Food, place & people

Towards a spatial experience inspired by Marabastad's food culture

MInt(Prof)

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For Lexie and Nyanya

PROJECT SUMMARY

DISSERTATION TITLE:	Food, place and people: Towards a spatial experience inspired by Marabastad's food culture
PROJECT DESCRIPTION:	Catalyst for the acknowledgement and commemoration of Marabastad's food culture whilst promoting social interaction in a food complex North of Marabastad
PROGRAMME:	Experiential Kitchen
SITE LOCATION:	Virtual site derived from the dissertation titled Layered Potential: An integrated capital exchange, completed in 2018 by Robert Renton consisting of various spaces for food production and consumption
SITE LOCATION:	Daspoort Ridge, North of Marabastad, across the railway loop adjacent to Belle Ombre station
ADDRESS:	Daspoort Sewage & Waste Water Treatment, Staatsartillerie Road, Daspoort. (Historic Old Marabastad)
GPS COORDINATES:	25°44'00.3"S 28°10'31.2"E
RESEARCH FIELD:	Heritage and Cultural Landscapes
CLIENT:	Farm this City
KEYWORDS:	Food culture, social interaction, ritual, sensorial experience, experiential design, interior design

Submitted in partial fulfilment of the requirements for the degree Master of Interior Architecture (Professional) to the Faculty of Engineering, Built Environment and Information Technology.

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In accordance with Regulation 4(e) of the General Regulations (G.57) for dissertations and theses, I declare that this dissertation, which I hereby submit for the degree of Master of Interior Architecture (Professional) at the University of Pretoria, is my own work and has not previously been submitted by me for a degree at this or any other tertiary institution.

I further state that no part of my dissertation has already been, or is currently being, submitted for any such degree, diploma or other qualification.

I further declare that this dissertation is substantially my own work. Where reference is made to the works of others, the extent to which that work has been used is indicated and fully acknowledged in the text and list of references.

Audrey M Nanjala

ABSTRACT

This study is an investigation into the links between food, place and people and how the resulting exchange influences the production of an interior artefact. Marabastad as the immediate physical context of the selected site of intervention, plays an important role by being presented as a place where Southern African food culture is present, characterised by specific food practices and techniques. Although a distinct character, it often goes unacknowledged and underappreciated which can be attributed to emotional and physical barriers hindering its celebration.

In an effort to address current concerns within Marabastad's food cycle, an architectural proposal was put forward for an MArch (Prof) dissertation in 2018, proposing to use the latent potential of an adjacent site by introducing a building complex that facilitates for a hybrid interaction of nature, culture and industry. This resulted in a site that accommodates for the full food cycle focusing on an integrated natural and productive landscape (Renton, 2018: IV). This is therefore used as a virtual site for this study.

The focus, however, is on one building within the complex which presents the opportunity to investigate adjacent Marabastad's food practices and how factors such as people and place can influence its transposition onto the new site. The aim of the design project, therefore, is to investigate how space can be used to represent and enable intangible rituals as ingrained in Marabastad's food culture thus providing a tangible spatial and sensorial experience.

Design development is focused on the potential of food spaces to serve as facilitators for social interaction, this including specificity of the kitchen layout to support individual ritual relating to food interaction. This is dependent on tools such as flexibility and craftsmanship to allow for appropriation of space to support ritual. Therefore, the technical investigation is an inquiry into how methods of flexibility and craftsmanship can support multiple kitchen typologies to facilitate different rituals of food preparation and interaction. This will be presented to include an introduction of two vendors, their menus and specific rituals relating to their menus. This will be followed by an illustration of how the stalls can be appropriated to function as desired by individuals. In its completion, the study proposes to provide an interior space that embodies the food culture of Marabastad thus becoming a place where people can make meaningful connections.

KEYWORDS:

Food culture, social interaction, ritual, sensorial experience, experiential design, interior design

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1_STUDY PROPOSAL

1. INTRODUCTION

This dissertation seeks to investigate the role of design in facilitating the exchange between food, place and people. The focus on these three elements was influenced by an already existing structure of interaction present in Marabastad. The site as an extension of this identity rather than being at the centre of Marabastad lends the opportunity to investigate how transposition of culture in space can influence people's perception and in turn facilitate a celebration of said culture.

In this chapter, the study's groundwork is set by outlining its background informing the design and research problems to be addressed by the objective of the project. The research method is also included to delineate the thought process as well as briefly describing the challenges and consequences as anticipated. To conclude, an overview of the study's structure will be highlighted.

2. BACKGROUND

The architectural proposal as presented by architectural student R. Renton (2018) is such that the resulting complex serves as a destination in which a diverse group of people can converge to interact and experience the food culture of Marabastad. In addition to this, by introducing programmes such as a greenhouse, fruit processing plant and food waste processing plant, the complex fills the identified gaps in Marabastad's food cycle. Therefore, the complex embodies a place that possess knowledgeable value to the people of Marabastad as well as serving as a 'safe' space for people seeking to explore and engage in Marabastad's food culture.

The site as further unpacked in section 2.3 below, reveals the multiple categories of the complex. This includes the following: administrative, educational, industrial and social which are a culmination of several buildings' clusters. This study zooms into the social edge which currently consists of a tasting pavilion, test kitchen and fresh produce market which will be re-oriented to improve on their functional relationship. The existing test kitchen will be the focus of intervention to a detailing level, limiting the work on the adjacent buildings to a zoning exercise to support the new programme and overall design intention.

3. PROBLEM STATEMENT

An analysis of the site gave insight into some shortcomings as discussed in section 2.4, particularly of the social edge where it is noted that the resulting space does not embody the identity of Marabastad, there are missing functional links between the buildings and it is generally closed off and does not meet the criteria of a social space. Furthermore, a comparison study of what is existing in Marabastad versus that of the new addition reveals a missing link especially with regard to specificity such as rituals that characteristically define how the food spaces are used and experienced by the various users in question. It is this lens that is therefore adopted to guide the approach of this study, where rituals and interaction patterns will be used to express an interior that embodies the food culture of Marabastad. In addition to this, the viability of social interaction as a resultant effect will be presented thus advancing the complex as a destination aiming to ease its visitors into further exploring Marabastad.

4. RESEARCH QUESTIONS

The following questions are derived from the above-mentioned issues of the underappreciated food culture of Marabastad, the effect of introducing new spaces in already established communities as well as the role of interior design in maintaining and continuing of cultural identities.

4.1. Main research question

How can the introduction of an interior that embodies Marabastad's food culture in an adjacent food complex act as a catalyst for its celebration and promotion of social interaction?

4.1.1. Sub-questions

1. Theory:

How can food culture influence the articulation of space and place to facilitate experience and interaction that in turn expresses place identity?

2. Context:

How can the selected site be adapted and altered for it to reflect the identity of its immediate context resulting in meaningful connections with the existing food culture?

3. Design:

How can interior design methods of meaning making embody an interior space with cultural meaning to encourage a commemoration of Marabastad's food culture?

5. OBJECTIVES

1. To explore the potential of connecting people to place through the celebration of its food culture and practices.
2. Place the study within the food realm establishing it as an informant in the making of an interior.
3. Establishing phenomenology as a design approach informing spatial articulation to enhance the experience and interaction with people and food.
4. Investigate rituals and interaction patterns around existing food spaces to result in space production methods to be used as spatial markers to influence user experience.

6. SIGNIFICANCE OF THE STUDY

Resulting from this study should be an interior artefact that is a representation of a wholesome sensorial experience. This involves including spaces, rituals and activities that not only facilitate social interaction but interaction with food as an object beyond consumption. This ensures that both the food and architecture are experienced beyond visualisation where one enables the other.

As the project is rather site specific, this study endeavours to highlight the potential of architecture to act as a catalyst for the celebration of Marabastad's food culture. By acknowledging this as a prominent part of its identity and its contribution to Pretoria's food network, it will enable the possibility of re-establishing Marabastad within its greater context as a significant district.

7. RESEARCH METHODS

1. Extended observation and Mapping

According to Zeisel (2006:159), observing physical traces involves looking at the physical surroundings in order to document previous activities to be measured by the researcher. These traces can then be used to infer reasons why the environment is as is, how people use the space and feel about their surroundings and how particular environments meet the needs and requirements of its inhabitants. These can further be used to formulate ideas around people, their culture, affiliations and way of presentation.

Elements such as by-products and adaptations of use, displays and public messages and context inform a useful departure point, where more information can be added accordingly. This method can prove useful as it is characterised by its imageable, unobtrusive and easy nature where methodical recording devices are used for documentation. These include: 1.) annotated diagrams, 2.) drawings, 3.) photographs and
4.) counting (Zeisel, 2006:160).

In addition to that, observing environmental behaviour is a method prescribed with varying observer's vantage points. Due to the nature of the site, the position of recognised outsider and marginal participant were adopted. However, this presents a challenge where subjects having known as observed could have altered the way the act (Zeisel, 2006:197). This will further be discussed in section 1.8 below. In being a marginal participant, the researcher acknowledges her personal experience as influencing the research findings. This method is characterised by its empathetic and variably intrusive nature with the addition of maps, videotapes and films as recording devices (Zeisel, 2006:192).

This method enables the author to systematically watch people use their environment and document their actions, activities, how they relate to each other spatially, how spatial relations affect participants as well as how the environment supports or interferes with behaviours taking place within it (Zeisel, 2006:191).

2. Semi-structured interviews

The Department of Architecture has a blanket approval for all MProf studies as set out in the ethics application. This study falls within the approved category as it does not involve vulnerable people that may be compromised by the results of any data collected on site with their help. Therefore, general questions were set out to guide semi-structured interviews employed on site.

As a means to further engage, understand and define the eminent food culture, semi-structured interviews will be undertaken to include all stakeholders. This will include but not limited to interviews with community watch officials, food vendors, commuters and consumers. This is an effort to include a wide range of user groups in order to comprehensively define their narratives and how they fit within the food culture context.

3. Literature Review

Hofstee (2006:121) states that literature reviews are used to "produce a new perspective on what has gone before". He continues to note that when combined with a dissertation statement and intention, these literature reviews can be useful in establishing a field of study, and a platform from which to evaluate the study (Hofstee 2006:212).
The theoretical premise of this dissertation is therefore based on literature engagement with theories on food culture, place and meaning making and designing experience based on human centered design. Guidelines and informants are derived from these and provide the theoretical framework grounding for the architectural response. Supporting information such as historical context, building requirements specific to program are also acquired through literature review.

4. Precedents

Groat and Wang (2013:418) define a case study as an empirical enquiry that investigates a phenomenon or setting. Such studies allow the discovery of principles that have been used in the past, and also, when multiple sources are referenced, common errors are highlighted (Hofstee 2006:123).

Relevant architectural precedents both local and international will be selected based on theory, design intent and technical articulation followed by a critical spatial analysis informed by similar criteria. These serve as informants for spatial exploration and analysis of the selected virtual site in addition to aiding in identifying gaps and opportunities that can be explored in the proposal thus adding to the significance of the study.

5. Iterative design process

The iterative design process involves a back and forth process where design guidelines and informants derived from the above discussed methods are used as criteria to measure the feasibility of the spatial articulation. This includes adapting and altering the space to best achieve the set out criteria. After which the technical aspects of the design will be investigated further adjusting and improving the design to meet the set standards based on context, theory and precedents.

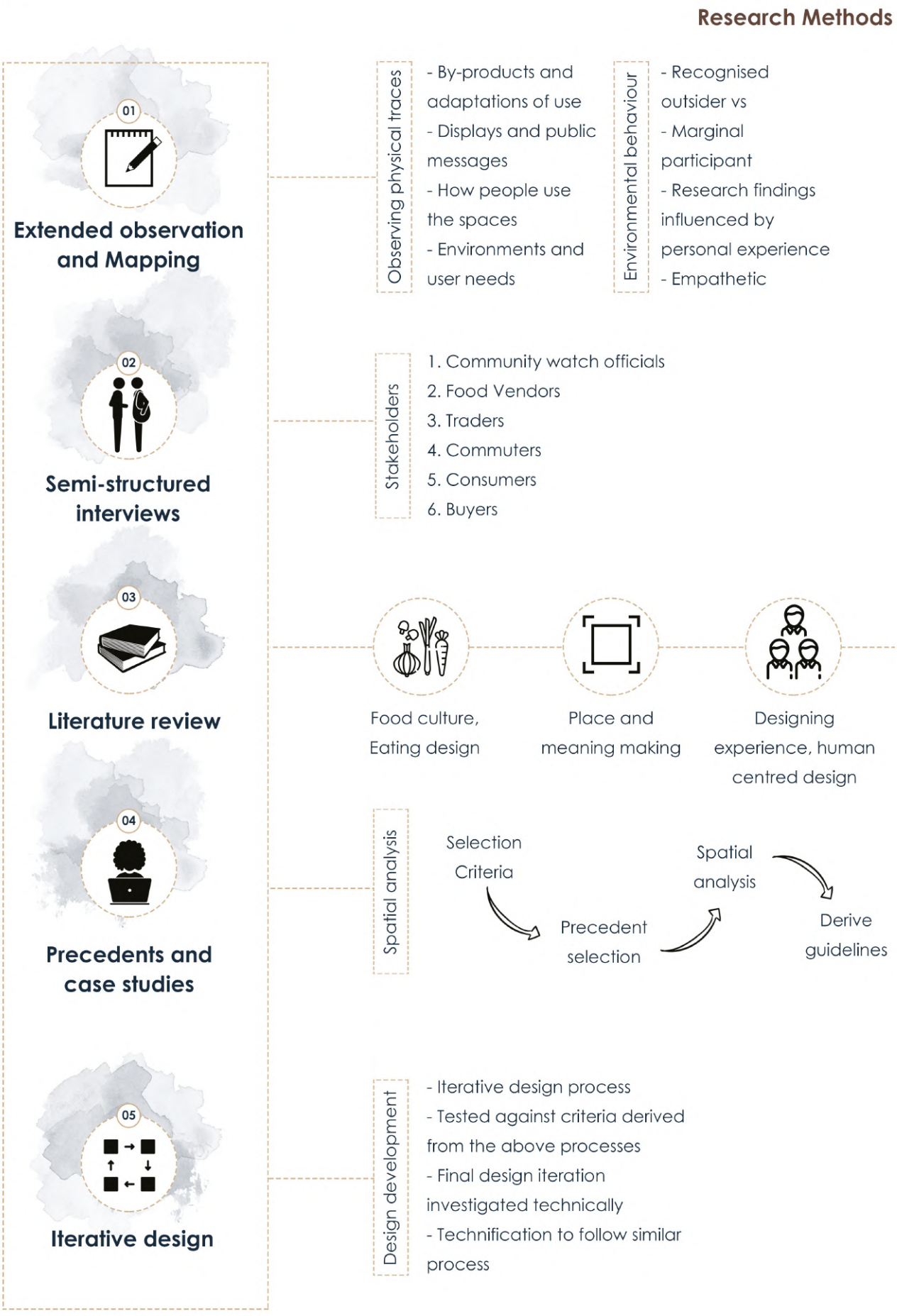


Figure 1.1: Image outlining the research methodology

8. LIMITATIONS AND DELIMITATIONS

8.1. Limitations

1. Language barrier

As a recognised outsider seeking to participate in the study environment and conduct interviews, language may present a hindrance that may affect data collection. As an effort to curb the foreseen deterrent, the author may request the assistance of a person of shared language to conduct the interviews and video recording. There will also be reliance on secondary data where need be.

2. Nature of the site

As this project makes use of a virtual site, there is limited access to physical information available. However, the author has access to Renton's (2018) dissertation, drawings, 3D digital model and images. This will be used to examine the site and understand the project's intentions and further defining the author's contributions.

8.2. Delimitations

1. Interior intervention

As previously noted, the building complex comprises of several buildings, however this study will be limited to the existing test kitchen within the social edge. The other two (tasting pavilion and fresh produce market) will only be addressed on a zoning level where spatial changes will be proposed to align with the research findings and project's intention.

8.3. Assumptions

Although the study is based on a virtual site, the building will be viewed as a built project with the assumption that all the architects design decisions were implemented as indicated in the published documents. The implications are such that any programmatic changes proposed within this study will be as a result of identified opportunities in the larger context from the author's design perspective.

9. OVERVIEW OF STUDY

The iadjacent image outlines the sequence in which the narrative of this project will be presented in this document

Figure 1.2: Overview of study

10. DEFINITIONS

a. Culture: Denotes to the entity encompassing all human phenomena not determined by biology. However, for this study's purposes, it will be defined as a semiotic concept which simply means that culture is considered as the sharing of information with cultural gestures that carry meaning which can be understood by those who perceive them (Königk 2015:7).

b. Food Culture: The outlook on food as it relates to its context within rituals of production, distribution and consumption (Vally, 2014:8).

c. Social Friction: The singularity that heightens consciousness of difference via engagement of differences between multiple sets of people through productive confrontation and conflict and can be used as a mechanism for social interaction that supports exchange between the varied social clusters (Kachwalla, 2010:4).

d. Ritual: An act that is methodical, symbolic with or without cultural significance and full of meaning to the performers and participants (Collins, 1998:1).

11. CONCLUSION

In this chapter, the project intention was briefly introduced stating that this study seeks to use a variety of methods but most importantly interior design methods of cultural production to provide a space that embodies the food culture of Marabastad, making the interior a place of meaningful interactions. The interior therefore serves as a mediator (place) where the body (people), interacts with an object of meaning (food). This will be an exploration of the relationship between the tangible and intangible aspects of cultural production, whilst providing for an exchange between architecture and the community it serves. In so doing, the space becomes a catalyst for the acknowledgment and celebration of the rich food culture of Marabastad.

2_CONTEXT STUDY

1. INTRODUCTION

The following chapter is an investigation of the context across board from the urban environment to the selected buildings for intervention within the architectural complex. The urban context will be considered as an informant and derivative of the food culture to be interpreted in the selected site. The analysis will therefore be limited to components deemed appropriate as components of food culture.

This will be followed by an introduction of the virtual site outlining the architect's intention and how that translated spatially. In addition, programs and systems will be delineated to highlight the workings of the site and SWOT analysis (Fig. 2.35) to determine opportunities which will dictate this study's point of intervention.

Finally, a spatial analysis of the selected buildings will be undertaken based on contextual, pragmatic and programmatic issues. This will provide the basis of the design development strategy.

2. MACRO: MARABASTAD

The point of departure for this section is a comprehensive mapping of the food culture of Marabastad as this informs directly the identity of the design intervention. This data was compiled after a series of site visits over a couple of weeks to capture the full essence of Marabastad's food culture. Documentation of data is therefore presented using mixed media.

2.1. Locality

Marabastad is a business district located 2.3 km off Pretoria's central business district on its North-western periphery, south of the Apies River. It can be characterised by its identity as both a highly transit and commercial node, where businesses conducted are a mix of both formal and informal trading concentrated around transit nodes in the area (Brandt, 2002:222).

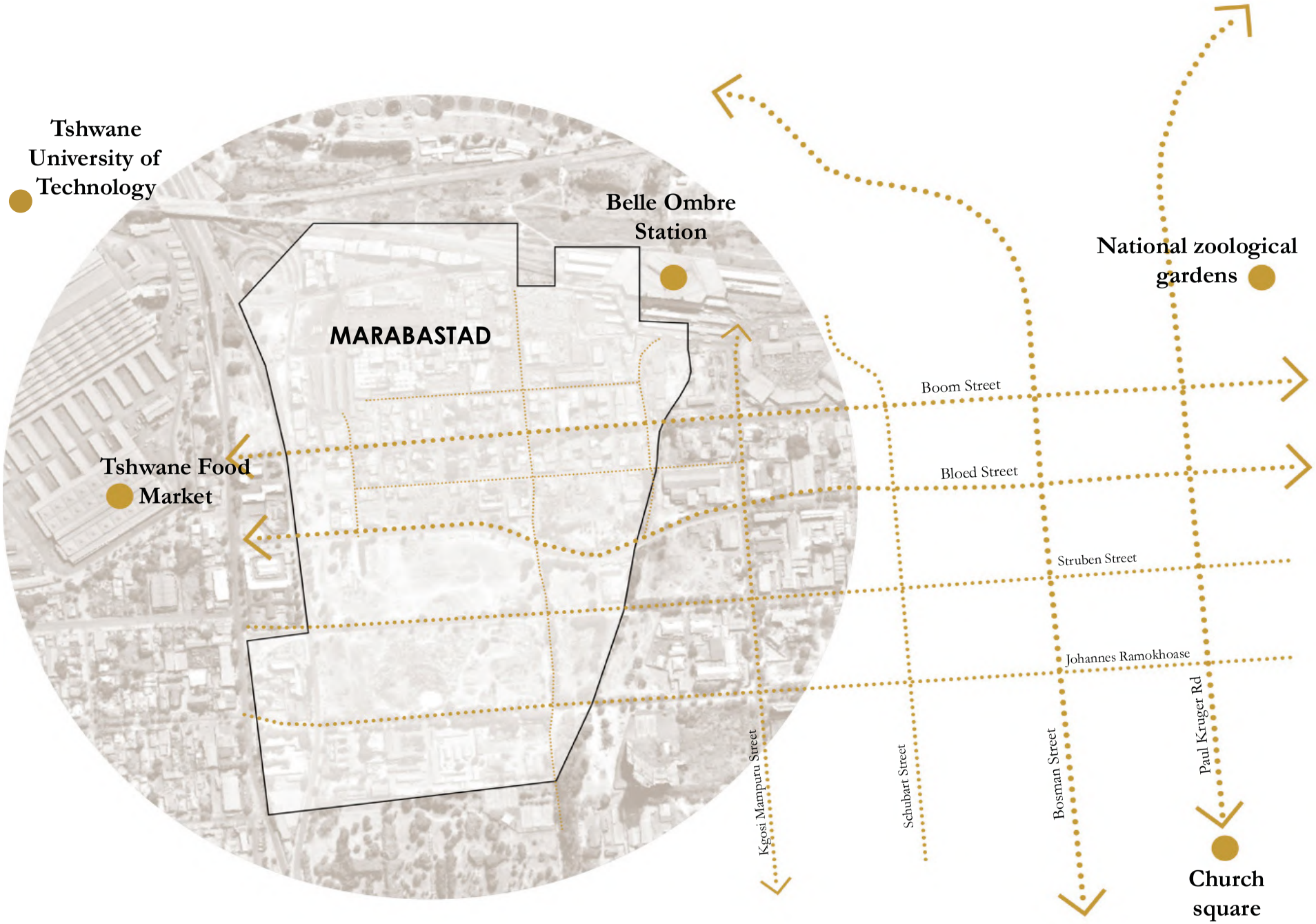


Figure 2.1: Marabastad within the greater Pretoria region

2.2. Historical context

Marabastad's existence can be dated back to over 120 years when it sprung as one of the many satellite communities on the peripheries of Pretoria during the 19th century (Clarke, 2008:15). Between 1870 and 1975, the greater Marabastad consisted of 5 settlements namely: Old Marabastad, Schoolplaats, New Marabastad, Asiatic Bazaar and the Cape Location, each characterised by their inhabitants who then identified with their shared cultures. However, between 1912 leading up to 1975, the settlements were demolished leaving only the old Asiatic Bazaar (Clarke, 2008:13), now commonly known Marabastad.

1934

1965

1998

2018

Figure 2.2: Diagrammatic timeline of Marabastad

2.3. Approach and access

As seen in figure 2.3 below, Kgosi Mampuru Street (Pretoria Main Road) is the main thoroughfare into Marabastad. It connects two major transport nodes in and out of Pretoria; the Pretoria Station and Belle Ombre Station. Auxiliary roads stemming from the main road connect Marabastad to the East of Pretoria.

Once in Marabastad, it can be noted that main pedestrian access in is Boom Street along the East-West axis, this then streams into minor roads into Marabastad and towards the city center. Along these routes and street edges, food vendors have set shop servicing the pedestrian traffic.

Figure 2.3: Access routes into and through Marabastad

2.4. Food culture

According to Vally (2014:8), food culture is defined as the outlook on food as it relates to its context within rituals of production, distribution and consumption. Therefore, in order to understand the food culture of Marabastad, the above components as pertaining to the context will be discussed in this section.

2.4.1. Food spaces

This is a discussion of the spatial qualities of food entities. This section unpacks the mapping of the produce as well as the stall typologies followed by an argument of how they inform the food identity of Marabastad. This will be in twofold:

1. Types of food

- **Meals:** This is inclusive of stalls that service preparation of food and have seating areas
- **Fresh produce:** Fruit and vegetables for sale only
- **Indigenous foods:** Specific to Southern Africa
- **Refreshments and snacks:** These are processed foods, branded and repackaged to suit the needs of the commuters
- **Fast foods:** These are present in formalised areas and buildings

Here on after, the focus of food discussion will be limited to meals and activities and spaces that support its production, distribution and consumption. Where necessary, links will be drawn to the remaining categories.

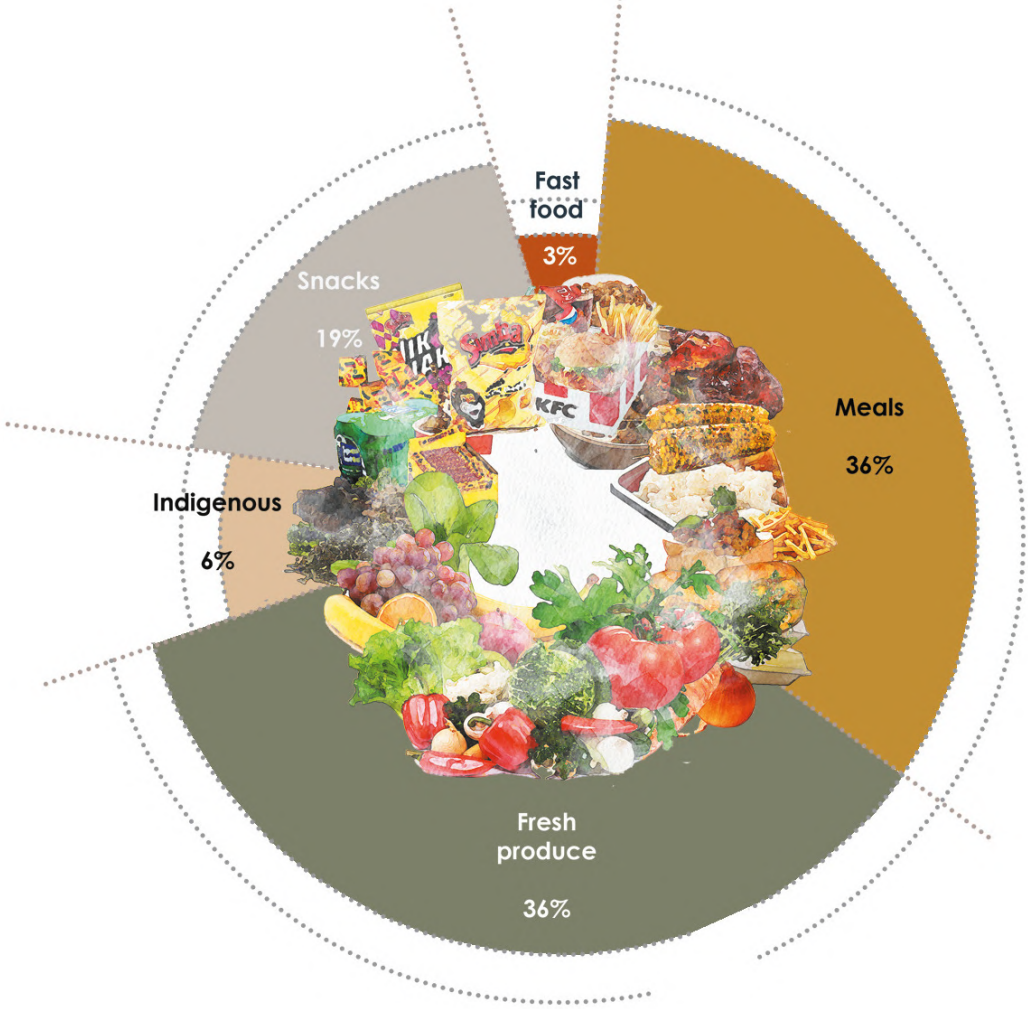


Figure 2.4: Marabastad's food produce chart

2. Food space typology

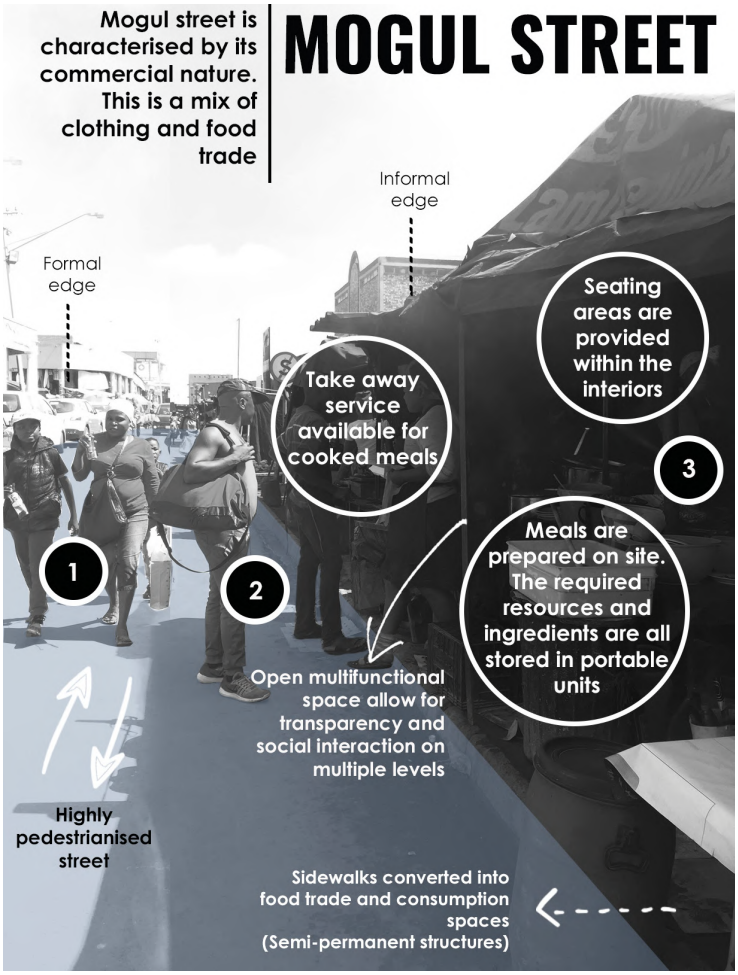
As already discussed, the trade scene in Marabastad and its surroundings is characterised by both formal and informal traders. However, the informal traders make a substantial contribution to the character of the areas in which they are present. This study is limited to their contribution to the food culture. This therefore limits the stall typologies that are analyzed and can be classified as below:

- **Permanent:** This denotes to provision made by the local government to serve food vendors.
- **Semi–permanent:** These structures are brought in by the vendors and assembled on site, they are identified by steel frames and canvases that are used as covering on account of changing weather.
- **Single equipment:** Depending on what the trader's needs are, they bring either a table or cooking equipment and set up on street corners then pack up at the end of the day.

These were further analyzed using existing spaces on site with the focus set on understanding the three main components informing the translation of the food culture, namely; ways of cooking, ways of sitting and ways of eating. Below is a photographic analysis of the selected spaces representing the three identified typologies. This will further be discussed in depth as part of the conceptual approach in section 6.2 to follow.

Figure 2.5: Map showing the concentration of food spaces in Marabastad

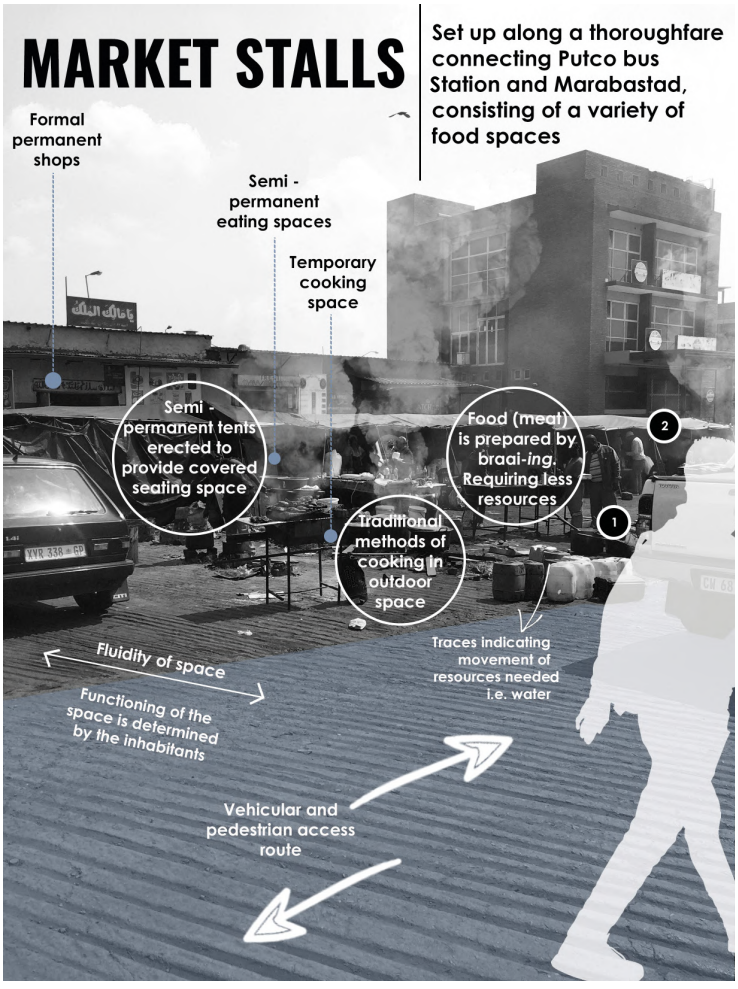
Figure 2.6: Concentration of food spaces in Marabastad based on the type of food being prepared, sold and consumed



A. Mogul Street

Mogul Street is characterised by its commercial nature. On one edge there are formal shops selling clothing items while the opposite side is set aside for eating spaces. This typology was analyzed in depth in order to document the intangible rituals defining the specific activities around food interaction. This is further discussed in section 6.2.1 to follow.

Figure 2.7: Photo analysis of Mogul Street's food stalls



B. Market stalls

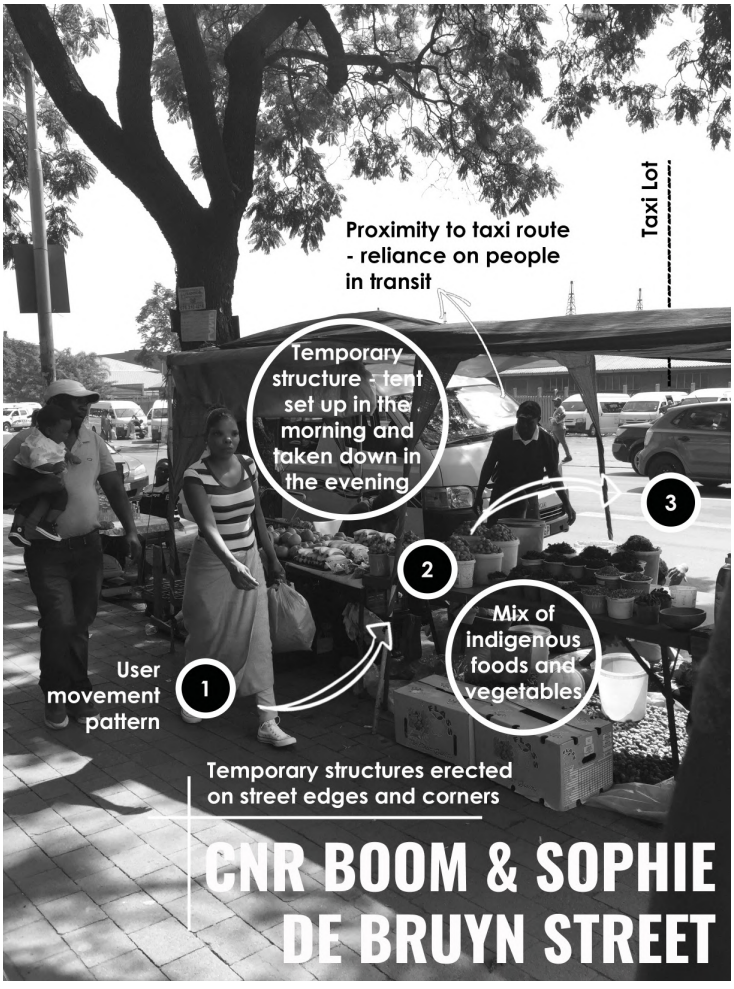
Set up along a thoroughfare connecting Putco Bus Station and Marabastad, consisting of various food space typologies. This includes formal permanent shops on the edge, semi-permanent eating spaces erected along the store fronts and temporary cooking spaces on the edge of the sidewalks characterised by cooking equipment.

Figure 2.8: Photo analysis of Market stalls' food spaces

C. Belle Ombre taxi rank

Like other food spaces around Marabastad, street vendors here appropriate street corners to capitalise on the pedestrian traffic leading up to the train station. Here, food is prepared using a single equipment and sold within the same space.

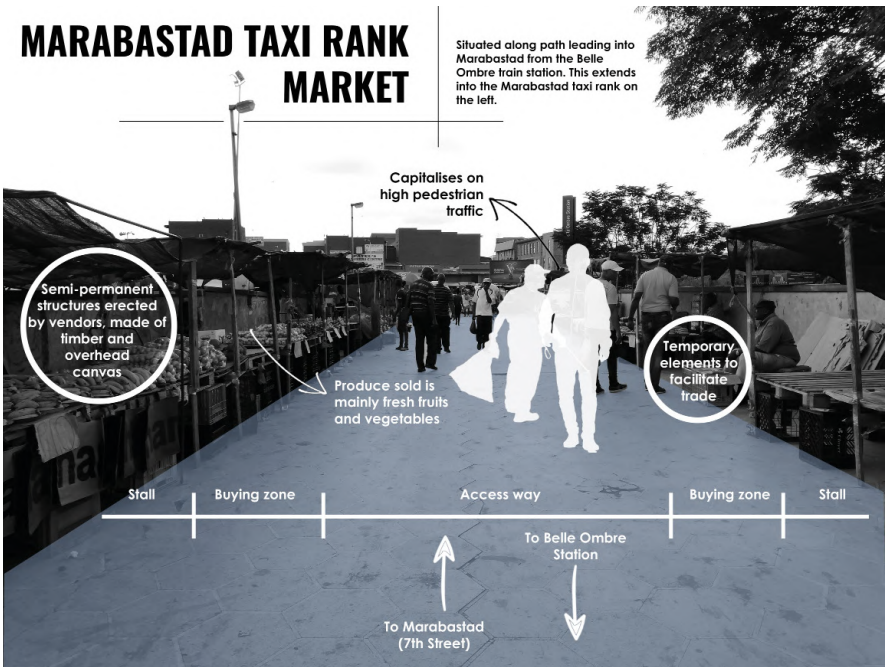
Figure 2.9: Photo analysis of Belle Ombre taxi rank food stalls



D. Cnr Boom & Sophie de Bruyn Street

Temporary structures are erected on the street edges and corners. These are set up in the morning and taken down in the evening and service mostly pedestrian traffic moving in and out of Marabastad. This stall sells a combination of fresh produce and indigenous worms and has a double connection to the pedestrians on either side of the stall.

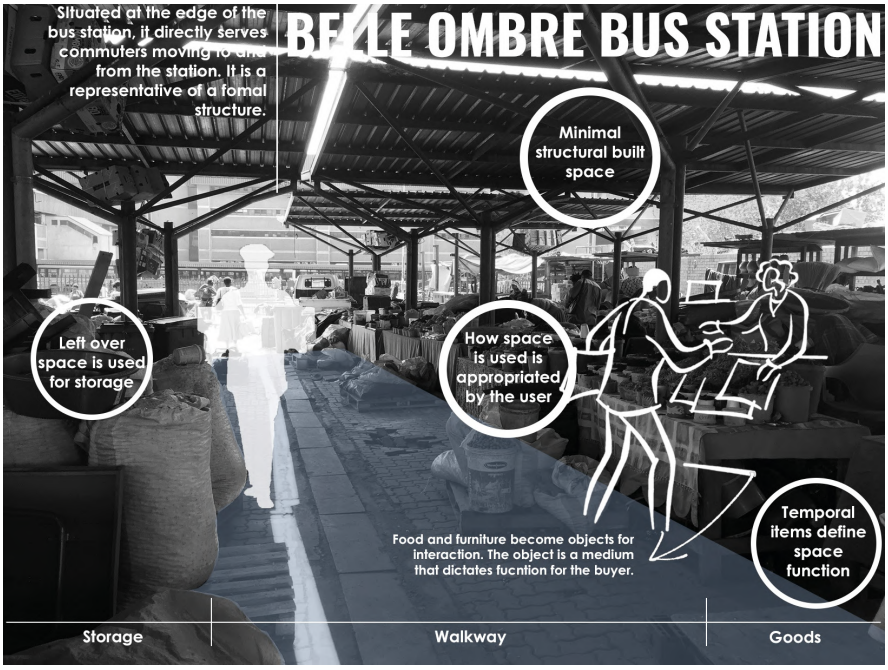
Figure 2.10: Photo analysis of stall located along Cnr Boom & Sophie de Bruyn Streets



E. Marabastad taxi rank market

Situated along the path leading into Marabastad from the Belle Ombre train station. This extends into the Marabastad taxi rank on its left. Activity here is limited to trading of fresh produce.

Figure 2.11: Photo analysis of Marabastad taxi rank market



F. Belle Ombre Bus Station

Situated at the edge of the bus station, it directly serves commuters moving to and from the station. This is a representation of a formal structure provided by the city to serve food vendors. Service here is limited to trading of raw foods, i.e. fresh produce and indigenous dried food

Figure 2.12: Photo analysis of stalls along the Belle Ombre Bus Station

2.4.2. Means of production

Different vendors have different techniques of food preparation dependent on the types of food being prepared. This section therefore unpacks the three categories of food production. Firstly, introduction of the foods being prepared, the techniques used for this and the tools needed for food preparation. It is expected that these methods may be present in other areas of food interaction in the region but will be considered a direct influence on the proposed interior.

1. Types of food and cooking techniques

This is limited foods being cooked in the identified stalls. This will be taken and adapted as a menu for the new interior. An understanding of this results in the new proposal drawing links between adjacent spaces of production and distribution, ensuring provision for the necessary equipment and spaces to support the food specific rituals.

Category	Type	Storage	Cooking method	Heat source
Proteins (Meat)	Beef	Refrigeration	Braai	Braai stand
	Lamb	Refrigeration	Braai	Braai stand
	Chicken	Refrigeration	Braai	Braai stand
	Chicken intestines and feet	Refrigeration	Stewing	Firewood lit fire pit
	Eggs	Open, dry	Boiling, frying	Firewood lit fire pit
Vegetables	Salads: Lettuce, cucumber, tomatoes, onions, beetroot, carrot	Refrigeration + Open and dry	Mixing	No heat sources required
	Kale, cabbage	Refrigeration	Stewing	Firewood fire pit
Starch	Pap	Open, dry	Boiling / Steaming	Firewood fire pit
	Rice	Open, dry	Boiling	Firewood fire pit
	Potatoes	Open, dry	Boiling	Firewood fire pit
	Buns	Open, dry	No preparation	No heat sources required
Beverages	Hot: tea, hot chocolate, coffee	Open, dry	No preparation	Firewood fire pit
	Cold: soda varieties	Refrigeration	No preparation	No heat sources required

Table1: Outlining the food types present in Marabastad and their respective preparation methods

From the table above, the following conclusions can be made:

- There is a limited selection of foods available. However, from the above list, vendors have selected a combination that works for them, i.e. as observed on site, not all vendors serve breakfast, while others only offer a selection of two types of meat.

- Cooking techniques are limited to two options. These have been selected to support the temporary nature of the stalls. Images of fire sources

- Sourcing and storage are dependent on adjacent buildings. This speaks to the linked nature of the food networks in Marabastad. The scale of the stalls also does not allow for all the programmes to be contained within a single space.

2. Tools of the trade

Having summarised the foods present, the next step is an introduction of the tools used in the preparation of them. This influences the types of storage spaces to be provided in the proposed interior. Mostly, wooden cooking utensils are used which can easily be cleaned and stored predominantly by hanging. Therefore, storage devices that take into consideration these methods should be considered.

Figure 2.13: Firewood as a source of fire

Figure 2.14: Cooking activities are visually accessible to customers

Figure 2.15: Washing hands as ritual

Figure 2.16: Braaing as a cooking technique

Figure 2.17: Eating with hands as celebrated ritual2

2.4.3. Ways of consumption

Consumption relates to how people eat both physically and the environment that facilitates these methods. Therefore this section will be a brief introduction to ways of eating and ways of sitting.

1. Ways of eating

As observed during the site mapping exercise, most vendors make provision for cutlery. However, the food being prepared is typically eaten using hands. Therefore, most customers prefer to eat using their hands. This is given consideration in the proposed interior as a significant ritual that adds to the experience of the food spaces in Marabastad, where cleansing stations will be provided to fully embody the ritual in the new space.

2. Ways of sitting

The sitting structure can be attributed to the scale of the stalls on a functional level, where long tables are provided to fit the maximum number of customers. In addition to that, where eating is considered a communal and social activity, this layout supports that ritual. This emphasises the notion of shared spaces and activities which are also to be celebrated in the interior proposal. Multiple group sitting typologies can be explored here in order to enhance the experience using design.

Figure 2.18; Food is displayed on a serving table where customers choose their meal from

Figure 2.19: Vendor serves customers from the service table

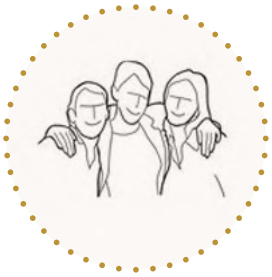
Figure 2.20: Communal sitting encouraging a shared experience

a. Wash

b. Serve

c. Eat with hands

d. Share



e. Communal

Figure 2.21: Ways of consumption and distribution

Figure 2.22: Marabastad as the central distribution point of food to the gretear Pretoria region

2.4.4. Distribution

Mapping exercise conducted have revealed the symbiotic relationship between transport and food nodes. As people move to and from transportation areas they scatter and congregate around areas of pause. The presence of food heightens the need to stop and engage with not only the physical environment but fellow commuters. This has resulted in a unique character to place that is not static as there is always movement of either goods or people into them. It can therefore be concluded that food acts as medium that encourages various interactions.

The Tshwane Food Market located on the western edge of Marabastad along Es'kia Mphahlele Drive is a fresh produce market division that provides a central distribution system primarily for the city (Tshwane, 2015). According to a study, 80% of street vendors in Marabastad buy their goods from shops and wholesalers in Marabastad (Brandt, 2002:229), this is indicative of the existing relationship between the formal and informal traders. This relationship has further been extended by other street vendors in various districts around Pretoria that source their fresh produce from vendors in Marabastad. This continuous movement of fresh produce from Marabastad to its various destinations constitutes a noteworthy food network system.

On a smaller scale, methods of service should also be considered as a means of distribution. This allows the proposed design to be viewed as an intervention that provides for all rituals inclusive of service methods. It was observed that most vendors do both the cooking and the serving. This is done from a central display table where customers can select from what is available and the vendor does the serving. In addition to this, some vendors have assistants who serve and clear the table when the customers are done. There is also provision for both sit-in and take-out customers.

2.5. Conclusion

This section serves as an introduction to what will be coined as the food culture of Marabastad throughout this document. This has been set out in a manner that allows for the information to be unpacked from a larger to a more intimate scale. Where the discussion falls short, more will be added in the conceptual approach chapter where more details will be explored further and proposed as direct design informants. Based on the definition of food culture, information has been categorised under the themes of production, consumption and distribution. Similar patterns will be established in the proposed design to back up its functionality as it will be rooted in the existing models and improved where deemed necessary.

The following section is an analysis of the selected site; virtual site as proposed by R. Renton (2018). The focus is placed on the architectural form and its success in supporting the interiority of the proposed programmes.

3. MESO: VIRTUAL SITE BY R. RENTON

3.1. Historical context

Following evictions and demolitions of residential houses in the old Marabastad, Daspoort was established in 1913 as an industrial site intended to manage the city's wastewater. However, with a history of over 100 years, the infrastructure has been left unused and dilapidated. Where new technology is introduced to handle the waste management processed, they are installed on open landscapes and the existing infrastructure left to decay (Renton, 2018:46).

Large expanses of the site now lay open and uncultivated causing the land to remain vain for any use. Expanses of green landscapes present give the impression of a park and not that of a functioning sewage works. This can be attributed to the unused portions having overgrown giving way to the natural landscape (Renton, 2018:50). Therefore, the site was then identified to possess latent potential in the form unused land and parts of the industrial infrastructure.

3.2. Conceptual approach and intentions

3.2.1. Conceptual approach

R. Renton's architectural response, therefore, is an intervention that reintegrates the heritage site into its surrounding community. The existing heritage buildings have been left as they are ingrained into the historical landscape (Renton, 2018:131), as well as the functional industrial infrastructure. The unused drying beds were used to inform the footprint of the additional buildings thus exploring the potential of integrating the existing processes with the new. According to the architectural student (Renton, 2018:131), the land maintained its functional integrity through a renewed industrial and integrated proposal.

Amongst others, the concept informing the architectural response consists of strategies put together from explored information that informed the development of the site as well as the articulation of interaction points between the currently separated notions of industry, culture and nature (Renton, 2018:131) thus the idea of layered potentials. The result therefore is a new mid-ground for production, resource provision and waste management, with an overarching focus on a flexible, diverse and adaptable macro ecological complex system: a new hybrid industrial typology grounded in critical dependency (Renton, 2018:80).

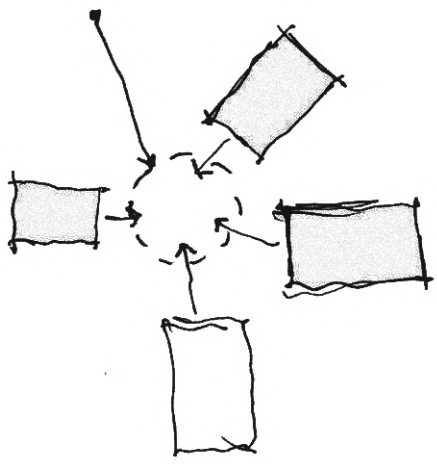


Figure 2.23: Conceptual approach summary diagram

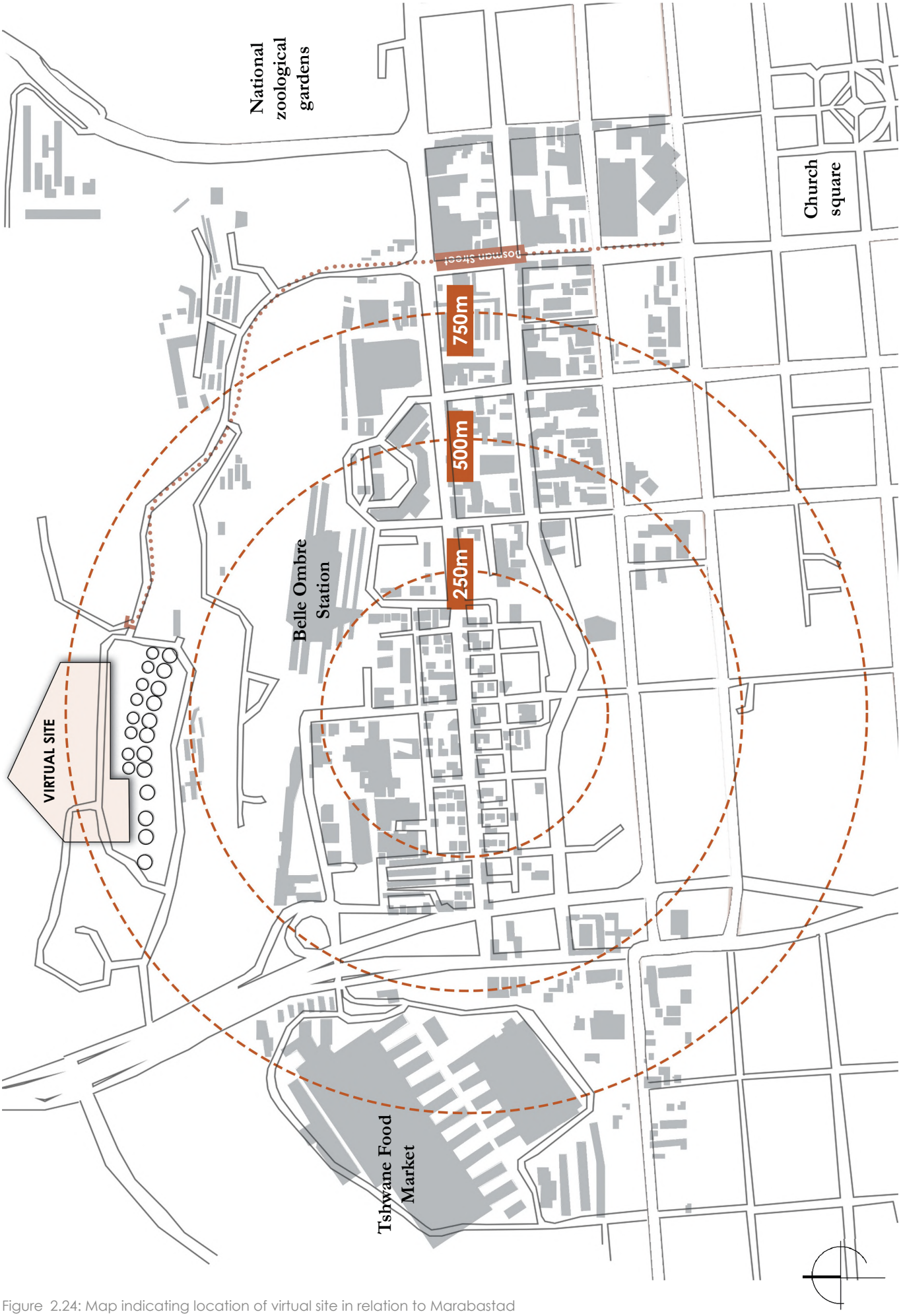
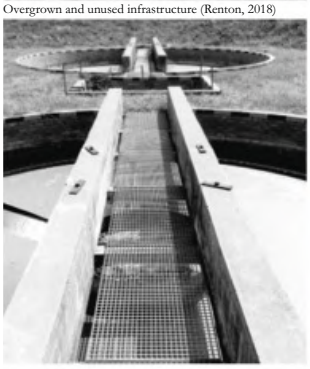


Figure 2.24: Map indicating location of virtual site in relation to Marabastad

Original 1913 biofilters (Renton, 2018)

Overgrown and unused infrastructure (Renton, 2018)



Settling tanks covered in algae (Renton, 2018)

Settling tanks covered in algae (Renton, 2018)

The old Marabastad furrow (Renton, 2018)

Approach from the East (Renton, 2018)

Public square and splash pond (Renton, 2018)

Laboratories from the South (Renton, 2018)

Access walkway between test beds (Renton, 2018)

Access walkway adjacent to the greenhouse (Renton, 2018)

Tasting Pavilion (Renton, 2018)

Approach site from vehicular road

As the user approaches the site along the vehicular route to the public parking lot, they can get glimpses of the industrial edge making use of the existing infrastructure. These include: 400m3 biodigesters, water filtration and methane processing plants and the test beds. This heightens the awareness of the processes regardless of whether the user will directly experience them or not.

View into public square with splash pond

Standing on the South Western edge of the open market, one has visual access into the public square that has a splash pond. On the edge is the double storied fruit processing building overlooking the square. On the horizon, the viewingdeckcan be identified as a landmark to be associated with wayfinding and boundary of the social space.

Path to public square from staff and service parking

The staff access on the East reveals a clear path into the social spaces with tributaries into in-between spaces bound by the laboratory buildings and offices. Thse spaces are characterised by their connectivity nature where there physical connection between two buildings in the form of circulation elements (i.e. staircases and bridges).

Pedestrian access through test beds from parking

Access walkways in between spaces and buildings enhance the visual experience of the user. While using these designated paths, the user regardless of their destination is made aware of their surrounding and the relevant food process. These walkways are characterised by semi-open structures that confine the journey by also allow for visual access. They can also be viewed as phyiscal connections between buildings.

Exisitng tasting pavilion

The tasting pavilion is designed to be a semi-open communal kitchen to be used by the community of Marabastad. The intention behind it is to tap into the informality of the food trade of Marabastad. It is characterised by a single cooking platform at the center and seating areas on either edges. On the left, is a more open seating area along the path to and from the offices and labs while the one on the right is semi-closed and allows for a level of privacy but still allows visual access into the public square.

Figure 2.25: Site before and after R. Rentons intervention

3.2.2. Design intent
3.2.3.

This architectural proposal consequently provides the platform for the reintroduction and reconnection of the site to the community of Marabastad. While there already exists a level of awareness in the community stemming beyond basic selling and buying of fresh produce, the proposal delves deeper into one that includes a closed-loop system. Essentially, the project was aimed at using interaction to create a greater awareness of energy exchange by using components in the context that are recognisable by the community. The different functions include; fresh and spoilt fruit processing, to methane extraction and output to electricity, and smaller aspects such as digestate that is used as compost and 'processed' water from the fish tanks in aquaponics harvested and re-used for its high nutritional value (Renton, 2018:126).

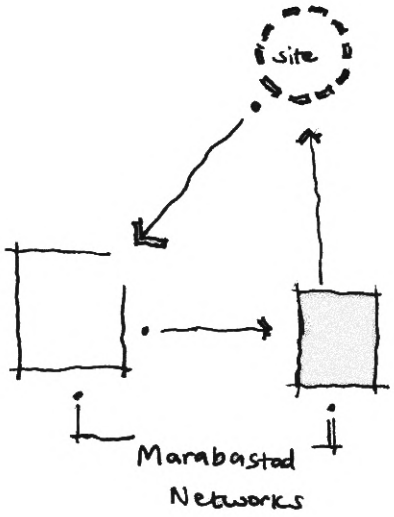


Figure 2.26: Design intent summary diagram

3.3. Site analysis

3.3.1. Approach and access

The site's location can be accessed both through walking and by vehicle either privately or by using public transport. A bus stop is located at the site's entrance along Bosman Street, streaming from Pretoria Central. Upon arrival, the street stems into Staatsartillerie Rd that can be accessed by private vehicles for both staff and visitors. Two parking areas are provided for the two identified user groups. With the later located at the southern edge, after parking the visitors walk through either the fruit processing building where the new reception area is located or around it and stream into the social square with visual access of the three social buildings.

3.3.2. Zoning

Programmes in the compound can be placed into four categories namely; social, industrial, administrative, and educational as further illustrated in adjacent page.

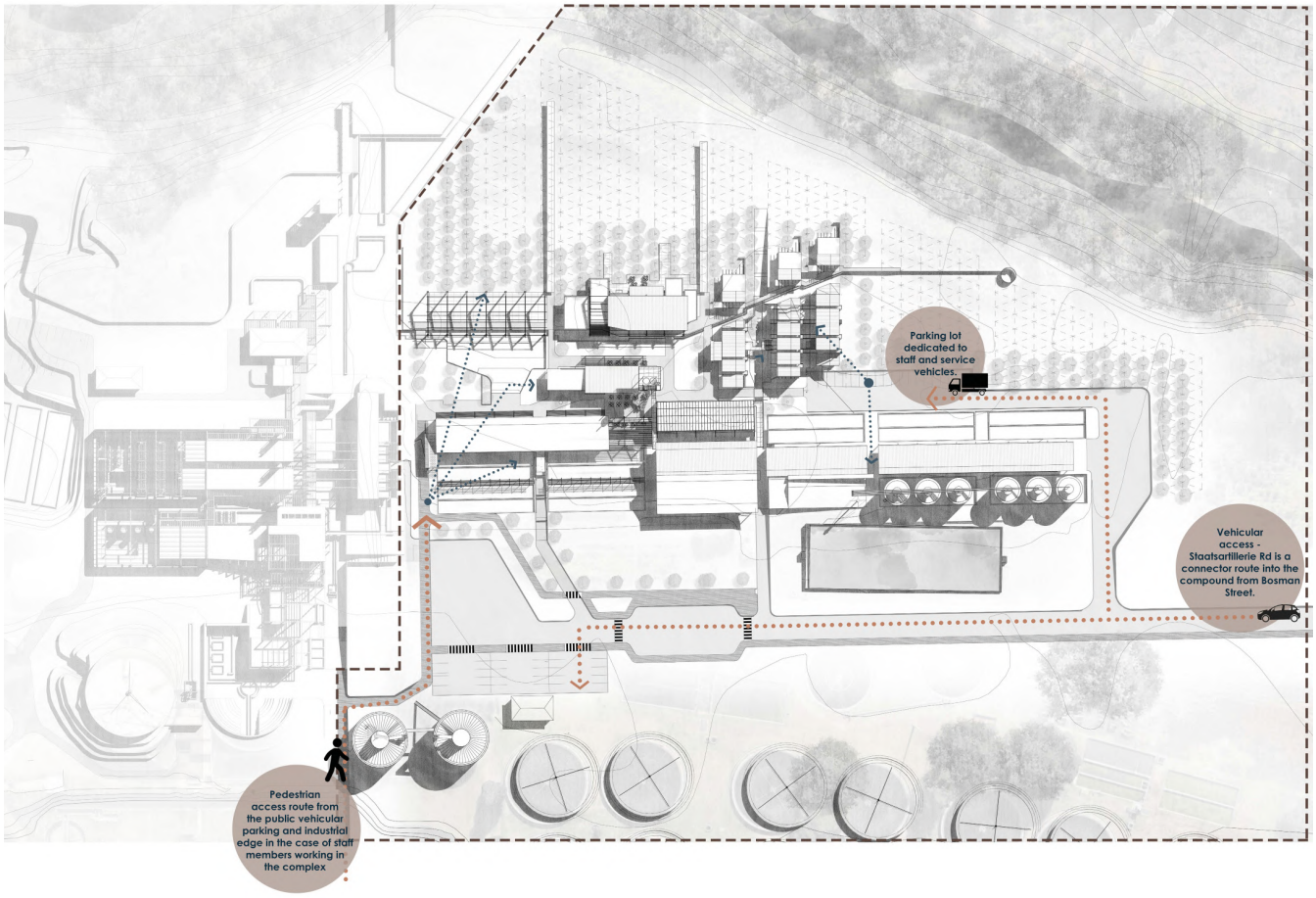
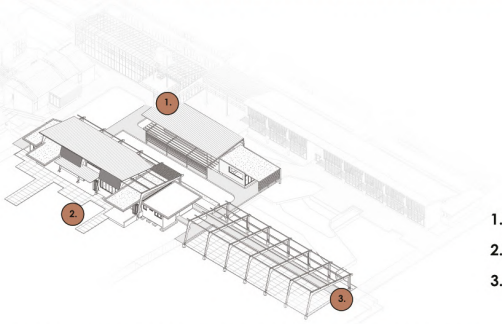


Figure 2.27: Site plan showing main access and movement routes

01. SOCIAL

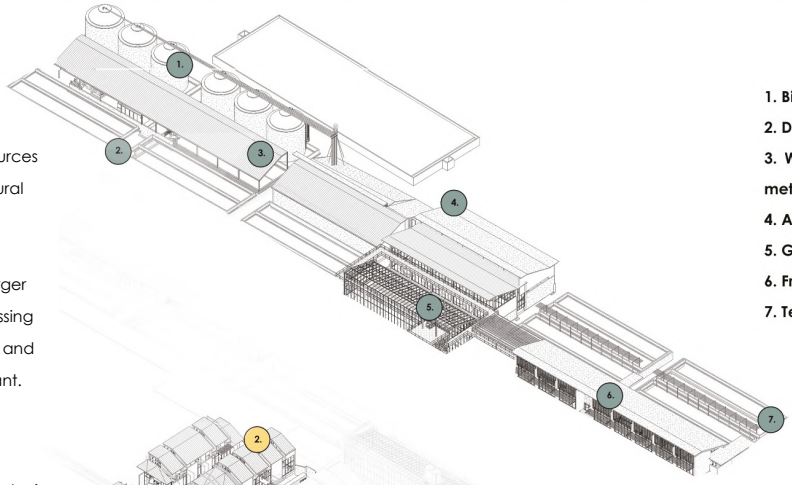
In between spaces facilitate for social interaction between the multiple users of the entire complex in addition to being thoroughfares that open adjacent spaces to easy access. These social spaces are characterized by interactions between people as well as people and food. The tasting pavilion is more of an informal setting, while the test kitchen has more of a formal disposition, and the market giving access to a wider public user group. This will be explored further and enhanced to include more variety in the interaction.



1. Tasting Pavilion
2. Test Kitchen
3. Market

02. INDUSTRIAL

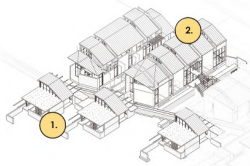
Productive functions are accommodated on the southern side of the site making use of natural resources present whist incorporating systems managing natural resources that act in a closed loop. These facilitate fresh foods produce processing as well as waste management addressing the missing gap in the larger Marabastad. Spaces present include; a fruit processing plant, aquaponics, greenhouse, drying bed, water and methane processing and fruit waste processing plant.



1. Biodigesters
2. Drying beds
3. Water filtration anf methane processing
4. Aquaponics
5. Greenhouse
6. Fruit processing
7. Test beds

03. EDUCATIONAL

Provision is made for educational programs by introducing classrooms for the Agricultural Technical Vocational Education and Training (ATVET) programme as well as inclusion of laboratories as a research facility. The classrooms and laboratories can easily be denoted to knowledge sharing, while the industrial edge possess the secondary function of educating the users of processes regarding waste management.



1. ATVET classrooms
2. Laboratories

04. ADMINSTRATIVE

Offices located adjacent to the social square accommodate the administrative function of the anchor institution that would manage the complex. This would include overseeing the overall complex, access and perhaps facilitating and hosting functions. As the office buildings are placed close to the center of the complex, staff can easily access the rest of the compound from a central point. Their placement and multi-storey nature of the office buildings also facilitate visual accessibility around the complex thus providing a level of passive surveillance

1. Offices

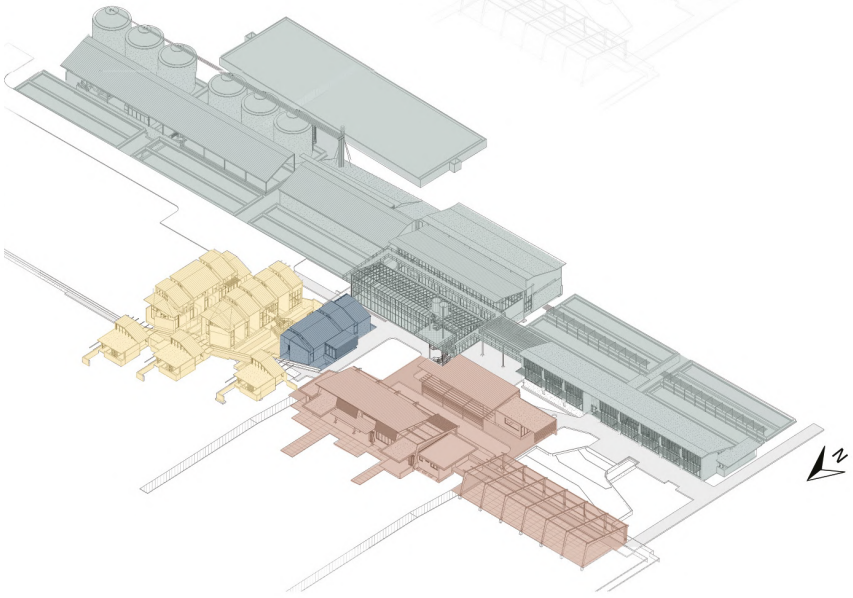


Figure 2.28: Zoning of activities in the existing building complex

3.4. Statement of Significance

The MArch (Prof) project was selected for the following reasons:

1. Site location

The site for the architectural proposal is well within the vicinity of Marabastad which allows for an easy transposition of the existing and presenting it as an extension thereof. According to the architectural student (Renton, 2018:46), the land existed as large expanses of open and uncultivated space left dilapidated as a result of previous industrial activities. By introducing a new architectural intervention, the site can now be viewed as an extension of Marabastad, with both physical and non-physical connections to it. As a new addition, the site presents potential to attract more people into the district to engage in its food culture separate from biased barriers.

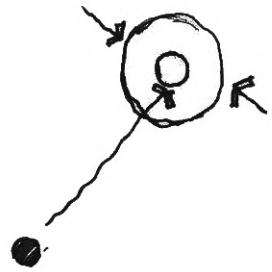


Figure 2.29: Site location sumamry diagram

2. Programmatic intention

The physical form resulting from the dissertation (Renton, 2018), gives opportunity to further explore the potential of spaces to facilitate social friction. In its positioning, the point of intervention for this dissertation is central to the community of Marabastad and that the newly introduced user group i.e. staff that may not necessarily be from Marabastad. In addition to this, the programmes designed for are spread across the food cycle range allowing the author to select an appropriate point of food interaction that speaks to the existing food culture.

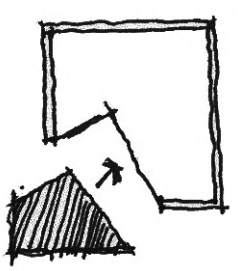


Figure 2.30: Programmatic intention sumamry diagram

3. Conceptual approach

The conceptual approach of the architect's project (Renton, 2018) is focused on using a site's potential to inform an architectural proposal. This involves documenting and articulation of interaction points between the separated notions of industry, culture and nature (Renton, 2018:131). The author therefore adopts this approach in that this dissertation seeks to explore the potential of the built environment to facilitate interaction between people around the notions of food.

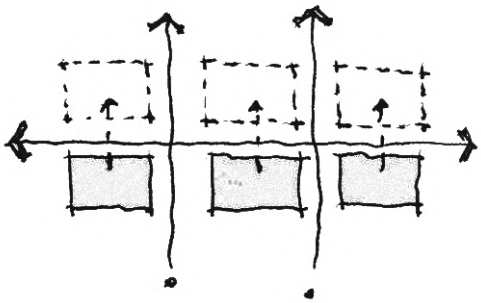


Figure 2.31: Conceptual approach sumamry diagram

4. MICRO: SELECTED BUILDINGS

The buildings selected for this study fall within the social sphere and can accommodate a range of user groups thus present a suitable opportunity for the investigation of social interaction. The three buildings are also a provision for activities that mirror those in Marabastad, hence are an appropriate canvas to deliver an architecture that acts as a catalyst for cultural celebration.

4.1. Climate

The initial climatic investigation was limited to an analysis of perceived sun allowance study as deemed relevant for the proposed programme. The orientation and linearity of the buildings positions the longer facades towards the North and South allowing for maximum natural sunlight during the extreme seasons. Fully openable facades allow for natural ventilation when completely open allowing for movement of fresh air across the room.

4.2. Access and circulation

The main access route connects all the three buildings along the peripheries and branches into minor paths into the individual buildings. A central spine defines movement inside the buildings giving central access into the activities taking place in the interior. Private and public access is defined by wall partitions, but visual accessibility enhanced by use of glass partitions. Shared spaces are defined by their open nature with maximum visibility.

4.3. Sensorial Experience

According to the architect (Renton, 2018), the social buildings have multiple levels of openness thus allowing a degree of connectivity to the landscape. Similarly, there should be an allowance of visual accessibility into the buildings to allow users to passively engage with all the activities in the social sphere. This will be explored further in the design development stage and improved on to heighten the sensorial experience.

The openness of the tasting pavilion does not only allow for visual accessibility, but also enhances the olfactory senses as one can use the food scents as a guiding element into the social sphere. However, in the test kitchen the cooking area is closed off and does not extend the same sensorial experience as the open tasting pavilion.

Other senses will be explored further as a means of improving the experience around food and its interactions, these being its preparation and consumption. These senses include: touch, hearing and taste that will be ingrained in the spatial articulation to further enhance the user experience.

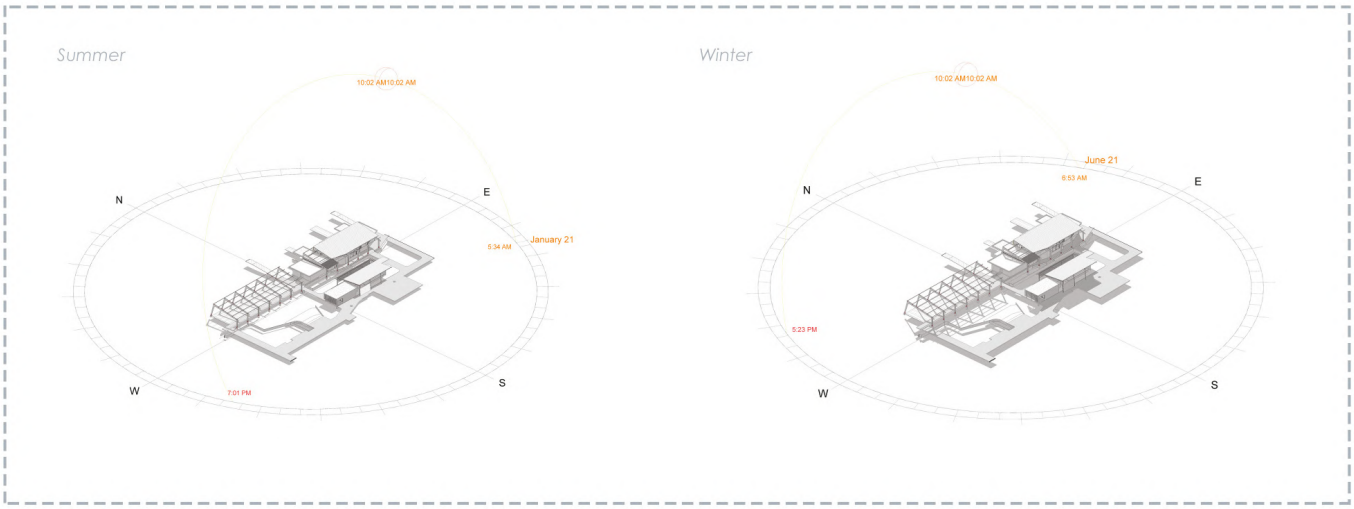


Figure 2.32: Sun angles path above selected buildings

Accomodation Schedule as Existing

Space	Size	Programmes	Users
Test Kitchen	400m^2	Kitchen - Cold and dry stores - Change rooms Office Seating area WC's	Professional chefs Adminstrative Open to public
Tasting Pavilion	230m^2	Reception Shop Cooking counter WC's Seating area	Adminstative Cooking vendor Public
Market	300m^2	Open space for market stalls	Vendor Public

Figure 2:33: Accommodation schedule of existing buildings in the social edge

4.4. Existing programmatic analysis

The programmes are analysed as existing in terms of their functional requirements. These are then juxtaposed with the potential they hold for the design intervention of this dissertation.

1. Test Kitchen

The test kitchen is a 400m2 space that is used by professionals to reimagine healthy tasty foods from fruit and vegetable waste. Its main purpose is essentially to create awareness on the possibilities of food waste.

2. Tasting pavilion

This is a 230m2 open space provided for vendors to set up stalls and for people to gather and interact. It is a combination of a retail space where visitors can purchase site grown and processed food and a reception to serve as an orientation tool to other parts of the complex.

3. Market

300m2 of open space is dedicated for food vendors to sell produce from site and Marabastad, it is also in direct contact with nature and the orchard adjacent to it.

The social edge is unpacked as a unit followed by an analysis of the individual buildings in terms of their functionality to support the intention of the study.

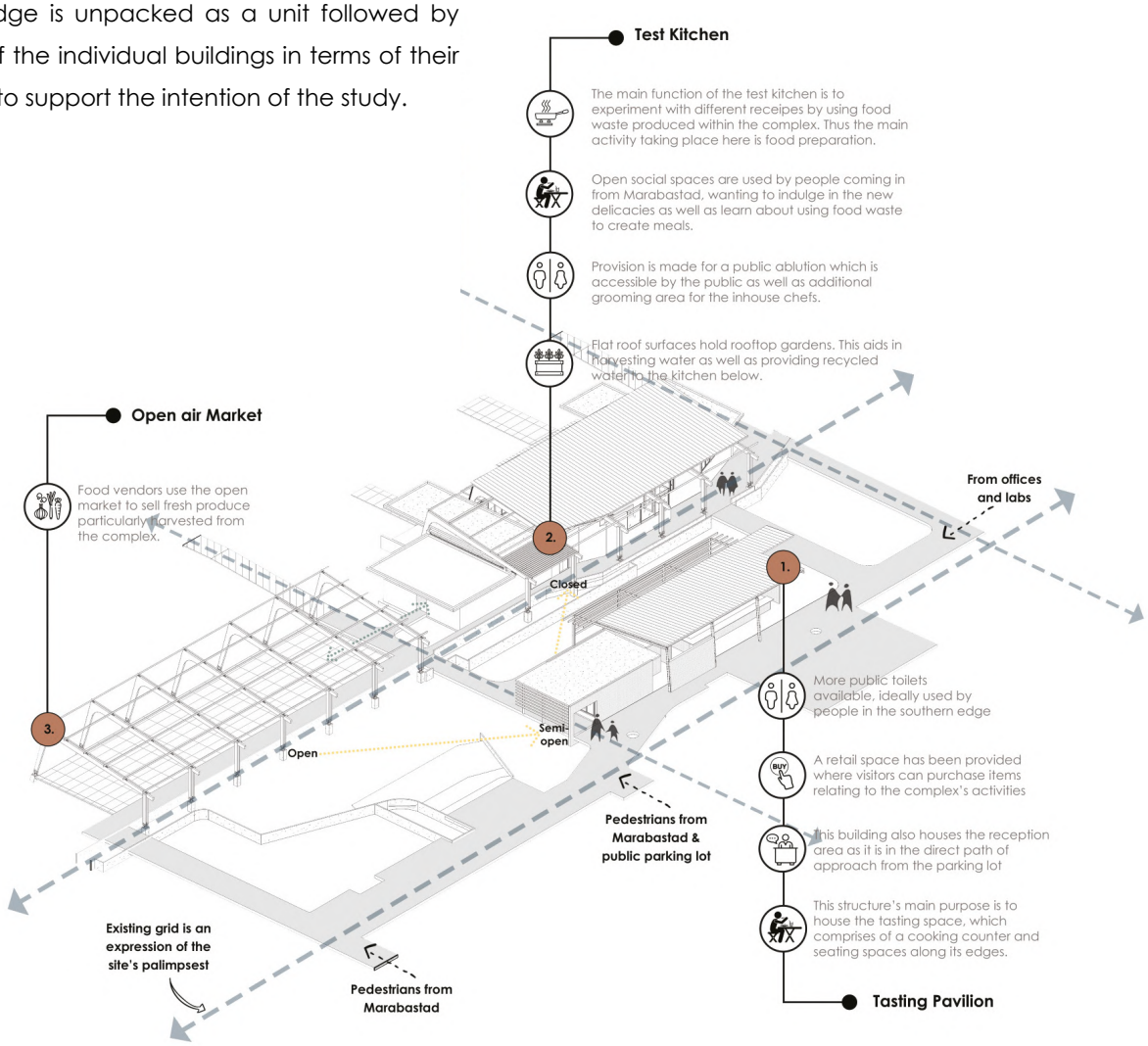


Figure 2.34: Diagramatic analysis of the exiting programmes in relation to each other

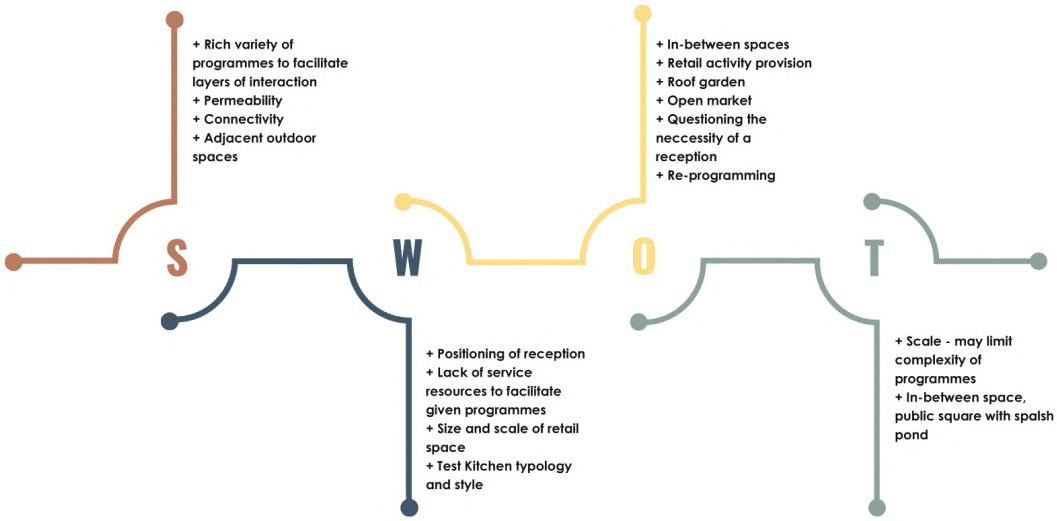
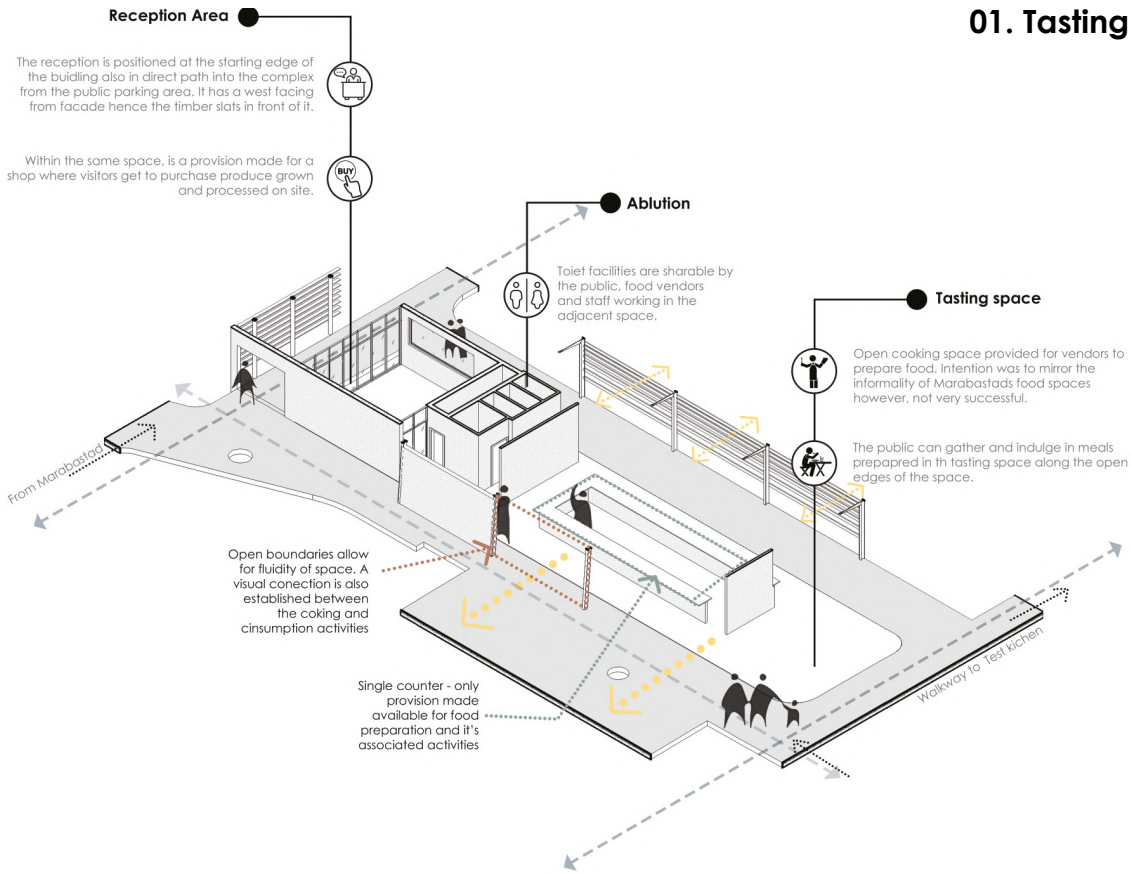
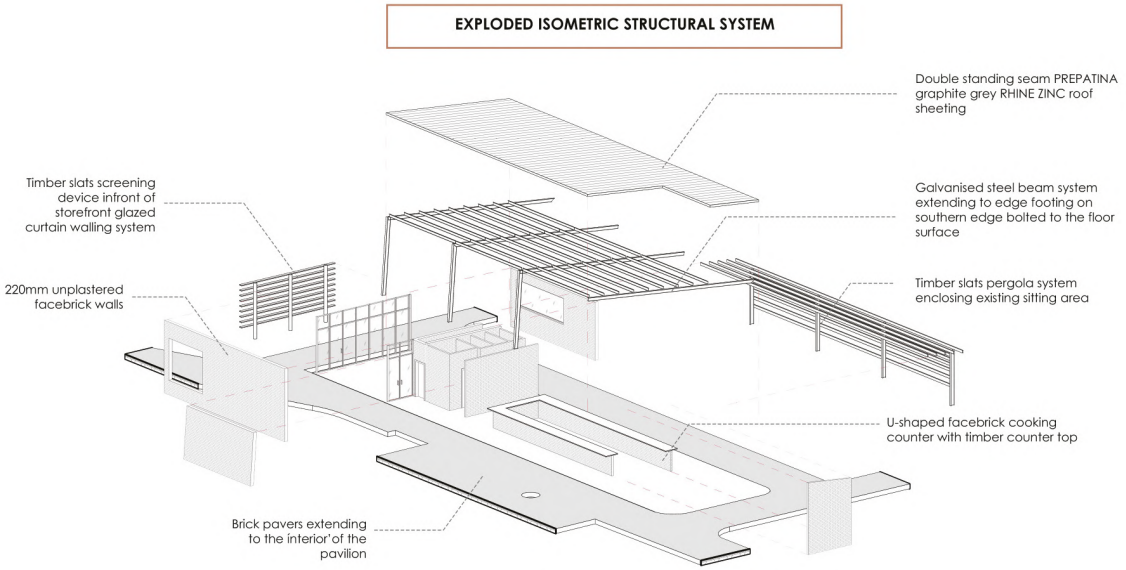


Figure 2.35: SWOT analysis relating to the study's intention





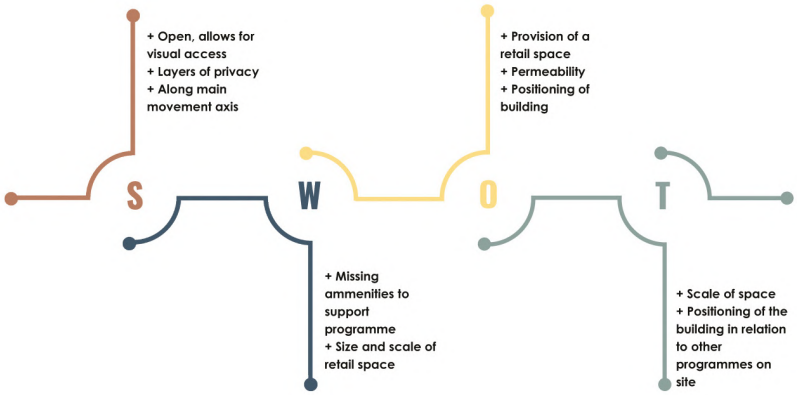
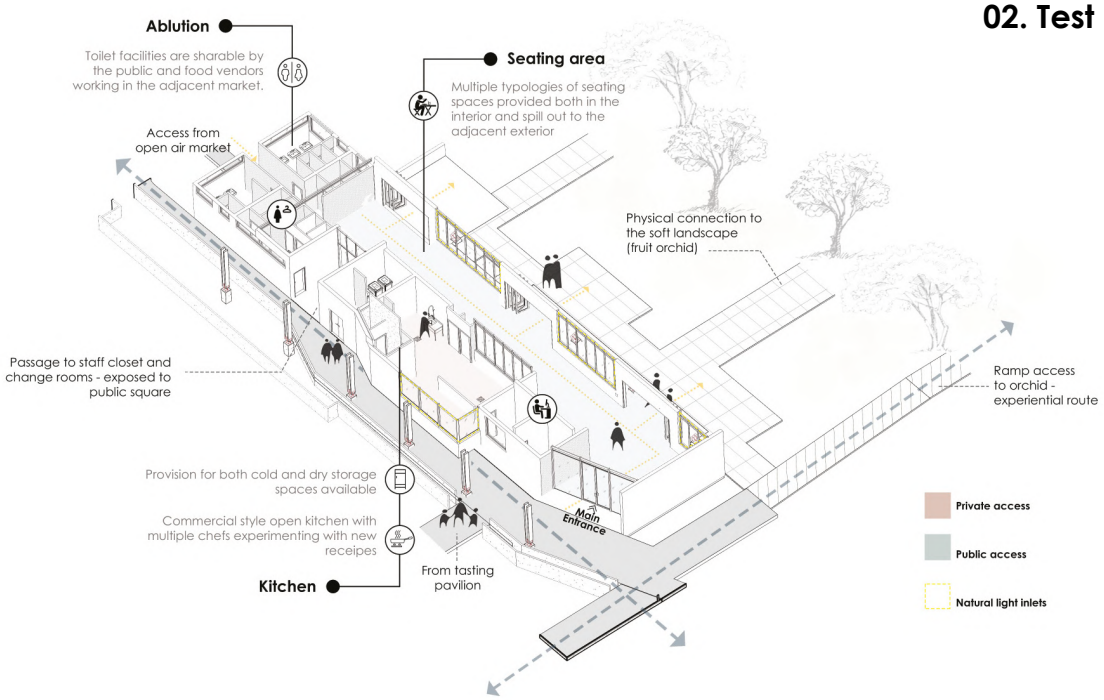
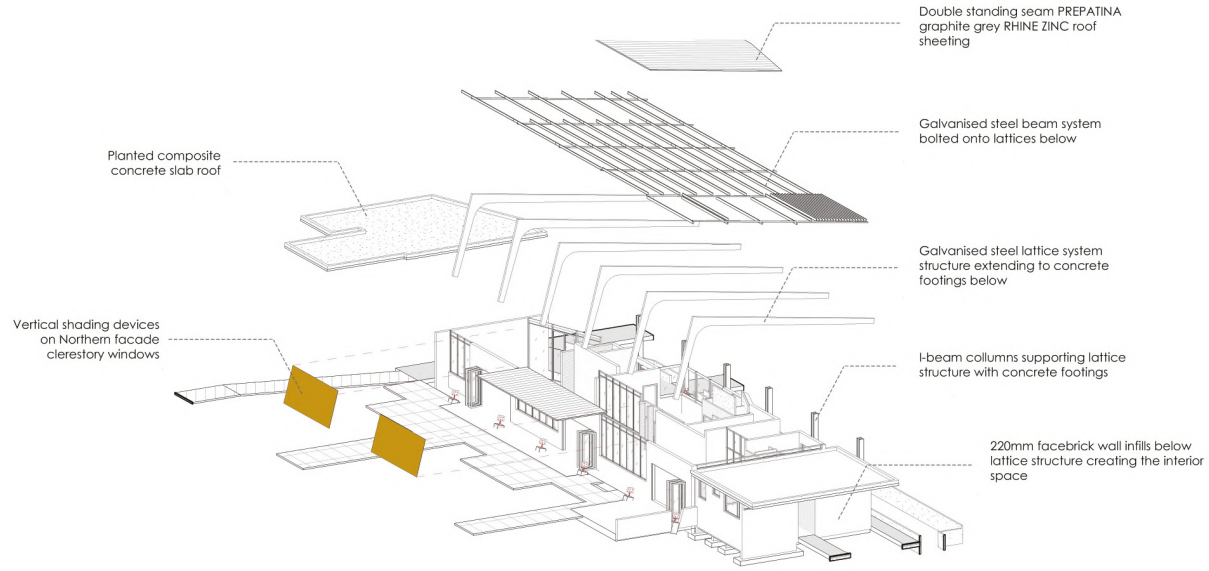


Figure 2.36: Diagrammatic analysis of the existing tasting pavilion



EXPLODED ISOMETRIC STRUCTURAL SYSTEM



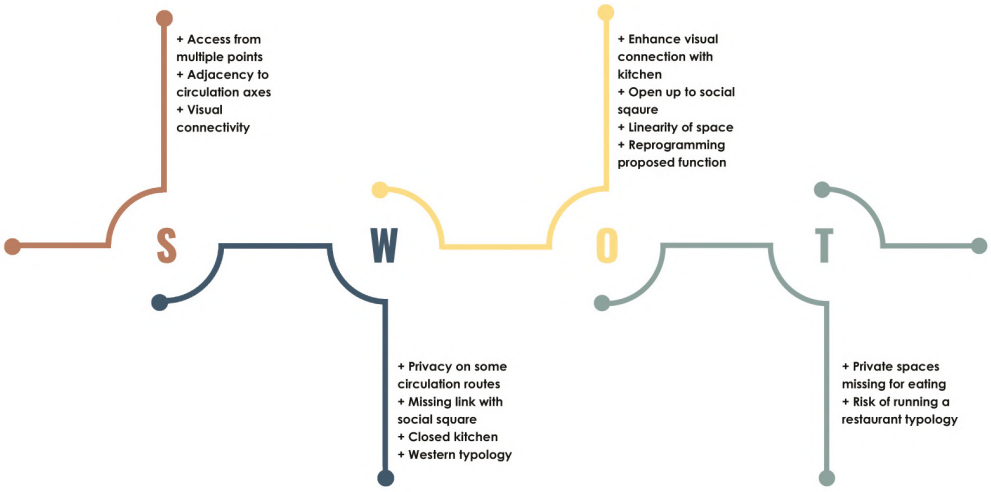
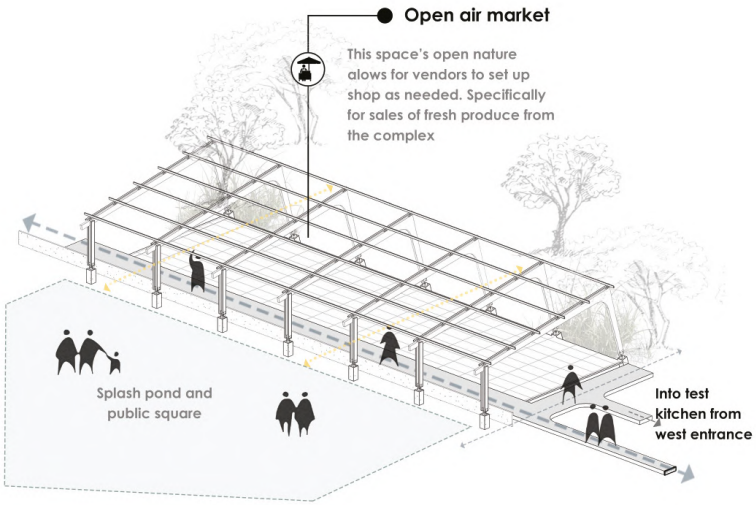


Figure 2.37: Diagrammatic analysis of the existing test kitchen



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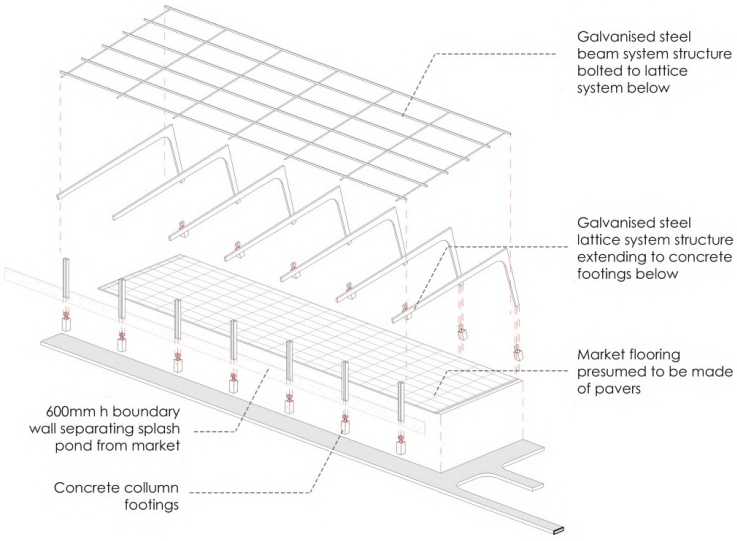

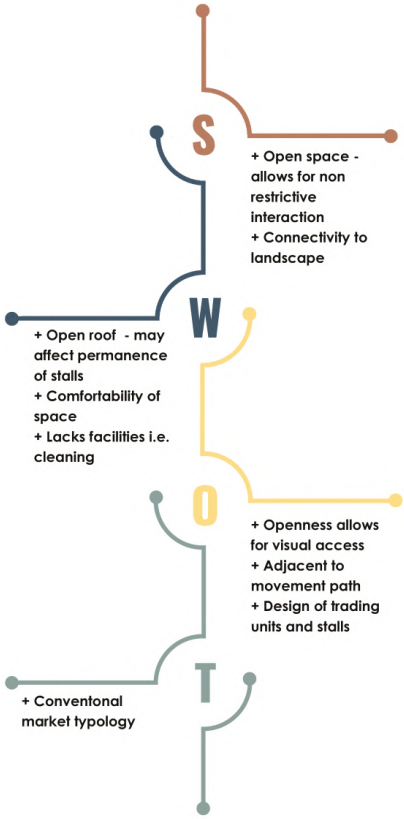

Figure 2.38: Diagrammatic analysis of the existing market

5. CONCLUSION

The extensive context study was done in order to understand the contextual influences on the architectural proposal which was also evaluated to appreciate its suitability for the design intent. The multiple levels of analysis provide an array of information to inform the design development on multiple facets, i.e. a study of the intangible rituals of Marabastad will be translated into the workings of the interior, while the immediate context and articulation of the architecture influences how the users experience the space. The following chapter is a discussion of how the programme selection and user will further influence the special articulation whilst supporting the design intent. From here henceforth, the proposed interventions made by Renton in 2018 will be taken as 'as built' site.

3_THEORETICAL PREMISE

1. INTRODUCTION

This chapter is a combination of literature reviews and an investigation into theories on food, place and people derived from engaging with the contextual site and identifying these as its fundamentals. The aim of this section is to derive informants that will influence the context analysis as well as precedent selection. In addition to that, further deductions will be made to validate the project intentions especially through highlighting of possible overlaps.

Food as a theoretical topic will highlight aspects of food culture with focus on how it influences the production of space. This is a possible overlap with the disciplines objectives of creating meaningful spaces. Further, the concept of food well-being will be discussed as an additional possible result of the design intervention. Due to the project's reliance on intangible aspects present in the larger context such as rituals and interaction patterns, consideration will be given to theories of meaning making in interiors and how these can be resultant to space production. In so doing, further investigation will engage with the notions of human centred design and designing experience in interior spaces dependent on the intangible aspects as mentioned before.

In the following section, each element is dealt with separately, thereafter links are drawn to create a comprehensive theoretical framework. The resulting principles will inform the design approach with focus placed on how the three distinct aspects of the project overlap as will be outlined in the discussion and conclusion section.

2. FOOD

Food studies have been on the rise and this can be attributed to the increase and expansion of social movements linked to food, i.e. the slow food movement which has in turn resulted to an increased awareness of the relationship between consumption and production. Furthermore, an interdisciplinary nature of the studies is established as there is novelty and richness in the scope provided that links body and soul, self and other, the personal and political, the material and the symbolic (Counihan & van Esterik, 2013:2). This provides premise for the initial link between food and the effect it has on the outlook of life in general.

Horwitz & Singley (2006:5,10) state that much of the built environment is designed around the processes of food including; production, storage, transportation, selling, serving and eating it. They propose that by examining the intersections of the preparation of meals and the production of spaces there is much to learn. This can include the rituals of dining, the design of meals and the process of cookery form and inform a distinctively expressive architecture that is rooted in the specifics around food.

In addition to that, ways in which food and architecture come together to shape the identity of places, is a culture-producing process that enables the appropriation of global meanings and values in the local context (Horwitz & Singley, 2006:87). Similarly, the same way sustainable architecture responds to its context, making use of the existing resources, the production of interior spaces can respond to cultural markers that aid in the creation of territorial identity as not only as a space of consumption but also as that of production. This starts with the promotion of local food rituals, products, and methods of production (Horwitz & Singley, 2006:73) and ends with a newfound appreciation of the food culture more generally.

2.1. Food and design

In a report done collaboratively by Dezeen and Scholtes (kitchen appliance brand), the cross-pollination between food and design is categorised into two notions that can be used to explore the two disciplines and their intersection; food as an object of influence and the idea of the changing kitchen (Fairs, 2010).

2.1.1. Food and design at the same table

Food and eating designers emerging are no longer just looking to design the food, but rather all aspects of food culture; this inclusive of the ingredients, the preparation, the gastronomic process, the design of the kitchen and the objects within it, the serving and the pleasure of food (Fairs, 2010). This therefore places designers in a position where they have an influence on how people interact with food not limited to consumption.

Marije Vogelzang, a Dutch eating designer, states that there is no other object that comes as close to the human body as food. It does not only go to the stomach but can also activate the brain and rouse strong memories and emotions. The result therefore is food culture that she describes as the most active form of culture (Vogelzang, n.d.), one that can easily be related to by a group of people who share similar ideas. Through her various projects, she has developed a set of informants that can be used to communicate the potential of connecting food and design namely; the senses, nature, culture, society, technique, technology, psychology and science (Vogelzang, n.d.).

Under this category, the following ideas can be explored as a means of enhancing food interaction (Fairs, 2010). However, only the first two will be considered and interpreted to be used in the design development to follow:

- Food as material
- Designing the experience, not the food
- The past is the future
- Provenance

Figure 3.1: Food as material a - Bread Shoes by R&E Praspaliauskas (Fairs, 2010)

Figure 3.3: Intangible beto an installation by Marije Vogelzang using spatial devices to encourage experiencing food using all the senses (Vogelzang, n.d.)

Figure 3.2: Food as material b - Series of vases, bottles and bowls made of baked flour, coffee and other foodstuffs. (Fairs, 2018)

Figure 3.4: Sharing lunch by Marije Vogelzang (Vogelzang, n.d.)

a. Food as material

Like plastics, metal and wood, food as a material can be experimented with in a workshop or studio. The end results can vary from items that can be eaten to those otherwise and rather used for visual appeal. More often, designers are interested in the figurative and visual qualities of food items stirring investigations into ways of creating pieces that are inspired by culinary processes (Fairs, 2010). There is therefore potential of food to be used as a material to facilitate the eating experience and not just be presented as an object to be consumed.

Marije Vogelzang (Fairs, 2014), terms food as the most important material in the world due to its multi-dimensional nature. She adds that food as a material is connected to emotions and memories that could either bring people together or pull them apart when used as an object for interaction. She uses food as a material to create installations and performances that encourage interaction around the subject matter.

b. Designing the experience, not the food

According to the report *food and design*, spaces of consumption are intended to compliment the food and the eating experience physically, emotionally, sensorial and subliminally (Fairs, 2010). The focus for spatial production therefore is placed on craftsmanship, local culture, informality and sensuality to mention just a few. In analysing the food processes, i.e. how food is prepared and the complements involved, how it is presented and eaten (Fairs, 2010), designers create spaces that are a reflection and facilitator of these intangible elements. This has also led to the exploration of new kitchen concepts that will be discussed in the following section.

2.1.2. The changing kitchen

The kitchen is considered as a space where people have the bulk of their interaction with food. However, taking into consideration the home kitchen, its function has shifted from merely 'a room used for cooking and food preparation' to becoming a central space for both living and entertaining. It is merging with other rooms becoming a social hub of activities (Fairs, 2010). This is an indication of the changing function of the kitchen, which is growing bigger to accommodate all these mixed functions which should be taken into consideration by the designer. In designing a kitchen, the designer is tasked with engaging with the specific food activities and rituals that inform specificity in the design. Today, cooking is considered a leisure and social activity, in which the cook prepares food before the visitors who also help, thus becoming more of a therapeutic activity than a chore (Fairs, 2010). This further advances the kitchen as a space for social interaction where knowledge can be exchanged between different groups of people.

Some of the kitchens explored in the article include (Fairs, 2010):

- The workshop kitchen
- Fast kitchen, slow kitchen
- The communal kitchen
- More authenticity, less gadgetry
- The professional kitchen
- The growing kitchen
- The ritual kitchen
- The sharing kitchen
- Kitchen as theatre

A selection of the above mentioned are further explored in the design development phase where relevance to the study is taken into consideration.

According to Schroder (2016), arrangements, including that of kitchens, can influence the behaviour and interaction of the model inhabitants in space. This can be addressed by creating an intervention with different levels, measures and means of privacy while still promoting the essence of an eating experience specific to place. Open and shared kitchens here then encourage both passive and active interaction between the vendors and the customers.

2.1.3. Slow food movement

Started in the early 1980s in Italy by a group of friends unhappy with their food quality and the rise of the fast food culture, slow food as a movement has grown into an international organisation that is against the standardisation of culture and taste. Its main principles can be summarised as; emphasis placed on the appreciation of good, healthy food and the skills involved during its production, protection of local customs and species, protection of biodiversity and educating the general public about food (Louw, 2014;153).

In addition to this, the movement's manifesto mentions the principles *good, clean and fair*: Good being about the sensorial quality of food, as well as materials and production; clean is about the environment, health, sustainable farming, processing and consumption; and fair being about social justice, better labour conditions, the right to food, reward cultural diversity, tradition and a more balanced global economy (Slow food, 2013). The aim of the movement is to promote regional food having been prepared by identifiable producers, in place of industrially manufactured consumer products currently in abundance in the marketplace (Louw, 2014;153).

To show importance of the already international movement at the time, it witnessed a drastic rise of interest and advocacy through an increase in membership by prominent celebrities from the United States, United Kingdom, Japan, among other countries considered vital in the globalisation process, this occurring between the years 2000 and 2003 (Schneider, 2008:387).

The table below (adapted from Meneley, 2004:172), illustrates a simplified comparison between slow food and fast food movements.

Slow Food	**Fast food**	**Slow food**	**Fast food**
Artisinal	Industrial	**Local**	Global
Handcrafted	Mass-produced	**Rural**	Urban
Healthy	Unhealthy	**Pure**	Addititives
Distinctive	Homogenised	**Consumed convivially**	Consumed alone
Vulnerable	Hegemonic	**Appreciation**	Profit
Origin known	Origin erased	**Producer known**	Workers anonymous
Natural	Artificial	**Defetishised**	Fetishised

Table 2: Comparison between slow food and fast food movements (Louw, 2014:139)

Although sometimes contentious and often criticised as elitist, since it often promotes expensive, high quality and specialised products (Louw, 2014:154) the principles of *good, clean and fair* can be applied to small scale and local establishments, where the enjoyment of food is also about the relationship with one's social and natural environment.

The link between food and architecture should not be limited to the design of buildings where food is produced and/or consumed but should rather be viewed as the sum of interconnected systems and cycles of life. This argument is formed on the basis that the production of both typically starts in the soil, as natural ingredients or materials, which then go through various growth and production stages, the transported, prepared and assembled, consumed or occupied until being disposed of or demolished, or alternatively composted or recycled. Both systems have an impact on the environment, economy and society (Louw, 2014:155). To emphasize on the interconnected systems and cycles of life, slow food uses a model of gastronomy that offers a link between the biological and cultural aspects that are in line with food production and consumption. A more modern and updated form of gastronomy bases food as the core of all human culture, in this case, slow food bearing the natural, healthy, rural, raw, pure elements, as those among the outlined in the table above (Schneider, 2008:388). This can therefore be additionally applied in the linkage between food and architecture.

The following section is a brief discussion on the links between food and architecture as derived from the principles of the slow food philosophy (Louw, 2014:155-163).

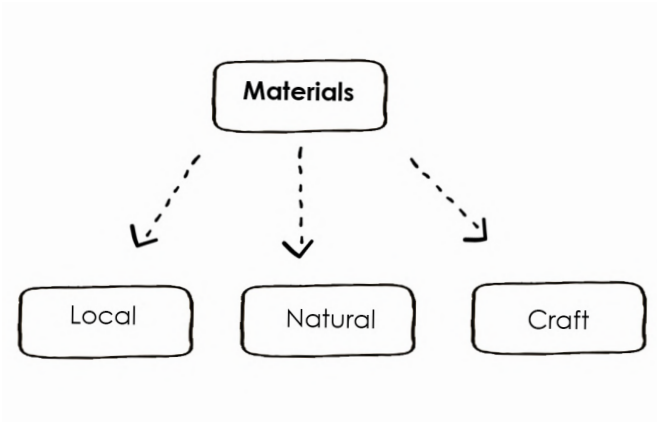

Figure 3.5: Ingredients and production

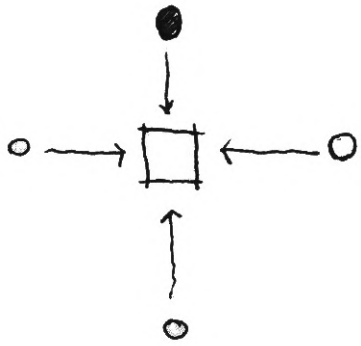

Figure 3.6: Community

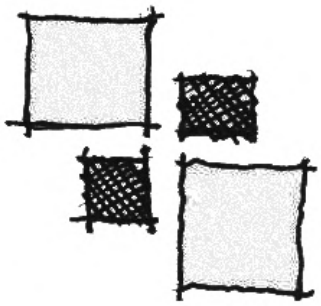

Figure 3.7: Form, proportion and measurement

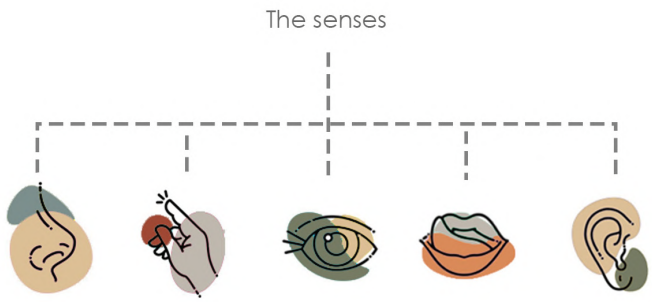

Figure 3.8: The senses (Adapted from Sullivan, 2018)

a. Ingredients and production

Slow food advocates for organic agriculture with less impact on the environment, improvement of food traceability and changes in food well-being practices. In addition to this, ingredients are considered if they are seasonal, local and advance traditional produce. In the context of restaurants, ingredients from the proximal natural environment should be considered which can be equated to raw materials used in the built environment in place of alternative processed ones. Both in cooking and architecture, raw materials are processed through craft to become something greater than the sum of its parts (Louw, 2014:156). However, the link between environment and craft should be retained through avoidance of over processing.

b. Community

The idea of community is important when thinking about food as it is a shared experience and conviviality in most cultures which can perhaps be lacking in the experience of architecture. The creation of localised groupings is essential in connecting producers to consumers. This can be compared to participatory design in architecture where the end-users can be involved in the design and construction process (Louw, 2014: 157).

c. Form, Proportion and measurement

The art of building and cooking both consider proportion and measurement, both deal with form and shape, composition, assembly and harmony. These relate to the way that ingredients or building elements are volumetrically designed and grouped together, overall balance of the final composition of a dish or a building in terms of all the senses (Louw, 2014: 157).

d. The senses

When it comes to senses, food and architecture consider taste as a preference neglecting some of the other physical senses. One challenge is the increased ornamentalisation of both where high-quality visual imagery is used to portray both (Louw, 2014:162). The curing and ageing of food to improve on its flavours and taste thus heightening the eating experience can be matched to age, preservation and patina on building materials to show evidence of transience of life. It is this same intensity that should be unearthed and understood in specific cooking practices to inform a space that embodies the physical and sensorial experience of food interaction.

Food as object of influence (Vogelzang;

01.

Under this category, the following ideas can be explored as a means of enhancing food interaction (Fairs, 2010)

- Food as material
- Designing the experience, not the food
- The past is the future
- Provenance

- Food as material

Food as material a - Bread Shoes by R&E Praspaliauskas (Fairs, 2010)

- Designing the experience

Sharing lunch by Marije Vogelzang (Vogelzang, n.d.)

Changing role of the kitchen (Marcus, 2013):

02.

- The workshop kitchen
- Fast kitchen, slow kitchen
- The communal kitchen
- More authenticity, less gadgetry
- The professional kitchen
- The growing kitchen
- The ritual kitchen
- The sharing kitchen
- Kitchen as theatre

Figure 3.9: Relating food literature to Marabastad as context

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FOOD

Slow food

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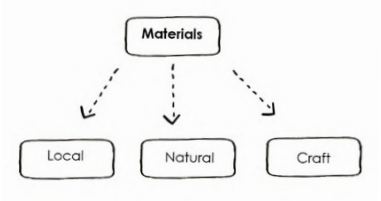
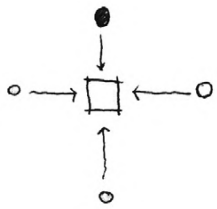
Link to architecture (Louw, 2014)

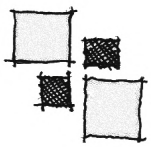
- Ingredients and production



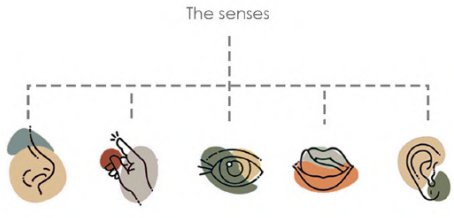
- Community



- Form, proportion & measurement



- The senses



3. PLACE (Towards production of space)

Edward Relph in his book *Place and placelessness* (1976) introduces the concept of place, based on Lukermann's (1964) understanding that place is a complex integration of nature and culture that develop and are developing in particular locations and are linked by flows of people and goods to other places (Relph, 1976:3). After further discussion, he adds that meanings of places may be rooted in the physical setting and objects and activities, they are however not a property of them – rather that of human intentions and experiences (Relph, 1976: 47). Therefore, the design approach taken with regard to place should be one that is responsive to local structures of meaning and experience, to particular situations and variety of levels of meaning of place and the need that many people have for a profound attachment to places (Relph, 1976: 146).

Before the establishment of a human-oriented vision of space, there is need to delineate the different zones of space in the area beyond the physical bodies that remain directly adjoined to people. Personal space is defined as the zone around an individual into which other persons may not trespass. This affects the design of interiors, since the sense of self inevitably stretches into areas where there is interaction with other people. Contrary, in the broader context of public space, the zone within which we expect to interact with others, we consciously adjust to boundaries to accommodate the intrusions (Caan, 2011:45).

Lefebvre (1974) introduces the spatial trialectic as a representation of space that does not reduce space and place to an abstract rather transforms spatial practices to imagined geographies, i.e. 1.) 'First space' is denoted as the 'real', material space that is seen 2.) 'Second space' as conceived and representations of space and 3.) 'Third space' as experienced space characterised by the lived social relations of users (Hunter, 2018). The later situates the premise of this study.

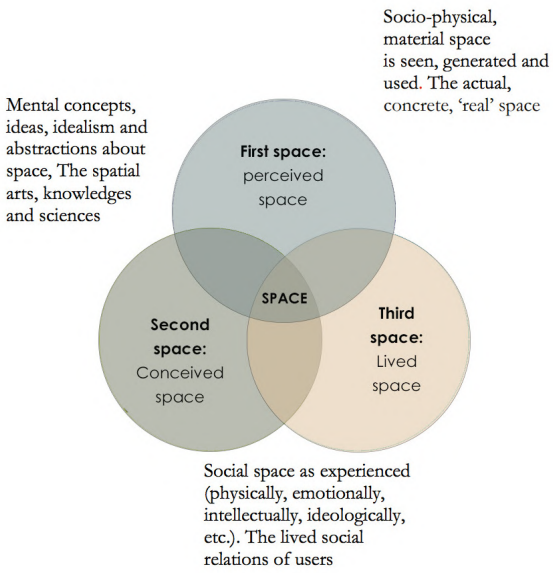


Figure 3.10: Lefebvre spatial triad (Hunter, 2018)

3.1.1. Social space

Oldenburg (1997) considers homes as first places, workplaces as second and informal gathering places as third place, where he notes that there is a lacking for "the means for people to gather easily, inexpensively, regularly and pleasurably" (Galuszynski, 2015:50). However, he suggests that the way to make social spaces successful, the designer should make it dependent on localness (Oldenburg, 1997:10). In addition, Kobrin and Vaske (2010) suggest that to achieve this, third spaces should be in proximity to a community and remain local in terms of ownership making the space more able to be adapted to maintain relevance in the people's lives (Galuszynski, 2015:50).

Additionally, Carmona et al. (2003:113) describes more characteristics that deem a social (third) space successful. This include (Adapted from Galuszynski, 2015:51):

- 'Neutral ground' - people can come and go as they please
- Highly inclusive – a space where people can access without any form of formal membership
- Should be of a low profile
- Functional during official work hours as well as outside office hours
- Can be characterised by its 'playful nature'
- Can provide psychological comfort and support

Taking the above into consideration the design's functioning can begin to be unpacked against the criteria to determine its viability as a social space.

However, a clear distinction should be made between Oldenburg's (1997) notions of third space and that of Tuan (1977). While both are generally relevant, with regard to context, the latter is seen as a more appropriate theory. Tuan's tree recognises that appropriated, unplanned places to pause and gather are equally socially valid and important. These spaces have the potential to either be third spaces on their own or they contribute towards a setting role as a third place (Galuszynski, 2015:51). A combination of both results in a hybrid space that can be a catalyst of social interaction for people from multiple levels of life, which forms the basis of the design intention. As stated by Königk (2015:50), social space is the vehicle for the cultural life of society to take place and it is produced by and influences cultural interaction.

3.1.2. Meaning making in interior design

Interior design addresses the qualities of human experience (security, comfort and well-being) in the built environment as no other design discipline can (Caan, 2011:97). Fundamental to the discipline is an understanding of specific behaviours, needs and subliminal desires of constituents and cultures for whom spaces (and objects) are designed for (Ruth, 2017:62). However, these are not the only roles of interior design. It also offers the tangible cultural spaces that serve as vehicles for intangible cultural practices (Königk, 2015:50). This, therefore, forms the basis of interior design as a tool for cultural production.

In his paper *An interpretation of the role of meaning in interior design,* Königk (2015) begins by defining the link between social space and cultural production and further explaining the role of interior design in space making. When viewing culture as a semiotic concept which fundamentally involves communication of meaning, then all artefacts can be considered as 'texts'. During semiosis (the transfer of meaning) two creative acts are at play: the creative act of generating meaning and the second act of interpretation (Königk, 2015:8). He argues that space influences the behaviours and interactions of inhabitants and gives form to social structures and ideologies. He adds that the framework situated for meaning communication is embedded in material objects and spaces that can be found in the interior artefact (Königk, 2015:50).

Further on, he explains that the production of meaning addresses the psychological needs of the inhabitants, while technification directs embodiment thereof in physical objects. The relationship between object and function is such that, objects and spaces possess an operational purpose but also create and communicate meaning. Therefore, for interior design to construct meaning, it must generate a physical object, which is the inhabitable spatial expression of the imaginal meaning in the mind of the designer (Königk, 2015:54).

This discussion furthers into an explanation of the layers of meaning that can be derived from an interior artefact; 1.) First-order meaning and 2.) Second-order meaning. The first, denotes to the functional object's operational purpose and is dependent on the inhabitant's trust in the technical execution, while the second refers to socially constructed connotations such as social status and is dependent on the inhabitant's suspension of disbelief and trust in the message and its connoted references. However, associations and connotations are unstable and timely as they are dependent on the creative participation of the inhabitant (here considered as the reader of the interior as 'text' (Königk, 2015:50, 55).

The role of the designer, therefore, is to undertake an iterative design practice and develop an emphatic response to the future inhabitant. During the iterative process, the designer can collect analysable information from the utterance and synthesise meaning on both a superficial and deep level. This process enables the designer to investigate how the message can be structured and disseminated in the interior artefact. The transfer of meaning is therefore dependent on correlations between the associations identified by the designer and those active in the mind of the inhabitant (Königk, 2015:50, 55).

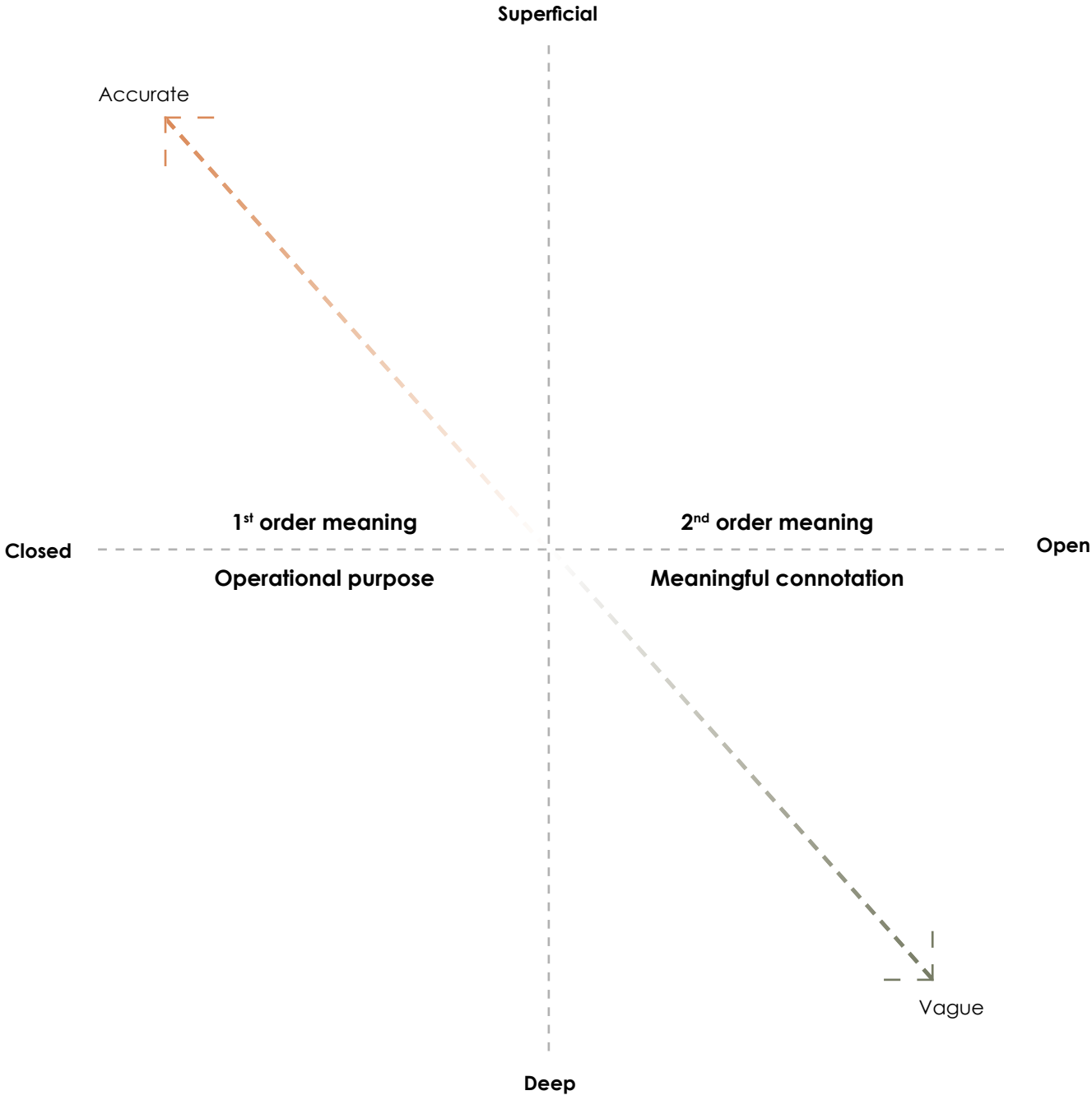


Figure 3.11: Diagram illustrating 1st & 2nd order meaning to be populated accordingly in design development chapter

Characteristics of social spaces

Carmona et al. (2003:113)

01.

As stated by Königk (2015:50), social space is the vehicle for the cultural life of society to take place and it is produced by and infl uences cultural interaction.

Carmona et al. (2003:113) describes more characteristics that deem a social (third) space successful. This include (Adapted from Galuszynski, 2015:51):

Neutral

'Neutral ground' - people can come and go as they please

Low profile

Should be of a low profile

Operational

Functional during official work hours as well as outside office hours

Inclusive

Highly inclusive – a space where people can access without any form of formal membership

Playful

Can be characterised by its 'playful nature'

Comfort

Can provide psychological comfort and support

Figure 3.12: Relating place theory to Marabastad's food spaces

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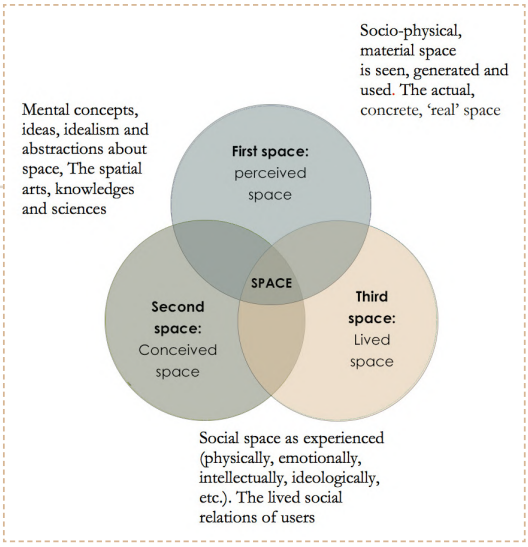
1974)



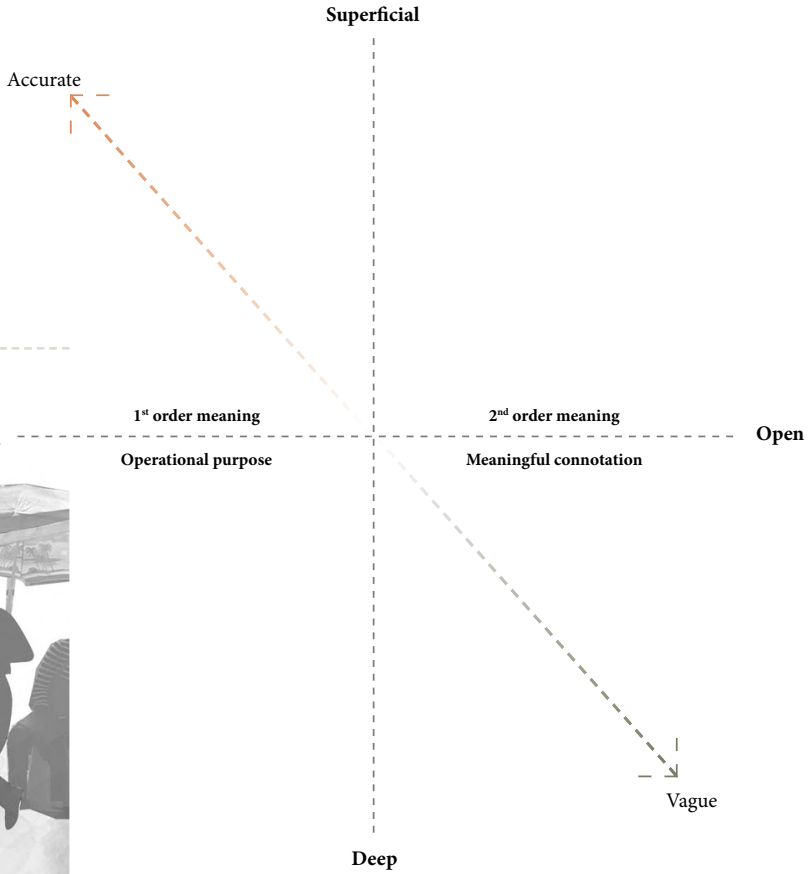
Meaning making

01.

1st & 2nd order meaning chart

Raymund Königk, (2015):

The layers of meaning that can be derived from an interior artefact; 1.) First-order meaning and 2.) Second-order meaning. The **first**, denotes to the **functional object's operational purpose** and is dependent on the inhabitant's trust in the technical execution, while the **second** refers to **socially constructed connotations** such as social status and is dependent on the inhabitant's suspension of disbelief and trust in the message and its connoted references.



4. PEOPLE

The relationship between community (people) and place is powerful as one reinforces the identity of the other in which the built environment is very much an expression of communal held beliefs and values. In other words, people are their place and place is its people known through common experiences and involvement in common symbol and meanings (Ralph, 1976: 34).

The end of the industrial era saw the rise of design becoming more responsive to cultural, social, and personal needs of the user. The focus is now on the dynamic process of user experience and adaptation than on the physical form and mass markets. The shift is therefore characterised by the change from universal product-based design to flexible process-based experiences, tailored specifically for the users in question (Mitchell, 1993:1).

This section deals with the notions of designing for people and theories of human centred design and experiential design will be discussed. This then places the designer in a framework where an understanding of the client and subsequent user needs inform the design approach.

4.1. Social Interaction

According to Kachwalla (2010), social friction is described as the singularity that heightens awareness of difference via engagement of differences between multiple groups of people through productive confrontation and conflict and can be used as a mechanism for social interaction that supports exchange between the diverse social groups.

For the purposes of this dissertation, the focus will be placed on the social structure and how the interior can contribute to meaningful social interactions. There are three structures that contribute to the notion of friction namely: social structure, urban elements and urban structure. Sennett (1971), identified the key aspects of the social context and them into categorised in two groups:

- A social structure that leads to the formation of community groups
- Social structures that promote interaction between the groups.

He further defines mechanisms for social interaction, namely: contact points, collision points and social strands as points through which information can be exchanged between social groups (Kachwalla, 2010:19). These will further be discussed:

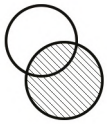


Figure 3.13: Contact points

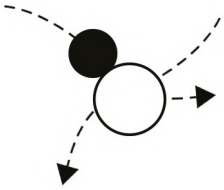


Figure 3.14: Collision points

Figure 3.15: Social strands

1. **Contact points:** are described as points where two or more individuals confront each other, and differences are engaged. These are characterised by the overlap between two or more social groups and a transfer of knowledge (Kachwalla, 2010:21).

2. **Collision points:** These are created by the manipulation of movement patterns of the different social groups in the given space. These points ideally allow exchange between individuals in a state of movement. This can result from a planned collision of two or more walkers taking opportunities of the movement and activity patterns of mixed social groups present in the space (Kachwalla, 2010:23).

3. **Social strands:** These are described as social connector that forms a continuous link between socio-economic groups by connecting contact points and collision points. It enables the transfer of information into different social groups depending on the diversity of options in the space. Diversity of function ensures the movement of the user cutting across the presented boundaries of space. It therefore ensures the continuation of the social strand giving it the capacity to create exchange across the edge of two or more areas in a space (Kachwalla, 2010:26).

These elements are then translated in architectural features in space that can facilitate social interaction. For example, the pathway as a friction element can be translated into a footpath that can be used to trace movement patterns and, in the process, highlighting contact and collision points. As a departure point for articulating friction into space, the three types of friction are described as below (Petzch, 2013:53):

- **Physical friction** relating to interaction with space and the immediate physical surroundings.

- **Visual friction** draws from visual culture as where the view becomes more than just viewing but an extended consciousness.

- **Social friction** as indirect points of exchange created between individuals due to information obtained from the public character.

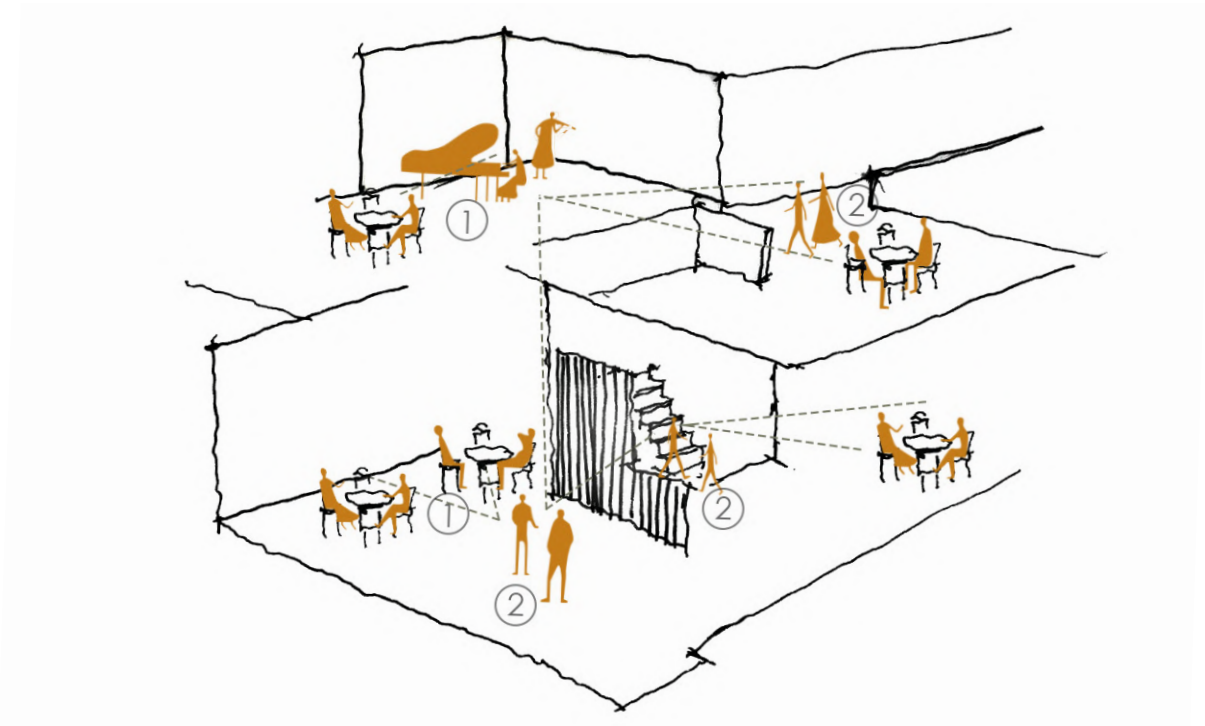


Figure 3.16: Illustrating types of interaction an interior environment

4.2. Human centred design

Human centred design revolves around the intent for the user, seeming to create an emotive message and desired value which can be achieved by intentionally designing the spatial story, which is the experience (Schroder, 2017:50). According to Caan (2011:61), for design to produce solutions that address human concerns, the universal man must be redrawn, and three distinct categories of needs must be envisioned.
These include (Caan, 2011:61):

- The innate physiological and psychological requirements which include social and ecological responsibilities simply described as human nature
- Culturally specific needs which can vary over time and through history
- Needs that are specific to the individual. These serve as a unique lens through which each person views the built environment

Also referred to as user centred design, first coined by Norman (1988), placed focus on making products that were understandable and usable (Zhang & Dong, 2008:2). This can be extended to the designing of spaces, in this case an interior artefact that is user centred taking into consideration the specific functional and cultural needs of the target group. According to Kuthe (Zhang & Dong, 2008:4), the design model starting in the 1990s is one that advocates for design that was about self-presentation and experiences. After the 2000s, human focused design meant increasing moments of interaction.

IDEO's pyramid model of design, highlights the need for products to be useful and usable thus making the product desirable. This is in conjunction with the pyramid of human needs, illustrates that design tends to satisfy higher levels of requirements. The needs of self-actualisation comprising intellectual, appealing, self-actualisation and self-transcendence, reveal the tendencies which future design is likely to care for (Zhang & Dong, 2008:5).

Figure 3.17: Sphere of human needs (Caan, 2011:65)

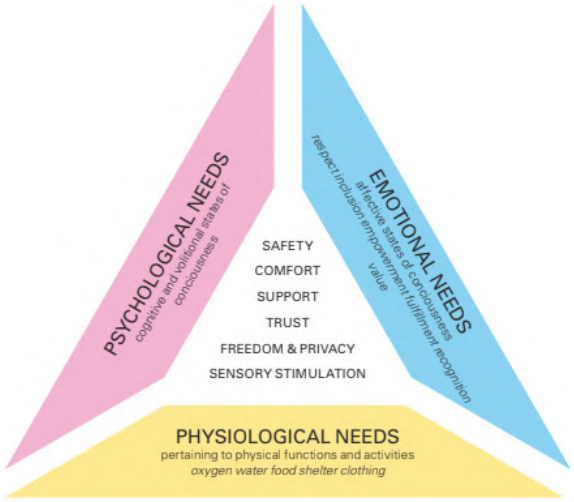


Figure 3.18: Triangle of human needs (Caan, 2011:65)

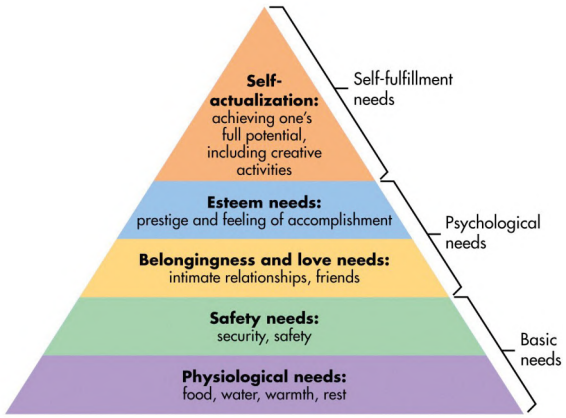


Figure 3.19: Marslow's hierachy of needs (Marques, 2018)

4.3. Designing experience

Exploring the question of how people experience the built environment and how they perceive experiences is key to understanding how to create notable experiences as a result of evocative and consequential places (Ruth, 2017:55). This lends itself as an important aspect to consider as the intention of the design intervention is to interpret the experience that defines Marabastad in providing an additional space where old and new interactions can be explored.

We are accustomed to judging the quality and value of the built environment from still images on magazine pages or television screens, with a prominently missing human often resulting in an empty stylistic shell. Such an approach turns designed environments into depopulated space that more often succeeds only as an image. According to Caan (2011:15), a human being cannot feasibly live in such as environment, at least not in comfort.

Whereas space is usually considered and consumed visually, Caan (2011:51) argues that vision in performance with other senses such as smell, sound, temperature and touch alter the inhabitant's perception of space. All these are contributors to the comfort and well-being of our psyche and memory which cannot be reached only by visual sensations (Caan, 2011:51).

Hassenzhal (2014), defines two types of experiences;
1.) Moment by moment and 2.) Memorised experience. The first type refers to the immediate user interaction, enjoyment and feeling at a specific time while the second refers to experience as a narrative. The latter stems out of memories created before and creates a new one to be communicated at a later stage. This is as a result of a dialogue between the user and a series of actions that create various emotional and physical responses across a period (Schroder, 2017:51).

4.3.1. User behavioural aspects

The challenge however with experiential design is that is remains subjective to the user, where the needs are based on personal perceptions, emotions, motivations and cognitive actions (Schroder, 2017:53). To aid in narrowing it down, six needs have been identified as being suitable to address through experience design (Hassenzhal et al., 2013, 22):

- **Autonomy –** referring to the freedom to take part in actions without the pressure of external factors
- **Competence –** possessing the feeling that one is easily able to do something
- **Relatedness -** a feeling of intimate contact with others and not in isolation
- **Popularity -** a sense of influential value from others
- **Stimulation -** a sense of enjoyment and satisfaction
- **Security -** feeling safe and in control without the dangers of circumstances

In addition to exploring the above, for the spatial environment to be viewed as an experience provider, interior design principles can be applied to provide for a holistic experience through implementing the following experiential models (Schroder, 2017: 53);

- Sensory experience (sense)
- Emotional experience (feel)
- Cognitive experience (think)
- Physical experience (act)
- Social experience (relate)

Finally, interaction patterns with interior artefacts also determine the user behaviour in the space. This relationship is central to designers for the interactions are resource-consuming actions which should be addressed in terms of the sustainability of the design (Stömberg et al., 2015:3). According to Schroder (2017:55), interaction patterns can be defined by the following aspects:

- User pathway
- Frequency
- Time and duration

The above will be explored spatially and their influence explicitly addressed in the design investigation phase to follow.

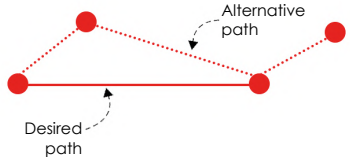


Figure 3.20: User pathway

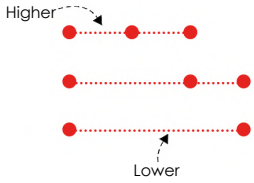


Figure 3.21: Frequency

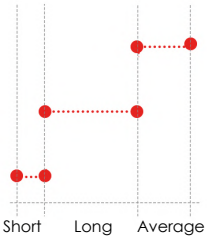


Figure 3.22: Time and duration

Social interaction

Types of interaction 02.

(Petzch, 2013:53):

- **Physical friction** relating to interaction with space and the immediate physical surroundings.
- **Visual friction** draws from visual culture as where the view becomes more than just viewing but an extended consciousness.
- **Social friction** as indirect points of exchange created between individuals due to information obtained from the public character

Interaction patterns 01.

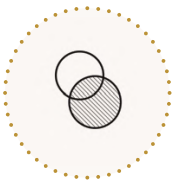
(Schroder, 2017: 55);

- User pathway
- Frequency
- Time and duration

Desig
exper

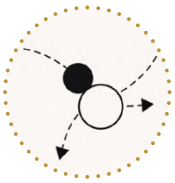
Mechanisms for social interaction 01.

(Kachwalla, 2010:19):



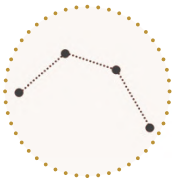
a. Contact point

Contact points: are described as points where two or more individuals confront each other, and differences are engaged



b. Collision point

Collision points: These are created by the manipulation of movement patterns of the different social groups in the given space



c. Social strands

Social strands: These are described as social connector that forms a continuous link between socio-economic groups by connecting contact points and collision points

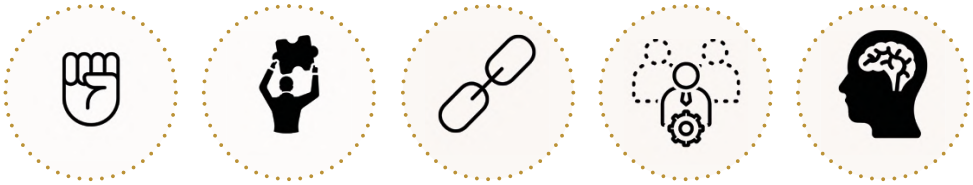
Figure 3.23: Relating literature on people to Marabastad as context

gning
rience

PEOPLE

Human centred design

02. **User behavioural aspects** (Hassenzhal et al., 2013, 22):

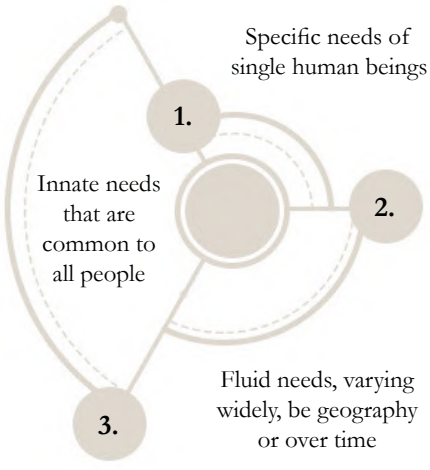


Autonomy *Competence* *Relatedness* *Popularity* *Stimulation*

01. **Categories of needs**

(Caan, 2011:61):

1. Individual needs
2. Culturally specific
3. Human nature



5. ESTABLISHING A THEORETICAL FRAMEWORK

The above chapter discusses several theories on food, place and people. In relation to the topic, appropriate theorists/writers were selected in order to formulate a discussion around the intersection between the three points of interest. The table below is a summary of the points discussed and their implications on the design decisions to follow.

Topic	Theory/Concept	Theorist/Writer	Description	Design considerations
Food	Food and design	Marije Vogelzang	Food as an object of influence to design experience, not the food	Points to inspire eating design: senses, techniques, action of food
		Marcus Fairs, (2010)	The changing role of the kitchen and how it affects interaction with food	Cooking as a shared social activity. Kitchen as a space for interaction and knowledge sharing
	Slow Food Movement	Mike Louw, (2014)	Link between slow food and architecture	Sensorial experience Regional food Crafted communally Proximity
Place	Social space	Edward Relph, (1976)	Meanings of place comprises of: physical setting, objetcs and activities, interaction, experience	Complex intergration of contextual physical characteristics, activities and rituals resulting in a farmiliar experience
		Lefebvre, (1974)	Third space as experienced space characterised by the lived social relations of users	Understanding of user social patterns, make it contextual, space to be influenced by findings
		Tuan, (1977)	Appropriated, unplanned places to pause and gather to be considered as third/social spaces	Design to accommodate for spaces to be appropriated and shifted according to need
	Meaning in making in interior design	Raymund Königk, (2015)	Tangible cultural spaces enable intangible cultural practices	Accommodate spatially intangible practices that are part of the food culture by providing markers that are familiar to the participants
People	Social interaction	Nazia Kachwalla, (2010)	Social interaction in an interior is a result of contact and collision point and social strands	Spaces to provide for instances of social interaction to occur Multi-layered friction: physical, visual, social

Continued on next page

	Human Centred Design	Don Norman, (1988) IDEO, (2008)	The intent for the user is foremost, create an emotive message and desired value	Intentionally designing the spatial story, which is the experience, consider user needs and (rituals) first
	Designing Experience	Marc Hassenzhal, (2010)	This takes into consideration user behavioural patterns to determine how the space will be articulated	Types of experience: Moment by moment & Memorised Instances of multiple experiential models Interaction patterns

Table 3: Theoretical summary and design implications

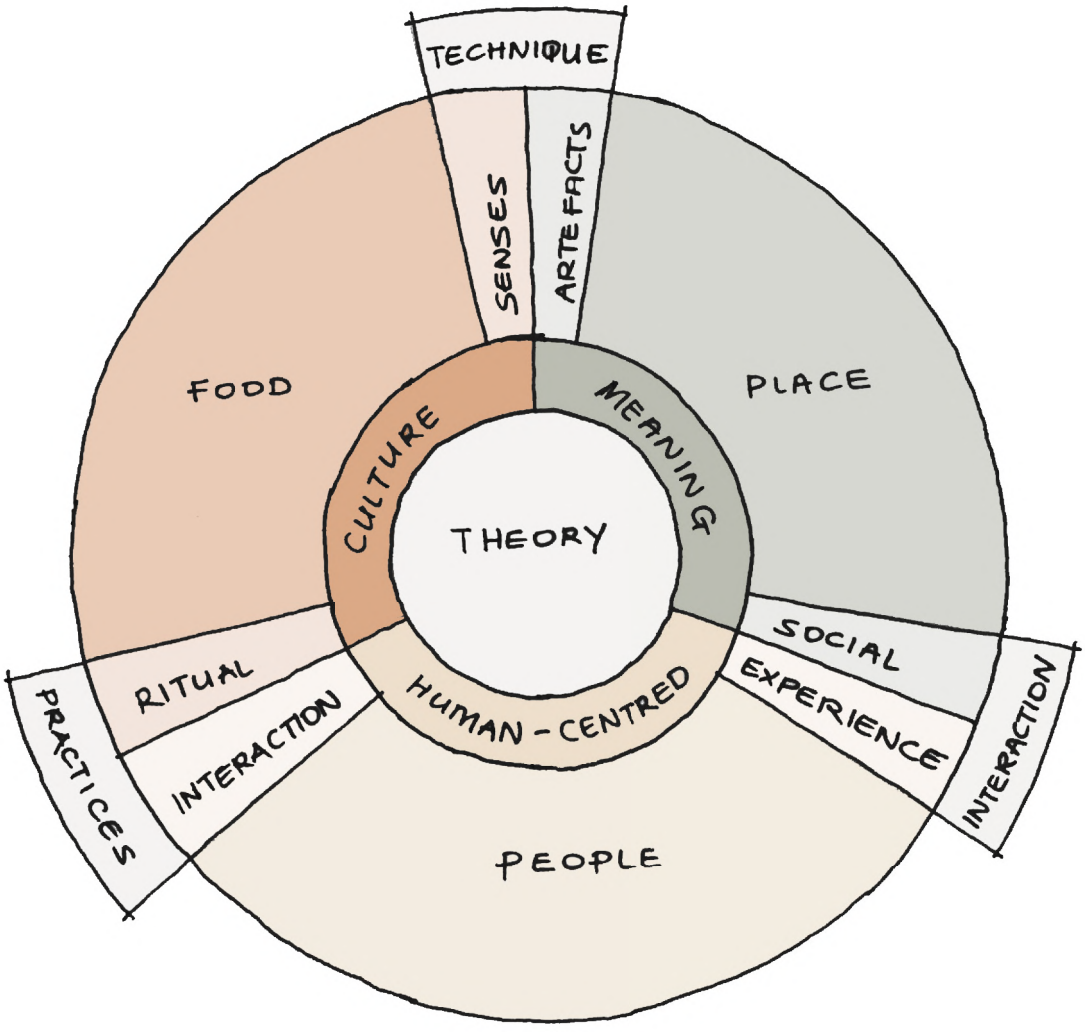


Figure 3.24: An exchange between food, place and people: establishing a theoretical framework

6. CONCLUSION

Where food and design collide, the sensorial experience as a result of the user interacting with the food and the space that facilitates this interaction is paramount. The making of food, in addition to issues such as sourcing and craftsmanship can be extended into the making of a space, particularly an interior artefact. The resulting 'slow' architecture is therefore an embodiment of phenomenology enhancing the overall experience of space. The highlighted areas of interest as discussed above form the main informants under the theme of food.

Following the literature review above, the conclusion is such that food is identified as the main programme driver, how people experience space is considered as part of the design informants and resulting in a space with a specific identity rooted in its contextual markers. The link between the three elements defines the theoretical approach where keywords are derived to guide in the design process.

4_PRECEDENT STUDY

1. INTRODUCTION

This chapter investigates architectural precedents to support the basis of this study. The following precedents were selected in order to derive design guidelines that are in alignment with the project's intention and interests. Based on the theoretical investigation, these are categorised into the following three themes, namely; design intent, programme and food for interaction. These were derived from the context and programme analysis adding onto the objectives of the study. The objective is to derive design guidelines from each section that will aid in design decisions in the design development phase. Where deemed necessary, more precedents will be introduced in the technical development chapter to further support the technical investigation supporting the overall study.

2. SELECTION CRITERIA

1. Design intent

The resultant effect of the intervention should be a space that facilitates for social interaction. Taking into consideration that the target market is people from multiple facets of life, this lends itself as a relevant area of investigation. Spaces to be analysed under this section should therefore be an embodiment of the promotion of social interaction. The assessment criteria here is derived from the literature review done on theories of social space.

2. Programme

The programme selection is important in being able to successfully promote and enhance social interaction. The nature of the programmes selected lends for a multi-functional space that caters for food production and consumption. Therefore, four key words were derived to guide programme exploration and precedent selection, these being; grow, prepare, trade and eat. Spaces analysed in this section embody food spaces that are a combination of these activities.

3. Food for interaction

The main object of interaction in the designed interior will be food. Therefore, the complete food cycle will be considered and how it affects interaction between the relevant parties. Its presentation therefore forms an important aspect in relation to how the interior is presented to the user. Consideration will also be given to how food contributes to the sensorial experience of space, therefore precedents selected for this section illustrate the intangible aspect of space production.

3. ASSESSMENT CRITERIA

The assessment criteria have been derived from the context analysis and literature review as done in the previous chapters. These will be classified according to their relevance to the selection criteria, i.e. criteria derived from food theory will be applied in section 4.4.3 which discusses precedents based on the notion of food as an object for interaction.

1. Design intent

The following are used to evaluate precedents to inform the design intent:

- Types of friction present in the space, i.e. physical, visual and social
- Points that support mechanisms of social interaction, i.e. collision and contact
- Place as a neutral space i.e. people may come and go as they please
- Evidence of inclusivity, i.e. how is the space experienced by people with various abilities

2. Programme

Spaces that embody the four key words as identified above; grow, prepare, trade and eat will be analysed using the following criteria:

- Spatial provision for all four activities and supporting rituals and activities
- Communality as a means of experiencing space, i.e. the success of shared spaces of consumption
- Spatial markers that support ritual specific to food interaction
- Proximity of zones of activities and how they support each other
- Infrastructure to support functioning of the space

3. Food for interaction

Here food is viewed as an object to facilitate interaction and to be interacted with. The following criteria derived from theory of food and design will be used for the analysis of precedents under this section:

- How food is experienced and the inclusion of all sense in that experience
- Nature of environments that enable the sensorial experience of food
- Other ways of experiencing food beyond consumption

4. PRECEDENT STUDY

4.1. Design intent

4.1.1. The Watershed, Cape Town

Architects: Wolff Architects

Year of Completion: 2014

Category: Public space

According to the architects (Wolff Architects, 2014), the resulting architectural space from their brief is an educational institution that shows leadership in city formation to serve other interests beyond the proposed business incubator. This is defined by a central street connecting the opposite ends of the exterior to the social interior. The street reclaims the public realm which is of a bigger order than the business incubator where the public pedestrian connects to other users and spaces within the shed.

Figure 4.1: Core of building as street connecting two nodes (Wolff Architects, 2014)

Figure 4.2: Open spaces encourage visual interaction (Wolff Architects, 2014)

Figure 4.3: Double volume opens up space and defines experience (Wolff Architects, 2014)

Figure 4.4: Positioning of stalls taps into the pedestrian traffic (Wolff Architects, 2014)

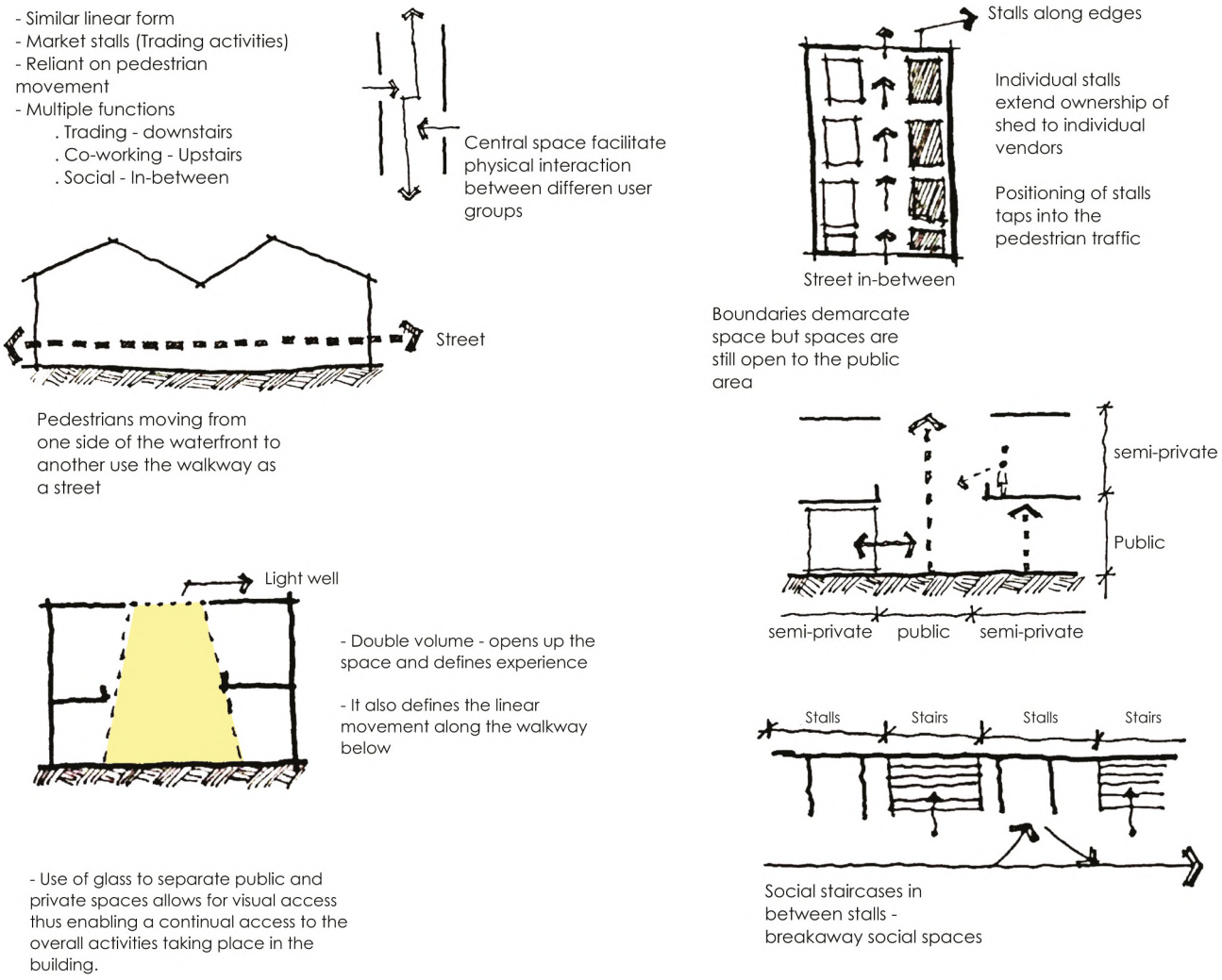


Figure 4.5: Diagramatic analysis of The Watershed

a. Design guidelines

The following design guidelines are supported by literature of the characteristics of social spaces as in section 3.1.1 above, to facilitate social friction and will be carried forward as lessons learnt from this precedent:

- **Openness:** To facilitate fluidity of space hence allowing easy access for multiple users
- **Central space:** Allows for an open space where users can socialise hence heightening instances of social friction
- **Levels of privacy:** Different inhabitants use space differently hence there is a determination of spatial hierarchy to define its articulation
- **Space ownership:** Private space for vendors with their individual spatial requirements such as storage, cleaning etc.
- **Intangible elements** are used to define space and function
- **Corridors and walkways** seen as spaces to facilitate collision and exchange of knowledge.

4.1.2. Markets of Warwick, Durban

Architects: -

Year of Completion: -

Category: Public market

Markets of Warwick are an amalgamation of several markets viewed as one. These are: fresh produce market, bovine head market, early morning market, traditional medicine market, herbs and spices market and the Brook Street market. It is situated in Durban's CBD and adjacent to multiple transport nodes, Warwick junction's typology is one that is similar to that of Marabastad. However, it is celebrated as one of Durban's tourist destinations where visitors get to immerse in the trading activities. This therefore serves as an example where social friction would occur between various groups of people.

a. Design guidelines

- **Hierarchy:** To facilitate space to be used by different users as well as enhance visual accessibility. Different spaces also demarcate specific experiences.
- **Use of walkways:** Setting up stalls along pathways attract pedestrian traffic into the stalls therefore acting as a pull element.
- **Multiple spatial typologies:** Allows for multiple ways for the users to experience space. A combination of sub programmes enhances richness in programme.
- Mapping of **movement patterns** indicated the different ways in which multiple users experience the space thus unpacking the space in multiple ways,
- **Provision for cultural needs** i.e. ways of eating that may heighten the user experience. Specific foods are eaten in specific manners and therefore the vendors do not try to enforce other ways of eating, but rather promote cultural mannerisms.
- **Open spaces** remain open for the public to facilitate social friction between the various user groups of people using the market space.

Figure 4.6: Market adjacent to bus station (Maassen and Galvin, 2019)

Figure 4.7: Eating spaces are situated adjacent to cooking areas encouraging multiple interactions (Opencity Projects, 2013)

Figure 4.8: Long eating tables encourage celebration communal eating which is by hand as per ritual (Plumbley, 2018)

Figure 4.9: Interaction between vendor and customer around the food table (Plumbley, 2018)

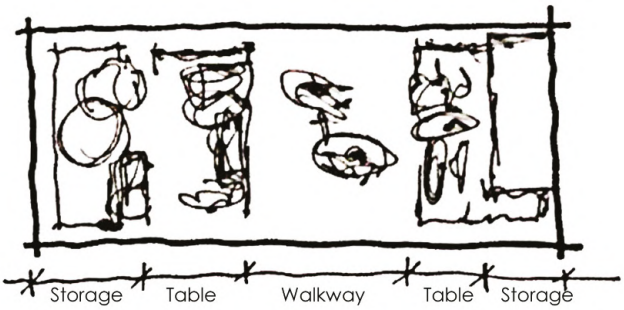


Figure 4.10: Trading space also serve as vendors personal space i.e. the back of stalls used as storage and sleeping area.

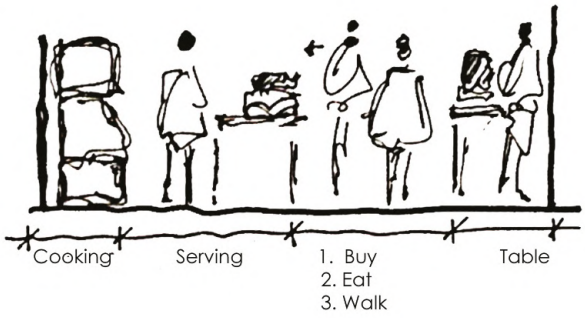


Figure 4.11: Meal spaces accommodate a variety of activities around food rituals. Cooking is visually accessible to the buyers but an individual activity for the vendors. Tables allow for buyers to grab a meal on the go.

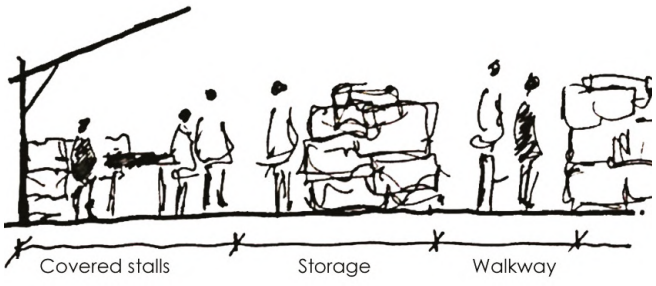


Figure 4.12: The more organised spaces are on the peripheries while open in between spaces have been appropriated for storage and informal stalls while still accommodation for pedestrian traffic.

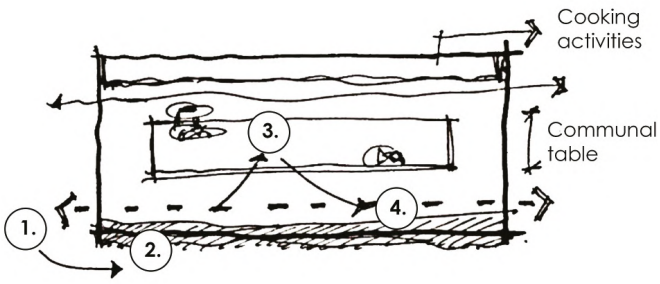


Figure 4.13: Illustration of movement patterns inside individual stalls

Figure 4.14: Relation between paths and stalls

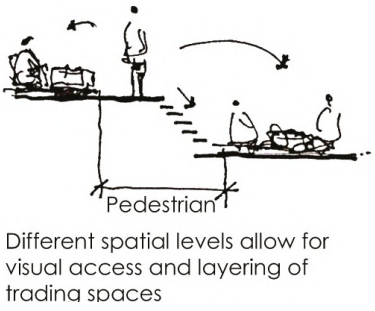


Figure 4.15: Multiple levels enhance hierachy of experience

4.2. Programme

4.2.1. Brasserie 2050 restaurant, Netherlands

Designers: Overtreders W

Year of Completion: 2018

Category: Temporary installation

The pavilion was conceived as a barn of the future as a barn represents the timeless icon for farming (Pintos, 2019) but adapted to fit the new idea of a shared space that caters for the food cycle. The building envelope is a dismountable, minimal materials leaving shifting the focus to the food activities taking place inside the pavilion. The following guidelines were deemed important for the purpose of this study.

- The pavilion is characterised by two distinct spaces, identifiable by the difference in materiality. Each of the two spaces is a combination of two or more functions that intersect on the boundaries.
- Main construction consists of standard pallet racks, with a stack of vertical farming cabinets making the façade of the building. This is used for growing herbs that the customers can use.

Figure 4.16: Building reimagined as a barn with produce grown on its walls used in the indoor restaurant (Pintos, 2019)

Figure 4.17: Food in open storage also used as wind shields for customers indoor (Pintos, 2019)

Figure 4.18: Eating is a communal activity faciliated by the inclusion of long tables and benches (Pintos, 2019)

Figure 4.19: Layering of sub-programmes in close proximity thus enabling each other (Pintos, 2019)

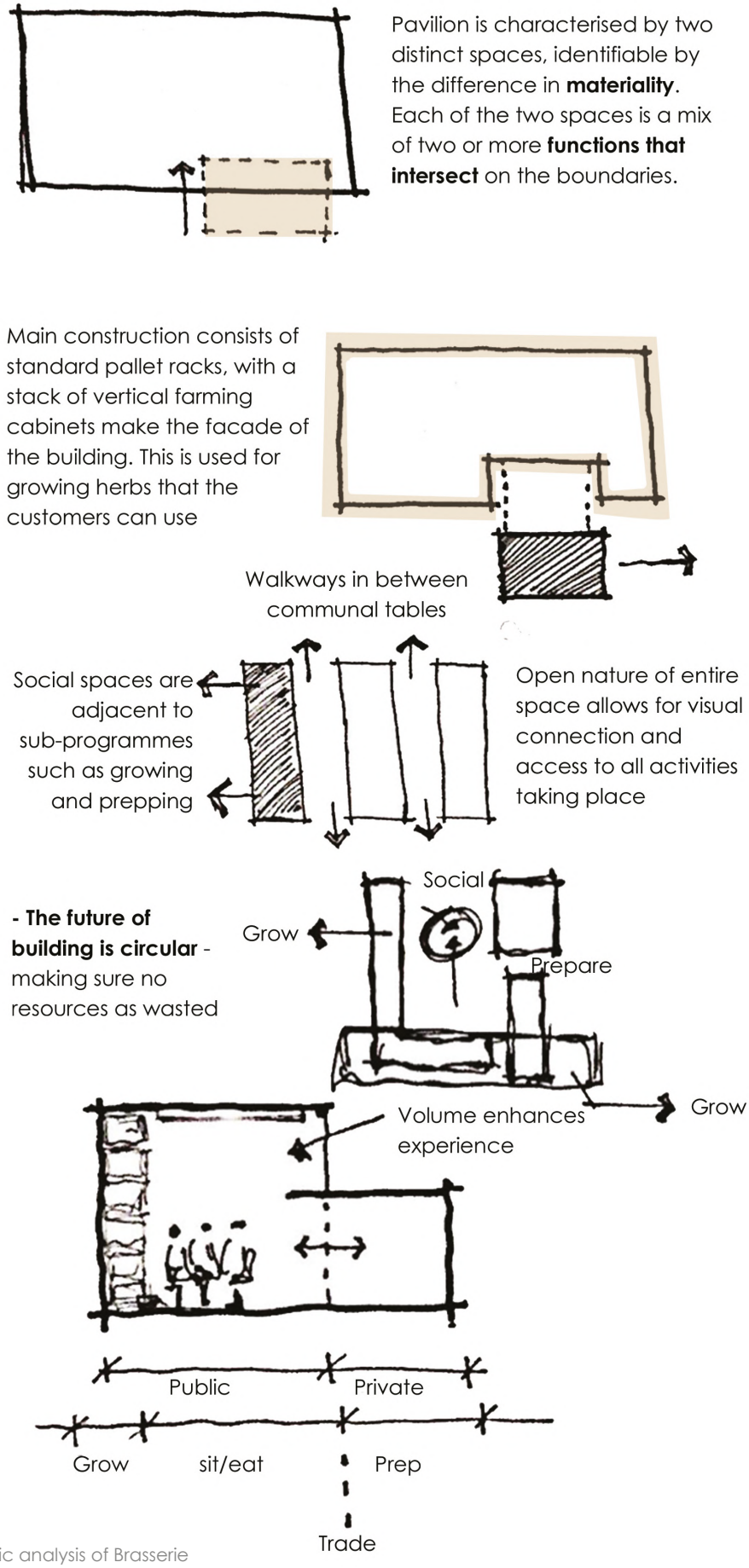


Figure 4.20: Diagramatic analysis of Brasserie

4.2.2. Space 10 Indoor farm, London

Designers: Space 10
Year of Completion: 2017
Category: Installation

The installation comprises of a space that showcases the possibility of a multifunctional food preparation space. This was later adapted a London restaurant 'Lokal'. The essence of the installation is such that within the confines of a single space, vegetables and herbs are grown on vertical growing modules, there is provision for counters to be used during food preparation and a serving table is set up adjacent. This makes the food preparation compact and interactive for both the vendor and the customer. Image 4.24 outlines the design guidelines derived from this precedent.

Figure 4.21: Food preparation and service area is the focal point of the space (Marchese, 2017)

Figure 4.22: Sitting is along the edges of the food prep. area (Marchese, 2017)

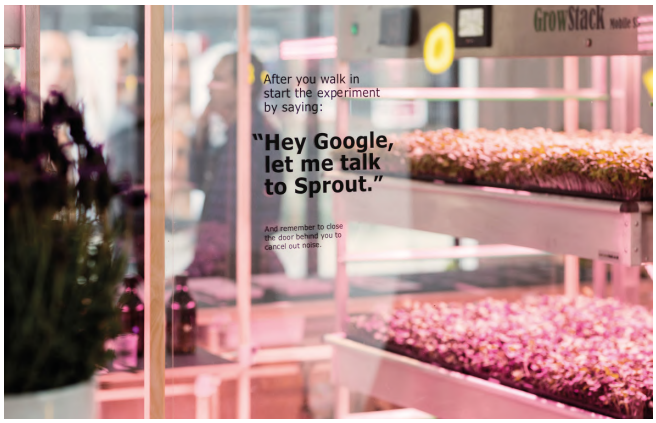
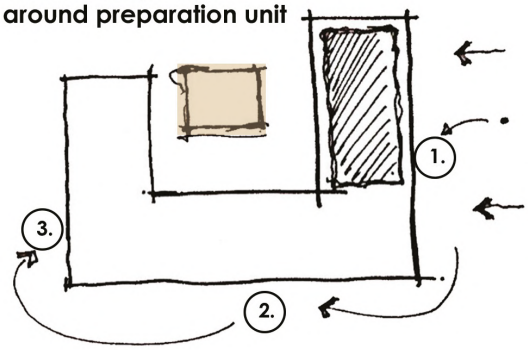


Figure 4.23: Incorporation of technology to add to the spatial experience (Marchese, 2017)

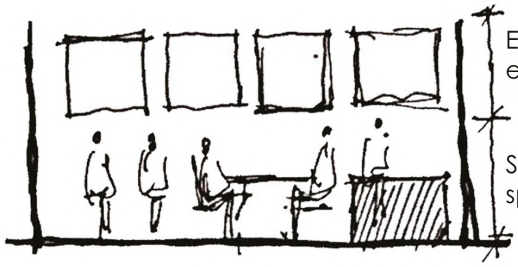

Figure 4.24: Serving bowls are incorporated into the furniture in open view to enhance interaction (Marchese, 2017)

Movement pattern around preparation unit

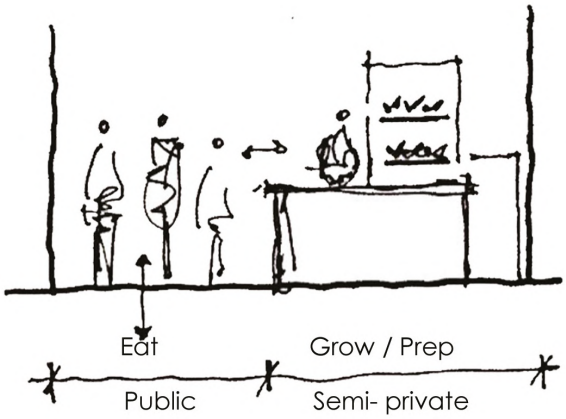


- Growing module is at the center of the preparation unit - visually accesible to public

1. Entrance from street
- Pick utensils and
2. Self service of a selection of produce from igrowing module
3. Complete serving, oick cuttlery



- Inlusion of educational elements within social spaces ensures an active engagement with them



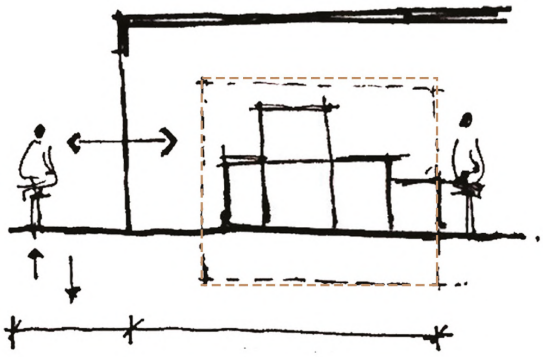
- Open preparation unit allows for **visual accessibility of activities** leading up to the meal

- Social space allows for multiple **levels of interaction** i.e. individual sitting vs group sitting

- **Shared space**

- Connection with the adjacent exterior. **Permeable thresholds** allow for pedestrians to access interior activities.

- **Including the users** in the food preparation creates an interactive atmosphere



4.3. Food for interaction

4.3.1. Sensorial Seeds Experience, Toronto

Designers: Marijè Vogelzang

Year of Completion: 2019

Category: Installation

According to the designer (Howarth, 2019), the installation is supposed to be an immersion of all the five senses and not limited to the visual as most installations would function. She uses objects such as ribbons to hide the object of interaction (food) which prompts the users to experience foods in other ways, i.e. touch and smell. Each space is meant to activate a different sense. Although not explicit, a similar interaction exists in Marabastad and therefore arises the need to heighten it as part of the experiential journey. The guidelines acquired therefore are as follows:

a. Design guidelines

- **Space dividers** are inexpensive and suspended from the ceiling for easy disassembly. Their permeable nature allows for interaction with the space as well as creating a sense of intimacy.
- Installation dictates **movement** through space, while categorisation allows for multiple experiences.
- Fabric dividers conceal the food objects but allow for the participant to engage with other senses such as smell thus heightening the sensorial experience: **Permeable boundary**
- **Multiple layers of boundaries** add to the experience, i.e. a stab through a solid wall to direct hand movement towards object of interaction.
- The **sensorial experience** combines multiple elements to facilitate interaction between people and objects
- **Open pathways** adjacent to experiential pods facilitate interaction between **groups of people**, while the individual pods facilitate a direct interaction between an individual and the object.

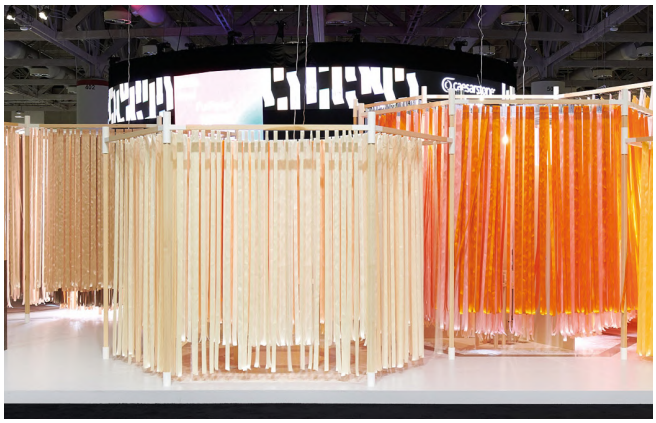


Figure 4.26: Spatial devices serving as experiential boundaries encouraging interaction with tangible space (Howarth, 2019)

Figure 4.27: Each unit uses a different technique of exhbition adding variety to experience Howarth, 2019)

Figure 4.28: Exhibition encourages experiencing it using all the senses by suppressing others at any given stop (Howarth, 2019)

Figure 4.29: Using actual food as an object to interact with (Howarth, 2019)

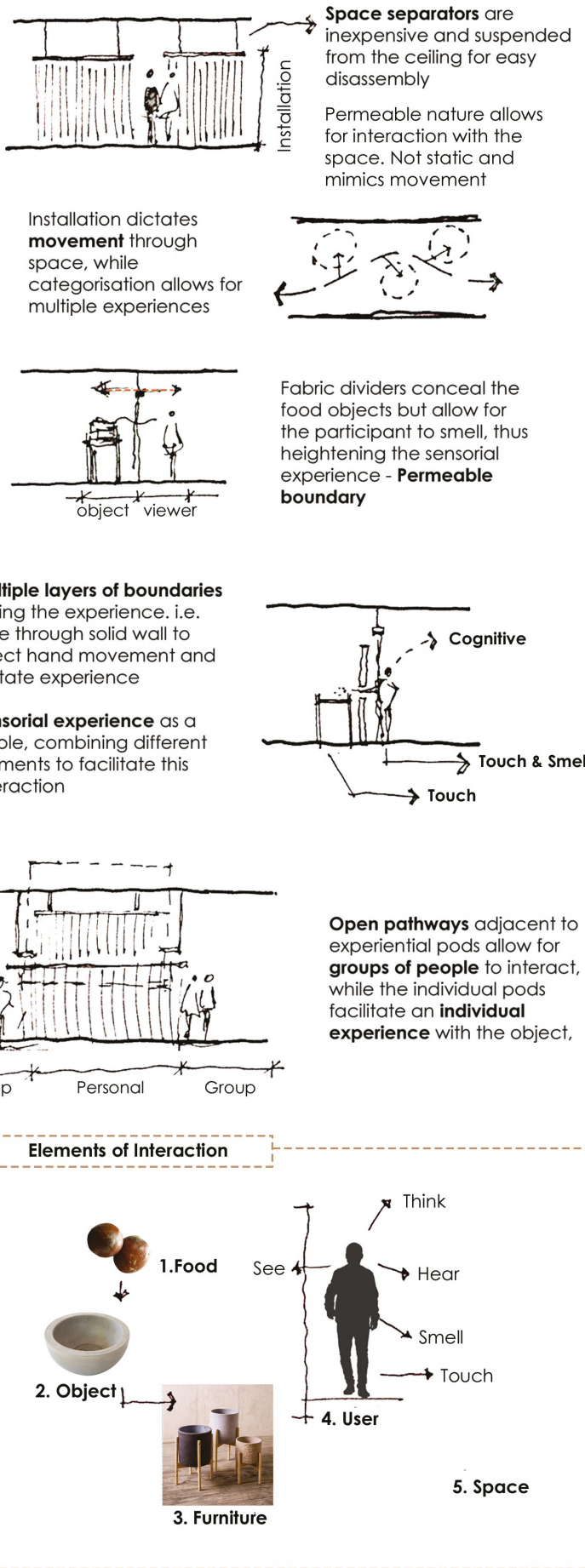


Figure 4.30: Diagramatic analysis of the sensorial seeds experience

4.3.2. The Act of Eating

Designers: Subirats, C et.al.
Year of Completion: 2017
Category: Experiments

The act of eating is a series of installations that experimented on people's interaction with food, considering external factors such as the environment and rituals and how that affected the interaction thereof. The experiments are briefly discussed below (Subirats,2017).

Experiment 1.1 – Exploring interaction with food

When asked to describe their ideal eating scenarios, most participants mentioned the environment leaving out the most important aspect of eating; food. The conclusion here was that the environment is an important factor affecting people's experience with food (Subirats,2017).

Figure 4.31: (From top left) Spatial experience to a mindful eating exhibition (Subirats, 2017)
Figure 4.32: Information cards as a guide to eating actions (Subirats, 2017)
Figure 4.33: Experiment 2.2 - challenging the farmiliar way of eating (Subirats, 2017)

Experiment 2.1 – How might we be more aware of the act of eating?

Following the participants response of the environment affecting the food experience, this follow up experiment created a focus on the food. A table with food was set up in a neutral enclosure to draw the participants focus on the act of eating (Subirats,2017).

According to the designers (Subirats,2017), the resulting feedback was:

- There was a lack of environment to relate to therefore no memory connection was made with the act of eating
- However, there was no distraction, hence having the meal was fully engaging.

Experiment 2.2 – Challenge the familiar way of eating

In addition to removing external environmental factors that may be distracting, the experiment narrowed down to the intimates dictating the act of eating. In this experiment, cutlery was removed from the table setting and participants had to device methods of eating suitable for them (Subirats, 2017). The result was such that:

- The participants talked about the act of eating and not the environment as in the first experiment.
- Using hands or bread as spoons reduced the eating pace significantly thus making the activity more engaging and savoury.

Experiment 3.1 – A guide to eating mindfully

Based on the culmination of findings from all the above experiments, the final experiment sought to make the act of eating interactive taking from each of the above. The elements guiding this experience include (Subirats,2017):

- Blocking all physical distractions
- Encouraging participants to eat using their hands
- Multiple ways to experience a richer taste palette
- Step by step placard guide given to participants to indulging in the presented meals

Experiment 1.1 – Exploring our interaction with food

Environment as main factor affecting peoples experience with food.

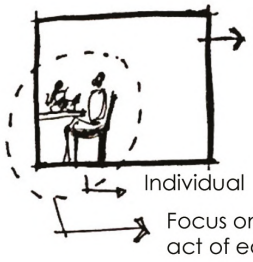
1. Intimate group

2. Individual

3. Intimate - no furniture

4. Intimate - outdoors

Experiment 2.1 – How might we be more aware of the act of eating?



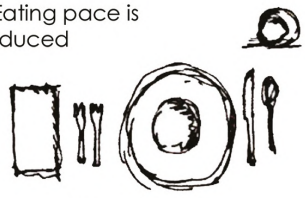
A neutral environment to bring focus to the food and the act of eating.

Participant feedback:
- lack of environment to relate to
- However there was no distraction, hence meal was fully engaged

Experiment 2.2 - Challenge the familiar way of eating

- Remove cultlery

- Eating pace is reduced



WIth cutlery

using hands or bread as spoon

Foods as eating aids

- Participant talks about the act of eating and not the environment

Experiment 3.1 - A guide to eating mindfully

Interactive:

- step to step guide to indulging in a meal

Elements definigng experience:

- Block physical distractions
- Encourages eating with hands
- Multiple ways to experience richer taste palette

Figure 4.34: Diagramatic analysis of the 'ways of eating'

5. SPATIAL GUIDELINES

The table below is a summary of the discussed precedents and the spatial guidelines derived from each to further be used as design informants.

Criteria	Space	Characteristics/Spatial guidelines
Design intent	The Watershed	Openness, central social space, levels of privacy, ownership, intangible elements, movement paths
	Markets of Warwick	Hierarchy, movement paths, multiple spatial typologies, provision for rituals, open
Programme	Brasserie 2050	Functional spaces intersect, materiality to define space, social core, functional edge, circular use of resources, open
	Space 10	Movement defines spatial organisation, educational elements, multiple levels of interaction, shared spaces, permeable thresholds, active participation by customer
Food for interaction	Sensorial seeds	Space dividers, movement, permeable edges, layers of space, sensorial experience, open, individual vs group experience
	The act of eating	Neutral spaces of eating, promote familiar ways of eating, interactive elements, environment to contribute to experience

Table 4: Outlining the spatial guidelines derived from each section of analysis

6. CONCLUSION

The selected precedents were critically analysed according to three categories; design intent, programme and food for interaction. These all fall within the spectrum of where food, place and people intersect. This intersection will further be discussed within the theoretical premise in the following chapter. This section's contribution, therefore, spans from a macro to micro level where each outlined guideline will be used to investigate the workability of the interior.

5_CLIENT, PROGRAMME & USERS

1. INTRODUCTION

The program selection was influenced by an overlay of information gathered from the macro site analysis with that of the meso. This also informed the selection of the client as the new client needed to be an embodiment of the principles being adopted for the project intervention. This chapter therefore presents the client followed by an introduction of the programmes and subsequent user profiles. The discussion will delve into an understanding of how these relate to their intended spaces and functional requirements thus validating their selection as appropriate insertions.

2. CLIENT

"The city too is a living system even if the context and environment is different"
(Calitz & Drakes, 2016).

Farm this city (FTC) is an initiative based in Maboneng, Johannesburg that is rooted in three main aspects of food culture. They believe that; the future is food; everyone is a farmer and in urban community integration through food cultures. In addition to this, their driving influences were rooted in statistics showing that 62% of South Africa's population is concentrated in urban areas while 55% of all South Africans are insecure and name South Africa as the 3rd fattest nation in the world (Calitz & Drakes, 2016).

They consist of a group of individuals and communities that are passionate about food on multiple facets of the food process. These include urban farmers, restauranteurs and eatery owners, students and educators, as well as the general public engaging in food spaces. Projects done under FTC range from community urban farming, training of urban farmers to restaurants that encourage the farm to fork movement as well as advocacy for street food celebration (Calitz & Drakes, 2016).

Bambanani - FOOD & HERB GARDEN PROJECT

Joburg Food Culture Hub

MABONENG - Major urban rooftop farm

Ellis House - URBAN ROOFTOP FARM / GARDEN

Figure 5.1: Projects done by FTC (farm This City, 2016)

Their approach involves implementing a five seed ecosystem that feed onto each other as a means of establishing a balance of the different elements. These include (Calitz and Drakes, 2016):

- **Urban earth:** Encourages city dwellers to use open, unused or abandoned space for cultivation.
- **Urban environment:** Relates to using contextual markers to inform need and requirements as well as using agriculture a means of sustaining the city.
- **Urban economy:** In implementing these strategies, they improve on the economy while shaping and sustaining the city.
- **Urban future:** Uses food as a means of educating the youth who will inherit knowledge to help the city grow
- **Urban community:** The city is dependent on its inhabitants. Collectively they give the city life, they inhabit it, direct it and grow it

2.1. Statement of significance

FTC as a local initiative that exemplifies the notions of including the community in its projects aimed at creating sustainable cities (Calitz and Drakes, 2016) thus making it a viable client. The aim of this dissertation is to illustrate that design and its associated principles can be used to enhance an existing culture (in this case around food) and render it celebrated. To make the five eco-system strategy appropriate for the selected site, this project makes use of 'urban environment' through understanding and documenting of the contextual issues to inform the intervention. In addition to that, 'urban community' is set to facilitate sense of ownership by designing for the existing culture in as much as the intervention is not directly situated at the centre of Marabastad. This also provides for a space where outsiders can engage with and celebrate said food culture.

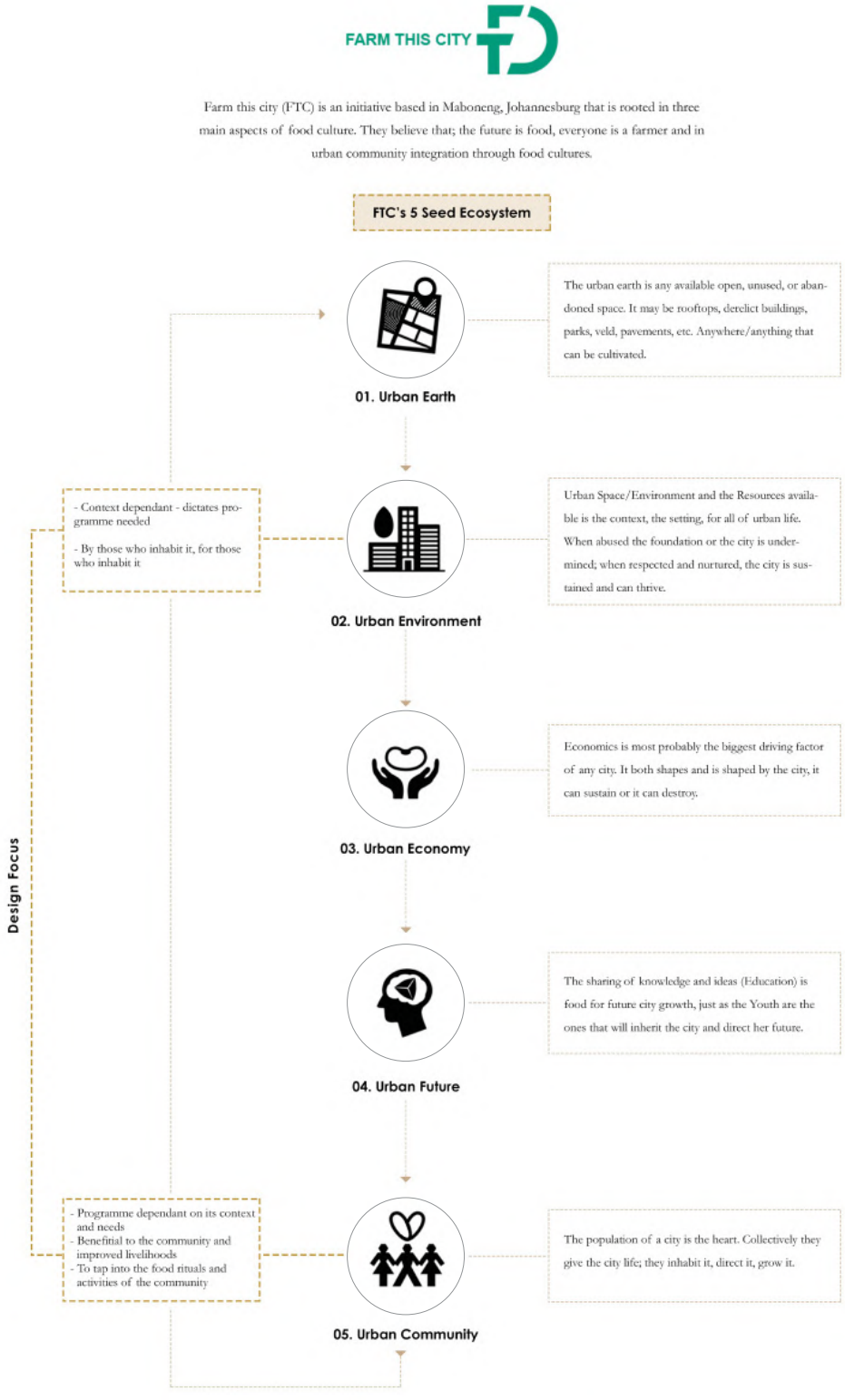


Figure 5.2: The FTC eco-system highlighting significance to study (Adapted from Farm This City, 2016)

3. PROGRAMMES

Following the findings of the contextual study, this section highlights the specific programmes that will define the design intervention for this study. In addition to this, the sub-programmes are briefly introduced to illustrate the rich exchange of function. Programmes pertaining to the selected buildings will further be explained in terms of their contribution to the conceptual approach.

Introduction to programmes

	Programme	Sqm	Operational hrs	Sub-programmes	Zoning
1.	Butchery and spice shop	230 m^2	**Weekdays:** 7am - 5pm **Weekends:** 9am - 2pm	- Products display Meat,spices, canned items) - Tasting area - P.O.S	Sales floor area - Public
				- Storage - Changing room - Personnel WC	Personnel - Private
2.	Experiential Kitchen	400 m^2	**Weekdays:** 7am - 5pm **Weekends:** 8am - 2pm	- Vendor stalls - Multiple sitting areas - Wash stations - Service counters - Public WC -Disposal stations	Production floor area - Public
				- Storage - Cleaning - Changing rooms	Vendors - Private
3.	Peel workshop	400 m^2	**Weekdays:** 7am - 5pm **Weekends:** 8am - 2pm	- Dispatch area - Display shelving - P.O.S	Sales floor area - Public
				-Sorting station - Maceration station - Moulding station - Cleaning - Storage	Workshop area - Private

Figure 5.3: Introduction of programmes and sub-programmes

3.1. Butchery and seasoning shop

As previously stated, the two adjacent buildings to the experiential kitchen (currently test kitchen) will be addressed on a zoning level as supporting functional spaces for the main programme. Existing on site within the tasting pavilion, is a small shop that was found to not be sufficiently sized to cater for retail activities and trading of other foods other than fresh produce. This space will therefore be adopted and transformed into an exclusively retail store.

Meat as a main component of the menu being served in Marabastad is noted to be prominently missing within the complex as part of the distribution cycle. By introducing a butchery, the link between the three buildings in the social sphere is closed thus completing the production to distribution to consumption cycle. This also ensures that the vendors in the experiential kitchen can completely track the sourcing of their ingredients thus putting into practice the slow food movement principles. As in Marabastad, produce will be sourced from an abattoir and sold to either the public or vendors within the complex. In addition to meat, items such as spices and local flavourings, i.e. atchar, produced in the adjacent fruit processing plant will also be sold here.

For the retail space to act as an experience provider, the experiential models as discussed section 3.4.3 will be implemented as follows:

- **Sensory experience:** The display area for the fruit products should allow the customers to taste and smell before purchasing.
- **Physical experience:** Customers have the autonomy to service themselves, i.e. select their own packaging and serve their products before proceeding to the pay point.
- **Social experience:** Openness of the sales floor enhances social interaction between the customers. In addition to this, allowing the customers to actively take part in the activities will stimulate social interaction.

The design development section to follow will further discuss more design decisions in detail, highlighting their influences on the design intent.

3.2. Experiential kitchen

The experiential kitchen is a direct translation of the activities taking place in food spaces in Marabastad. The focus of the project, therefore, lies in articulating the space as an experiential environment that embodies the food culture of Marabastad inclusive of its intangible rituals.

Main activities of the space are categorised under either production, consumption or auxiliary, all supporting the main programme of food interaction. Based on the elements that define Marabastad's food culture, a further breakdown of the above-mentioned categories will define the specific activities that will take place in the space. These are defined by the notions as previously stated of: ways of cooking, ways of eating and ways of sitting.

As the main space that supports cultural production and as an experiential provider, the following aspects of designing for experience are taken into consideration:

- **Autonomy:** Setting out of sub-programmes should allow the users to interact and actively take part in preparing their meals. Interior features and markers will be used to support the expression and unpacking of rituals that embody those existing in Marabastad thus allowing users to engage with the space.
- **Competence:** The interior should support the need of the user to easily be able to engage in the activities set out as defined by the experience.
- **Relatedness:** As present in Marabastad, the interior should the idea of shared spaces that facilitate interaction between the various user groups. This intention defines how the space is organised to support intimate contact while still encouraging communal relations.
- **Security:** The overarching objective of the project is to provide a space that embodies the food culture of Marabastad whilst providing a safe space for interaction that is not stifled by emotional and physical barriers thus opening it up to the possibility of it serving as a departure point into Marabastad.

The experiential kitchen will follow a similar operational model as the vendor stalls in Marabastad. This allows for certain rituals such as assembly of stalls and purchase of food materials to be retained and celebrated. In addition to this, it will enhance the inter-relational nature of the proposed programmes within the social edge. This is also grounded by place theory indicating that social spaces should be functional during official work hours as well as outside office hours as stated in section 3.1.1 above.

Therefore, during weekdays the operational hours are from 7:00am to 5:00pm, while on weekends they are from 8:00am to 2:00pm. The following tables and corresponding graphs show the relationship between model inhabitants and duration in space accordingly.

Weekdays: 07h00 - 17h00

	User	Duration	Frequency	Coming from	Purpose of visit
1.	Vendor	All day	All day	Marabastad	Trading
2.	Commuter	1- 2 hrs	Morning & Evening	Marabastad	Consumption
3.	Shopper	2 - 3 hrs	Mid-day	Pretoria regions	Consumption
4.	Adminstrative	1 hr	Lunch hour	Pretoria regions	Consumption
5.	ATVET Students	1 hr	Lunch hour	Pretoria regions	Learning
6.	Workers	1hr	Mor, noon, eve	Marabastad	Consumption
7.	Tourist	3 - 4 hrs	Mid-day	Pretoria & beyond	Cultural exchange

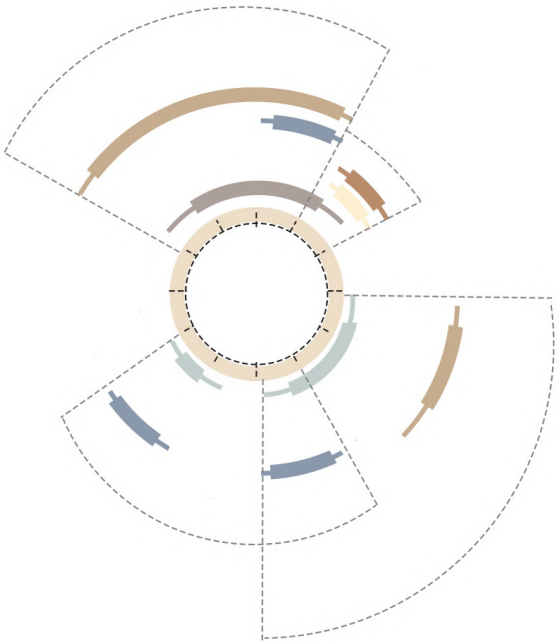
Vendors - Set up shop and are in the building through out the day

Commuters - Consists of people going in and out of Pretoria CBD through Marabastad using the complex as a pause space

Shopper - A variety of people who source their foods from Marabastad. Stopping for a quick meal

Administrator - Staff members working in the adjacent office and lab spaces

Worker - People working in Marabastad who use the space for their lunch breaks



In between hours where there is less to no traffic allows for vendors to prepare for the following influx of people.

Figure 5.4: Weekdays operational hours and model inhabitants

Figure 5.5: (Adjacent page) Weekends operational hours and model inhabitants

Weekends: 08h00 - 14h00

	User	Duration	Frequency	Coming from	Purpose of visit
1.	Vendor	All day	All day	Marabastad	Trading
2.	Commuter	1- 2 hrs	Morning	Marabastad	Consmption
3.	Shopper	2 - 3 hrs	Mid morning	Pretoria regions	Consumption
4.	Family	2 - 3 hrs	Mid morning	Pretoria regions	Consumption
5.	Students	3 - 4 hrs	Mid morning	Pretoria regions	Consumption
6.	Individuals	1.5 - 2.5 hrs	Mid morning	Pretoria regions	Consumption
7.	Tourist	3 - 4 hrs	Mid Morning	Pta and beyond	Cultural exchange

Commuter- People coming into Marabastad and Pretoria for week-end working and running errands

Shopper- Weekend food shopper rangin from family to retail sourc-ing

Family - In groups for family lunches. This to include children of various ages

Students - To encompass groups of young students looking to spend some time indulging in an eating experience

Cultural tourists - Individual or group of people most probably un-knowing of the food culture and rituals

Peak Hours are between **10am and 1pm** Vendors arrive earlier than the opening time to set up and start preparing for meals. **At 2pm, the kitchen closes** to allow for ven-dors to clean and pack up

The following deductions can be made from the preceding graphs.

- Vendors arrive at 6:00am and take up to an hour to set up their stalls and start cooking for the first arrivals at approximately 7:30am.
- Most of the time in the morning is spent preparing for the lunch hour influx of people.
- During the in-between hours when there less to no traffic, the vendors can prepare for the following influx of people.
- Peak hours for both weekdays and weekends are between 10:30am to 1:00pm. The space therefore, should be able to accommodate for a variety of social settings and ways of eating during these hours.
- As with restaurants, when the kitchen closes the vendors are still in for up to an hour, cleaning up and packing up their equipment before locking the stalls. The two levels of thresholds for security and functional purposes will further be discussed in chapter seven to follow.

3.3. Open Air market

The existing open-air market as analysed will be retained in its function as it was found suitable in its functioning. As with the butchery above, this market will be the main provider for fresh produce to the vendors in the experiential kitchen. Again, it closes the loop between supplier and vendor advancing the principles of the slow food movement. This also aids in tracking the food movement in a process-oriented approach to space articulation. In addition, it provides an added space where social interaction can occur especially between the vendors and the visitors. As discussed in section 3.1 of the preceding chapter, the following mechanisms for social interaction can be identified to be present in the market.

- **Contact point:** The point of exchange between the vendor and visitor will present an opportunity where knowledge relating to goods on sale will be disseminated between the two user groups.
- **Social strand:** Between the three buildings, multiple points of interaction can be connected to form a social strand, therefore presenting the market as a social connector.

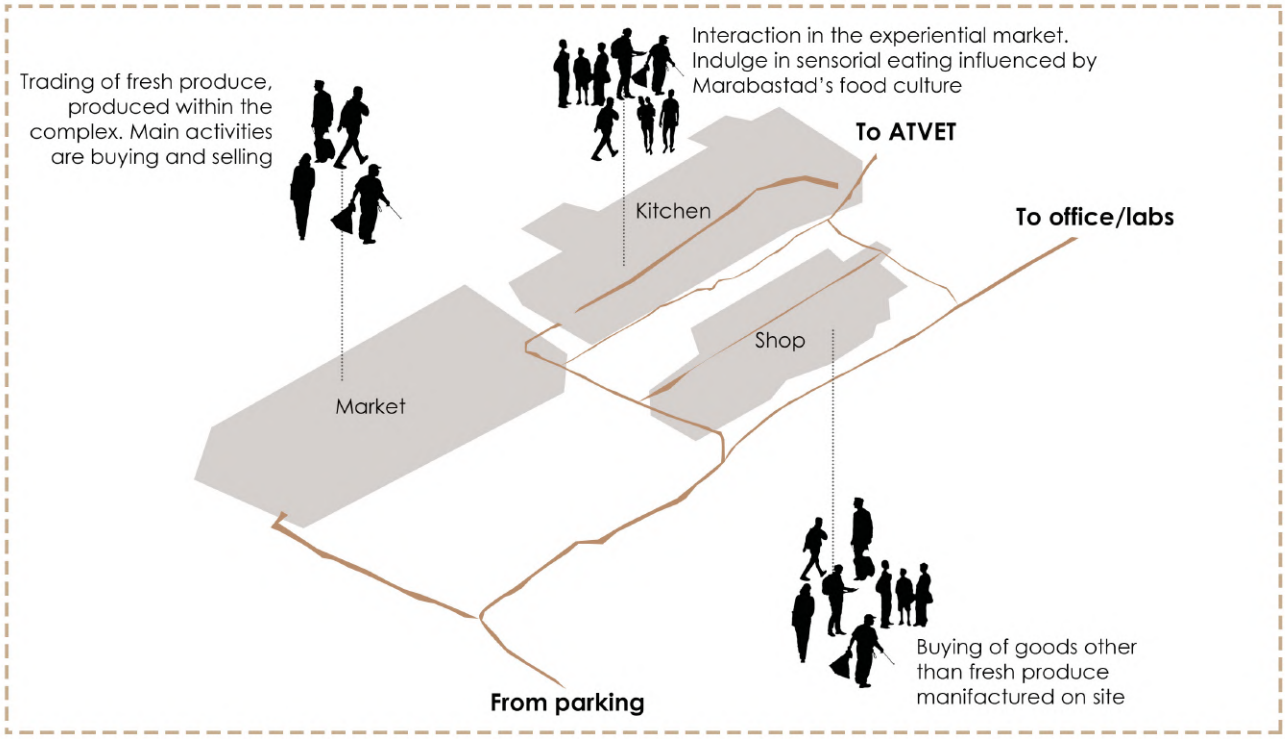


Figure 5.6: Building use and intended model inhabitant

4. USER PROFILES

The presentation of the user profiles will consider the two groups of people envisioned to encounter in the space; 1.) community member and 2.) visitor. This is intended to aid in determining their narrative, how they contribute to the food culture and their points of interaction with and in the space. Spatial requirements will then be deduced from this data to serve as informants in the design development phase.

Figure 5.7: Model inhabitants

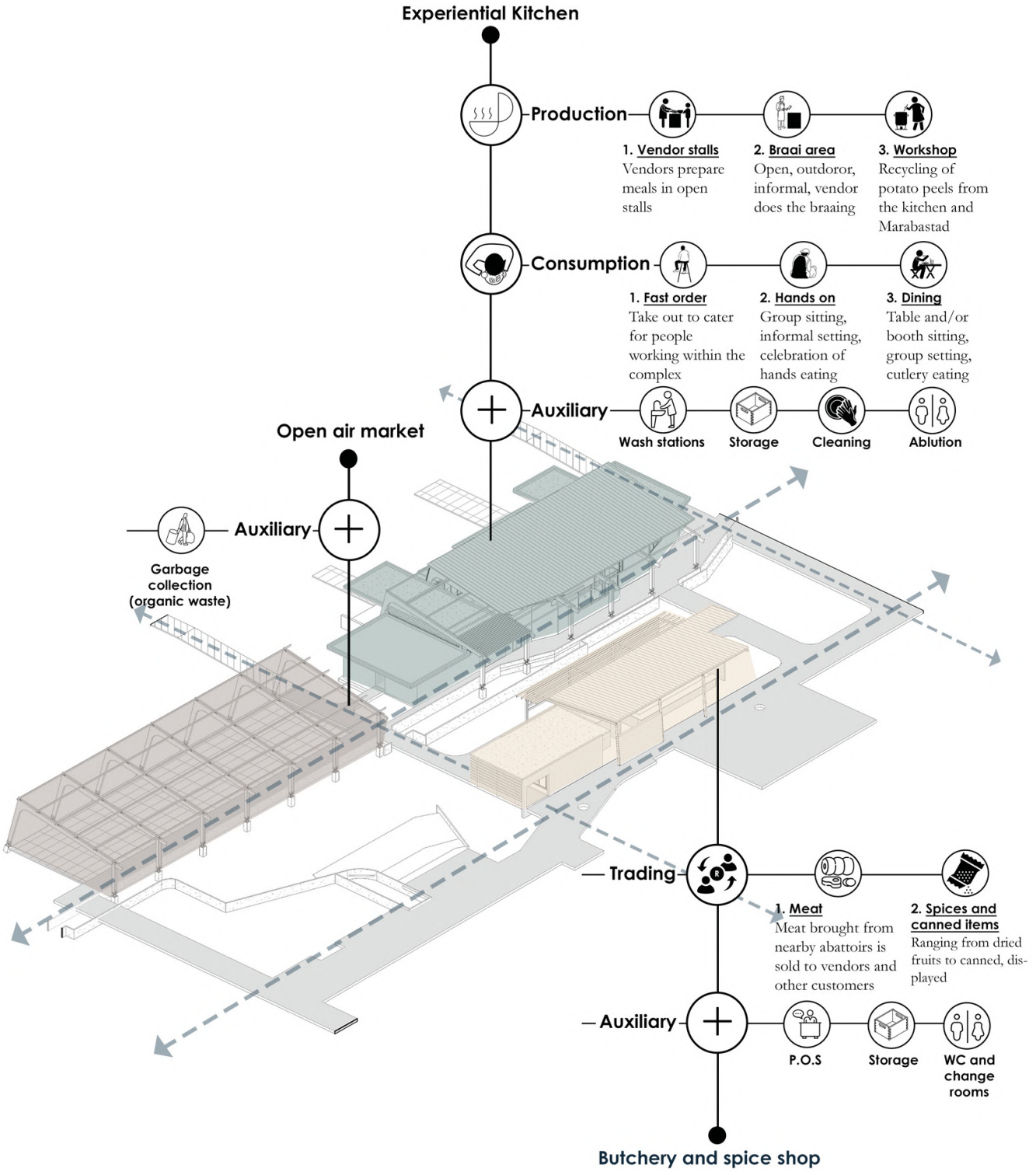


Figure 5.8: Overview of experiential journey within the social edge

5. CONCLUSION

The client (FTC) defines how the overall development will be used and oversee its day to day running. The two principles selected outline the suitability of the client as an insertion into the site. By using them, it ensures that the intervention is relevant to its context and supports the architect's intention. In addition to this, it was important to understand the specific users and how they would approach the space. The user pathway therefore will be determined by the frequency and duration of the specific user.

In the following section, an outline of the design informants based on the previous chapters will be provided followed by an unpacking of how they influence design decisions.

6_CONCEPTUAL APPROACH

1. INTRODUCTION

The conceptual approach is divided into two sections: an analysis of Marabastad's food spaces and an investigation into the verbs of making food to serve as inspiration for the making of the interior. This will be discussed in conjunction with a theoretically informed lens where appropriate to support the findings of the above-mentioned investigations. The conclusions will then be collated and presented as the design informants to be used as a tool to aid in testing the feasibility of the design as well as a spatial articulation strategy.

2. THEORETICAL AND CONTEXTUAL INFORMANTS

2.1. Food spaces in Marabastad

As introduced in section 2.4, three food spaces were selected to satisfy multiple typologies for further analysis. This section unpacks the contextual analysis as there is a theoretically grounding that informs this analysis which makes it grounded and design intent specific. The three stalls selected are situated along Mogul Street and 1st Street adjacent to the Putco Bus Station.

The aim of this analysis is to understand the functionality and experience provided in the stalls that make it specific to Marabastad. This considers structure and physicality of the stalls, movement patterns of people and food as well as the proximity of activities. These are then translated into characteristics that address commonality from which spatial devices are derived to be used as strategy for spatial articulation and a tool for testing the design feasibility.

- Structure and physicality relate to the infrastructure present that defines the specific space in which food activities take place, this can be considered as the 'building envelope' that encloses the interior.
- Movement patterns as described in Schroder (2017:55) help define the interaction patterns within a space. In addition to this, a process-oriented view of how food moves in space determines its interaction with both the vendor and the customer. This speaks additionally to the identity of the food establishment and the kind of experience it offers.
- Proximities is a phenomenon that identifies the different activity zones and their placement within the interior. It further integrates movement within the zones to illustrate the relationship between user paths and outlined zones as well as articulating the space used for each zone giving an idea of how stalls in the new interior can be scaled.

The following diagrammatic analysis illustrates the findings of the analysis to be followed by a summary of the identified common characteristics.

Figure 6.1: The intangibles of Mogul street

Figure 6.2: Collage of food spaces as captured in Marabastad illustrating ritual

1. Mogul Steet

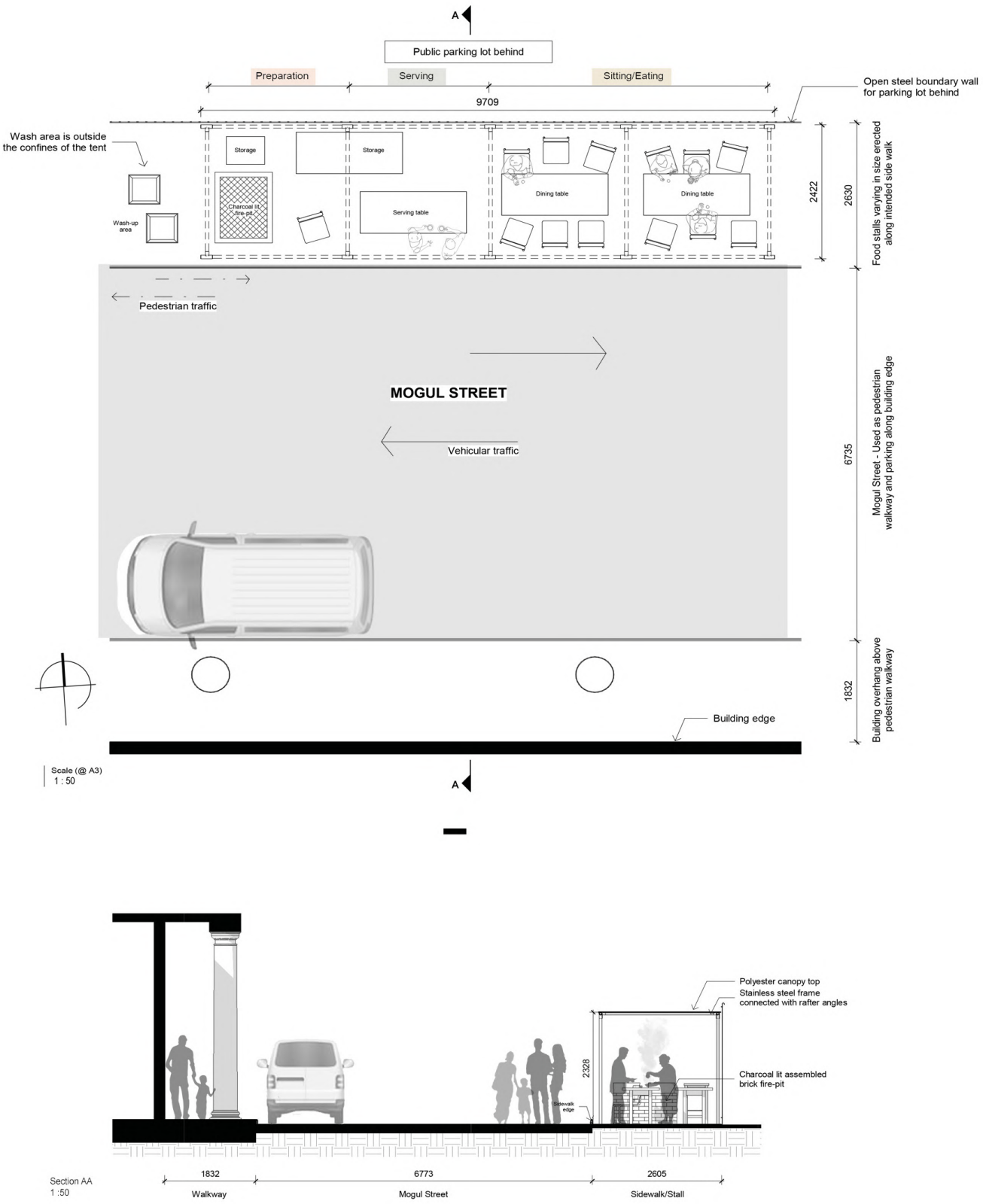
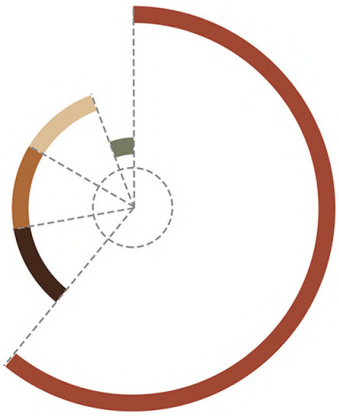


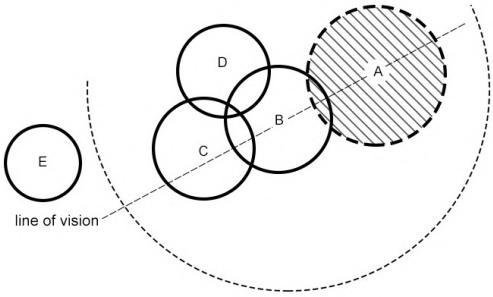
Figure 6.3: Plan and section of selected stall along of Mogul street (not to scale)



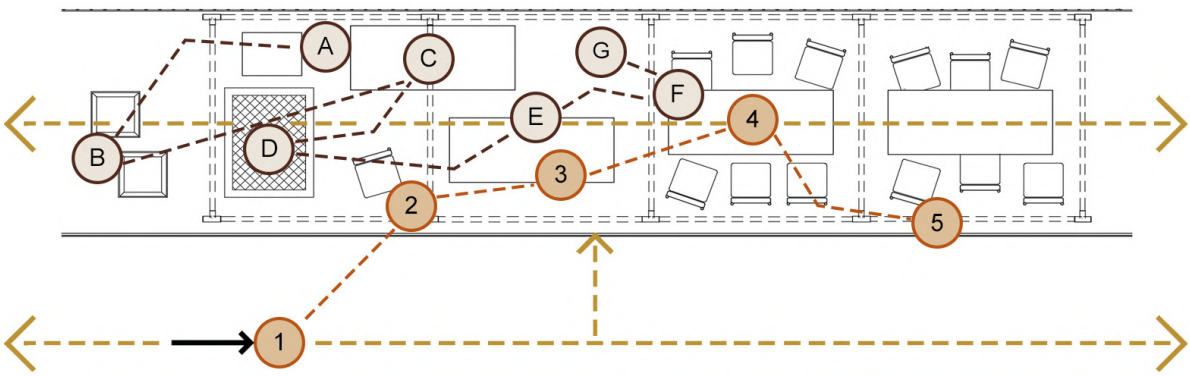
01. PROXIMITIES

A representation of activities (ritual) present in the stall and their relationship to each other

- A - Sitting and Eating : 11m²
- B - Serving (Display) : 2m²
- C - Preparation (Pre-prep + Cooking) : 2m²
- D - Day storage : 2m²
- E - Washing (Utensils and food) : 1m²



02. MOVEMENT PATTERNS



MOGUL STREET

In a process oriented view of activities, the above image maps the movement of both people and food within the stall which in turn defines the stall-specific expereince. This is also affected by the organisation of furniture as well as zoning of activities and ritual as identified in proximities image above.

PEOPLE

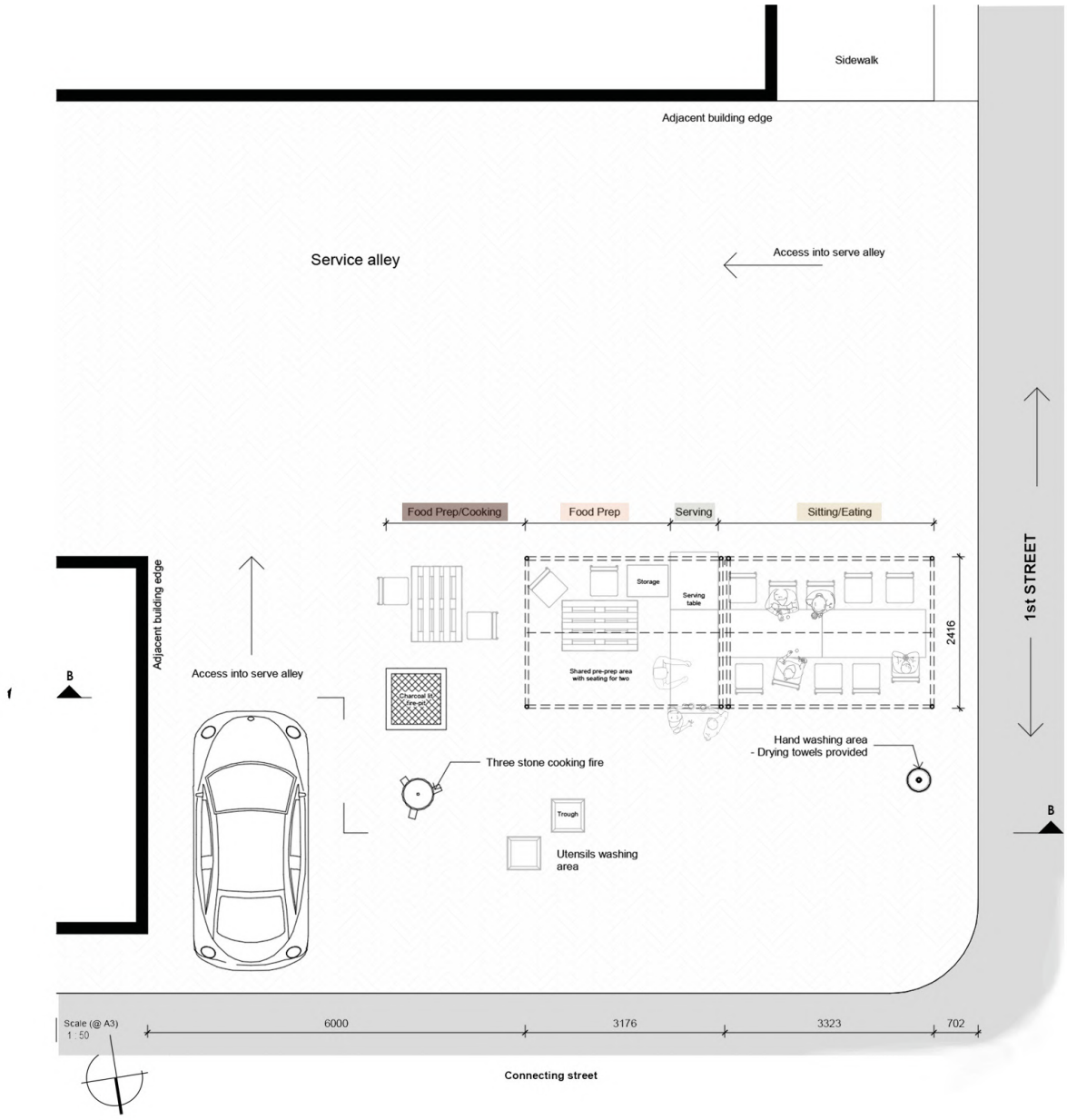
1 - Approach
2 - Place order
3 - Plating/serving/paying
4 - Sitting
5 - Dispose/leave

FOOD

A - Removed from day storage
B - Wash
C - Pre-prepped (cut,slice,dice etc)
D - Cooked (Techniques specific)
E - Plate/Store in servers
F - Eat
G - Waste disposal

Figure 6.5: Movement patterns of food and people in the stall at Mogul Street stall

2. Cnr of 1st Street



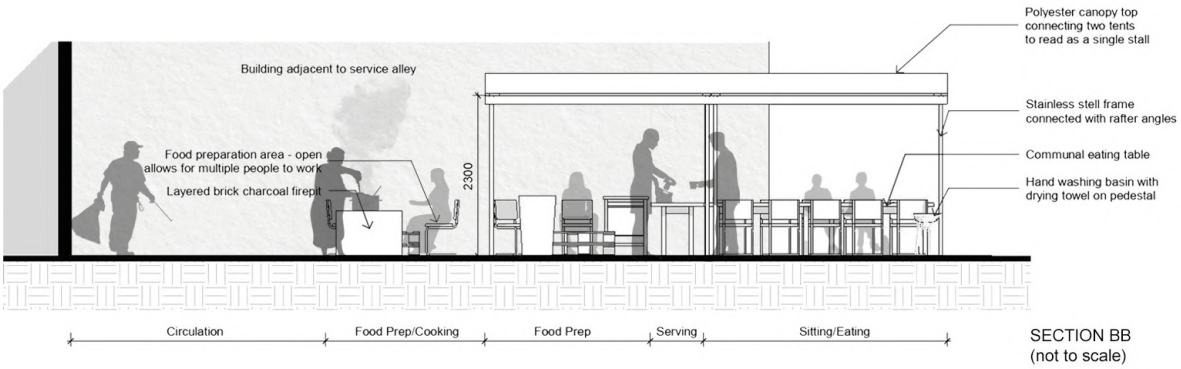


Figure 6.6: Plan and section of selected stall along of 1st Street (not to scale)

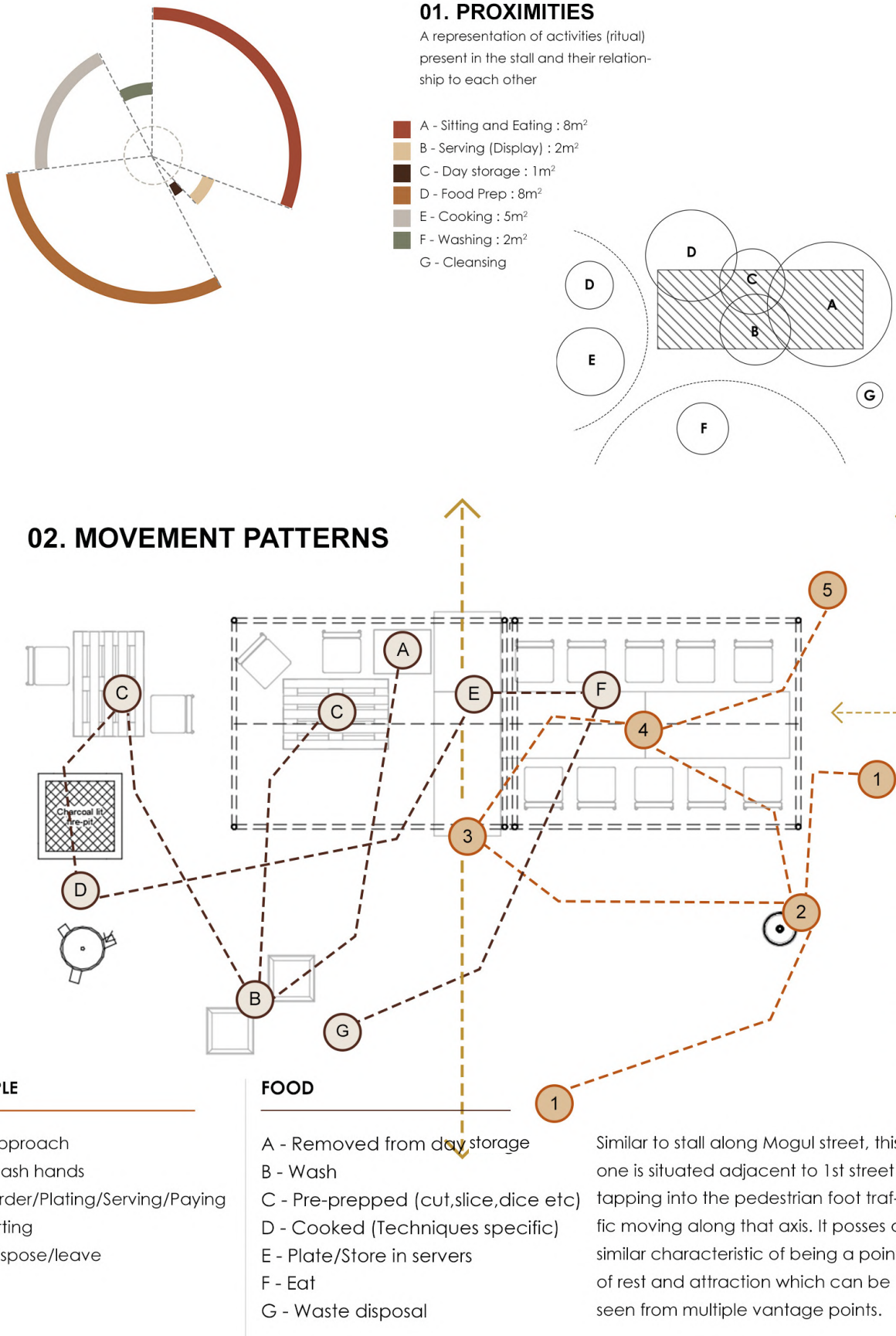


Figure 6.8: Intersecting of movemnt patterns of food and people

3. Market stalls

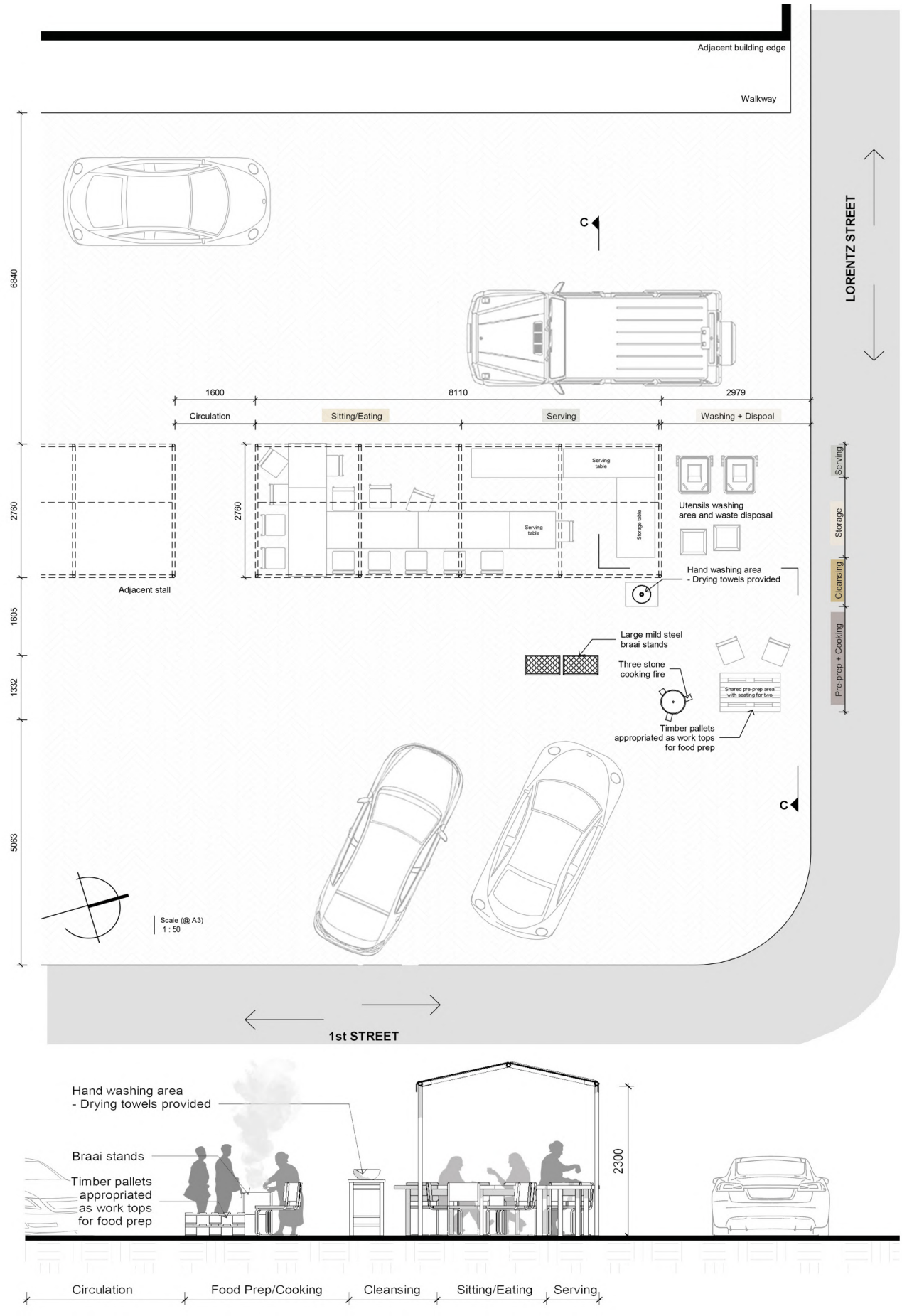


Figure 6.9: Plan and section of selected stall at the cnr of 1st and Lorentz Streets (not to scale)

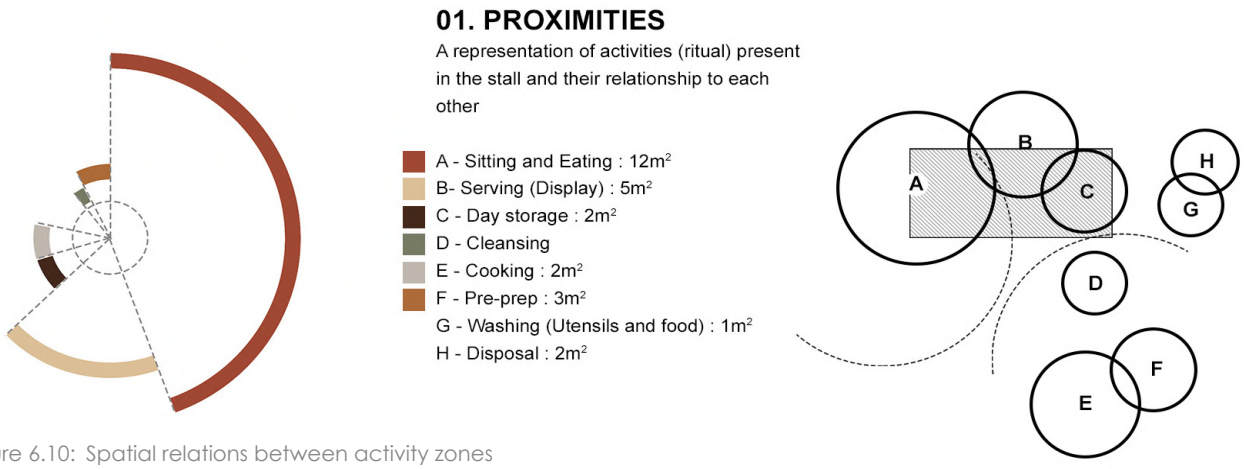


Figure 6.10: Spatial relations between activity zones

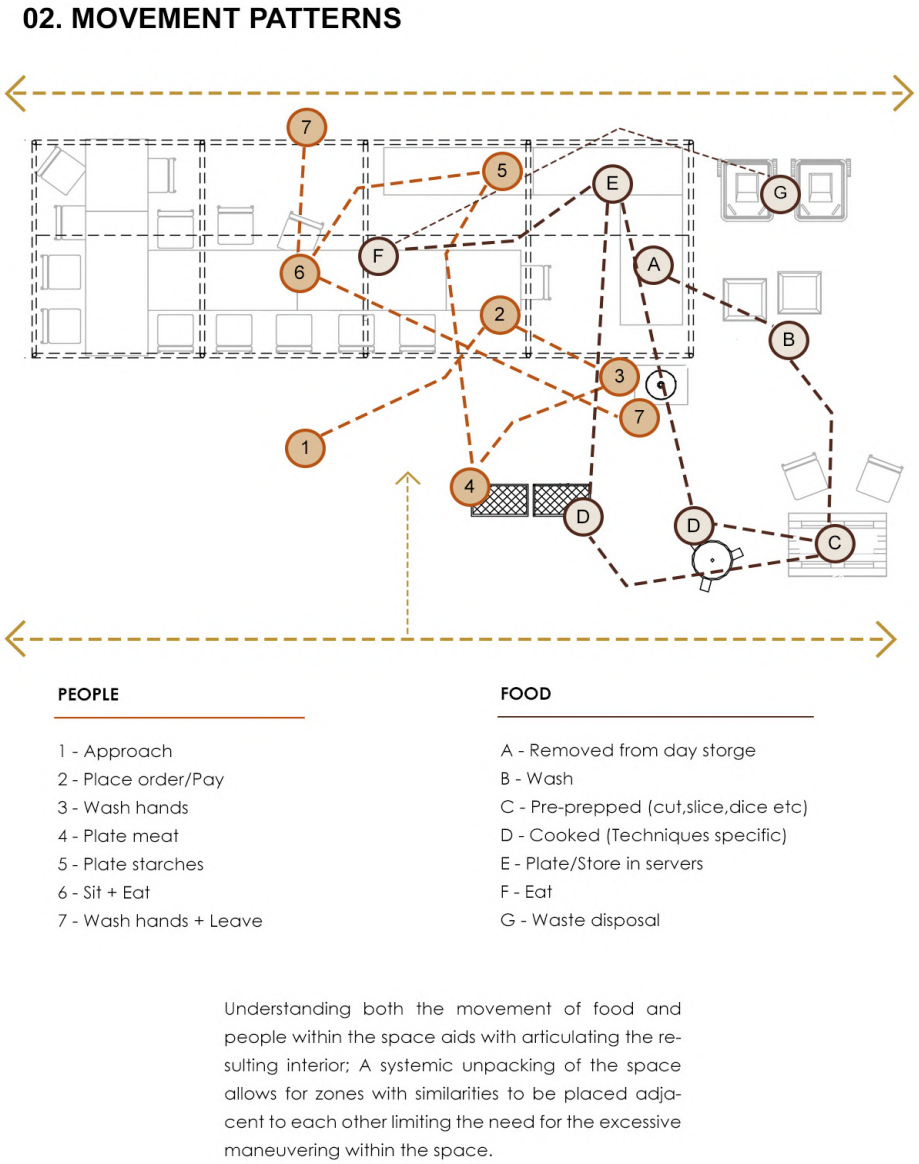


Figure 6.11: Intersecting of movement patterns of food and people at the Market stalls

The following characteristics are derived as similarities of the three spaces analysed and will be used as guidelines for the articulation of a new interior that embodies the food activities and interactions in Marabastad. These are:

- The infrastructure is kept **minimal and comprises of three elements** which can be denoted on a functional level to the idea of t**emporality and flexibility** making **assembly and disassembly** of the space a quick action. On a second order level, this enhances the interaction with food without environmental distractions. The open nature of the space also allows for **permeable thresholds** on both tangible and intangible level.
- **Objects** in the interior can serve **multiple purposes**. i.e. A serving table is used to demarcate space and extends as a functional object used for eating.
- The entire **food process** is **visually accessible** to the customers upon entrance up to their exit. This includes the customer beyond the consumption stage and presents an opportunity for **social interaction** and **knowledge sharing**.
- There is a celebration of **linearity** of spaces which have been appropriated along **movement axes** and fitted with multiple layouts that tap into the pedestrian movement.
- Finally, the food spaces can be defined as **nodes that interrupt movement** and how the street works. This makes the stalls a **point of interest, point of rest and point of attraction** along the user movement path.

The following spatial devices are derived from the above analysis and findings and will be used as criteria for successful analysis of the proposed design layout and functionality, this is inclusive of space identity and ritual for the new interior artefact. In addition to this, the criteria will be used to analyse precedents specific to design and technical development. This will include an analysis of spatial functionality and object identifiers that aid in ritual and social interaction. This will further be discussed and illustrated in the following section:

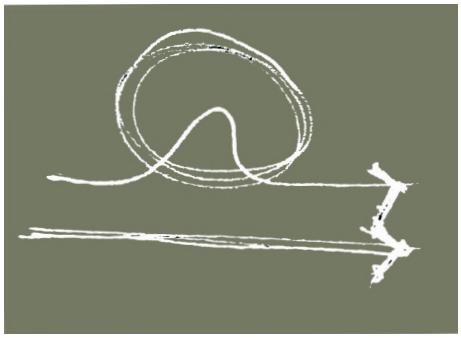


Figure 6.12: Parti diagram

Principle	1st / Operational (Kognik, 2015)	2nd / Meaningful (Kognik, 2015)
FRAME(WORK)  **Structural element defining the food spaces**	- Lightweight - Easy to assemble - Allows for stall to grow or become smaller - Infills are to support sub-programmes -Structure is in components	- Sense of ownership and autonomy to personalise the stalls based on the vendor's ritual and prefered activities - Flexibility allows for adaptation of food spaces to accomodate multiple scenarios - Components as meaningful elements to the consturction of the frame
PROXIMITY  **The relationship between activity spaces within the stall**	- Activities are in close relation - Open spaces - Shared utilities - Relation to circulation route	- Activities relating to food do not occur in isolation, they are dependant on each other - Customers are subconsciously part of the complete food cycle - Knowledge is shared between multiple groups of people - Entire food cycle becomes a social event
THRESHOLDS  **Both tangible and intangible boundaries aid in the definition of spatial functionality**	- Permeable (tangible and intangible) - Blur boundaries between public and private - Relationship between food an d people - Multiple levels of accessibility	- Knowledge sharing is made easy and effortless as it is visual - Open nature allows for the adjacent spaces to be experienced passively - Multiple opportunities of interaction are provided
SCALABILITY  **The ability of a space to grow or become smaller based on need of the user**	- Portability - Intimacy levels - Macro vs micro experience - Visual accesibility	- There is an element of temporality that speaks to the nature of the spatial characteristics - Vendors have the an autonomy to curate their spaces and make them personal to them - Creates opportunity for multiple layers of interaction
LOCAL  **The celebration of local rituals partaining to food activities and techniques**	- Object: Food - Interaction: communal i.e. ways of eating - Activity: cooking methods - Techniques of preparation	- Skills and knowledge are celebrated and preserved within the food spaces - There is sensitivity to the existing typologies and methods of working
NETWORK  **The resulting (movement and process) pattern forms a network of systems**	- Integrated - Closed loop of systems - Process oriented view - Multiplicity in function i.e. object and boundary)	- There is functional dependency of various elements - Rituals and activities are observed and translated into the spatial articulation - Sharing of resources to make the most of an item due to limitation of space

Figure 6.13: Spatial devices and theior relation to orders of meaning

2.2. Verbs of making

According to Vogelzang (n.d.), when combining food and design there is a possible eight points that inspire this exchange. These include:

- Senses
- Chemistry
- Culture
- Technique and material
- Grow
- Psychology
- Action of food
- Society

For the purpose of this study, food as a conceptual driver will be limited to the following:

- **The senses:** This emphasises that food activities be experienced holistically by both the vendor and the customer. The realisation of a sensorial experience is therefore dependent on the space being able to provide instances where the multiple senses are required to complete tasks involving interaction with food.

- **Culture:** As discussed at length in the previous sections, the food culture of Marabastad is a significant influence on the articulation of the proposed interior. This has been narrowed down to several aspects of food culture, i.e. production, distribution and consumption and more intimately the rituals supporting this culture.

- **Technique and material:** Denote to the methods and tools applied to facilitate interaction with food. This also supports the inclusion of a sensorial experiences, where different techniques and material in space can give varied experience. This can be applied both in the tangible methods of food preparation as well as the intangible aspects of an interior where different approaches can signify functionality.

- **Action of food:** In the interaction with food, there as several ways in which the person encounters food as with the aspects named above. However, for this study to be successful, the notion of food as an object had to be explored further. This involved the experimentation with food and actions related to its methods of preparation. This allows for the project to adopt a more intimate scale in addition to the expected spatial intervention. This is discussed further below.

The verbs of making, therefore, refers to the action of food as well as technique of food handling as discussed above. This was selected as a method of investigation as it is synonymous to methods of food preparation as existing in Marabastad. The investigation involved dissecting a typical meal served in Marabastad and compiling a list of ingredients that make up the meal and analysing their properties as singular elements. Food and design dictates that food becomes more than an object for consumption and gains a new character by being viewed as a material that designers can use to create or seek inspiration from. Therefore, the aim of this inquiry is to dissect and understand properties unique to an array of foods and streamlining the findings to inform the making of the interior. The intangible properties such as smell, and texture can be translated into physical qualities of an interior which will in turn affect the eating experience.

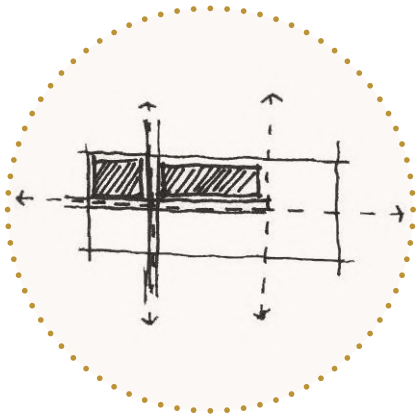
The experiment required collection of food ingredients commonly used by most vendors in Marabastad, these include: tomatoes, onions, carrots, beetroots, lettuce and braai spice. This was followed by the identification of possible characteristics to be analysed. These include layering, texture, effect of additional element, i.e. water, colour transposition on paper, structural makeup and light penetration. Thereafter, the findings were translated into spatial implications that will be used as design informants.

	Verb	Food for action	Description	Properties to be related to spatial characteristics
1.	Cut	Tomato, Carrot	The act of cutting involves piercing through the food object with a sharp object (in this case, a knife)	Underlying components
2.	Slice	Tomato, Beetroot	This refers to the act of dissecting the food object into smaller parts	Sum of parts
3.	Peel	Tomato, Onion, Beetroot	This involves the removal of the outer skin of the food object leading to an investigation of the characteristics of the singular part	Light transmission, translucency
4.	Part	Onion, Lettuce	The act of partitioning denotes to the notion that an object has multiple layers	Layering
5.	Strip	Carrot	The outer layer is removed to reveal a more appealing inside considered safe	Ways of revealing
6.	Core	Carrot	This action reveals the centre part of the carrot, achieved through cutting	Central component
7.	Disperse	Beetroot, Braai spice	Richness in colour allows for it to be spread in water which changes its colour.	Memory and residue

Table 5: Parameters of investigation

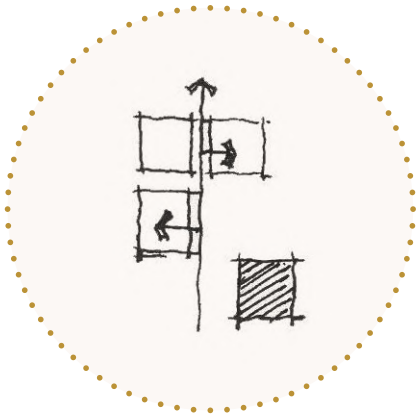
CUT

The act of cutting involves piercing through the tomato with a sharp object (knife). This reveals the inner parts and characteristics of the tomato. Similarly, the interior should be unpacked in bits, specific moments being revealed according to the direction of movement



SLICE

Slicing refers to the act of disecting the tomato into smaller pieces. The sum of its parts can easily be added into a meal. The space as a sum of separate experiences encompass a wholistic experience. When unpacked in smaller bits it is easier "consumed"



PEEL

The peel once seperated from the flesh reveals an unlikely characteristic. Its transluscency allows for directed light rays to pass through. In a similar understanding, the layers of the interior when separated should reveal the underlying contents

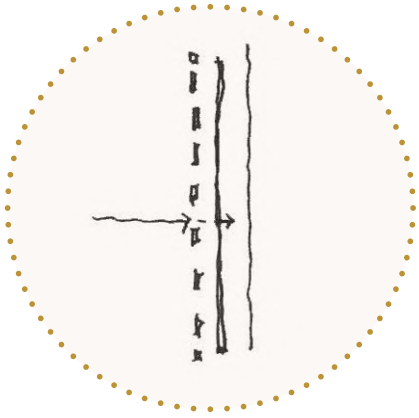


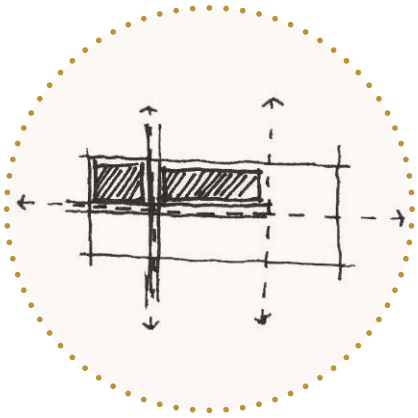
Figure 6.14: Tomato as food object of experimentation and corresponding spatial implications

STRIP

The outer layer is striped away to reveal a more appealing interior, one that can be used as a safe ingredient. This can be equated to a cladding / veneer of an interior material selected to purposefully weather to show evidence of transcience of life

CUT

The act of cutting involves piercing through the carrot with a knife. This reveals the inner parts and characteristics of the carrot. Similarly, the interior should be unpacked in bits, specific moments being revealed according to the direaction of movement



CORE

The core of the carrot when taken out can be served as a food on its own. The functioning of the interior can be reduced to a core programme with other supporting functions. The main programme dictates the activities to take place within the interior either singularly or as a sum of its parts

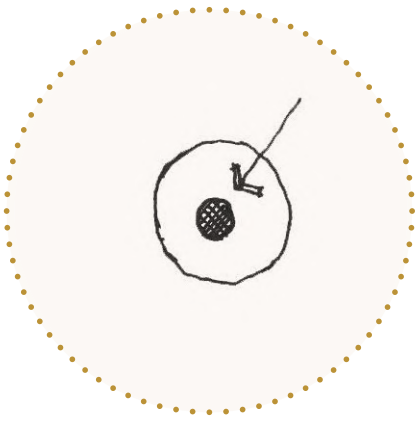
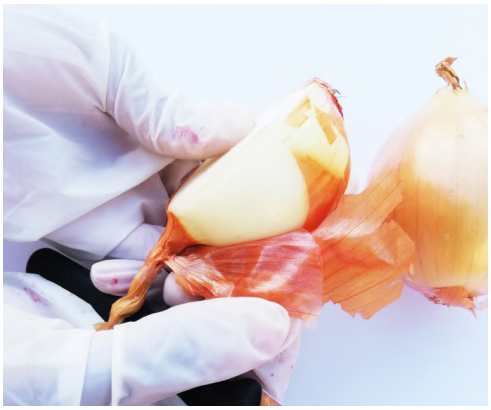


Figure 6.15: Carrot as food object of experimentation and corresponding spatial implications

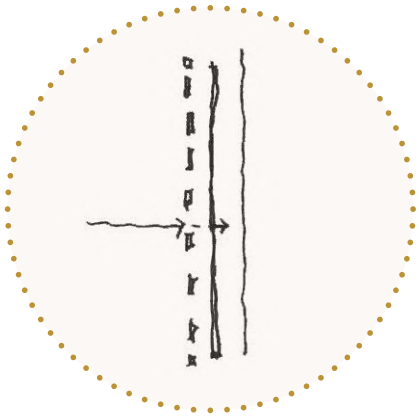
PART

The action of partitttioning denotes to the notion that an object (here as onion) has multiple layers. This can be equated to layering of materials and products making up the interior. This can also be layered in terms of activities taking place to make up a single experience



PEEL

To peel denotes to the action of removing the outer skin of the onion. The skin protects the flesh and keeps it fresh. The interior is a facilitator of activities particularly related to food therefore a sense of safety and privacy should be embraced in the interior



SKIN

The onion skin once separated from the flesh reveals an unlikely characteristic i.e. its transluscency allows for directed light to go through. In a smilar manner, the layers of an interior when separated should reveal its underlying contents

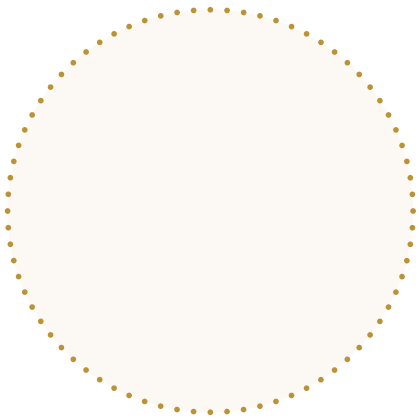
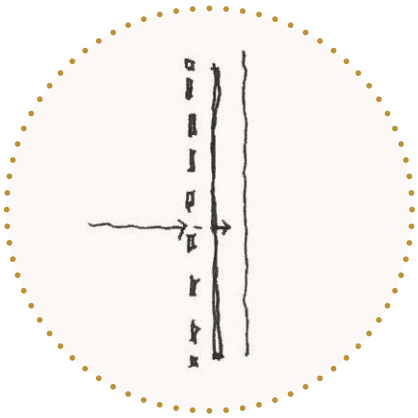


Figure 6.16: Onion as food object of experimentation and corresponding spatial implications

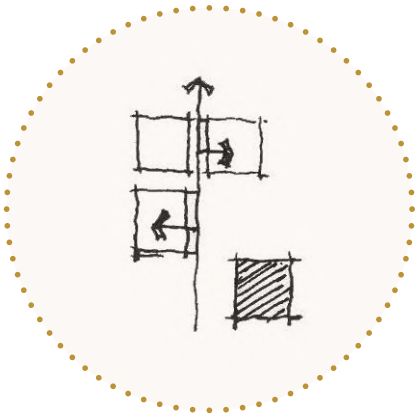
PEEL

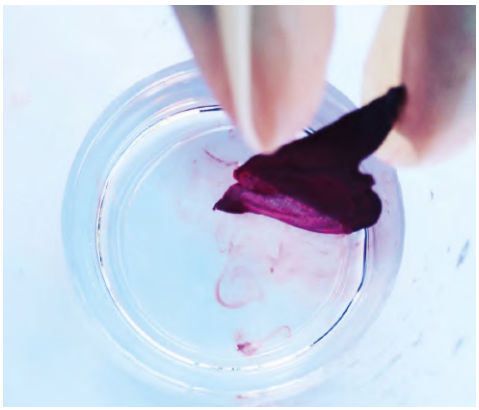
The beetroot peel once separated from the flesh reveals a solid inside flesh rich in colour. While the shell of a building can be serve as a protective element, the interior can present a more delicate space, characteristically rich in haptic and visual qualities



SLICE

Slicing refers to the act of disecting the beetroot into smaller pieces. The sum of its parts can easily be incorporated into a meal. The space as a sum of separate experienced encompass a wholistic exprerience. when unpacked in a consumable amount





DISPERSE

The richness in colour of the beetroot allows for it to disolve into a water solvent. This changes the colour of the water. If the notion of dispersion is to be translated to the interior, the memory of the rituals and activites should linger with the inhabitant, where possible tangible incentives can be used

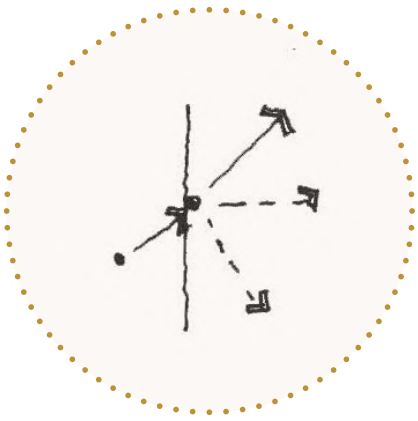


Figure 6.17: Beetroot as food object of experimentation and corresponding spatial implications

3. CONCLUSION

The above conceptual discussion is rooted in the findings of the context study relating to the food culture. In addition to this, food is considered the main object of interaction, therefore as an extension of study linking food and design, it presented an ideal and appropriate material for investigation and translation into physical properties in the interior artefact. The following summary is a collation of the design guidelines as derived from the previous chapters and section.

Context:

This chapter considered the physical context of the selected site as well as the intangible aspects of it, i.e. rituals. This was further pulled through into the conceptual approach chapter where a further analysis resulted in the stipulation of spatial devices to be used as guidelines in the design development stage. Here, the physical context outlines the locality of the site and proposes how the physical qualities can be appropriated and used to define the experience in the proposed interior. In addition to that, the study of the intangible elements present in the physical context gives a deeper understanding of function and meaning and how it affects the spatial familiarity and articulation resulting in a characteristically contextual experience that will be transposed into the new interior artefact.

Theory:

The theoretical premise is an understanding of the link between theories of food, place and people and finding parallels that could be applied to spatial articulation. As outlined in the summary table in section 3.5, each section was divided into smaller subcategories where suitable ideas were selected to be used as grounding the preceding chapters. This were used to analyse precedents that gave spatial characteristics to be viewed as the ideal when designing the new interior (refer to design guidelines per section). From this, the idea of using food as an experimental object was derived which informed the conceptual exploration as discussed above.

By establishing and outlining the design guidelines per section, a continuous approach that links the design process and provides a control measure can therefore be used to facilitate the articulation of the resulting space as an interpretation of tangible and intangible facets.

Precedents:

Precedents were analysed according to the three main aspects of this study, namely: promotion of social interaction in a food-oriented space, designing a space that allows for the complete food cycle to enhance the experience of the user and use of food objects to facilitate interaction and a sensorial experience. From each category, a set of spatial characteristics to be used as guidelines for the space articulation were derived and listed in table 4 above.

7_DESIGN DEVELOPMENT

1. INTRODUCTION

Following the above discussions, this chapter outlines the application of the findings resulting in a tangible spatial expression of this study. As mentioned earlier, the focus of the design intervention is on the experiential kitchen that will further be detailed in the texhnical investigation chapter. The intervention on the adjacent buildings as discussed will be limited to a zoning exercise to illustrate the functional relations between the proposed function and the existing infrastructure.

The chapter will be unpacked in a manner that introduces a brand that will be considered as the retail anchor to the experiential kitchen. This will be followed by a brief discussion of the design strategy as a discussion of how new programmes will be addressed within the existing context. Thereafter, a brief discussion of the spatial requirements based on findings and guidelines as outlined in preceding chapters influencing the spatial articulation will follow. The spatial articulation will be discussed in depth outlining influences, functionality and aesthetic appeal. To conclude, instances of social interaction and sensorial experience will be highlighted as a means of indicating articulation of the design intent.

2. BRAND DEVELOPMENT

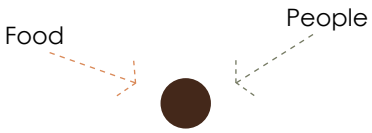
2.1. Logo

The experiential kitchen is named *Maraba Kitchen*.

This was derived as a two-part identity relating to the context. The site is an extension of the greater Marabastad, thus making it an appropriate site for the transposition of its food culture. In addition to that, the identity of its place is already embedded in its name therefore the kitchen should be viewed as an extension of this. The second part denotes to the kitchen as an evolving space where in Marabastad the streets have been appropriated as communal kitchens where interaction on different levels can occur.

A series of iterations (figure 7.2) explored the brand image to be used on menus, packaging items, display items and facades. This was influenced by the brand principles identified as follows:

- The kitchen as a communal space
- There is transparency in processes, i.e. there is proximity of activities within an open space
- Food preparation and consumption is technique oriented, i.e. cooking techniques, ways of eating



Food = Meals are a combination of plant based and meat ingredients

People = Hands & mouth as tangingle interactions with food (Consuming vs producing)

The logo design iterations therefore explore the combination of the symbolic images to represent the culmination of food and people in space.

Figure 7.1: Final logo design

Figure 7.2: Logo exploration

2.2. Menu, packaging & plating

As found in the contextual study and conceptual development chapters, menus are unique to each vendor which also dictates the service methods and layout of their stalls. For this study, three vendors are selected, their menus outlined, followed by the rituals defining how they use their space. This will further influence the technical investigation that will be discussed in the following chapter.

There is provision for takeout meals therefore packaging here will be considered for such meals. The following instances are foreseen:

- Meat being prepared outside dictates that the customer will walk to the outside with their *plate,* hence the already served meal will have to be covered appropriately.
- People working in the complex may prefer buying food as takeout, therefore it must be packaged in an effective manner to allow eating remotely.
- One intention of the complex as mentioned in (Renton, 2018) is to reduce food waste and reimagine it into other food products where possible. Therefore, potato waste will be transformed into plating bowls that can then be used as compost after use.

2.3. Look and feel

The interior environment will complement the eating experience therefore it should reflect the principles governing a sensorial experience. As discussed in section 3.4.2, the spatial narrative is the experience provider which is determined and achieved by purposely including elements that create an emotive message in the space. In addition, to that, in order to avoid the articulation of space remaining visual, consideration is be given to how interior elements such as materials can be used to evoke a more holistic sensorial experience.

The brand principles derived from an analysis of the contextual functioning also aid in defining the look and feel. The **communal** nature of eating spaces dictates that these should be articulated to allow them to be experienced as shared and **sharing spaces**. A celebration and **transparency of processes** ensures that rituals are visually accessible to the inhabitants and furthers the notion of sharing. This can also be translated into the methods of joinery where elements can be **exposed to reveal** how each element works as a sum of its part, like ingredients being carefully selected and curated to create a meal. Finally, the space is articulated in a manner that allows for a **technique and process-oriented** view of the experience. Consideration is given to how food is prepared and how that can be translated into spatial characteristics i.e. the ingredients undergo minimal manipulation therefore priority is given to **natural materials** that are less engineered where possible

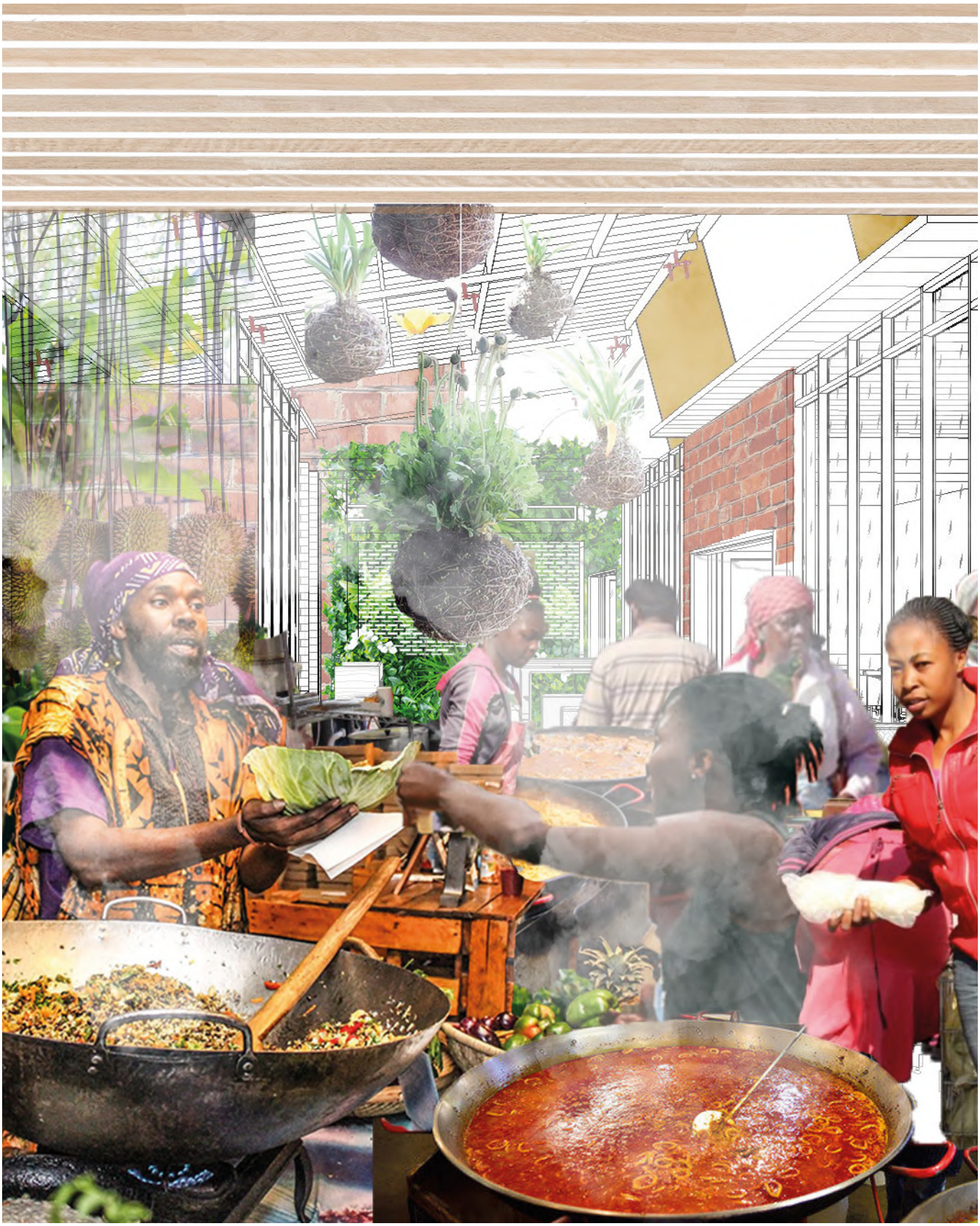


Figure 7.3: Atmospheric photomontage

3. APPROACH AND STRATEGY

3.1. Existing vs. new

Programmes: The existing programmes have been altered and reimagined for them to work in harmony to support this study's objective. As the point of arrival and main movement axis, the social edge had the potential to be fully food oriented to allow for cyclic movement of visitors enhancing their interaction around food. With a central public space, the three buildings are well located to allow for visually connectivity in addition to the physical.

Architectural elements: The architectural integrity of the buildings will be preserved especially distinctive identifiers (fig 7.7). This will be celebrated and exposed to ensure that the entire complex does not lose its identity. Similarly, the exterior palette will remain as is, where necessary changes will be made to the facade to support the interior functioning. The linearity of the building largely influences the articulation of the interior space where that as an experience will be celebrated.

3.2. Space articulation

Layout: Based on the characteristics of the food spaces in Marabastad, the stalls are defined as points of *interest, pause and rest*. Due to the positioning of stalls along street edges, these points of interest direct customers away from the parallel axis into these interaction nodes where the act of eating is considered an activity away from the usual routine thus making them a point of rest. Those in transit can further relate to them being pause spaces along their passage route. Therefore, the placement of the stalls in the interior is influenced by movement axes extending from the adjacent spaces into the experiential kitchen.

Eating spaces are centralized within the interior to enhance the notion of sociability and to be celebrated as the main point of social interaction. Multiple seating typologies will be provided in order to accommodate a variety of experiences and user groups. Positioning of furniture should additionally allow for multiple vantage points of the interior and other processes of food interaction.

Proportions: As discussed in section 6.2, the stalls are relatively small at an average of 12m^2 meaning they can accomodate approximately two vendors and all activities pertaining to food are concentrated within the space available. The proximity of activities allows for a smaller scale and intimate form of interaction. Combining this model and that of a modern kitchen, the stalls will be dimensioned to allow for optimal functioning as a kitchen as well as individual vendor stalls. Ritual specific elements will also be considered in order to make the experience personal as discussed in principles of human centred design.

Permanence: The stalls are considered *semi-permanent* insertions that can be *appropriated* by individual vendors according to their specific food preparation ritual. In so doing, this allows for a similar spatial flexibility as existing in Marabastad where the vendors have authority and ownership over their space. This will further be explored in the technical investigation chapter to follow.

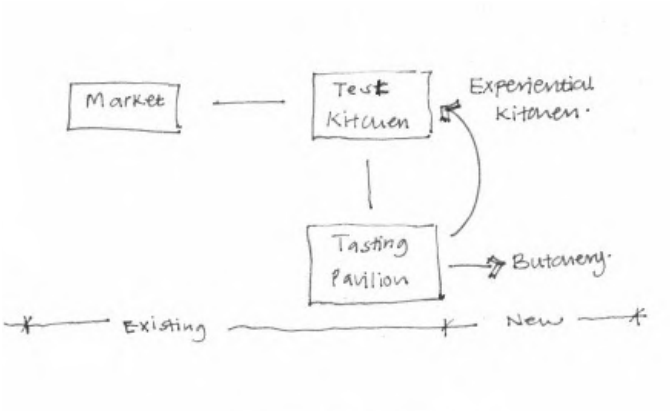


Figure 7.4: Programmes

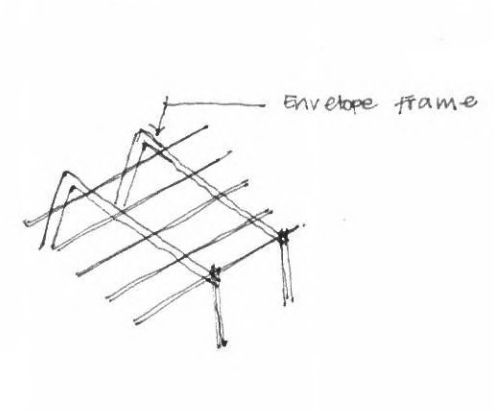


Figure 7.5: Architectural elements

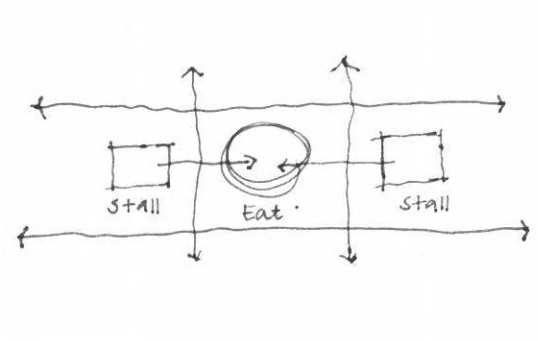


Figure 7.6: Layout

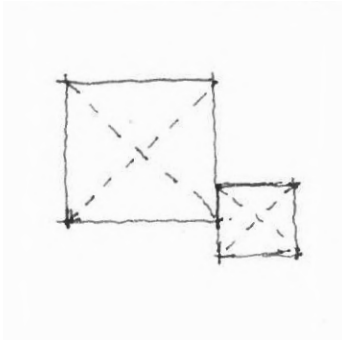


Figure 7.7: Proportions

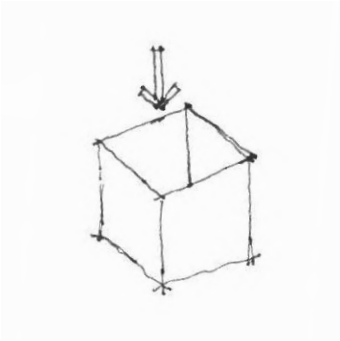


Figure 7.8: Permanence

4. SPATIAL REQUIREMENTS

For *Maraba Kitchen* to function and fulfil the objectives of this study, the spatial requirements pertaining to each space are discussed in the following section.

4.1. Experiential kitchen

The two main spatial components of the experiential kitchen are the stalls and the seating areas. This section will therefore focus on their spatial requirements as they relate to the functional and experiential needs taking on a process-oriented approach.

4.1.1. The stalls

The stalls are to be designed to accommodate a maximum of two vendors as observed on site. Food preparation is sometimes divided amongst two people to fasten the process. In as much as the stalls are to be **adaptable**, a standard design will be provided from which various iteration will be derived and made suitable for individual ritual. They will then be arranged to accommodate the food process as well as the user movement patterns.

A central services core is to be considered for building purposes as the stalls do not function like a commercial kitchen. In addition to this, **storage** for different goods is to be provided and could correspond with stall allocation. An element of **security** other than lockable main doors will also be investigated to enhance the feeling of ownership for the vendors.

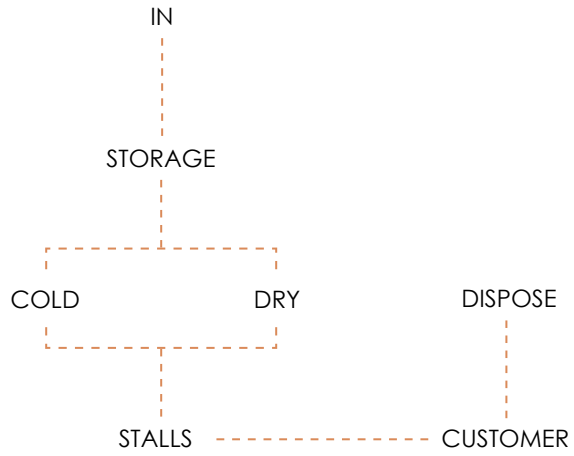


Figure 7.9: Food movement in space

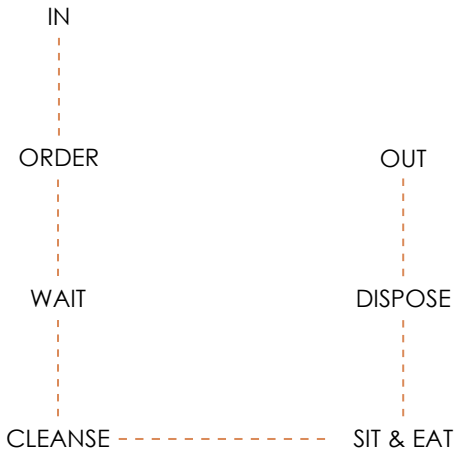


Figure 7.10: People movement in context

4.1.2. Sitting area

As previously discussed, for *Maraba Kitchen* to accurately represent the rituals of Marabastad, the sitting configurations will be defined and characterized by their communal and shared nature. Exploration here will include an analysis of ways of sitting for both individuals and group settings to maximize the occurrence of social interaction. These will be considered as contact points where interaction is expected to be at its maximum.

Furthermore, intimate and more tangible elements such as furniture should also facilitate interaction. Sitting areas are not only to be used for eating but should be viewed as an extension of the waiting zone after the customer places an order. This will further be discussed and explored in section 7.5 to follow.

4.2. Peel to pack workshop

Potato is a common starch served in different styles by the vendors in *Maraba Kitchen* as with Marabastad, this means that there is a substantial amount of potato skin resulting from the methods of preparation. Within the complex, there is provision for processing of fruit waste from Marabastad that is converted into various by-products i.e. compost to be used in other areas within the complex. Similarly, potato waste emanating from Marabastad and *Maraba Kitchen* can be recycled into packaging to be used in the experiential kitchen. Due to its biodegradable nature, is can then be used as fertilizer in the orchard and greenhouse.

The process is such that the peels are macerated then naturally dried in the sun. Afterwards, they are moulded to give the desired shape (Hitti, 2018). This will then be used as bowls for sit-in customers, after which they will be disposed into a recycling bin to be taken to their next point of use.

Figure 7.11: Sequence of transformation (Hitti, 2018)

The following spaces are required:

- Receiving and dispatch
- Maceration station
- Drying beds
- Moulding station
- Storage for both raw and completed products

Peel to pack workshop - spatial requirements

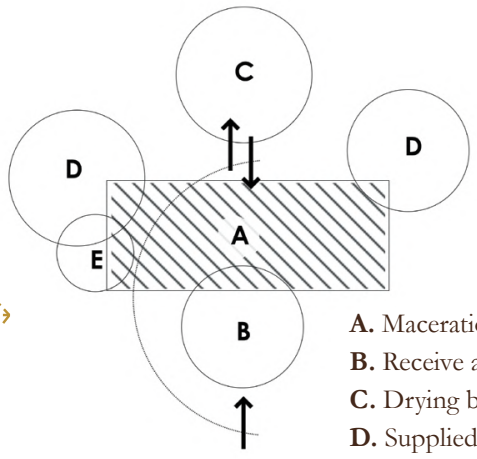
Potato is a common starch served in different styles by the vendors in Maraba Kitchen as with Marabastad, this means that there is a substantial amount of potato skin resulting from the methods of preparation.

The process is such that the peels are macerated then naturally dried in the sun. Afterwards, they are moulded to give the desired shape (Hitti, 2018). This will then be used as bowls for sit-in customers, after which they will be disposed into a recycling bin to be taken to their next point of use.

The following spaces are required:
- Receiving and dispatch
- Maceration station
- Drying beds
- Moulding station
- Storage for both raw and completed product

Adapted from (Hitti, 2018)

Functional proximities of activity spaces



A. Maceration and moulding
B. Receive and dispatch
C. Drying bed
D. Supplied storage
E. Wash station

Figure 7.12: Spatial requirements for peel to pack proccess

4.3. Public ablutions

According to SANS 10400-A (pg.43-49), *Maraba Kitchen* is classified under class A1 as a place for entertainment and public assembly. At full capacity, the population will be inclusive of 27 personnel, 76 customers sitting and 36 customers standing. The allocation of sanitary fixtures therefore is done in accordance to regulations as per SANS 10400 – Part P.

	Female	**Male**
Pan	3	1
WHB	2	2
Urinal	.	2

Table 6: Sanitary fixtures provisions for less than 30 personnel (Adapted from SANS 10400-P:29)

	Female	**Male**
Pan	3	1
WHB	2	1
Urinal	.	2

Table 7: Sanitary fixtures provisions for the public (Adapted from SANS 10400-P:32)

Personnel and public amenities will be combined and positioned to become accessible to visitors within the social edge.

5. SPATIAL ARTICULATION

5.1. Layout exploration

The three main elements to be considered in this section include: movement patterns of both food and people, food production and food consumption.

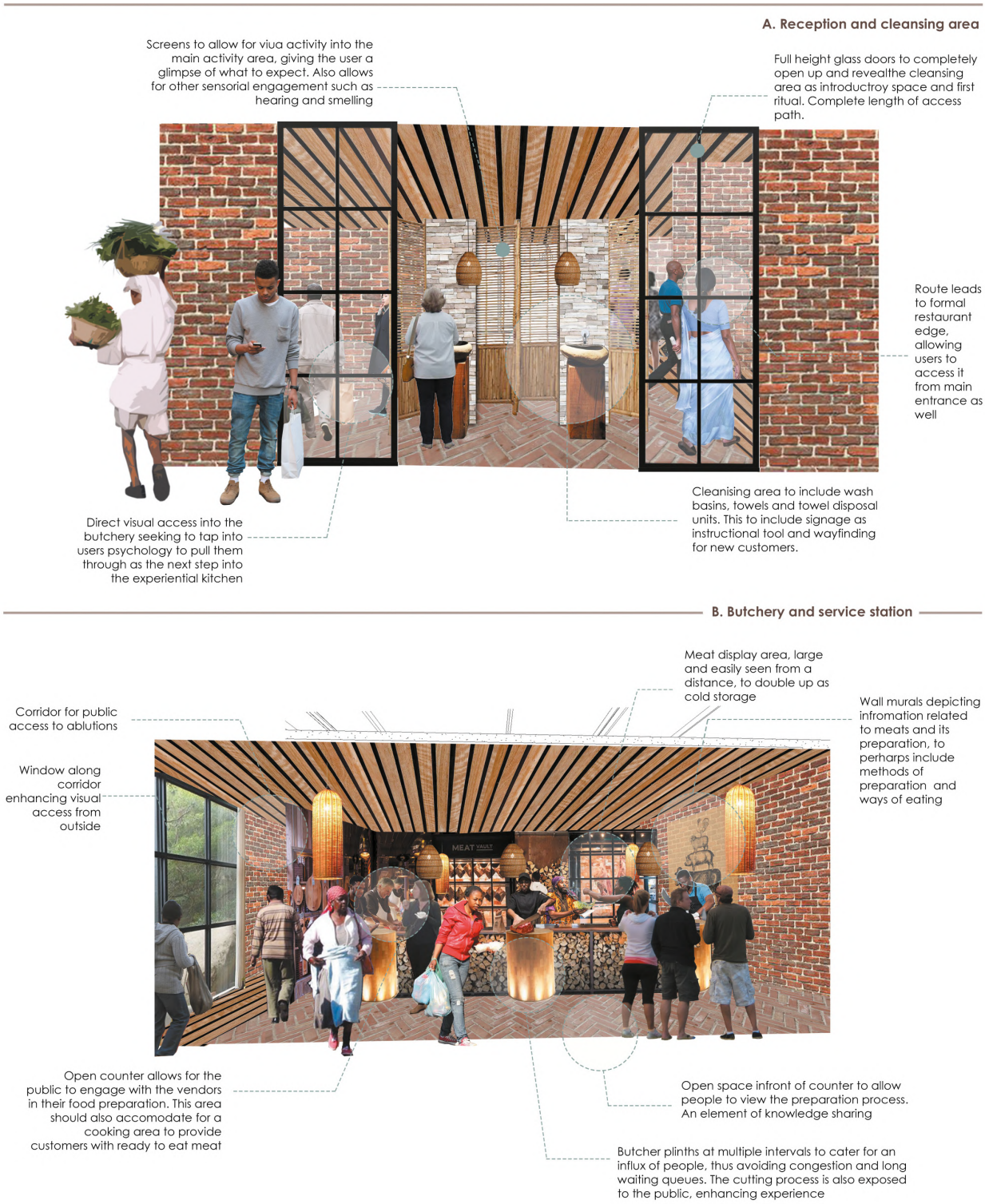
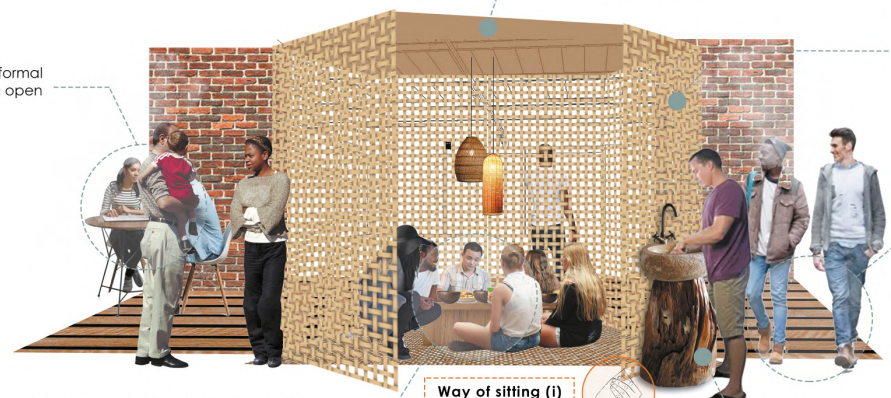


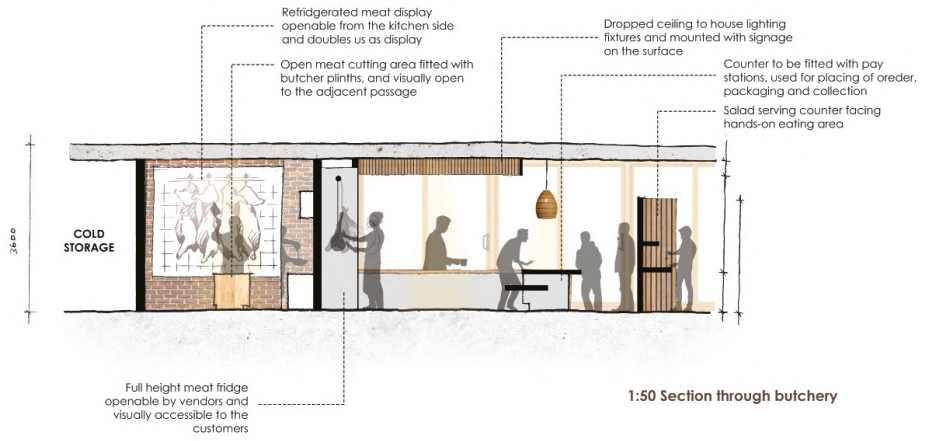
Figure 7.13: Spaces needed for production, consumption and movement

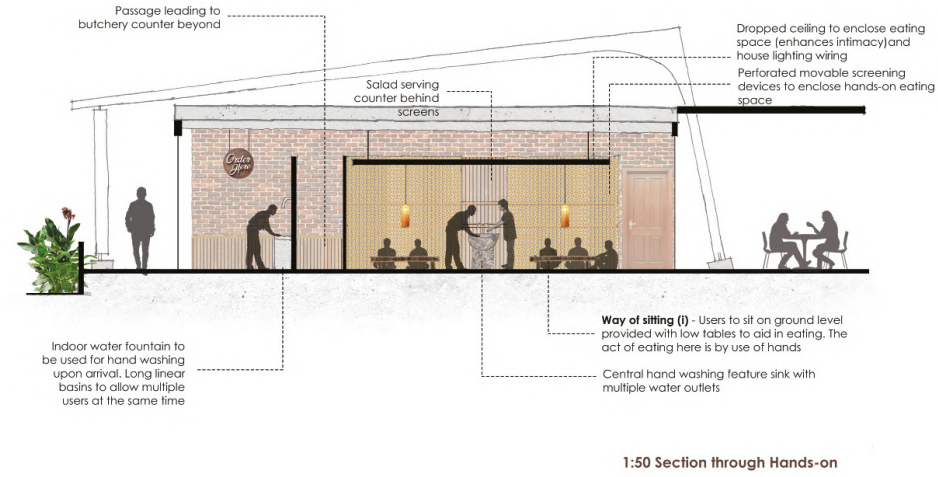
C. Eating space 1 - Hands on



D. Formal sitting area

5.1.1. Iteration 01 - June 2019





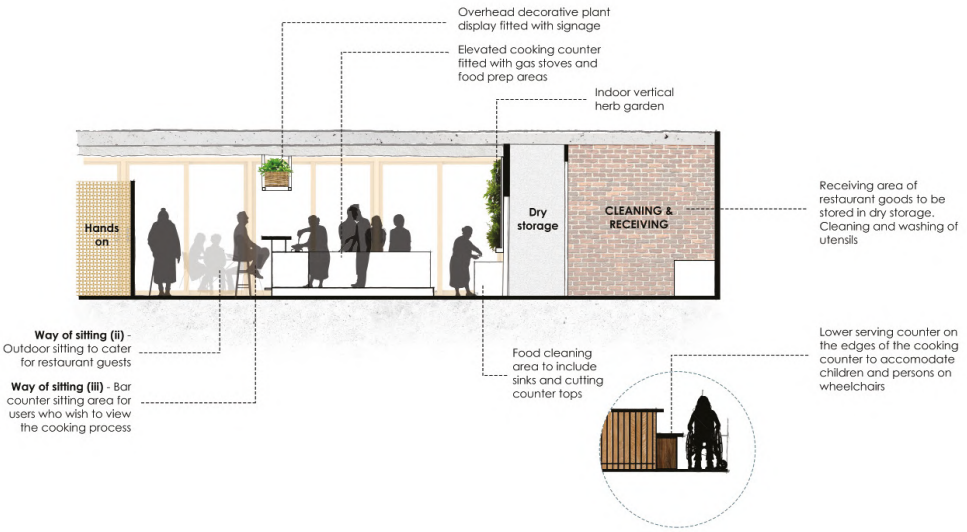


Figure 7.14: Spaces needed for production, consumption and movement

Figure 7.15: Initial look into butchery serving area

Figure 7.16: Initial look into counter sitting area

5.2. Rituals as spatial determinants

Rituals that have been identified to be impactful to the overall spatial experience include:

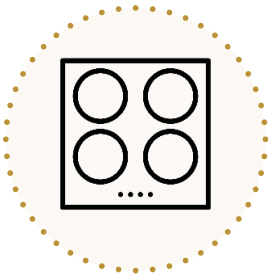
- Ways of cooking
- Ways of sitting
- Ways of eating

This is will be explored and presented to illustrate instances of social interaction and sensorial experiences.

5.2.1. Ways of cooking

a. Firewood

b. Gas



c. Electricity

Figure 7.17: Exploration of ways of cooking and their spatial requirements

5.2.2. Ways of sitting

a. Folded legs

b. Formal

c. High table

d. Bench/ informal

Figure 7.18: Exploration of ways of sitting and their spatial requirements

5.2.3. Ways of eating

a. Cutlery

b. With hands

Figure 7.19: Exploration of ways of eating and their spatial requirements

6. SPATIAL EXPRESSION

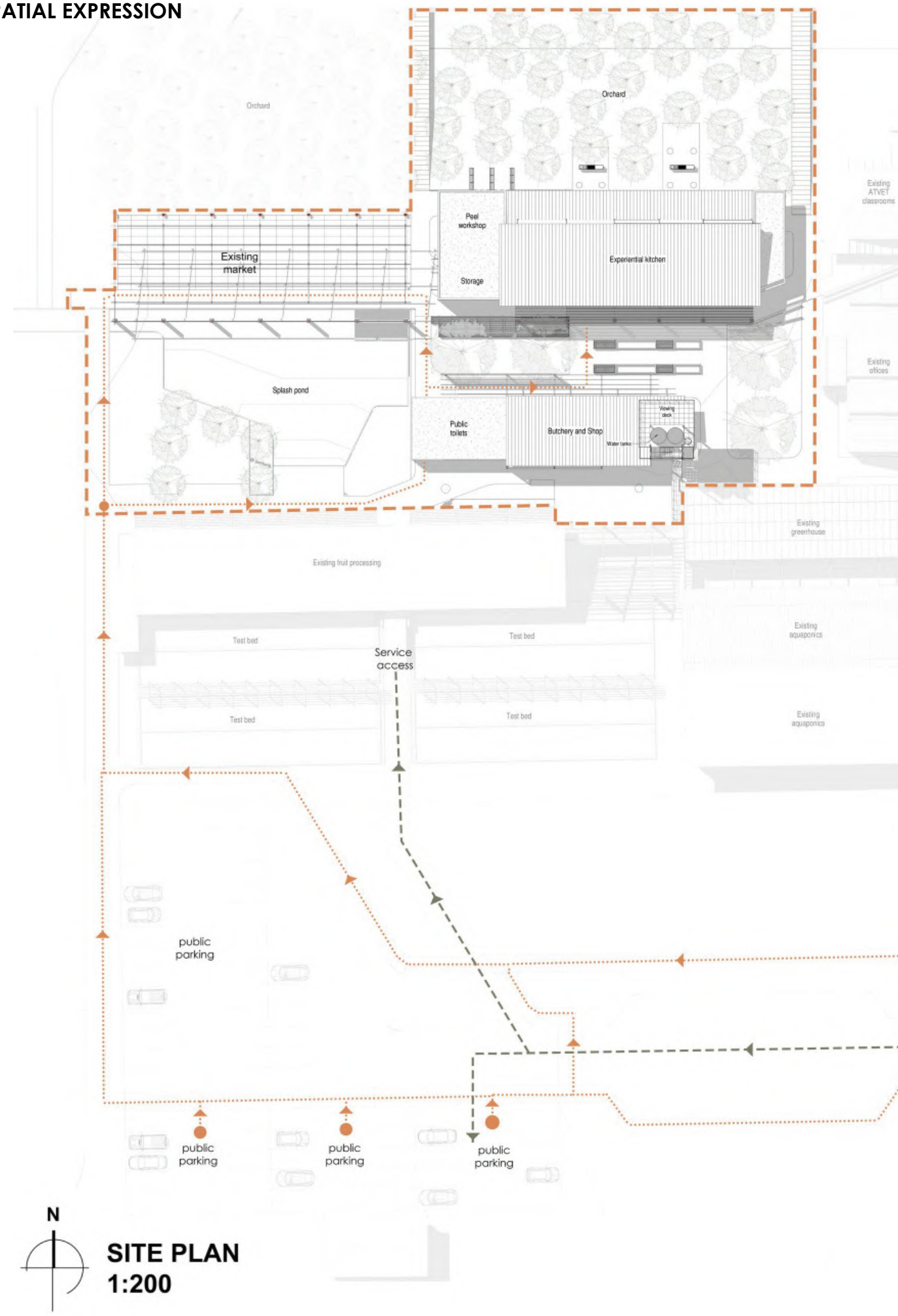


Figure 7.20: Site plan (not to scale)

Atmospheric Elevations
Southern elevation- PEOPLE
1:50

Atmospheric Elevations
Western elevation- FOOD
1:50

Figure 7.21: Atmospheric elevations (Not to scale)


Proposed Planting
Tomatoes
Onions
Carrots
Coriander


Production
Distribution
Consumption
Distribution

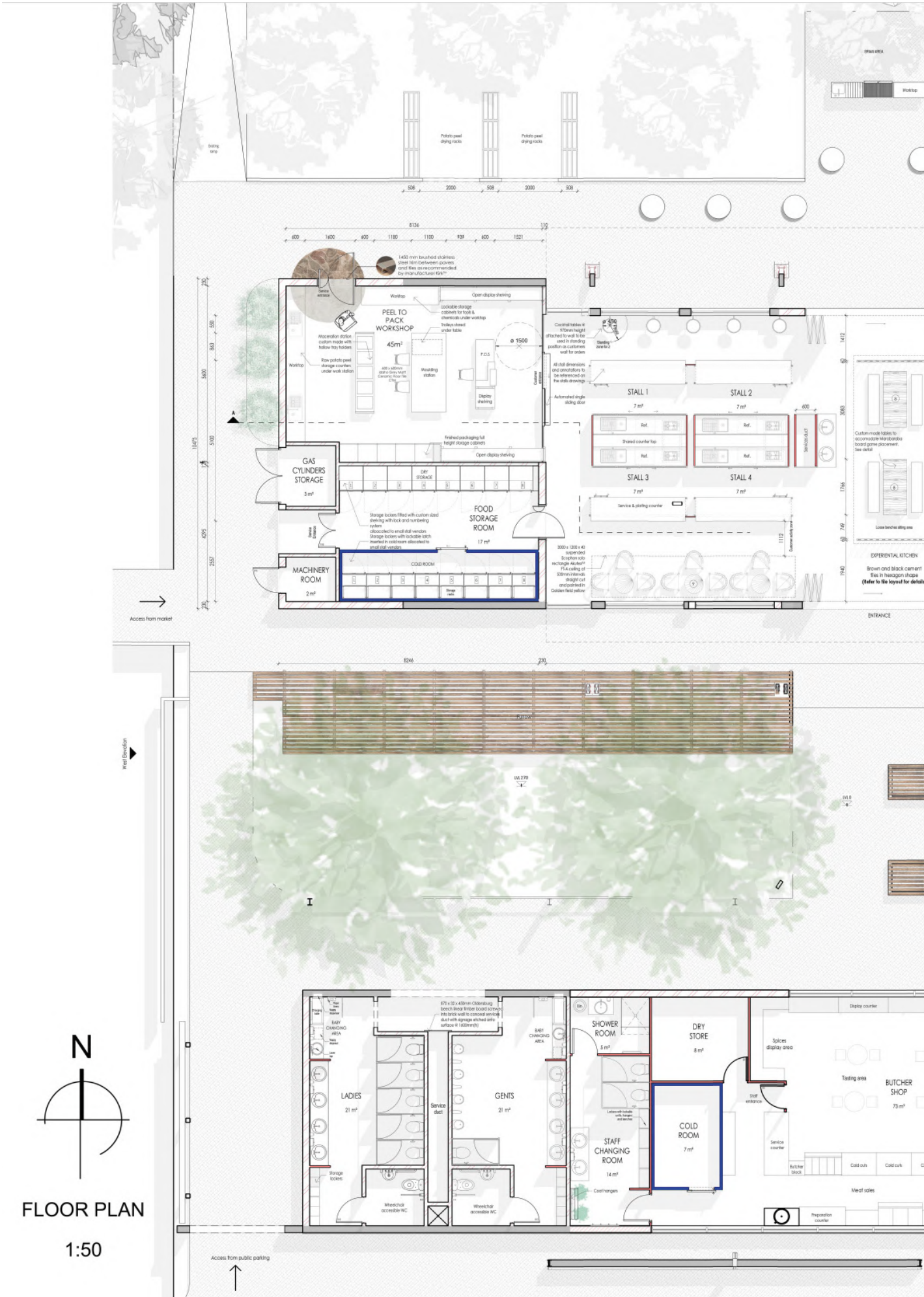


Figure 7.22: Floor plan (not to scale)

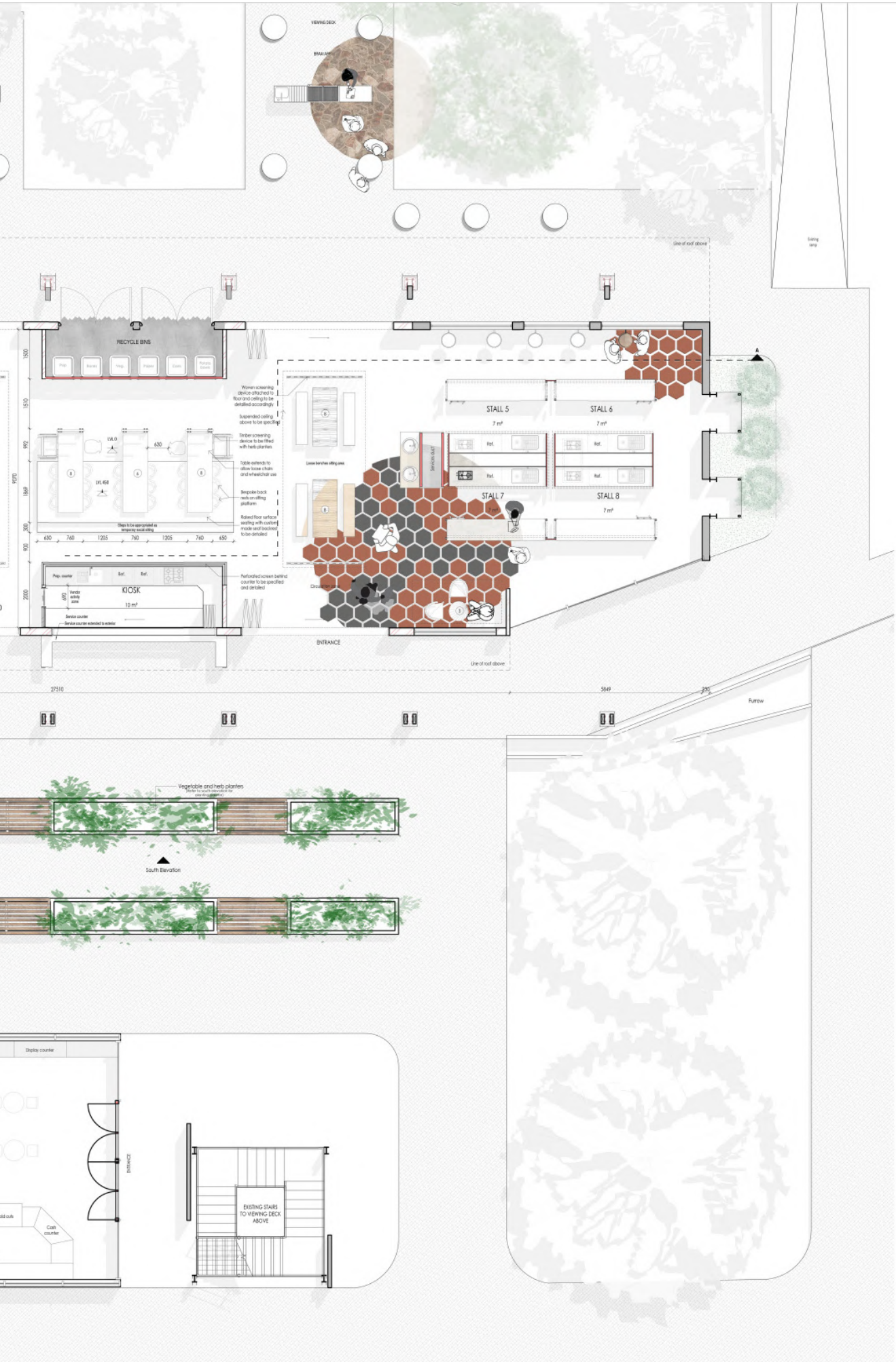

VIEWING DECK
RECYCLE BINS
STALL 5
STALL 6
STALL 7
STALL 8
KIOSK
ENTRANCE
Furrow
Vegetable and herb planters
South Elevation
Display counter
Cash counter
ENTRANCE
EXISTING STAIRS TO VIEWING DECK ABOVE

Figure 7.23: Section through East-West axis (not to scale)

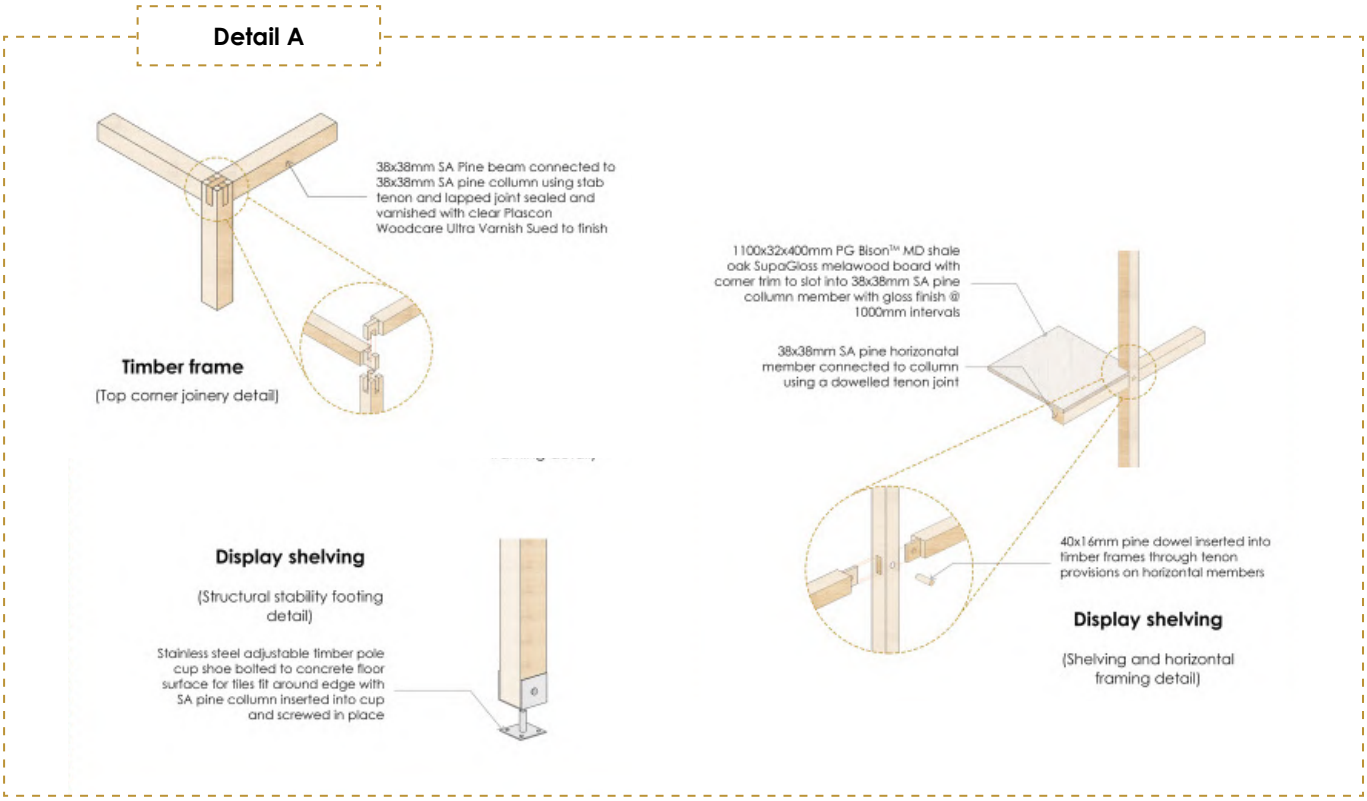
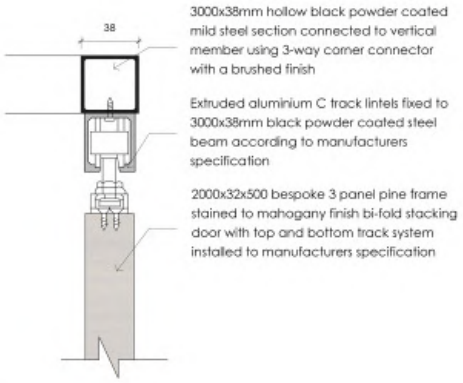


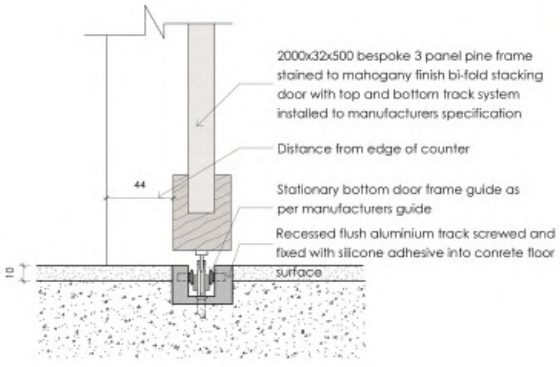
Figure 7.24: (Left to right) Interior fittings details as shown on 1:20 section (indicated scale @A1)

Detail B



Detail B1
1:2

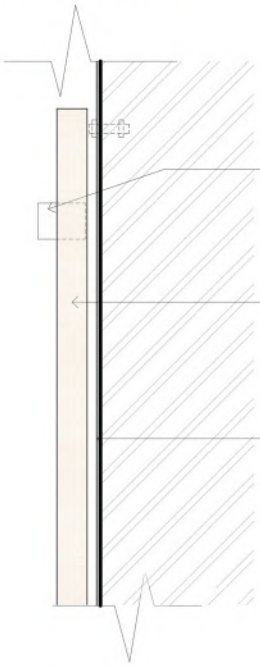
Folding stacking door top track



Detail B2
1:2

Folding stacking door bottom track

Detail C



19x25mm black matte alluminium stand off connected to mild steel corner bracket wrapped around brick wall edge

870x32x450mm Oldensburg beech linear timber board screwed into mild steel bracket on brick wall to conceal services duct with signage etched onto surface @ 1600mm height

2mm black powder powder coated mild steel corner bracket bolted to side of facebrick wall demarcating the service duct

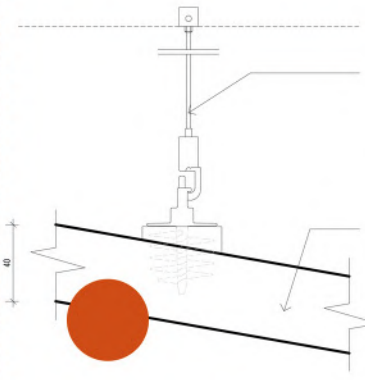
Service duct timber panel siding

1:2

Interior of service duct

Inspiration image - Ash wood and black powder coated steel
(Surrounding, 2019)

Detail D



L = 1300mm stainless steel adjustable wire hanger connected to ceiling panel with an absober bracket and to existing roof truss system above according to manufacturers details

3000x1200x40mm suspended at 150 Ecophon Solo rectangle AkutexTM FT-A ceiling panel with 500mm spacing straight cut and painted sunset heat orange

Suspended acoustic panel ceiling

1:2

Detail E

Cord cables screen

Zigzag red and white fabric cable

Zigzag graphite and ivory fabric cable

Solid yellow fabric cable

(Components and specifications)

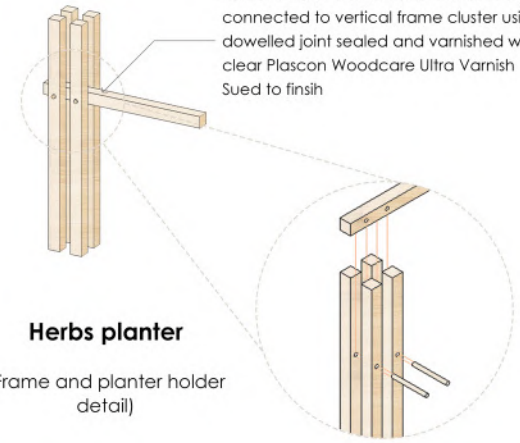
Cords

Connectors

Closed Solid yellow fabric cable to be easily installed on ceiling board, using a standard wall plug

Supplier: Hoi P'loy CPT

Detail F



Herbs planter

(Frame and planter holder detail)

Possible herbs to be grown:

Section illustrating planter frame in use. Naturing of the herbs will be assigned to vendors, where use is for both vendors and customers

Rosemary

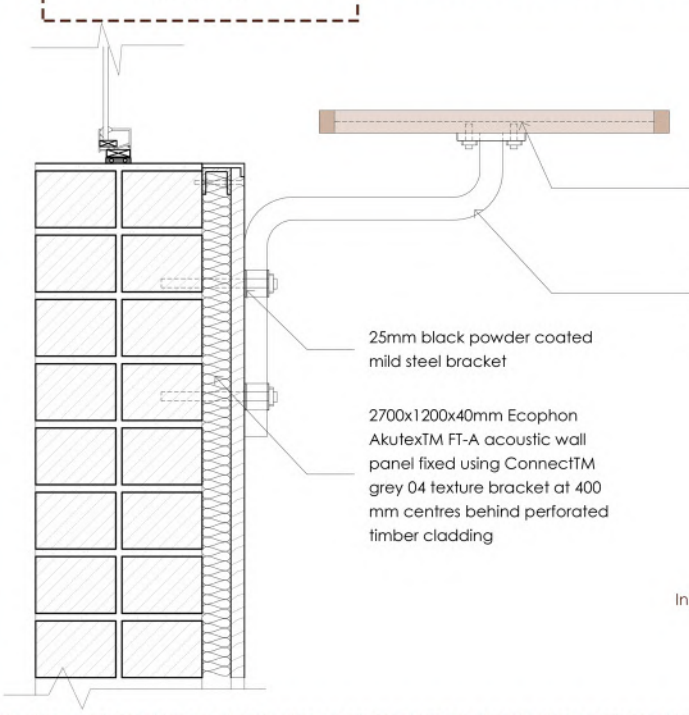
Parsely

Chilli

Detail G

Cocktail tables

(Connection to wal detail)



Plan view of cocktail table in use

Inspiration image - Cocktail tables attached to wall *(Pinterest, 2019)*

Figure 7.25: View of courtyard from outside butchery approaching from office

Figure 7.26: Access route and entrance into public ablution

Figure 7.27: Access into main interior space with view of stalls

Figure 7.28: Raised sitting area and view of recyling bin area

Figure 7.29: Layout and organisation of games table as viewed as approaching from braai area

Figure 7.30: View of braai area as apporaching from interior

6.1. Material selection Strategy

To accurately represent the likeness of food spaces in Marabastad in Maraba Kitchen, consideration had to be given to the material selection strategy. In addition to this, materials are an integral part in completing the sensorial exprience within an interior. Therefore, the following strategies were applied resulting in a palette as illustrated in figure 7.26.

6.1.1. Context as informant

This selection of materials was directly influenced by materials found in Marabastad. As the intention is not to mirror but enhance the experience, an understanding of the choice of materials is formulated which is then translated into the resulting palette. Principles such as varying levels of permance, treatment of thresholds and use of space, therefore, form the basis of how the material palatte is translated in the interior.

In addition to this, the methods of food preparation used by vendors can be viewed as those that posses an element of craftsmanship specific to the vendor. The same level of attention to detail will be extended into the materials selected and how they are produced. The demographic is also taken into considereation where elements such as meaningful patterns from multiple tribal groups can be translated into patterns used on screening devices.

6.1.2. Building with waste

As discussed earlier, food is not only considered an object of consumption, but also a source of inspiration for design. The prevalence of food in Marabastad results in food waste that is often dumped within the district in addition to that which comes from other parts of Pretoria thus becoming a part of the urban fabric. Recycling and sorting areas located on Johaness Ramokhoase Street and provision made within the site complex for waste processing, present an opportunity for converting food wastes into non-complex building materials that can be used in an interior environment. Therefore, a selection of materials specified will include those re-purposed from food waste that can easily be sourced in Marabastad.

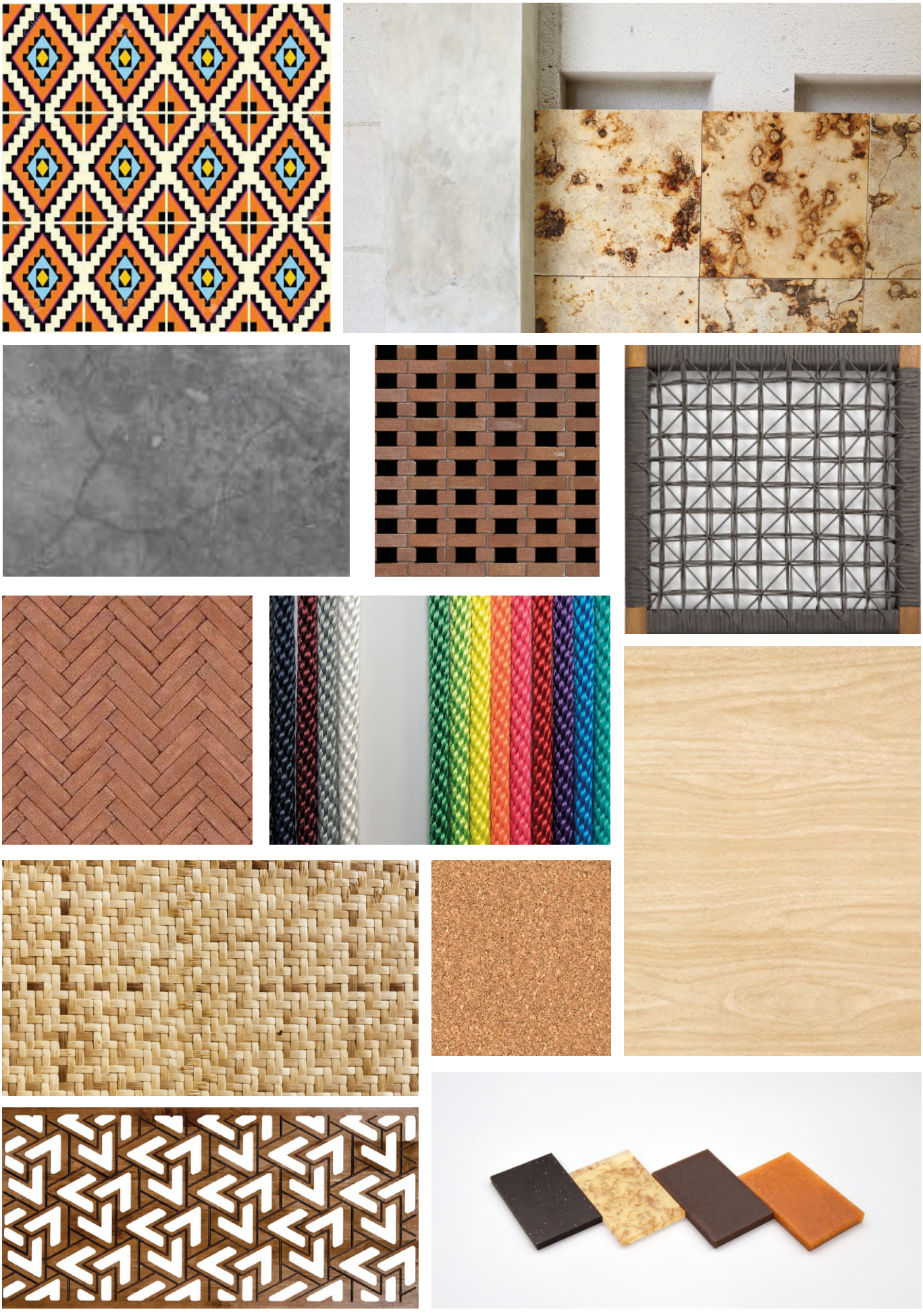


Figure 7.31: Material palette

7. INTENDED SPATIAL MEANING

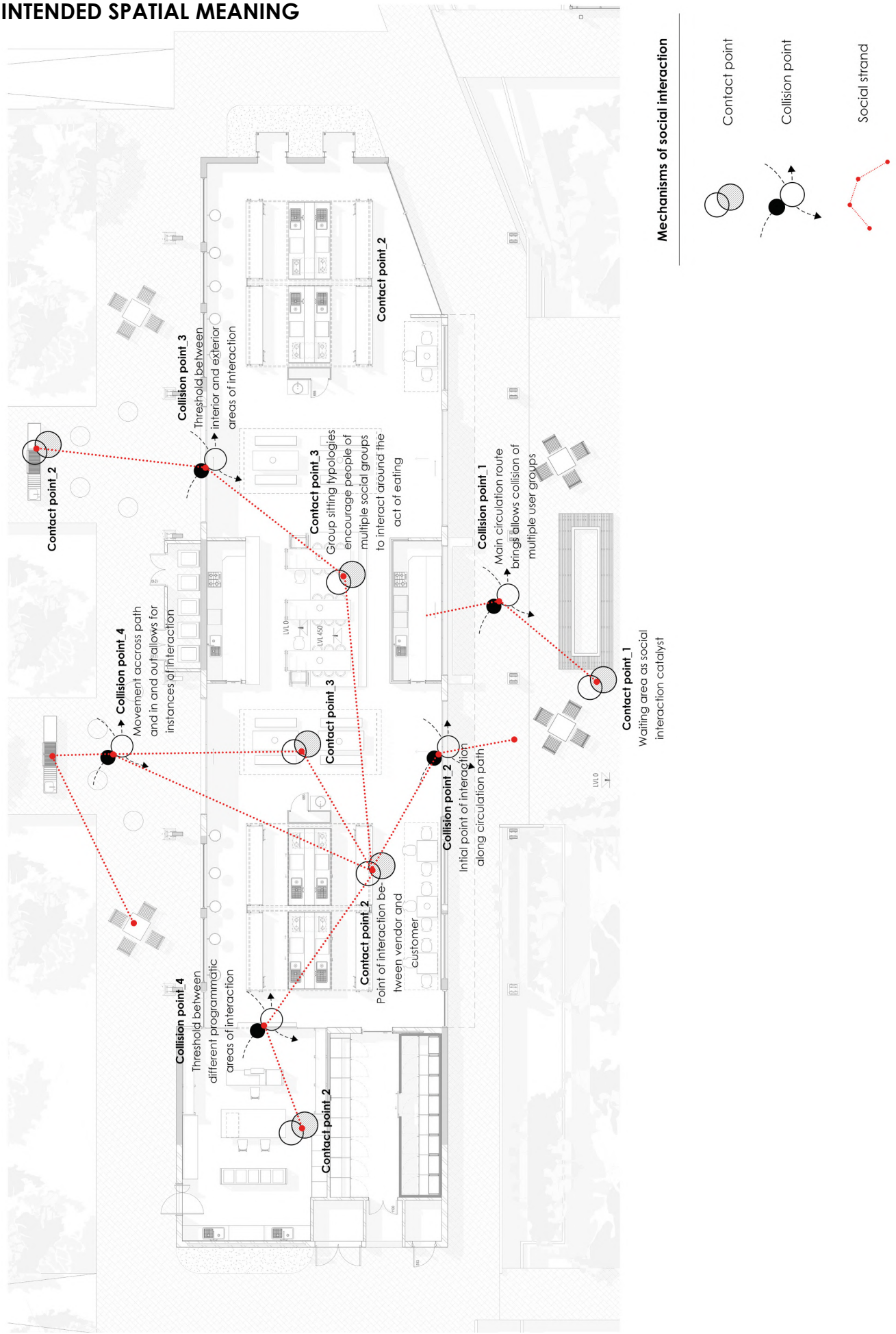
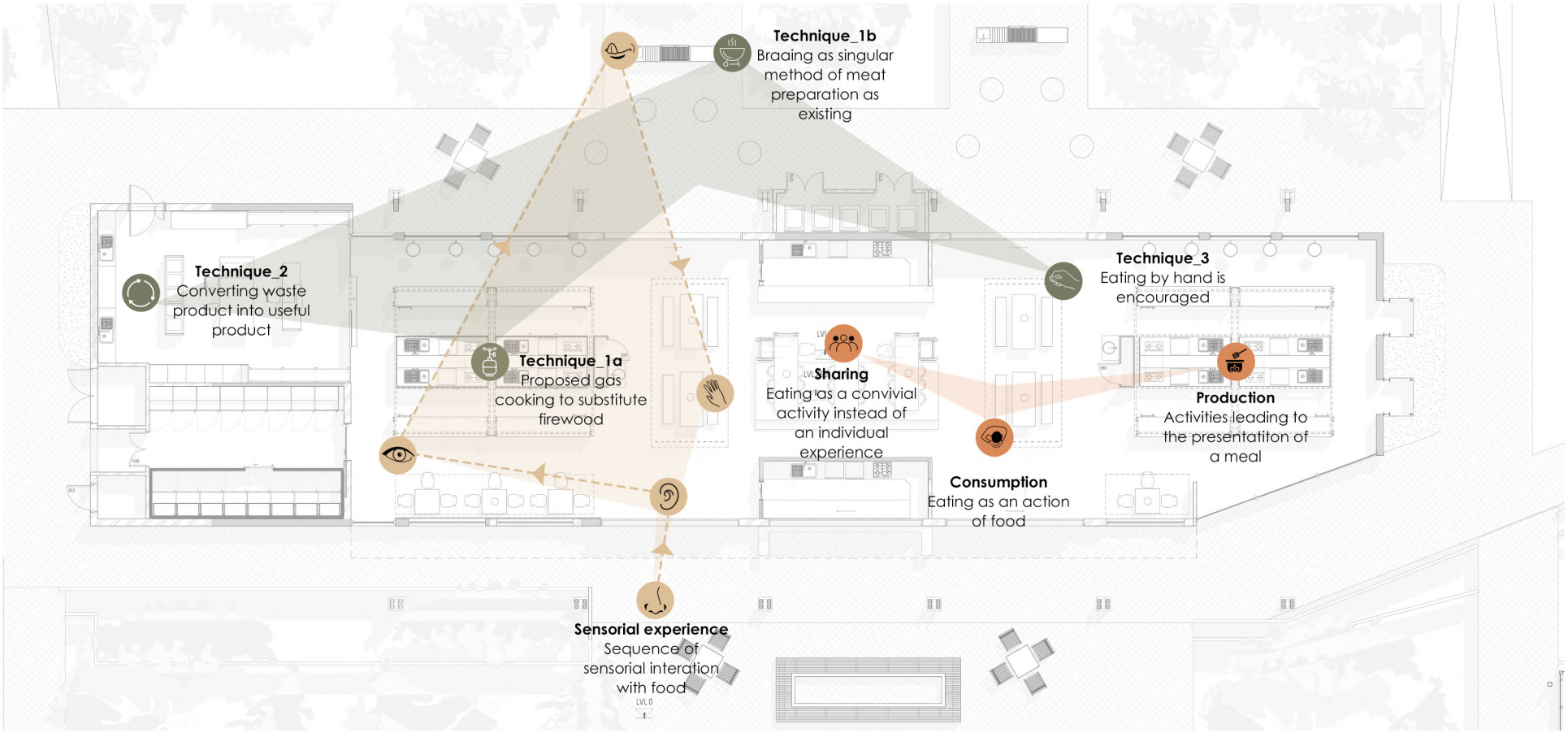


Figure 7.32: Scenarios of social interaction

Figure 7.33: Scenarios of sensorial experiences



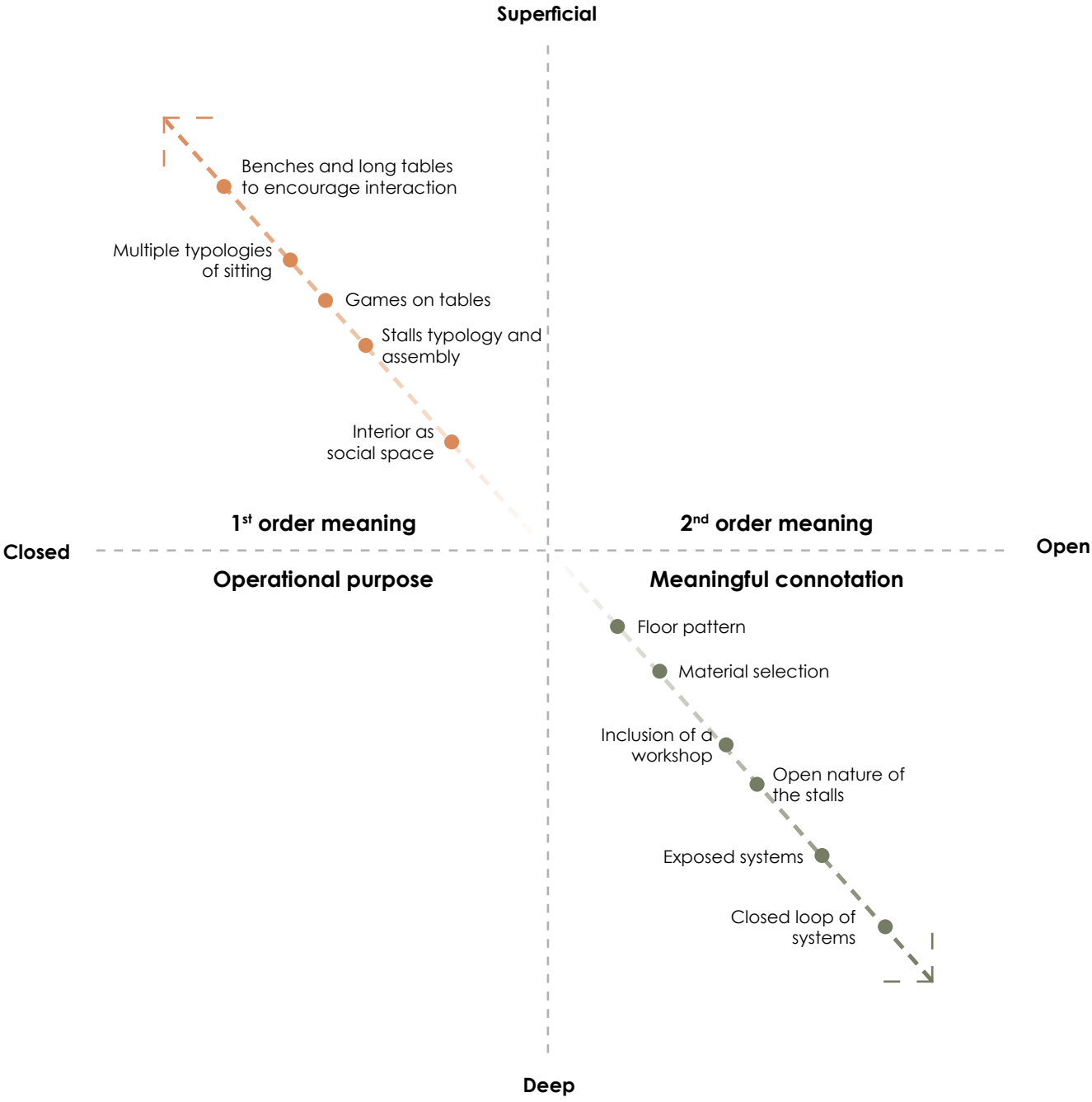


Figure 7.34: Intended spatial meaning plotted on 1st and 2nd order chart

8. CONCLUSION

This chapter explored the tangible spatial expression of the proposed theories and concepts as a means of embodying the interior with cultural meaning in order to encourage the celebration of Marabastad's food culture. The process-oriented approach enabled the three main aspects of this study to be addressed to detail resulting in an interior that facilitates the exchange of said ideas. Through an iterative process, the spatial identity of the interior developed to strongly facilitate social interaction, a sensorial experience in addition to being ingrained in its tangible and intangible contextual informants.

The stalls are further identified as the main design component relating to the food preparation rituals present in Marabastad. This informs the basis of the technical investigation to follow where focus will be placed on the functioning of the stalls in relation to the individual and their interaction with food and other persons.

8_TECHNICAL INVESTIGATION

1. INTRODUCTION

The design development section explored the potential of food spaces to serve as facilitators for social interaction. This included specificity of the stalls layout to support individual ritual relating to food interaction. This is dependent on employment of tools such as flexibility and craftsmanship to allow for appropriation of space to support ritual.

The technical issue under investigation therefore is a continuation of the notion of how space articulation can support ritual. The technical statement, therefore, reads as: **Investigating how methods of flexibility and appropriation can enable a semi-permanent stall insertion to be appropriated based on individual vendor rituals of food preparation and interactions.**

2. STRATEGY & METHODS OF INVESTIGATION

The following methods of investigation will be employed:

- An analysis of technical precedents using the criteria of spatial devices derived from the analysis of stalls in Marabastad outlined in section 6.2.1
- The guidelines of spatial articulation will be derived from a combination of brand principles and findings of the precedent study
- A standard stall will be designed and tested to fit the general functionality and activities
- Real time vendors will be introduced adjacent to their specific rituals and interaction patterns to highlight their influences on the stall's configuration
- Finally, these will be presented alongside the standard stall design to test their functionality based on intended ritual and interaction.

A standard stall is designed and detailed from which vendor specific stalls will be derived. In order to accurately represent and investigate the technical issue the approach taken is such that individual vendors are introduced as existing in Marabastad, juxtaposed with their specific food preparation rituals which will inform and influence the articulation of their stalls.

First, the identified technical precedents are analysed in the following section.

3. TECHNICAL PRECEDENTS

The spatial devices derived under the conceptual development from the analysis of Marabastad's food spaces are used to analyse precedents that illustrate craftsmanship and more, so flexibility of units used for food interaction. These are summarised as:

- **Frame -** The stalls are made of lightweight structural frames that are easily assembled on site with inserts accommodating for specific food activities.
- **Proximity -** Activities are placed in proximity and the open shared spaces allow for multiple spatial relations.
- **Threshold -** Blurred boundaries create two layers of thresholds, namely visual and physical thus creating an easily accessible and permeable relationship between food and people.
- **Network -** An integrated network of elements creates a closed loop of systems that encourage an overlap of functionality.
- **Scalability -** The scale of the units facilitates multiple levels of intimacy in addition to their portable nature that add on to the overall experience for both the vendor and customer.
- **Local -** A celebration of local interaction and technique methods are embraced.

An analysis of the selected precedent follows.

3.1. Mobile Hospitality by Chmara. rosinke

"The idea is as simple as this - to share time, food and space with others"
Chrama & Rosinke (Micińska, 2014).

Mobile hospitality is a combination of a portable kitchen, dining table and foldable stools that completely fold down into two transportable carts. It includes functional service elements needed in the kitchen such as a pump for running water connected to the sink, pots for growing herbs and a basic stove. The concept focused on celebrating the ritual of eating in public spaces where the meal is shared between the cook and the visitor thus creating an interaction that fosters spontaneity and a sense of community (Mikocki, 2012). The simplicity of the design provides a minimal backdrop shifting the attention to the activity of cooking and the food as the object of interaction (Micińska, 2014). The unit is primarily made of pine wood finished with linseed and orange oil and measures 760 x 1200 x 1100mm (Chmararosinke. com, 2011).

Figure 8.1: (Top right) Mobile hospitality full unit (Chmararosinke.com, 2011)
Figure 8.2: (Centre right) Mobile hospitality unit enables flexibilty of location of use (Chmararosinke.com, 2011)
Figure 8.3: (Bottom right) Mobile hospitality compositions (Chmararosinke.com, 2011)

The following principles and characteristics are evident;

- **Frame -** The formal language of the unit is kept clear and consciously taps into the DIY aesthetic (Chmararosinke.com, 2011). This renders it easily manipulated and assembled in-situ to make up the complete unit.
- **Proximity -** All activities are compacted within a small surface area encouraging a visual and physical relation between the spaces and the people.
- **Threshold -** Its open nature facilitates easy access to the ritual of cooking for the customers from their sitting positions.
- **Network -** The water system for washing the fruit and vegetables is made of watering cans, a hose and a foot-powered pump that works in a cyclic nature (Micińska, 2014).
- **Scalability -** The unit can easily be set up within minutes in a coordinated manner by two people. All the components are foldable and can easily be stowed away (Micińska, 2014).
- **Local -** The object comes in various versions each time; therefore, the kitchen is proposed to be made of locally available materials. The designers have a policy that states that design should be responsible and in dialogue with the local community, thus the wood is sourced from the closest and best producer which does not necessarily make it the cheapest option (Micińska, 2014).

The sequence of assembly and use is then outlined using the following verbs, this illustrating the interaction between vendor and stall, vendor and food, customer and vendor and customer and food. Similar methods of flexibility and craftsmanship can therefore be applied in the articulation of the kitchen stalls in *Maraba Kitchen*.

Pull

Screw

Hang

Attach

Unpack

Cook

Serve

Figure 8.4: Sequence of assembly and use (Chmararosinke.com, 2011).

Below are examples of how the movable unit has been appropriated and used in various cultures with specific food rituals.

Figure 8.5: Mobile hospitality unit adapted and used for a tea ceremony (Chmararosinke.com, 2014)

Figure 8.6: Mobile hospitality unit adapted and used for an open market food stall (Chmararosinke.com, 2014)

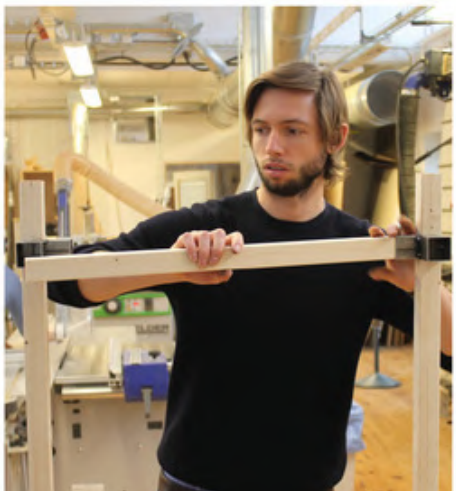
3.2. IKEA hacka kitchen by IKEA

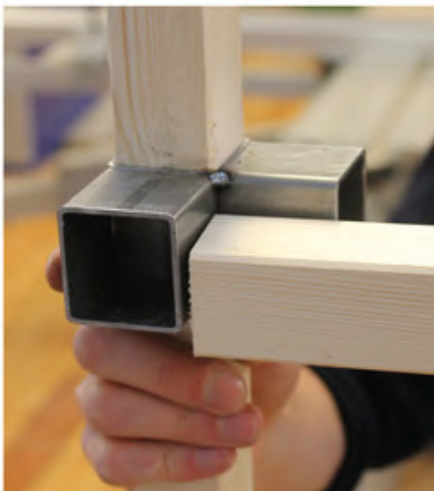
The hacka kitchen was conceived as a result of exploring people's behaviours around food and activities associated with its production. It was noted that one of the most common needs was one of people wanting to modify products to make them their own. The resulting product is a frame system, consisting of standard size wooden beams and metal joints. These function as the main structure for the kitchen where appliances and fittings are inserted into (Iranzo, 2015). The modular system's unrestricted flexibility allows for it to be assembled in custom sizes making it possible to cater for various needs. Measuring guides on the wood make it possible for the owner to cut the desired lengths and reassemble the unit based on their individual needs (Brink, 2015).

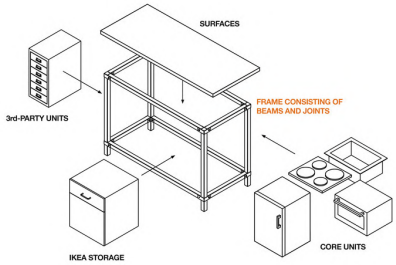
The following guidelines are derived from the analysis above to inform the articulation of joinery and details in the vendor stalls.

- **Frame -** The modular unit consists of wooden beams that can be assembled to form a singular and functional unit. These can be cut into multiple sizes to fit individual needs. The corner elements are like the elbow joints used in Marabastad.
- **Proximity -** Activities related to food production are near maximise on the available space.
- **Threshold -** As with similar examples, the kitchen unit is generally open thus allowing multiple levels of permeability.
- **Network -** The unit can be put together to accommodate standard fitting of services or these can be custom made and fit accordingly.
- **Scalability -** Measuring guides on the main framework allow for individuals to scale the kitchen according to their specific needs. The process is however permanent and cannot be reversed.

From the above introduction and analysis, the three main areas of resolution identified therefore include: assembly, materiality and functionality.







Adjacent page

Figure 8.7: (Top left) IKEA hacka outdoor iteration (Brink, 2015)
Figure 8.8: General unit showing multiple fitted configurations (Brink, 2015)
Figure 8.9: Unit fitted as standard kitchen cabinetry (Brink, 2015)

On this page

Figure 8.10: Images showing assembly of unit (Brink, 2015)
Figure 8.11: Images showing relationship between structural and joinery components (Brink, 2015)

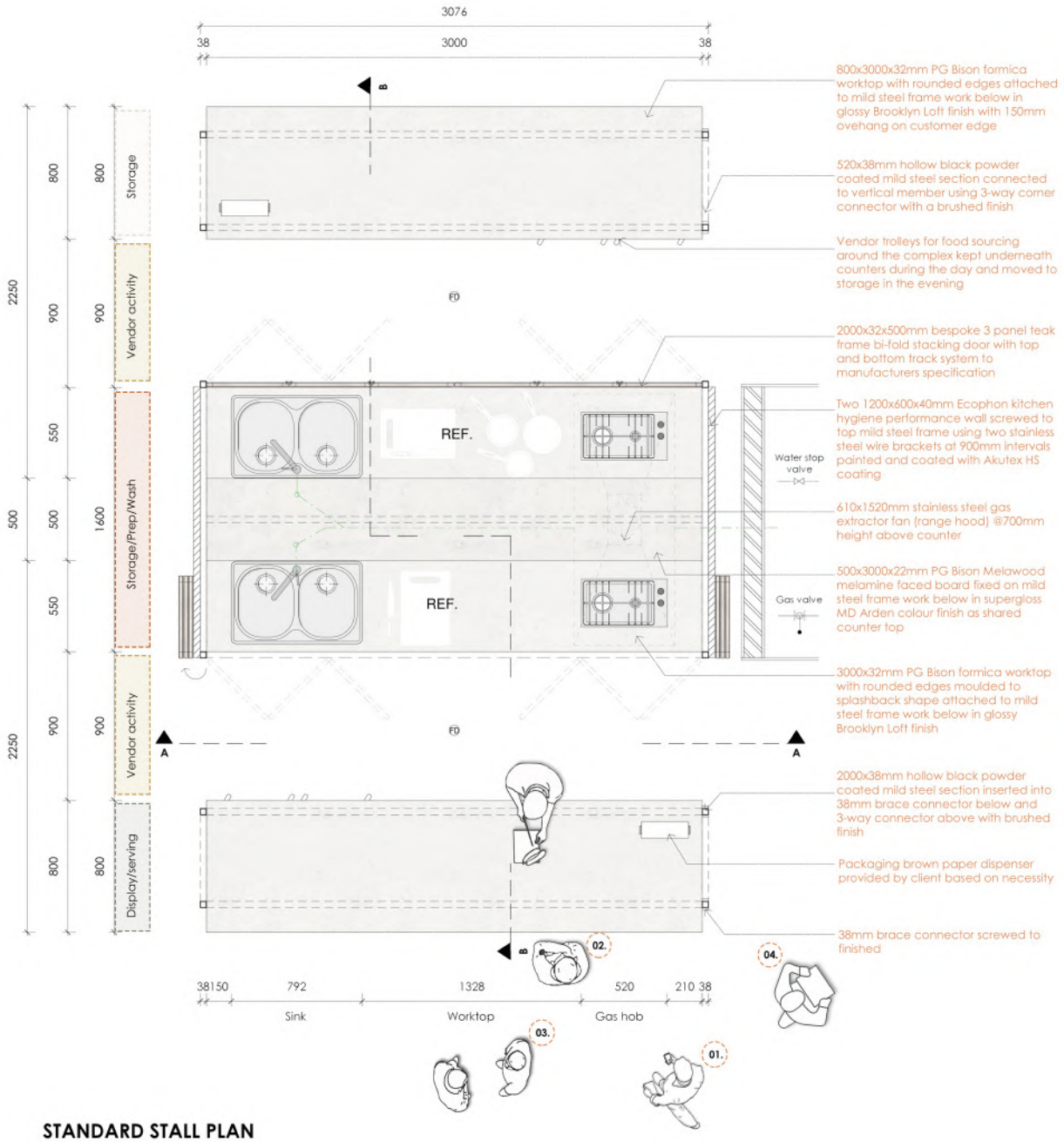
4. TECHNICAL DEVELOPMENT OF STALLS

As indicated earlier, the approach taken on this section will be as follows: the general stall design will be explored, from which vendor specific stalls will be iterated according to their specific food interaction ritual. The vendors introduced in this section co-relate as the owners of the stalls analysed in section 6.2. Therefore, the specified rituals are to be viewed as real and in occurrence. This will further into an exploration of the joinery details that aid the desired assembly and configuration. To conclude, a complete cycle of use and interaction will be illustrated by use of a story board, testing the multiple scenarios of use.

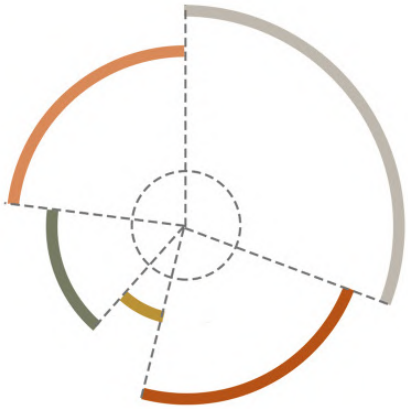
4.1. Standard stall module

The base module is a lightweight structure consisting of a timber frame attached to the floor with cabinet inserts for appliances and storage as seen appropriate.

Figure 8.12: Plan illustrating standard design considerations (not to scale)
Figure 8.13: Graph illustrating proximities and movement patterns



STANDARD STALL PLAN
1:20



PROXIMITIES

A representation of activities (ritual) present in the stall and their relationship to each other

- Day storage : **3m²**
- Washing (food and utensils) : **1m²**
- Pre-preparation : **3m²**
- Cooking : **2m²**
- Serving/Display : **4m²**

MOVEMENT PATTERN

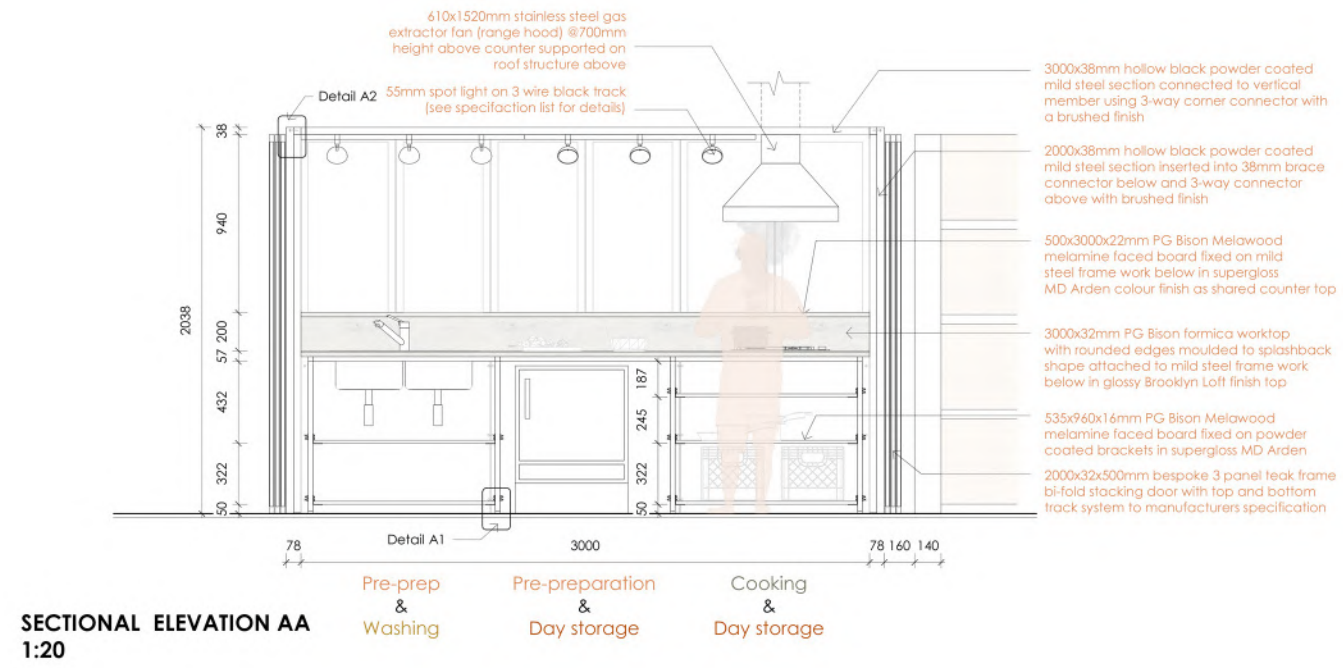
This pattern is limited to around the stall and not the overall space. This should therefore be viewed in isolation of activities relating to the stall

Overall pattern

1. Approach
2. Place order/pay
3. Wash hands/wait
4. Collect plated food

Limited to new stall

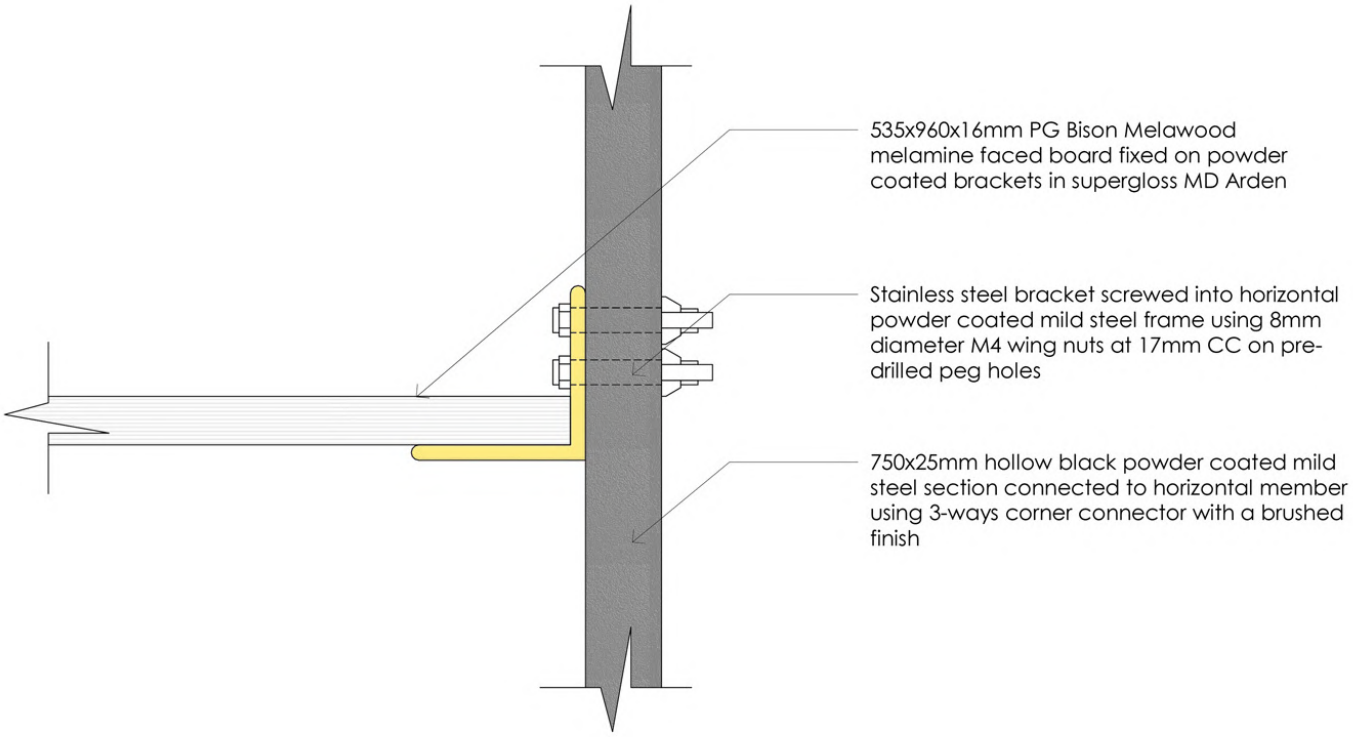
5. Sit and eat
6. Dispose waste
7. Wash and leave



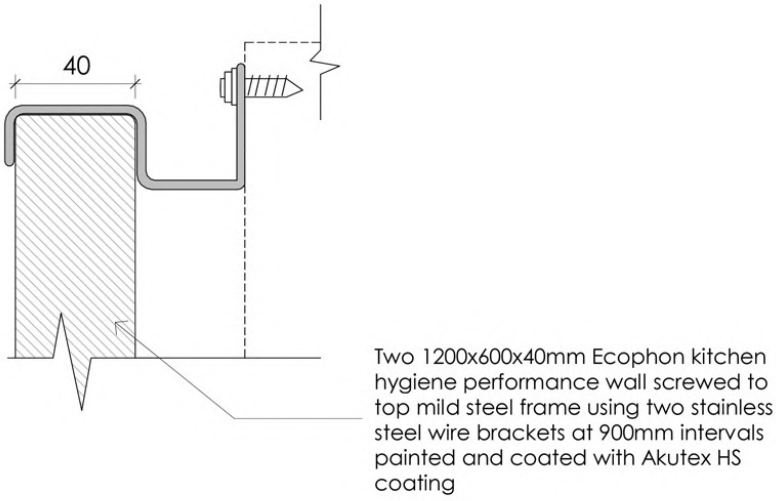
Sectional Elevation AA (not to scale)

Section BB (not to scale)

Figure 8.14: Sections of standard stall



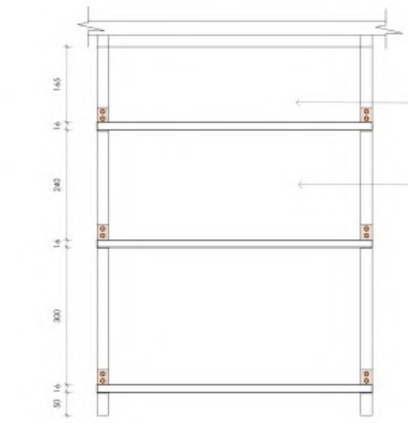
Detail A1 - Adjustable shelf connection to infill frame (not to scale)



Detail A2 - Installation of hygiene wall to frame (not to scale)

Figure 8.15: Details as marked on sections through standard stall

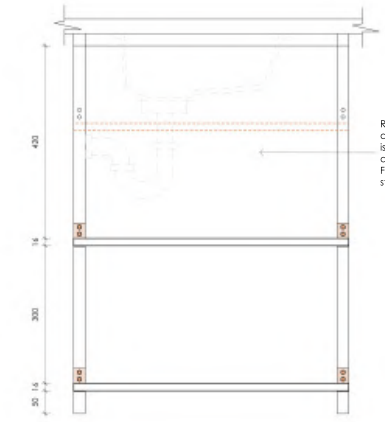
Shelves configurations



The smallest shelf size can accomodate insertation of **drawers** based on vendor needs. Here, issue such as **storage of personal items** can be considered were lockable drawers can be inserted

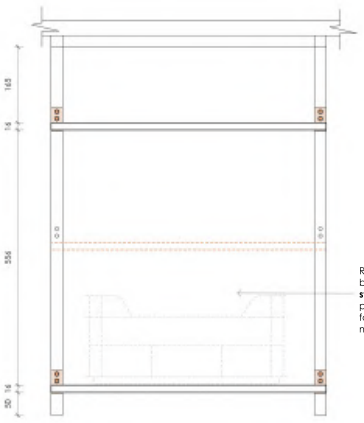
Multiple sizes of medium sized shelving allows for different types of **storage containers** to be used. **Plastic crates and cardboard boxes** have been considered

Configuration 01 - All shelves inserted
1:5



Removal of the top shelving unit allows for a higher compartment. This configuration is suitable for the underside of sinks to allow installation of plumbing systems. Futhermore, this can also be used for storage of cleaning equipment

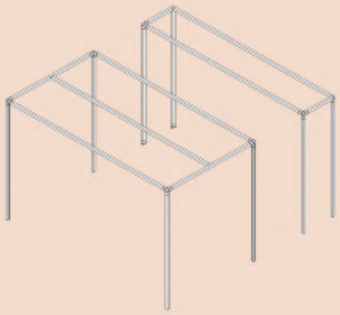
Configuration 02 - Top shelf removed
1:5



Removal of the mid shelf opens up the bottom shelf that can then be used as **stacking storage.** This can include utensils, plastic crates and cardboard boxes with food supplies as acquired from the market.

Configuration 03 - Mid shelf removed
1:5

Figure 8.16: Multiple shelving configurations as required by vendor



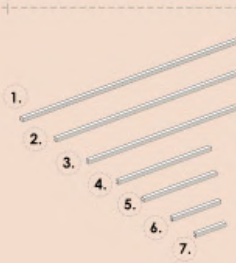
The framekit consists of 38mm hollow black powder coated mild steel sections in both vertical and horizontal members. These are connected at various points using corner connectors of a polymer finish with a red painted finish. The permanence of the frame is determined by their attachement to the floor surface.

Corner connectors

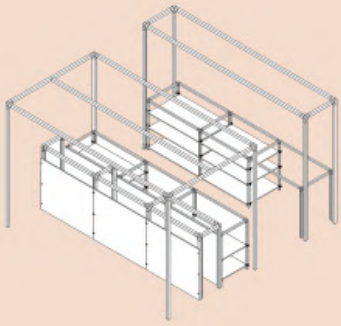
Base supports

Counter corner brace

FRAME KIT



1. 38X3000x38 = 4
2. 38x2000x38 = 15
3. 38x1600x38 = 2
4. 38x1000x38 = 10
5. 38x780x38 = 2
6. 38x520x38 = 4
7. 38x325x38 = 4

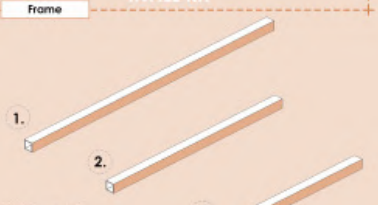


The infill kit is a combination of both 25mm hollow black powder coated mild steel and various sized boards attached the frame accordingly. The steel sections are not attached to the flor making them semi-permanent insertions whereas the 600x925x16mm boards slot into the frame as with **Detail A1.**

The service core is defined by a longer steel sections that elevate the counter above this making is usable as a shared counter top.

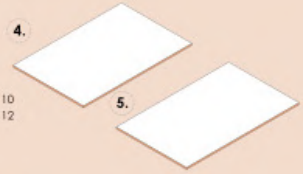
INFILL KIT

Frame

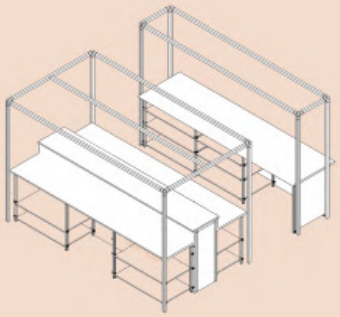


1. 25X790X25 = 32
2. 25X550X25 = 8
3. 25X485X25 = 8

Shelves



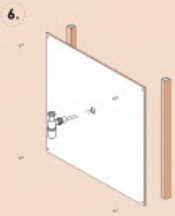
4. 600X960X16 = 10
5. 600X925X16 = 12



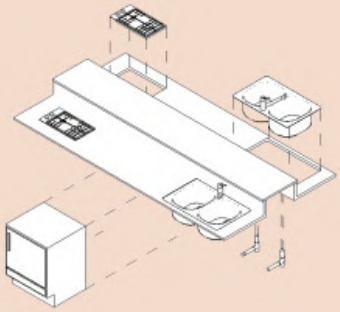
Standard counter top sizes (3000x32x800mm) are installed on top of the infill frames at heights that are accordance with universal design principles in order to accomodate various working and serving positions i.e. a maximum height of 850mm above ffl.

Siding boards are also screwed into place on the serving counters where shleving and storage components are concealed from the public view.

Back board



6. 1000x800x12 = 6

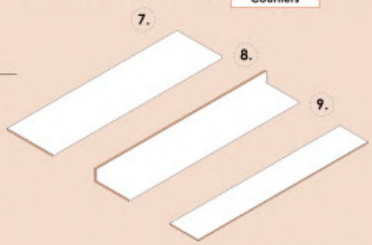


3rd party appliances and equipment are then installed within the already assembled framework where needed.

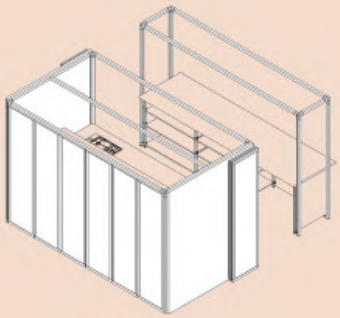
The following are the specified appliances and equipment deemed contextually suitable and befitting for the scale of the framework:

Item	Brand	Descriptive name
Undercounter fridge	Hisense	91L bar fridge, 495(l)x446(w)x840(h)
Gas cooker	Defy	350x540x140mm 2 burner gas hob
Double bowl sink	Franke	840x470x200mm stainless steel double bowl undermount sink with 90mm basket strainer waste fitting
Mixer	BluTide	Chrome plated one hole top swivel sink mixer

Counters



7. 3000x32x800 = 2
8. 3000x32x570 = 2
9. 3000x32x500 = 1



Finally, hygiene wall panels are installed within the service core and attached to the permanent framework as per **Detail A2.**

Sliding folding doors are then inserted within the frame with racking systems attached to both the floor and horizontal frame above. This is limited to the service core where security is neede more. Storage space here can be used in addition to the assigned locker spaces as the doors are lockable and the vendors keep the keys.

NB: Two stalls djacent tp each other are considered as a sinlge unit. This is because:

- Services are shared between two individual stalls.
- Demarcation of individual stalls here is limited to the -service area.

Hence the above part relate to the assembly of a single unit to be shared by two vendors.

Figure 8.17: Assembly sequence on site and kit of parts

4.2. Mama Fatima - Module 1

4.2.1. Introducing the vendor

Figure 8.18: Mama Fatima

Name: Mama Fatima

Stall in Marabastad: Mogul Street

a. Rituals

- Sits down when preparing condiments
- Cuts vegetables on hand – attributes it to speed and comfort
- Places sauces on shelf that is accessible by customers

b. Menu and serving method

Category	Type
Starch	Pap
	Rice
Vegetables	Kale
	Cabbage
	Chakalaka
Proteins	Braai lamb

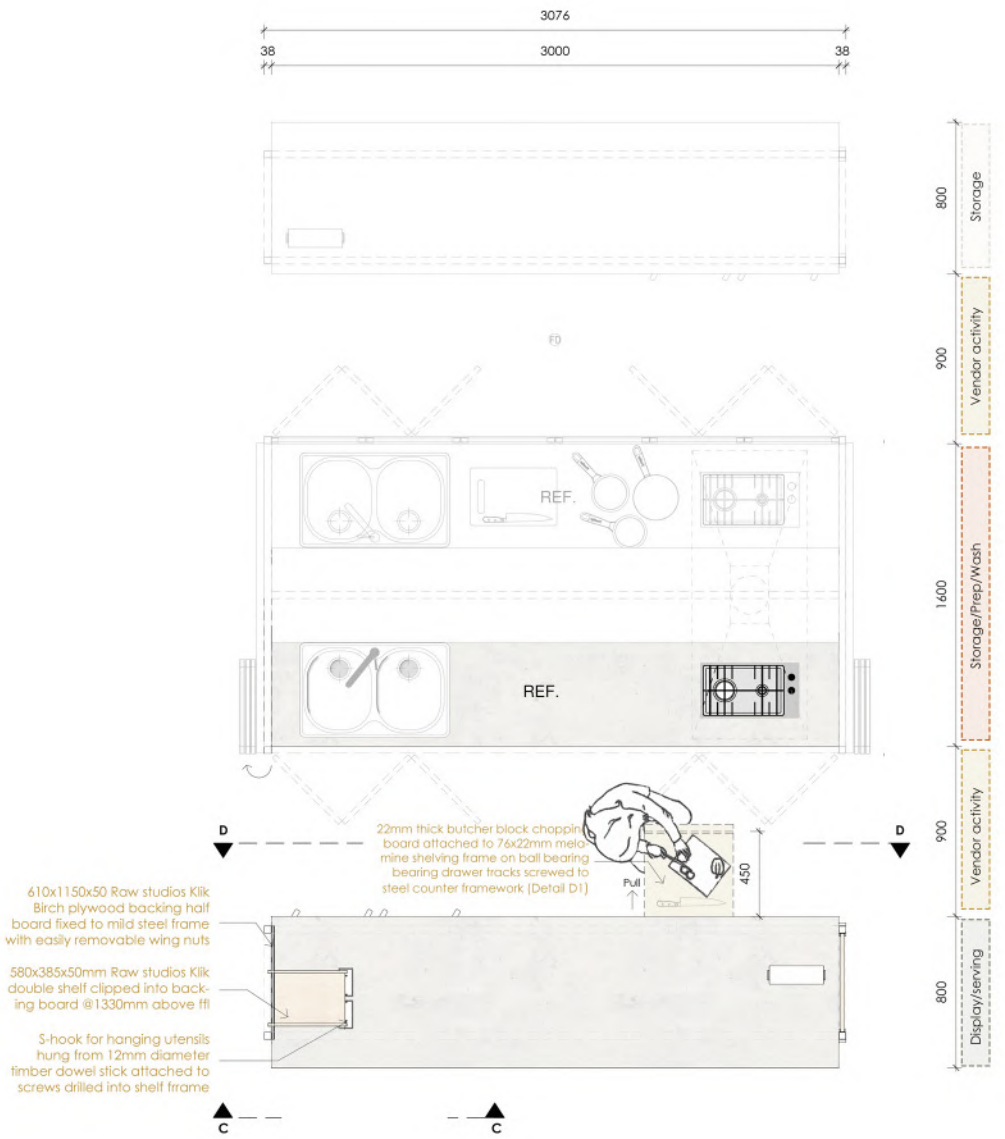
Table 8: Menu as prepared by Mama Fatima

Dishes are placed on the serving table where customers select food along a moving queue as she serves.

c. Stall detailing

The custom features here include: a pull-out chopping section on counter, foldable chair (refer to section 4.3) and shelving system for sauces and cutlery.

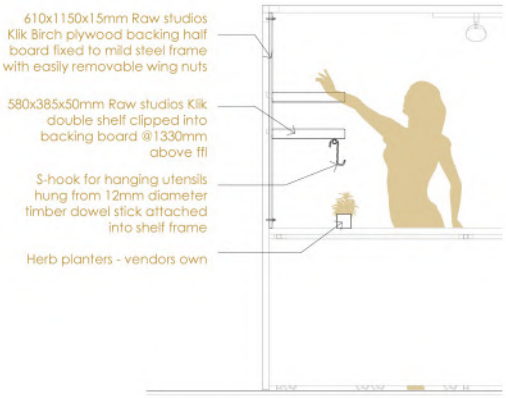
Figure 8.19: Photo taken in Mama Fatima's stall



MAMA FATIMA'S STALL PLAN

1:20

Figure 8.20: Plan showing Mama Fatima's stall with additional elements (not to scale)



SECTION CC

1:20

Figure 8.21: Sections illustrating custom additions (not to scale)

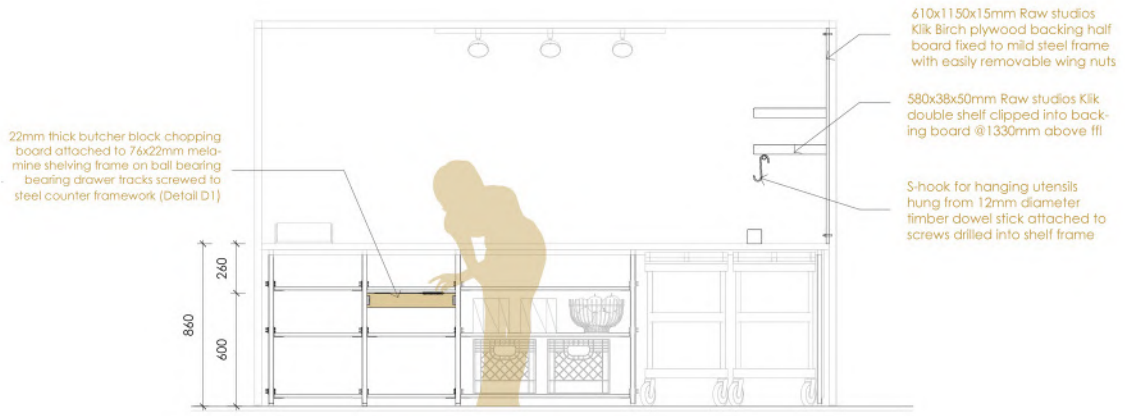


Figure 8.22: Sections illustrating custom additions (not to scale)

Figure 8.23: Scenario testing using 3D image illustrating sequence of use

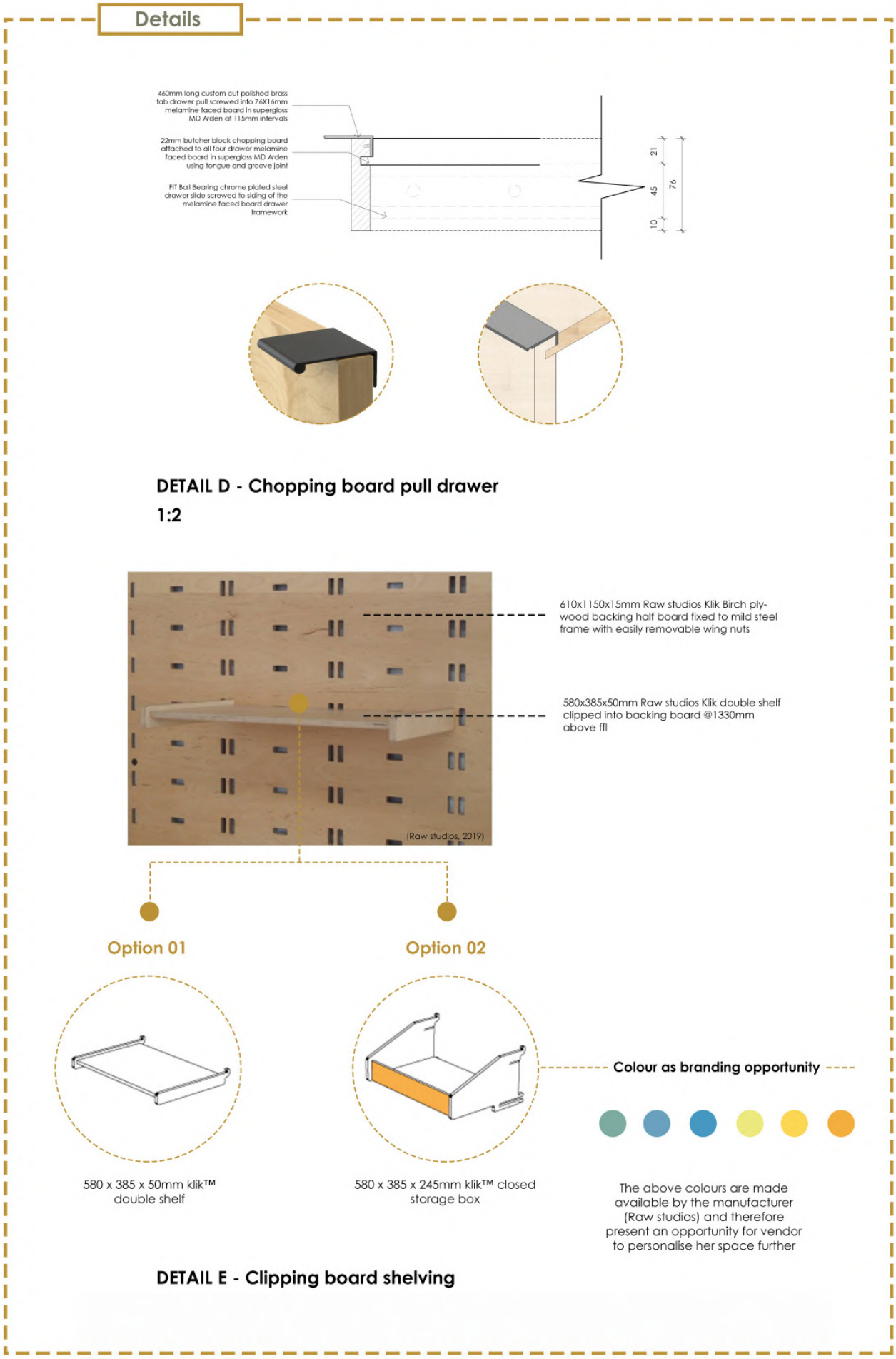


Figure 8.24: Detail diagrams of custom additions to Mama Fatima's stall (not to scale)

4.3. Johaness - Module 02

4.3.1. Introducing the vendor

Figure 8.25: Johannes

a. Rituals

- Has an assistant that helps with food preparation
- Sits and talks to customers, serving table and eating as one
- Sits when preparing food

Name: Johannes
Stall in Marabastad: Cnr of 1st Street

b. Menu and serving method

Category	Type
Starch	Pap
	Potato
Vegetables	Kale
	Cabbage
	Spinach
	Chakalaka
Proteins	Braai lamb
	Chicken intestines

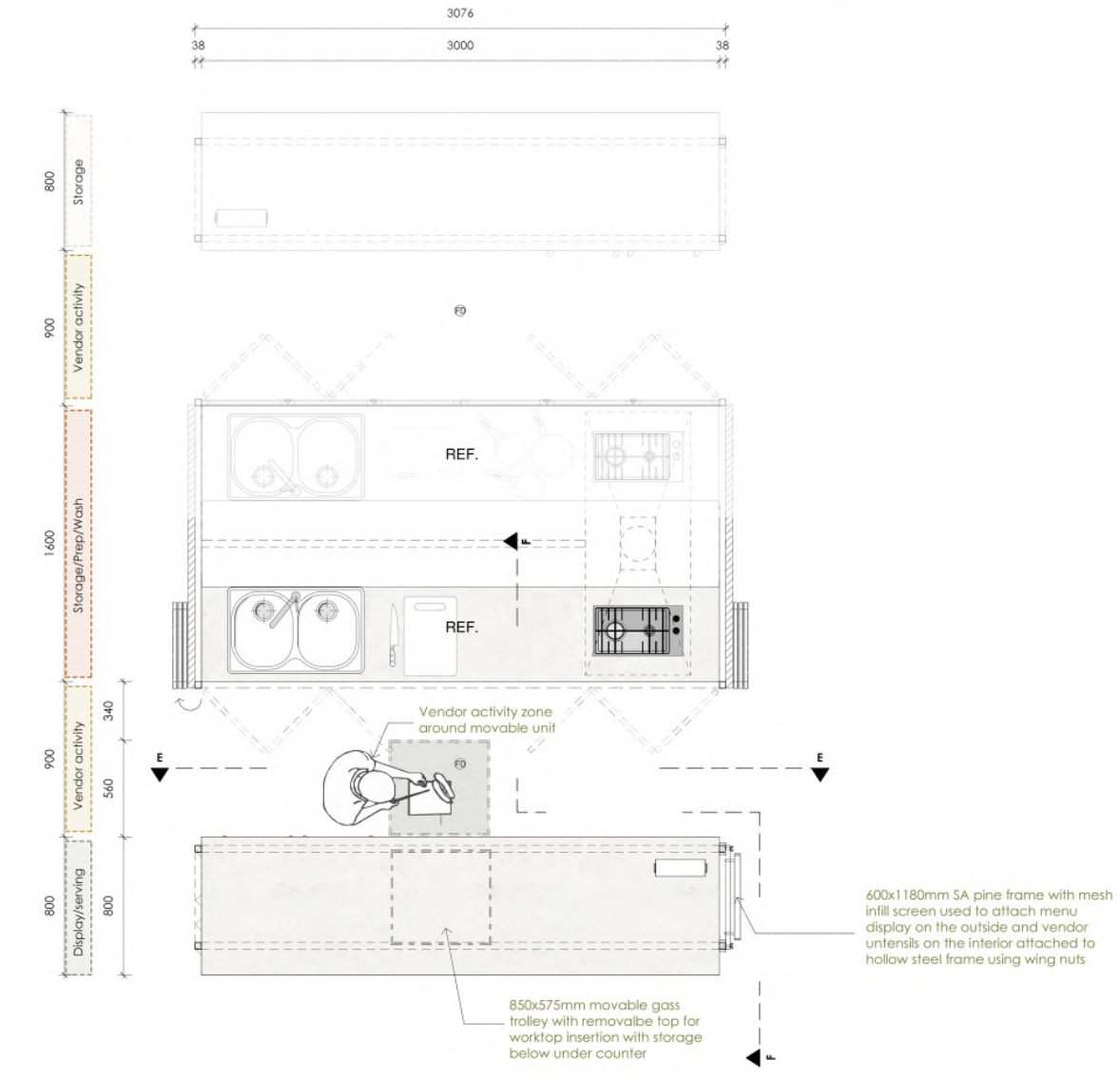
Table 9: Menu as prepared by Johaness

Johaness provides a variety of food hence the pricing varies. He also therefore needs more heat sources in addition to the ones provided in the standard stall.

c. Stall detailing

The custom features here include: a pull-out unit to accommodate a shared working point in the activity zone. This will thus affect the dimensioning and position of drawer and cabinet units.

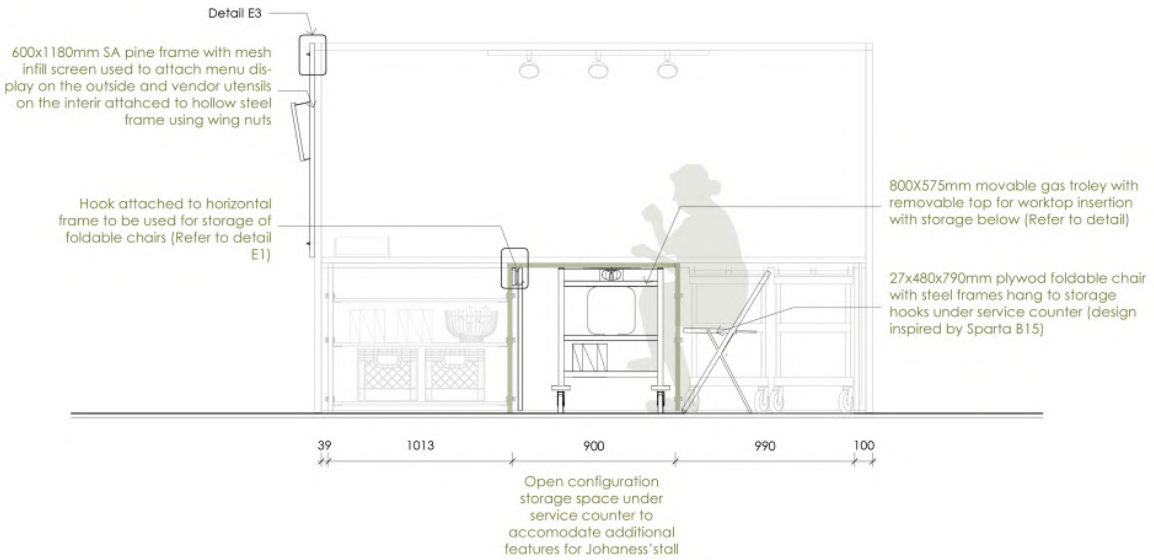
Figure 8.26: Instance where assistant handles the pre-preparation



JOHANESS' STALL PLAN

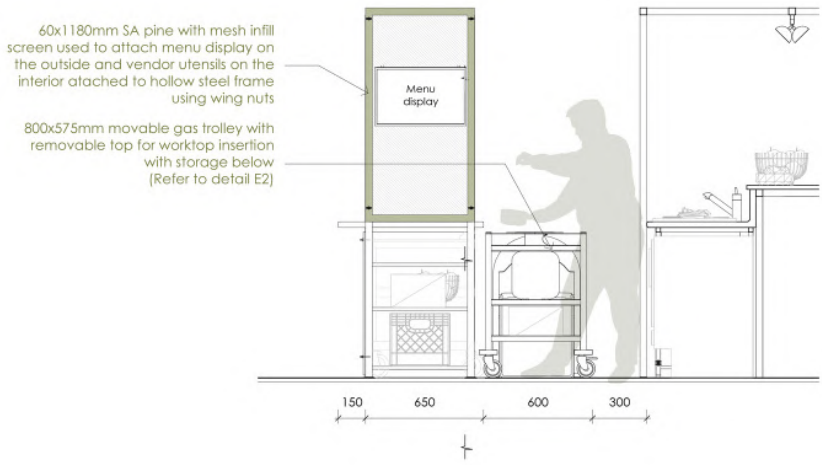
1:20

Figure 8.27: Plan showing Johaness's stall with additional elements (not to scale)



SECTIONAL ELEVATION E-E

1:20



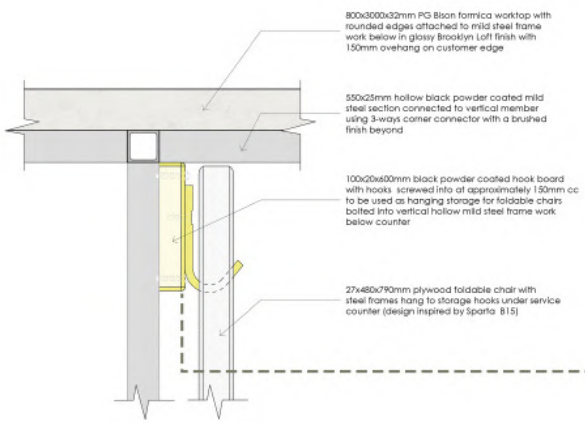
SECTION F-F

1:20

Figure 8.28: Sections illlustrating custom additions (not to scale)

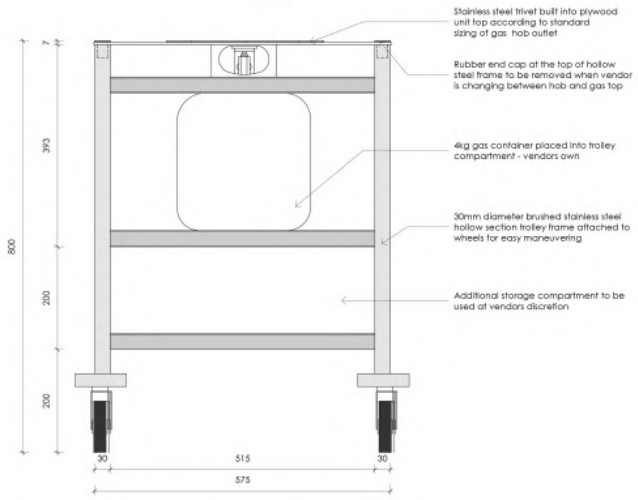
Figure 8.29: Detail diagrams of custom additions to Johaness's stall (not to scale)

Details



Detail E1 - Foldable chair hanging hook
1 : 2

Foldable chair (**representation image** as the ideal scale and functionality to fit within the stall) - *(architonic.com, 2019)*



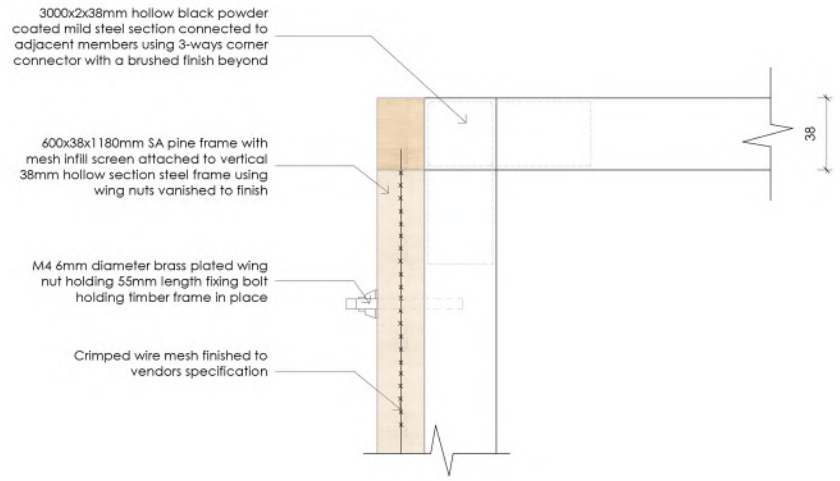
Detail E2 - Movable gas and work trolley unit
1 : 5

Option 01

An additional hob can be inserted into the frame to cater for the the large menu that Johaness presents for his customers.

Option 02

This can then be converted into an additional worktop to cater for his assistant who does most of the pre-preparation



Detail E3 - Mesh frame for hanging menu
1 : 2

Figure 8.30: Details of custom additions continued (not to scale)

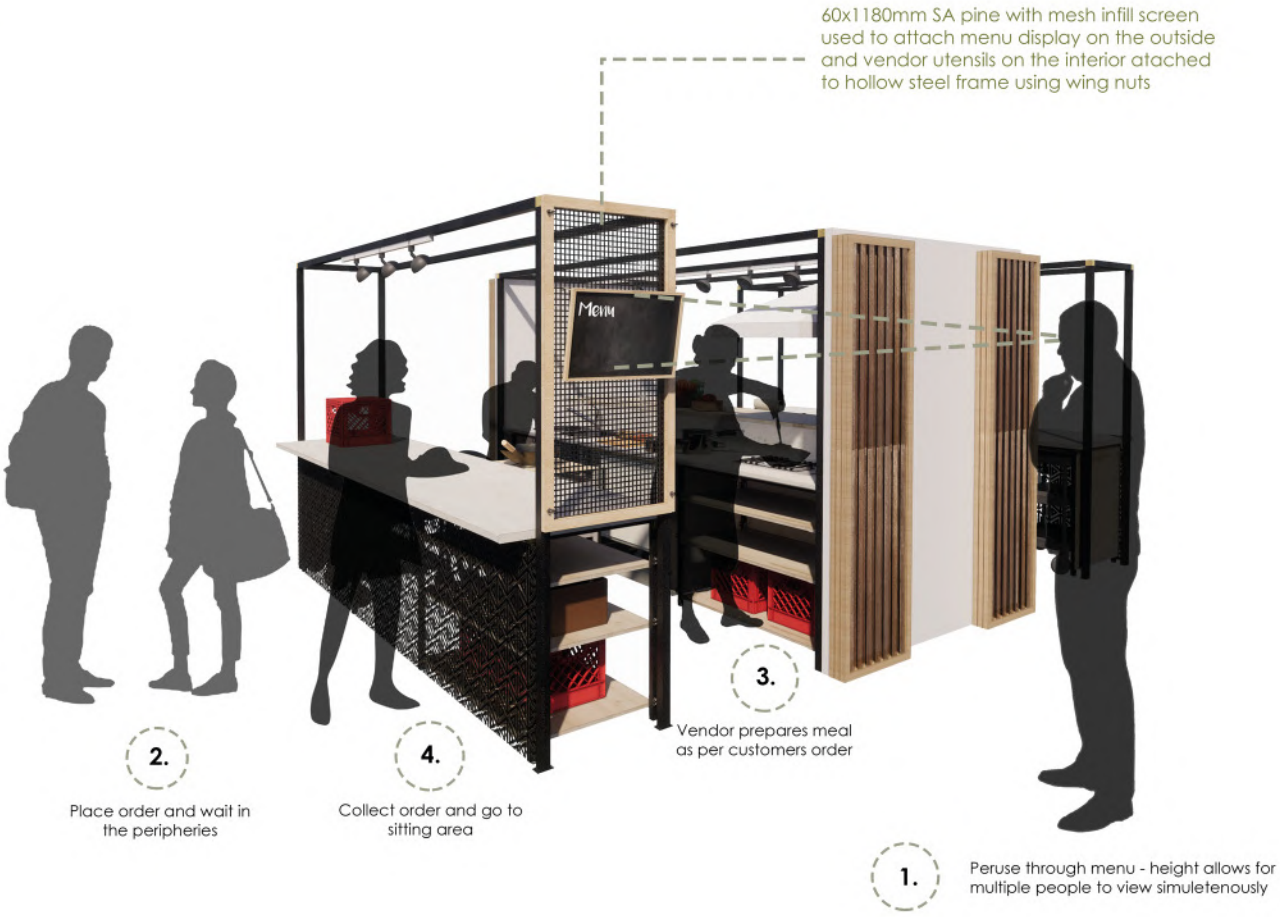


Figure 8.31: Scenario testing using populated 3D images illustrating sequence of use

5. SECONDARY AREAS OF RESOLUTION

5.1. Tiling layout

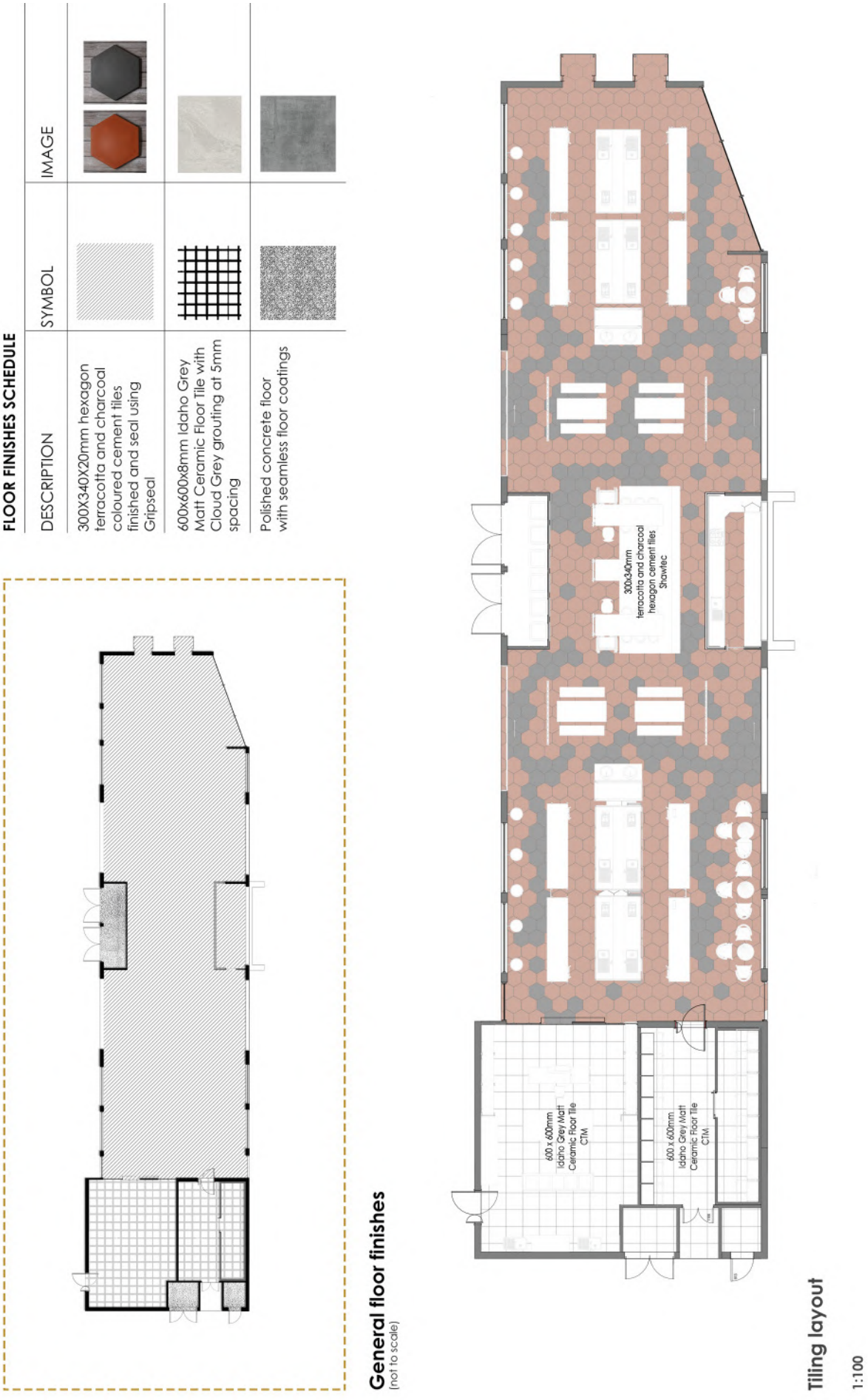


Figure 8.32: Floor finishes plan and tile layout for movement experience

5.2. The waiting interface

Board games will be incorporated into bespoke tables as a way of enhancing social interaction as customers wait for their orders. Preference is given to indigenous Southern African games thus enhancing the waiting period as a moment of knowledge sharing. This is considered as a contact point within the movement pattern.

a. Morabaraba board game

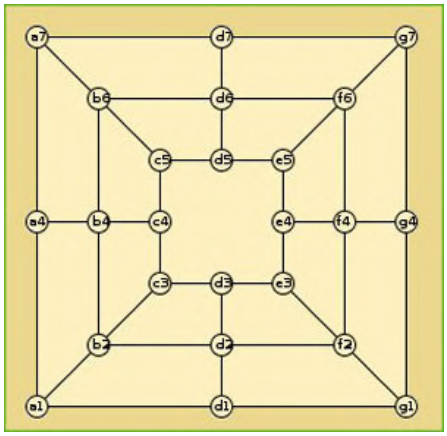


Figure 8.33: Morabaraba board setup

The following elements are considered in the design of game table:

- **The board** - embossed with the required lines. The technique used here should be similar to other cutout elements within the interior
- **Storage** - a pocket for the placement of the instructional guide and pebbles used for playing
- **Top cover** - placement to allow for the top to be used while eating comfortable and a mechanism that allows for a quick changeover, i.e. sliding through a groove
- **Instructional guide** - material used, storage options if any and language used

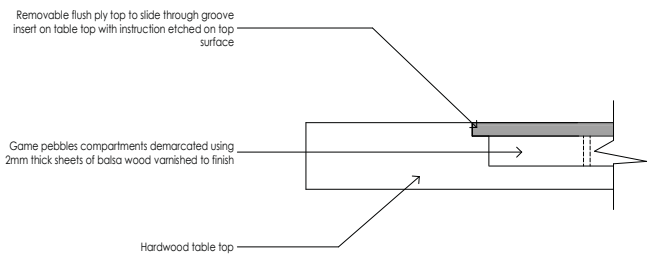


Figure 8.35: Games table compartment (not to scale)

The tables should, therefore, serve as functional objects to facilitate eating as well as act as a point of interaction beyond eating. Consideration. therfore, is given to the artiulation of the table to allow both functions without one being a hinderance to the other. Easy access and change over is another element of consideration seeking to promote autonomy and competence as part of tapping into user behavioural aspects of designing experience.

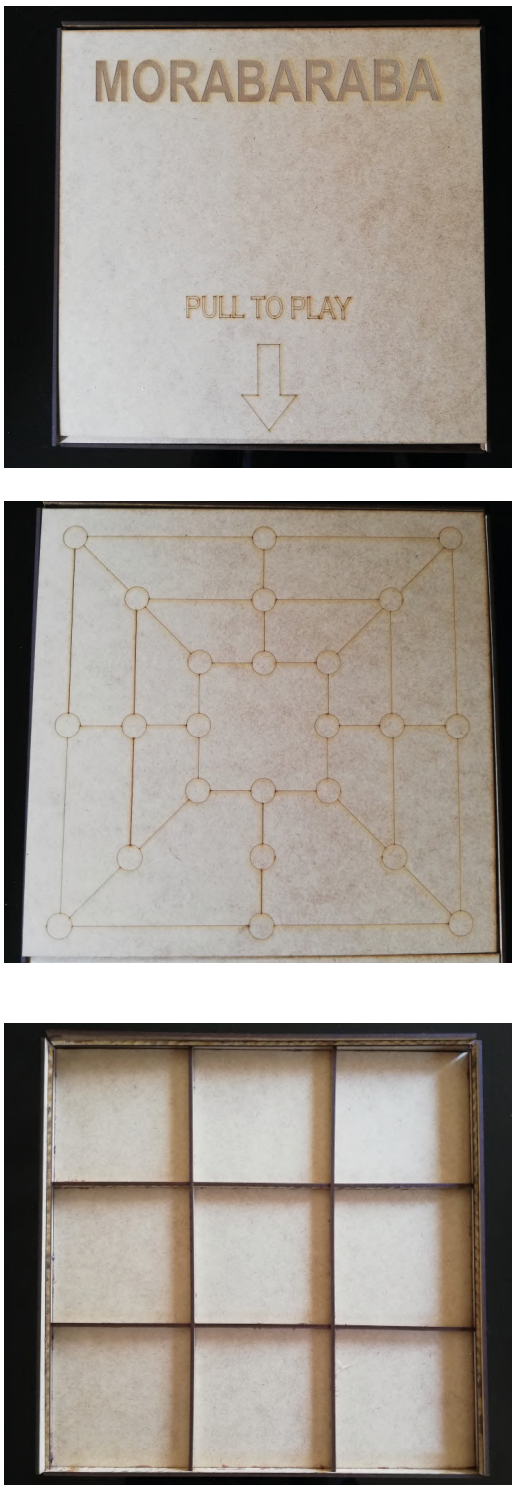


Figure 8.34: Waiting area interface - games table model

5.3. Furniture schedule

Figure 8.36: Furniture schedule

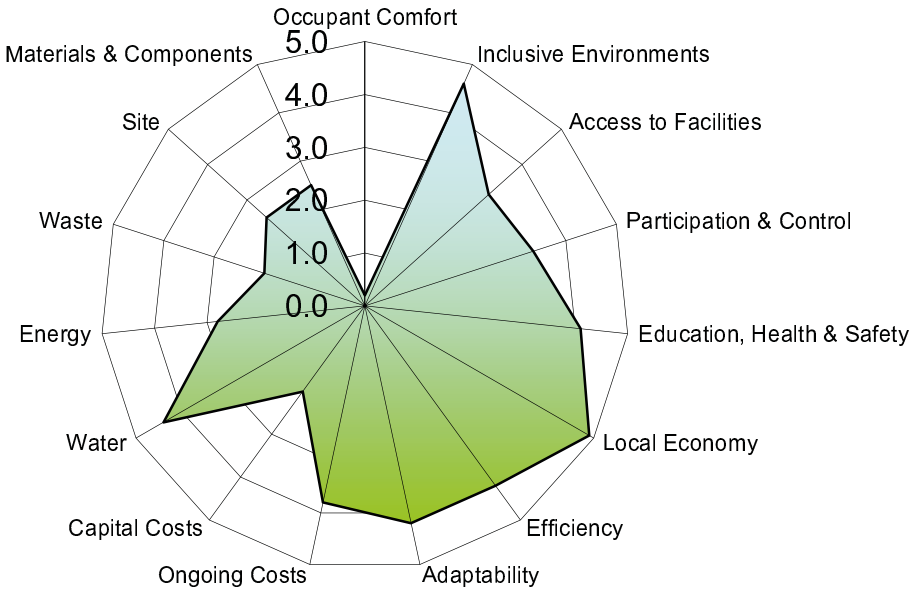
5.4. SUSTAINABLE BUILDING ASSESSMENT TOOL (SBAT)

The SBAT tool outlines three areas of analysis, namely; social, economic and environmental. The premise of this study is under the *Heritage and Cultural Landscapes* therefore, the SBAT analysis focussed on the social aspect of the resulting space. Where applicable (fig 8.37) environmental and economic considerations were analysed.

From the overall results, it can be concluded that points were lost generally due to non-perfomace in the environmental section. Data logged here relate to the architectural intervention and considerations therefore can not be viewed as the author's contribution to the site/project.

EN 2	**Energy**	Explanatory notes		2.8
EN 2.1	Location	% of users who walk / cycle / use public transport to commute to the building	50	0.5
EN 2.2	Ventilation	% of building ventilation requirements met through natural / passive ventilation	50	0.5
EN 2.3	Heating & Cooling	% of occupied space which relies solely on passive environmental control (no or minimal energy consumption)	100	1.0
EN 2.4	Appliances & fittings	% of appliances / lighting fixtures that are classed as highly energy efficient (ie energy star rating)	80	0.8
EN 2.5	Renewable energy	% of building energy requirements met from renewable sources	0	0.0
EN 3	**Waste**	Explanatory notes		2.0
EN 3.1	Toxic waste	% of toxic waste (batteries, ink cartridges, flourescent lamps) recycled	0	0.0
EN 3.2	Organic waste	% of organic waste recycled	100	1.0
EN 3.3	Inorganic waste	% of inorganic waste recycled.	100	1.0
EN 3.4	Sewerage	% of sewerage recycled on site	0	0.0
EN 3.5	Construction waste	% of damaged building materials / waste developed in construction recycled on site	0	0.0

Figure 8.37: SBAT environmental performance data as addressed within study



Social	3.1	Economic	3.8	Environmental	2.8
		Overall	3.2		

Figure 8.38: SBAT analysis results

6. CONCLUSION

This chapter set out to investigate how methods of flexibility and craftsmanship can be used to articulate multiple configurations of a stall in order to accommodate individual specific ritual. Through introduction of real-time users, the scenarios were tested and found to be appropriate in this case. Supporting detailing such as floor finishes and furniture itemising were also presented as a means of illustrating how human centred and sensorial experience design considerations can be used to influence social interaction of the inhabitants. In conclusion, it is evident that the processes outlined and undertaken throughout the study have proved meaningful in creating a space that celebrates the food culture of Marabastad.

9_CONCLUSION

1. OVERVIEW OF STUDY

This study set out to investigate how methods of interior design could be employed to facilitate social interaction in an interior public space around food activities specific to Marabastad. An emphasis was placed on fully understanding the constituents of the said food culture which outlined both its tangible and intangible elements. This was inclusive of spatial properties as well as underlying rituals surrounding the food spaces and the production of the food. In addition to this, appropriate literature review was carried out to find an exchange between the three main themes of this study; *food, place* and *people*. This highly influenced the spatial articulation as an expected result of the MInt (Prof) programme.

The MArch (Prof) dissertation titled *Latent potential* by graduate student Robert Renton provided an appropriate site as it is located on the peripheries of Marabastad, thus giving a clean slate where transposition of the food culture would occur and encourage its celebration without hinderance of preconceived notions of the greater Marabastad. An extensive context analysis was carried out on multiple levels to understand the contextual influences on both a spatial and object level. The findings had a direct impact on the expression of the space on both macro and micro levels, articulation of interaction patterns in the interior as well as inclusion of subtle elements to preserve the rituals associated with them.

The conceptual approach was therefore a direct influence of context and theory of the identified themes of interest. This ensued into practical and tangible spatial elements that are a representation of Marabastad's food culture. The systematic approach supported by principles of human-centred design ensured that the information throughout this dissertation was unpacked from a general outlook to a more specific focus. The resulting interior artefact, therefore, is a space that encourages the colliding of food and people

2. OUTCOMES

As set out in the objectives section, the following are outcomes of this study:

- A connection between people and place was established through the common medium of food culture celebrations. Food culture was identified as the most active form of culture, which is very much dependent on people's interaction, this makes the space the facilitator for this interaction.
- In finding a connection between food and design, it was established that food can be viewed as an object material that can be used in multiple experiments. The processes of making food objects were then adopted as informants in the making of an interior.
- All the design considerations took into account the influence of a sensorial space on how people experience space. This served as a common medium attached to both space articulation and food interaction.
- Finally, documentation of rituals and interaction patterns around food spaces resulted in guidelines used to create an interior space with spatial markers that can easily be associated with and influence the user experience.

3. CONTRIBUTIONS

The following contributions were made to the interior design discipline through this study:

- Through engagement with literature, it was discovered that food is becoming a topic of interest for integration with other disciplines. In this study, food was considered as a conceptual driver where principles derived from a hands-on experiment directly influenced the spatial articulation. This therefore forms the basis of one of the recommendations outlined below.
- The interior as a product of spatial design can be viewed as a tool for creating empathetic spaces aimed at preserving and encouraging a celebration of cultures where emotional and physical barriers may present a hinderance to that specific experience.

4. RECOMMENDATIONS

Whereas food was explored as a direct informant for spatial articulation in this study on a conceptual level, it can further be considered as a focus study where investigation will concentrate on food as an object and possible spatial implications.

The technical aspect of this study focused on detailing the stall to function in an interior context. However, due to the nature of food cultures rooted in the South African context, is such that most of these spaces are in outdoor public spaces. Therefore, a study focused on creating stalls to optimally function in outdoor spaces, meeting all environmental conditions would be recommended as a means of refining the suitability of similar methods to support existing models of food interaction and experience.

5. CONCLUSION

In conclusion, while undertaking this study, flexibility and adaptation to the direction the project was going into had to be allowed. What started out as a completely different interest, led to the discovery of Robert Renton's dissertation which was found to have explored and addressed the issues the author had interest in. This therefore stretched the author into a different direction that led to the exploration of something she grew to be passionate about. As a former student of Food Science and Nutrition, the author find it intriguing that in her final year of architectural studies, she would find herself researching the link between food, place and people, combining both her initial and found passions. Fate or destiny, you decide.

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APPENDIX A - Ethics checklist

PROFESSIONAL MASTERS PROGRAM AT THE DEPARTMENT OF ARCHITECTURE

ETHICS CHECKLIST ONE: PRIMARY DATA

If you answer **NO** to any of the following statements/ questions, then you require **ethics clearance** at Faculty level: EBIT Ethics Clearance (full application).

1. Your research *does not* involve medical or animal research.	YES	NO
2. Your research does not involve healthcare in any form. ***Note!*** A project that is concerned with the design of facilities for any form of healthcare (formal and informal).		
3. The research *does not* present potential impact on the environment. *In other words, is there potential for physical impact on the environment, e.g. building a physical prototype and monitor its impact on the environment.*		
4. The research *does not* involve any of the following vulnerable peoples: *Children and/ or minors under the age of 18 / Homeless persons / Persons with Disabilities / Elderly persons / Persons who are migrants or refugees / Abused women.*	YES	NO
5. The research *does not* associate with any political or social issues that may have ethical concerns. *In other words, could your research place you in an ethically compromised position due to political or social issues that may be involved/ uncovered?*	YES	NO
6. You understand that a *letter of permission* is required should you be collecting information from a firm, organization or institution, from their archives, records or reports that are *not publically* available. *Provide your letter of permission with this checklist for your supervisor to approve. Include it in an appendix to your dissertation a letter(s) of permission from this entity to carry out this study (See attached template).*	YES	NO
7. The research *does not* involve people as research subjects. *Research subjects are people that actively take part in the research, e.g. where biological measurements are made (e.g. heart rate) or where people take part in behavioral tasks (e.g. listening tasks) or using a prototype (e.g. kitchen utensil)*	YES	NO
8. If the research involves people as informants, you understand that *informed consent* must be obtained before any person is interviewed or takes part in a survey? *Informants are people of whom you require an opinion, e.g. people that are*	YES	NO

interviewed (incl. structured and semi-structured) or take part in a survey. ***Note!*** No vulnerable peoples (c.f. 4.) may be interviewed. Secondary data must be relied upon exclusively and the limitations thereof must be acknowledged in the methodology section. See Ethics Checklist Two: Secondary Data and/or Literature. Otherwise full ethics clearance must be sought. *Provide your questionnaire, survey questions or interview questions, along with your letter of informed consent (template provided) with this checklist for your supervisor to approve.* ***Note!*** You **may not** ask any personal details (gender, age, sexual orientation, HIV/ AIDS status, income, education level, health status, address, email address, etc.)		
9. You *will not* be surveying or interviewing full-time UP students or UP personnel in this study.	YES	NO
10. You understand that while voice recording during interviews is permitted, no video recording is allowed. *The name of the respondent may not be recorded. The voice data must be refer to the respondent by numbers (e.g. respondent #1, #2, #3, etc). This is to prevent direct links between data files and respondents. You need to include a reference to voice recording in the informed consent form. You need to stipulate where you will store this data and how you will keep it secure.* *Question / statements 8: Interviews with informants apply.*	YES	NO
11. You understand that if any employees of a firm, organization or institution are to be questioned as informants, a *company permission letter* needs to first be signed. *Provide your company permission letter (template provided) with this checklist for your supervisor to approve. Include it in an appendix to your dissertation the letter(s) of permission from this entity to carry out this study.* *In the case of the Director / CEO / Owner being the only informant, then a company permission letter is not needed but an additional condition needs to be stated in the informed consent form.*	YES	NO

If you answered **NO** to any of the statements/ questions, then ethics clearance from the EBIT ethics committee (full application) needs to by sought. *Apply* for ethics clearance for your research project, with assistance from your supervisor:

http://www.up.ac.za/en/faculty-of-engineering-built-environment-it/article/15815/faculty-committee- for-research-ethics-integrity

Student Signature: **Supervisor Signature:**

ETHICS CHECKLIST TWO: SECONDARY DATA AND/ OR LITERATURE

This checklist is provided to prevent you from the potential ethical pitfalls in citing and application of secondary data and/or literature.

The questions serve to test whether you have sought secondary data and/ or literature according to the hierarchy of credibility:

1. Have you sought literature according to hierarchy of credibility? ***Scale of credibility, (1) being the most credible and (5) being the least.*** **(1) Peer-reviewed accredited publications** (*incl. monographs and peer-reviewed journals*); **(2) Unpublished Thesis / Dissertations** (*These two formats have undergone 'peer- review' in the sense that they have been examined by a panel of external examiners and thereafter passed University senate for conferral of the degree*); **(3) Official:** government / company / institutional official websites, newspaper articles, published magazine / journal articles (*not peer-reviewed*); **(4) Websites;** **(5) Other:** social media (Twitter, YouTube, etc), blogs and wiki's. **Note!** *Excludes chat-rooms, Facebook, Instagram or similar password controlled social media environments. You need to apply for ethics clearance and informed consent*.	YES	NO
2. Are you citing peer-reviewed accredited publications? Either paraphrase in *own words and reference* (Author / Date) (e.g. Borden 2011: 21) OR quote "direct quote" using *quotation marks* and *reference* (Author / Date).	YES	NO
3. Are you citing from an unpublished thesis / dissertation? **Prioritise** the thesis / dissertation, which has explicit ethics clearance (find it in the methodology and appendix: signed ethics declaration, letter(s) of consent and interviews / surveys) over the thesis / dissertation, which does not. In either case you need to **be descriptive** in your citation, i.e. include a brief description of the nature of the study, method of data collection, ethics clearance (obtained or not) and purpose of the research. Thesis / dissertations **older than 7 years** will, in all likelihood, not have sought ethics clearance; this does not render the research redundant. However, as in (2), you need to be descriptive when citing the source.	YES	NO

4. Are you citing from an official website, newspaper or published magazine article (*not peer-reviewed*)? When citing, ensure that you are descriptive in your citation. State the nature and purpose of the source from which the data / literature was obtained. **Examples:** Official websites: Stats SA, or SA Government Gazette, or World Health Organisation (WHO), or Department of Basic Education; Newspapers: Pretoria News, Sunday Times, Mail & Guardian; Published magazines: Time, Frame, Domus, JA.	YES	NO
5. Are you citing from a website and/or non-password controlled social media, blog or wiki? You may decide to cite information from these sources as a substitute for conducting interviews / surveys, in an effort to avoid the need for ethics clearance. However, you are reminded to **always** first to search in accredited published literature, thereafter, should you have exhausted your search and can honestly not find the information in any accredited publication, **then** you may use data / literature from the sources described above. In this instance, it is **critical** that you are descriptive in your citation, i.e. include a brief description of the nature source (website / form of social media, the purpose it serves, e.g. a platform for disgruntled residents), the audience for whom it is intended, why it is in the public domain. **Note!** This source type includes design websites such as YouTube, Vox, ArchDaily, Dezeen, KNSTRCT and Yatzer.	YES	NO

Rule of thumb!

If the data / literature is in the public domain you may cite it, **however,** always ensure that preference is given according to hierarchy of credibility.

As credibility decreases, **be descriptive in your citation** as to the nature of the source and intended audience. This is in an endeavor to ensure that you **do not misinterpret** the data/ literature, as well as, that your thesis (argument) and the data/ literature you use to support it **cannot be misconstrued** by others.

Student Signature: **Supervisor Signature:**

APPENDIX B - Unpopulated renders


Courtyard view


Formal sitting


Adjacent corridor


Workshop approach


Planters & butchery


Into stall

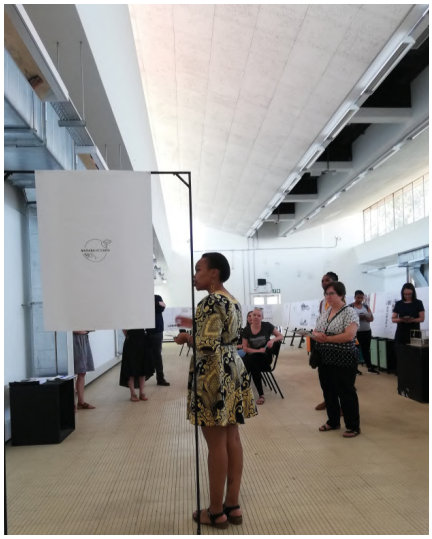

Main approach


Ablution entrance


Evening


From market

APPENDIX C - Photos of final crit on 29th Nov 2019



APPENDIX D - Final posters

FOOD, PLACE & PEOPLE

Towards a spatial experience inspired by Marabastad's food culture

The architectural proposal as presented by architectural student R. Renton (2018) is such that the resulting complex serves as a destination in which a diverse group of people can converge to interact and experience the food culture of Marabastad. In addition to this, by introducing programmes such as a greenhouse, fruit processing plant and food waste processing plant, the complex fills the identified gaps in Marabastad's food cycle. Therefore, the complex embodies a place that possess knowledgeable value to the people of Marabastad as well as serving as a 'safe' space for people seeking to explore and engage in Marabastad's food culture.

The site as further unpacked in section 2.3 below, reveals the multiple categories of the complex. This includes the following: administrative, educational, industrial and social which are a culmination of 'several buildings' clusters. This study zooms into the social edge which currently consists of a tasting pavilion, test kitchen and fresh produce market which will be re-oriented to improve on their functional relationship. The existing test kitchen will be the focus of intervention to a detailing level, limiting the work on the adjacent buildings to a zoning exercise to support the new programme and overall design intention.

An analysis of the site gave insight into some shortcomings as discussed in section 2.4, particularly of the social edge where it is noted that the resulting space does not embody the identity of Marabastad, there are missing functional links between the buildings and it is generally closed off and does not meet the criteria of a social space. Furthermore, a comparison study of what is existing in Marabastad versus that of the new addition reveals a missing link especially with regard to specificity such as rituals that characteristically define how the food spaces are used and experienced by the various users in question. It is thus lens that is then fore adopted to guide the approach of this study, where rituals and interaction patterns will be used to express an interior that embodies the food culture of Marabastad. In addition to this, the viability of social interaction as a resultant effect will be presented thus advancing the complex as a destination aiming to ease its visitors into further exploring Marabastad.

01_ Study proposal

02_ Context study

03_ Theoretical premise

04_ Precedent study

05_ Client, programme, users

06_ Conceptual approach

07_ Design development

08_ Technical investigation

09_ Conclusion

STUDY OUTLINE

Profiling areas of focus culminating in the overall study

RESEARCH QUESTIONS

Outlining the issues of investigation and research

RESEARCH METHODS

Outlining the procedure and techniques of investigation

02. CONTEXT STUDY

02.1

MACRO: MARABASTAD

- Locality
- Historical context
- Approach and access
- Food culture
  - Food spaces
    - Types of food
    - Food space typologies
  - Means of production
    - Types of food and cooking techniques
    - Tools of the trade
  - Ways of consumption
    - Ways of eating
    - Ways of sitting
    - Distribution

02.2

MESO: VIRTUAL SITE BY R. RENTON (2018)

- Historical context
- Conceptual approach and intentions
  - Conceptual approach
  - Design intent
- Site analysis
  - Approach and access
  - Zoning
- Statement of significance

02.3

MICRO: SELECTED BUILDINGS

- Climate
- Access and circulation
- Sensorial experience
- Existing programmatic analysis

MACRO: MARABASTAD

1. Locality

Marabastad is a business district **located 2.5 km off Pretoria's central business district** on its Northwestern periphery, south of the Apies River. It can be characterised by its identity as both a highly transit and commercial node, where businesses conducted are a mix of both formal and informal trading concentrated around transit nodes in the area (Brandt, 2002:222).

2. Historical context

Marabastad's existence can be dated back to over 120 years when it sprung as one of the many satellite communities on the peripheries of Pretoria during the 19th century (Clarke, 2008:15). Between 1870 and 1975, the greater Marabastad consisted of 5 settlements namely: Old Marabastad, Schoolplaas, New Marabastad, Asiatic Bazaar and the Cape Location, each characterised by their inhabitants who then identified ed with their shared cultures. However, between 1912 leading up to 1975, the settlements were demolished leaving only the old Asiatic Bazaar (Clarke, 2008:13), now commonly known Marabastad.

3. Approach and access

As seen in fi gure 2.3 below, Kgosi Mampuru Street (Pretoria Main Road) is the main thoroughfare into Marabastad. It connects two major transport nodes in and out of Pretoria; the Pretoria Station and Belle Ombre Station. Auxiliary roads stemming from the main road connect Marabastad to the East of Pretoria.

Once in Marabastad, it can be noted that main pedestrian access in is Boom Street along the East-West axis, this then streams into minor roads into Marabastad and towards the city center. Along these routes and street edges, food vendors have set shop servicing the pedestrian traffic.

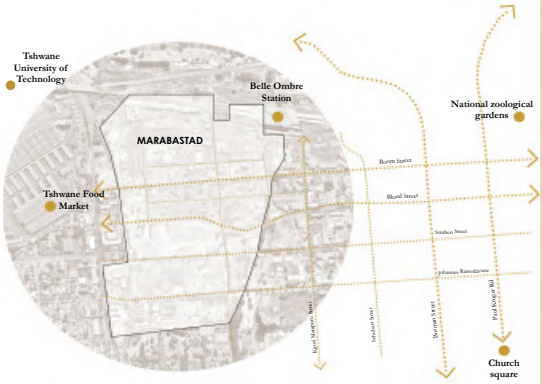


Fig: Marabastad in relation to proximal points of interest in Pretoria and main axeis/ roads into the district

MACRO: MARABASTAD'S FOOD NETWORK

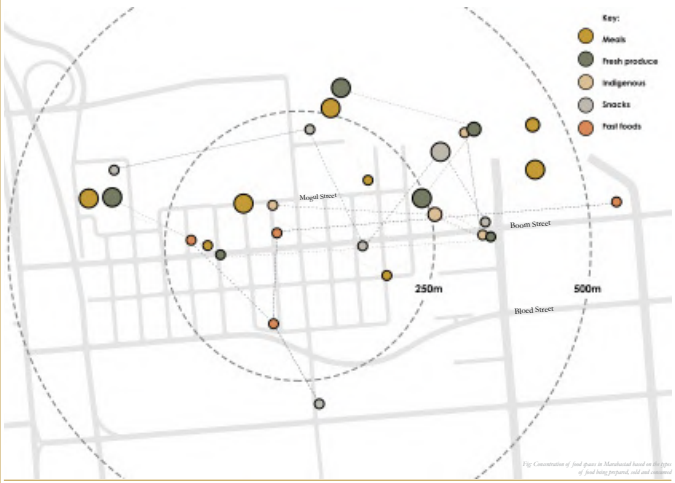


Fig: Concentration of food spaces in Marabastad based on the types of food being prepared, sold and consumed

LOCATING MARABASTAD

Urban mapping of Marabastad within the greater Pretoria

MACRO: FOOD CULTURE CONTINUED...

8. Means of production

Different vendors have different techniques of food preparation dependent on the types of food being prepared. This section therefore unpacks the three categories of food production. Firstly, introduction of the foods being prepared, the techniques used for this and the tools needed for food preparation. It is expected that these methods may be present in other areas of food interaction in the region but will be considered a direct influence on the proposed interior.

1. Ways of preparation

This is limited foods being cooked in the identified stalls. This will be taken and adapted as a menu for the new interior. An understanding of this results in the new proposal drawing links between adjacent spaces of production and distribution, ensuring provision for the necessary equipment and spaces to support the food specific rituals.

Category	Type	Storage	Cooking method	Heat source
Proteins (Meat)	Beef	Refrigeration	Braai	Braai stand
	Lamb	Refrigeration	Braai	Braai stand
	Chicken	Refrigeration	Braai	Braai stand
	Chicken intestines and feet	Refrigeration	Stewing	Firewood lit fire pit
	Eggs	Open, dry	Boiling, frying	Firewood lit fire pit
Vegetables	Salads: Lettuce, cucumber, tomatoes, onions, beetroot, carrot	Refrigeration + Open and dry	Mixing	No heat sources required
	Kale, cabbage	Refrigeration	Stewing	Firewood fire pit
Starch	Pap	Open, dry	Boiling / Steaming	Firewood fire pit
	Rice	Open, dry	Boiling	Firewood fire pit
	Potatoes	Open, dry	Boiling	Firewood fire pit
	Buns	Open, dry	No preparation	No heat sources required
Beverages	Hot: tea, hot chocolate, coffee	Open, dry	No preparation	Firewood fire pit
	Cold: soda varieties	Refrigeration	No preparation	No heat sources required

1. Use of firewood as a source of fire
2. Quantity of ingredients needed for food preparation
3. Braaing as the primary means of food preparation
4. Locally made tools used for food preparation
5. Pre-preparation includes cleaning of food ingredients
6. One source of fire used for multiple pots simultaneously

2. Ways of consumption and distribution

Consumption relates to how people eat both physically and the environment that facilitates these methods. Therefore this section will be a brief introduction to ways of eating and ways of sitting.

• Ways of eating

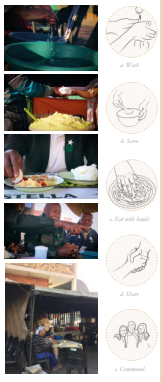
As observed during the site mapping exercise, most vendors make provision for cutlery. However, the food being prepared is typically eaten using hands. Therefore, most customers prefer to eat using their hands. This is given consideration in the proposed interior as a signifi cant ritual that adds to the experience of the food spaces in Marabastad, where cleansing stations will be provided to fully embody the ritual in the new space.

• Ways of sitting

The sitting structure can be attributed to the scale of the stalls on a functional level, where long tables are provided to fi t the maximum number of customers. In addition to that, where eating is considered a communal and social activity, this layout supports that ritual. This emphasises the notion of shared spaces and activities which are also to be celebrated in the interior proposal. Multiple group sitting typologies can be explored here in order to enhance the experience using design.

• Ways of service

On a smaller scale, methods of service should also be considered as a means of distribution. This allows the proposed design to be viewed as an intervention that provides for all rituals inclusive of service methods. It was observed that most vendors do both the cooking and the serving. This is done from a central display table where customers can select from what is available and the vendor does the serving. In addition to this, some vendors have assistants who serve and clear the table when the customers are done. There is also provision for both sit-in and take-out customers.



a. Wash
b. Serve
c. Eat with hands
d. Share
e. Communal

WAYS OF...

Introducing rituals of production, distribution and consumption

MACRO: FOOD CULTURE

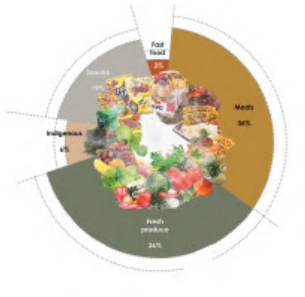
According to Vally (2014:8), food culture is defined as the outlook on food as it relates to its **context** within **rituals of production, distribution and consumption**. Therefore, in order to understand the food culture of Marabastad, the above components as pertaining to the context will be discussed in this section

A. Food Spaces

This is a discussion of the spatial qualities of food entities. This section unpacks the mapping of the produce as well as the stall typologies followed by an argument of how they inform the food identity of Marabastad. This will be in twofold:

1. Types of foods

- **Meals:** This is inclusive of stalls that service preparation of food and have seating areas
- **Fresh produce:** Fruit and vegetables for sale only
- **Indigenous foods:** Specific to Southern Africa
- **Refreshments and snacks:** These are processed foods, branded and repackaged to suit the needs of the commuters
- **Fast foods:** These are present in formalised areas and buildings

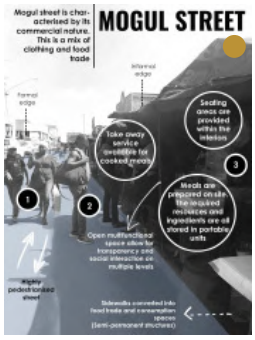


2. Food space typology

As already discussed, the trade scene in Marabastad and its surroundings is characterised by both formal and informal traders. However, the informal traders make a substantial contribution to the character of the areas in which they are present. This study is limited to their contribution to the food culture. This therefore limits the stall typologies that are analyzed and can be classified as below:

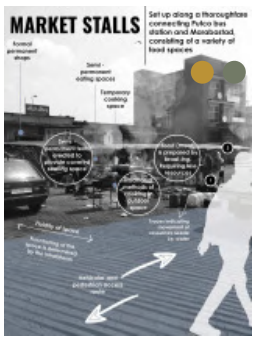
- **Permanent:** This denotes to provision made by the local government to serve food vendors.
- **Semi-permanent:** These structures are brought in by the vendors and assembled on site, they are identified by steel frames and canvases that are used as covering on account of changing weather.
- **Single equipment:** Depending on what the trader's needs are, they bring either a table or cooking equipment and set up on street corners then pack up at the end of the day.

These were further analyzed using existing spaces on site with the focus set on understanding the three main components informing the translation of the food culture, namely; ways of cooking, ways of sitting and ways of eating. Below is a photographic analysis of the selected spaces representing the three identified typologies.

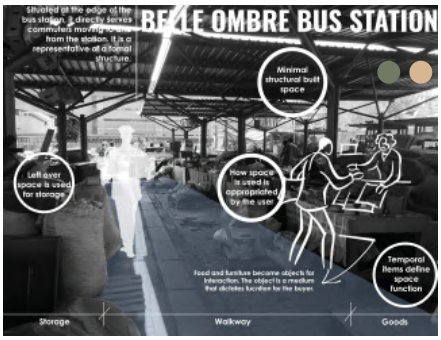


Mogul Street is characterized by its commercial nature. On one edge there are formal shops selling clothing items while the opposite side is set aside for eating spaces. This typology was analyzed in depth in order to document the intangible rituals defining the specific activities around food interaction

Situated along the path leading into Marabastad from the Belle Ombre train station. This extends into the Marabastad taxi rank on its left. Activity here is limited to trading of fresh produce



Set up along a thoroughfare connecting Putco Bus Station and Marabastad, consisting of various food space typologies. This includes formal permanent shops on the edge, semi-permanent seating spaces erected along the store fronts and temporary cooking spaces on the edge of the sidewalks characterized by cooking equipment

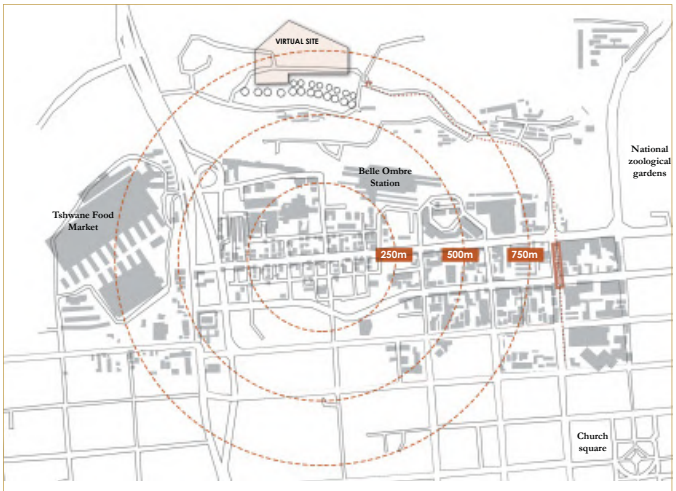


Situated at the edge of the bus station, it directly serves commuters moving in and from the station. This is a representation of a formal structure provided by the city in terms food vendors. Service here is limited to trading of raw foods, i.e. fresh produce and indigenous dried food

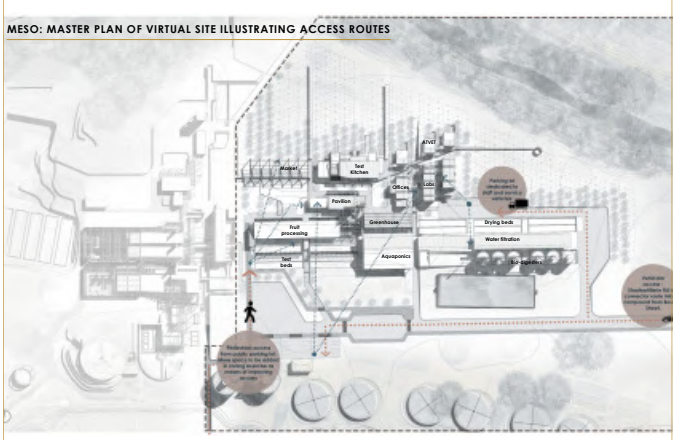
Temporary structures are erected on the street edges and corners. These are set up in the morning and taken down in the evening, and service mostly pedestrian traffic moving in and out of Marabastad. This stall tells a combination of fresh produce and indigenous worms and has a double connection to the pedestrians on either side of the stall

MAPPING MARABASTAD'S FOOD CULTURE

Presenting the elements of Marabastad's food culture



MESO: MASTER PLAN OF VIRTUAL SITE ILLUSTRATING ACCESS ROUTES



LOCATING VIRTUAL SITE

Introducing the virtual site by R. Renton (2018)

Original 1913 bioblium (Renton, 2018)

Approach from the East (Renton, 2018)

Approach site from vehicular road

As the user approaches the site along the vehicular route to the public parking lot, they can get glimpses of the industrial edge making use of the existing infrastructure. These include: 400m3 biodigesters, water filtration and methane processing plants and the test beds. This heightens the awareness of the processes regardless of whether the user will directly experience them or not.

Overgrown and unused infrastructure (Renton, 2018)

Public square and splash pond (Renton, 2018)

View into public square with splash pond

Standing on the South Western edge of the open market, one has visual access into the public square that has a splash pond. On the edge is the double storied fruit processing building overlooking the square. On the horizon, the viewing sek can be identified as a landmark to be associated with wayfinding and boundary of the social space.

Settling tanks covered in algae (Renton, 2018)

Laboratories from the South (Renton, 2018)

Path to public square from staff and service parking

The staff access on the East reveals a clear path into the social spaces with tributaries into in-between spaces bound by the laboratory buildings and offices. Thse spaces are characterised by their connectivity nature where there physical connection between two buildings in the form of circulation elements (i.e. staircases and bridges).

Settling tanks covered in algae (Renton, 2018)

Access walkway between test beds (Renton, 2018)

Access walkway adjacent to the greenhouse (Renton, 2018)

Pedestrian access through test beds from parking

Access walkways in between spaces and buildings enhance the visual experience of the user. While using these designated paths, the user regardless of their destination is made aware of their surrounding and the relevant food process. These walkways are characterised by semi-open structures that confine the journey by also allow for visual access. They can also be viewed as physical connections between buildings.

The old Marabastad furrow (Renton, 2018)

Tasting Pavilion (Renton, 2018)

Exisiting tasting pavilion

The tasting pavilion is designed to be a semi-open communal kitchen to be used by the community of Marabastad. The intention behind it is to tap into the informality of the food trade of Marabastad. It is characterised by a single cooking platform at the center and seating areas on either edges. On the left, is a more open seating area along the path to and from the offices and labs while the one on the right is semi-closed and allows for a level of privacy but still allows visual access into the public square.

VIRTUAL SITE AS EXISTING

Comparison images of site before and after R. Renton's intervention

01. SOCIAL

In between spaces facilitate for social friction between the multiple users of the entire complex in addition to being thoroughfares that open adjacent spaces to easy access. These social spaces are characterized by interactions between people as well as people and food. The tasting pavilion is more of an informal setting, while the test kitchen has more of a formal disposition, and the market giving access to a wider public user group. This will be explored further and enhanced to include more variety in the interaction.

1. Tasting Pavilion
2. Test Kitchen
3. Market

02. INDUSTRIAL

Productive functions are accommodated on the southern side of the site making use of natural resources present whilst incorporating systems managing natural resources that act in a closed loop. These facilitate fresh foods produce processing as well as waste management addressing the missing gap in the larger Marabastad.

1. Biodigesters
2. Drying beds
3. Water filtration anf methane processing
4. Aquaponics
5. Greenhouse
6. Fruit processing
7. Test beds

03. EDUCATIONAL

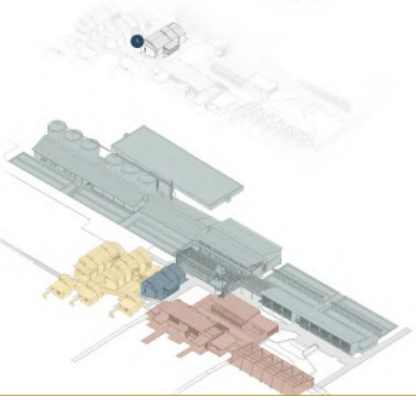
Inclusion of classrooms for the (ATVET) programme as well as laboratories as research facility. These can easily be denoted to knowledge sharing, while the industrial edge possess the secondary function of educating the users of processes regarding waste management.

1. ATVET classrooms
2. Laboratories

04. ADMINISTRATIVE

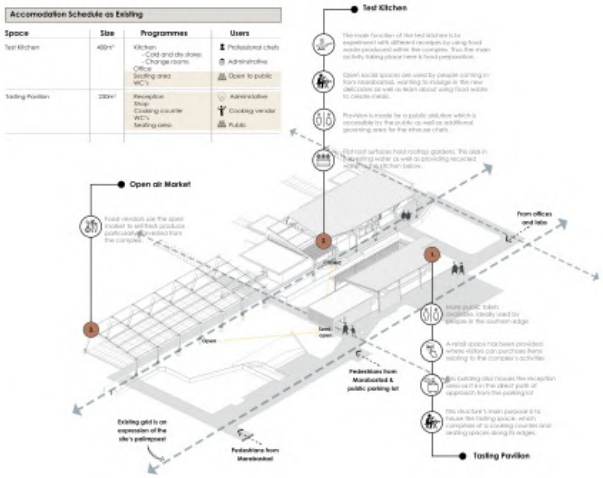
Offices located adjacent to the social square accommodate the administrative function of the anchor institution that would manage the complex. This would include overseeing the overall complex, access and perhaps facilitating and hosting functions. As the office buildings are placed close to the center of the complex, staff can easily access the rest of the compound from a central point. Their placement and multi-story nature of the office buildings also facilitate visual accessibility around the complex thus providing a level of passive surveillance.

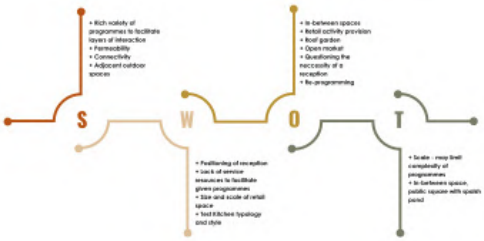
1. Offices



EXISTING PROGRAMMATIC ZONING

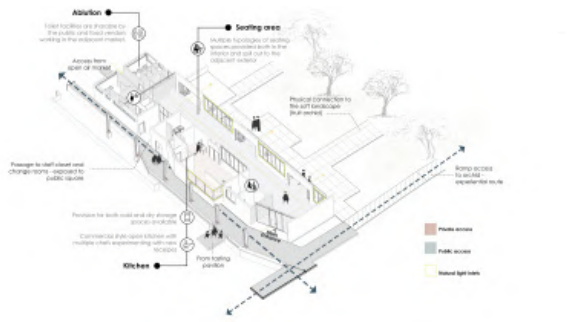
Overview of existing programmes within the virtual site



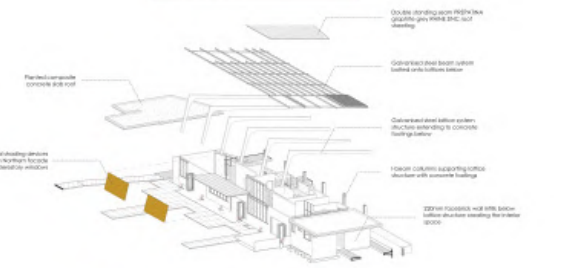


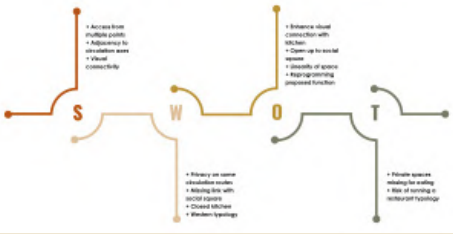
SOCIAL EDGE BUILDING ANALYSIS

Outlining architectural and environmental features to support programme



EXPLODED ISOMETRIC STRUCTURAL SYSTEM





EXISTING TEST KITCHEN BUILDING ANALYSIS

Outlining architectural and environmental features to support programme

03. THEORY

03.1

FOOD

- Food and design
  - Food and design at the same table
    - Food as material
    - Designing the experience, not the food
  - The changing kitchen
- Slow food movement
  - Ingredients and production
  - Community
  - Form, proportion and measurement
  - The senses

03.2

PLACE

- Social space
  - Spatial triad
- Meaning making in interior design
  - 1st and 2nd order meaning

03.3

PEOPLE

- Social interaction
  - Mechanisms of social interaction
  - Types of interaction
- Human centred design
  - Human needs model
- Designing experience
  - User behavioural aspects

04. PRECEDENT STUDY

Selection and assessment criteria

04.1

DESIGN INTENT

The following are used to evaluate precedents to inform the design intent:

- Types of friction present in the space, i.e. physical, visual and social
- Points that support mechanisms of social interaction, i.e. collision and contact
- Place as a neutral space i.e. people may come and go as they please
- Evidence of inclusivity, i.e. how is the space experienced by people with various abilities

1. **The Watershed, Cape Town**
2. **Markets of Warwick, Durban**

04.2

PROGRAMME SPECIFIC

Spaces that embody the four key words as identified above; grow, prepare, trade and eat will be analysed using the following criteria:

- Spatial provision for all four activities and supporting rituals and activities
- Communality as a means of experiencing space, i.e. the success of shared spaces of consumption
- Spatial markers that support ritual specific to food interaction
- Proximity of zones of activities and how they support each other
- Infrastructure to support functioning of the space

1. **Brasserie 2050 restaurant, Netherlands**
2. **Space 10 indoor farm, London**

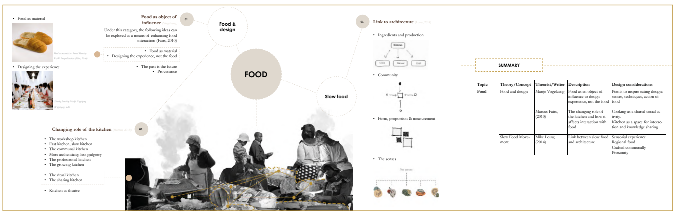
04.3

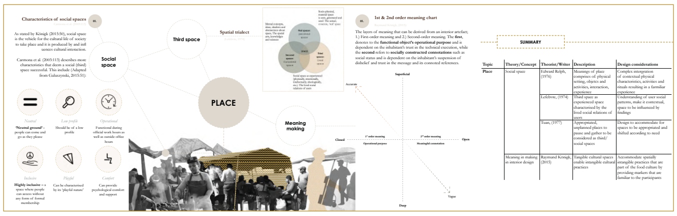
FOOD FOR INTERACTION

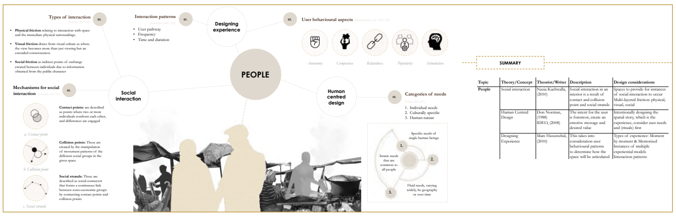
How food is viewed as an object to facilitate interaction and to be interacted with. The following criteria derived from theory of food and design will be used for the analysis of precedents under this section:

- How food is experienced and the inclusion of all sense in that experience
- Nature of environments that enable the sensorial experience of food
- Other ways of experiencing food beyond consumption

1. **Sensorial needs experience, Toronto**
2. **The act of eating**







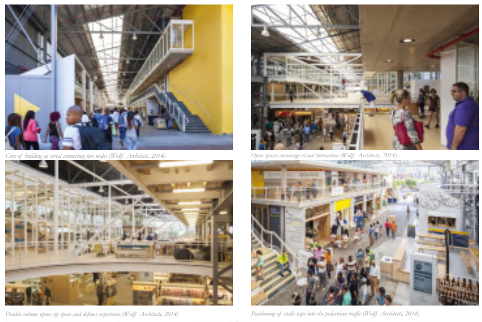
01. The Watershed, Cape Town

Architects: Wolff Architects
Year of Completion: 2014
Category: Public space

According to the architects (Wolff Architects, 2014), the resulting architectural space from their brief is an educational institution that shows leadership in city formation to serve other interests beyond the proposed business incubator. This is defi ned by a central street connecting the opposite ends of the exterior to the social interior. The street reclaims the public realm which is of a bigger order than the business incubator where the public pedestrian connects to other users and spaces within the shed.

Design guidelines

- **Openness:** To facilitate fluidity of space hence allowing easy access for all users
- **Central space:** Allows for an open space where users can socialise hence heightening instances of social friction
- **Levels of privacy:** Different inhabitants use space differently hence there is a determination of spatial hierarchy to defi ne its articulation
- **Space ownership:** Private space for vendors with their individual spatial requirements such as storage, cleaning etc
- **Intangible elements** are used to defi ne space and function
- **Corridors and walkways** seen as spaces to facilitate collision and exchange of knowledge.



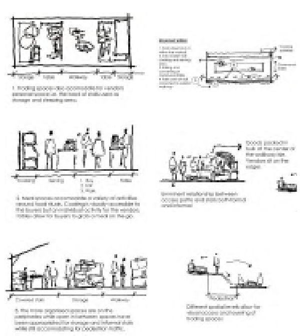
02. Markets of Warwick, Durban

Architects: -
Year of Completion: -
Category: Public market

Markets of Warwick are an amalgamation of several markets viewed as one. These are: fresh produce market, bovine head market, early morning market, traditional medicine market, herbs and spices market and the Brook Street market. It is situated in Durban's CBD and adjacent to multiple transport nodes, Warwick junction's typology is one that is similar to that of Marabastad. However, it is celebrated as one of Durban's tourist destinations where visitors get to immerse in the trading activities. This therefore serves as an example where social friction would occur between various groups of people.

Design guidelines

- **Hierarchy:** To facilitate space to be used by different users as well as enhance visual accessibility. Different spaces also demarcate specific experiences.
- **Use of walkways:** Setting up stalls along pathways attract pedestrian traffic into the stalls therefore acting as a pull element.
- **Multiple spatial typologies:** Allows for multiple ways for the users to experience space. A combination of sub programmes enhances richness in programme.
- Mapping of **movement patterns** indicated the different ways in which multiple users experience the space thus unpacking the space in multiple ways,
- **Provision for cultural needs** i.e. ways of eating that may heighten the user experience. Specific foods are eaten in specific manners and therefore the vendors do not try to enforce other ways of eating, but rather promote cultural mannerisms.
- **Open spaces** remain open for the public to facilitate social friction between the various user groups of people using the market space.



DESIGN INTENT

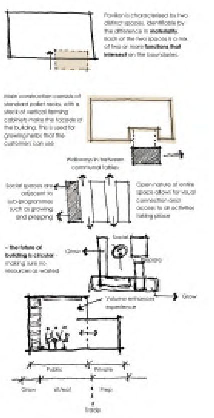
Analysis of spaces that are viewed to facilitate social interaction

03. Brasserie 2050 restaurant, Netherlands

Architects: Overtreders W
Year of Completion: 2016
Category: Temporary installation

The pavilion was conceived as a barn of the future as a barn represents the timeless icon for farming (Pintos, 2019) but adapted to fit the new idea of a shared space that caters for the food cycle. The building envelope is a dismountable, minimal materials leaving shifting the focus to the food activities taking place inside the pavilion. The following guidelines were deemed important for the purpose of this study.

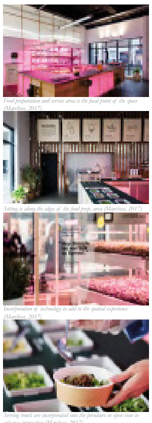
- The pavilion is characterised by two distinct spaces, identifiable by the difference in materiality. Each of the two spaces is a combination of two or more functions that intersect on the boundaries.
- Main construction consists of standard pallet racks, with a stack of vertical farming cabinets making the façade of the building. This is used for growing herbs that the customers can use.

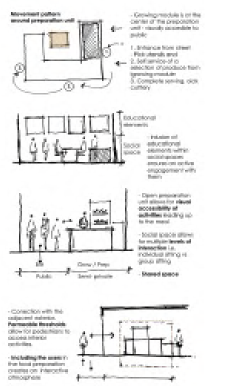


04. Space 10 indoor farm, London

Architects: Space 10
Year of Completion: 2017
Category: Installation

The installation comprises of a space that showcases the possibility of a multifunctional food preparation space. This was later adapted a London restaurant 'Lokal'. The essence of the installation is such that within the confines of a single space, vegetables and herbs are grown on vertical growing modules, there is provision for counters to be used during food preparation and a serving table is set up adjacent. This makes the food preparation compact and interactive for both the vendor and the customer. Far right outlines the design guidelines derived from this precedent.





PROGRAMME

Analysis of spaces that cater for food production and consumption

05. Sensorial seeds experience, Toronto

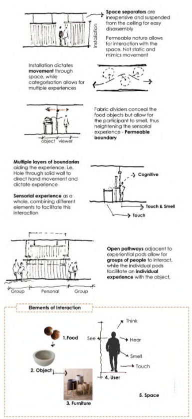
Designer: Marije Vogelzang
Year of Completion: 2019
Category: Installation

According to the designer (Howarth, 2019), the installation is supposed to be an immersion of all the five senses and not limited to the visual as most installations would function. She uses objects such as ribbons to hide the object of interaction (food) which prompts the users to experience foods in other ways, i.e. touch and smell. Each space is meant to activate a different sense. Although not explicit, a similar interaction exists in Marabastad and therefore arises the need to heighten it as part of the experiential journey. The guidelines acquired therefore are as follows:

Design guidelines

- **Space dividers** are inexpensive and suspended from the ceiling for easy disassembly. Their permeable nature allows for interaction with the space as well as creating a sense of intimacy.
- Installation dictates **movement** through space, while categorisation allows for multiple experiences.
- Fabric dividers conceal the food objects but allow for the participant to engage with other senses such as smell thus heightening the sensorial experience: **Permeable boundary**
- **Multiple layers** of boundaries add to the experience, i.e. a stab through a solid wall to direct hand movement towards object of interaction.
- The **sensorial experience** combines multiple elements to facilitate interaction between people and objects
- **Open pathways** adjacent to experiential pods facilitate interaction between **groups of people,** while the individual pods facilitate a direct interaction between an individual and the object.

Using actual food as an object to interact with (Howarth, 2019)



06. The act of eating

Designers: Subirats, C et.al,
Year of Completion: 2017
Category: Experiments

The act of eating is a series of installations that experimented on people's interaction with food, considering external factors such as the environment and rituals and how that affected the interaction thereof. The experiments are briefly discussed below (Subirats,2017).

Experiment 2.2 - challenging the farmiliar way of eating (Subirats, 2017)

Spatial experience to a mindful eating exhibition (Subirats, 2017)

Experiment 1.1 – Exploring interaction with food

When asked to describe their ideal eating scenarios, most participants mentioned the environment leaving out the most important aspect of eating; food. The conclusion here was that the environment is an important factor affecting people's experience with food (Subirats,2017).

Experiment 2.1 – How might we be more aware of the act of eating?

Following the participants response of the environment affecting the food experience, this follow up experiment created a focus on the food. A table with food was set up in a neutral enclosure to draw the participants focus on the act of eating (Subirats,2017).

According to the designers (Subirats,2017), the resulting feedback was:
There was a lack of environment to relate to therefore no memory connection was made with the act of eating
However, there was no distraction, hence having the meal was fully engaging.

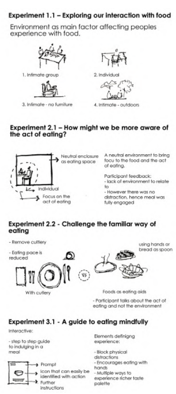
Experiment 2.2 – Challenge the familiar way of eating

In addition to removing external environmental factors that may be distracting, the experiment narrowed down to the intimates dictating the act of eating. In this experiment, cutlery was removed from the table setting and participants had to device methods of eating suitable for them (Subirats, 2017). The result was such that:

The participants talked about the act of eating and not the environment as in the first experiment.
Using hands or bread as spoons reduced the eating pace significantly thus making the activity more engaging and savoury

Experiment 3.1 – A guide to eating mindfully

Based on the culmination of findings from all the above experiments, the final experiment sought to make the act of eating interactive taking from each of the above. The elements guiding this experience include (Subirats,2017):
Blocking all physical distractions
Encouraging participants to eat using their hands
Multiple ways to experience a richer taste palette
Step by step placard guide given to participants to indulging in the presented meals



FOOD FOR INTERACTION

Analysis of intagible characteristics of food to contribute to sensorial experience

05. CLIENT, PROGRAMME & USERS

05.1

CLIENT

- Farm this City
  - Seed ecosystem
    - Urban earth
    - **Urban environment**
    - Urban economy
    - Urban future
    - **Urban community**
  - Projects
  - Statement of significance

05.2

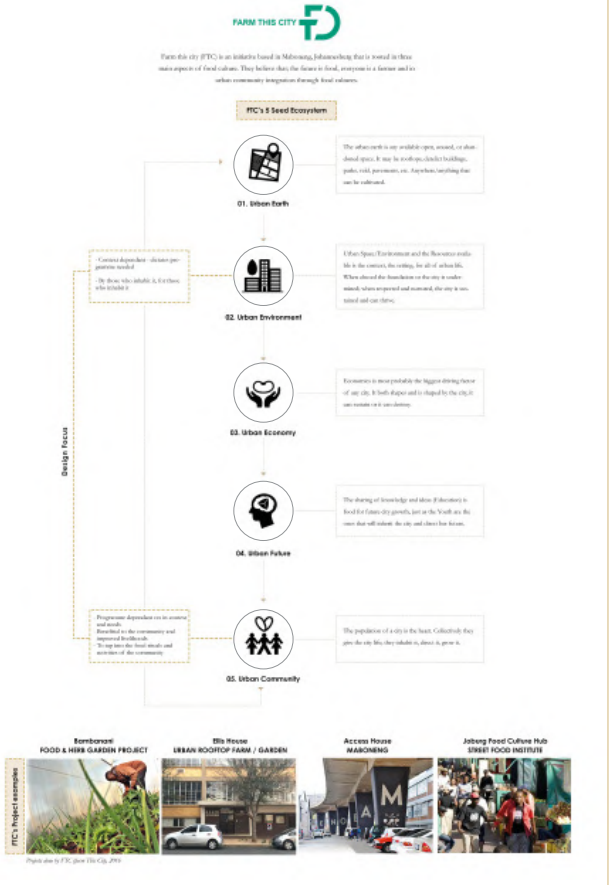
PROGRAMME

- Social edge exploration
  - Experiential kitchen
  - Butchery and spice shop
  - Market
- Programmatic requirements
  - Experiential kitchen
    - Pod workshop

05.3

USER PROFILES - Model inhabitants

- Vendors
  - To inform technical investigation
- Customers

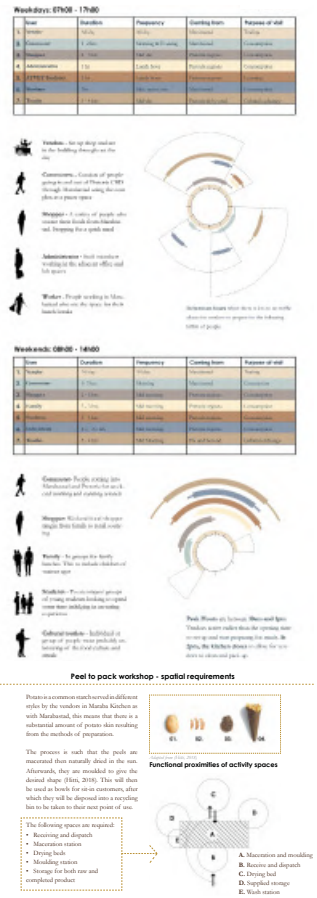


INTRODUCING THE CLIENT

Farm this City as overseer of management of the complex

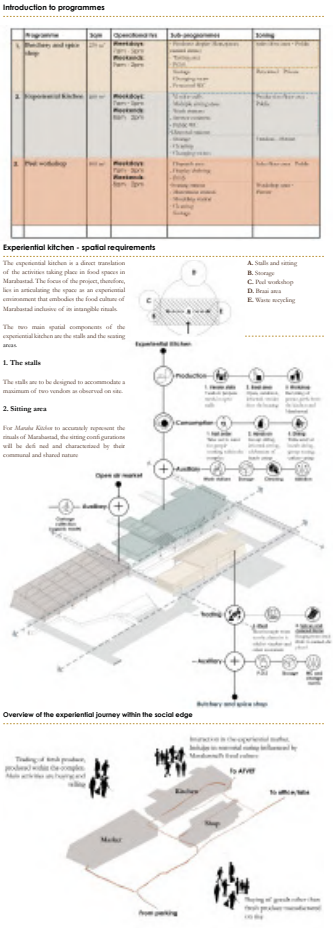
USER PROFILES

Model inhabitants as potential informants



EXPERIENTIAL KITCHEN

Outlining the programmatic spatial pragmatic requirements



PROGRAMME EXPLORATION

Presenting the social edge as an experiential node

06. CONCEPT

06.1

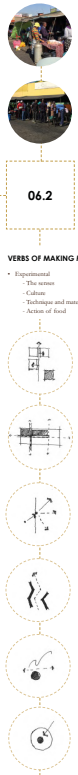
FOOD SPACES IN MARABASTAD

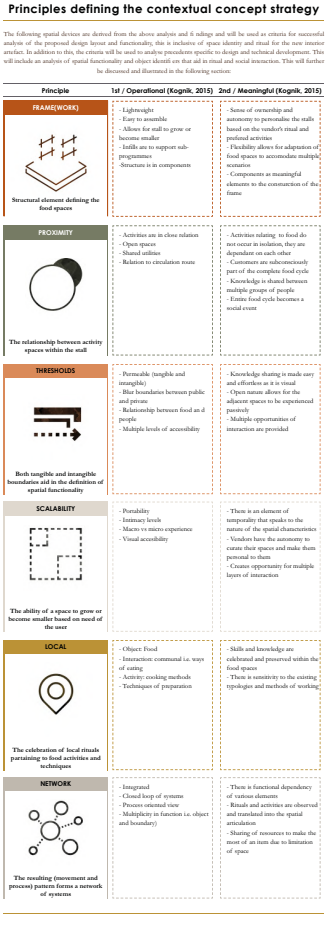
- Structure (kit of parts)
- Proximities of activities and rituals
- Movement patterns

06.2

VERBS OF MAKING FOOD

- Experimental
  - The senses
  - Culture
  - Technique and material
  - Action of food

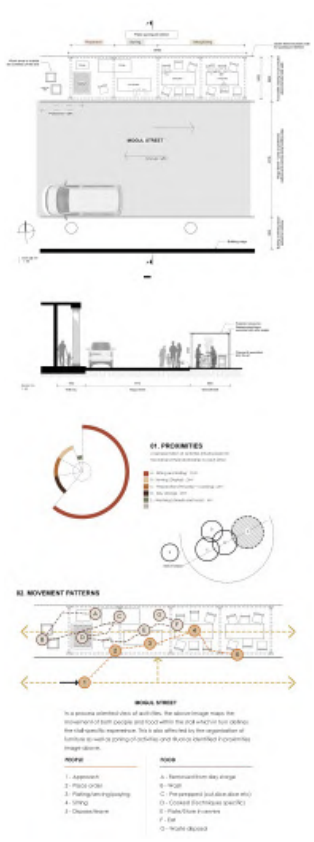




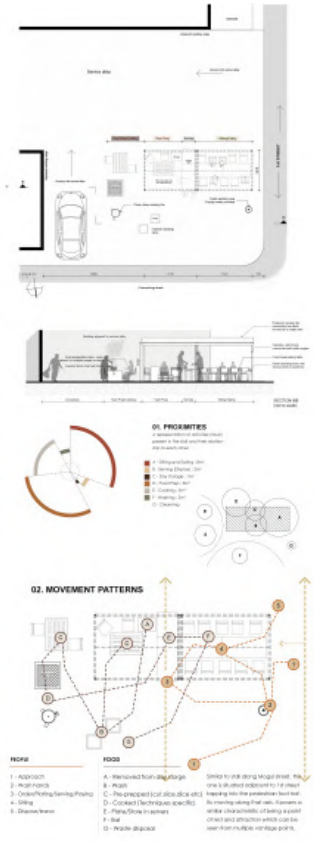
SPATIAL DEVICES

Resulting spatial principles from the food spaces analysis

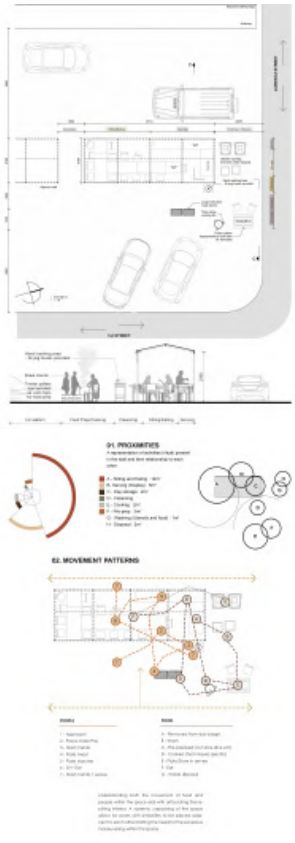
01. STALL ALONG MOGUL STREET



02. STALL ON CORNER OF 1st STREET



03. STALL SELECTED FROM MARKET STALLS



FOOD SPACES IN MARABASTAD

Existing functionality and experiential models as conceptual informant

According to Vogelzang (n.d.), when combining food and design there is a possible eight points that inspire this exchange. These include:

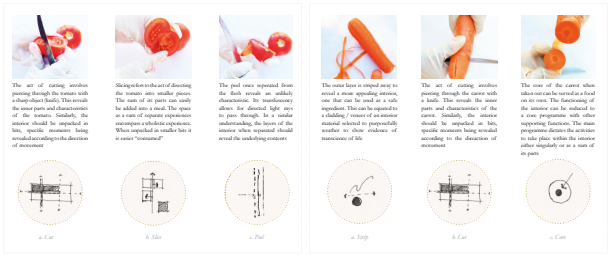
a. Senses
b. Chemistry
c. Culture
d. Technique and material
e. Grow
f. Psychology
g. Action of food
h. Society

For the purpose of this study, food as a conceptual driver will be limited to the following:

- **The senses:**
  - Food experienced holistically
  - Space as provider for multiple sensorial interactions
- **Culture:**
  - Aspects of food culture, i.e. production, distribution and consumption and more intimately the rituals supporting this culture.
- **Technique and material:**
  - Methods and tools applied to facilitate interaction with food and a sensorial experience
  - Tangible and intangible methods of interior articulation
- **Action of food:**
  - Food as object of exploration
  - Experimentation with food and action related to its methods of preparation

Outlining the parameters of investigation

	Verb	Food for action	Description	Properties to be related to spatial characteristics
1.	Cut	Tomato, Carrot	The act of cutting involves piercing through the food object with a sharp object (in this case, a knife)	Underlying components
2.	Slice	Tomato, Beetroot	This refers to the act of dissecting the food object into smaller parts	Sum of parts
3.	Peel	Tomato, Onion, Beetroot	This involves the removal of the outer skin of the food object leading to an investigation of the characteristics of the singular part	Light transmission, translucency
4.	Part	Onion, Lettuce	The act of partitioning denotes to the notion that an object has multiple layers	Layering
5.	Strip	Carrot	The outer layer is removed to reveal a more appealing inside considered safe	Ways of revealing
6.	Core	Carrot	This action reveals the centre part of the carrot, achieved through cutting	Central component
7.	Disperse	Beetroot, Brazil spice	Richness in colour allows for it to be spread in water which changes its colour.	Memory and residue



01. TOMATO

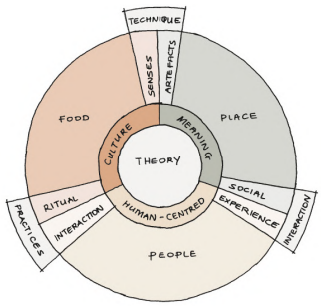
02. CARROT

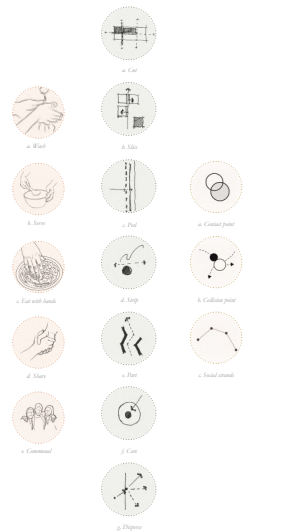
03. ONION

04. BEETROOT

VERBS OF MAKING

Intangible food characteristics translated into spatial concepts

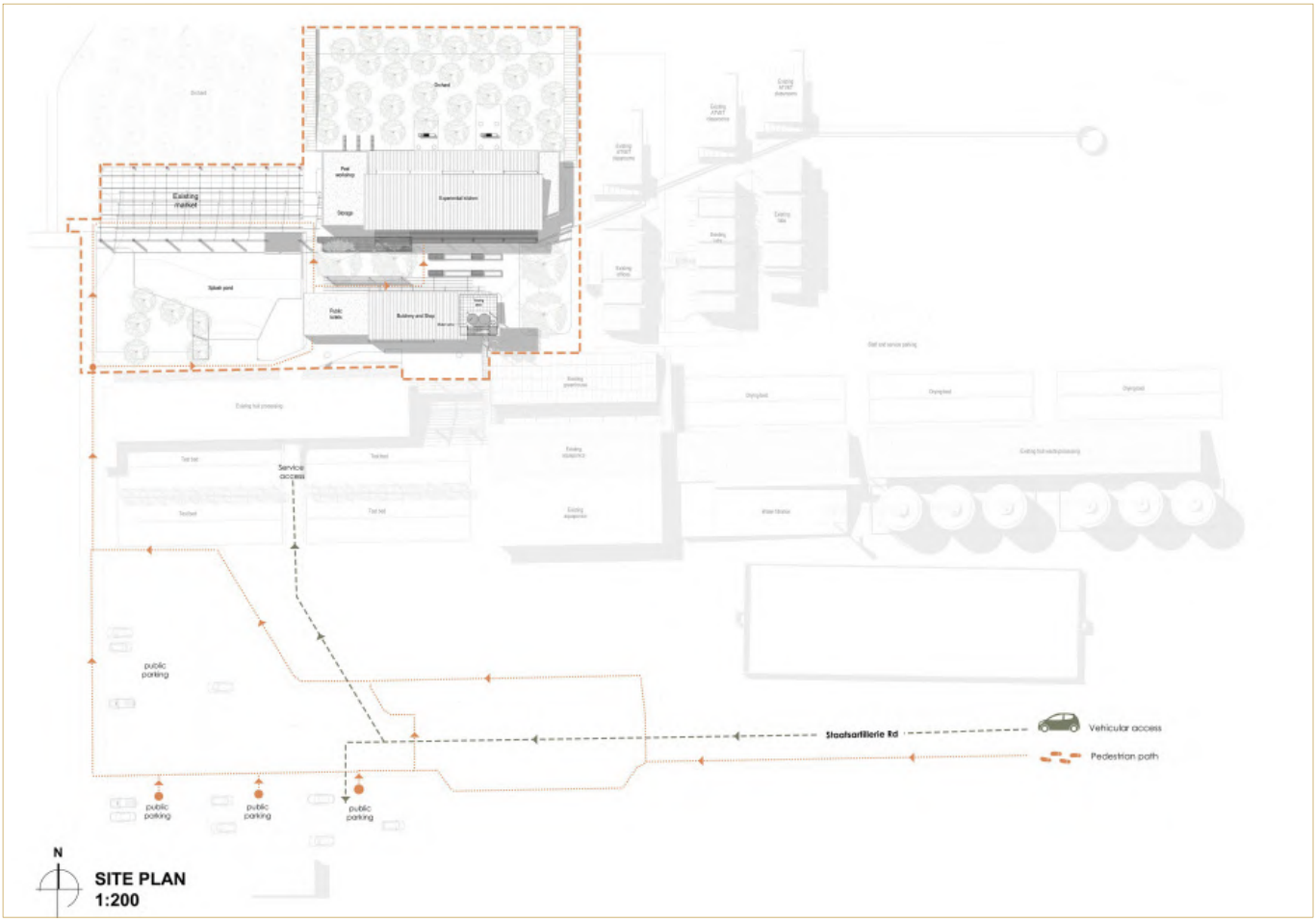




DESIGN INFORMANTS

Context, theory and precedents as main design informants

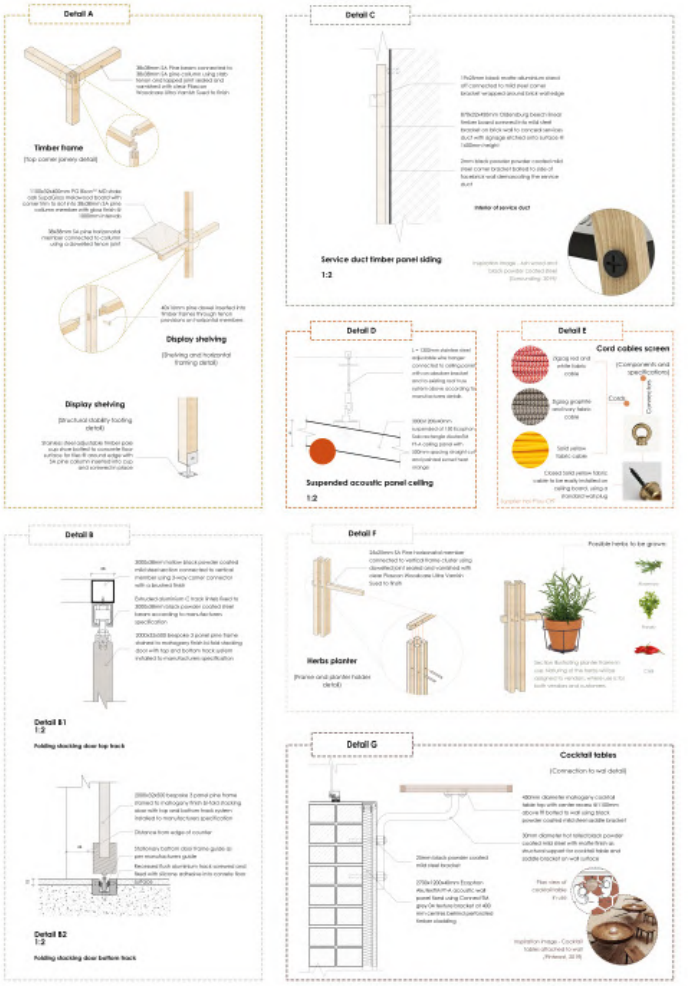
07. DESIGN DEVELOPMENT


Existing market
Service access
public parking
public parking
public parking
public parking
Staahsartillerie Rd
Vehicular access
Pedestrian path
N
SITE PLAN
1:200


N
FLOOR PLAN
1:50

Atmospheric Elevations
Southern elevation- PEOPLE
1:50

Atmospheric Elevations
Western elevation- FOOD
1:50



07. TECHNICAL INVESTIGATION

Investigating how methods of **flexibility** and **appropriation** can enable a semi-permanent stall insertion to be appropriated based on individual rituals of food preparation and interactions.

	ASSEMBLY		MATERIALITY		FUNCTIONALITY	
	Modularity	**Level of permanence**	**Material**	**Joinery**	**Ritual based**	**Threshold**
Description	Flexibility, adaptability, ease of assembly	Structural, personalisation, frequency of adaptation	Material selection, functionality, brand identity	Levels of permanence, connections, branding, craftsmanship	General use, ritual specific, adaptation	Functionality, comfort, inclusivity, interaction, interaction, opportunities
1st order (Functional)	- Ease of assembly and disassembly - Insertion of third party units Universal elements to be reused - Contextual	- Adaptability - Fabrication - Availability of resources - Personalisation	- Maintenance and cleaning - Availability - Structural integrity - Functionality - Waterproof	- Stability - Configuration - Adaptability - Craftsmanship	- Personal - Comfort - Ergonomic - Human centered	- Proximity - Facilitation of food activities - No boundaries
2nd order (Contribution to experience)	- Universal solution - Familiarity of context	- Markers for adaptability - relationship between owner and vendor	- Haptic qualities - Spatial identifiers	- Sense of control and ownership - Markers for adaptability	- Sense of ownership stemming from inclusion of personal items	- Continuation of existing interaction patterns

Technical precedents

01_ Mobile Hospitality by Chmara.rosinke

"The idea is as simple as this - to share time, food and space with others"
Chmara & Rosinke (Mieńska, 2014).

Mobile hospitality is a combination of a portable kitchen, dining table and foldable stools that completely fold down into two transportable carts. It includes functional service elements needed in the kitchen such as a pump for running water connected to the sink, pots for growing herbs and a basic stove. The concept focused on celebrating the ritual of eating in public spaces where the meal is shared between the cook and the visitor thus creating an interaction that fosters spontaneity and a sense of community (Milocki, 2012). The simplicity of the design provides a minimal backdrop shifting the attention to the activity of cooking and the food as the object of interaction (Mieńska, 2014). The unit is primarily made of pine wood finished with linseed and orange oil and measures 760 x 1200 x 1100mm (Chmararosinke.com, 2011).

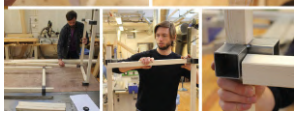
Sequence of assembly

The following principles and characteristics are evident;

- **Frame -** The formal language of the unit is kept clear and consciously taps into the DIY aesthetic (Chmararosinke. com, 2011). This renders it easily manipulated and assembled in-situ to make up the complete unit.
- **Proximity -** All activities are compacted within a small surface area encouraging a visual and physical relation between the spaces and the people.
- **Threshold -** Its open nature facilitates easy access to the ritual of cooking for the customers from their sitting positions.
- **Network -** The water system for washing the fruit and vegetables is made of watering cans, a hose and a foot-powered pump that works in a cyclic nature (Mieńska, 2014).
- **Scalability -** The unit can easily be set up within minutes in a coordinated manner by two people. All the components are foldable and can easily be stowed away (Mieńska, 2014).
- **Local -** The object comes in various versions each time; therefore, the kitchen is proposed to be made of locally available materials. The designers have a policy that states that design should be responsible and in dialogue with the local community, thus the wood is sourced from the closest and best producer which does not necessarily make it the cheapest option (Mieńska, 2014).

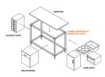
02_IKEA hacka kitchen by IKEA

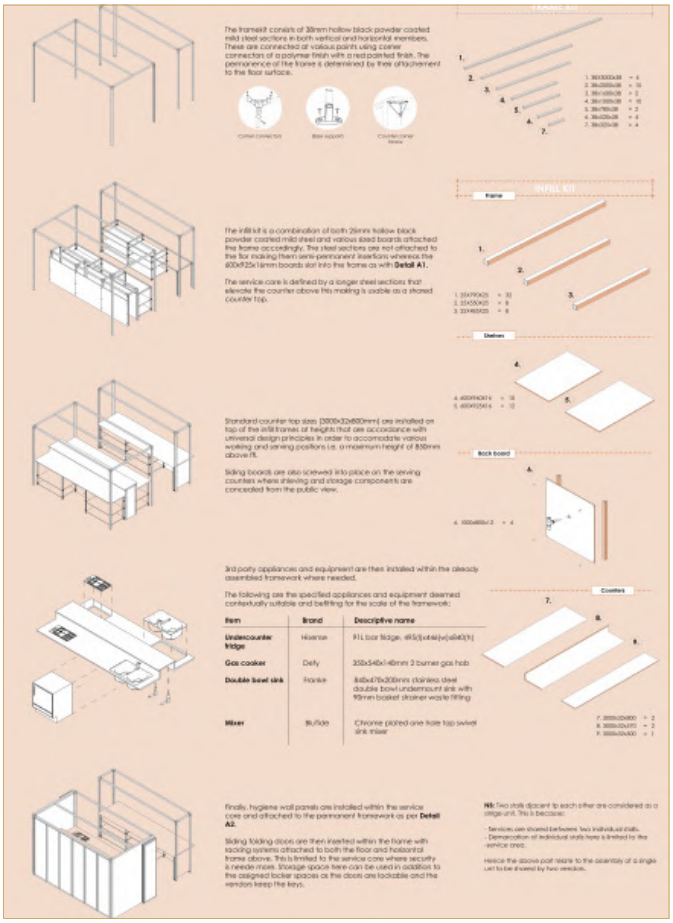
The hacka kitchen was conceived as a result of exploring people's behaviours around food and activities associated with its production. It was noted that one of the most common needs was one of people wanting to modify products to make them their own. The resulting product is a frame system, consisting of standard size wooden beams and metal joints. These function as the main structure for the kitchen where appliances and fittings are inserted into (Ikeaxo, 2015). The modular system's unrestricted flexibility allows for it to be assembled in custom sizes making it possible to cater for various needs. Measuring guides on the wood make it possible for the owner to cut the desired lengths and reassemble the unit based on their individual needs (Brink, 2015).

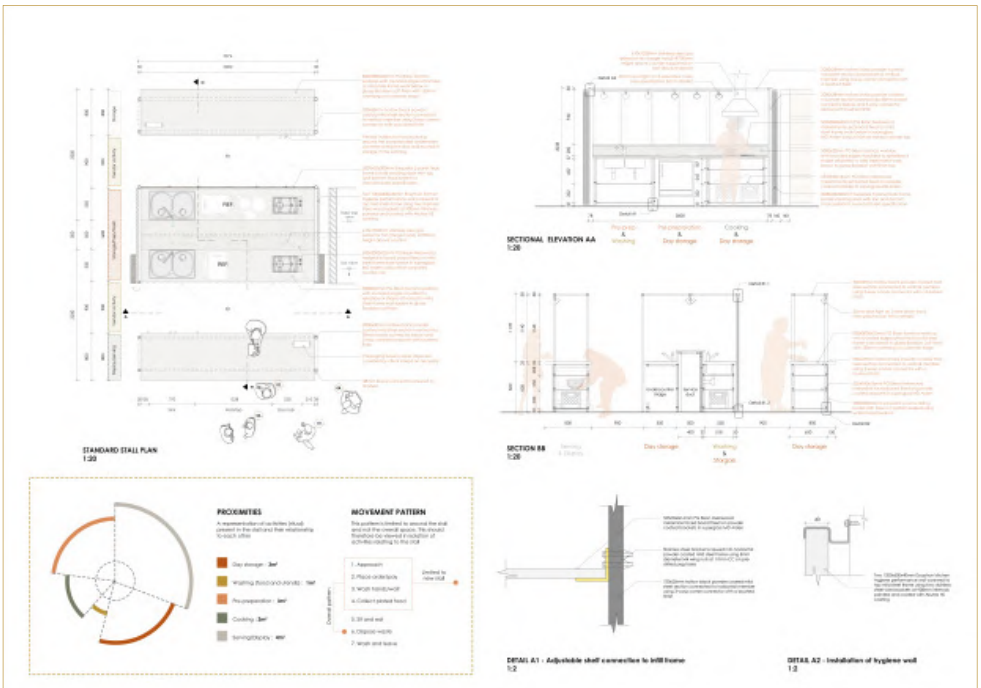


The following guidelines are derived from the analysis above to inform the articulation of joinery and details in the vendor stalls.

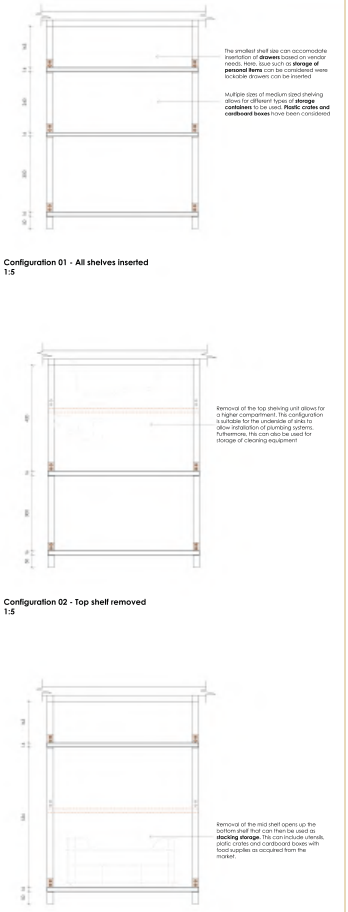
- **Frame -** The modular unit consists of wooden beams that can be assembled to form a singular and functional unit. These can be cut into multiple sizes to fit individual needs. The corner elements are like the elbow joints used in Marabastad.
- **Proximity -** Activities related to food production are near maximise on the available space.
- **Threshold -** As with similar examples, the kitchen unit is generally open thus allowing multiple levels of permeability.
- **Network -** The unit can be put together to accommodate standard fitting of services or these can be custom made and fit accordingly.
- **Scalability -** Measuring guides on the main framework allow for individuals to scale the kitchen according to their specific needs. The process is however permanent and cannot be reversed.







Shelves configurations



Mama Fatima

MENU:

Category	Type	Cooking technique
Stach	Pap, Rice	Ingredients are simply poured into the pot
Vegetables	Kale, Spinach	Pre-preparation includes cutting, chopping, peeling
Meat	Braai lamb	Done by vendors outside

SERVICE:

- Food dishes are placed on the display/service table
- Customers select food along a moving queue
- Fatima provides condiments and herbs for her customers

ADDITIONAL FEATURES: Ritual specific

- Pull out chopping board as she sits when doing the p re-preparations i.e. cutting, chopping, peeling of vegetables

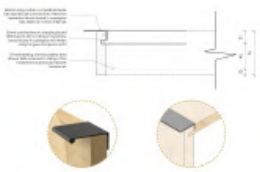
- Growing herbs and additional shelving for display of condiments

MAMA FATIMA'S STALL PLAN
1:20

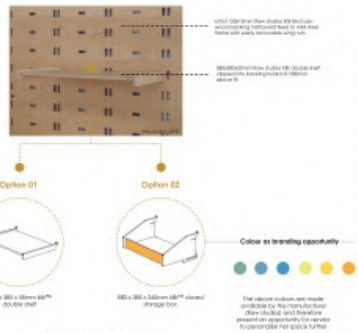
SECTION CC
1:20

SECTION DD
1:20

Details



DETAIL D - Chopping board pull drawer
1:2



DETAIL E - Clipping board shelving

Johaness

MENU:

Category	Type	Cooking technique
Starch	Pap, Potatoes	Peeling & washing
Vegetables	Cabbage, Kale, spinach	Boiling, stewing
Meat	Amathumbu we nkuku, Braai lamb	Cleaning, boiling & stewing
Sauces	Chakalaka, Atchar	Pre-mixed

SERVICE:

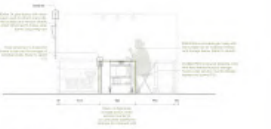
- Vendor does all the serving
- Serves a variety of food, with varying prices
- Has an assistant that helps with the food preparation

ADDITIONAL FEATURES: Ritual specific

- **Additional heat source** to cater for the large menu serving and worksta- tion for the assistant

- **Menu display** to present the meal options to the customers

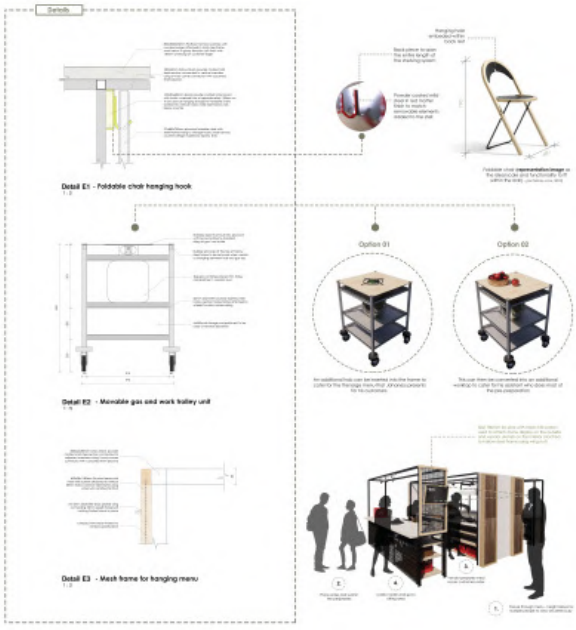
JOHANNES' STALL PLAN
1:20



SECTIONAL ELEVATION E-E
1:20

SECTION F-F
1:20

Details



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