

Precedent Study

As the new sciences of complexity are revealing, most of the Universe is self-organising, unpredictable, creative, and self-transforming like a butterfly (Jencks, 1996:11).



The memory of site:

(Figure 087) Sketch showing Saynatsalo Town Hall form and grassed steps (Author, 2009).

(Figure 088) Sayanatsalo Town Hall (Groak, 1992, p218).

(Figure 089) Sayanatsalo Town Hall (Porphyrios, 1982:63).



Fig: 087



Fig: 088



Fig: 089

Memory and the work of Alvar Aalto

Memory has also had connotations in architecture, as seen in the work of architectural masters like Alvar Aalto.

The town hall of Saynatsalo, Finland utilizes the *memory of its site*. This community building designed by Alvar Aalto is a single construction containing all the civic elements of a small town and consists of a council chamber, library, medical centre, and local authority offices (Groak, 1992, p218).

Aalto's preoccupation with the site and its pedestrian routes employs memory as part of the architectural experience. He had an interest in environmental comfort and a special interest in light which he treated as representative of nature, arising from his concern with a humane and often nature-orientated functionalism (Groak, 1992, p208).

Aalto interpreted functionalism in a humanist way and his buildings are deeply imbedded in nature. This can be seen in the town centre's horizontality and the surrounding towering trees, the variety of the climbing plants, and the grass creeping over the steps of the centre (Porphyrios, 1982:63).

Building, Circulation and Entrance

The orientation of Alvar Aalto's buildings maximises sunlight and natural lighting. He incorporated pedestrian patterns in his designs and defined the entrances to his buildings. These principles were applied to the proposed new *Trader's Centre for Arts*.





(Figure 090) Front façade of African craft market (University of KZN field trip, class of 2005).

The author visited various local precedent studies with similar themes to the proposed building. Also these local projects were chosen as part of the precedent study as the study imposes on a local and African inspired architecture. It is interesting for the author to see how other South African architects interpreted the South African context which is unique to the rest of the world.

African Craft Market, Rosebank:

Architect: Kate Otten Architects

Kate Otten designed this craft market. It is successful both commercially and socially. The building was designed to house street vendors who were seen as a security threat to surrounding businesses. The structure is reminiscent of an African fabric as can be seen by the use of gum poles and detailing. The internal pedestrian street allows movement through the building. The building is a tourist attraction and is reminiscent of markets in Dar es Salaam and Nairobi (Kate Otten Architects, 2009).

The street was previously lined with informal traders and it was seen by Rosebank Mall as a security risk. The mall purchased a portion of the road from the city and the Arts and Crafts Market was constructed in its place. There are a total of 70 stalls on the bottom floor and the top floor is used as a formal trading space and coffee shop. Light falls inside the double volume space through polycarbonate roof sheeting, and is filtered through a reed ceiling.



PRECEDENT STUDY

Fig: 091



Fig: 092



Fig: 093

Clockwise: (Figure 091) View from parking lot (University of KZN field trip, class of 2005),

(Figure 092) Entrance from street, top floor with coffee shop and formal trading stalls and more trading stalls at the bottom (University of KZN field trip, class of 2005)

(Figure 093) View from parking lot (University of KZN field trip, class of 2005).



PRECEDENT STUDY

PRECEDENT STUDY



Understanding the product and what the building 'houses' is key to the proposals development and sustainability. Products such as those sold at the Rosebank African Craft market would probably be very similar to those sold at the proposed new *Traders Centre for Arts* in Marabastad.

product, n. 1 a thing or substance produced by natural process or manufacture. 2 a result (*the product of their labourers*) (*Concise Oxford English Dictionary*, 1995).

colour, n. & v. 1 the sensation produced on the eye by rays of light. 2 perception of colour; a system of colours (*Concise Oxford English Dictionary*, 1995).

(Figure 094) Products sold at the African Craft Centre (University of KZN field trip, class of 2005).



(Figure 095) Exterior texture and colour of reveal (University of KZN field trip, class of 2005).

PRECEDENT STUDY



Application and Relevance of the Rosebank African Craft Market:

- *The building encourages movement through and around.*
- *The architecture reflects openness and lightness of structure.*
- *The building forms a backdrop to the parking lot to the east– where it is envisaged that events such as markets and music could take place in this urban square (Digest of South African Architecture, 2001).*
- *The building meets the needs of developers, the informal traders and the greater community at large.*
- *Useful to the author was areas such as the 650m² ground level of the market which houses about 70 traders that previously sold informally along Cradock Avenue. The upper floor, which covers 350m² overlooking the ground level, is dedicated to more formal trading, including a colonial style décor and coffee shop (Digest of South African Architecture, 2001).*
- *The design of the building was intended to be an urban African icon and hence shows Kate Otten’s interpretation of an African inspired architecture. This African theme is also meant to be part of the market’s attraction. By creating a symbol that can be related to African Art and Architecture would help in tourists and visitors identifying the building as a tourist attraction.*
- *Conceptually the building is a simple, two–storey structure that responds directly to the site, client and user constraints.*
- *Light, texture and colour play an important role in the expression of this contemporary building, which is appropriate in its scale and design.*
- *The site was previously a road and this translates into an internal pedestrian street through the building. This ‘street’ is a double–volume space with light coming in from above and occasional bridges across. This allows visual contact between the floors and a number of different shopping experiences (Digest of South African Architecture, 2001).*
- *The building is a narrow building which has rich earth colours accented by the steel structures in charcoal blue (Digest of South African Architecture, 2001).*
- *The building is bound at the southern end by a cluster of three towers– they are important urban makers of the building. These towers are answered by three light shafts at the northern end, all of which are interpretations of the craft aspect of the market through their steel ‘basket’ caps, tiled ‘necks’, textured plaster shafts and bases (Digest of South African Architecture, 2001).*
- *To the northern end of the building has a large, curvy outside which looks onto and links into a public pedestrian area that connects the craft market and the mall (Digest of South African Architecture, 2001).*



PRECEDENT STUDY

72



Apartheid Museum

Architect: GAPP architects and Urban Designers, Mashubane Rose Architects, The Britz Roodt Partnership and Linda Mvusi Architecture and Design

The Apartheid museum has a strong link with memory and South Africa's history. The project was a collaboration of a consortium of architects. The design merges building with landscape and reminds the visitor of South Africa's history. It is a memorial to the Apartheid era and the lives it affected.



(Figure 096) Entrance signage (University of KZN field trip, class of 2005).

(Figure 097) Reinforced concrete and rusticated metal with the word: 'Freedom' (University of KZN field trip, class of 2005).

(Figure 098) Interior with texts about South Africa's history on the walls (University of KZN field trip, class of 2005).



PRECEDENT STUDY

PRECEDENT STUDY

Fig: 099



texture, n. & v. 1 the feel or appearance of a surface or substance. 2 *Art* the representation of the structure and detail of the objects. (*Concise Oxford English Dictionary*, 1995).

(Figure 099) Exterior view of building (University of KZN field trip, class of 2005).

(Figure 100) Use of gabion walls on the exterior create 'earthy' textures (University of KZN field trip, class of 2005).

(Figure 101) Panels of text fixed onto walls provides information for viewer (University of KZN field trip, class of 2005).



Fig: 100



Fig: 101



PRECEDENT STUDY

Application and Relevance of the Johannesburg Apartheid Museum:

- *The design and planning of the museum sets to tell a story of South Africa's political struggle and remind the viewer of the past mistakes. It is a history that is so recent that the story is still unfolding. The future is much stronger and the building communicates that together South Africa will achieve more, not divided.*
- *Architecturally different textures are used from structural concrete, gabion walls, play of lighting and signage as well as brickwork.*
- *The building sets to make a historic account of the Johannesburg neighbourhood. It tells two stories, one white and one black. It is a passionate story of struggle and one that is identical to the story of Marabastad.*
- *The story tells of the dispossession of land and the displacement and ultimate segregation of groups of people (gallery in the proposed new Traders Centre for Arts also tries to inform visitors of Marabastad's history by utilizing these very aspects from this precedent study, but showing and interpreting it in art).*
- *The juxtaposition of colour and texture creates striking features.*
- *The building works on a layering of space, some spaces are there but one cannot get to them. Different sections look onto the next with mesh cages, glass and visual depictions dividing areas.*
- *The main material used is structural concrete that is left true to its nature; it is unadorned concrete with no finish (Much similar to the "venturi chimneys" placed in the proposed new Traders Centre for Arts).*
- *The Apartheid museum becomes a living memory. The proposed new Traders centre for Arts is meant to create a lively memory of things to come and communities to be restored.*

Note: The Venturi effect is the reduction in fluid pressure that results when a fluid flows through a constricted section of pipe. The fluid velocity must increase through the constriction to satisfy the equation of continuity while its pressure must decrease due to conservation of energy, the gain in kinetic energy is balanced by a drop in pressure or a pressure gradient force. An equation for the drop in pressure due to the Venturi effect may be derived from a combination of Bernoulli principle and the equation of continuity (Venturi effect 2009).



Fig: 102



Everard Read gallery, Rosebank, Johannesburg:

Architect: Moren Williams Forsythe

The Everard Read gallery is South Africa's most famous commercial art gallery and was established in 1912. Over the years the gallery has grown in size and sophistication. In 1980 the gallery moved from its elegant downtown location to a purpose-built building in the precinct of Rosebank. The post-modern building surrounds a 1920's house, which is the gallery's administrative centre. The building comprises of protected sculpture courtyards and four exhibition areas of various proportions with clerestory windows that bring in daylight. The sculpture courtyards and indigenous gardens draw the outdoors in, creating an inviting space.

Everard Read has become synonymous with the finest art emanating from southern Africa. Many of this region's most celebrated painters and sculptors, both traditional artists of the past and emerging talent, exhibit with Everard Read which is also the agent for fine artists from elsewhere in the world.

(Figure 102) Use of gabion walls and pergola (University of KZN field trip, class of 2005).

(Figure 103) Use of natural light from clerestory window in gallery space (University of KZN field trip, class of 2005).



Fig: 103



Application and Relevance of the Johannesburg Everard Read Gallery:

- *Building identifies with LIGHT.*
- *Lighting is important to gallery spaces and this gallery highlights ways of making use of natural lighting which is also important in the proposed Trader's Centre for Arts gallery space.*
- *The brief called for a low cost project that would be both functional and practical. Jeremy Williams (the architect), used the existing house as pivot, walls as ordered "plates", undulating organic elements and columns. He explored these concepts mixing it with "first world" and African elements and imagery (Building, 1993).*
- *Sculptured columns were used to reinforce the galleries African identity.*
- *Windows were removed to create maximum wall area and provide a controlled lighting level.*
- *Use of light grey and white was used in the interior to not deter the viewer away from the artwork.*
- *For flexibility and good colour rendering the interior lighting uses a combination of track mounted metal halide flood and low voltage dichroic lighting. The low voltage track fittings are pendant style and are custom made (Building, 1993).*
- *Exterior illumination consists of eyelid style bulkhead luminaries with compact fluorescent lamps wall mounted for safety and orientation lighting (Building, 1993).*
- *Recessed low voltage luminaries encircle the plinth which surrounds the gallery and provide medium beam up-lighting to the structure (Building, 1993).*
- *The principle structure is illuminated up and down using miniature low voltage spot fittings, all exterior graded (Building, 1993).*
- *The sculpture gardens are illuminated by means of QI and low voltage light sources, both wall mounted and portable (Building, 1993).*
- *Blue neon circles illuminate each column top (Building, 1993).*



PRECEDENT STUDY

77

Constitutional court, Braamfontein:

Architect: Andrew Makin of OMM design

The design of the building physically and experientially represents the values of South Africa's constitutional democracy. The building has a simple plan and is a highly detailed building. The four major components of the building are the court foyer and chamber, the library, the administration areas, an exhibition space and the judges' chambers (offices) (Digest of South African Architecture, 2004/2005).

The court foyer and chamber are the primary focus of the Constitutional Square. The emblem of the South African Constitutional Court is a tree. In South African rural society, the shade of a tree is used as a place of communal gathering such as in schools, meetings in a community with their elders, or simple social exchange. The library, the repository of knowledge, was placed at the bottom of the slope of the site, at the opposite end from the foyer and chamber. It was designed as the tallest structure on the side of the ridge and is supposed to be a "glowing beacon of knowledge; and to the south the "chamber of wisdom" or court chambers (Digest of South African Architecture, 2004/2005). The building utilizes the use of light and its impact on concrete, timber, steel, stone and glass. The use of light on solids and surfaces reflect the colour, coolness and warmth, show scale, volume, silhouette, relief, soft whiteness and a smooth, undulating shine (Digest of South African Architecture, 2004/2005).



(Figure 104) Photograph from building taken from the top of a hill (University of KZN field trip, class of 2005).

(Figure 105) Exterior showing signage that is placed on the front façade of the building (University of KZN field trip, class of 2005).

PRECEDENT STUDY



PRECEDENT STUDY



(Figure 106) Carpentry and woodwork depicting attention to detail and craftsmanship (University of KZN field trip, class of 2005).

(Figure 107) Exterior showing signage that is placed on the front façade of the building (University of KZN field trip, class of 2005).



detail, n., & v. 1 a minor decoration in on a building, in a picture, etc (*Concise Oxford English Dictionary*, 1995).



PRECEDENT STUDY



(Figure 108) Exterior detailing of façade panels. These detailed tip-up screens are conceived by Andrew Verster and are installed on the west façade (University of KZN field trip, class of 2005).

(Figure 109) Interior detailing of tip-up screen panels (University of KZN field trip, class of 2005).

Application and Relevance of the Braamfontein Constitutional Court:

- The brief called for a building that would represent the value system of democracy as it is contained in the Constitution of the Republic of South Africa. It was required in the brief that people visiting the court should understand and experience these values (Urban Renewal, 2003).
- Andrew Makin (architect, OMM design) states: "In our design submission we sought to respond primarily to the values expressed in the Constitution, taking cognisance of the social and political history of the country and of this particular site, as well as the contemporary socio-political context and, importantly within the broader view, the economics of the contemporary building industry. We also, of course, had to work with the constraints and opportunities of this urban site." (Urban Renewal, 2003).
- Andrew Makin also states: "...what makes cities democratic? And the answer here relates to choices. Democratic cities offer people choices- which, in turn, relates to freedom of movement, freedom of access, and appropriate, mixed land use that meets the needs of the people and offers them a range of amenities and opportunities, conveniently." (Urban Renewal, 2003).
- Andrew Makin continues: "The plan of the building is very simple, it answers to the accommodation brief, the requirements for public and private space, and manages the interface between them. It also responds to the urban design level, as a perimeter building, to interface directly with the public open space around it, while framing a private internal courtyard." (Urban Renewal, 2003).



- *It is important in the urban environment that buildings convey their purpose through their form and expression (Urban Renewal, 2003).*
- *The building makes use of detailed, hand-crafted entrance doors, the spaces are formed using concrete, slanted concrete columns are used and the movement of the sun is incorporated within the building form whereby skylights that are cast as slots at various angles in the concrete roof slab (Urban Renewal, 2003).*
- *Celtis Africana trees are planted along the pathway to offer shade to people on the steps (Urban Renewal, 2003).*
- *The building uses a limited palette of material. This makes the building more economically viable and a reflection of the current industry and market at present.*
- *Particular attention has been given to the detailing of the building and to opening opportunities for individual artists and craftsmen to contribute to the making of public building (Urban Renewal, 2003).*
- *Work by artists can be seen in the timber doors and wrought iron gates, carpets, light fittings, etched panels, mosaics, nose edgings on stair treads, and in emblems designed for the ventilation chimneys (Urban Renewal, 2003).*

In terms of sustainability:

- *The north / south orientation of the main public spaces is appropriate for passive or low energy climatic controls whilst the east/ west orientation requires more design inventiveness such as the sun-screens placed on the western façade.*
- *A rock store system is used in the building to provide a low energy means of controlling the internal climate. This system increases the thermal storage capacity of the building (absorbing cold night air in summer or absorbing heat from a warm day in winter) (Urban Renewal, 2003).*
- *Mechanical fans are used to drive the cooler air in summer or warmer air in winter (Urban Renewal, 2003).*
- *The mechanical system works in conjunction with ventilation chimneys which are installed to extract hot air from the interior by the natural stack effect. The steel chimneys are fitted with fans to accelerate the release of hot air (Urban Renewal, 2003).*
- *The internal ventilation shafts house rainwater downpipes and electrical cabling (Urban Renewal, 2003).*
- *A conventional mechanical air conditioning system is installed to service the basement to ensure a stable environment for archival material (Urban Renewal, 2003).*





Woza Woza Tourist Centre, Mpofana

Architect: Bingham Associate Architects assisted by Symmetry

Senior professor at UKZN, Kevin Bingham designed the building as Bingham Associate Architects working in association with a drafting company Symmetry who were the original contacts for the project. Together the two firms won the project in a closed competition.

The building was designed as the restaurant and take-away component of a larger tourist centre that unfortunately, due to funding never happened. The client was the Mpofana Municipality (formerly Mooi River Municipality). The land is owned by Tolcon (the tollgate company) and was given to the municipality for use by all the people of Mooi River. The problem of this is that they could never lease it out to anyone other than the general Tourist Info and so it has remained empty for years.

The budget for the proposal was cut and the contractor had to work with fewer resources. An alternative religious group has currently moved into the building.

(Figure 110) Exterior photograph of building showing architects use of innovative African inspired forms and local building techniques (University of KZN field trip, class of 2005).





local, adj., & n. 1 of or belonging to the neighbourhood. 2 belonging to or existing in a particular place or places. (*Concise Oxford English Dictionary*, 1995).

Application and Relevance of the Woza Woza Tourist Centre, Mpofana:

- *Building identifies with LOCAL MATERIAL.*
- *Use of latte applies to material choice selection that is local, thus supporting local businesses in the construction process and remaining “proudly South African”.*
- *Use of earthy colours on building shows architects intention and interpretation of an African inspired architecture.*
- *Building generates a type of ‘feel’ for a tourist market, and buildings like these are associated with tourist market groups. A sense of ‘identity’ for an African architecture is somewhat achieved.*
- *Play of light is evident in the interior spaces with the use of cylindrical and rectilinear openings which draw in light into the interior spaces.*
- *There is a contrast of materials with the latte and ‘adobe’-like and earthy quality of the walls.*
- *Suspended light fittings add to the quality of the architecture.*

(Figure 111) Exterior photograph of building (University of KZN field trip, class of 2005).

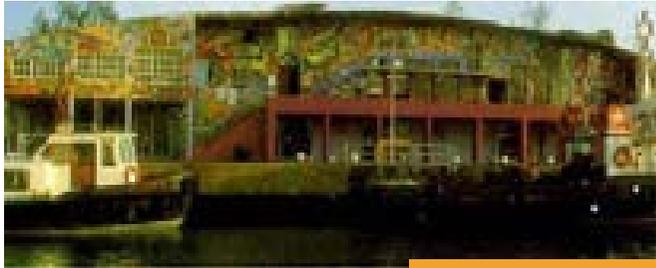
(Figure 112) Interior use of cylindrical ‘cut-outs’ of wall to bring in light (University of KZN field trip, class of 2005).

(Figure 113) Interior photograph of building (University of KZN field trip, class of 2005).



BAT Centre, Durban

Architect: Collaborative cc assisted by RAP studio



(Figure 114)
Exterior
photograph of
building (BAT
Centre, 2009).



(Figure 115) View
of Durban's
harbour from the
deck (BAT Centre,
2009).



(Figure 116) Lively
deck area during
the day (BAT
Centre, 2009).



(Figure 117) Artist
at work at the
centre (BAT Centre,
2009).

The Bat centre was established in 1995 and it is a place of South African artistic talent. It is a non-profit organisation dedicated to the promotion of music, visual arts, dance, craft and literature of KwaZulu-Natal.

It aims at generating work for artists and establishing new markets. It is an arts and culture community centre found in the small craft harbour, off Durban's Victoria Embankment. Its goal is to celebrate the arts and culture of Durban, KwaZulu-Natal and South Africa by promoting local talent and skills. It also aims at celebrating unique cultures, creates jobs, sources talent, imparts skills and develops markets.

There are short courses, workshops and seminars that take place at the BAT Centre on a continuous basis. Topics of discussion vary from visual arts, music, acting, writing and literature, to discussions on health, politics, business skills and entrepreneurship. Various venues are used, through booking, at the centre such as the Functions Room, Mission Control Room, The Studio Coastal Room, the MBL (Music Business Learnership) Room, the Resource Centre and the Siphon Gumedede Hall and the Visual Art Studio). The BAT Centre's Visual Art Studio, galleries & BAT shops allows the BAT patron the value of being part of the art world by offering exhibition space where tourists and art lovers can select and purchase artworks (BAT centre, 2009).

Application and Relevance of the BAT centre, Durban:

- Building supports local artistic talent and is a platform where artists can develop their skills.
- It creates jobs for artists and creates awareness to the community of the importance of art.
- It celebrates the arts and crafts of its neighbourhood (Durban) and promotes tourism to the area.



PRECEDENT STUDY

The architecture of the next precedent studies are already built South African trader's markets and they bring a sense of ownership, identity and possibly *pride* to the traders and street vendor's who use them. South Africa is unique to the world as it is a country divided; there is extreme poverty compared to a small percentage of rich, looking for precedent and learning from successful South African traders markets will only enrich future designs. Street traders are common in Marabastad and are often viewed as perennial economic outcasts. Trader's markets challenge the integration of marginalised communities such as street traders or taxi operator's and helps better integrate them into the public realm.

There is a need to house these street traders and vendors. Retailers see them as unfair competition, motorists see them as an obstruction and unsightly and it has also become unhealthy in certain parts of Marabastad such as the informal butchery and the local authorities themselves blame street traders for the decay of inner cities. On the other hand, these traders are a convenient and a cost-effective way to get goods cheaply and in small quantities (Hansen, 2008:44).

The people who use these traders markets are integrated into the building and decision making process. This integration of people who previously were never involved in the building process has now become part of the building envelope. The architecture expresses the people that it houses.

pride, n. & v. 1 a feeling of elation or satisfaction at achievements or qualities or possessions etc. that do not credit (*Concise Oxford English Dictionary*, 1995).



Rockey Street Trader Market, Yeoville

Architect: Urban Solutions and Urban Designers

This was one of the first markets to be constructed in 1998. The market was planned on a semi-vacant park/ parking site in Rockey Street, Yeoville's high street. The building was a challenge as no precedent was used and this was one of the first designs for a trader's market typology in South Africa. The footprint of the market was discussed at numerous community forums where up to 300 affected end-users were informed. The community design forums have become an important design tool in all the trader buildings that were constructed.

The final footprint was a perimeter lean-to sheds, with flexible trading spaces, opening as much as possible to the street to benefit from bypassing foot traffic. The trader sheds placed on the perimeter define three courtyards, which act as anti-space to the busy trader floors. Within these spaces are wash spaces in the form of fountains, benches with trees, and a performance stage in the back courtyard. The performance courtyard which faces the food traders and cooking areas has become the most successful and popular part of all the markets (Hansen, 2008).

The building is dominated by a high volume trader passage running through the centre. It is the *focal point* to the building. It demarcates the public entrances and links the various trader sheds and courtyards together. It has also become the social spine of the building.

focal point, n. 1 the area of a pictorial composition or a spatial setting to which the eye is drawn and returns most naturally (Porter, 2004).

The volumetric trader passage was the only part of the building that did not speak of utilitarian efficiency and attempted to give them identity and permanence within the urban fabric. The Rockey Street Market while popular and well occupied, suffered due to the lack of bypassing trade. By moving street trader operations into destination markets, a large number of hawkers lost their livelihood. Realising that street traders could not sustain themselves independently of other city functions and activities, projects were initiated which followed a more *integrated* approach (Hansen, 2008).





(Figure 118 & 119) Exterior photograph of building (Hansen, L. pp 44-45).

integrated, v. & adj. **1 a** combine parts into a whole. **b** complete (an imperfect thing) by the addition of parts. (*Concise Oxford English Dictionary*, 1995).

Application and Relevance of the Rockey Street Trader Market, Yeoville:

- *Building is dominated by a high volume trader passage running through the centre.*
- *This 'pedestrian spine' becomes a FOCAL POINT to the building.*
- *The market suffered because it lacked bypassing trade. To better the design the market needs to be focused on the spine of pedestrian routes.*
- *The design process promotes community participation.*





(Figure 120) Internal view of west tower detail (University of KZN field trip, class of 2005).
(Figure 121) Exterior of west tower entrance showing building signage (University of KZN field trip, class of 2005).
(Figure 122) Interior use of natural light (University of KZN field trip, class of 2005).
(Figure 123) Walkway detail (University of KZN field trip, class of 2005).



Metro Mall- Taxi/Bus Rank and Traders Market, Johannesburg

Architect: Urban Solutions and Urban Designers

The building appears to be a traditional Johannesburg inner city development.

The function combines taxi transportation with living, shopping and entertainment and a traders' market. Shopping is placed along interior pedestrian routes and this is reminiscent of Middle eastern Islamic societies. The project serves to relocate the centre of Johannesburg and establishes as a new reference point for the majority of inner-city users. It promotes interaction in an increasingly mobile society due to the Apartheid which segregated black communities far from cities (Digest of South African Architecture, 2004/2005).

During the planning stages of the market over 150 meetings were held with trader and taxi associations (Hansen, 2008). The link between traders and transport operators was made in this design. Taxis are the most popular mode of transport in all urban areas for the majority of South Africa's population and account for 65% of the total. More than 12 000 mini-bus taxi's serve commuters to and from outlying areas of Johannesburg (Hansen, 2008). The taxis have replaced the train and bus as the most important public transporters which make it ever so much harder to implement BRT transportation. The taxi, in South Africa has become the most important mode of public transport; therefore there is a need to provide sufficient parking for taxi owners in Marabastad as the taxi has an important standing with the community.



Until 2000, these taxi operators had no formal facility and used mostly temporary structures and vacant sites or pavements. The taxi's however were not treated as illegal urban citizens and seen to be of higher status to the community (Hansen, 2008).

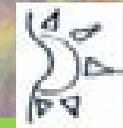
The Metro Mall design demonstrates a public building which provides' for a sector marginalised in the past. It presents itself with pride and a sense of arrival unlike the stereotype of taxi ranks that are around urban centres. The building displays a sense of permanence, moving away from the temporary treatment the mini-bus, taxis and traders received in the past. A design requirement for the building was to be robust and adaptable. The traders are free to use the spaces as they please, the material for construction had to be durable- thus the choice of off-shutter concrete and face-brick. The design started from an urban planning perspective to a planning one; as well as endless community and stakeholder participation process. The architectural expression occurred without a clear concept in mind and the final result is utilitarian (Hansen, 2008).

The brief asked for a transport interchange which would provide holding space for 25 buses, 2 000 mini-bus taxis and trading space for 800 informal traders. It would welcome and assist 200 000 commuters who pass through the facility daily. Formal retailers, community amenities, crèches, recreation halls and transport association offices were also required (Hansen, 2008).

Metro Mall was primarily designed to make connections with the surrounding city fabric; to complete the street grid to enable continuity and movement; to promote mixed-use within the buildings; to observe street boundaries in construction of perimeter buildings with active street edges; and to acknowledge the street as public space, thereby creating the active edges (Hansen, 2008).

The most commanding features of the building complex are the entrance towers, which act as oversized collection baskets. These dominate the streetscape and have been positioned at important street intersections and opposite existing movement routes to the community halls. They display and speak a language of *celebration*, an acknowledgement that the complex houses and serves an important public amenity (Hansen, 2008).

celebration, n. 1 honour publicly, make widely known.(The *Concise Oxford English Dictionary*, 1995).



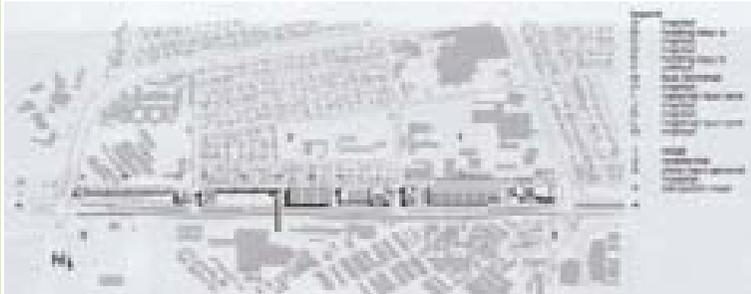
The towers lead into wide trader passages along which traders can display goods. Commuters are forced to pass through the colourful trader stands en route to their transport departure point. Leading off the trader passages are quiet courtyard spaces filled with benches, water fountains and sculptures, surrounded by cooking stalls under trees.

Application and Relevance of the Metro Mall– Taxi/Bus Rank and Traders’ Market, Johannesburg:

- *The building accommodates for close to 800 traders and retailers (Digest of South African Architecture, 2003).*
- *A large variety of traders spaces are housed along the internal street fronts used by commuters. These trading spaces cater for different trader needs and means. From small, simple–floor–space stalls with concrete counters to large roller–shuttered, lock–up cubicles and to fully serviced outlets to accommodate hairdressing salons and fast food services (Digest of South African Architecture, 2003).*
- *Urban principles informed the original development framework: making connections with the surrounding city fabric; completing the street grid to enable continuity of movement; supporting public mobility via various transport modes; promoting mixed–use and urban opportunities; observing street boundaries in construction of perimeter buildings with active street edges; and acknowledging the street as public space, allowing equal opportunity and access and freedom of movement (Digest of South African Architecture, 2003).*
- *This public building provides for a sector of our society marginalized in the past.*
- *Artworks by local community artists fill the interior walls and streetscape (Digest of South African Architecture, 2003).*
- *Oversized entrances acting as collection baskets dominate the street landscape (Digest of South African Architecture, 2003).*
- *Robust materials confront the rigour of its users (Digest of South African Architecture, 2003).*
- *Activity along its edges regenerates street life (Digest of South African Architecture, 2003).*
- *Public amenities are provided for all users and visitors (Digest of South African Architecture, 2003).*
- *Variety in space allocation caters for a variety of stakeholders (Digest of South African Architecture, 2003).*
- *The building attempts to restores civic pride (Digest of South African Architecture, 2003).*



PRECEDENT STUDY



(Figure 124) Plan of development (Hansen, L. P47).

(Figure 125) Exterior photograph of building (Hansen, L. P47).

Baragwanath Transport Facility and Trader Market

Architect: Urban Solutions and Urban Designers

The design process involved ways of integrating and benefiting the end user, who is usually unemployed and poor, into the construction process. An artist's programme was established to get artists in the community to decorate the buildings. This *participation* process is not only beneficial to the community and artists but provides a means through which the end-users can associate with the building and structures. The artists were trained and directed to complete a variety of mosaics, sculptures and murals. This creates a sense of ownership and adds a personal dimension to the building.

The Baragwanath Transport Facility and Trader Market acts as a gathering point for 60% of the transport routes from Soweto to Johannesburg. The brief required space for 1000 long- and short- distance taxi's, 22 buses and 500 trading spaces and associated amenities. The project site is wedged between the Chris Hani Baragwanath Hospital and the business district of Diepkloof.

The site is 1.3 kilometres long by only 50 metres wide. The project was implemented over a number of stages, stretching the construction process to over six years.

The planning of the design is stretched over the whole length of the site. The plan also shows a series of transport uses wedged between courtyard buildings housing the traders and public amenities, which are linked by a commuter/ trader passage stretching the whole length of the site.



participation, n. 1 (usu. foll. by in) share or take part (in).
2 (foll. by of) literary or archaic have a certain quality (the speech participated of wit).
(*Concise Oxford English Dictionary*, 1995).

At both ends of the building complex are tall concrete towers richly decorated with mosaics and lights. At every street intersection or break in the building chain, landmark structures were integrated into the buildings or within the trader passages. To ensure a unified building over the 1 300 metres, to address orientation, scale and establish a sense of place, a trader passage is placed to run the whole length: it becomes a feature and unites and links the various functions and amenities together (Hansen, 2008). The tower orientates the user. At every street intersection along the trader passage or major transport facilities, a commuter and trader courtyard building is positioned. Housed within these structures are on-the-ground floor trader shops and public amenities. On the upper levels of these same buildings are the various trader associations, taxi and bus operator offices as well as recreation areas for bored taxi drivers.

The artist Clive van den Berg was tasked with the artworks programme. School children in Soweto were asked to submit artwork proposals, which he then interpreted and implemented in various places and spaces around the site.

Application and Relevance of the Baragwanath Transport Facility and Trader Market:

- Building restores civic pride to those less fortunate.
- Building creates jobs for local artists and demonstrates the role artists have to play in public buildings.





(Figure 126) Exterior photograph of building (Murray, 2008).

The Tsoga Environmental Centre and Recycling Depot

Architect: ARG Design Team, city planning and urban design, Cape Town

The award-winning design in Samora Machel, Cape Town was designed and built according to sustainable architectural and urban design principles through community participation. The building uses reused materials often considered waste. It demonstrates simple construction and is ethical and important in terms of *sustainability*. The building was built with the intention to house the Tsoga Environmental Centre, an NGO founded in 1994 to provide environmental education and training that had its headquarters based in Langa. The building is not in use as the NGO collapsed.

The facility utilizes distinct brick walls and vaulted roof forms. It faces onto a public space with tall gum trees and makes use of reused bricks, broken granite tile floor finish and built in timber benches placed between structural bays. The roof structure uses reused beams and gum poles with a bent *Spaanse riet* ('Spanish thatch') ceiling broken only by ventilation and roof light slots (Murray, 2008).

There is a smaller hall that faces the road and uses reused sash-type windows. The building is highly adaptive to maximise sustainability. Heavy structural columns mean that the roof can be easily lifted to accommodate more floors and the columns are designed to take the new load as well as the main conduits for services allowing infill walls to be added or removed with ease.

Solid walls are interspersed with screens of 'latte', water tanks collecting water from the roof are visible. All the simple technologies can be seen. Trees and shrubbery are watered by rainwater channelled off the roofs into ground channels which sustain the gardens. Grape vines screen the north face in summer but in winter allow sunlight into the building. Trees are positioned to enhance space making.



PRECEDENT STUDY

93

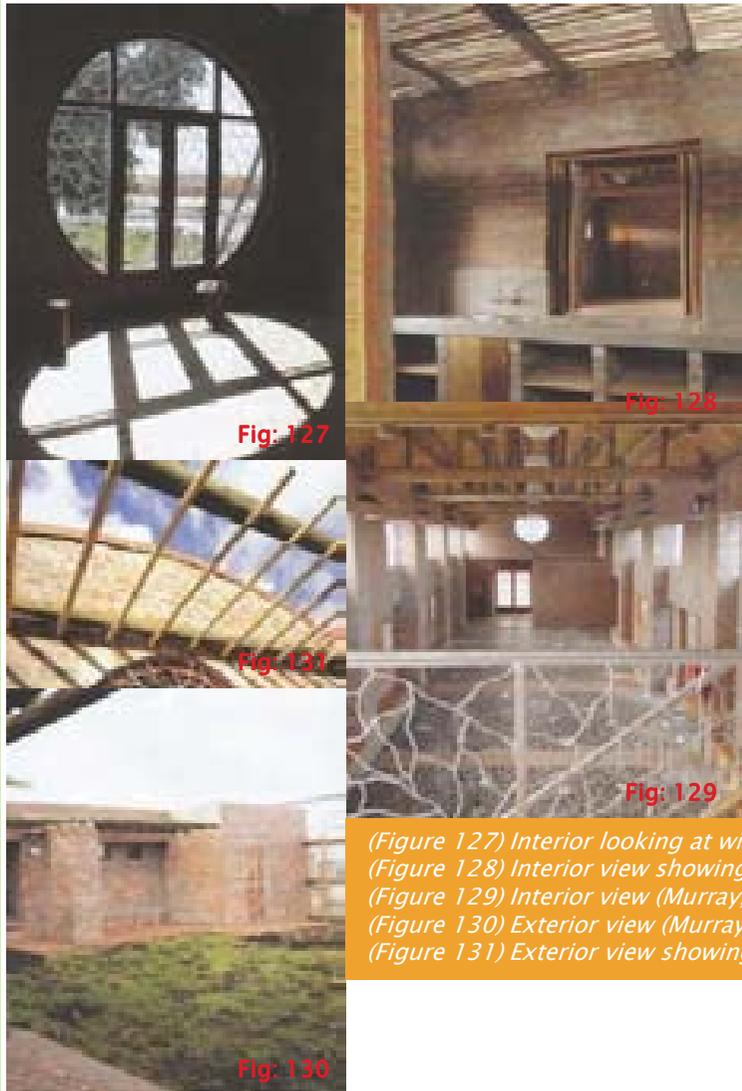


Fig: 127

Fig: 128

Fig: 131

Fig: 129

Fig: 130

(Figure 127) Interior looking at window and door detail (Murray, L. 2008, p44).
 (Figure 128) Interior view showing kitchenette (Murray, L. 2008, p44).
 (Figure 129) Interior view (Murray, L. 2008, p44).
 (Figure 130) Exterior view (Murray, 2008:45).
 (Figure 131) Exterior view showing pergola details (Murray, 2008:46).

sustainability, n. Ecol. 1 Ecol. (esp. of development) which conserves an ecological balance by avoiding depletion of natural resources. (*Concise Oxford English Dictionary*, 1995).

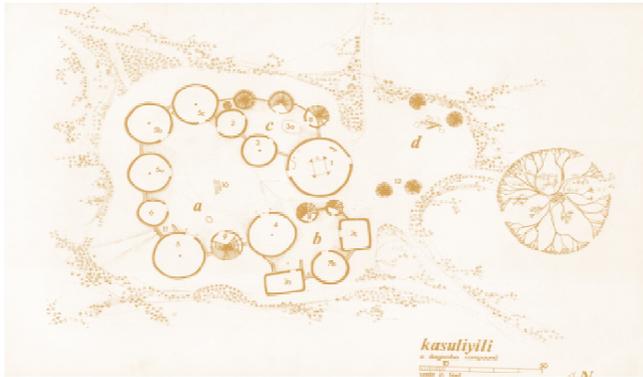
The building is currently not in use as the community has not taken ownership of it. The community thus needs to engage with the building well after the construction process (Murray, 2008 P42).

Application and Relevance of the Tsoga Environmental Centre and Recycling Depot, Cape Town

- *Building promotes sustainable interventions in South Africa.*
- *Design process involves community participation.*
- *Building uses reused materials.*
- *Building uses simple construction that is well known in South Africa. Thereby utilizing local building knowledge and practices to create a sustainable form.*
- *The building is adaptable.*
- *The building makes use of water collection and stores rainwater in tanks. These water tanks sustain the gardens.*



PRECEDENT STUDY



(Figure 132) Plan of the Kasuliyili (northern Ghana) shows that African vernacular villages were planned around a central courtyard space (Prussin, 1969).

What is the author's interpretation of an African inspired architecture?

The South African precedents were chosen as most represent traders markets which are very common to the South African context. The author investigated 20th century South African precedents built after the 1994 democracy. The architects in these precedents have shown an interpretation of an African inspired architecture but what is the author's interpretation of African architecture? The author's investigation into this topic concluded in the planning of some African vernacular dwellings which "wrapped" around a central courtyard space. This was best interpreted as "African Courtyard Architecture".

African Courtyard Architecture

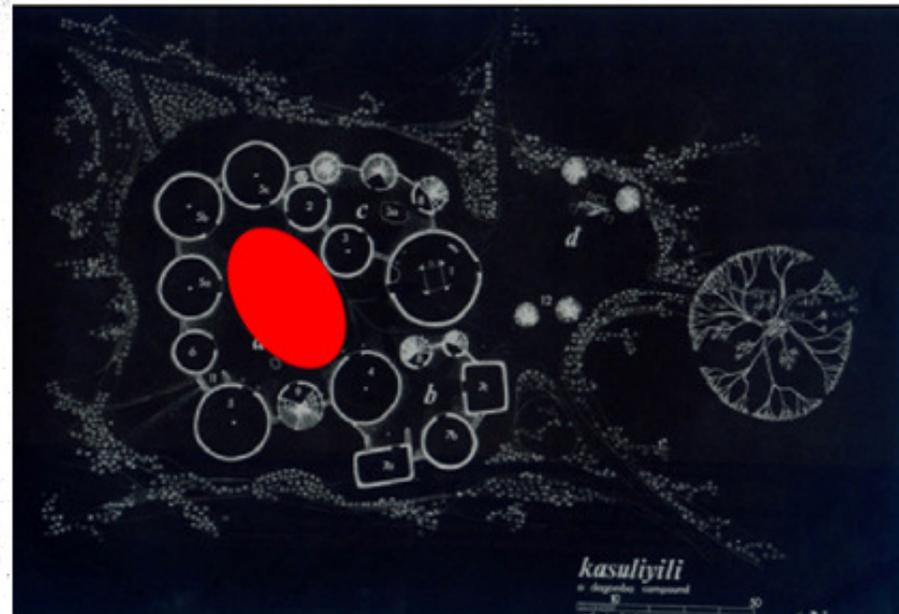
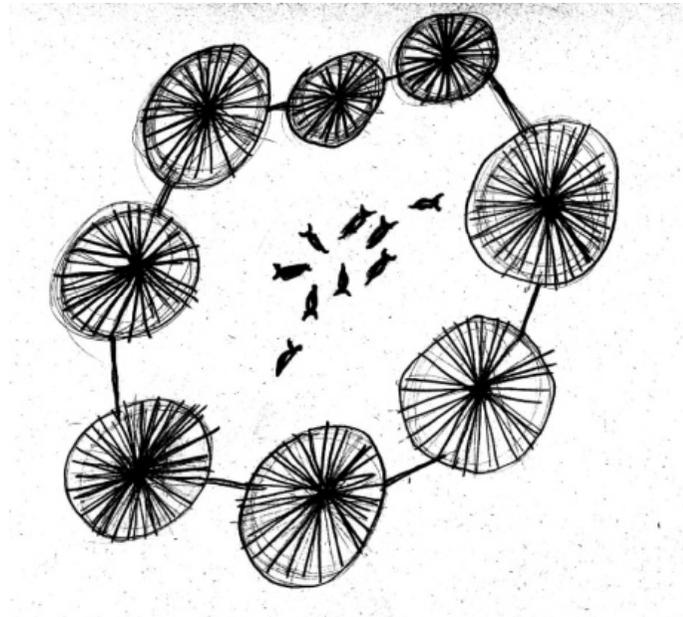
Professor Gerald Steyn of the Tshwane University of Technology conducted research based on African courtyard architecture in his research document: *African Courtyard Architecture: Typology, Art, Science and Relevance*. Steyn investigated traditional African cultural practices that have developed over time and culture. In his research it is noted that most Sub-Saharan vernacular dwellings include a clustering of huts around a central living space. This clustering of houses served as a protection barrier for their cattle as well as a public living space. Compact neighbourhoods which have existed in African culture for centuries are becoming accepted all over the world as an alternative to suburban sprawl. This *type* or *typology* of African culture is the root of our architectural heritage in South Africa. The way African communities were planned before westernisation took over is the root to creating links with the past (Steyn, 2005, African Courtyard architecture).

Quiet courtyard spaces are important to the initial planning of the proposal also sculptures from the art studio can be placed within the courtyard as well as the space being utilised as a stage area when there are gatherings or special events taking place.



Application and Relevance of African Courtyard Architecture:

- Use of a centralized courtyard 'wrapped' by the building envelope.
- The courtyard space is a welcoming but also private part of the proposed building.



(Figure 133) Conceptual sketch plan of an African village showing that the central courtyard space is also used as a protected area whereby cattle can be kept safe (author 2009).

(Figure 134) Inverted plan of the Kasuliyili (northern Ghana) shows that African vernacular villages were planned around a central courtyard space. This protected courtyard space can be seen on the plan in red (Prussin, 1969).





(Figure 135) House in Museumlaan by Cino Zucchi (Zucchi, 2009).

type, n. Ecol. 1 Ecol. (esp. of development) which conserves an ecological balance by avoiding depletion of natural resources. (*Concise Oxford English Dictionary*, 1995).

typology, n. & v.1 an object, conception, or work of art serving as a model for subsequent artists. (*Concise Oxford English Dictionary*, 1995).

House in Museumlaan

Architect: Cino Zucchi

Contemporary Dutch Architecture – window placement

The author also looked to international precedent to draw inspiration for the final design. The author was intrigued by the window placement that is both cheap and yet architecturally stimulating.

The house to the left is a house in Museumlaan designed by Cino Zucchi. It clearly demonstrates the play of window levels and heights.

Application and Relevance of House in Museumlaan

- Play of window heights and levels.

