Wherever food markets survive, they bring a quality to urban life that is all too rare in the West: a sense of belonging, engagement, character. They connect us to an ancient sort of public life. People have always come to markets in order to socialise as well as to buy food, and the need for such spaces in which to mingle is as great now as it has ever been – arguably greater, since so few such opportunities exist in modern life.

- Carolyn Steele

07. program

Defining the brief
The urbanisation of more than 50% of a ever growing human population, makes food security unstable. Therefore more and more people are so removed from the natural environment that they don't realise what they put in their mouth. There is a great truth in the saying, man is what he eats. If man doesn't know where his food comes from, how would he knows where his roots are? This result in a society that is dislocated and depressed.
At the supermarket, one takes the produce from the shelf appose to the ritual in the market where one needs to ask another for the bread or tomatoes that one wants to buy. The supermarket society is selfish and will take what he or she needs without thinking of the community. The society that asks for their food is humble and realise the interdependency of the community. The current global climate crisis will not be solved by the former society.
In Chapter 3 the current state of food security in South Africa was discussed. The current system of food distribution does not benefit the producer nor the consumer. As a result a new approach and organisation of food procurement must be researched. As an architect, one must plan for the future and thus is a new configuration of the food market a study of importance.

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REQUIREMENTS

The food market is seen as a destination in the urban landscape. It can be perceived as a city within a city; it has different hierarchies of public spaces, parks and routes. Orientation in the market is important and elements must be so designed to make the market legible.

The market must be easy accessible to both pedestrians and produce. A multitude of entry points ensure the building to extent into the city so that the market visitors could easily transact with the urban context. The delivery of produce is paramount in the market and need special attention when the market is planned.

As the program of this building is a pivoting point of urban ritual (all people need to buy food), is it important that it forms a landmark in the environment. In the same sense as the table give meaning in a space so must the market give meaning in the urban context. This was discussed in Chapter 6.

In the market the relation and situation must be facilitated so that urbanites can perform their role in the city. Adequate seating along routes must be provided.

The philosopher Socrates was a regular speaker in the Agora of antiquity. (Steele2008:121) In the market the designer must cater for the troubadour, philosophers or street preacher so that they can have an audience. This, together with the enjoyment of taste, smell and companionship a vibrant public building could be realised.

ASSUMPTION

This project will not be viable if the framework is not implemented. Although Schubart Park is still in use, Kruger Park is vacant. The residents of Schubart Park alone will not be enough clients for a market of this intensity. Therefore it is assumed that the framework is realised.

The farmers won't be able to sell their produce themselves, the farmer will have to hire someone to sell their goods, the road stall, that is seen in the country side comes to mind.

DELIMITATIONS

This market does not compete with the Tshwane fresh produce market. This place of trading is for the producer and the individual consumer. The groceries that are sold at the market come direct from the farm and don't need to go through the municipal market or a middle man. The direct exchange is of cardinal importance to sustain economic viability for consumer and producer alike.

The Victorian houses on the premise will not be redesigned; it is only proposed that the interior may be adapted to house two deli's and the exterior be restored. They are used to create a presence in the open area in the middle of the market. The houses date from the 1880's are older than 60 years and are therefore protected by SAHRA (South African Heritage Resources Agency).

CONCEPT

African urban space, as stated in Chapter 4, is characterised as an ambiguous place that seems chaotic and yet function well. An African market is no different, a space must be created so that the users could fill and consume it. A covered market floor with a grid as ordering system enables the market to be adaptable according to the users need. The idea is to create a building that spills out into the city and at the same time invite the city back in. The edge is therefore permeable but still well defined. A roof creates the archetypical image of a market, the roof forms a presence in the vicinity but at the same time gives delight and shelter to the dwellers in the market. The ritual of the sun's movement is utilised trough the effect that the structures' shade plays on the ground.

Similar to streets that gives orientation in the city, so does the structural grid give direction in the market. The structures form a focus point in smaller squares within the market. In some of these areas is a pit introduced where produce can be hoisted from the delivery basement direct into the market. The design decisions are discussed in depth:

grid dimension

A grid system gives order and legibility in the market. The circulation as well as the structure is super imposed on the grid. The urban fabric's grid and grain change at the Steenhovenspruit. To celebrate this adjustment, the grid on the eastern part of the market respects the grid of the city but alter at the existing cul-de-sac road to accommodate the angle of the square. The road of the cul-de-sac was chosen for the line of grid change to respect the historic fabric and to utilize the vista to the houses. The main entrance to the market is placed on this line to strengthen the importance and energy such a grid adjustment initiate.

The appropriate length of linear stalls is 15- 20m (fig 7.4) before allowing a break for circulation. Less than this, some stalls won't get enough feet while with longer runs the shoppers tend to avoid the central stalls. In this case the grid that was opted for is 19m x20m so that the actual run is 15mx16m. Six stalls of 2,5m in width can fit into this dimension. The versatile square configuration is used so that the stall layout may be altered in the future. (Behrens 1997:215)

fig. 7.2

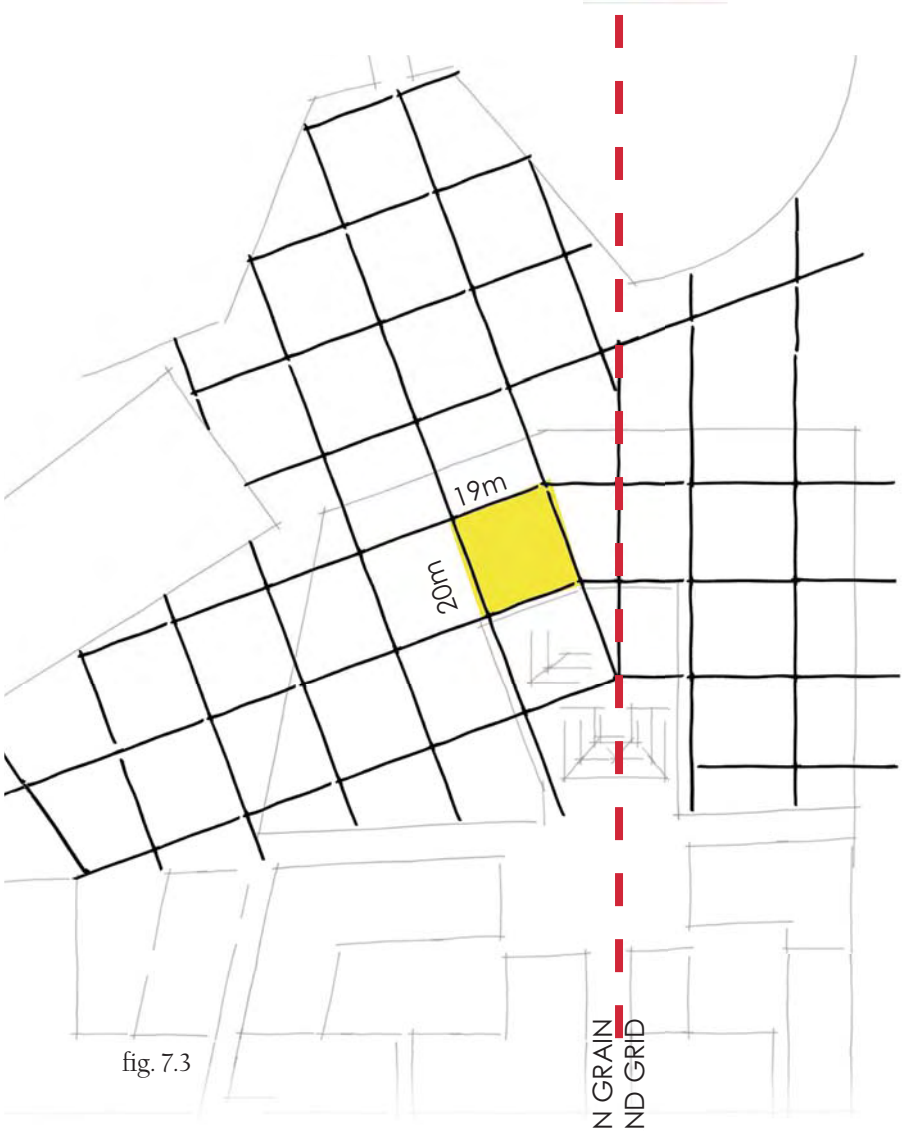


fig. 7.3

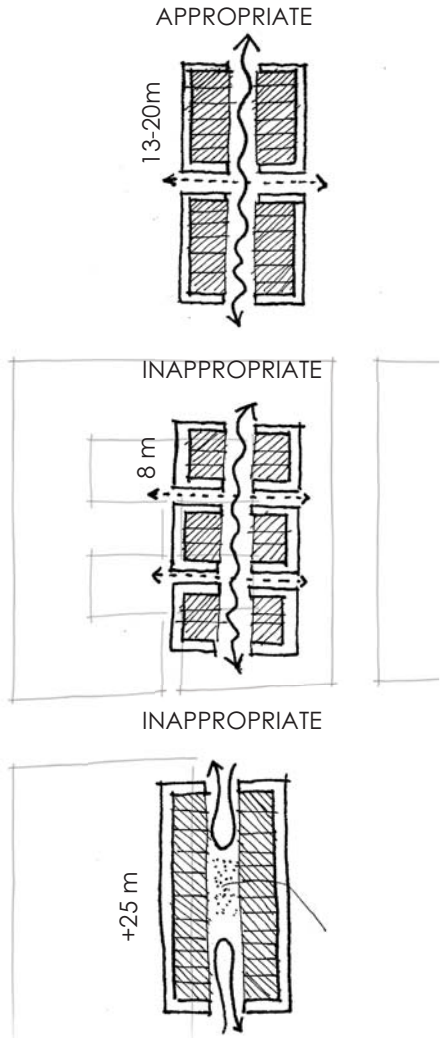


fig. 7.4 Diagram illustrating lenghts of linear stall runs

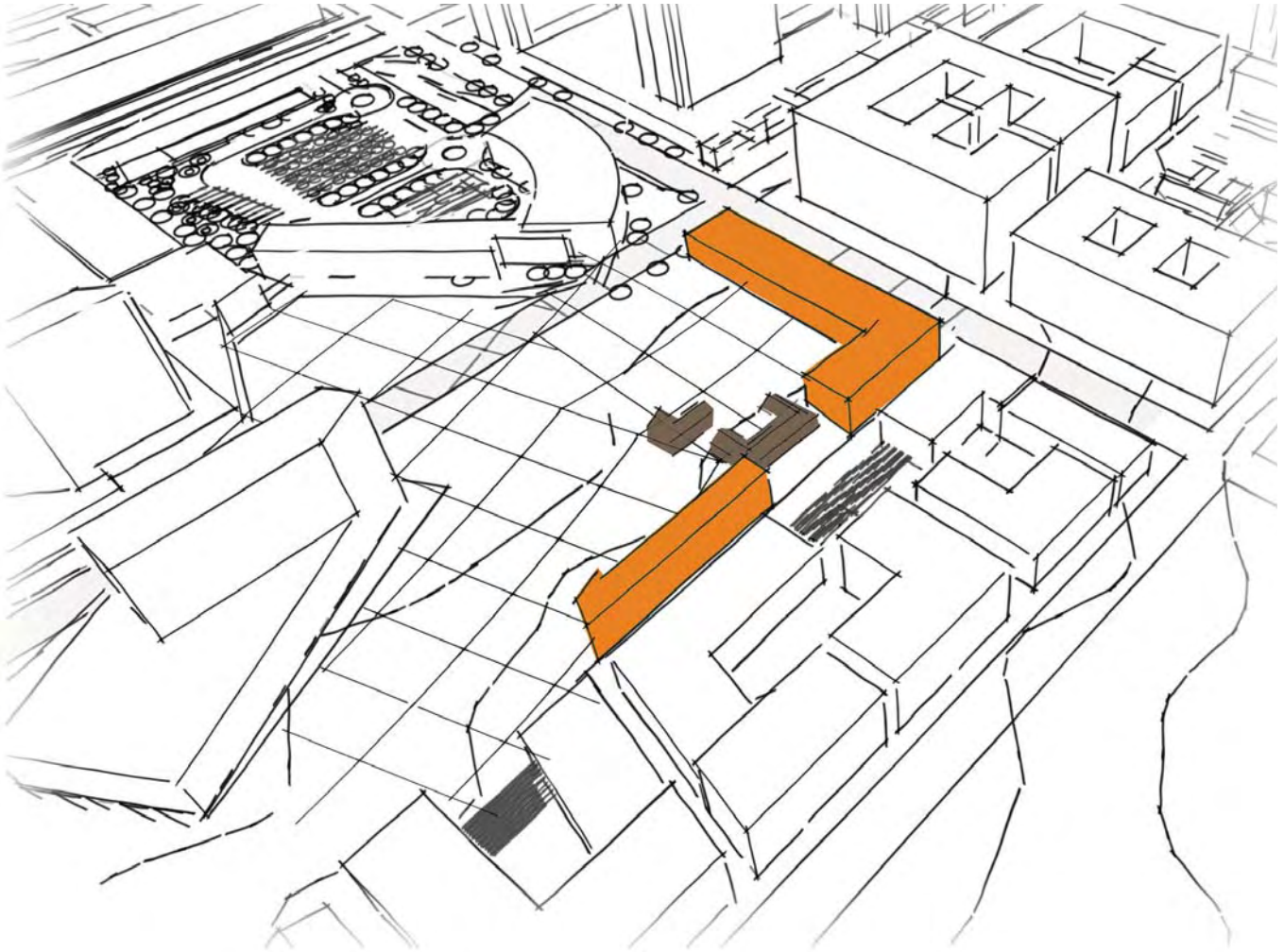


fig. 7.5

The transaction between the new built intervention and the city is of great importance. Two buildings are arranged on the east and south of the site to address and respect the language of the city. A solid edge is formed east, along Potgieter street, and south along the service and pedestrian way. The market floor is enclosed towards the city and thus forces activities from the market to spill into the open spaces. These buildings are 10m high and house the formal eateries, butcheries and industrial kitchens. The restaurants and café bar spill out on the pavement to create an active edge on the streets. This enhances the exchange of the building and the city.

fig. 7.6

The size of a market will change over the period of a week or a month. There will inevitably be times of expansion and contraction, and the development of the market must be flexible enough to accommodate these changes. (Behrens 1997: 217) The public spaces next to the market give the opportunity for the market to spill out into the square. Extending the grid onto theses spaces; the ordering system is echoed; the language of the market is maintained and although the expanded market is informal, it will still be legible for the user. Movement routes are placed along the grid lines. These routes continue from within the market into the open spaces. At these times the area can become a carnival, bazaar or feast. Just like the table provide the opportunity in a space to initiate a situation (theoretical argument p.11), so may this market also initiate events.

fig. 7.7 Market in Marakesh, Marocco

fig. 7.8

transaction nodes

A market is a city within a city and has different hierarchies of spaces. The grid indicates the main movement arteries in the market. Through the study the behaviour of people in chapter three, did it became evident that people like to sit along movement routes. As this market is for a South African urban environment the main movement patterns are interrupted with nodes on the cross points where places of transaction can be accommodated in different intensities and levels. Regardless of the social interaction where people can sit and converse, the transaction of the rural producer and the consumer is paramount. The delivery of goods forms a ritual everyday but is normally concealed at the back. Exchange of the produce must be celebrated by designing places where the unloading of products can be efficient.

It seems as if produce is brought into the market from the earth; just like vegetation grow from the earth. Wells or pits are provided at the cross-points of the grid. The produce can be hoist up from the trucks in the delivery basement to the market floor. As a result, this unloading of the produce brings energy into the market but separate the vehicle from the pedestrian. If 70 plus trucks deliver daily to the market, the site will be dominated by vehicles and not pedestrians. Pedestrian safety and the character of the space will be jeopardised. When the wells are not in use, the openings are covered and act as seating or a stage for street entertainers.

fig. 7.9

fig. 7.10

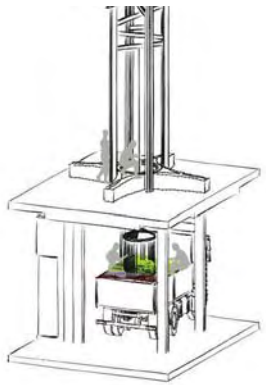


fig. 7.11 Truck stop under the well

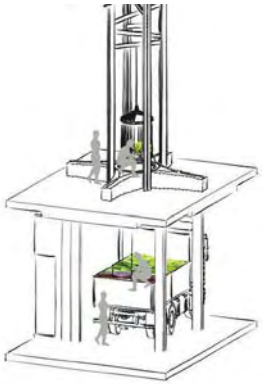


fig. 7.12 Produce is hoist up and distributed

fig. 7.13 Movement along arcade

An urban space should have a well defined edge and some sort of surveillance to establish 'outdoor rooms'. The success of a public space regarding nature, quality and safety is characterised by the way in which these defining edges are made (eg. by planting, by buildings, by walls, by colonnades, and by combinations of these) (Behrens 1997: 211). The edge of the market is defined by means of an arcade that creates a transition zone from the square to the market. This functions also as a movement route as indicated in fig.7.14

The first skin is a brick colonnade and the second interior leaf is an overhead ribbon of brick wall. The interior public space has only one skin, the overhead brick wall. Permanent stalls create a vibrant market edge.
A steel mesh on a pulley system enables the market to be closed at times. The steel mesh is visually permeable and creates a feature at night when the market is closed and light shines from within. The existing lane of Jacaranda trees creates a natural arcade along the street edge. These trees are repeated in the square as indicated in fig. 7.15 and provide the arcade shade in the summer and sun in the winter.

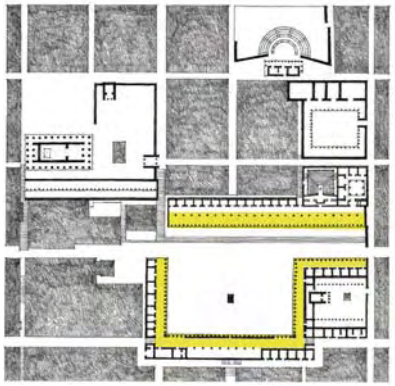


fig. 7.14 Plan of Agora at Priennne and its surroundings, 4th century B.C

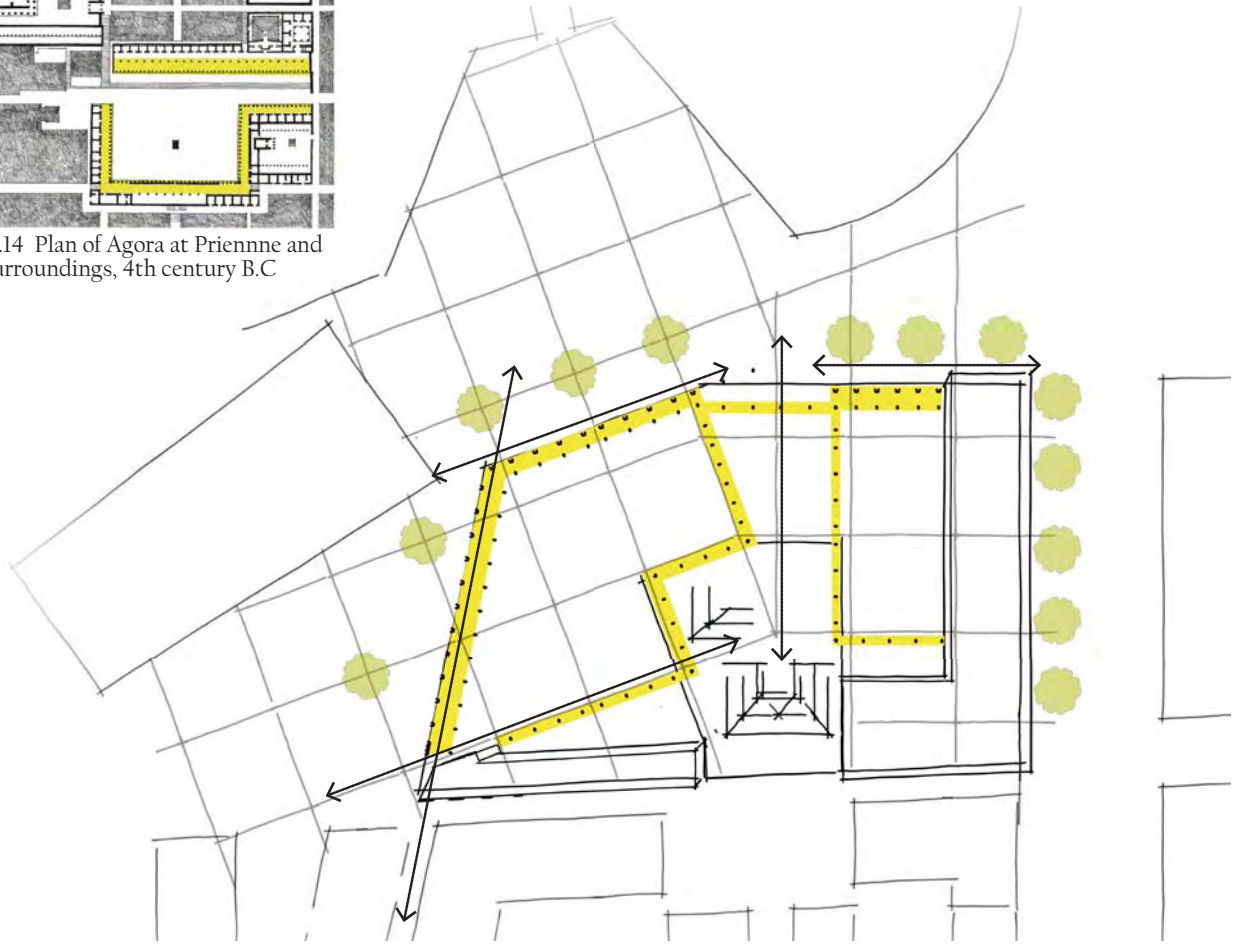


fig. 7.15

market layout

To ensure that the whole market is used, anchor products are located in opposite corners. The bakeries are located in the most south eastern corner of the market. The bakery's distinctive smells invite people from the street into the market and create an appetising atmosphere at the heart of the market.
Fresh produce is positioned near the entrance to give a calming effect. Most of the delivery wells are situated in this area and thus makes daily delivery of fresh fruit and vegetables easy.
Dairy products are also located near the wells for daily delivery and function as an anchor product in the south western corner.
The butcheries are secluded from the rest of the market for health reasons. The meat can be delivered from the service road at the south of the market. In front of the butcheries space is provided so that urbanites could braai their own meat. This adds another smell in the market.
Other products like spices are located between these zones. Take-away stalls are positioned along the edge of the market so that it creates a vibrant boundary that faces the square. Restaurants are situated along Potgieter Street to ensure an active edge. The service yard needs to be easy accessible from the street and is located in the south eastern corner.

The core of the market is left open so that different events can be housed in this area. The landscaping around the houses is sloped. This creates a space where people can sit. In the covered open area, tables and seating is provided for a street feasts.

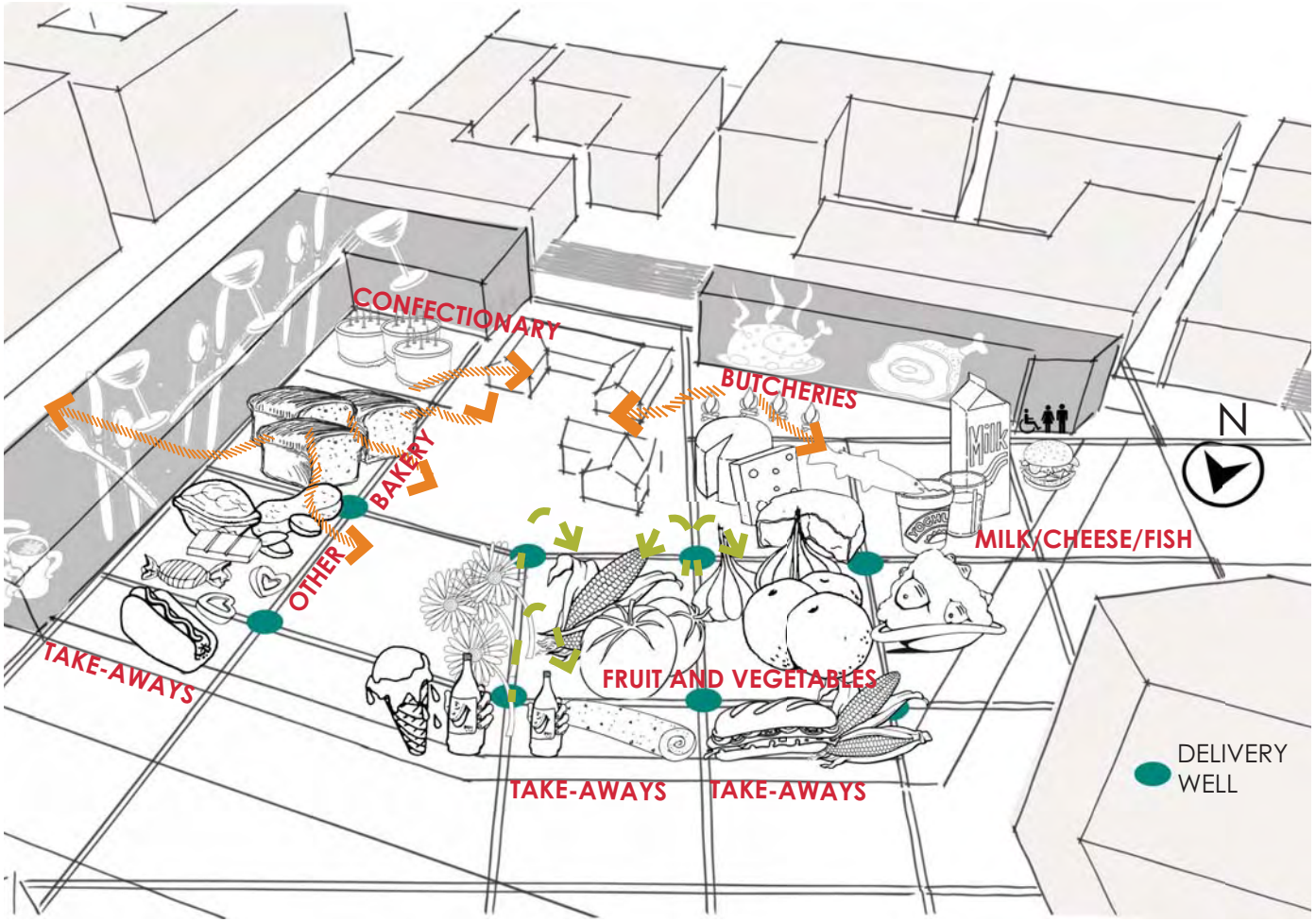


fig. 7.16

stall layout

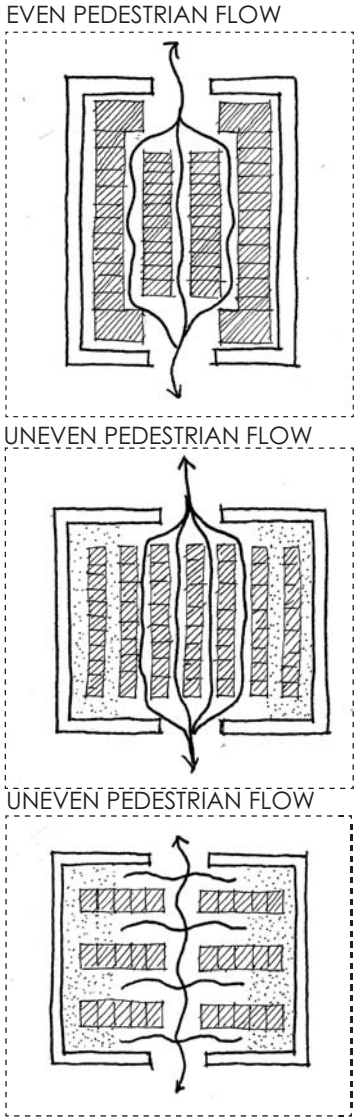


fig. 7.17 Distribution of Pedestrian flows past stalls (Behrens 1997; 216)

A market will only be successful if all the stalls are exposed to passersby. Uneven pedestrian flow must be avoided. Circulation routes must be wide enough so that a people can stand by a stall and that people with trolleys can move between the stalls. The main aisle of a typical market lay out should be 4m and the cross aisle 3.5 m.
The main aisles have a width of 4m. The secondary routes has a minimum dimension 2,8m.

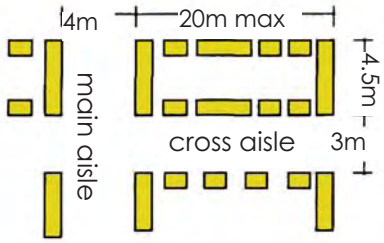


fig. 7.18 Part of typical market layout (Adler 1999: 13.3)

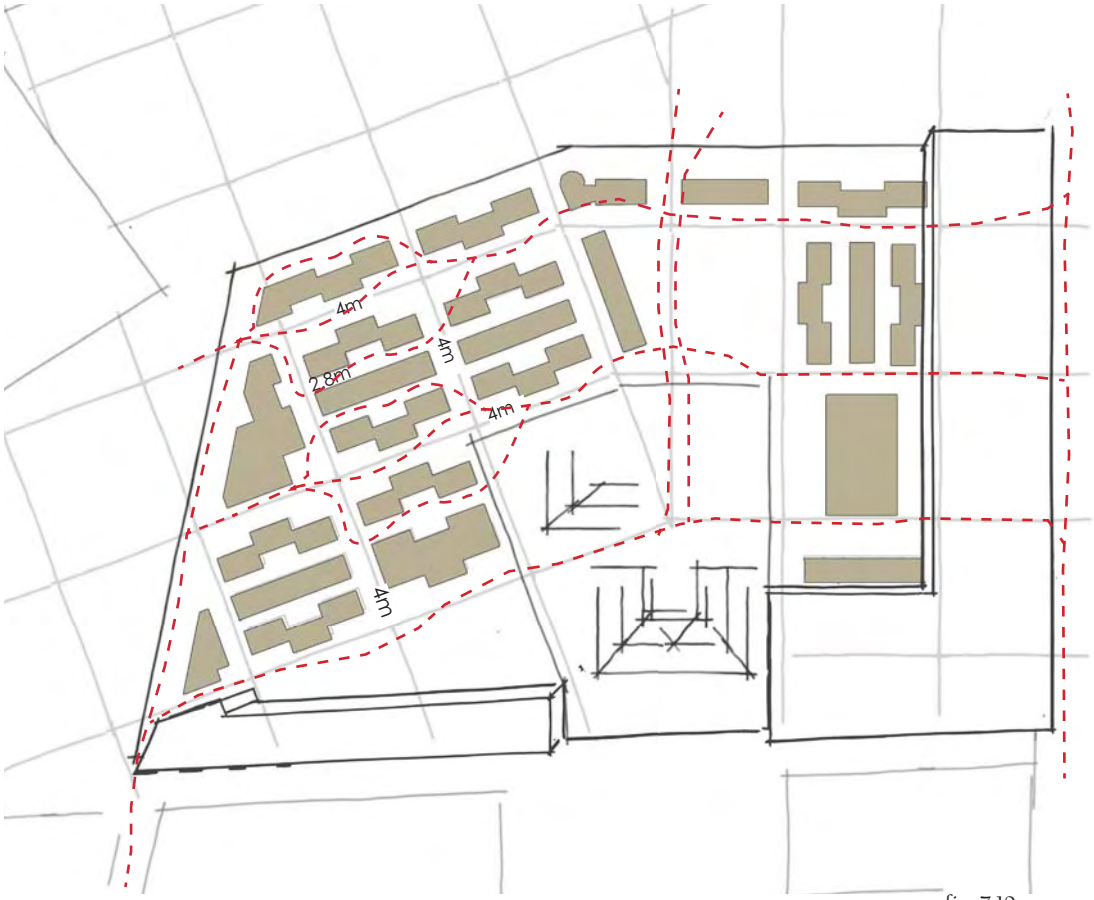
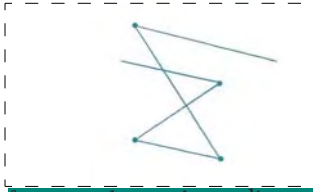


fig. 7.19

movement

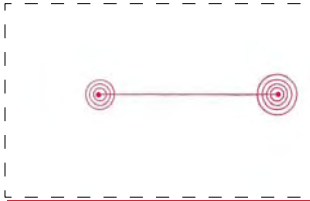
The loiter has his/her place in the city, They give a constant energy in the streets . They have spontaneous rituals that needs to be accommodated by providing places where they can sit or play.

fig. 7.21 Lucky Dlamini - wanderer - loiter - school children



This movement pattern is quick and efficient and needs to know where it is going, by making it legible a person can move quickly through the space.

fig. 7.22 Juluis Malan - direct mover - clerk/ business person



To group public buildings together, people don't need to run in different directions. They can walk at the different nodes where there is a lot of choices.

fig. 7.23 Vanessa Hotbottom - between nodes - worker/ children

Provide adequate places of rest for the old or the disabled. Provide routes through which this pattern can wander. Not jut sterile straight runs of stalls.

fig. 7.24 Ouma Sarah - purposeful wanderer - shopper /tourist

fig. 7.20

concept development

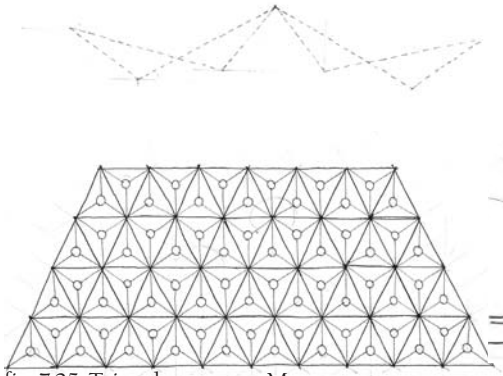


fig. 7.25 Triangle pattern - May

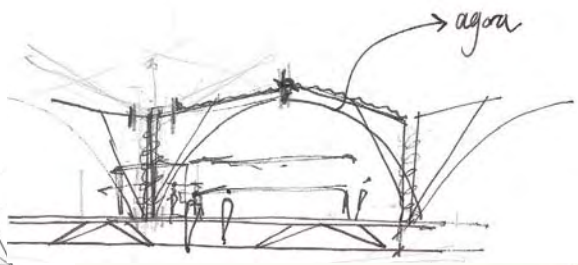


fig. 7.26 Wide spans

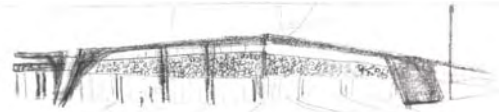


fig. 7.27 Floating Roof - July

fig. 7.28 Floating Roof - July

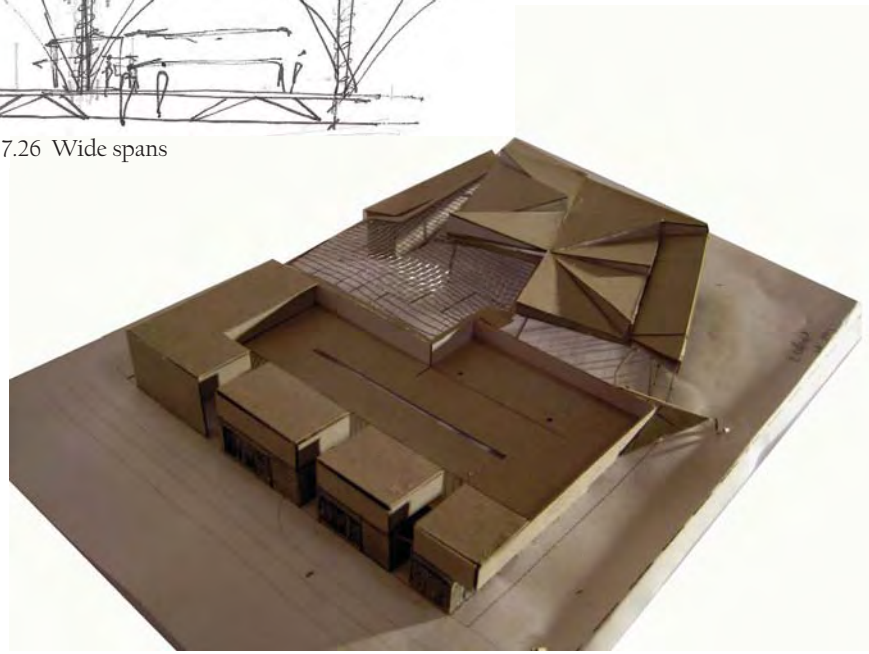


fig. 7.29 Two buildings- July

fig. 7.30 Working model -August

fig. 7.31 Working model - August

The triangle was used to generate the form. (fig 7.25). It is a versatile shape and was appropriate as the site has odd dimensions. The first pattern did not support the wide spans needed in a market and didn't correspond with the grid ordering system. (fig. 7.26) The grid is important to support the delivery scheme. The triangle form was discarded and a flat roof was proposed.(fig.7.27 and fig.7.28)
A roof that seems to float above and over the boundary of the building and at certain points connects to the ground. A roof garden was investigated; the large spans that were needed could not support loads such as a garden is. The floating roof concept did not provide adequate opportunity for natural light and ventilation.
The triangle was revisited. At first the concept of the accessible roof was kept but the conversation between the two buildings was dissatisfactory. (fig. 7.29) After experimenting with concept models and computer generating models, the design was put on the table.

form generator

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fig. 7.32

In the precedent study, it was concluded that the roof is the archetypical image of a market. An elaborate roof makes the market legible in the urban landscape. Besides that, should it also enable adequate daylight to penetrate the building even if the building is more than 40m deep. Natural ventilation was also a major consideration.
By using triangles in different orientation these three requirements were satisfied. The square that is generated from the grid is cut in half and therefore create two triangles. The two parts slope in different directions. (fig. 7.33) A form is so created that signify vibrancy and energy in the city context. This reminds one of produce or livestock in a bowl or an enclosure, they signify vitality.
In the same way this market signifies a feast in the city, a place where one can not only sustain one's body but also one's life in that of the city's sustainability.

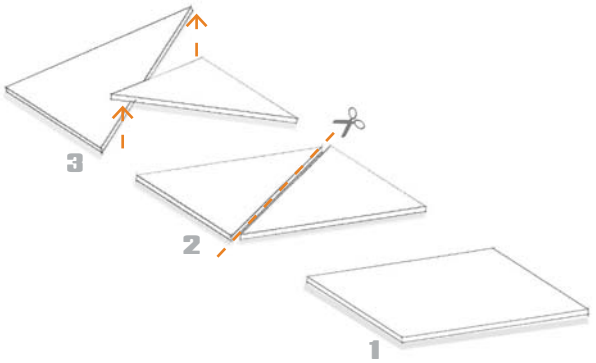

fig. 7.33

accomodation

"A rough guideline is that markets should accommodate at least 70 operators (preferably more) and that expansion should be allowed for. ...it is a general rule that larger markets are more successful than smaller ones. This is because they offer greater choice and diversity, parts of them tend to be more permanent, and other attractions (eg. restaurants, entertainment) tend to be associated with the market." (Behrens 1997; 216)

Basement

Basement Total: 4764m2
Basement Storage x 54: 6m2
Basement Storage x6 : 9m2

Market Floor

Existing House Deli 1: +/- 160m2
Existing House Deli 2: +/- 62m2
Flexible stalls: 103
Fixed stalls: 12
Coffee Bar: Ground Floor 50m2
First Floor Lounge 77m2
Restaurant 1 : Ground Floor
90m2
Kitchen 24m2
Washing 8m2
Storage: 5m2
First Floor
94m2
Bar 23m2
Storage 10m2
Washing 7m2
Restaurant 2: 69m2
Kitchen 26m2
Washinng 11m2
Storage 7m2
Butchery 1&2: Butchery 49m2
Dry Store 5m2
Cold Sore 9m2
Store 1 :20m2
2 :47m2
Total 67m2

Restaurant 3: 35m2
Kitchen 20m2
Washing 7m2
Storage 6m2
Bar

Rest Rooms: Unisex 31m2
Male 33m2
Female 60m2
Service Yard: 170m2
Bakery x3: 41m2

First Floor

Industrial Kitchen x 11: 10m2
Lockers: 55m2
Restaurant 4: 91m2
Sushi Bar 9m2
Wash 16m2
Storage 4m2
Restaurant 5: Area 368m2
Kitchen 41m2
Bar 26m2
Store 1: 4m2
Store 2: 6m2
Terrace : 128m2
Service yard: 5m2

Rest Room: 19m2
Security: 24m2
Administration: 50m2

Total Site Area: 7 724m2
Ground Floor Area: 6 494m2
Basement Floor Area: 4 764m2
First Floor: 1 586 m2
Total Floor Area: 12 844 m2
Floor Area Ratio:
7724/12844= 0.6