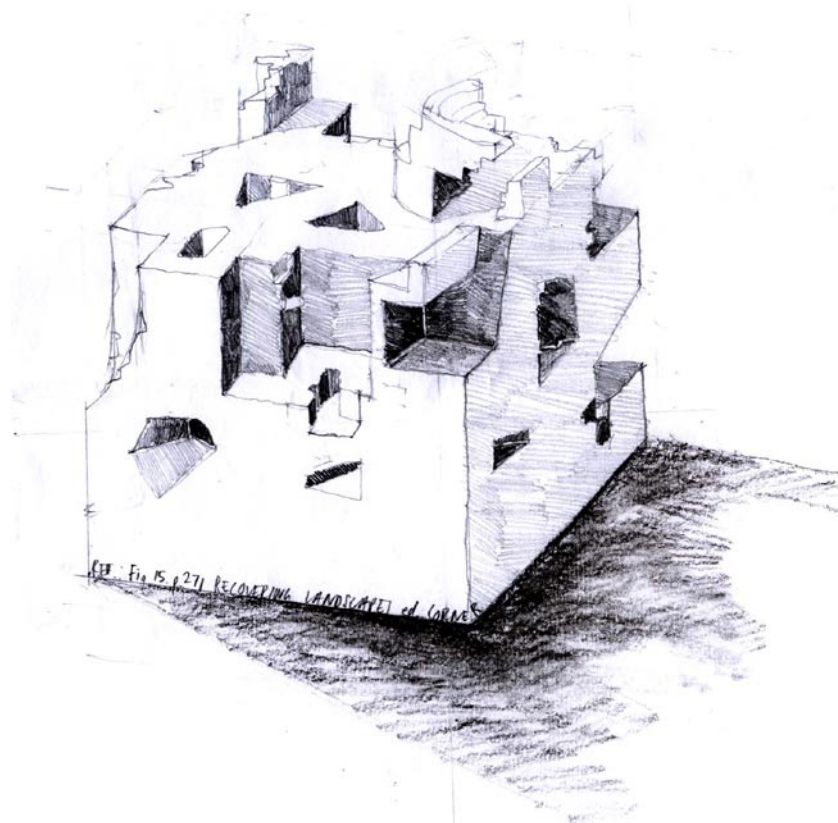


5. design and technical development



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Fig. 5.1 Illustration representing an object's adaptation to its environment (author, 2006)

5.1 DESIGN COMPONENTS

The design serves to improve the environment that directly influences the quality of life of firstly the hawkers (which comprise the main component of users on the site) and secondly the people using the site as a trading, waiting or resting area. From the theory and analysis sections, the following design components were decided upon:

SELLING SPACE

The site is zoned as 'informal market' according to the urban framework by Aziz Tayob Architects. At present, the site already functions as a public market, although other activities are also prevalent, i.e. pedestrian flow and dining.

Behrens and Watson (1997:212) differentiates between four levels of public market provision:

1. Lock-up stalls
2. Market buildings
3. Shelter and stall infrastructure
4. Basic level of market infrastructure.

The thesis project falls between the third and fourth level of market provision.

Allowing for a variety of trading space possibilities (eg. lock-up stalls, counters, etc.) would make a market space more user-robust, but due to restricted space on this site, it would result in a congested space. Hence, the decision was made to have no formally constructed stalls, but rather mainly open space that allows the hawkers to position themselves where they see fit. Though Hardoy et al. (1989:15) refers to the layout of communities, and not necessarily the layout of traders in an open space, they state that the daily users of an area know the area they use the best (i.e. movement patterns). In the case of the traders, they would be able to make the best judgment as to which positions would allow the most customers, thus an open space allows them liberty to place themselves. One can however make relatively accurate assumptions as to where the traders would set up their stalls. People in general, feel safe when they have protection behind them, requiring that they only survey the area in front of them, as the defensible space theory of Newman states (Broadbent, 1990:149). From this and by observing the traders in Marabastad, one can assume that traders would locate themselves against columns, along railings, walls and other structures (view figures 5.2-5) and specifically along large volume pedestrian routes (view figures 5.6, 7). This requires that suitable structures be provided for the hawkers against which they can place themselves, but at the same time structures that are not specifically hawker stands. It also requires that the structures are located as close as possible to high volume pedestrian routes.

Currently, all hawkers selling in the open air have no permanent hawker stalls except the ones illegally squatting in certain parts of Marabastad. Many, though not all, hawkers have gazebos that they set up each morning as shelter. Others might set up a table and an umbrella, or only a custom-made table from which to sell. There is a degree of flexibility that the hawkers enjoy by not having a permanent stall. If, for instance, the need arises for them to set up stall elsewhere, they are free to do so.

Fig. 5.2 Columns as structure for hawker stalls (author, 2006)



Fig. 5.3 Wire screen as hawker stall support (author, 2006)



Fig. 5.4

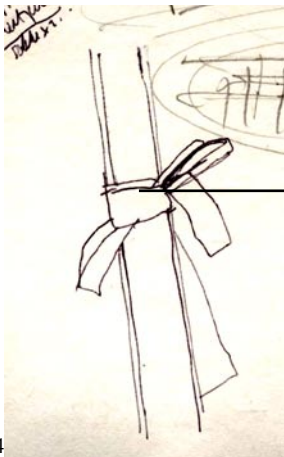


Fig. 5.5

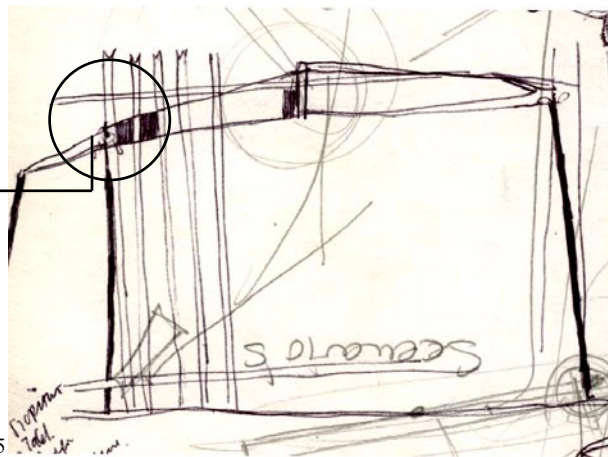


Fig. 5.4, 5 Illustrations of hawker stall fastened to fence (author, 2006)

Not providing physical hawker stands also leaves the area uncluttered and it allows the space to be used for other functions when selling does not occur there, i.e. concerts in the evenings. Because it is an already existing trading area, most traders have fixed selling spaces and although there are not individually indicated selling spaces, an understanding exists as to which area belongs to whom. This being another reason for avoiding the provision of constructed stalls.

In addressing the need to provide trading space for hawkers, an alternative solution to its provision is to ensure that walkways in the design are wide enough to accommodate pedestrians, hawkers and buyers. Since the site needs to cater for all three, the solution applies well in the area. Depth of stalls are generally between 1,5 and 2 metres and stall widths range between 1 and 2,5 metres depending on their function - an average of 5 metres is proposed for walkways that can accommodate both pedestrians and stalls (Behrens et al., 1997:216).

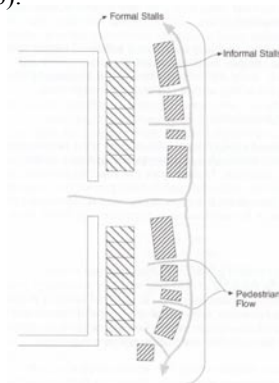


Fig. 5.6. Linear configuration of formal and informal stalls (Watson & Behrens, 1997)

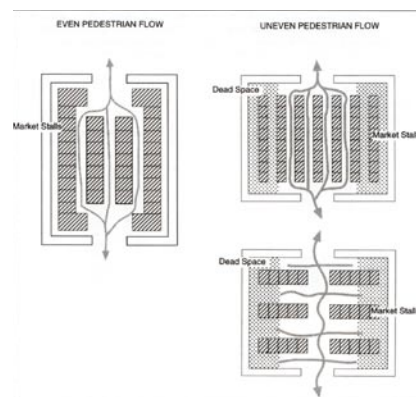


Fig. 5.7. Illustrating distribution of pedestrian flow along different stall layouts (Watson & Behrens, 1997)

AMENITY PROPOSAL

From case studies, observation, interviews and research, the following amenities are proposed:

- Storage

There are already five containers that have been provided at certain spots in Marabastad in which traders can store their stock. A payment of roughly R20 a month is made and the containers generally stay open until seven o'clock at night. Prices of storage space rent are however fluctuating and uncertain and cause discontent among the traders.

The need for regulated rent prices should be considered, with the possibility of a hawkers association which will be able to regulate prices.

- Garbage bins

- Shelter

- Toilets

- Electricity

- Water

- Steel structures along certain edges of the site to serve as frameworks for trading stalls

In discussing the provision of infrastructure for markets, Behrens and Watson suggest that provision should occur as a response to the emergence of a market. The 'emergence' of a market has already occurred on this site and thus the appropriateness of the provision of amenities (Behrens et al., 1997:217).

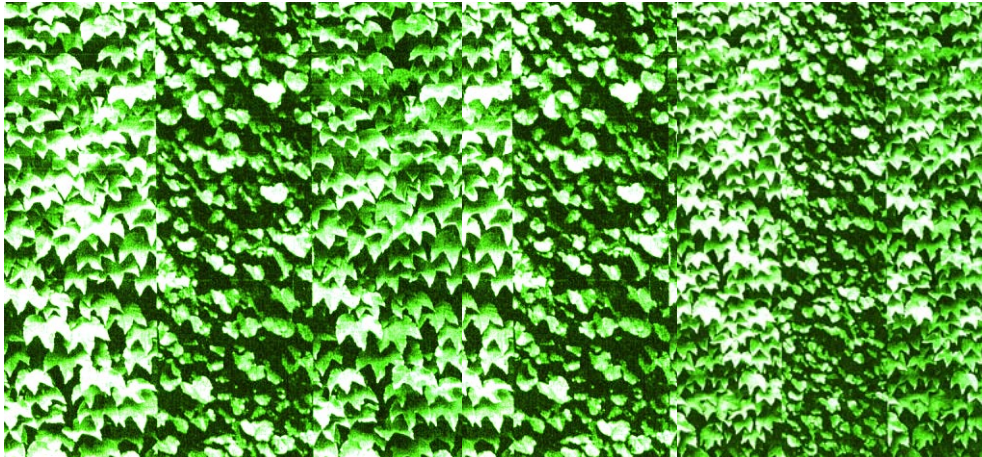


Fig. 5.8. (author unknown)

PLANTING

In a recent National Geographic article the positive effect which contact with nature brings about in people is reiterated. The article states that “*parks and gardens are...essential to human social and psychological well-being*”. Research shows that people who are in contact with green areas can better cope with stress and hardships, they are also less aggressive and violent, and apparently achieve better results in concentration tests (Ackerman, 2006:110). All the planting species proposed for the area are indigenous for the reason that most indigenous vegetation attracts specific insects and birds (Joffe, 2001:10). If this could be the case on the site, the space might be the only place where commuters can come into contact with a small piece of nature. It is proposed that all the trees that are to be planted on the site, be planted level to the ground (as opposed to being planted in planters) in tree grids. This allows the paving area to continue uninterrupted and thus provides unobstructed walking surface for the many pedestrians that use the area.

PROPOSED TREE SPECIES

- Terminalia sericea (Silver clusterleaf)
- Mimusops zeyheri (Transvaal Red Milkwood)
- Pterocarpus rotundifolius (Dopperkiaat)

The Terminalia and Pterocarpus tree species are chosen for their light canopies that allow dappled sunlight to reach the floor surface, but that still provide shade against the harshest sun (Joffe, 2001:114, 95). This quality is important since the space is relatively small, and a densely canopied tree would result in an overly-shaded space. All three tree species do not have aggressive root systems, preventing damage to paving. The Terminalia and Pterocarpus species are deciduous and the Mimusops evergreen.

PROPOSED CLIMBER SPECIES

- Combretum microphyllum (Flame creeper)
- Clematis brachiata (Traveller’s Joy)

Both climbers are fast-growing, providing greenery in the area in a relatively short time, and both need a structure for growth stability. The climbers also both have a beautiful display of flowers, the Clematis in summer, and the Combretum between August and October (Joffe, 2001:351, 353).



Fig. 5.9. *Clematis brachiata* (Joffe, 2001)



Fig. 5.10. *Combretum microphyllum* (Joffe, 2001)



Fig. 5.11. *Terminalia sericea* (Joffe, 2001)



Fig. 5.12. *Pterocarpus rotundifolius* (Joffe, 2001)



Fig. 5.13. *Mimusops zeyheri* (Joffe, 2001)

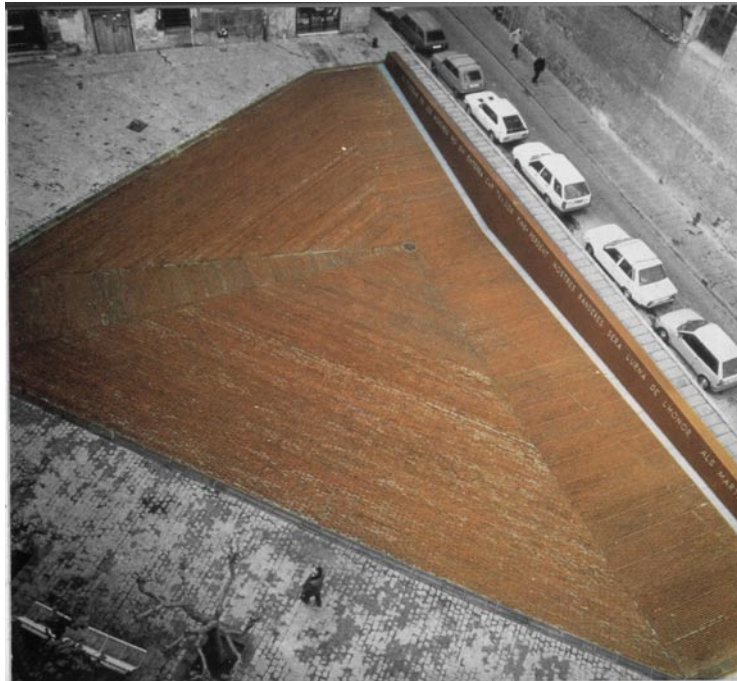


Fig. 5.14. Fossar de les Moreres, Barcelona, Spain: example of patterned application of brick paving (Berrizbeitia & Pollak, 2003)

PAVING, SURFACE AREA AND STORMWATER RUNOFF TREATMENT

Unterman (1984:59) states that two thirds of a person's 'visual cone' is toward the ground, making detailed paving even more essential in Marabastad where most of the movement is pedestrian. For this reason, brick is used as paving material for the intimate, human quality it possesses. The specific brick pattern application for each zone is discussed in section 5.2.

To allow unobstructed pedestrian movement, most of the surface area on the site is without level differences. The only exceptions are the sunken courtyard space and the barrier kerb by the bus terminal. The level difference of the courtyard is to distinguish the movement zone from the quieter space of the courtyard, while the barrier kerb is to encourage people to rather cross the street at the official pedestrian crossing.

Surface runoff treatment is incorporated into the paving pattern by sloping the paving in such a manner as to lead all the water off site via a shallow swale (fig.5.16). Incorporating the stormwater runoff system into the paving allows the paving to be more than just aesthetic (Pinder & Pinder, 1990:3).

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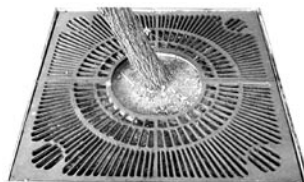


Fig. 5.15. Tree grid (author, 2006)

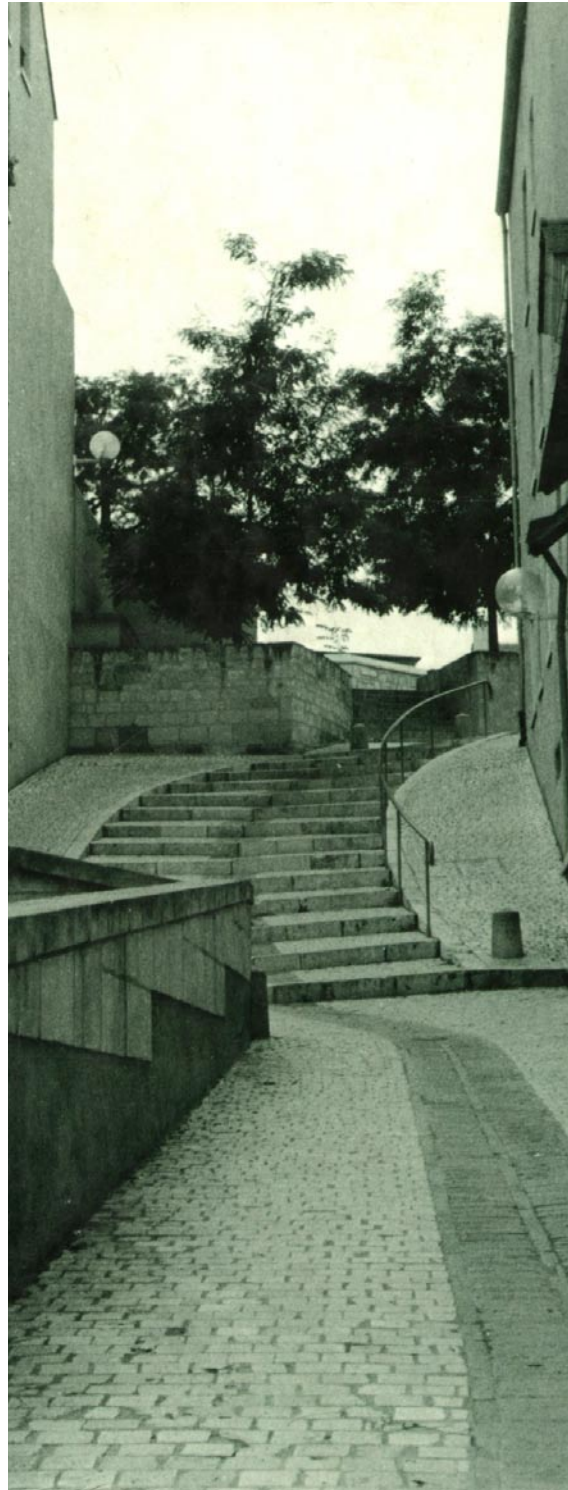
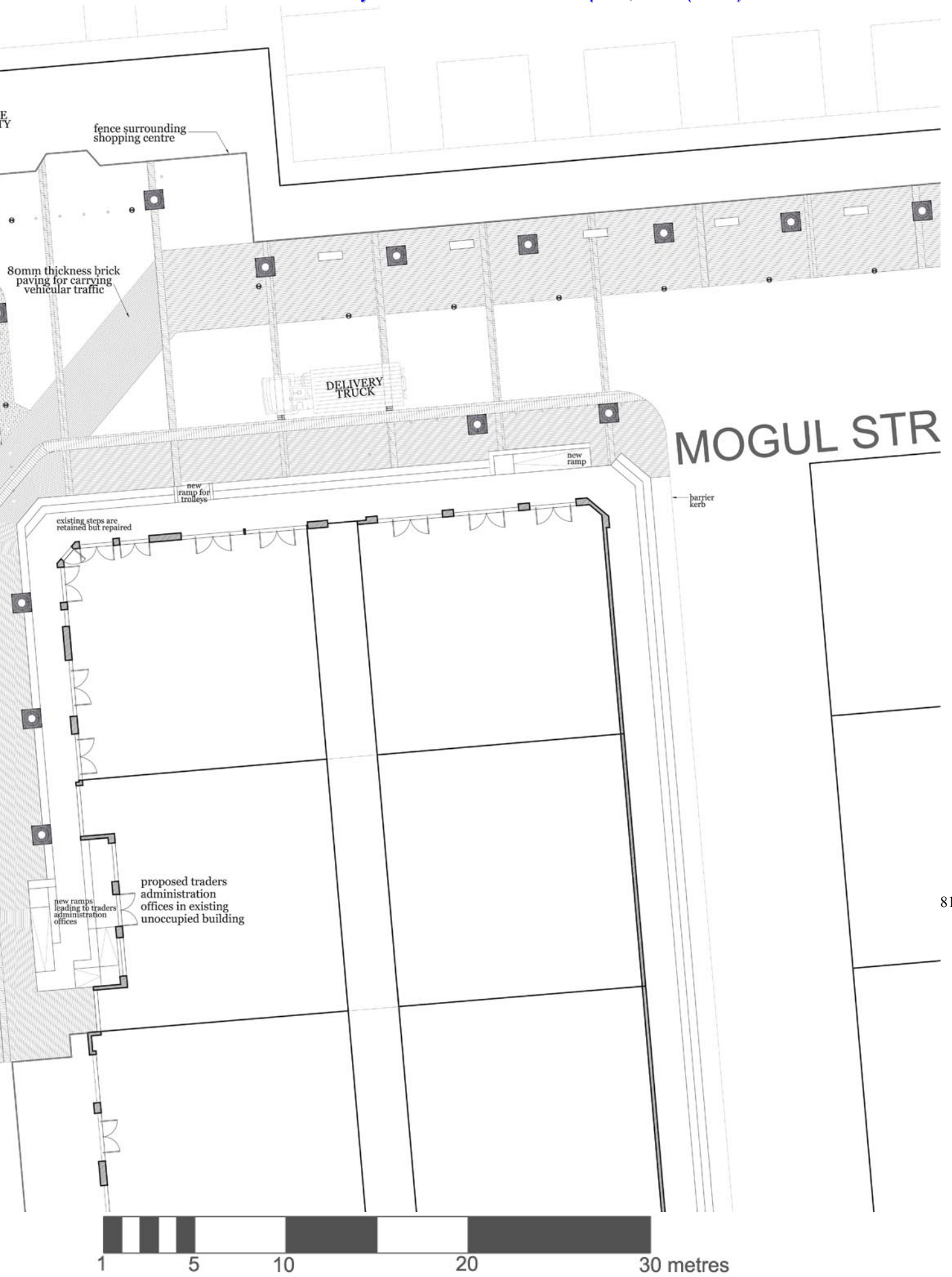


Fig. 5.16. Example of stormwater runoff treatment incorporated into paving (author unknown)



PAVING PLAN 



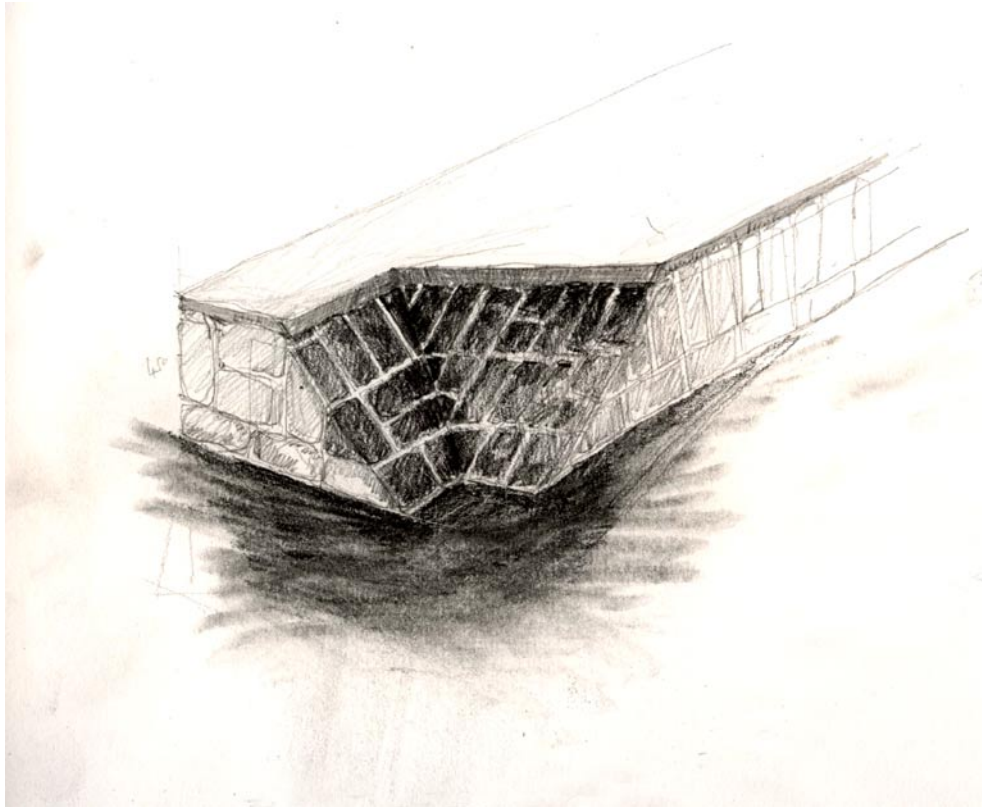


Fig. 5.17. Detail of proposed brick bench with pedestrian friendly corner (author, 2006)



Fig. 5.18. Wall serving as protection and seating (author unknown, 1984)

SEATING

Where it is feasible, all the areas of level-change and where retaining walls are necessary, the structures built are so treated that they provide ‘sittable’ space. Whyte (1980:28) speaks of ‘integral sitting’ as seating formed by features inherent in an area (eg. steps) that if treated correctly, could serve well as sitting space. A number of objects that could be made ‘sittable’ include ledges, planter edges, bollards and retaining walls.

Seating walls can also serve as barriers between pedestrians and vehicles (view figure 5.18), as well as serve as a divider of a space’s functions, i.e. pedestrian circulation and quieter seating space.

Furthermore, movable chairs that allow freedom of placement to its users are proposed for the courtyard (Unterman, 1984:28). Most of the eating stalls on the site already provide loose plastic chairs for their customers.



Fig. 5.19. Eating stall with portable chairs and tables in Marabastad (Molenaar & author, 2006)

PEDESTRIAN ACCOMMODATING WALKWAYS

It is necessary to respond to the large pedestrian volumes prevalent on site by preventing the design of features that can potentially cause harm (eg. sharp edges, view fig. 5.17). Often-passed corners are treated in such a manner as to prevent unnecessary injuries, and round columns (eg. at the Baragwanath Transport Interchange in Soweto), instead of square ones, are used in high traffic areas for the same reason. The overall levelness of the site and the elimination of steps in highly trafficked areas are other aspects that will walking more pleasant (Unterman, 1984:6).

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LIGHTING

The provision of effective lighting can serve a safety, social and economic advantage by allowing night activities on site. Hawkers selling food could economically benefit from better lighting, being able to stretch their time of selling into the evening. The combination of good lighting and public activity on site in the evenings will make it safer and more accessible to the broader public.

→ BARBER STREET

LORENTZ STR

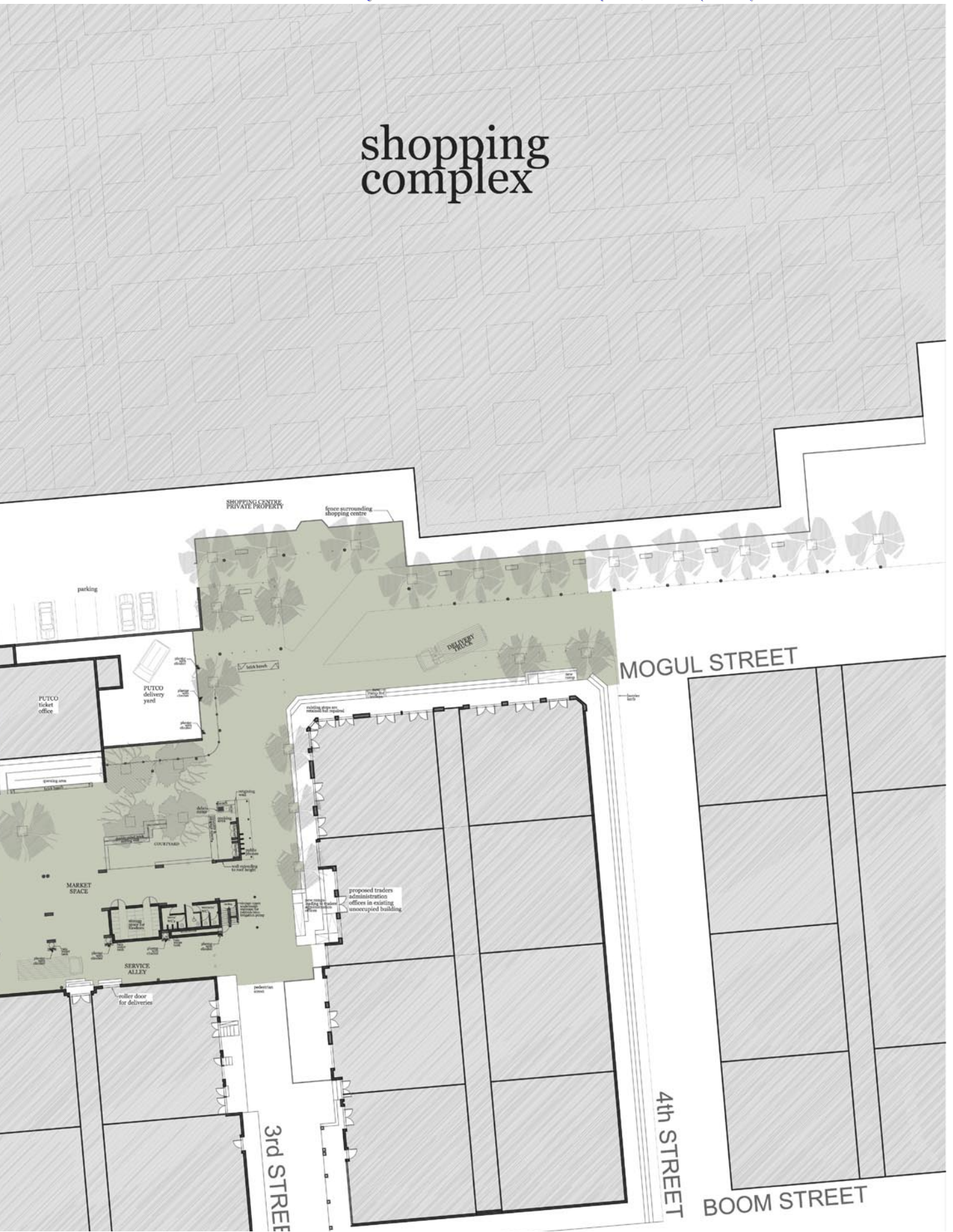


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SITE PLAN 

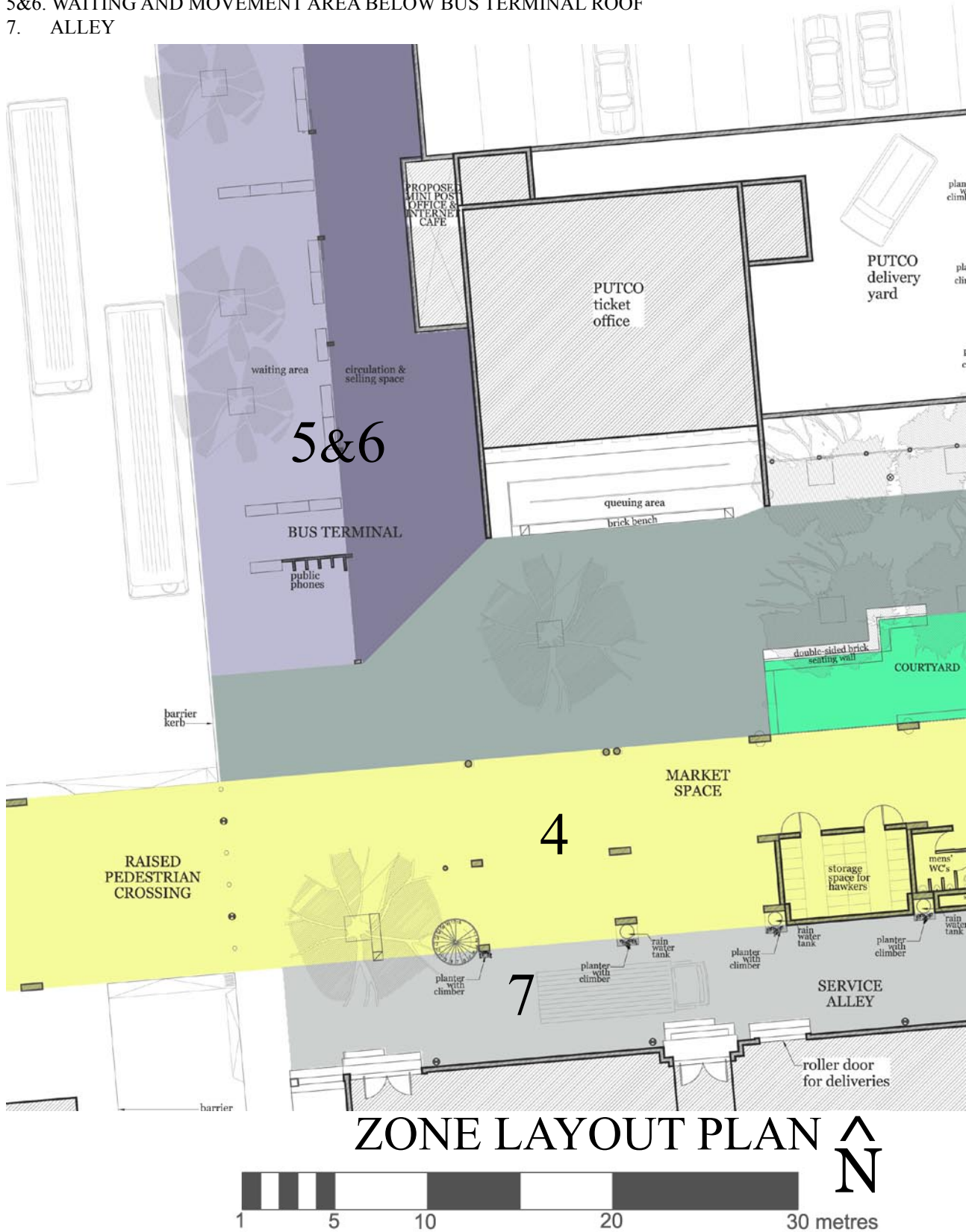


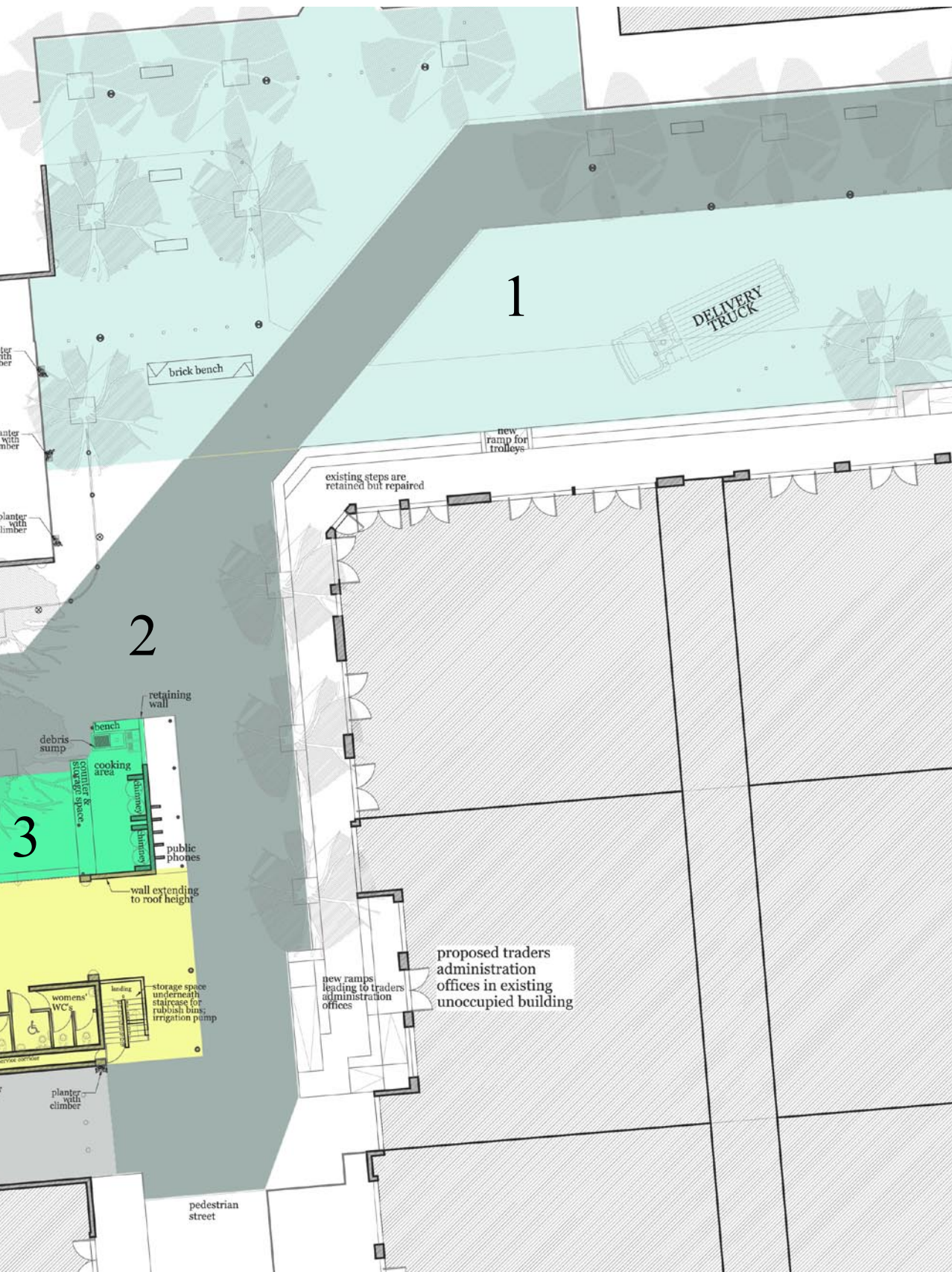
shopping complex



5.2 DESIGN PROPOSALS IN EACH OF THE SEVEN ZONES

1. APPROACH TO SITE
2. MOVEMENT ZONE
3. COURTYARD
4. VAULT SPACE
- 5&6. WAITING AND MOVEMENT AREA BELOW BUS TERMINAL ROOF
7. ALLEY





ZONE 1.
APPROACH TO SITE FROM BELLE OMBRE TRAIN STATION – MOGUL STREET



LAYOUT PROPOSAL

As is stated in the theory component, the decision was made to respect the current layout of the site, which is shaped mainly by the positioning of the hawkers. Most of the hawkers place themselves along the edges of the site and some have strategically placed themselves in frequently passed areas that are not necessarily along edges. This layout of the hawkers is one of the main factors determining the placement of structures and planting.

STRUCTURES PROPOSAL

Due to the compromise of movement between pedestrians and vehicles, few structures are proposed for this zone. The extent of structures include seating along the edges of the site, bollards that segregate pedestrians from vehicles and vertical gum poles at intervals that can serve as support for the structures of hawkers' stalls.

Since the zoning of the framework proposed for Marabastad does not include this area as official informal market, simple structures (i.e. the gum poles) instead of built structures are proposed to assist traders selling along the fence.

PLANTING PROPOSAL

The extent of vegetation for this zone is trees, planted along the edges of the site. The planting would serve as shelter for hawkers selling in that area. The fence mentioned earlier is seen as the boundary against which the structures and planting are placed.*

SERVICES PROPOSAL

No services are proposed for this area.

PAVING PROPOSAL

Paving suitable for relatively heavy vehicles (garbage trucks, delivery vehicles) is naturally proposed in the areas where heavy vehicles traverse the street. The areas segregated for pedestrians and hawkers only can be treated with the same quality as is proposed for zones 5 and 6.

Although different types of paving are proposed, paving materials that are similar (i.e. in colour and shape) is desired to ensure the continuation of surface area that is at a suitable scale for pedestrians, since pedestrians are the most frequent users of the site.

*If the fence is removed in the future, the structures and planting placed along the edge of the fence would still be suitable and not out of place. Both the structures and planting would provide comfortable congregation space outside shops and so attract people while the trees also add pedestrian scale to the street (Untermann, 1984:165), making the necessary walk down Mogul Street a more pleasant experience for the commuters.



ZONE 2.
MOVEMENT ZONE THROUGH AND ALONG SITE



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Fig. 5.20. Directional paving (Weilacher, 1999)



Fig. 5.21. Swale incorporated into paving (Pinder et al, 1990)



LAYOUT PROPOSAL

The area where most of the pedestrian flow occurs requires unobstructed space for movement. Enough space for movement should be allowed to accommodate pedestrian flow while still allowing for extra space needed for pedestrians that stop for retail purposes as well as allowing for seating space. To accommodate people who want to sit, seating along the edges of the movement zones are proposed.

The open area in front of the ticket office also holds the potential of becoming an outside area where people could gather in the evenings. Food could be served from the courtyard space (described below) to the crowds that gather and a lively atmosphere could be created within a well-lit area.

STRUCTURES PROPOSAL

Structures include the benches proposed along the movement space. Bollards are also proposed where vehicle movement should be restricted.

PLANTING PROPOSAL

Trees are proposed along the edges of the movement zone. The trees would provide shade for hawkers and seated persons and would also serve to define the space.

SERVICES PROPOSAL

No services are suggested for this area except for the proposed ablution block next to the ticket office.

PAVING PROPOSAL

Part of the paving in this zone would functionally serve as a shallow drainage channel for stormwater runoff. As previously discussed, paving can also be used directionally and the movement zone seems an appropriate area for applying paving in such a manner.



ZONE 3.
COURTYARD SPACE



LAYOUT PROPOSAL

The courtyard's longitudinal sides face north and the courtyard is therefore optimally oriented with respect to sun orientation. The layout proposed is mainly rectangular except for a narrowing of the courtyard where the movement zone adjacent to the courtyard requires the extra space. The largest area of the courtyard would ideally be used as seating space for customers of the food stalls and others stopping to relax.

The layout also includes a space designated for cooking. This area would include most of the services in this zone (i.e. water and electricity points). The cooking area includes a counter, with lockable space underneath. The traditional cooking in 'konkas' produces a lot of debris and ash, and as with the bovine head cooking facility in Warwick Junction, a sump designed to catch the debris is proposed.

Integral to the proposed roof over the cooking facility are two chimneys constructed to prevent smoke from entering areas where it is not wanted.

STRUCTURES PROPOSAL

Partial roof covering over the cooking space is suggested to provide impervious shelter. Bordering the courtyard is the proposed vaults; the vaults and the roof covering the cooking space serve to enclose the courtyard.

The boundaries of the courtyard space are a seating wall in the north, steps in the south and west and cooking space in the east. The seating wall is double-sided and serves as seating to both the outside of the courtyard and its inside space.

SERVICES PROPOSAL

Services proposed in this area are water and electric points that mainly serve the cooking area.

PAVING PROPOSAL

A paving pattern that focuses inward (i.e. circular) into the courtyard space is proposed for the area. Since the area would be used not as a place to quickly pass through as on the rest of the site, but rather as a place to stop, a more detailed paving pattern could be implemented. People have time to observe detail and smaller paving materials (i.e. half bricks) would suit the area.

PLANTING PROPOSAL

One tree inside, and one just outside the courtyard is proposed. The latter tree is close enough to the courtyard that it still influences the character of the space. Next to one of the vault columns bordering the courtyard a climber in planter is suggested that could grow up the column and so introduce vegetation in the area.



Fig. 5.22.
Konka (author,
2006)

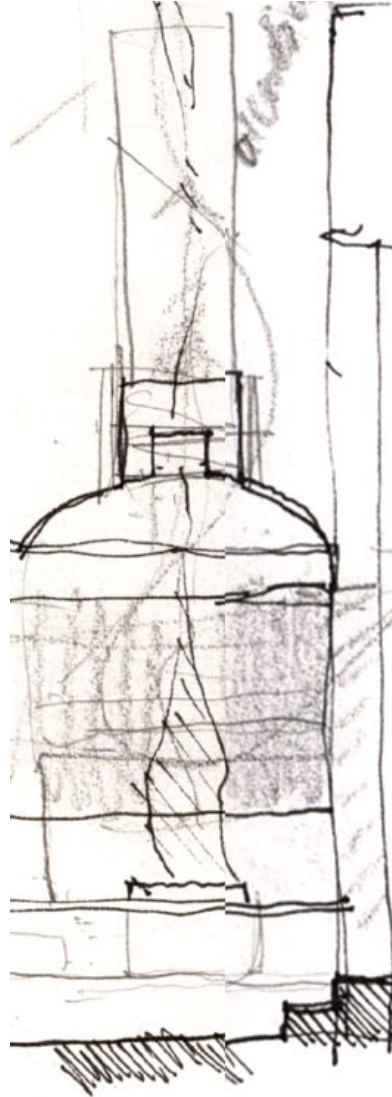


Fig. 5.23. (author,
2006)



Fig. 5.24. (author,
2006)

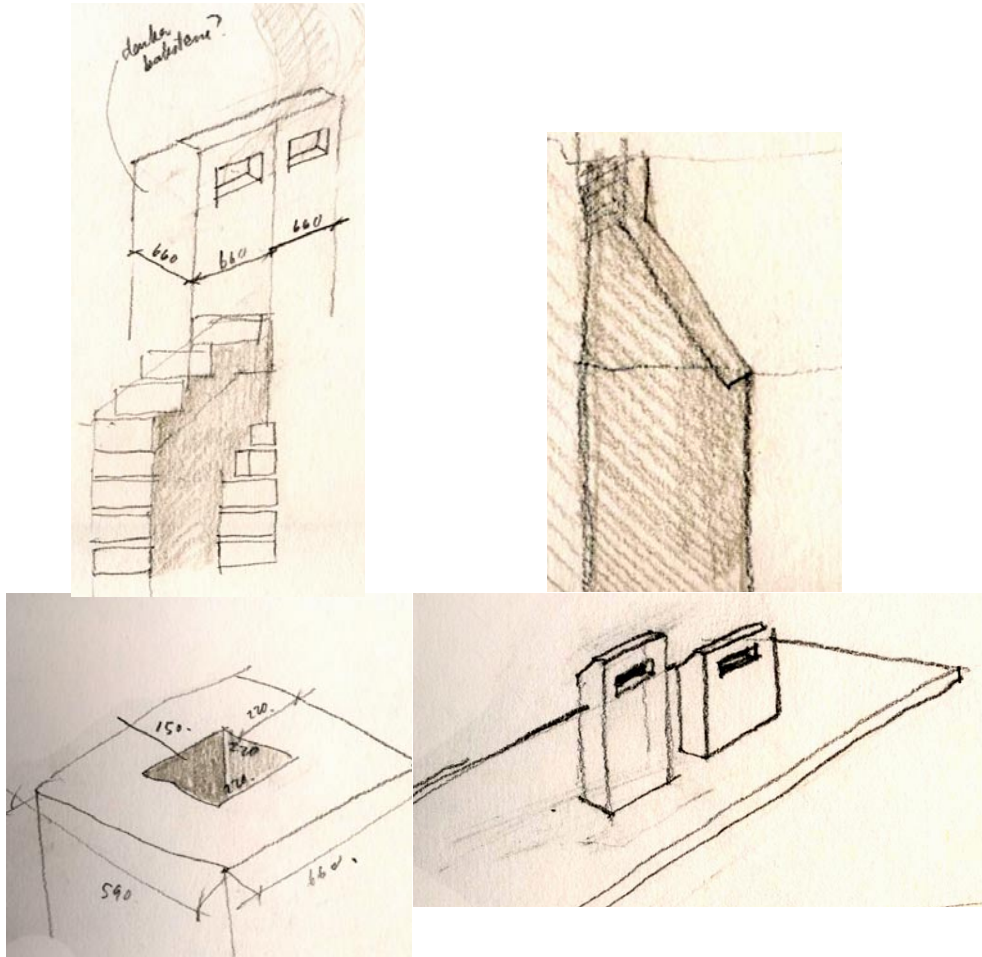


Fig. 5.25. (author, 2006)



ZONE 4.
VAULT SPACE



LAYOUT PROPOSAL

The layout is linear in an east west direction and follows the tendency of the permanent hawkers to place themselves in this direction. The function of the vaults is to serve as overall structure for hawkers to place themselves under. The structure also serves as a core onto which services can be added.

The reasoning behind the placement of the vaults in this position is because the northern façade against which the vaults are placed does not respond to the street. The vault structure's visual permeability will however will not result in totally blocking the façade. Placing the vaults relatively close (5m) to the buildings also did not cause reason for alarm for the same reasons. Storage space and a new ablution block between specific columns also make up part of the layout. They are placed in an area below the vaults that can be anticipated not to carry as many pedestrians as the rest of the area and therefore their positioning would not really upset flow of movement.

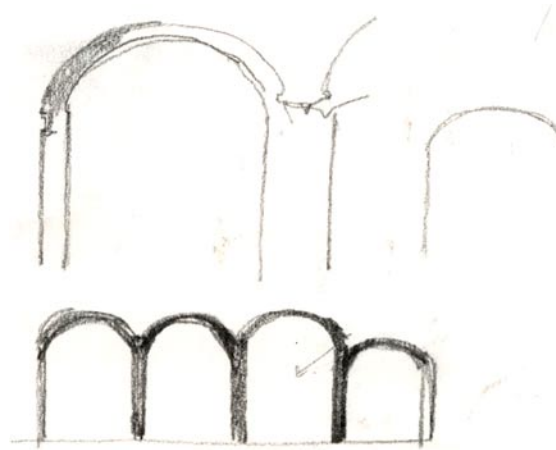


Fig. 5.26. (author, 2006)

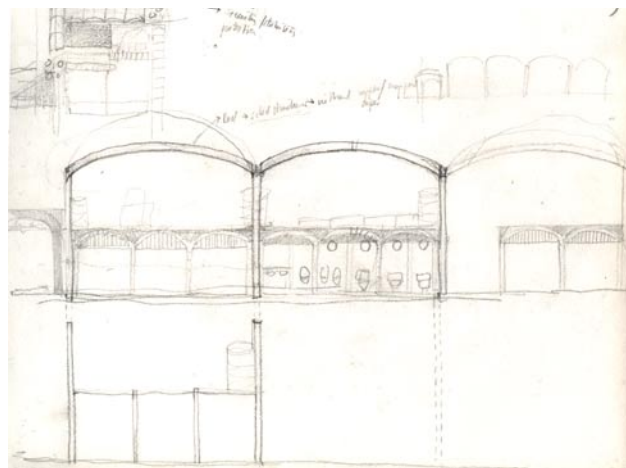


Fig. 5.27. (author, 2006)

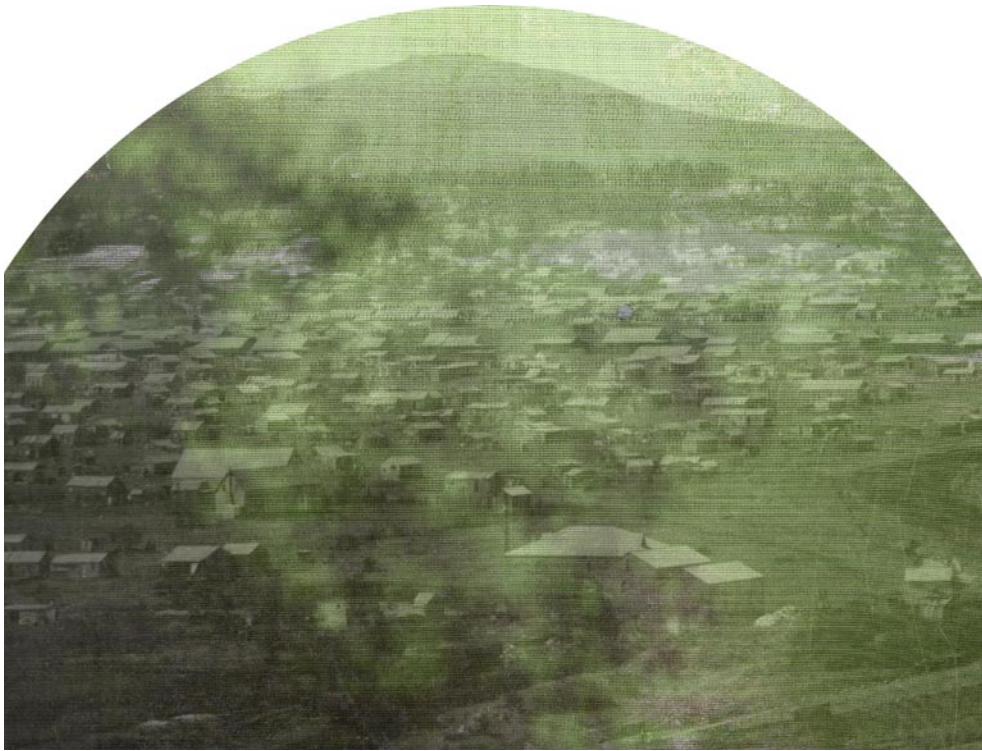


Fig. 5.28. Screen in vault (author, 2006)



Fig. 5.30. Peanut bag (author, 2006)

Fig. 5.31. Peanut cooker (author, 2006)



Fig. 5.29. Typical folding table used by hawkers (Greenfield catalogue)

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Fig. 5.32. Trolley (author, 2006)



Fig. 5.33. Trolley (author, 2006)



Fig. 5.35. Carrying bag (author, 2006)

Typical features used by hawkers in Marabastad

STRUCTURES PROPOSAL

The vaulted structure was not chosen as a shape that responds to its surroundings, but rather for the qualities inherent in vaults. C. Alexander speaks of a ‘sheltering roof’, a vault being an example of such a roof. The respective vaults all create a separate, individual space and so divide the large space into a few smaller ones, creating a more human scale and thus an ‘atmosphere of shelter’ (Alexander, 1977:572). The height (approximately 8m) of the vaults was initially decided upon as a reaction to the experience of walking through the historical market located in Marabastad (view figures 2.6 and 4.19). The historical market, as described in the analysis, has an inappropriately low roof, with meandering pathways leading to different selling spaces. The layout of the market makes the space quiet, dangerous and unpleasant, and the market is not on any direct pedestrian route, which limits potential customers from passing stalls.

The height also allows space for a mezzanine floor. The choice was made to construct the mezzanine floor across the southern length of the vaulted structure only. This allows a large part of the vaulted structure to still have a double volume and so create the openness that was observed as lacking in the historical market. The mezzanine floor serves as a space proposed for use as workshops (refer to section on economic situation in Marabastad) and also as shelter for hawkers on the southern side of the vaults. A screen of shade cloth in a steel frame is proposed on the structure’s northern façade, since the height of the vaults would allow rain to enter the structure. The mezzanine floor also serves as roof for the storage facilities and the men’s ablution block.

PLANTING PROPOSAL

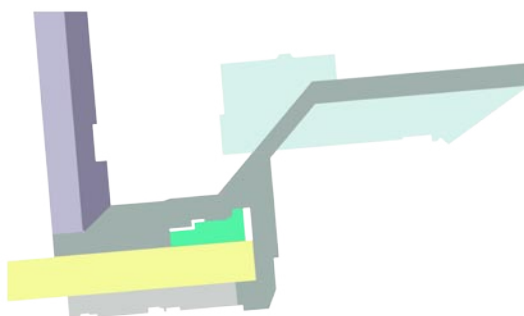
Planting in this zone consists of one or two trees and climbers planted in planters next to the structures’ columns and allowed to grow up the column.

SERVICES PROPOSAL

The vault structure serves as a core (view case study 5) into which certain amenities for the hawkers can be fixed. Amenities such as storage facilities and other associated infrastructure (i.e. electricity and water) are the services proposed for this area.

PAVING PROPOSAL

Paving in this zone is proposed to be a specific community project that the people using the site, especially the hawkers, can assist in designing and paving. The paving materials for this area can also be smaller than the general size paving unit (i.e. brick) used throughout the site, since the movement tendency in this area is also to slow down, giving the opportunity to observe the floor surface.



ZONES 5&6.
WAITING AREA AT BUS TERMINAL AND
MOVEMENT AREA BEHIND WAITING AREA



Fig. 5.36. Sign pillar at bus stop: something to read while waiting (Alexander et al, 1977)



Fig. 5.37. Teller: a service (author, 2006)

LAYOUT PROPOSAL

It is proposed to remove all the existing steel railings and seating. The western half of the area cleared below the terminal roof is to function as a seating area for commuters waiting for buses. Included in the proposal of the waiting area is the addition of trees. The eastern half of the cleared area below the terminal roof is to be used as circulation space and space for hawker trading.

Alterations to the existing layout are in areas where structures have hitherto prohibited movement and thus influenced the positioning of hawkers (following the accepted principle that hawkers place themselves at places of intense pedestrian movement). Anticipation as to where hawkers would locate themselves is also made also according to the above stated principle.

The 'Bus stop' and 'A place to wait' patterns in A Pattern Language (Alexander, 1977: 453&710), suggest that in a place where people have to wait, one can at least attempt to make the waiting experience positive, by combining waiting with other activities. In the Marabastad context, facilities such as automatic tellers, a small post office, an internet café and public phones is proposed to be implemented in close proximity of the bus stop. These activities are proposed along the movement area behind the waiting area. The width of the terminal is narrow enough so that with whichever activity a commuter is busy, he/she would still be close enough to the bus stop to be able to hear it arriving.

STRUCTURES PROPOSAL

It is proposed that certain parts of the roof be cut out of the existing roof, either to facilitate better pedestrian movement or to allow trees to be planted at certain intervals along the terminal. There is already a tendency with the hawkers to use the steel structure supporting the terminal roof, as armature on which to hang certain goods sold (view figures 5.2 and 5.3). It is proposed to add a new steel framework onto the existing one, at a lower level, to make it more accessible but still leaving enough headspace for comfortable walking.

Constructing a small building that could house a miniature post office, an internet café and an automatic teller against the ticket office's western wall is proposed. Extending the existing roof attached to the ticket office.

PLANTING PROPOSAL

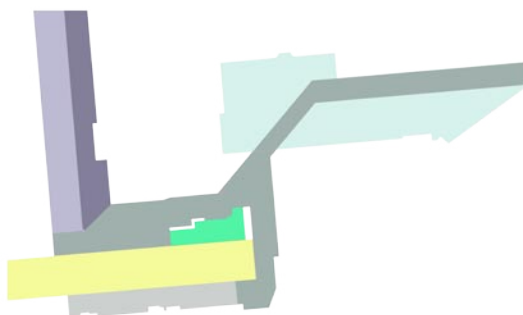
The only planting proposed in this zone is trees in the spaces created where the existing roof has been cut out.

SERVICES PROPOSAL

Banking facilities in the form of an automatic teller, public phones, post office facilities and internet connection is proposed in this zone. Currently, barbers on the streets use charged batteries as power supply to motor their clippers (view fig. 4.8). The provision of electricity will allow small businesses to set up their stalls with more ease.

PAVING PROPOSAL

The paving in this zone is divided into two paving types. The first paving pattern is a general paving pattern, neither directional nor inward-facing, and the second is the paving pattern applied in the waiting area. The first pattern is proposed as general (i.e. running bond, stacked mix) since a variety of activities occur here. The second area is a waiting area, thus the same type of paving pattern is proposed in this area as is proposed in the courtyard zone.



ZONE 7.
ALLEY

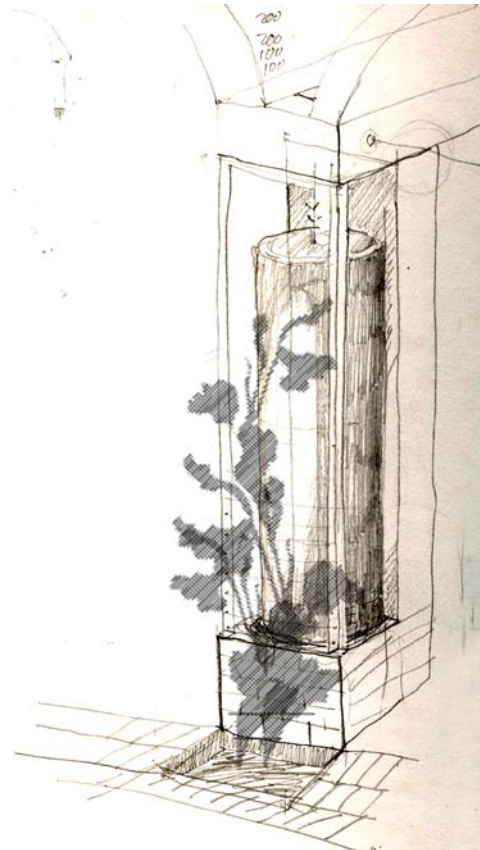


Fig. 5.38. (author, 2006)

LAYOUT PROPOSAL

The most important proposal for this zone is the opening up of the impermeable edge produced by the hawker stalls. Permeability will ensure a safer space because of increased visibility on the site and it would visually enlarge the relatively small area by extending the observable space. Unterman (1984:147) suggests that with the addition of landscape elements, existing alleyways can be transformed from being mere service lanes into spaces where pedestrians would enjoy walking.

STRUCTURES PROPOSAL

Structures in this zone would only include bollards preventing vehicles to drive beyond the delivery area and planters for climbers.

PLANTING PROPOSAL

Lack of space prevents the planting of trees. Climbers in planters are however suggested next to the vaults' columns to soften the space and so attract pedestrians.

SERVICES PROPOSAL

No services are suggested for this area.

PAVING PROPOSAL

Using the same paving material as is used throughout, the alleyway can in this way also be included as part of the site area. This part of the paving would however necessitate a stronger sub-base for carrying vehicles.



ROOF PLAN



2ND FLOOR PLAN



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University of Pretoria etd – Swanepoel, I M (2007)
DRAINAGE PLAN














IRRIGATION PLAN



STREET FURNITURE PLAN

LEGEND:

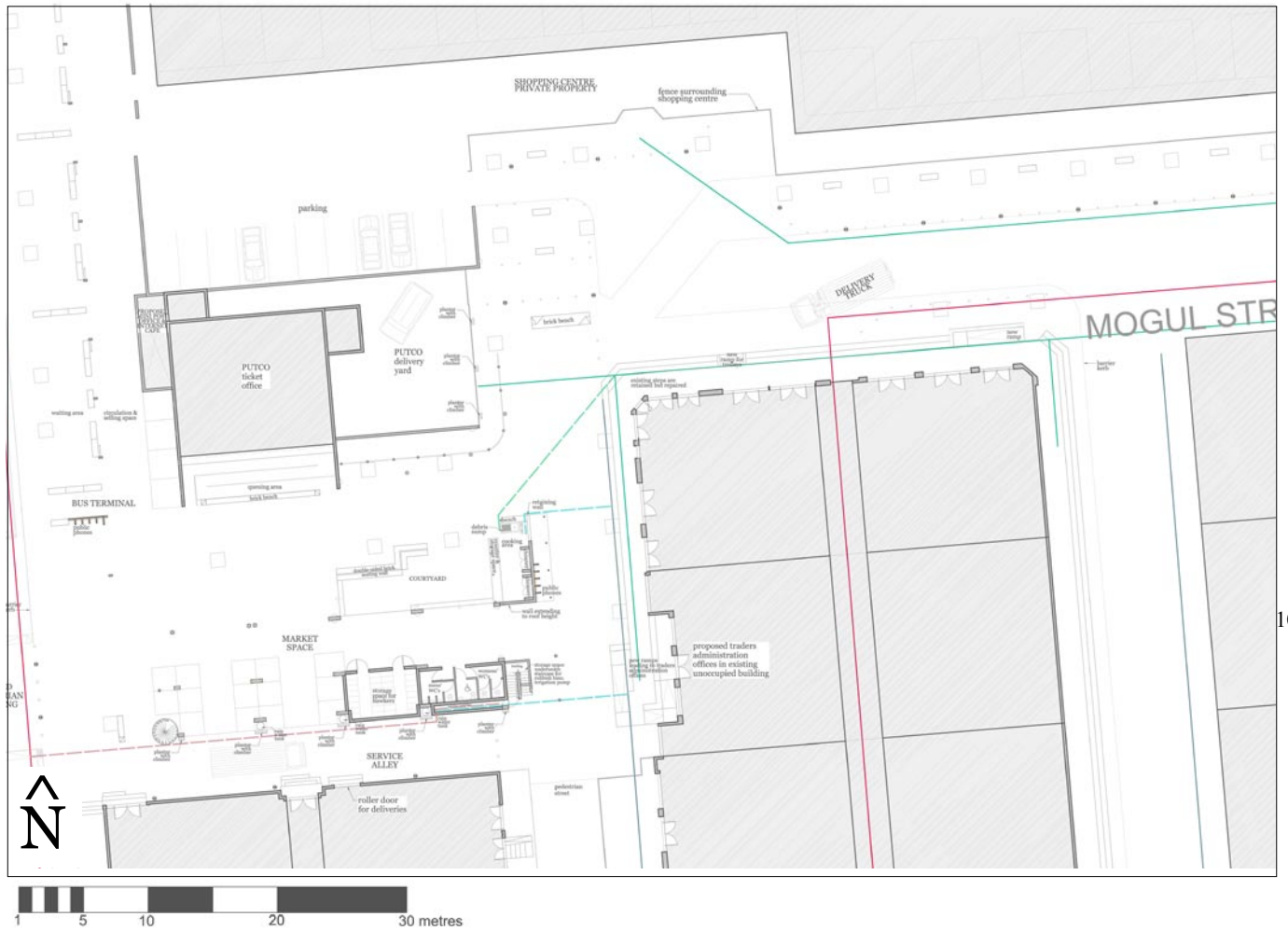
- bench 
- bench with backrest 
- brick bench 
- signage 
- steel frame 
- bollard 
- fluorescent light 
- medium height light 
- street light 
- spray light 
- litter bin 



SERVICES PLAN

LEGEND:

- existing sewerage
- new sewerage
- existing water
- new water
- existing stormwater
- new stormwater



COMMUNITY PARTICIPATORY COMPONENTS OF DESIGN

The following components of the design are considered for specific community participatory projects:



1. BRICK BENCH

The brick benches are constructed of rubble and other ‘found objects’ of Marabastad. Physically they add a rich texture to the design and they also add to the reminiscence value of Marabastad.

2. SCREEN PRINTING AND WEAVING

The screen consists of a ‘Coolshade’ netting, made from a high density polyethylene knitted fabric. For the netting to fit between the columns of the vaults, the treble standard size (7500x5500mm) Coolshade is used. The varying colours in which the Coolshade netting is manufactured provide varying shade coverage. The screens crafted by the shade netting can easily be replaced, thus a definite decision does not have to be made as to which colour to use. Netting with a high percentage of shade coverage can, for example, be used in summer, simultaneously blocking harsh sun and summer rains. Community members can aid in weaving patterns and illustrations onto certain shade nettings, while images can be printed on others.

3. MURAL PAINTING

Blank, unused walls bordering the site can be used to good effect as canvases for community members to illustrate their thoughts and ideas.

Fig. 5.39, 40. 'Found objects' in Marabastad (author, 2006)



Fig. 5.41. Screens (author, 2006)

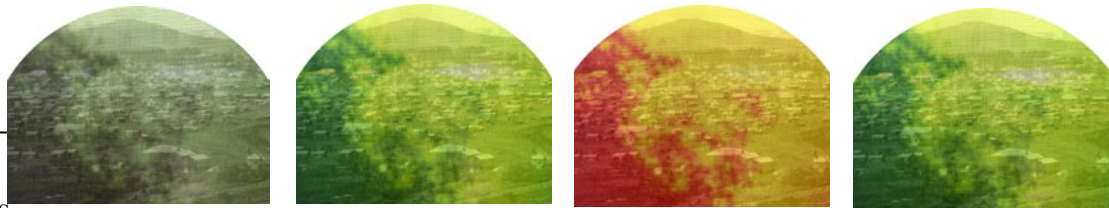
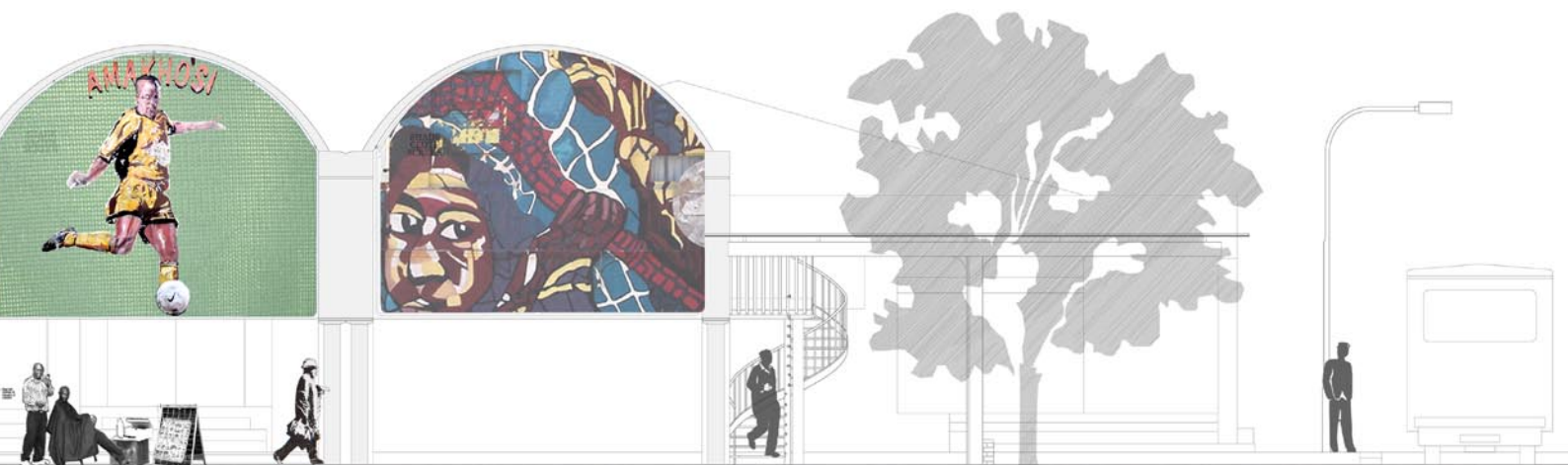


Fig. 5.42. Wall in Marabastad (author, 2006)

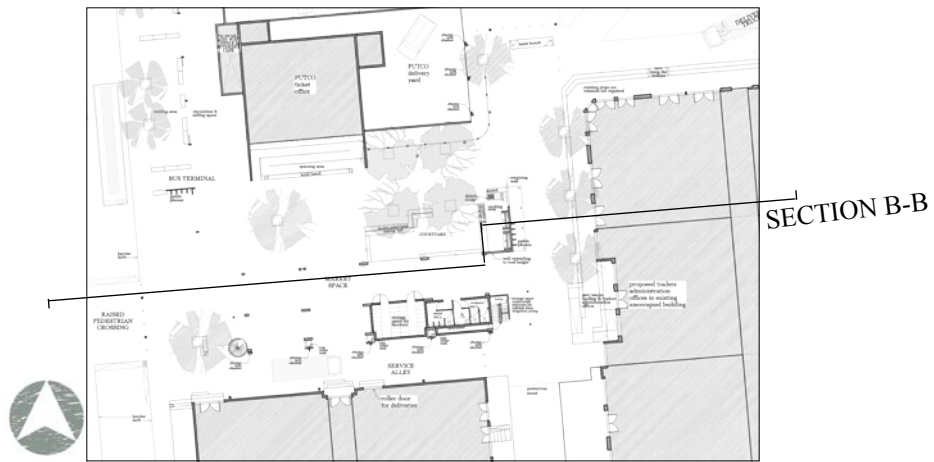




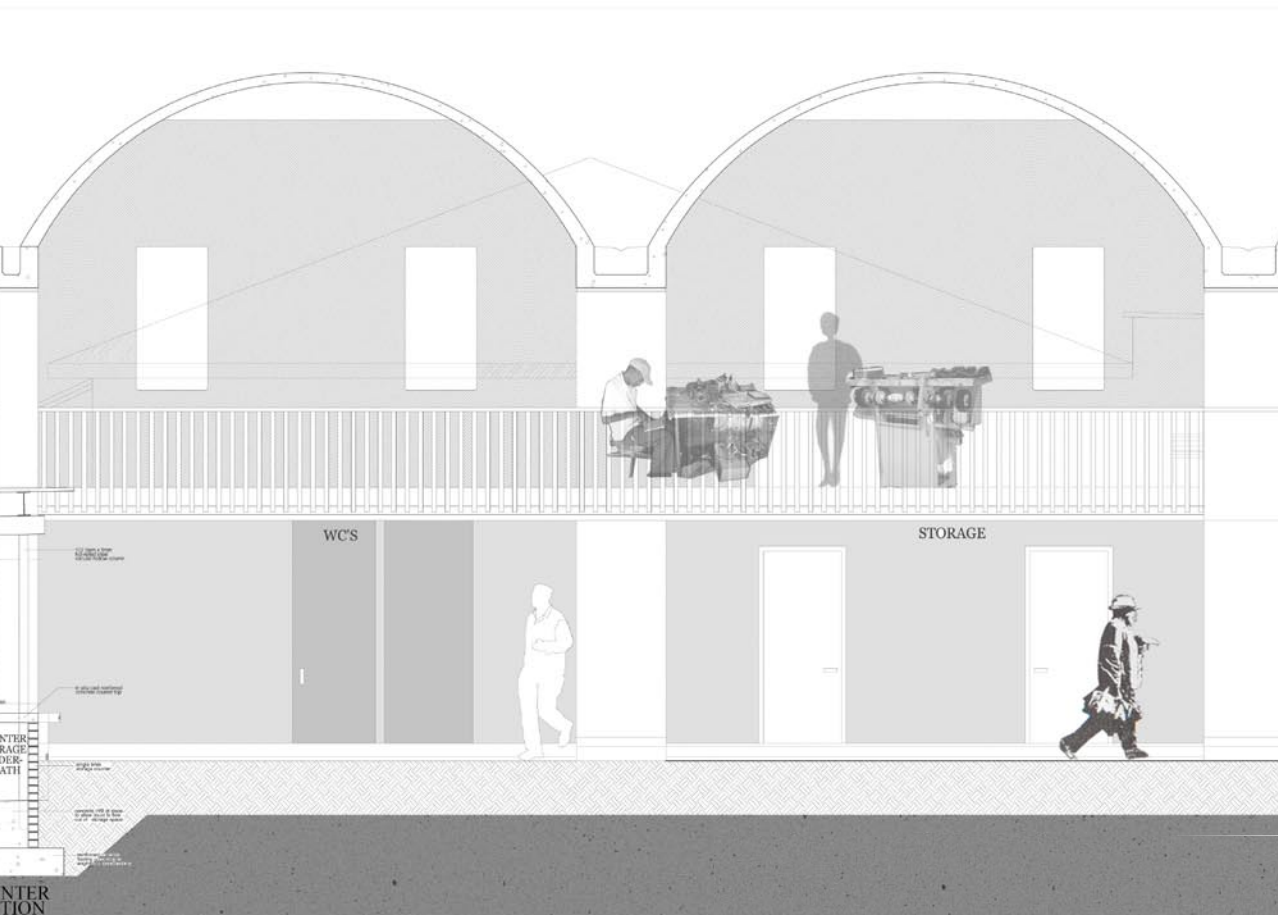
SECTION A-A



NORTHERN SECTION ELEVATION

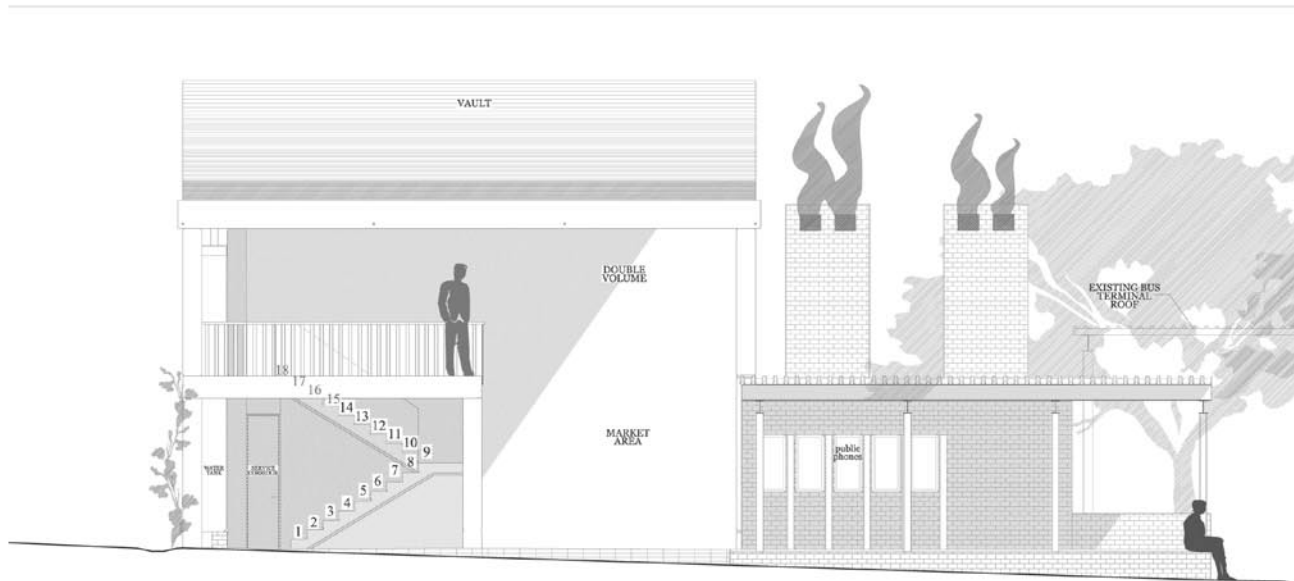


SECTION B-B



SECTION THROUGH VAULTS & COOKING AREA

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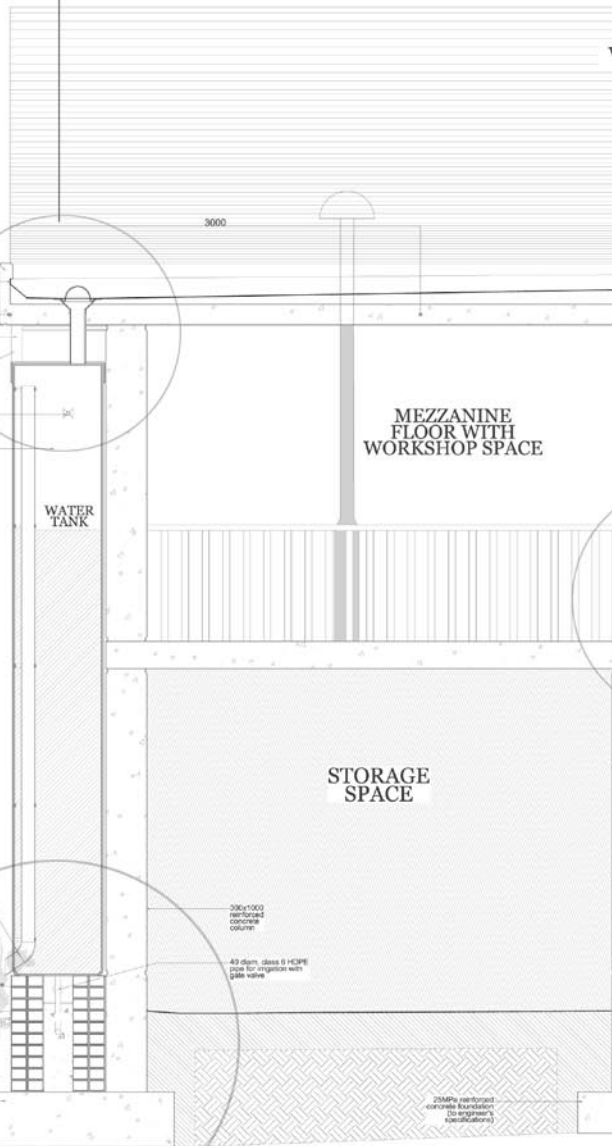
EASTERN ELEVATION



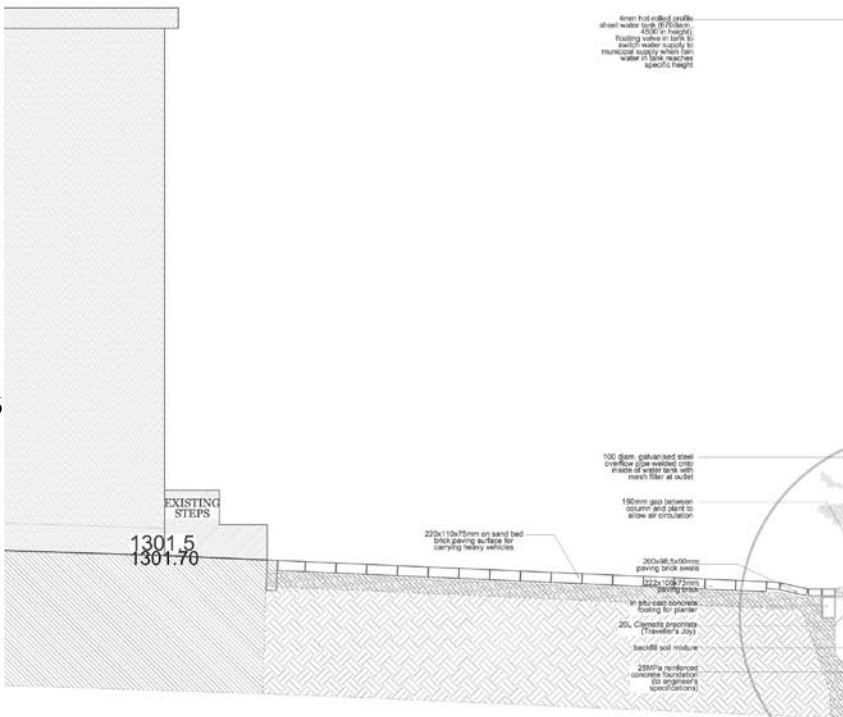


BOX GUTTER
DETAIL
SECTION 1

- reinforced precast concrete box gutter
- polymer modified bitumen waterproofing 2 mm, 40 litres of 1:100 oil
- 20 diam galvannead steel in section of 3000 mm wide
- 80x20x3 hot-rolled steel angle profile
- 50mm diameter mesh fastened to angle profile
- floating valve
- 6mm full width profile sheet water tank (1000mm x 2500 in height), floating valve in tank to maintain water level in municipal supply area, see water at site specific height

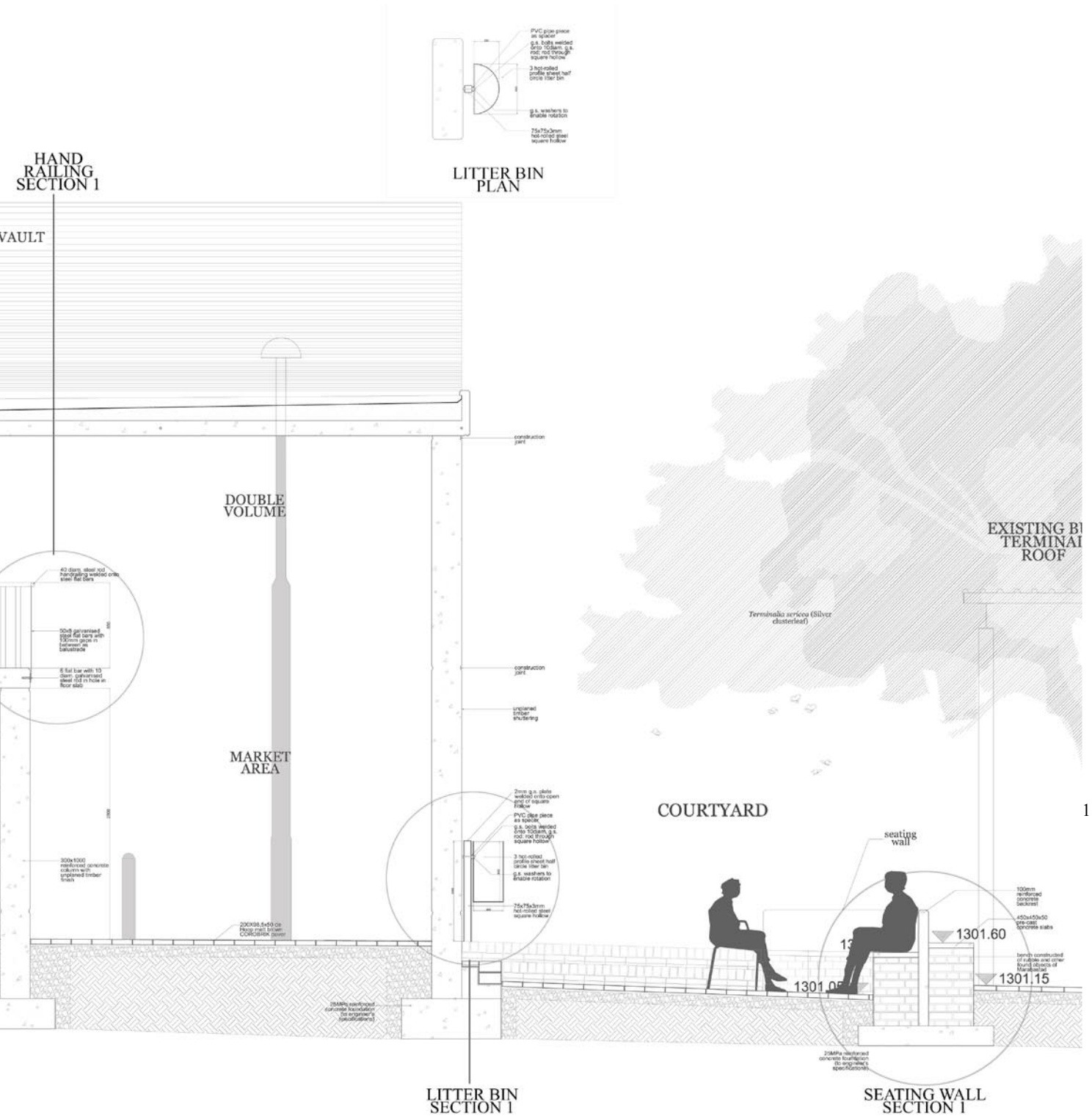


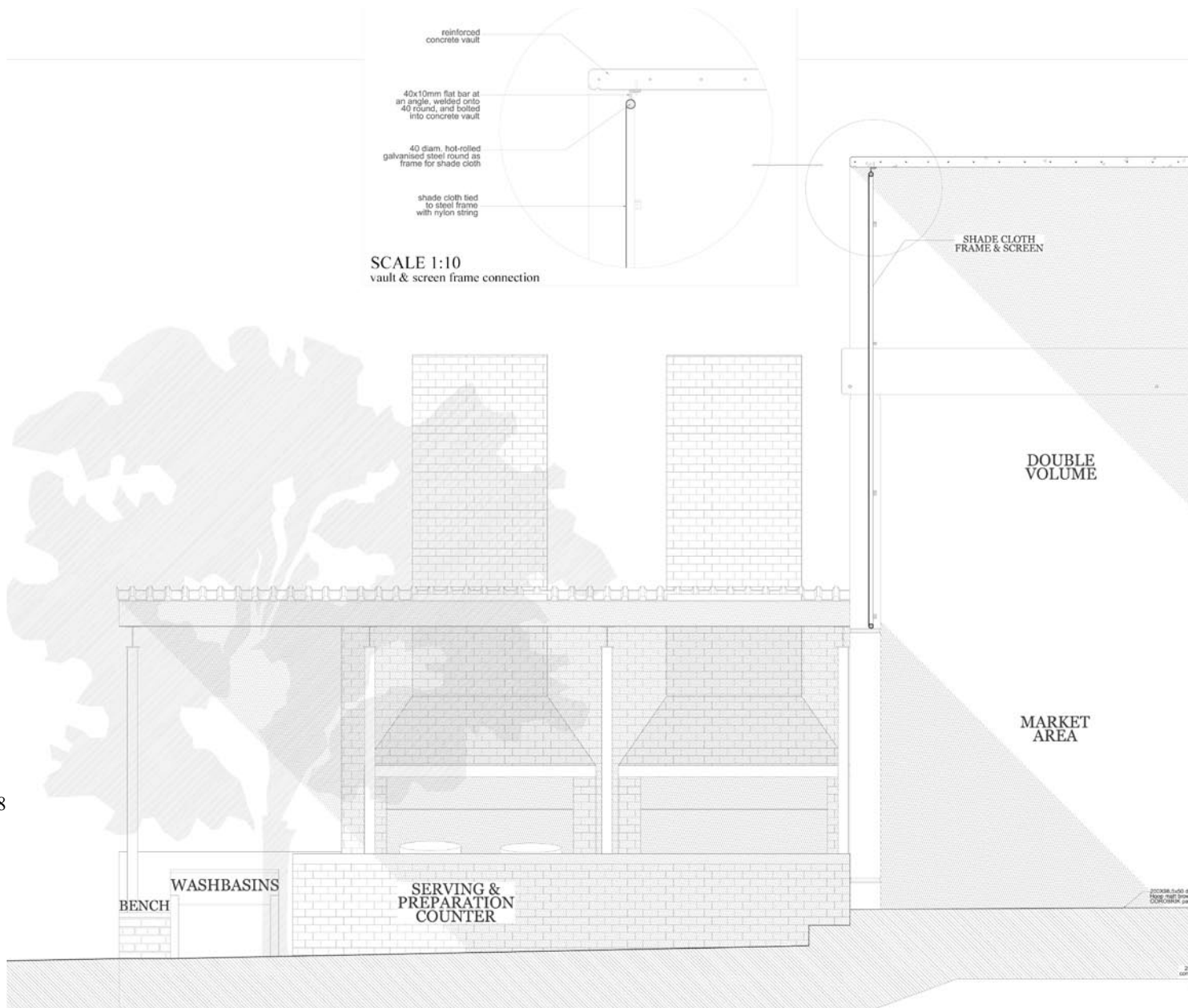
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PLANTER
BY COLUMN
FOOTING
SECTION 1

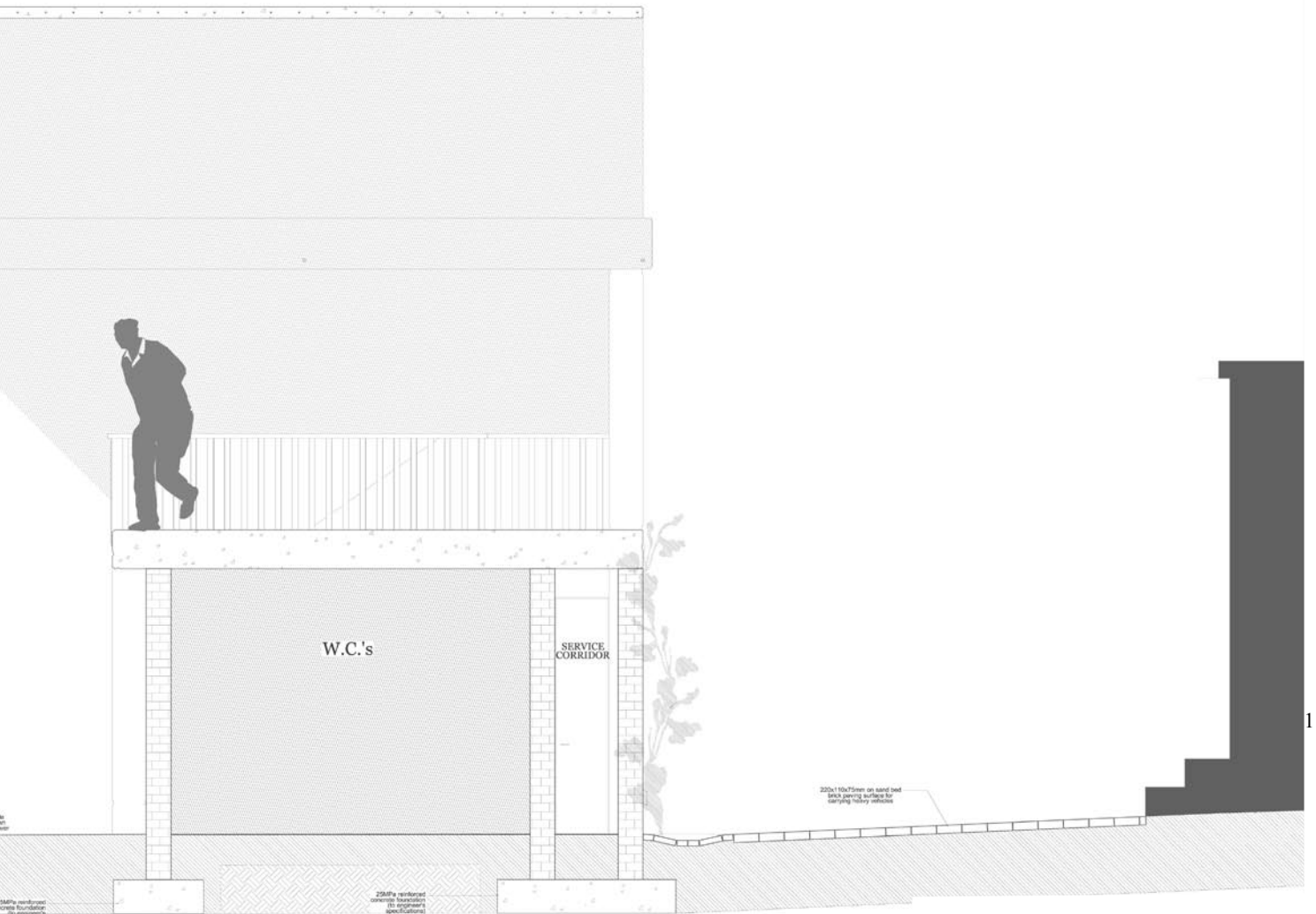
SECTION C-C

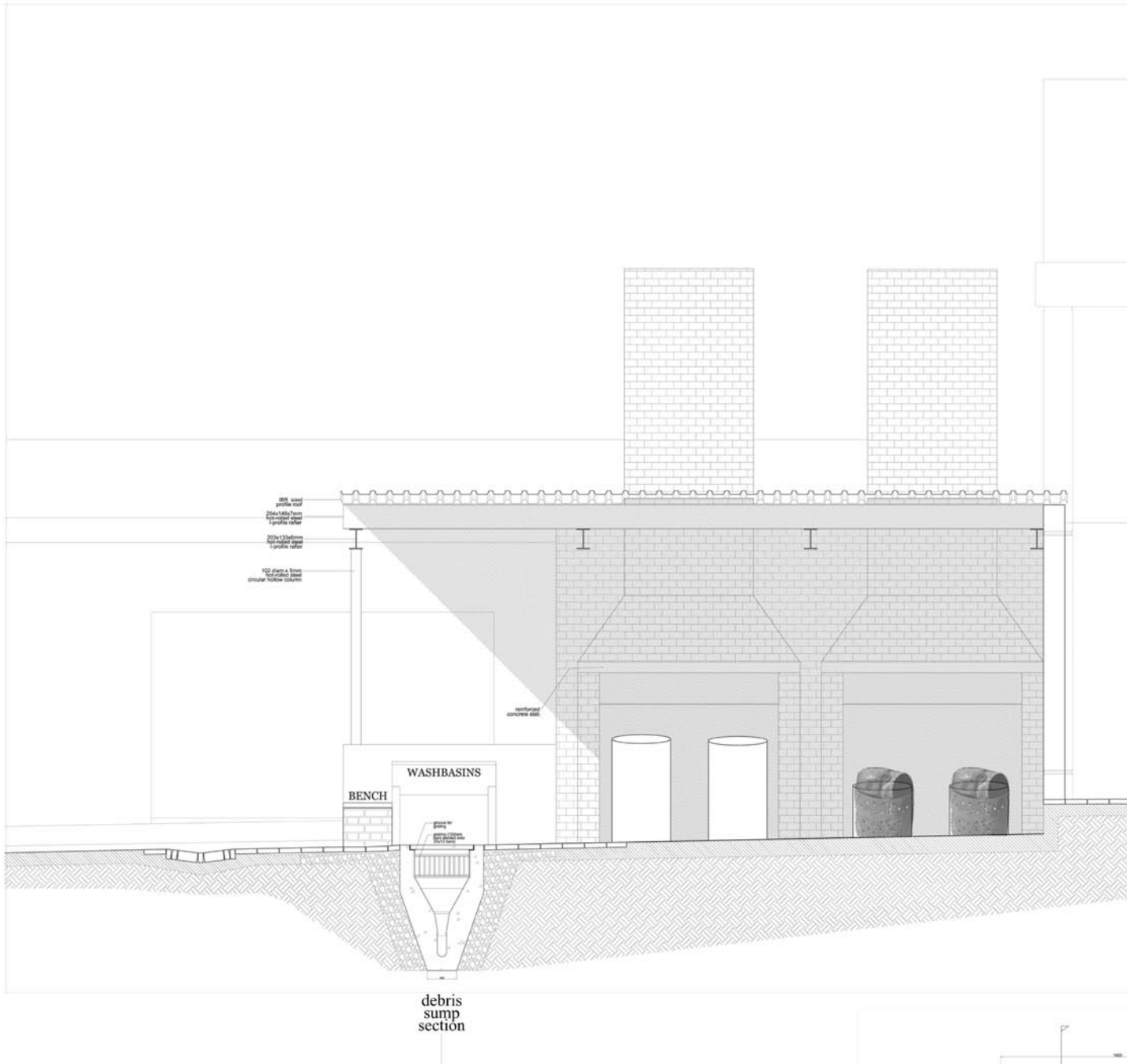




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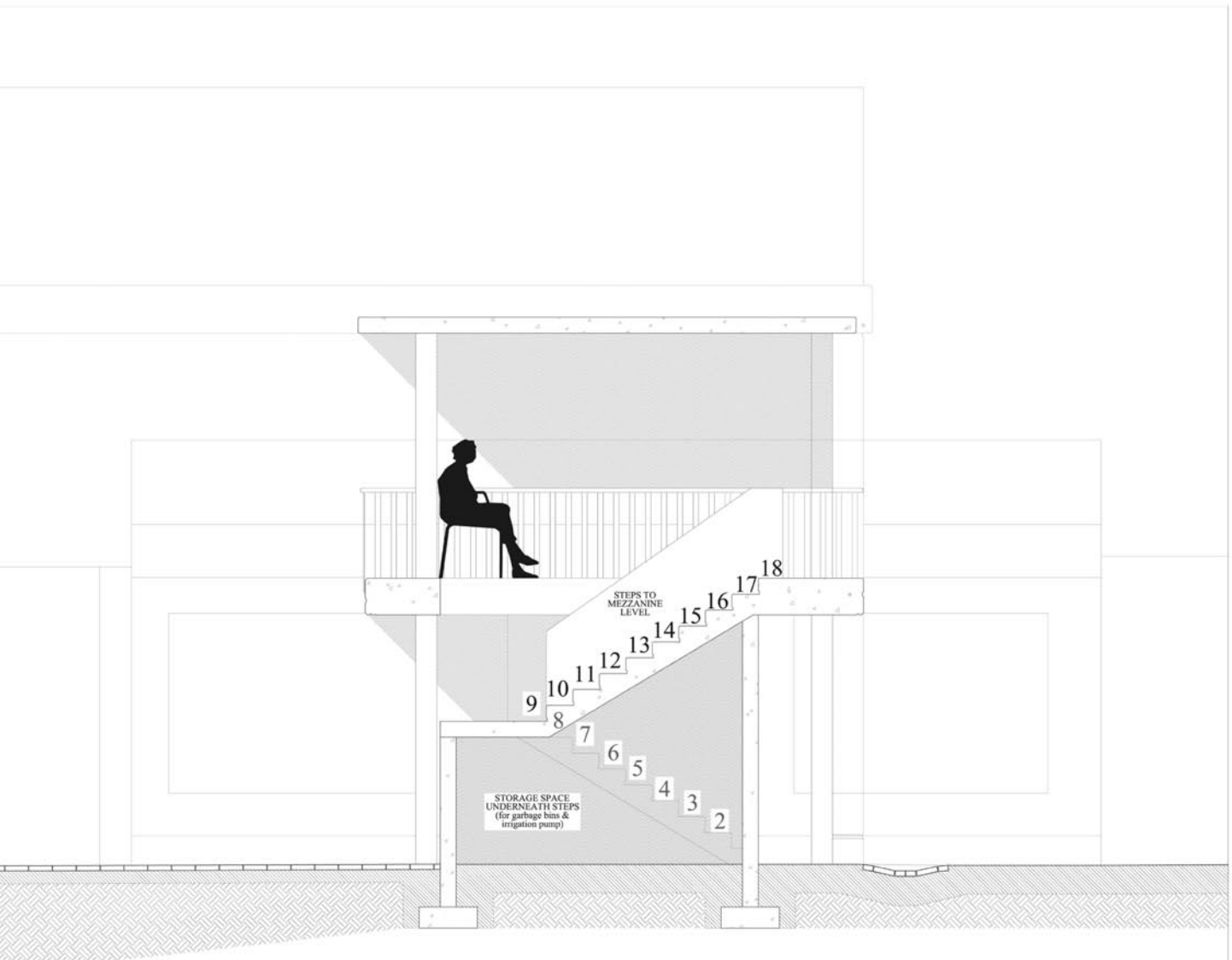
SECTION D-D



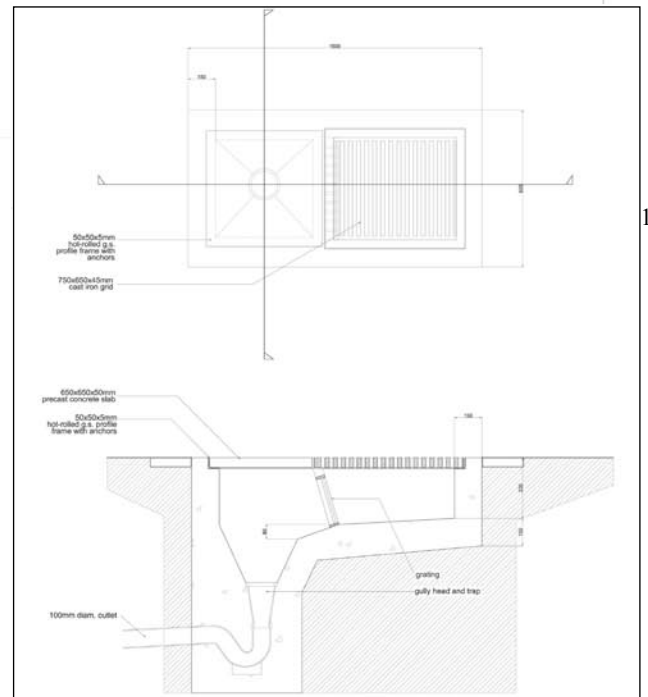


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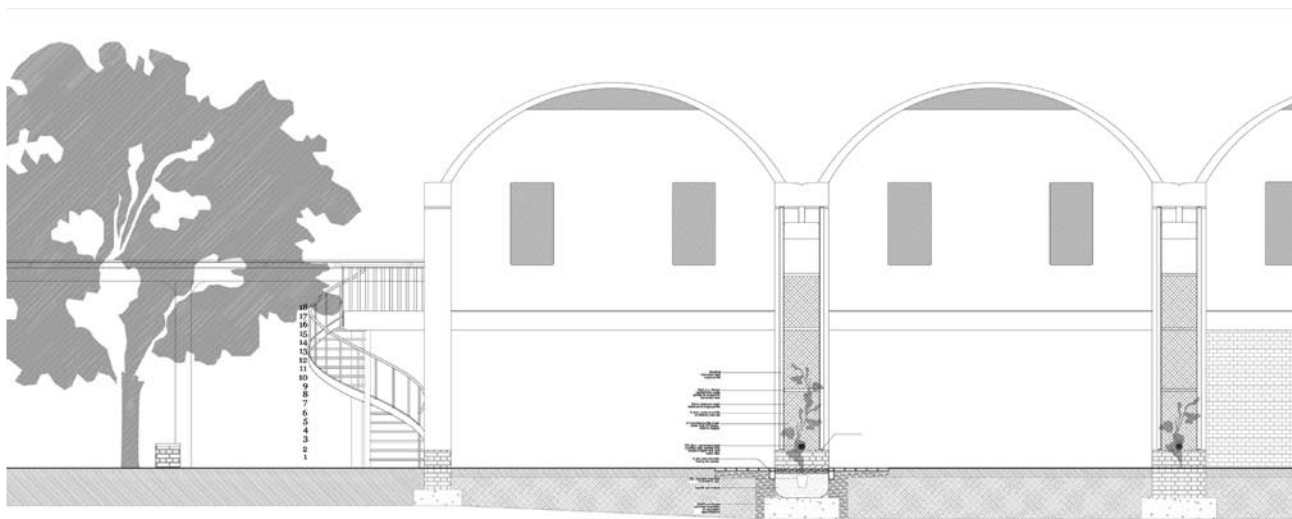


SECTION E-E



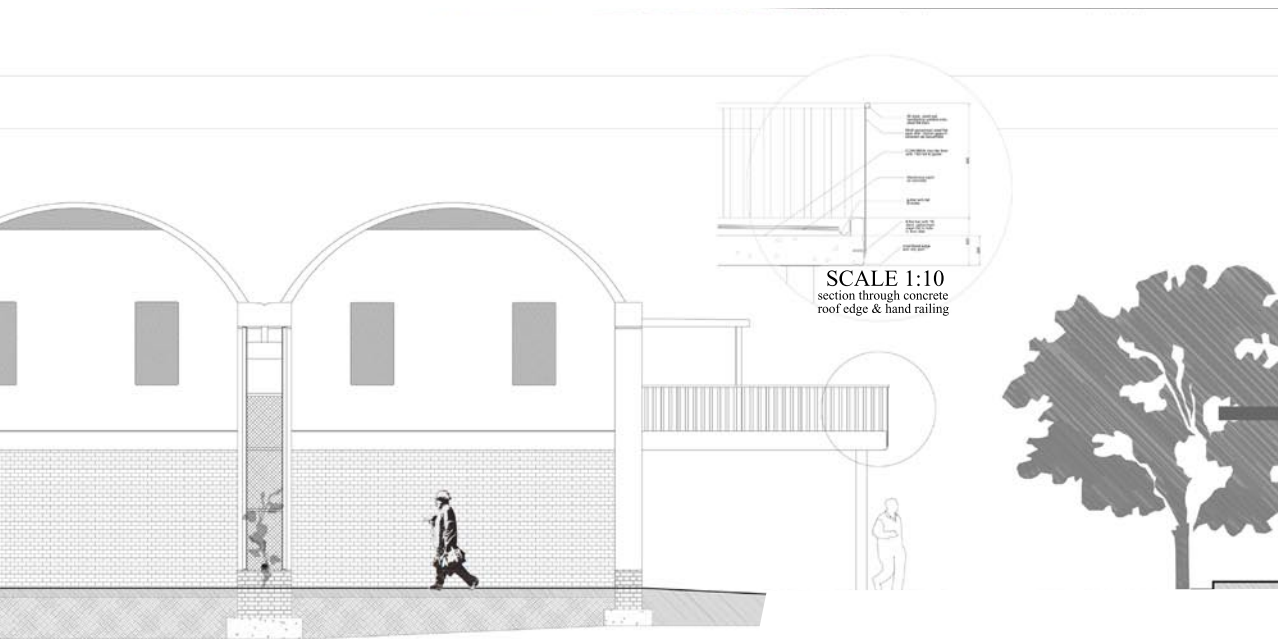
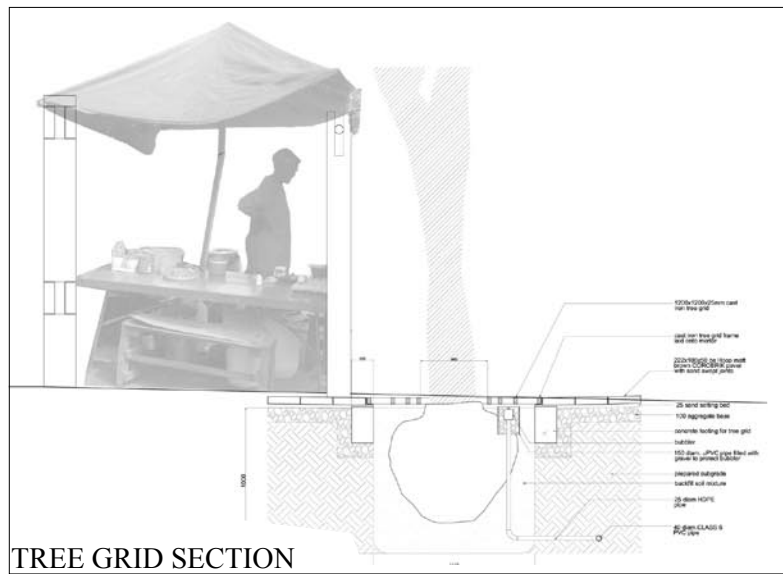
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DEBRIS SUMP PLAN & SECTION



PLANTER
BY COLUMN
FOOTING
SECTION 1

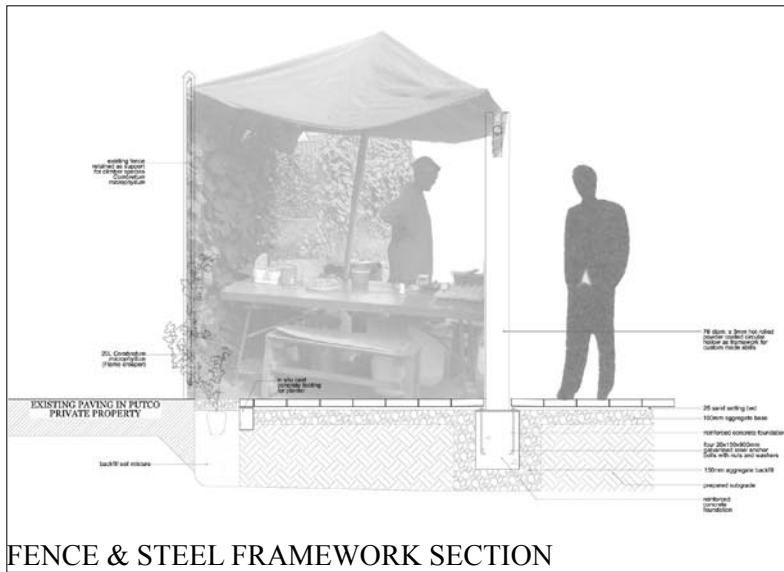
SOUTHERN ELEVATION



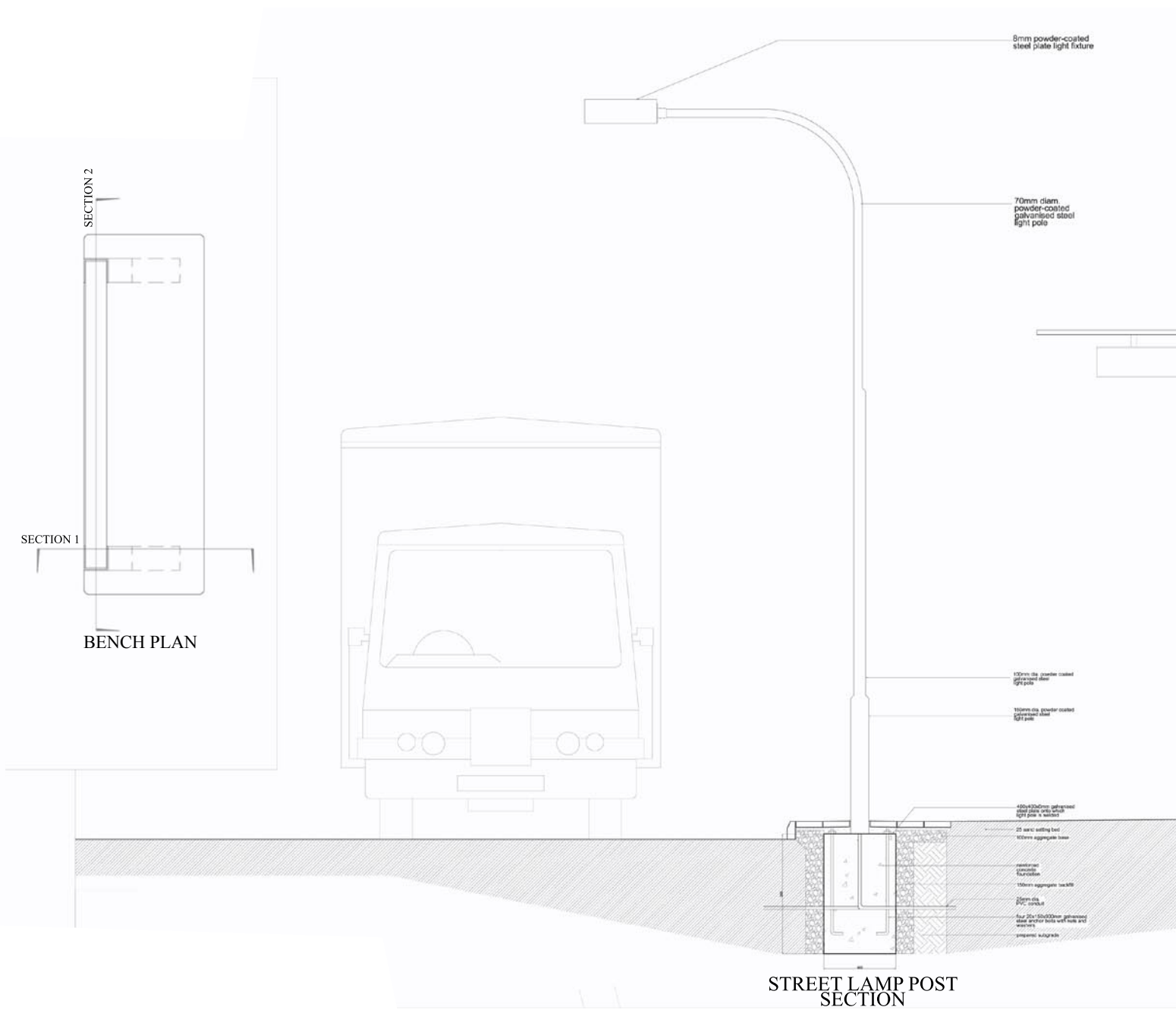
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WALL ADJACENT TO TICKET OFFICE ELEVATION



DETAILS BELOW BUS TERMINAL ROOF



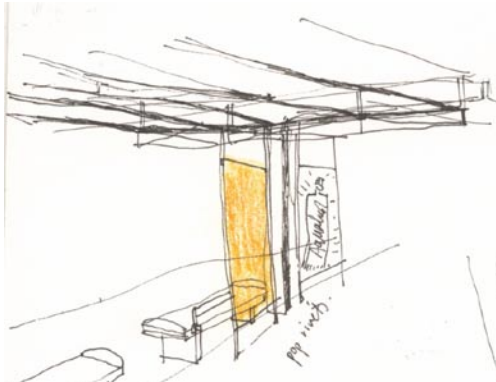
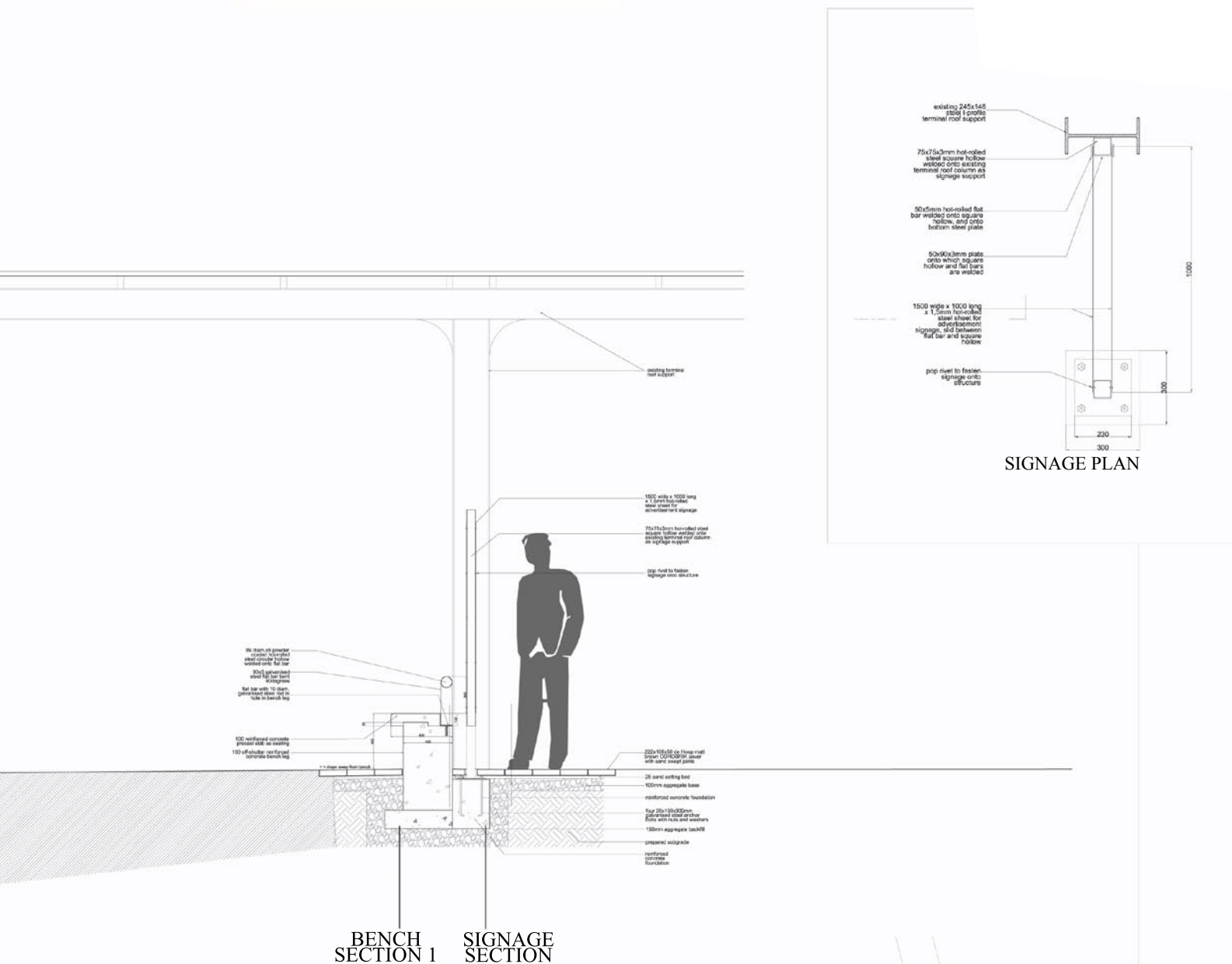
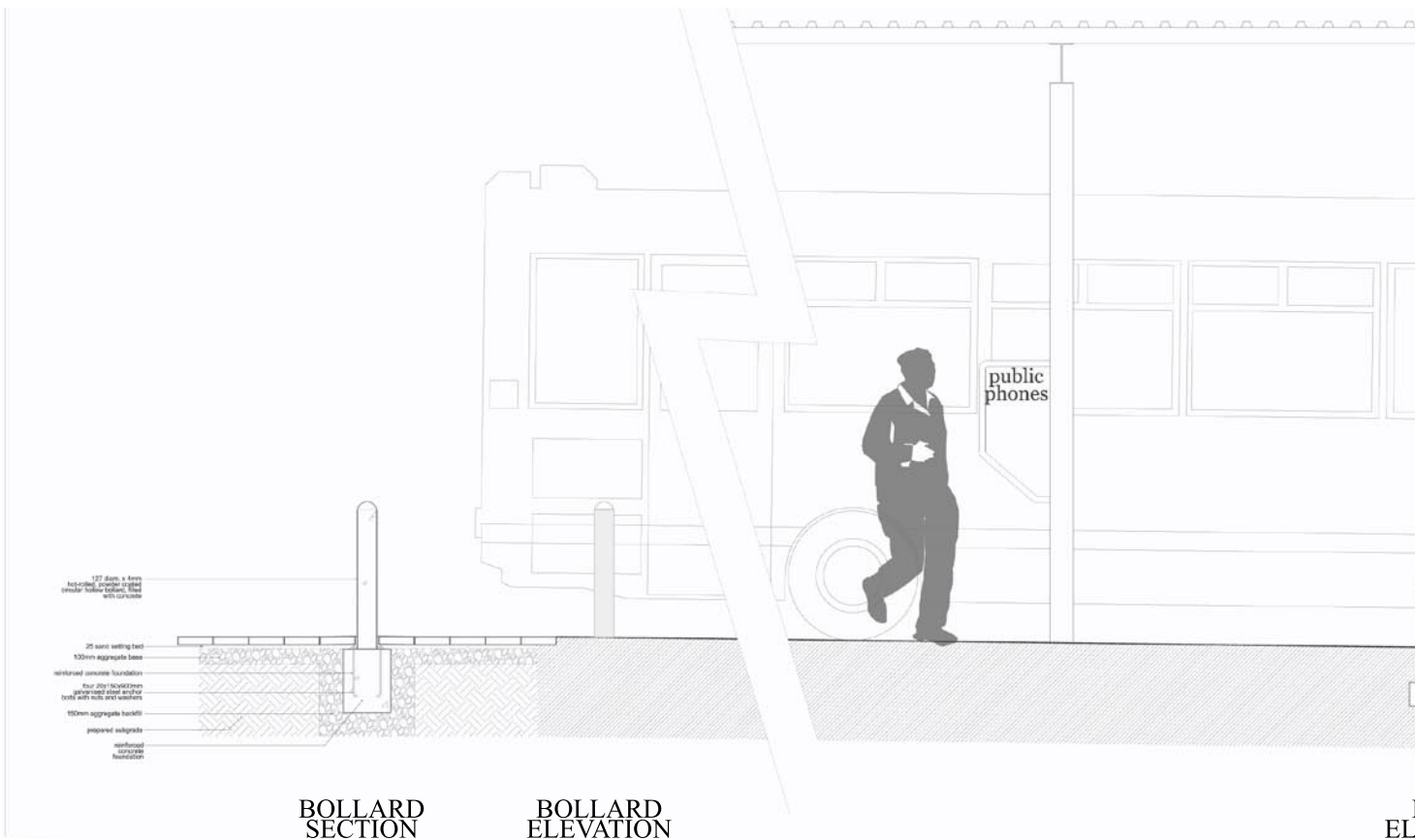


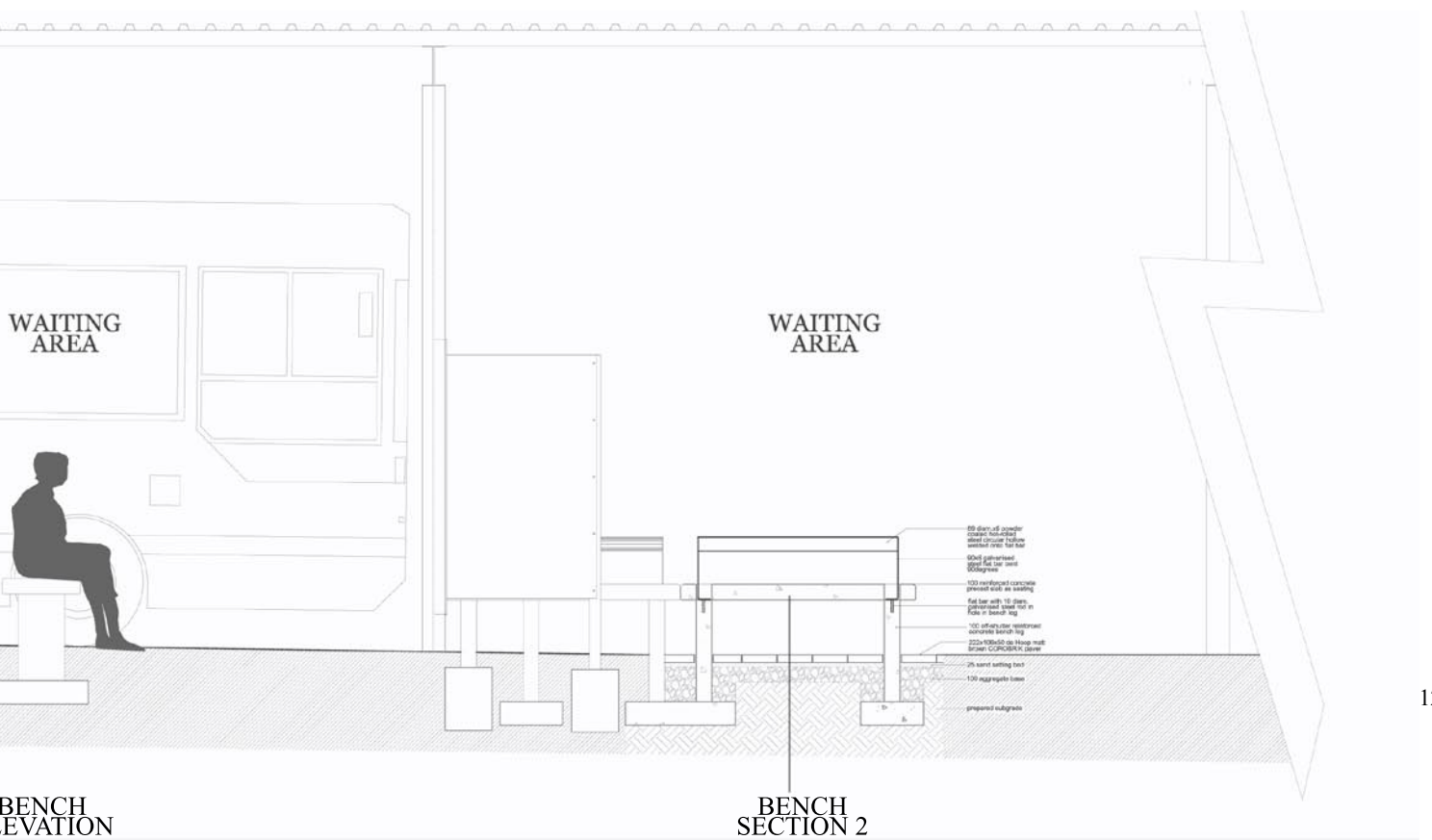
Fig. 5.43. Signage under terminal roof (author, 2006)



DETAILS BELOW BUS TERMINAL ROOF

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TWO OTHER PROBLEM AREAS' SUGGESTED INTERVENTIONS



Fig. 5.44. Image of existing situation along Steenoven spruit (author, 2006)

STEENOVENSPRUIT ON THE EASTERN EDGE OF MARABASTAD

Concrete platforms with possible electricity points could be constructed in the areas where hawkers are selling at present. It is also advised that the spruit is made accessible. This might be possible if the existing concrete channel that lines the spruit is broken up. The concrete pieces could be reused and placed in gabions which would be a better alternative lining for the spruit. Gabions would allow plant growth and so create a softer water edge, while still providing sufficient stormwater control.

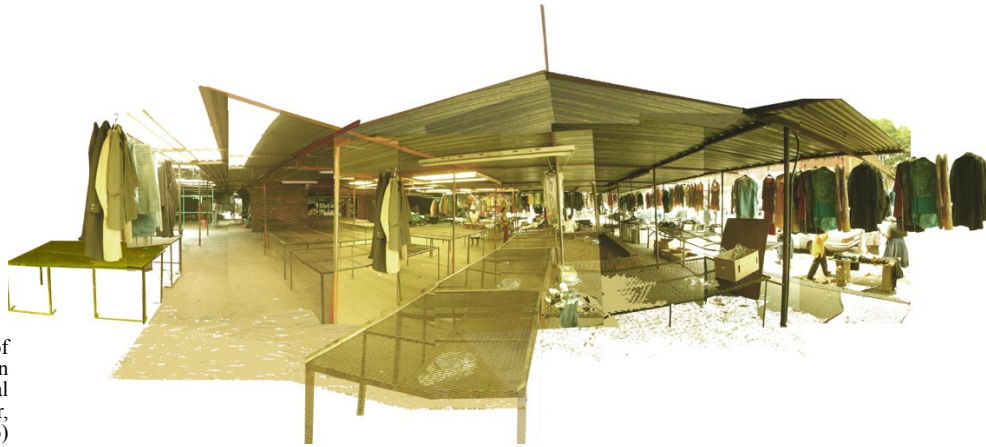


Fig. 5.45. Image of existing situation under historical market's roof (author, 2006)

HISTORICAL MARKET ON BOOM STREET

Proposed for the historical market are firstly simple alterations to the roof. The hot, claustrophobic and anti-social space created by the low roof can be greatly improved by lengthening the steel columns supporting the roof and raising the roof by 500-1000mm. This would allow more light, more air and a higher visibility which could all contribute to a more attractive area. Ideally, however, would be to maintain the outer stalls as market space, where most of the pedestrian traffic is, while the central part is converted to other uses, eg. housing or offices. Currently, the selling spaces in the central part of the market are generally empty and quiet; adding a housing or office component would render the site more useful and this in turn would lead to a safer area. The fact that it is a historical landmark is overridden by the need for a better use of land. Part of the original structure will be kept for the hawkers at the periphery of the market and the central part of the structure could be incorporated into the new housing/office design, thus not eradicating the historical landmark.

ORGANISATIONAL FUNCTIONING ON DEVELOPED SITE

Initially, a trial period should be set aside for observing the utilisation of the developed site by its users. Strict prescriptive regulations for the use of the site is not advised. As Watson & Behrens (1997:217) states, extensive provision of market infrastructure should be a response to site use. The observation could be coordinated from the proposed hawkers administration office.

HAWKER STAND RENTING AND ELECTRICITY PROVISION:

A limited number of stands is proposed to be made available at a set price with the advantage of an electricity point and being under cover. The rest of the space should be left open for hawkers to set up stall as they read the use of the area.

The use of electricity is to be monitored from the administration office. A limited number of electricity points could be provided at first and as the need arises the number can be increased.

A basic rental fee should be charged for a hawker stand, while electricity can be bought additionally.

WATER PROVISION:

It must be prior knowledge to the hawkers that the provision of water in the market area is only initially to be free of charge. As the organisational functioning of the site falls into place, a basic fee for the use of water can start to be charged.

PROJECT IMPLEMENTATION

From interviews with two leading figures (Mr. Stephan de Beer from Pretoria Community Ministries and Mrs. Marlene Freishlich, Chief Executive Officer of Popup; refer to Appendix) in community oriented organisations, the following table with role players and their participation in the project implementation, is suggested:

POSSIBLE ROLE PLAYERS	ACTIVITY
Municipality & government	Funding
Professionals (architects/landscape architects/engineers/urban planners)	Skills delivery Skills training Planning Phasing
NGO's	Hands-on work Funding
Community (Marabastad)	Hands-on work
Community organisations	Job organisation & distribution