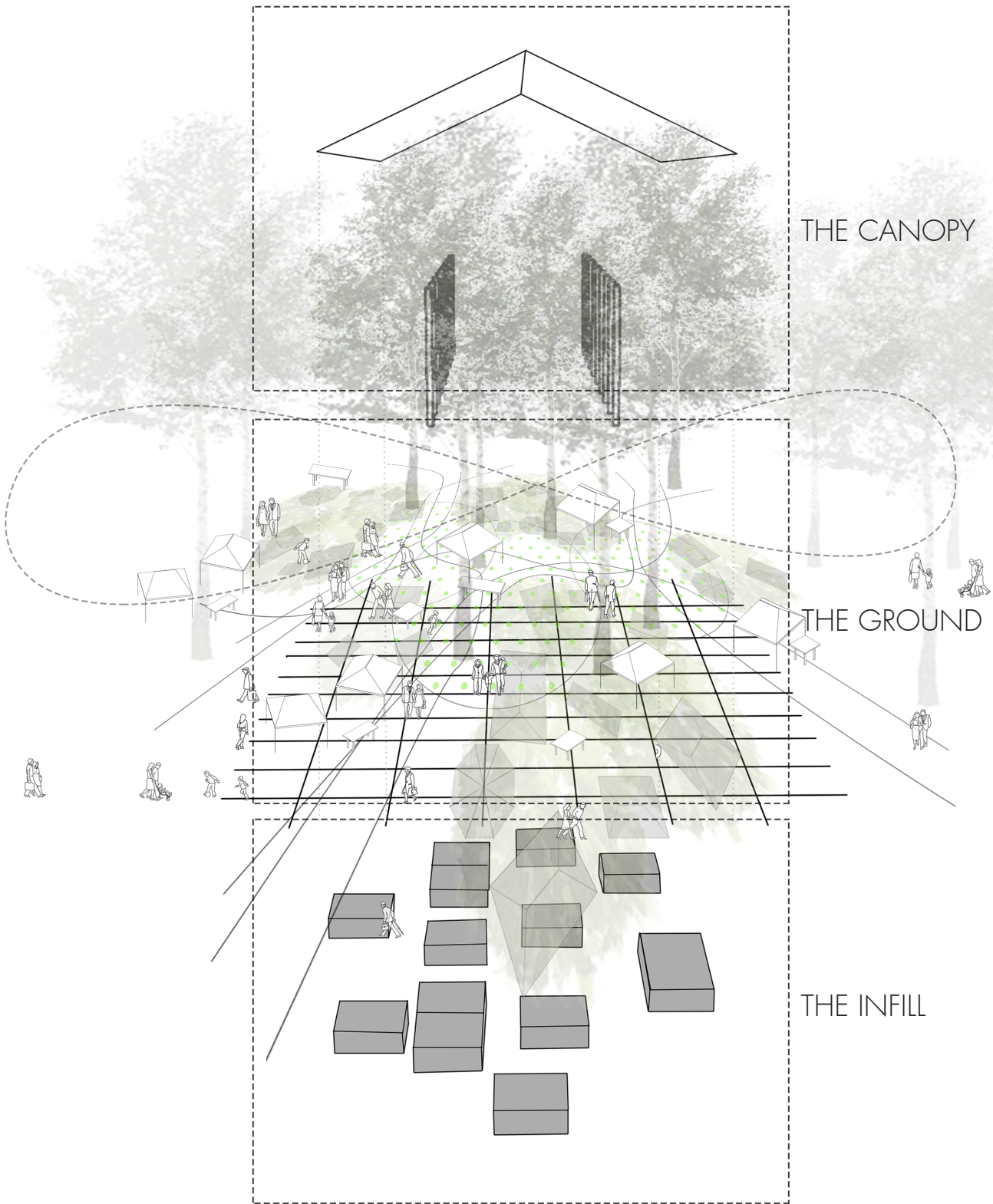
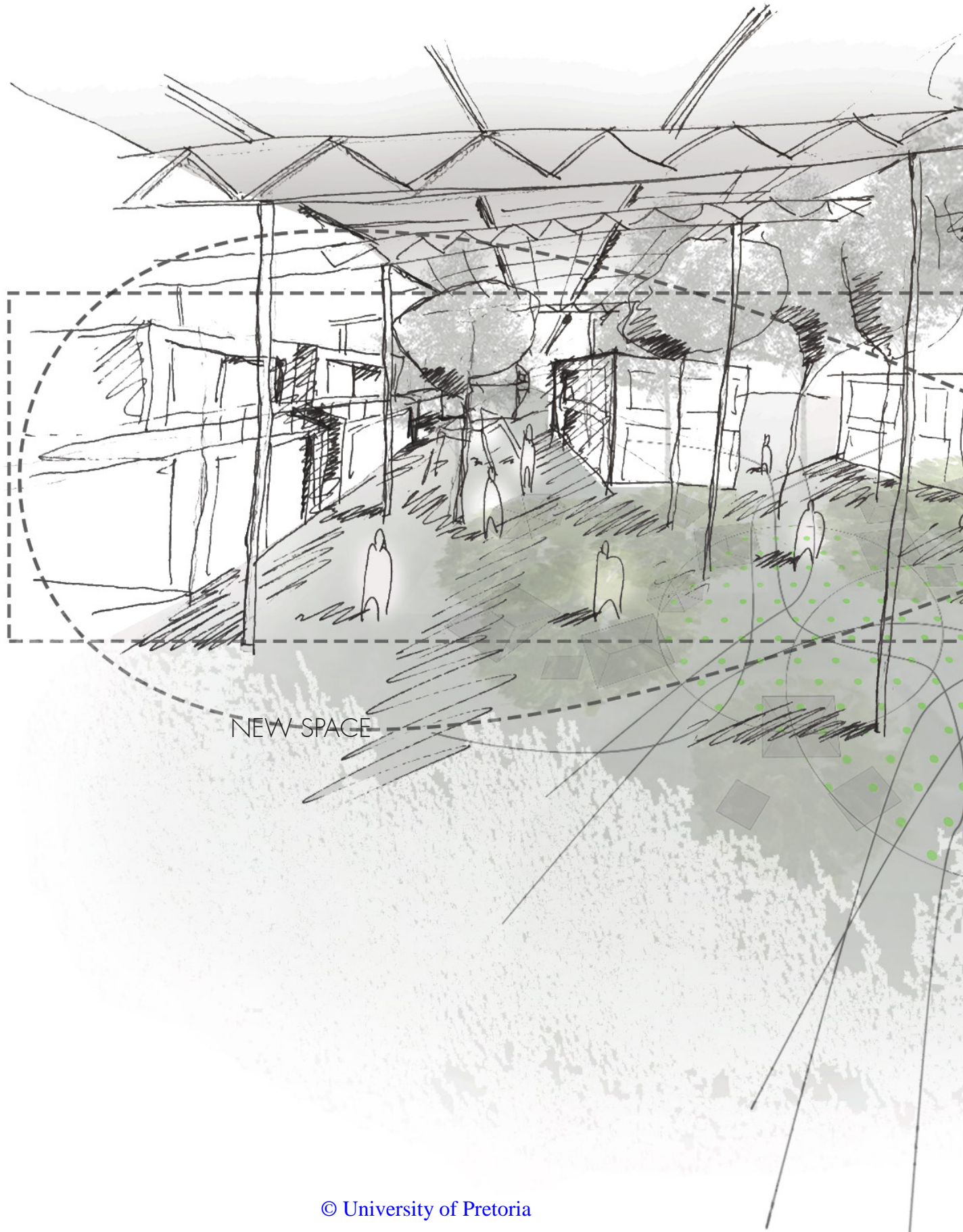
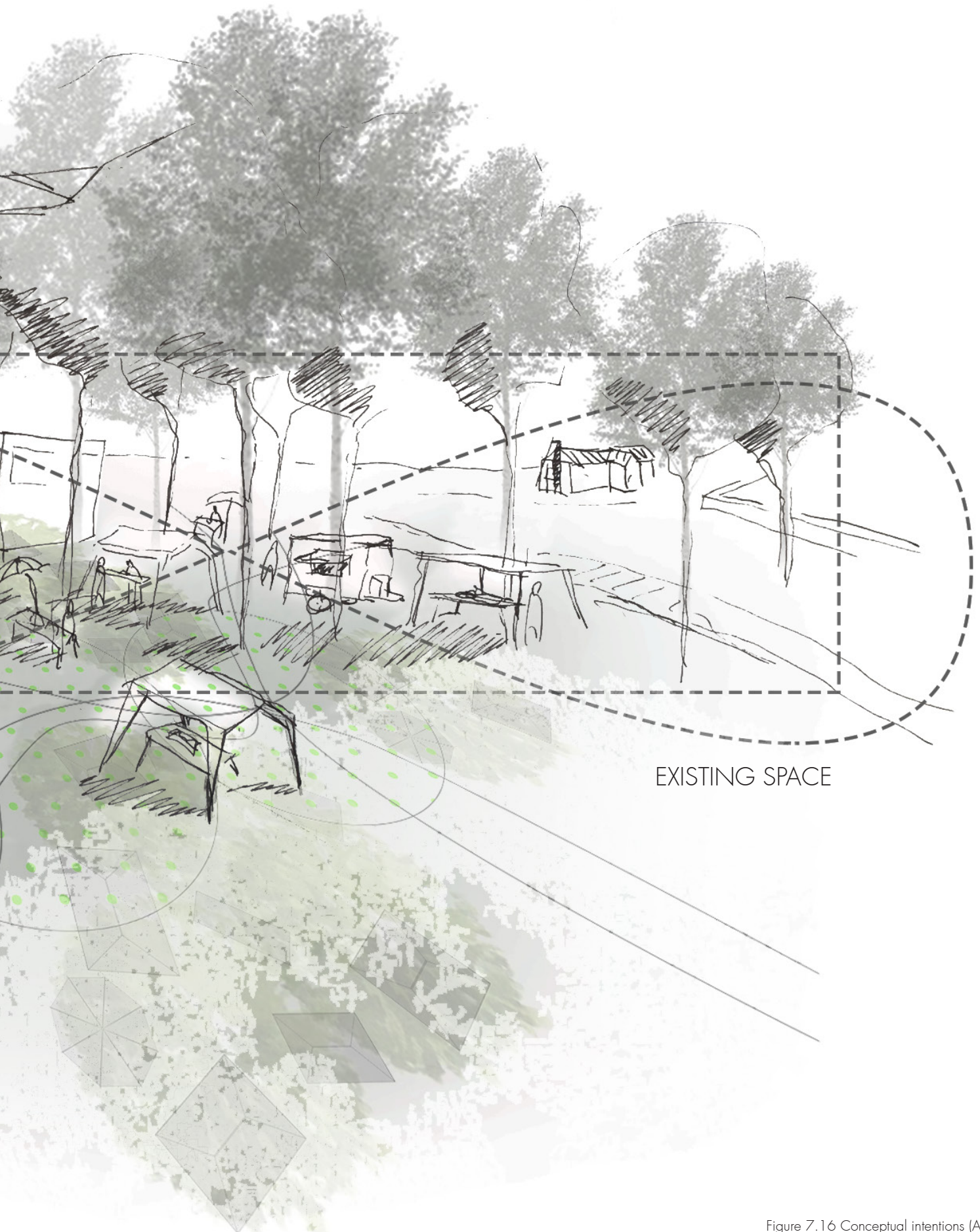


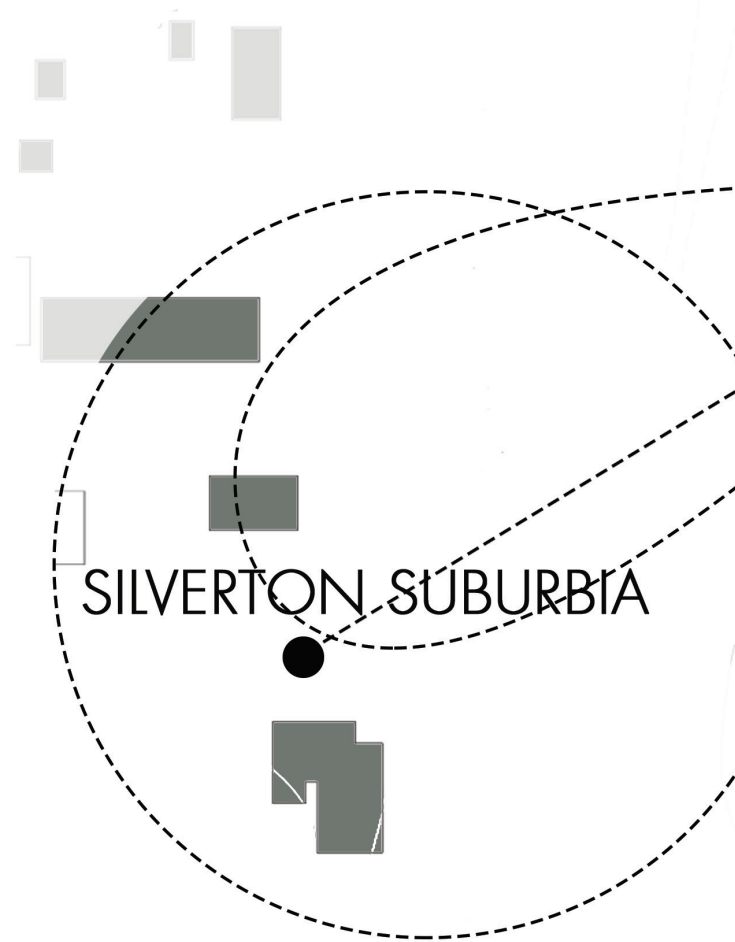
Figure 7.15 Conceptual diagram (Author)



NEW SPACE



EXISTING SPACE



THE CONCEPTUAL PLAN:

The conceptual approaches of “explode”, contextualize and include were followed through on plan level. The intention was to create a plan that responds to the surrounding context by continuing with existing spatiality and scale. The floor plan is a continuation of the scale of the suburban context and the historic fabric of the pioneer house. It is translated through the dismembering of the retail spaces into small individual units that are analogous to the spatial narratives of “monolith” and “autonomist”. These pods are then organized and contained by roof and ground structures as illustrated in figure 7.16 and 7.17.

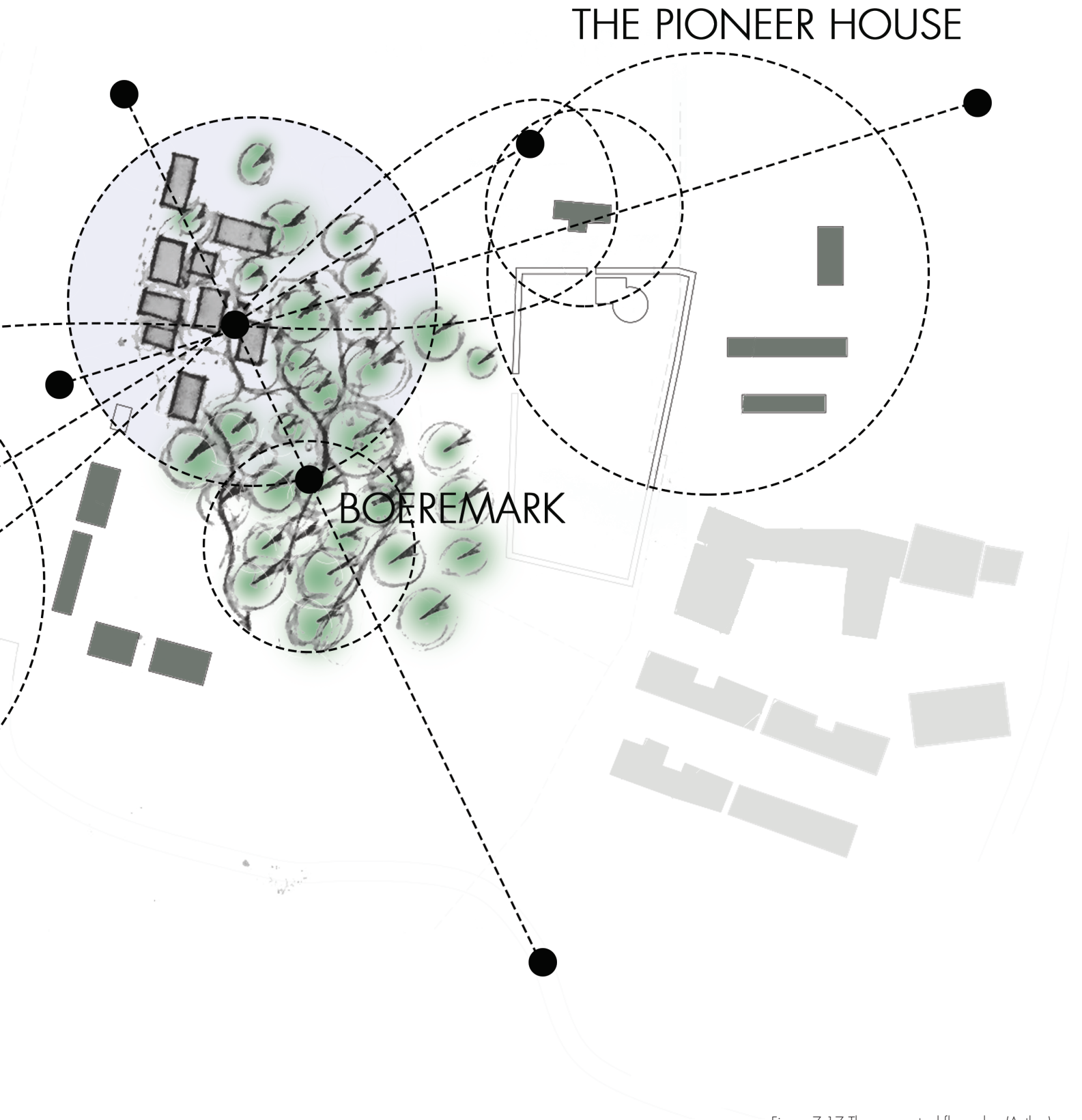


Figure 7.17 The conceptual floor plan (Author)

7.7 DESIGN DEVELOPMENT:

7.7.1 SPATIAL EXPLORATION:

EXPLORATION A:

The first exploration considered a direct response to circulation and connectivity. The structure is placed at the intersection of the envisioned production route and Pretoria Street framing the proposed circulation routes. It also explored the possibility of placing the structure on the periphery of the site in order to frame and promote the Pioneer Museum as open public space.

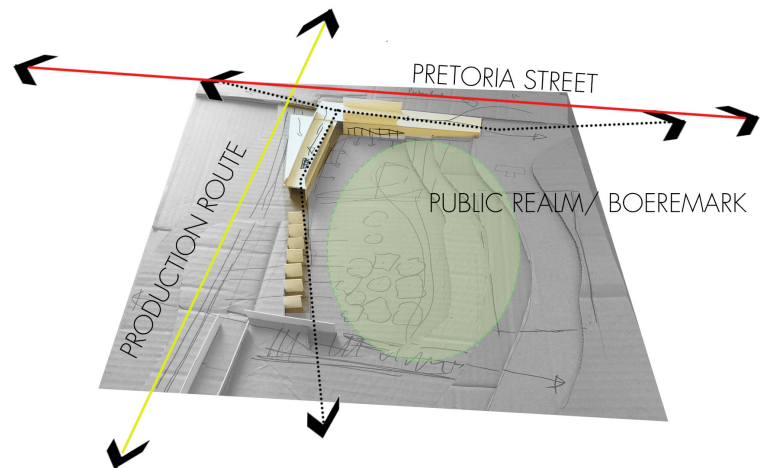


Figure 7.18 Spatial exploration A (Author)

EXPLORATION B:

The second exploration is a continuation of the first exploration. As can be seen in figure 7.19 the form is more responsive towards the historic built fabric of the Pioneer House in terms of scale and composition. The structure is elevated proportionally towards the same level of the Pioneer House. The structure is also stepped back in from Pretoria Street in relation to the historic fabric. This creates a more defined threshold and relationship towards the site. It also explored the spatial implications of incorporating the “Boeremark”.

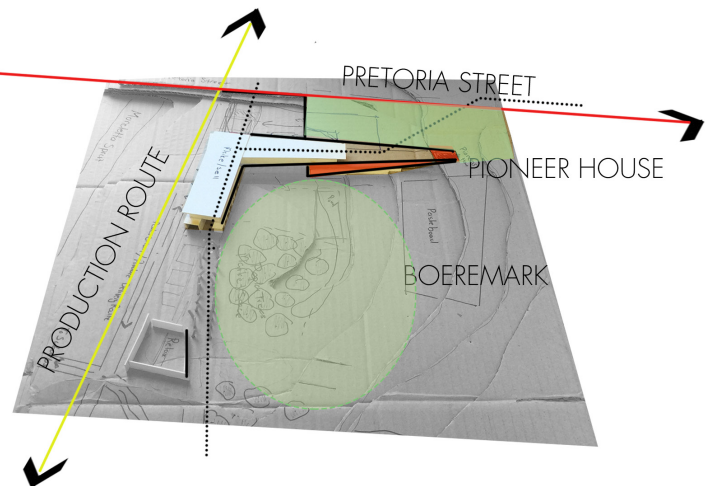


Figure 7.19 Spatial exploration B (Author)

EXPLORATION C:

The third exploration considered the possibility of a liner structure that frames the circulation of people and products. It is a continuation of contextual composition lines that stretches and aims at “exploding” the structure towards its immediate environment. It explored the possibility of physical connections between the structure and context while at the same time framing the Pioneer Museum as a public space.

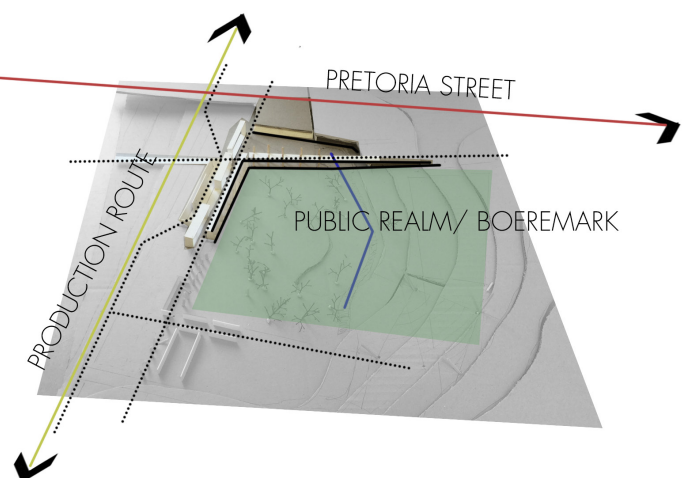


Figure 7.20 Spatial exploration C (Author)

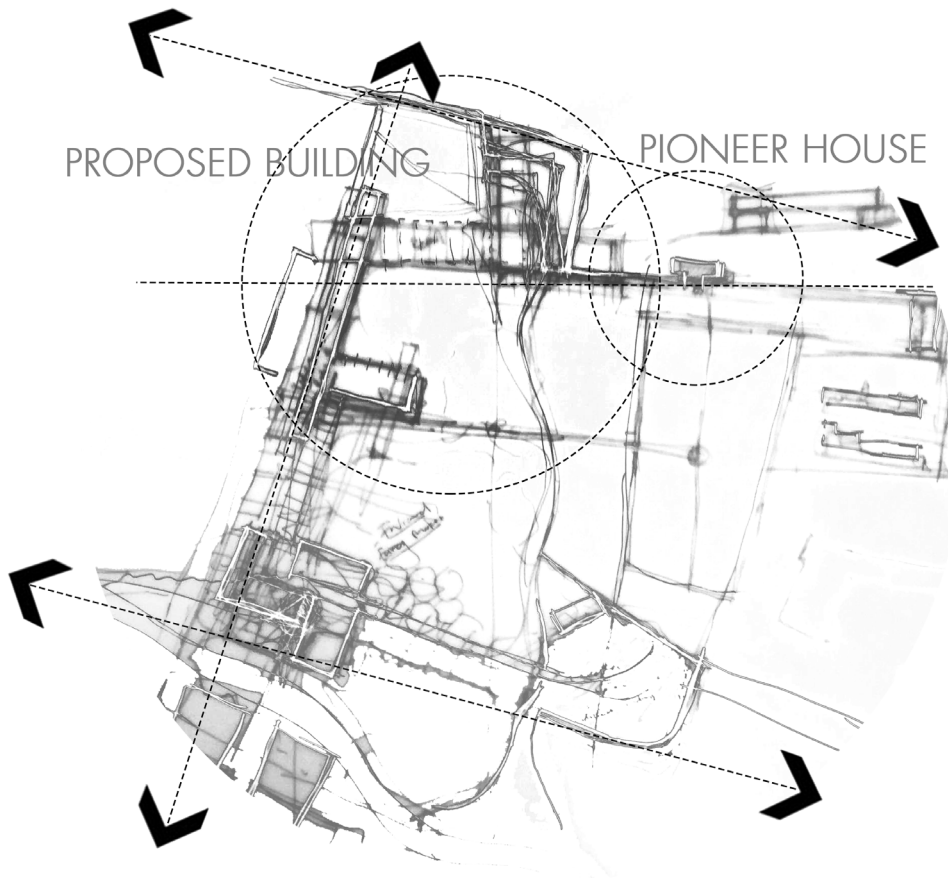


Figure 7.21 Site exploration A (Author)

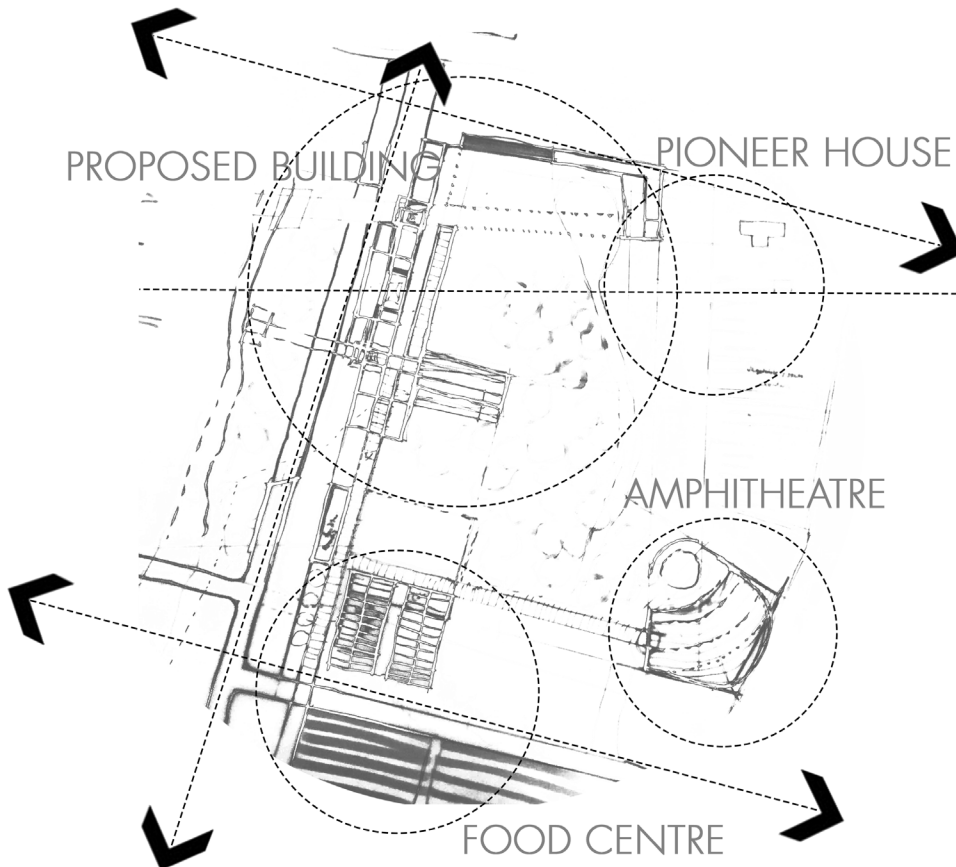


Figure 7.22 Site exploration B (Author)

7.7

7.7.2 ITERATION 1

This iteration is a response to the architectural language of Silverton. It explored the industrial shed typology of Silverton into a site specific response. It is the first iteration that explored the conceptual approach into form where the shed represented the canopy towards a free space with architectural infill that translates the scale of the context on ground level.

It is a continuation of the site spatial exploration into a more architecturally defined form.

It is an exploration of a permeable building where the external walls is removed to expose the internal structure of the building. The roof is a contextual response in form that was adapted to allow for natural light and ventilation. The roof structure and infill is seen as two separate entities that aimed to spatially function independent from each other.

Though the building had no physical barriers between inside and outside space, the critique was that the structure did not successfully represent the architectural intentions of explode, include and to “externalise” the building. The structure still resemble the stereotypical retail space that is turned inwards and produced internalised controlled spaces. It was also not successful in producing a defined relationship between the proposed public space (outside) and the new building (inside).

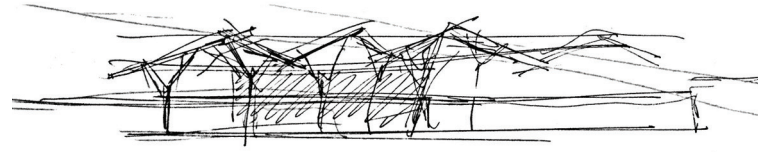


Figure 7.23 Conceptual sketch of iteration 1 (Author)

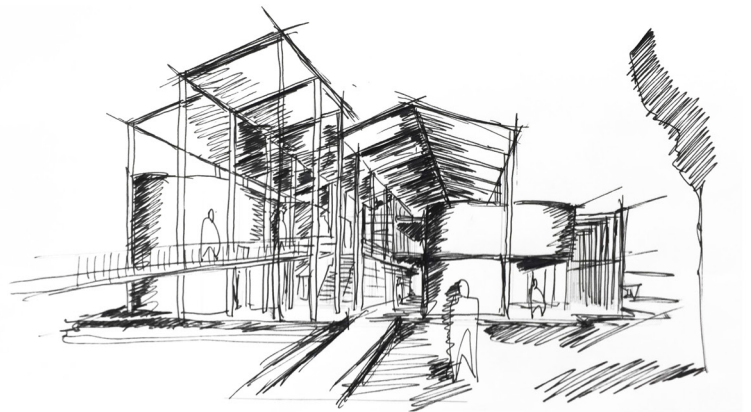


Figure 7.24 Spatial sketch of iteration 1 (Author)

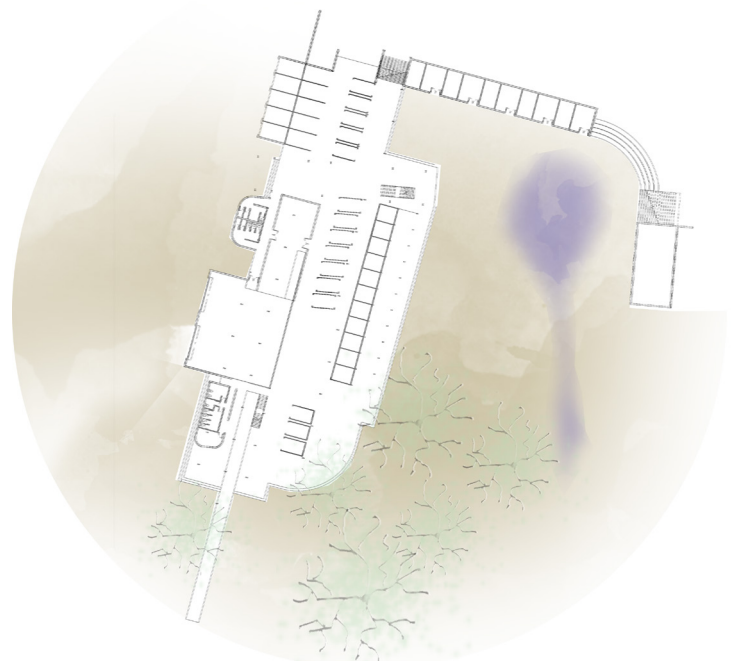


Figure 7.25 Floor plan of iteration 1 (Author)



Figure 7.26 Section drawing of iteration 1 (Author)

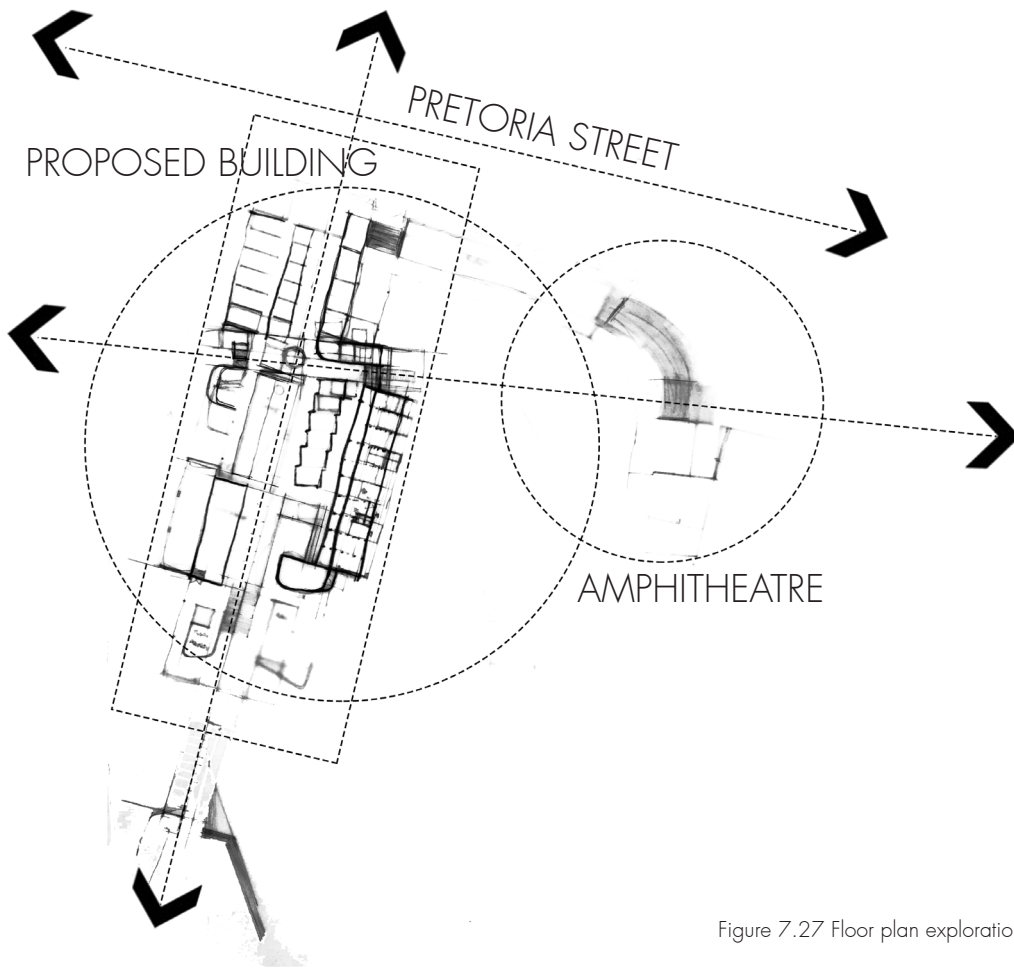


Figure 7.27 Floor plan exploration of iteration 1 (Author)

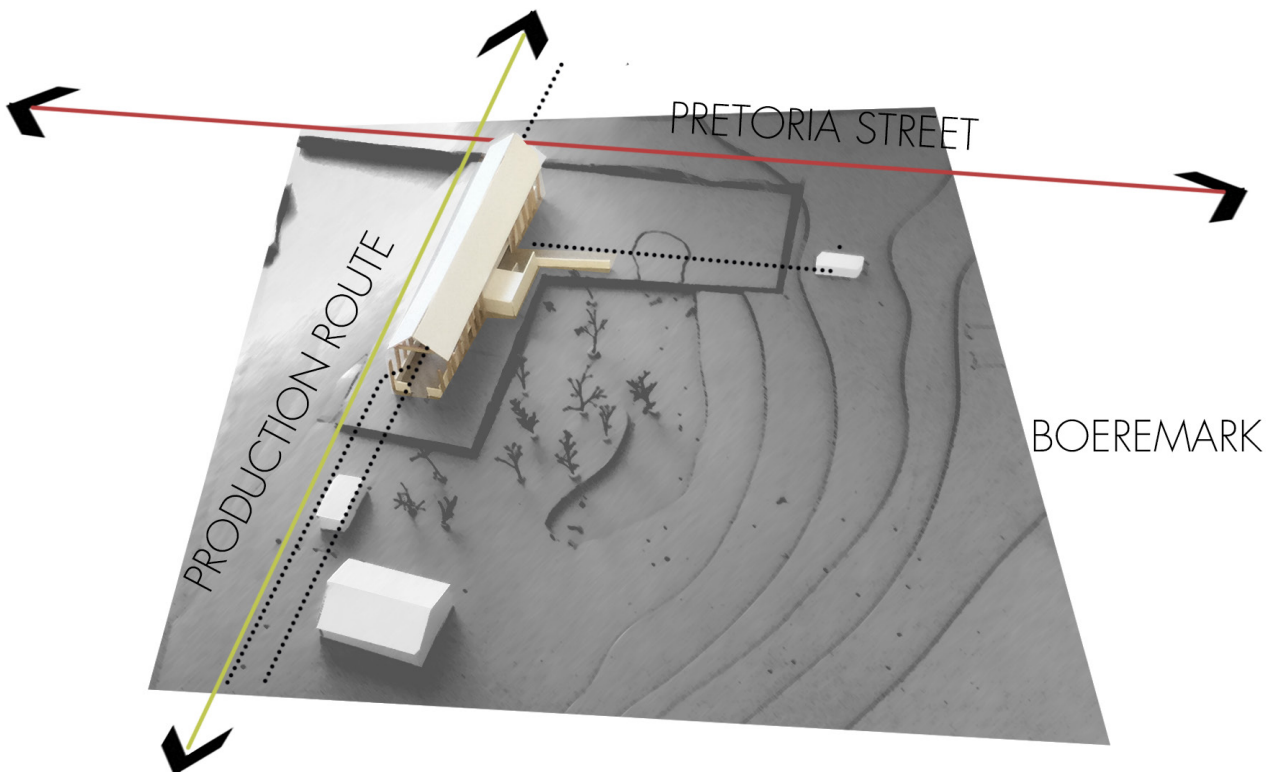


Figure 7.28 Model exploration of iteration 1 (Author)

7.7

7.7.3 ITERATION 2

Iteration 6 is a direct response to the critique of iteration five and the architectural intention to “explode the mall”. The floor plan was conceptually taken apart and the idea of controlled circulation and defined space was disregarded. The intention of this iteration was redefine the retail space into a new spatial typology that resembles a “free plan” in its essence. The required programmes is hosted in individual pods that functions independently from the roof and is placed organically throughout the site. The structuring of these pods counter the spatial critiques of Monolith, Autonomist and Internalist. It redefined typical retail spaces by breaking and scaling it down to respond more successfully to the immediate context.

The roof was a simplistic approach towards creating a shelter and container. The aim for the roof was to define a continuation between inside and outside space. Through scale, it continued the existing spatial qualities of the trees from outside into the new form. The iteration also explored methods where the building should not produce barriers and allow for visual and physical diffusion

The critique however, concluded that the floorplan was too random and in order for the project to be feasible a certain degree of controlled space is required.

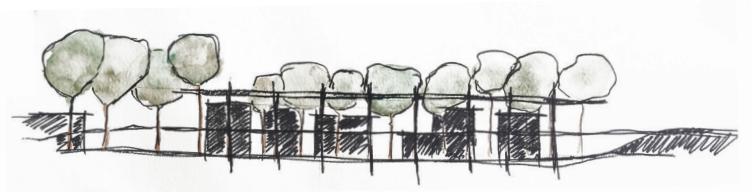


Figure 7.29 Conceptual sketch 1 of iteration 2 (Author)

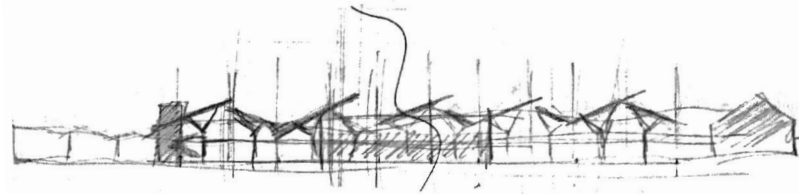


Figure 7.30 Conceptual sketch 2 of iteration 2 (Author)

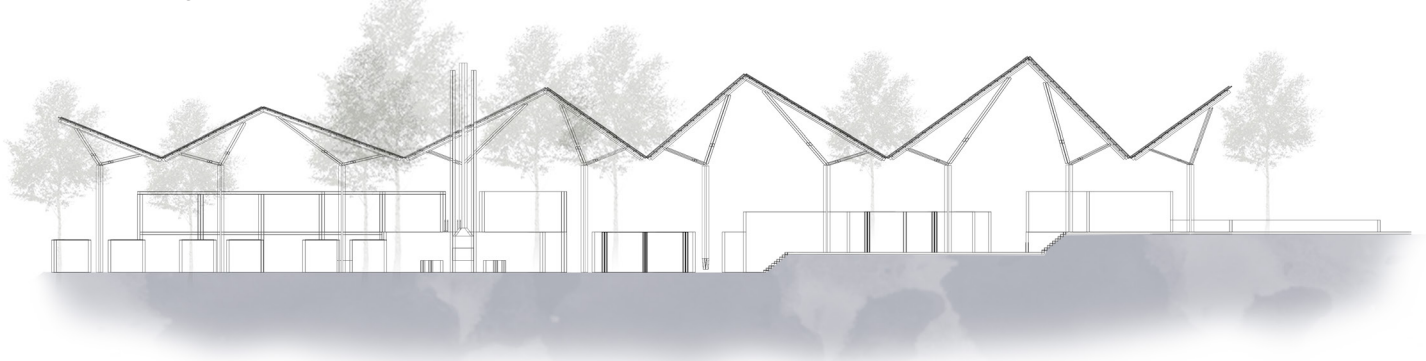


Figure 7.31 Section A-A of iteration 2 (Author)

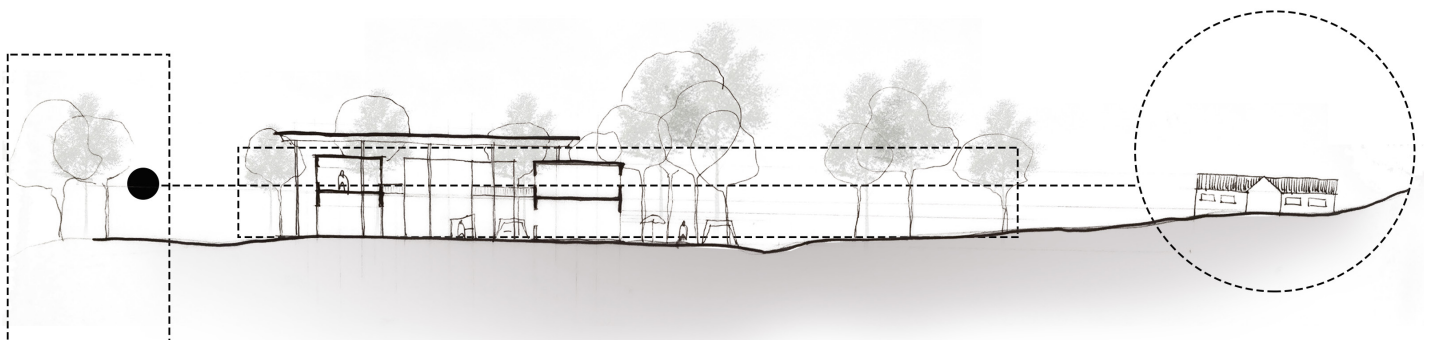


Figure 7.32 Section B-B of iteration 2 (Author)

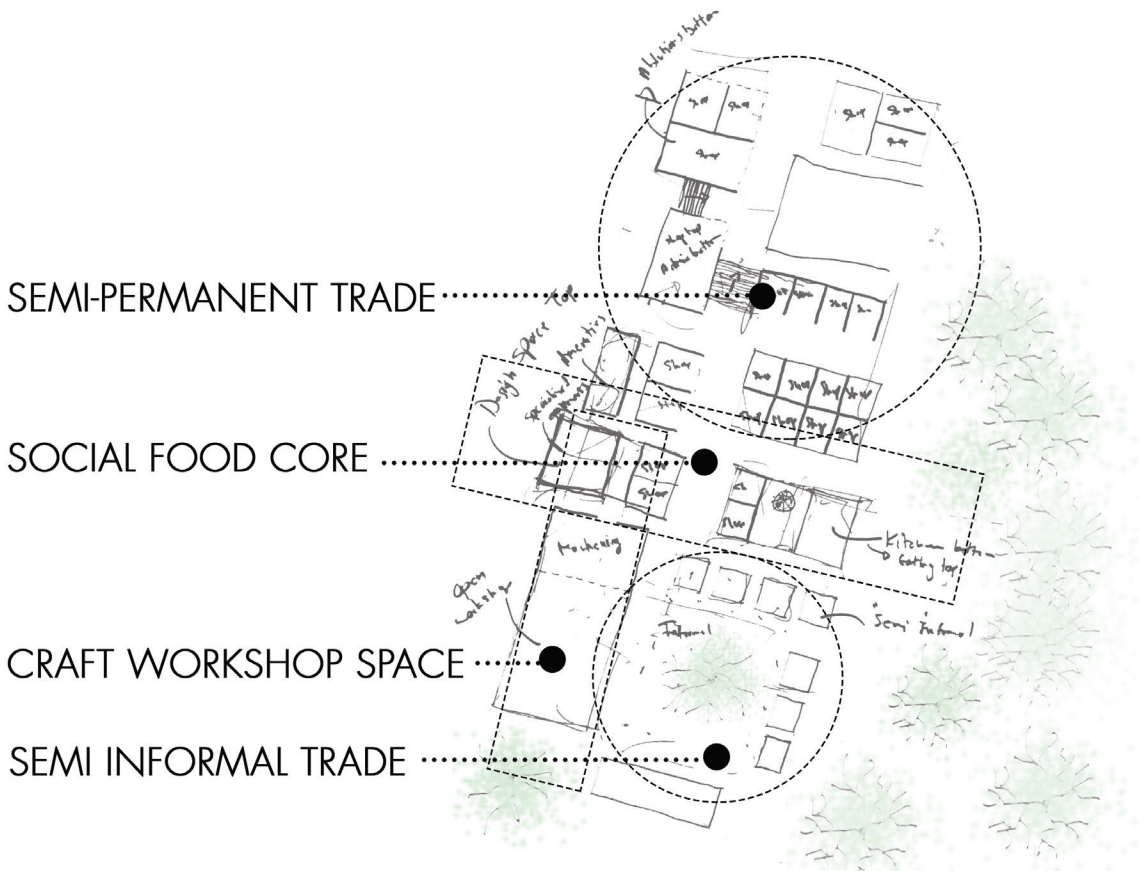


Figure 7.33 Floor plan exploration 1 of iteration 2 (Author)



Figure 7.34 Floor plan exploration 2 of iteration 2 (Author)

7.7

7.7.4 ITERATION 3

Iteration seven is a result of interpreting the conceptual approach, spatial intentions and critique of previous iterations into a structure that is contextual and inclusive. A simple structure that is open eliminates barriers and allows for visual diffusion. The roof form and scale, anchors the building as the civic centre point. As a separate element, the roof imitates the shed typology of Silverton into a more site specific form. The ground floor that hosts the retail spaces as independent pods is framed by columns without the use of walls. The roof introduces a new scale that differentiates controlled and free space. A new method of creating public space under a shelter that is continued from the poplar trees towards the interior of the building is imitated through form.

The scale of the infill is broken down to reflect the contextual suburban and historic context contained under a roof. Circulation is framed to connect the structure physically to the BRT station to the north and the neighbourhood to the south-west through the proposed promenade along the Moreleta Spruit. As the structure has no physical barriers and the relationship between the outside and inside space is distorted, the structure explodes and allows for movement to take place freely between building and context.



Figure 7.35 Roof development of iteration 3 (Author)



Figure 7.36 Model exploration of iteration 3 (Author)



Figure 7.38 Site plan development iteration 3 (Author)

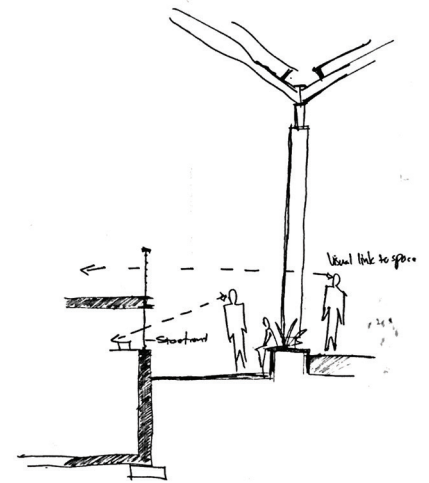


Figure 7.37 Shop exploration of iteration 3 (Author)

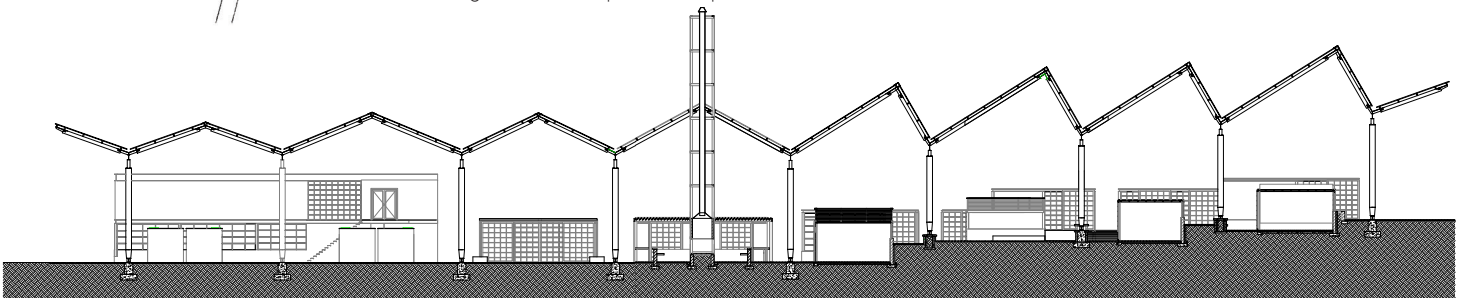


Figure 7.39 Section development iteration 3 (Author)

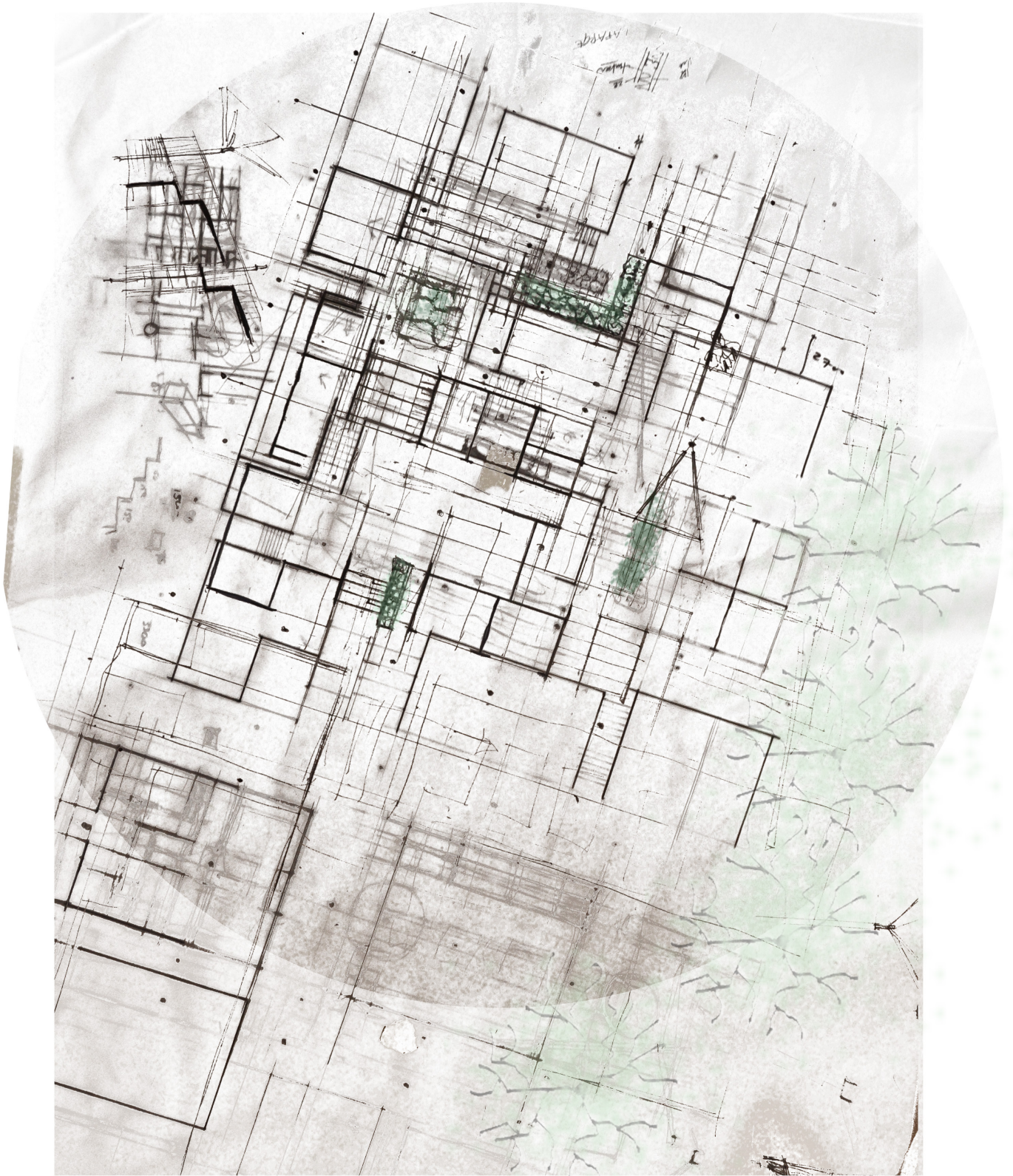
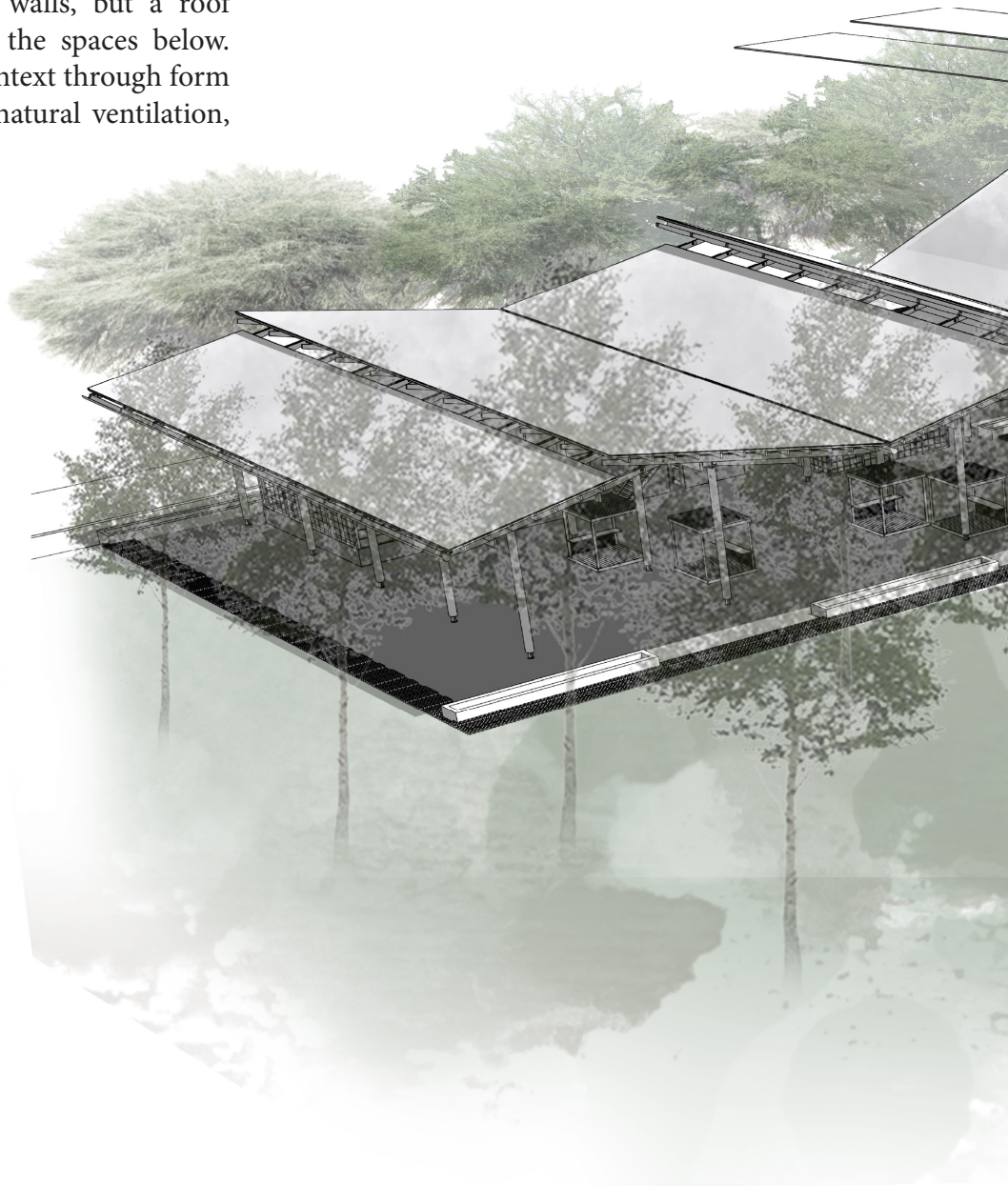


Figure 7.40 Floor plan development iteration 3 (Author)

7.8 DESIGN RESOLUTION

The final design resolution is explained in four spatial realms. The “Semi-Controlled”, the “Social Core”, the “Semi-Informal” and “Circulation”. The “Semi-Controlled” space is the threshold between Pretoria Street and the BRT station to the north. The “Semi-Informal” to the south serve as a platform that will host a more permanent market space or the “Flexible Retail” that relates to the existing Boeremark or “Informal Retail”. The social core is seen as the anchor point that bind these conditions through hierarchy by celebrating the social act of making food. The floorplan resembles a free collection of spaces that produces an alogism to controlled circulation. These conditions is contained not by physical barriers such as walls, but a roof structure that shelters and frame the spaces below. The roof is a continuation of the context through form and scale that is manipulated for natural ventilation, daylighting and solar heat gain.



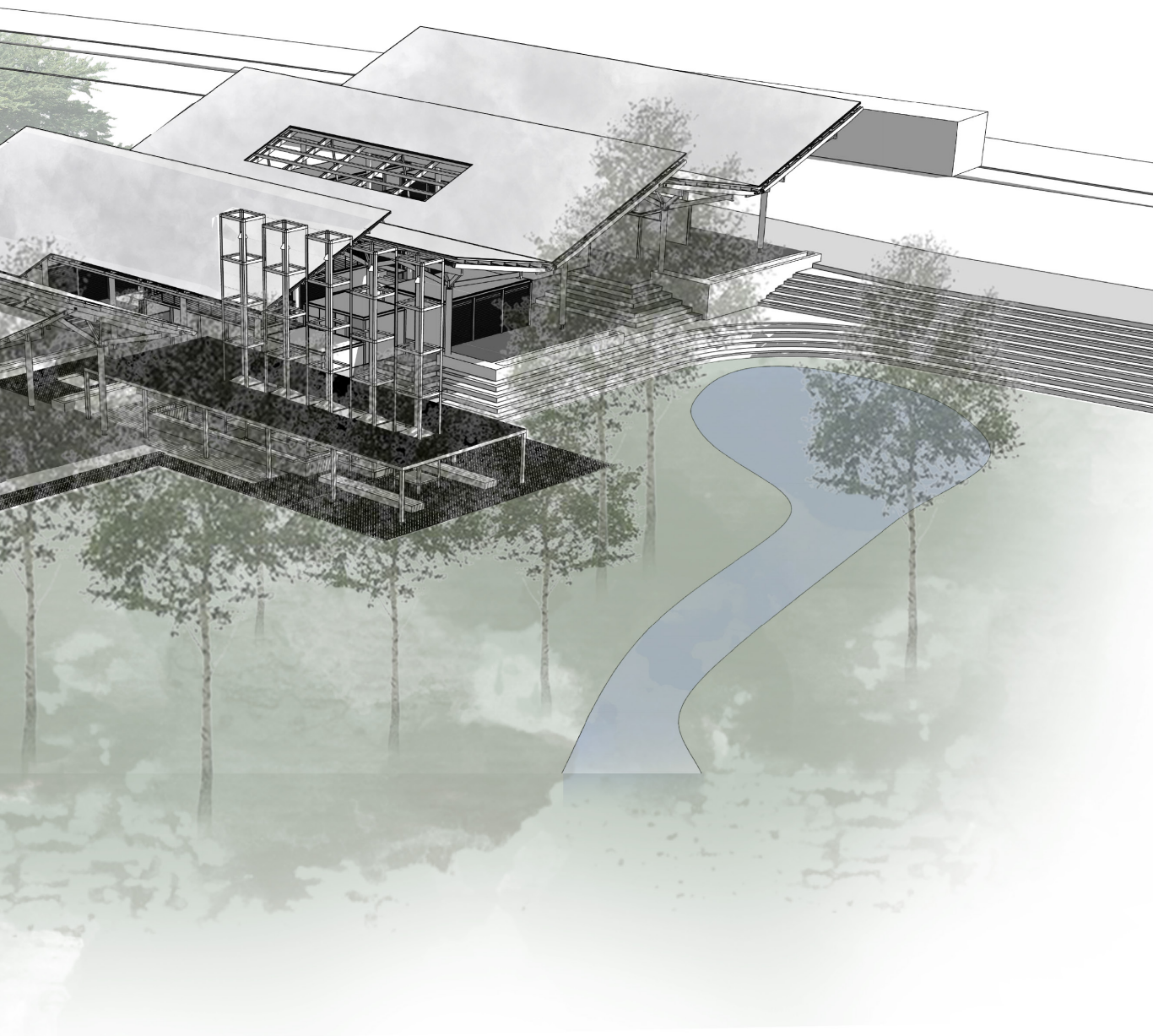


Figure 7.41 Axonometric view of proposed building (Author)

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Figure 7.42 Site plan NTS (Author)



Figure 7.43 Ground floor plan NTS (Author)

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7.8.1 PLAN RESOLUTION

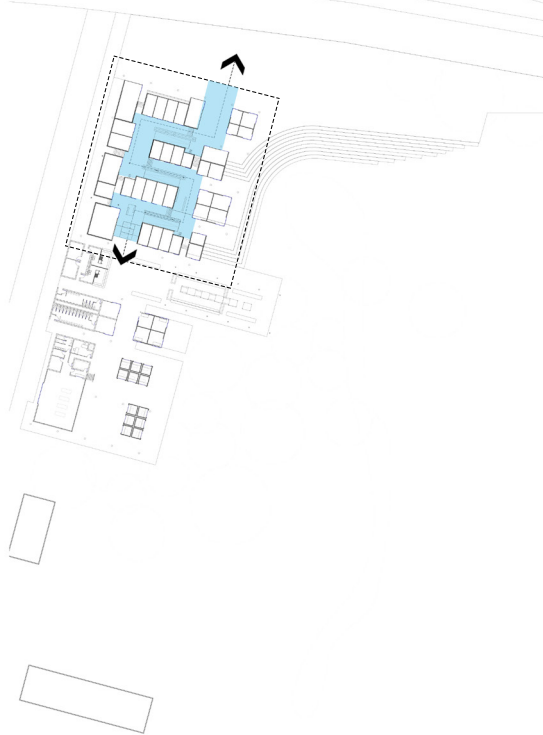


Figure 7.44 The semi-controlled space (Author)

THE SEMI-CONTROLLED SPACE:

The semi-controlled space is a defined circulation space that serve as threshold and leads people from the street edge into a greater civic space. The floor is sculpted to allow for a visual connection between person and destination throughout the journey. This portion will host semi-flexible retail pods or “pop-up shops” that should be able to adjust according to the requirements of the tenants.

THE SOCIAL CORE

The social core serve as threshold and anchor point between the more controlled and informal spaces. It creates hierarchy as primary communal space that connects the inside and outside public spaces. The programme aims to celebrate the making of food as social activity. It is a structured space responds to the informality of the Boeremark. It includes a communal braai area, formal and informal café and restaurant spaces.

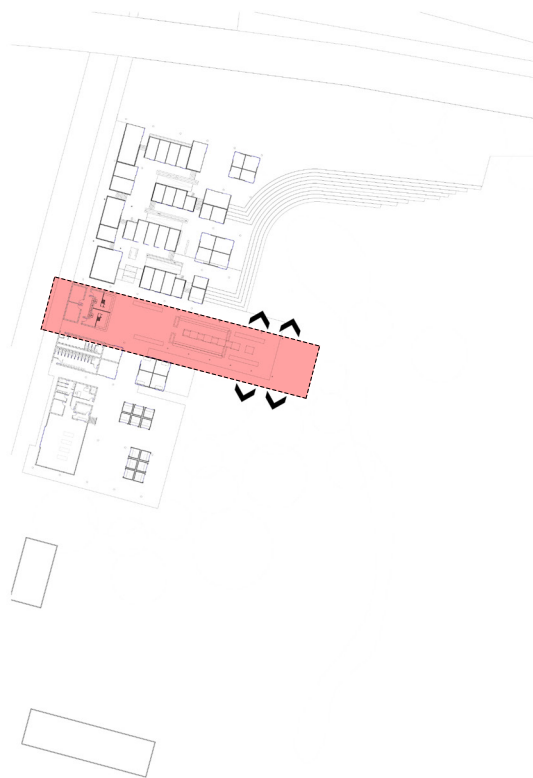


Figure 7.45 The social core (Author)

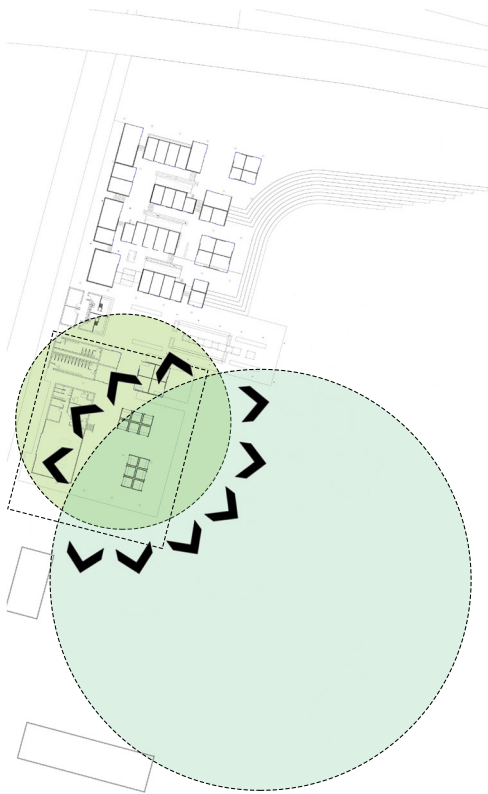


Figure 7.46 The semi-informal space (Author)

THE SEMI-INFORMAL SPACE:

The southern portion of the structure serve as the semi informal retail space. The scale of the roof at this portion aims to recreate the scale and spatiality of the surrounding poplar trees to distort the threshold between the interior and exterior. The programme consist of flexible and temporary market stalls that can be adjusted and moved as needed. This space allow for the informal Boeremark to spill into the building so the structure and open space can function as an entity.

CIRCULATION:

As part of the urban and site vision, the Moreleta Spruit is activated as a spine that will connect the site to the surrounding neighbourhood through a production route and promenade. As people, products and materials move along this route the structure should frame the circulation to connect the site to its context and to make the space easily accessible. Though the main entrance is situated to the north alongside Pretoria Street at the site of a proposed BRT bus station and taxi rank, the project aim to as far as possible distort the idea of controlled circulation. The movement of people and products are not seperated to reflect the concpetual aim of "expose" as discussed in chapter 6.

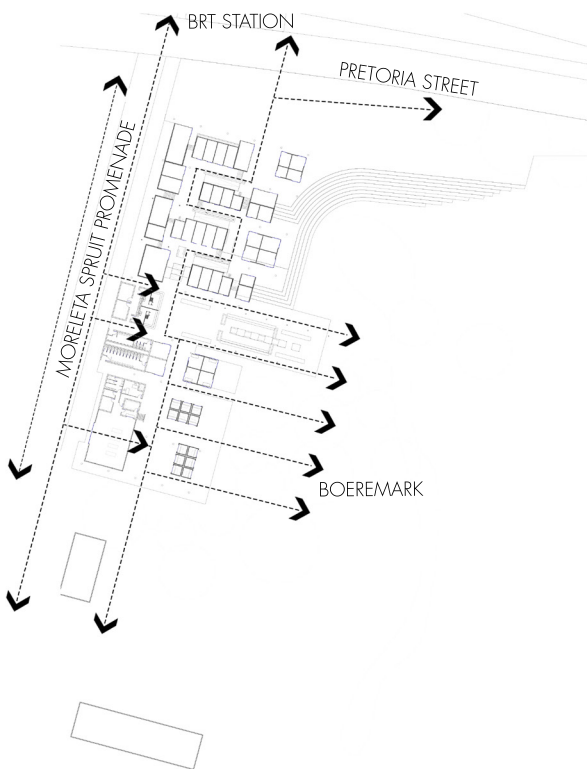
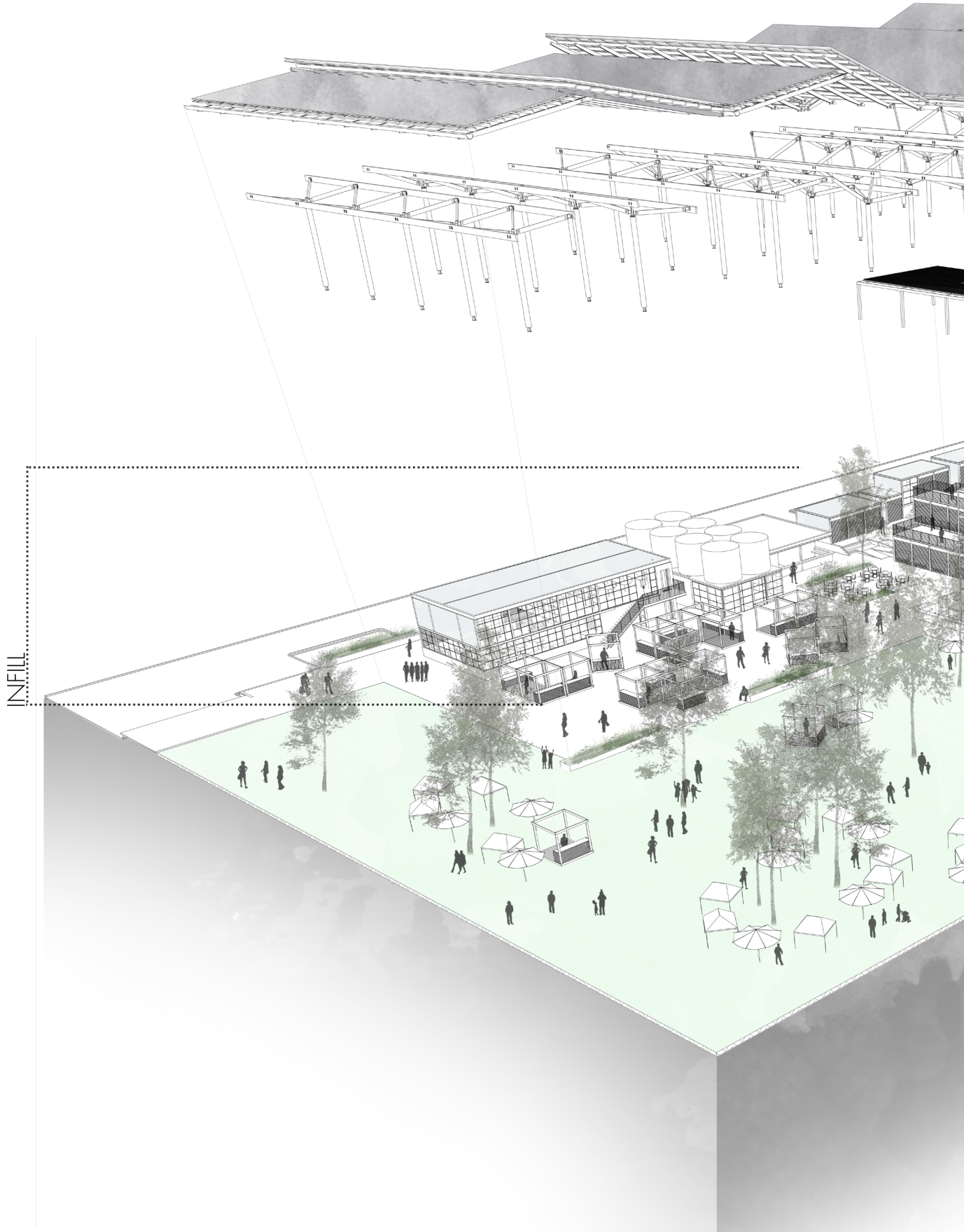


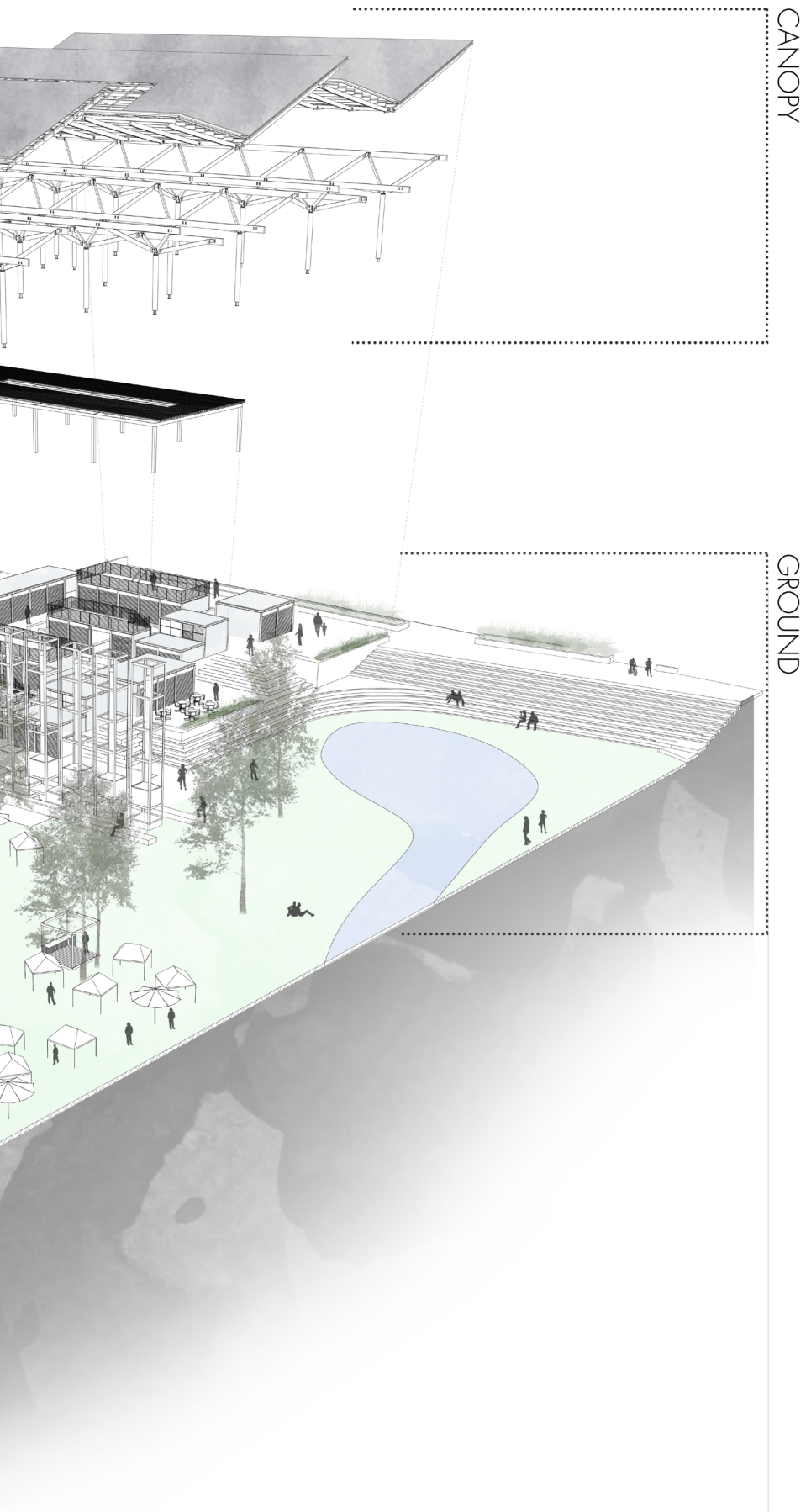
Figure 7.47 Circulation (Author)



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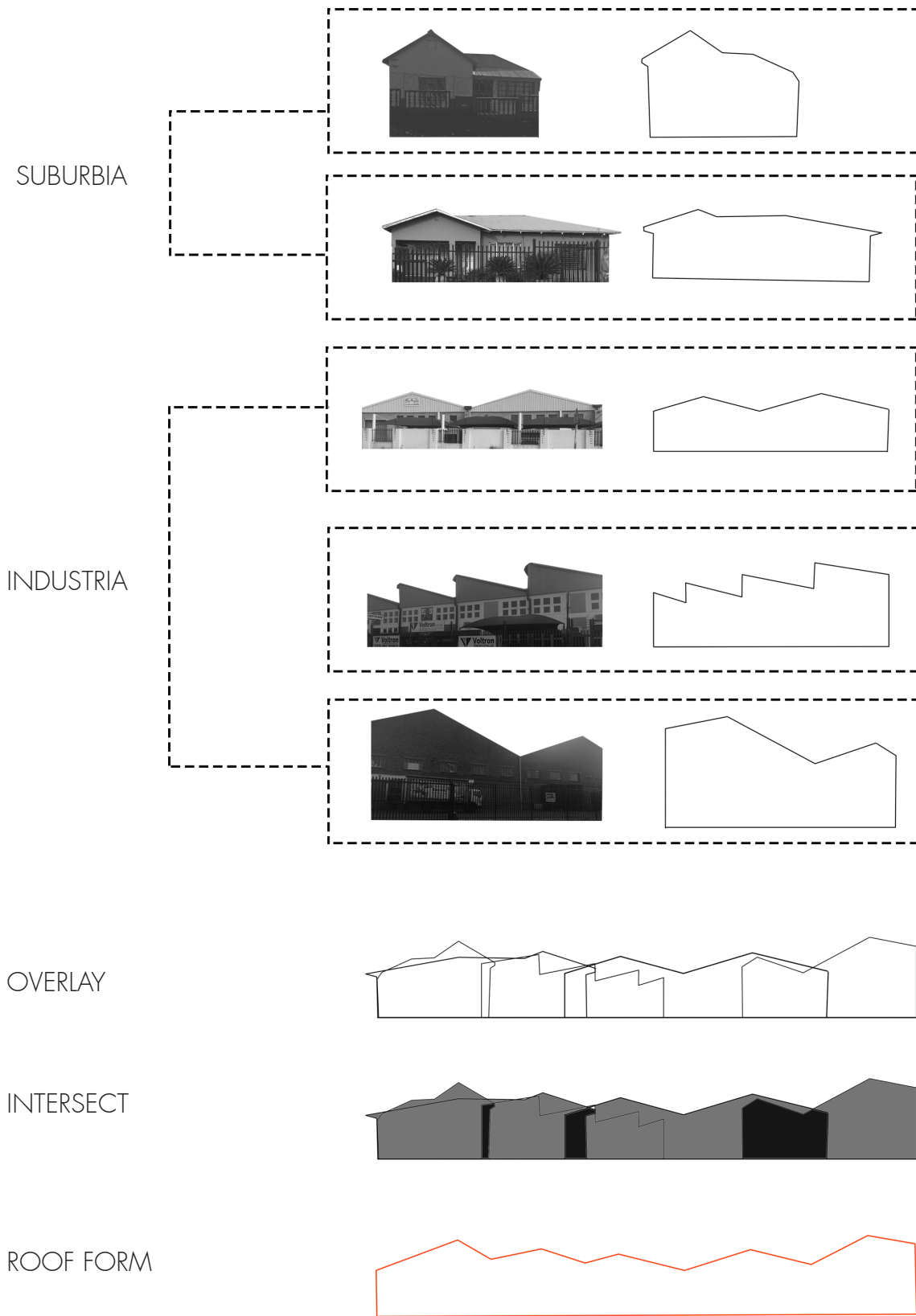
INFILL





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7.8.2 ROOF FORMATION



A continuation of the context

7.8.3 RETAIL SPACE RESOLUTION

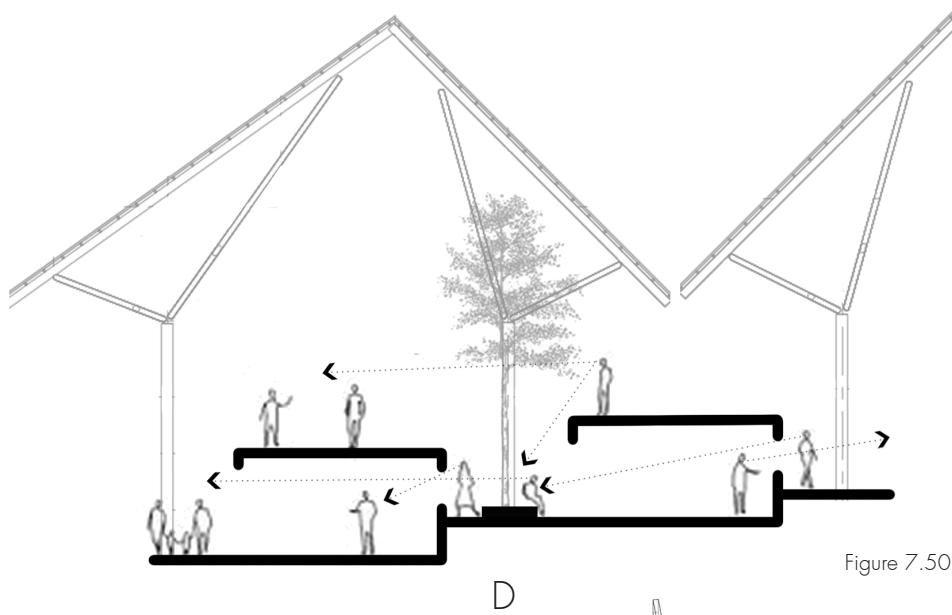
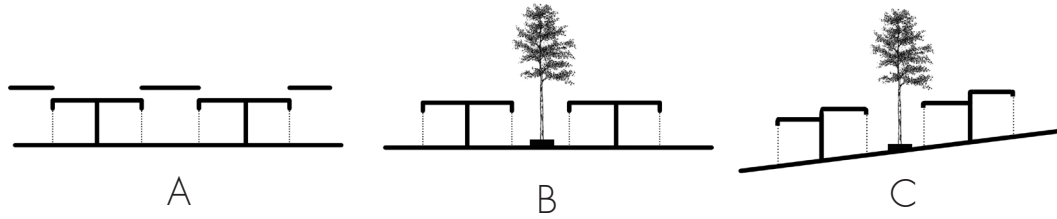


Figure 7.50 Retail space formation (Author)

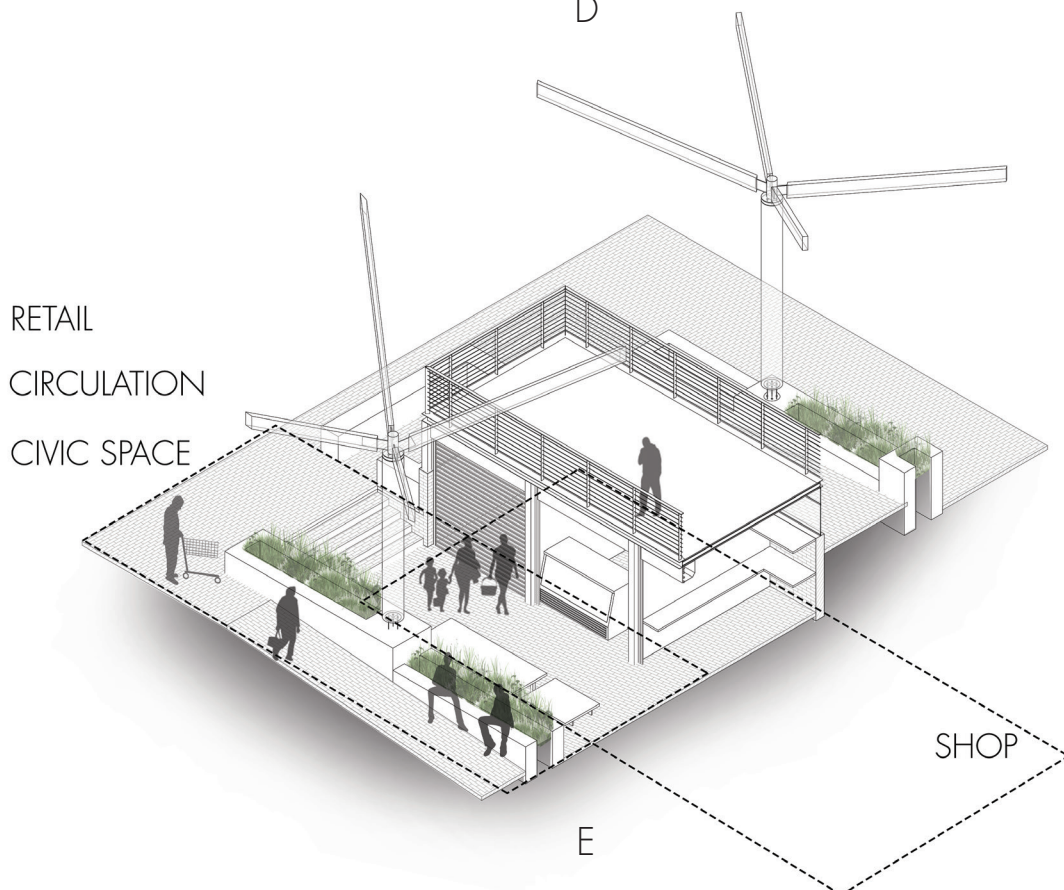


Figure 7.51 Retail space resolution (Author)



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Figure 7.52 Interior perspective exploration showing retail space and circulation (Author)
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