2.0 Case studies and Precedents

The taxi industry's involvement in South African public transport is as important as any other mode of transportation. It is a private enterprise that has taken over from government's lack of development of this crucial infrastructure. The industry will always exist as long as there is a demand. Government has taken notice of this viable alternative to their current expensive and inefficient systems of buses and trains, as stated before in 0.1.
In Tswane alone government subsidises 30% public transportation. Therefore if government would invest in the industry by building financially sustainable terminals it could curb costs of running other less efficient modes of transport.

The study of current buildings in South Africa is the most suitable way to understand and make informed decisions, regarding the generative design of this new 'building type' and the cultural response to them.

Three buildings were studied, they include: Bree Street Metro Mall in Johannesburg. Baragwanath Public Transport Interchange and Traders Market in Soweto, Gauteng, and Joe Gqabi Transport Terminus in Philippi, Cape Town.

The study was conducted observing the following criteria:

- Interface of user with the mode.
- Circulation and coherency of the user including commuters, taxis and traders. Their input on urban renewal of deteriorated areas.
- Facilities are provided and the frequency at which they are used.
- Safety and security, including storage and day-night functionality.
- Social advantages of free urban spaces and social activities.
- Robustness of materials, durability of installations.

2_01 Bree Street Metro mall

2_03 Joe Gqabi Transport Terminus

2_02 Bara Mall and Market

3.1 Bree Street Metro Mall, Johannesburg

The Bree Street Metro Mall (Bree street) was built on one of the busiest streets in Johannesburg. It was built as a catalyst project of an urban design renewal programme. The two main driving design criteria was the accommodation of over 2000 taxis and the formalisation of some 800 street traders. The building also accommodates 25 buses that serve 35 routes with an estimated 150,000 commuters using the facility daily. (Deckler, Graupner, Rasmuss 2006:61-63)

There are two separate buildings, east and west Bree Street, each approach the interface between commuters and taxis differently.

East Bree Street is the smaller one of the two, it works on a battery system where there is a single row of embarking platforms. this system is simple and allows for a rapid interface between the taxi and commuter.

West Bree Street has a multiple battery system over a wide open floor that is also used as stacking area for awaiting taxis. It is confusing at first, and commuters cut across the stacking areas to get to their destinations. This exposes commuters to speeding taxis and fatal accidents may occur.

In both buildings pedestrian movements utilise the pavement that is lined with stalls and shops, creating an interactive edge with street. Informal traders are accommodated by an pedestrian plaza that also form accesses into the taxi ranks. This guarantees that foot traffic, which could be potential customers, is continuously passing by.

The buildings have enlarged entrance that act as baskets, collecting people (Deckler, et al 2006:63). This sensationalism of the entrance helps communicate the building's functions, for example entrance is here.

The facilities provided by the malls are extremely scarce elsewhere in the urban area. Public toilets are non existent and even simple drinking fountains are insufficient.

New facilities include food courts that are away from the busy streets, provide a quiet, shaded area where anybody can go and rest. Open squares are provided but seem to be not as popular, this could be due to the squares having no functions associated with them.

Traders have a variety of retail area to choose from, a floor stalls with concrete counter being the most basic. Larger cubicles with lockable roller shutter are the intermediate, and fully serviced shops accommodating fast food outlets and hairdressing salons as the most advanced option. Present storage facilities for the smaller stalls are necessary but highly inconvenient.

Traders have to pack up their goods onto trolleys, take the trolleys to a queue that is for the only lift which will take their goods into a narrow storage area that resembles a string of jail cells with two by two metre barred cages. Since there is no surveillance during the night some items could be stolen. Sometimes the lift does not function and traders are forced to take their goods through to their stalls or back to their cages using stairs.

The storage cages are also used in place of communal kitchens as well as poor storage environment. All the other available spaces, in the mall are used to make money not food. Traders are forced to make their meals in these inhospitable cages.

Materials used are robust and good quality.
Face bricks and off-shutter concrete are used for the walls, they require little to no maintenance but as in any city, posters and graffiti plague their vertical faces.
Walkways are paved but are not easily cleaned, and if not well compacted, will cause sagging. Steel is used extensively and in the cages, doors and staircases, the steel is able to withstand the heavy usage.

The mall safety depends on the community that use it. Passive surveillance accounts for most of the security (Kruger, Landman, Liedermann (*S.a.*):33). Security personel are available, but don't become involved unless, a situation call for them.

Eventually at around 6o'clock in the evening, when commuters stop coming, traders pack up and shops close. The mall closes its massive timber doors until the next day when activity returns at around 5 o'clock in the morning.


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2.2 Baragwanath Transport Interchange & Traders Market. (Bara Mall)

Baralink development framework to link the busiest transportation nodes in South Africa is between one of them being the Baragwanath Transport Interchange & Traders Market (Bara Mall), the other Bree Street Mall.

Bara Mall is located on a site 1,3 kilometres long and 50 metres wide. The project was divided into three phases (*vide* figure 2_14). At the completion of this project, at the end of 2007, the site will be able to cater for 70 percent of Soweto's commuters, travelling to Johannesburg. It will accommodate 500 street traders with associated amenities such as storage facilities, management offices and support infrastructure.

The 22 Bus Bays as well as 650 taxi holding areas will differentiate the functions along the 1,3 kilometre spine. Focal towers are at the entrances notifying and orientating users to where they are going (Digest of South Architecture 2006/2007(11):044-047).

Unlike the Bree Street, the Bara Mall is a single storey building with a few double storey volumes, and even fewer double storeys. There is little use of the first floor except for some offices used by the building management.

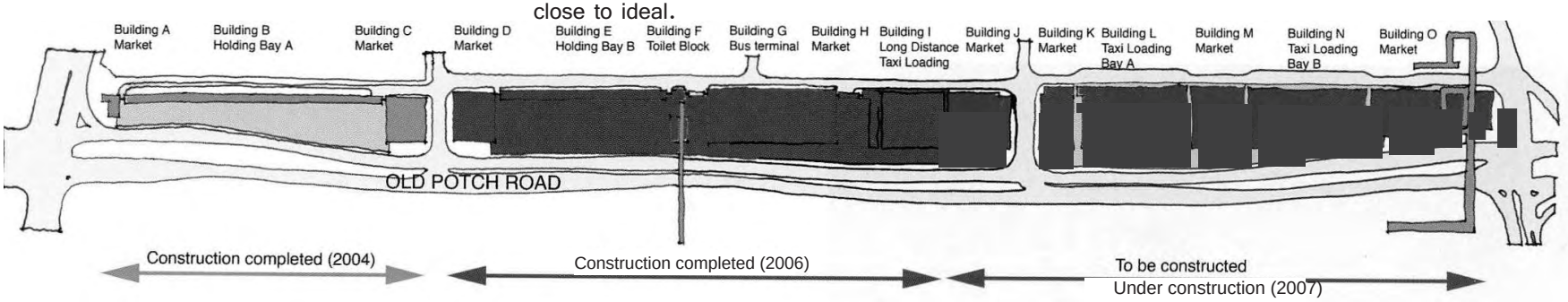
The building is a simple spine like concept with an arcade running the full length of the north side, which in winter will provide welcome sun the commuters. The double volume arcade connects with all six terminals with brakes in-between. Brakes are so called market squares, which invite commuters to a restful space. These spaces are filled with self storing stalls, benches and ablutions. Built area of the arcade is brought down by the introduction of a first floor.

Commuters do not ever have to stray off the arcade because all the terminals are right up against it. The interface is less hectic due to the arcade being on the one side and the terminals being on the other, and therefore close to ideal.

The concrete colonnade is lined with elements that are seats. The seats can be utilised as trading stalls, which offers the concrete features a dual function.

The materials are similar to Bree Street though the flat concrete roof construction has proved to be a waterproofing nightmare (*Vide* Figure 2_27).
Concrete slabs with pavers acting as patterning material are used in the flooring, mosaic tiles are elements bringing a more vibrant atmosphere to the area. Other art work dot the facility, instead of signs. However, people seem not to know their meaning.

Security installations are relatively low and blends into the forms (*Vide* 2_25), this is due more to the concentration of the facilities. Each market square or 'brake' can be sealed off independently, providing less area to protected and patrol.



2_14. Bara Mall phasing plan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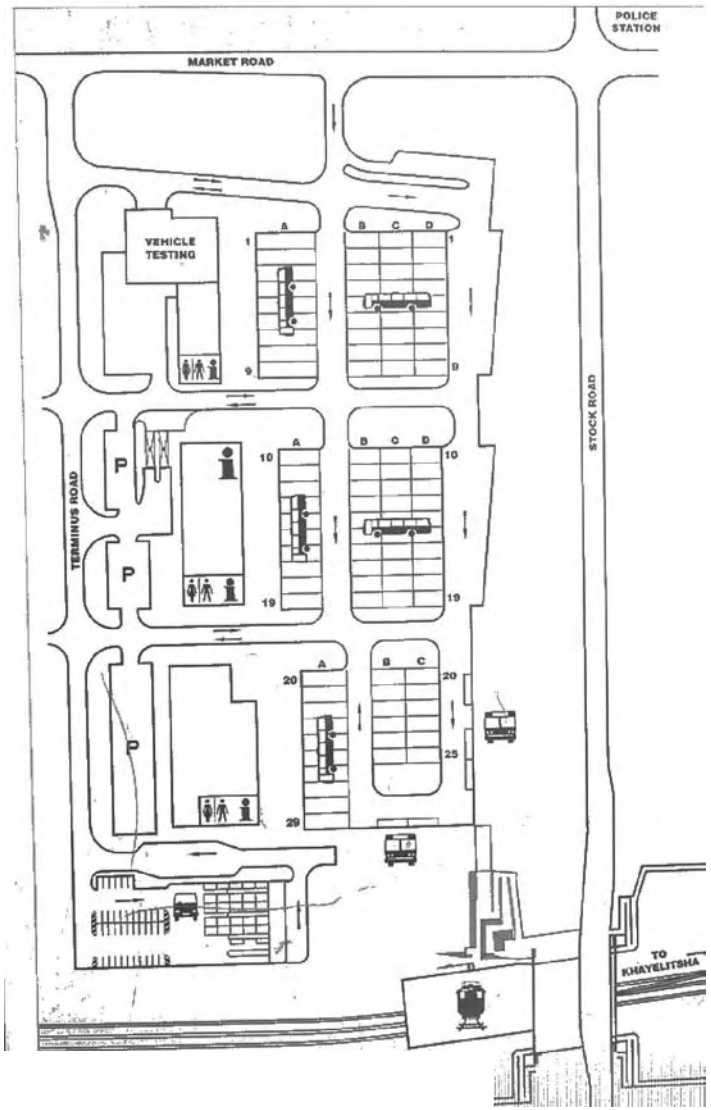
2.3 Joe Gqabi Transport Terminus, Phillppi Cape Town.



2_30 Joe Gqabi terminus key plan

Formally known as the Stock Road Transport Terminus, Joe Gqabi Terminus is primarily a long distance bus terminal with other secondary modes connected to it. The terminus is part of the city of Cape Town's Metropolitan Spatial Development Framework. A site of 40 hectares was developed to join with the new Stock Road Railway station.

The architect's concept was a public spatial framework meaning that buildings, wall and colonnades channelled pedestrians in an open space linking the modes of transportation.(Architecture South Africa, September/ October 2003:26-30)

The site remains mostly empty for most of the year. This is due to its focus on the long distance buses which are only used extensively for two seasons, Christmas and Easter. At those times there is hardly enough room to move, and commuters sleep out in the open.

Other functions do help to keep the facility alive by allowing more local users, these include metro buses, a taxi rank and the railway station, the rail link being the most advantageous.

However the taxi rank has been completely saturated by police, as the satellite police office in the terminus grew into an established station. The taxi rank is simply a carport which offers no social benefits.

Materials are similar to those found in Gauteng. High canopies don't offer any protection from wind driven rain. Expensive high tech car washers and bus washers sit on the west of the building, always broken or being used to wash the terminus' staff's cars.

The buildings architecture allows for shipping containers to be added to the main colonnade when necessary. This has not happened as planned, the containers are placed behind their intended position and have formed a new axis to an low cost housing development to the west.

Generally, the architecture has achieved the intended function, but at unnecessarily high cost.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2.4 Precedents

Nyanga Junction.

Nyanga junction is a pedestrian mall built on a stretch of land that is only 25m wide and stands between a railway and an arterial road. The goal of this building was to bring business opportunities to previously disadvantaged communities by exposing them to an emerging market, such as the ever growing commuter traffic.

The building boasts a high ratio of traders to tenant mix and allows for a competitive framework for retailing.

Neutral finishes and colours shift focus onto shopfronts and trader kiosks which provoke the diverse and sensual appeal, of a typical African market, dominating the entire visual arena (SA Architect (98/Apr):45-50).

2_47 Nyanga junction

Bridge Cinema and Hamilton Square Garage.

The cinema and parking garage is an urban renewal project by Pennsylvania University, converting a dangerous border of the campus to become a gateway. The development took an open parking lot and made it into a parking garage, then built a cinema complex on the site of an old Burger king take-away.

This project proves that an organisation such as a university can become an entrepreneur and at the same time an urban redeveloper, by investing into facilities that can be used by city dwellers and by the academic community.

The right formula of facilities or service will provide a sustainable development by being profitable. in the case of a public transport terminal, a hotel could prove just as successful (Architectural Record (191/8): 95-101).

2_48 The bridge

Millennium Park

Located in the centre of Chicago, this $450 million project was originally required to simply upgrade an unsightly railway ground and some car lots. The park offers both day and night functions with open concert halls and well lit walks.
On the south east corner is the popular Crown fountain by artist Jaume Plensa. It consists of two LED lit towers on either end of a shallow reflective pool with animated images of local citizens.

These towers add a new perspective to attracting and entertaining visitors. The large displays could screen games of the world cup for viewers that cannot afford to attend the games. In between games, the screens could broadcast news or public messages informing the people about the world around them
(Breazley M. 2006: 96-101).

2_49 Crown fountain

Topographical Movement.

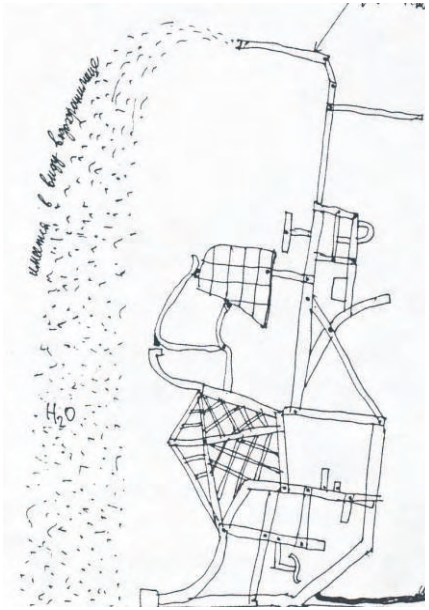
Various projects around the world have experimented with the theory of wayfinding (Passini 1992:53)[1].

Topological movement involves creating sculptures that mimics a cities map, playing on the recognisable and interesting features of a city.

By exaggerating or simplifying parts of the sculpture, the commuter is guided through the city in a personal perspective instead of just road signs through a more personal experience.

Discarded materials are used for a visual connection so that when a person arrives in the particular area, the material of the area will remind him/her of where he/she is the in relation to the map. Then the person may also remember on where he/she needs go next.

This theory will also be convenient for illiterate users. They could understand on how to get where they are going without humiliating inquiry. (AA files(48):39-46)

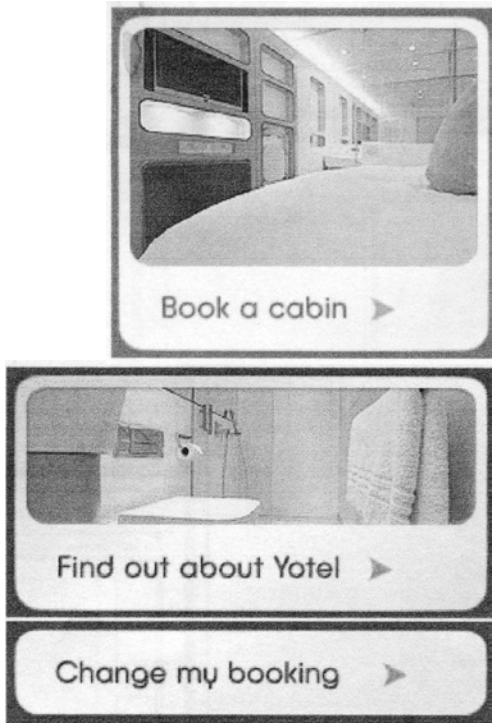


2_50 Plan of 4,5m sculpture of Toglaitti, Russia

2_51 Plan of Toglaitti, Russia

Yotels©

In June 2007, the Yotel chain was introduced to Gatwick Airport in West Sussex. It is a four star hotel that offers luxury 8 and 10m² standard and premium cabins. A commuter waiting for a flight, can go stay the Yotel for a duration of four hours to a full nights stay. These sound proof cabins have en suite bathrooms, a fold-out couch that converts into a bed and a flat screen television. The check in is fully automated (www.Yotel.com).



2_52 Tabs from web.

1. Togliatti, Russia (2000). A 4,5m sculpture was constructed of the Togliatti city map, local materials and water was used to symbolise the city and the Volga river respectively.
Grand union canal, London east end (2002). Alexander Flourensky, assisted by a group of students, constructed a three dimensional model of their movement through the city.