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SITE ANALYSIS

CHAPTER 06

SITE ANALYSIS

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“You would know the secret of death. But how shall you find it unless you seek it in the heart of life? ... If you would indeed behold the spirit of death, open your heart wide unto the body of life. For life and death are one, even as the river and the sea are one.” (GIBRAN 1926: 93)

6.1 THE SITE

The site is located in the social and cultural heart of its surrounding community. Indeed it is placing the dying process in the middle of the living community. Not placing it in an obscure edge condition nor hiding the function. The site is located in the Eastern area of the older sections of Mamelodi. It borders a tributary of the Pienaars river, which divides Mamelodi into east and west. The tributary is canalised further upstream from the site, but spills out into a natural riparian course at the foot of the site. Bordering the site is the green space and river reserve scheduled for upgrade as Node 2 in the linear nodal development framework. The node proposes urban agriculture, the strengthening and densification of the urban edges and the redevelopment of green spaces. Sited at the foot of the Magaliesberg Mountains the area experiences spectacular views and being on the edge of a green space affords views of natural vegetation and recreational community activity.

“Nature nurtures. There is no longer any doubt about the therapeutic value of contact with the natural environment, whether it is through window views, gardening, walking through the woods, or watching the

sun set over the ocean.” (GUENTHER & VITTORI 2008: 85)

The site also boasts well-established, tall and stately pine trees believed to date from before the founding of Mamelodi and most likely they formed part of the original farm trees in the area. The site and its surrounding area, now known as Mthunzini park, was once known as the Plantation. (WALKER & VAN DER WAAL 1991: 17)

6.2 THE HERITAGE OF THE SITE

Mtunzini, a Zulu word, means a place in the shade of a milkwood tree. But as the site is shaded by pines the more appropriate name Mthunzini, meaning a place in the shade of trees, was given to the site. (ZULULAND ZIG-ZAG. 2010.) Many of the businesses and functions on and around the site bear this name, making it is an exceedingly important aspect to both the identity of the area and to the heritage of the site.

“Few records survive of the buildings in the area pre-1945. An early map (dating from 1886) show ‘Wilson’s Winkel’ (situated about where the present Mthunzini Park now is in the Plantation)” (WALKER & VAN DER WAAL 1991: 3)



72. The Site - Tribal Offices on North Street Edge



73. The Site - Seating Area on North Street Edge



74. Photo of Park on the Western Edge of the Site Down to River



75. Relational Location Maps from National to Nodal Scale

SOUTH AFRICA

GAUTENG

THSWANE

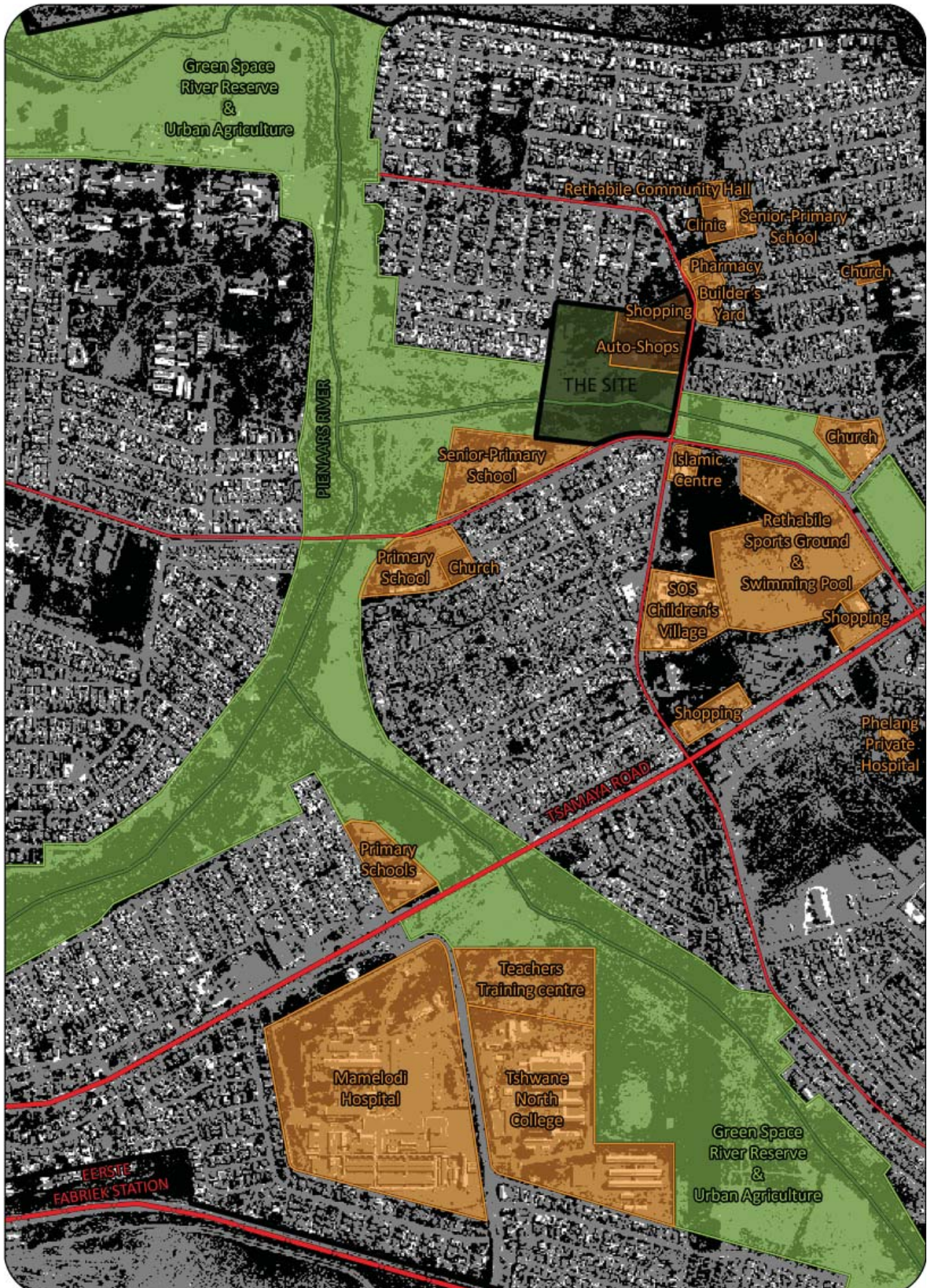
MAMELODI

NODE 2



COMMUNITY FUNCTIONS IN AND AROUND THE SITE

76. Map of Community Functions & Greenspaces in & Around the Site





77. Street View of SOS Childrens Village

Commercial activity has probably existed on the site since 1886, as shown by the quote above. At one point this area was used as a beer garden with tables littered under the trees, until the concept of beer halls fell out of favour. There were plans for a weaving industry, (WALKER & VAN DER WAAL 1991: 4) but today it is the site of many businesses including a self-named 'shopping centre' which through an ever-growing collection of buildings, provides facilities such as a bar and restaurant, hair dressers and an ATM. The back of the site facing onto the green space houses an Auto Shop and an Aluminum doors and windows supplier. These businesses have erected a 3 meter tall, solid brick wall, thereby completely turning

their back on the space and removing passive surveillance. This has created an environment rife with crime and although beautiful, dangerous as well. Other functions that happen on site include a butchery, an auto mechanic, several garage stalls and tucked away in a corner a Tribal office.

6.3 THE COMMUNITY

Not only is the site itself rich in community and commercially oriented functions but so to are its surroundings. The site is in one of the best serviced areas in Mamelodi, and is in close proximity to Hospitals, clinics, pharmacies, religious functions (including the only Islamic based worship site in Mamelodi) and the S.O.S. children's village.



78. Photo of Parking for the uBuntu Complex



79. Street Photo of Mamelodi Islamic Centre



80. Street Photo of Building Yard Across from Site



81. Series of Photos from Southern Edge of Site



82. Series of Photos of the Northern Edge of the Site Showing Tribal Offices, Garage Shops & Existing 'Shopping Centre' & Tavern



83. Map of the Site

THE SITE

The site that will be used to house the facility will cover only ex. disturbed ground but will interact with the whole area.

WALLS & FENCES

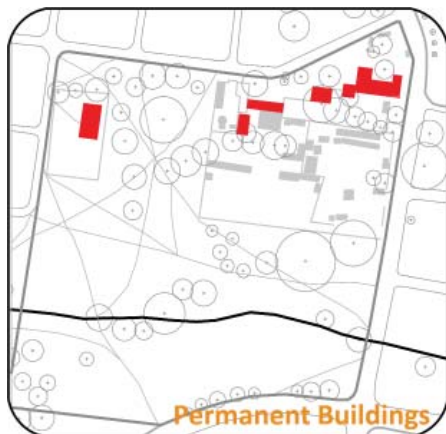
The existing walls & fences cut off the community from the site creating a dangerous environment.

GREENSPACE

These areas are zoned as greenspace and river reserve.



84. Map Depicting Existing Walls and Fences



85. Map Depicting Existing Permanent Buildings

PERMANENT BUILDING

These include a church on the far west, and a collection of brick buildings and garages as well as the 2 story shop building.

COMMUNITY FUNCTIONS

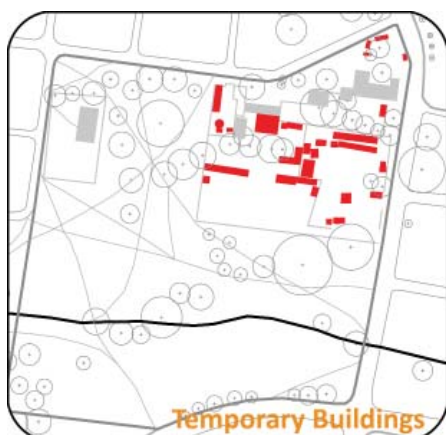
Schools, businesses and commercial functions.

RIVER AND TREES

The Pienaars river tributary runs through the south of the site. Some of the trees appear to be planted in rows.



86. Map Depicting Existing Community Functions



87. Map Depicting Existing Temporary Buildings

TEMPORARY BUILDINGS

These consist of lean to roofs, shacks and a rondavel.

DESIRE LINES

The site has become a place where people walk through as the main roads are unfriendly to pedestrians. This has created worn desire lines.

1M CONTOURS

The slope is steep due to being located at the foot of the Magaliesberg Mountains. The slope falls from the east to the west.



88. Map Depicting Existing Desire Lines or Pedestrian Routes



89. Panaoorama taken from the South of the Site Looking North

6.5 S.W.O.T. ANALYSIS

STRENGTHS

- Natural surroundings including, well established trees, views of the Koppies and access to flowing water
- The concentration of community functions in the area
- The proximity to the hospital and medically related functions

WEAKNESSES

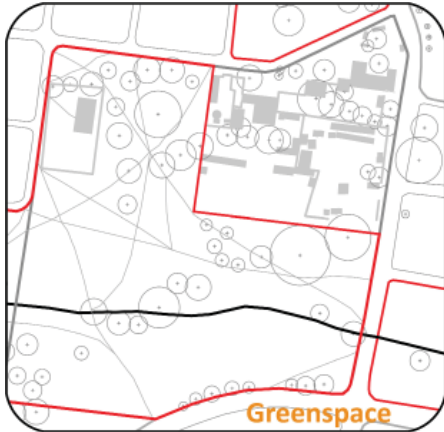
- Auto shops and building related functions that happen on site have turned their back on the green space creating a dangerous environment prone to crime
- The predominant low scale, high density residential housing in the area
- The lack of services and slope on the site

OPPORTUNITIES

- The area is already experiencing natural densification
- The slope of the land could be used to allow for broader access for those who are disabled without the use of stairs
- The large amount of pedestrian movement on and around the site

THREATS

- Pollution caused by dumping and litter in the riparian basin
- The crime in the area
- Fear and stigmatisation of the facility and its function ■



90. Map Depicting Existing Greenspace



92. Map Depicting Existing River & Trees



94. Map Depicting Existing 1m Contours



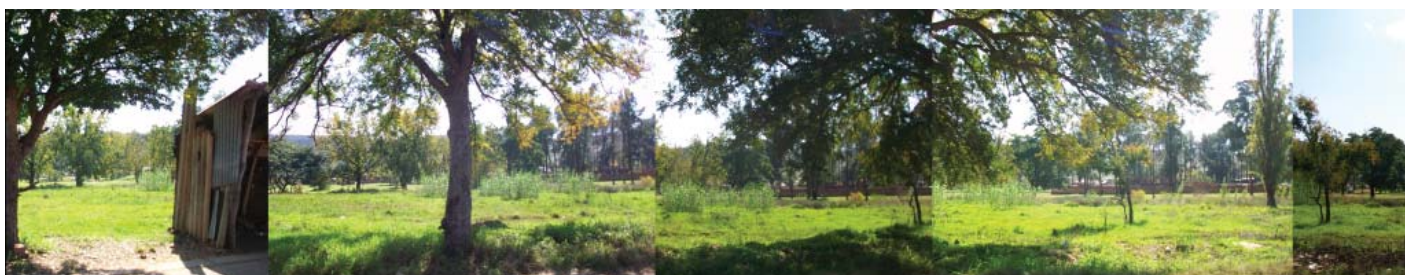
91. Photo from South of Site looking North



93. Photo from South of Site Looking North



95. Photo from South of Site Looking Towards Bordering Road



96. Series of Photos from South of the Site Looking Northwards



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PRECEDENT STUDY

CHAPTER 07



PRECEDENT STUDY

CHAPTER 07

SOWETO HOSPICE

2006

JOHANNESBURG
SOUTH AFRICA

The Soweto Hospice is a newly built facility, taking over from the temporary make-shift container building that used to serve the area. A large portion of the patients have AIDS related diseases, but the hospice also deals with other terminal conditions. In addition to the intensive medical care they provide, the facility also acts as a central node for those living with a terminal disease in the community, providing outpatient care. Each ward has indirect access to the courtyards, but these spaces are void of life and unused. This is probably due to either the patients being too ill to visit the spaces, or more probably the fact that there is no planting, a south facing orientation, very limited seating and little to capture the interest of the patients. Another area of the hospice which does not work well is the play area, as it is poorly located far away from the children's ward, with no access to

an outdoor play space. An aspect of the design which works exceedingly well is the discreet way which bodies are dealt with. There is a fine balance between being open about death, creating an atmosphere of acceptance, and death becoming too dominant. However this does not take into account the viewing of the body by family members, which this dissertation will hope to deal with more directly. (FCBS 2008: 17) ■



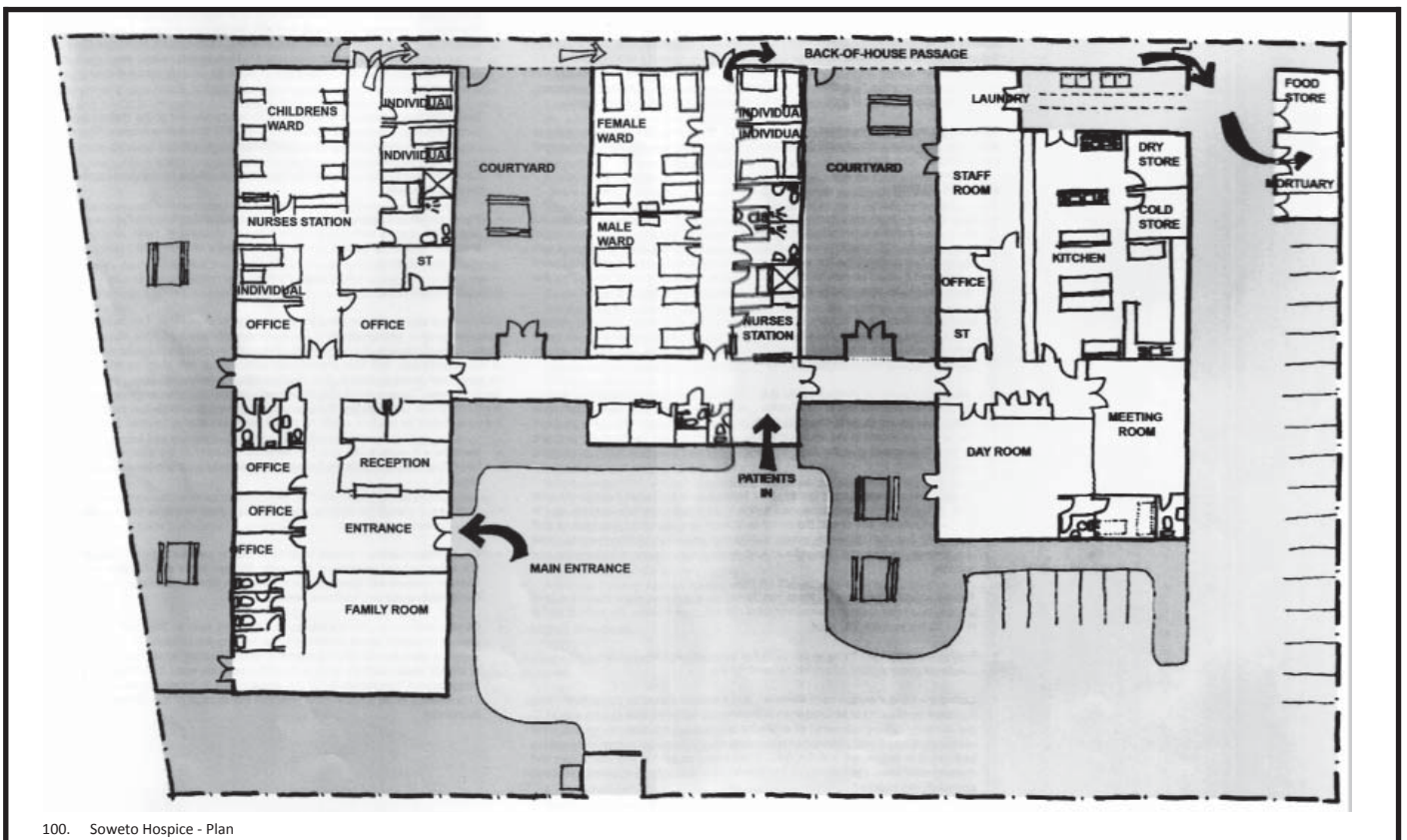
97. Soweto Hospice - View of Hospice from Parking



98. Soweto Hospice - Interior of Adult Ward



99. Soweto Hospice - Interior of Paediatric Ward



100. Soweto Hospice - Plan



102. Ingwavuma Hospice - Design Model

The step-down hospice unit, chapel and new offices will help serve the Ingwavuma Orphan Care organisation that has been working in the area for many years, and will cater for both adults and children, as well as any relatives who need to stay with the patients (e.g. parents or grandparents of the children). The majority of the patients will be suffering from AIDS related diseases but other conditions will be catered for as well.

“We believe the time has come to set up a step-down facility which will provide hospice care to clients who have no one to care for them or whose care givers need some respite support. With staff who specialize in palliative care, we can provide good quality end of life care in peaceful surroundings” (Dr. Ann Dean - FCBS 2008: 7)

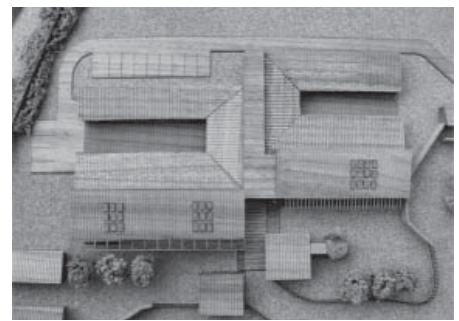


104. Ingwavuma Hospice - Design Model

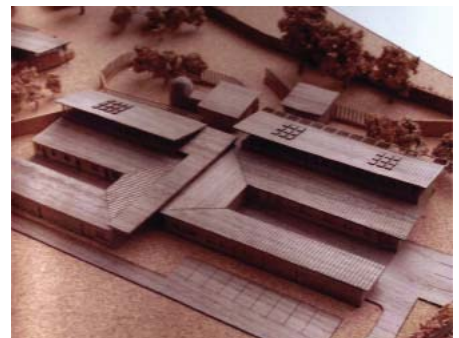
One of the concepts employed in the design is that of ‘the wall within the landscape’. A wall which runs through the design, linking the IOC offices and the hospice unit by surrounding a communal boma. The wall is use to order the site and bring coherency to



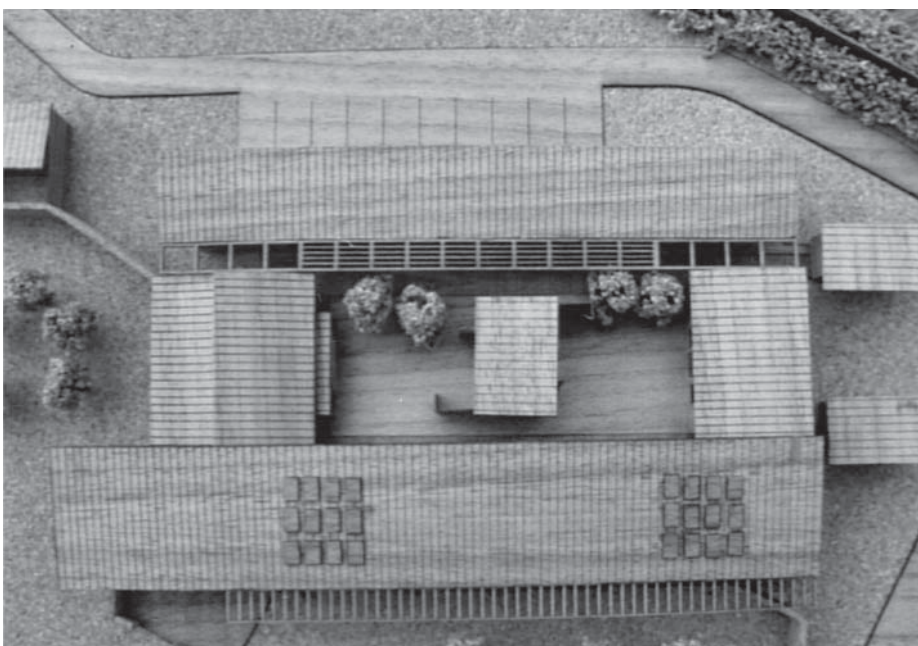
101. Ingwavuma Hospice - Design Model



103. Ingwavuma Hospice - Design Model



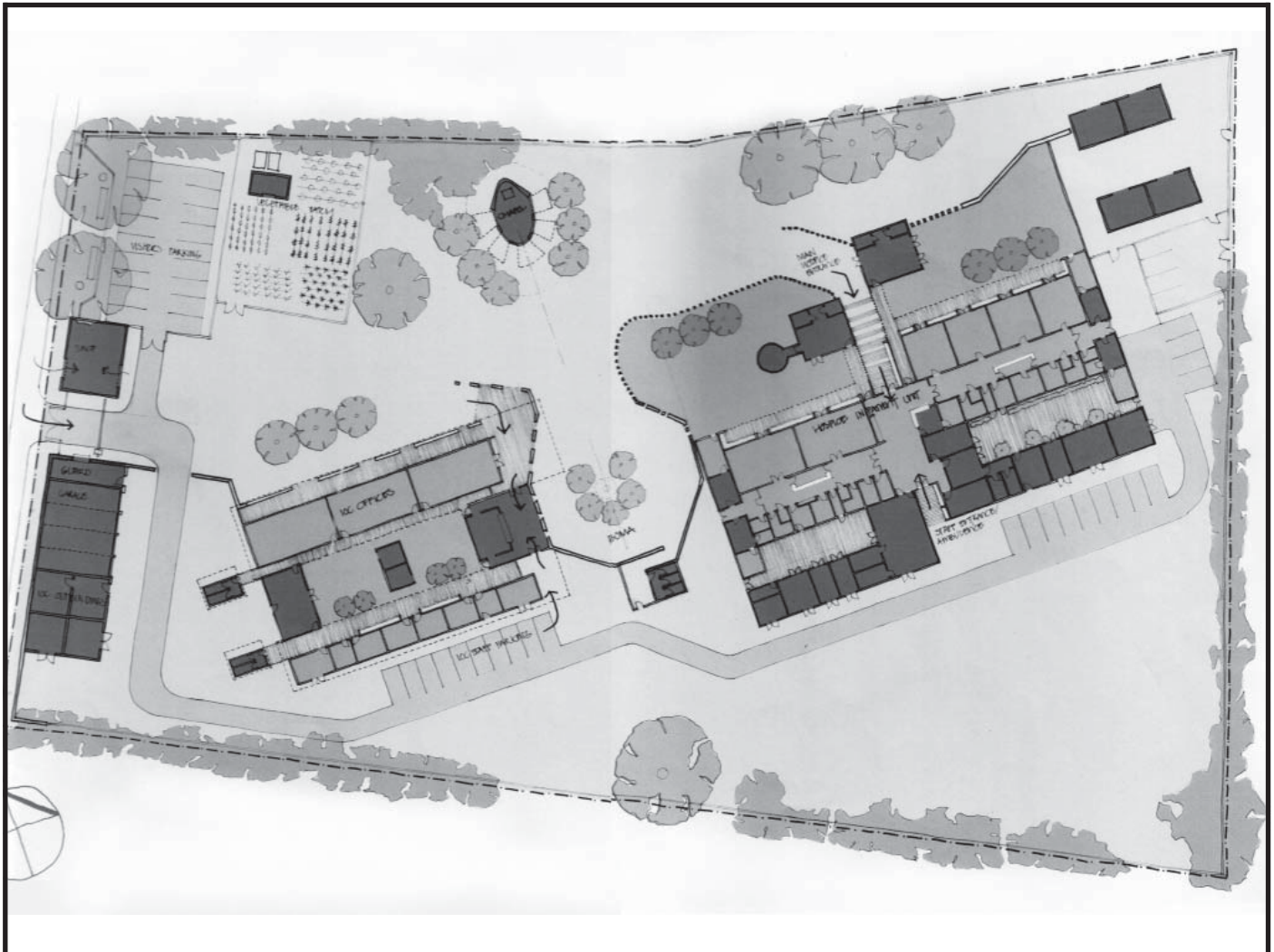
105. Ingwavuma Hospice - Design Model



106. Ingwavuma Hospice - Design Model



107. Ingwavuma Hospice - Design Model



108. Ingwavuma Hospice - Plan

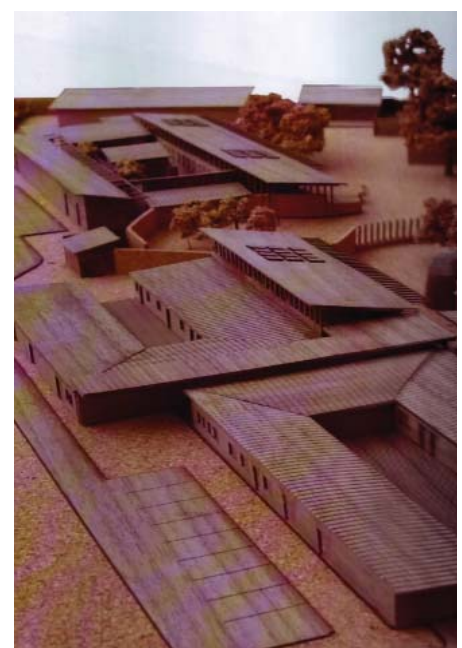
the various buildings. It is described as a living element, which can grow and evolve over time, with people either artistically altering it or demolishing it. (FCBS 2008: 36)

Vehicular and pedestrian traffic are separated as much as possible, to allow for safe places for those moving slowly in wheelchair, with children etc. It also allows for a back of house function and for bodies to be removed discreetly from the hospice unit. (FCBS 2008: 36)

In the hospice unit all of the services back onto a private staff courtyard. This also provides extra security as an individual would have to move through this courtyard to access medical stores and equipment stores. These spaces

also allow for the discreet removal of bodies to a mortuary that has access to the service road for collection. The paediatric and adult wards have been separated. With all wards having access to secure private gardens and day rooms. (FCBS 2008: 37)

Much effort has been placed on making the hospice as self-sufficient as possible. Natural ventilation and cooling has been made a priority as all electricity will have to be self-provided due to the remote location. Overall the design has very clear pedestrian movement and separation, such as main entrances and staff entrances etc. and a very clear relationship between the various functions. ■



109. Ingwavuma Hospice - Design Model



WHEATSHEAF HOUSE

2005

DAYLESFORD
AUSTRALIA

AVENELL HOUSE

2006

Paul Morgan Architects

AVENEL
AUSTRALIA



111. Wheatsheaf House Interior View

Wheatshaeaf house is situated in an existing clearing within an abandoned eucalypt plantation.

“the house is surrounded by tall trees with slim, straight limbed trunks and grey striated bark . . . Colour and material are used to set the building apart from its surroundings. Wrapping the structures is black corrugated iron lined internally with plywood stained a vibrant red-orange, accentuating the pattern of the wood.” (PHAIDON 2008: 22)

The house consists of two extruded volumes, c shaped in section, sitting side by side. The structure is *“a ribcage-like arrangement of steel frames.”* (PHAIDON 2008: 22) In order to respond to the remoteness and sensitivity of the site the design is prefabricated in nature.



110. Wheatsheaf House Showing Context

The house floats above a crushed gravel bed upon a plinth, allowing the house to appear to not touch its surroundings. The curve unifies ceiling, walls and floors creating an internal space that flows uninterrupted. ■



112. Avenell House - Side Elevation

This single storey house is embedded into the contours of a gently sloping granite hillside. The curvilinear form of the building is the result of reflecting prevailing solar and wind patterns giving the building an aerodynamic look. Curved timber sunscreens are used along exposed windows. (PHAIDON 2008: 22)

These sunscreens help accentuate and continue the curvilinear form without actually interrupting view, or resorting to solid forms. ■



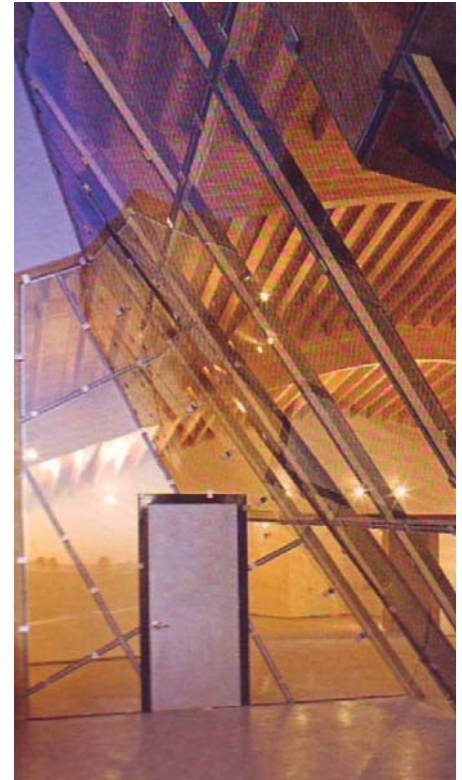
113. Avenell House - Screens within the Building Context



114. Commercial Building 3555 - Interior Ceiling

Eric Owen Moss Architects were commissioned to transform existing warehouses in the Hayden Tract of Culver City in West Los Angeles, in a successful attempt to revitalise the otherwise neglected 6 block area. The 15th building to be revitalised is 3555, a single storey brick building. (PHAIDON. 2008: 635)

The undulating roof profile was determined by averaging the maximum permissible height of 13m. The roof echo's the form and colour of the surrounding hills. The bays are separated by glass inserts which pull in natural light and provide access to roof terraces on either side. (PHAIDON 2008: 635) ■



115. Commercial Building 3555 - Glass Detail

"Prominently perched above a network of highways on the fringe of Melbourne's central business district. Acting as a billboard to communicate the role of SES to passing traffic." (PHAIDON 2008: 29)

The facility accommodates educational, operational and administration functions, with a strong emphasis on environmentally sustainable design. The facade is divided into 6 differently sized, curvilinear bays clad in corrugated steel. The fractured facade and use of colouring allows the building to be read at high-speed. Overlooking the view of speeding traffic on the highway the partially cantilevered southern facade is used as open plan work bays. A combination of passive and active environmental design principles and responses were employed to reduce energy consumption. (PHAIDON 2008: 29) ■



116. State Emergency Services Headquarters - Fractured Facade



117. State Emergency Services Headquarters - View from Street



118. Emergency Services Headquarters - Fracturing and Colour Use



119. Sheep Stable - Internal Linear View

The Sheep Stable was a category winner during the World Architecture Festival in 2008.

The city of Almere in order to control weed populations, such as ‘acanthus’ or ‘bears-breech’, implemented a natural strategy involving the use of 80 sheep. In order to house these warriors of the weeds a sheep stable needed to be built. The part of the building which houses the hay and human pathway is relatively high, while the volume slopes down into a lower section for the area dedicated to the sheep. This creates an a-symmetrical curvilinear cross section, which also encourages natural airflow within the building.



121. Sheep Stable - External View

The detailing of the building is exceptionally important when it comes to a full understanding of the design. Curved steel girders create a portal frame that supports the pine purlins and bent members, which in turn support the Western Red Cedar cladding.

The curved steel emphasises the overall shape while the timber cladding brings warmth and texture into an otherwise pure shape. Clerestory lighting where the internal volume lifts up off the



120. Sheep Stable - Lighting Detail

simple curvilinear shape accentuates and emphasises the shape and curve of the rest of the building while allowing natural light into the space.

The exterior of the building is simply clad and only punched through with windows and doors. Creating a purity of shape as well as confusing the eye as to where the facade ends and the roof begins.

The building embodies a sense of warmth, safety and security almost as if it was enveloping and holding you. ■










122. Sheep Stable - Internal View & Clerestory Window Detail



123. Sheep Stable - External Cladding Detail



PRECEDENT STUDY SUMMARY

| PRECEDENT | | SUMMARY |
|---|----------------------------------|---|
| SOWETO HOSPICE | Flow Of Services |  |
| INGWAVUMA ORPHAN CARE NEW OFFICES, HOSPICE & CHAPEL | A Wall Within The Landscape |  |
| WHEATSHEAF HOUSE | Juxtaposition & Curved |  |
| AVENELL HOUSE | Latticed Curve |  |
| COMMERCIAL BUILDING 3555 | Modulated Roof Scape & Timber |  |
| STATE EMERGENCY SERVICES HEADQUARTERS | Corrugated Steel & Statement |  |
| SHEEP STABLE | Simplicity, Curved & Woven Space |  |



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CONCEPTUAL DEVELOPMENT

CHAPTER 08

CONCEPTUAL DEVELOPMENT

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8.1 METHODOLOGY

The concepts behind both the technical and design aspects of this dissertation were arrived at through a process of theoretical research, investigation into the design informants and the context and heritage of the site itself. A sub-concept for each of these elements was rationalised and then brought into a cohesive whole, in order to inform and guide the design process.

8.2 DESIGN INFORMANTS

The three main design informants for a hospice on this site are the heart, the process of dying and desire lines, each offer a different perspective of the project, and each their own constraints.

8.3 THE HEART OF THE COMMUNITY

The site as it exists provides a point of connection exchange and focus. It has become the social heart of the surrounding community. Rather than disrupt the existing community spaces, they should be added to and improved without removing the existing functions, but rather moving some of them into more appropriate settings. The facility needs to add, rather than subtract, becoming circular, supportive and sustaining.

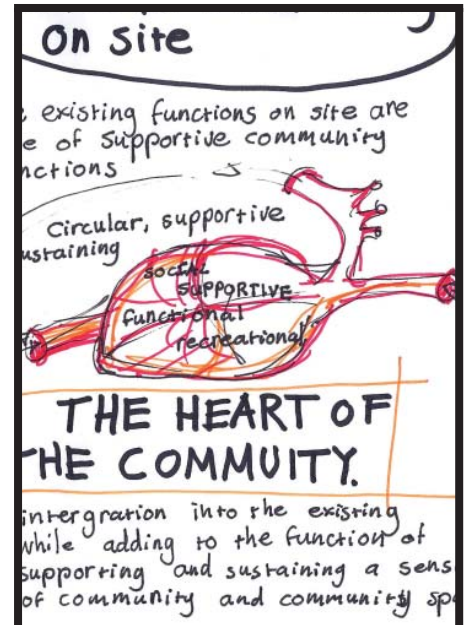
HOW THE DESIGN RESPONDS

The existing functions, such as the auto shops and building related manufacturers, on site that were harmful to the surroundings have been moved to a more appropriate space across the road, where they would help densify an urban edge rather than detract from a green space. This in turn would create a safer and less crime-ridden environment as the hospice creates passive surveillance of the green space.

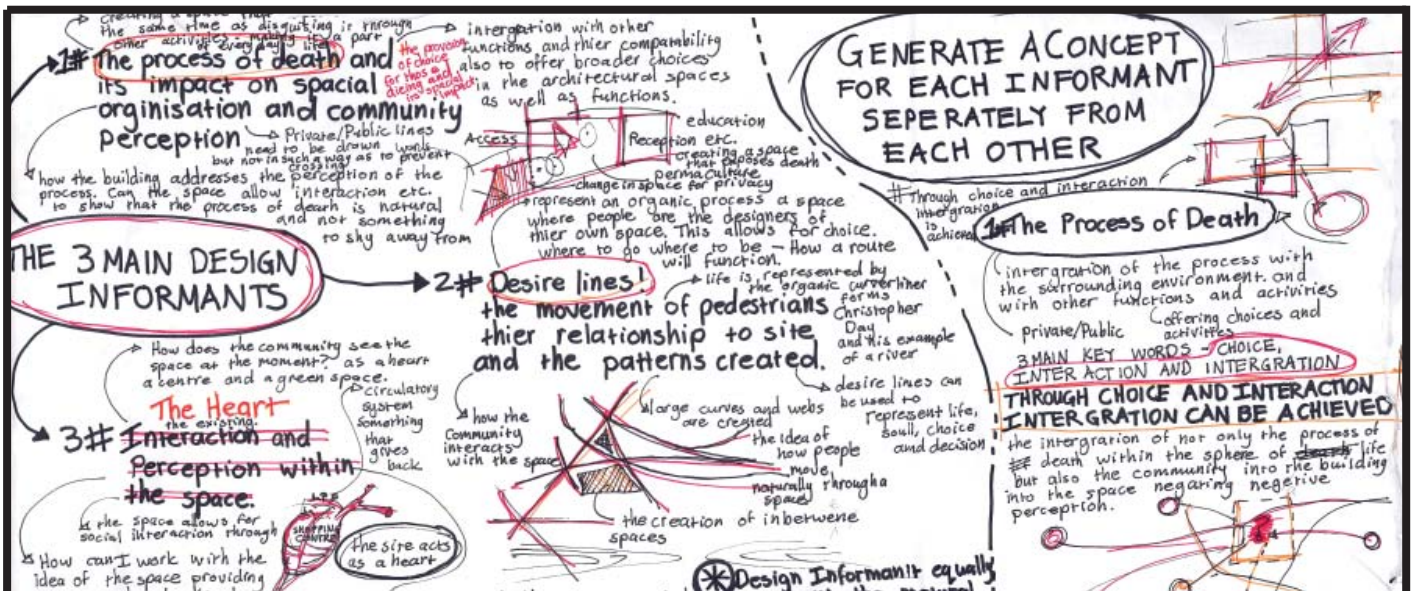


The Proposal relocates and densifies the existing functions depicted in red to the open tract of land indicated in orange

124. Figure depicting the relocation of ex. functions



125. Spider diagram / sketch of the heart of the community



126. Spider diagram and sketches of design informants and their influence on concept

8.4 THE PROCESS OF DYING

The process of dying and its impact on space, organisation and community is a difficult topic to approach, but for this hospice to be successful it must achieve in essence integration into the surrounding community. Basically how can the process of dying be brought into everyday experience? The integration with other compatible functions that cater to the community's needs would both encourage its members to interact with the building and the spaces it creates on a day to day basis, as well as create an acceptance of its core function within the community. On a separate level the provision of different functions would also provide choice to those under hospice treatment. It would allow them to interact with the surrounding community on the level that they are comfortable with.

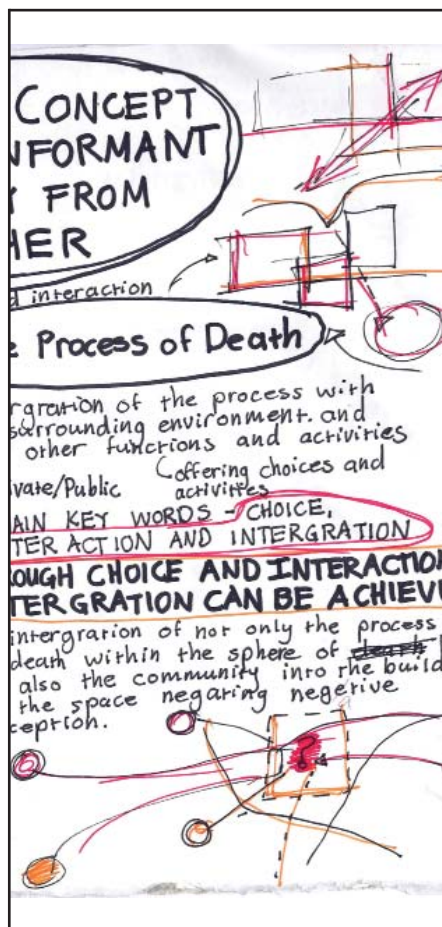
Through choice and interaction, integration can be achieved.

HOW THE DESIGN RESPONDS

The design responds to these ideas by providing not only spaces for the communities use, but several supporting functions as well. Which provide not only choice, but also an economic and social sustainability to the facility. These supporting functions include:

- Education and training for families, potential home caregivers and the community as a whole in care for loved ones at home, permaculture, the importance of nutrition and other related topics.
- A permaculture garden that not only produces food for the facility itself, but, provides jobs to the community and allows the manufacture and sale of related paraphernalia such as worm farms, seeds and starter kits for home gardens. The gardens would also provide education to the community about urban agricultural practices and the economic benefit they may provide.

- A function and exhibition hall that could be used for fundraising events, funerals, gatherings, sport etc.
- Commercial opportunities through the integration of the existing commercial atmosphere on site, proposed market spaces and the hospice shop.
- The outpatient centre and feeding program.



127. Sketch of the process of death design informant



128. Map depicting Desire Lines

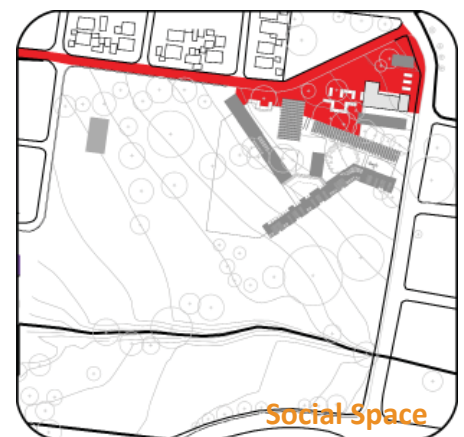
8.5 DESIRE LINES & SOCIAL SPACES

The movement and activities of pedestrians on and around site become important, especially when attempting to harness their potential, as well as siting functions that need varying levels of privacy. The adjoining green space is crisscrossed by the paths made by natural human movement. They create in-between spaces, an idea which is embodied strongly in the design.

HOW THE DESIGN RESPONDS

Social spaces and the majority of movement on and around the site itself occur on the Northern and Western Edges. The South Eastern corner, although not appearing to be the quietest area of the site at first glance, is in fact the area that offers the most privacy and therefore warrants the siting of the hospice. While along the Northern edge the huge concentration of social activity and movement is harnessed and manipulated through market spaces, as well as other commercial and community related functions.

The concept of in-between sacred spaces has been extensively used within the design of the facilities on and around courtyard spaces.



129. Map depicting Social Space

8.6 CONCEPTUAL THINKING DERIVED FROM THEORETICAL RESEARCH

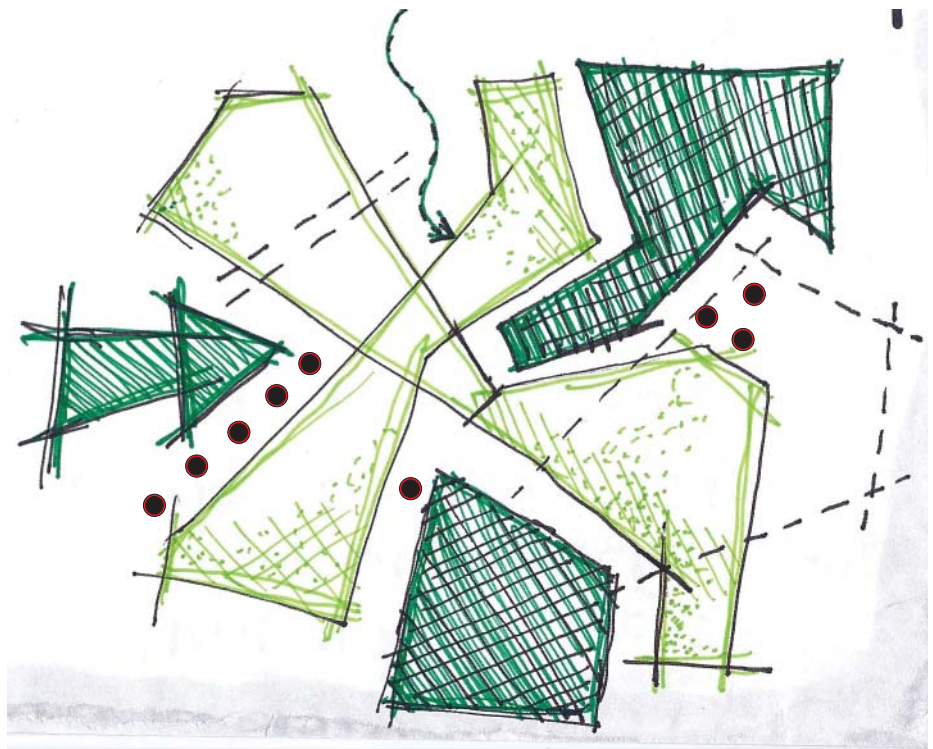
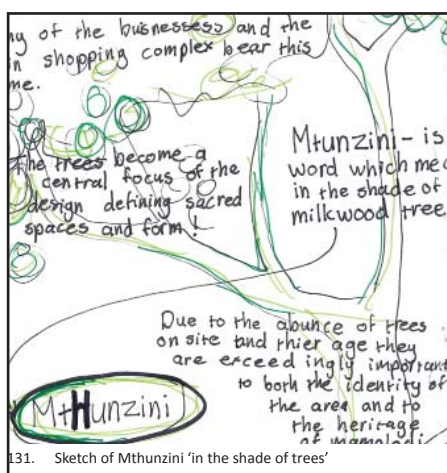
A space that houses and facilitates the process of the dying must embody meaning and life, through the use of juxtaposition, texture, colour, slope, memory, rhythm, pattern, light and the tension between straight and curved, as discussed and demonstrated in the previous theoretical discourse chapter.

8.7 MTHUNZINI - THE CONTEXT & HERITAGE OF THE SITE

Mthunzini means a place in the shade of trees. (ZULULAND ZIG-ZAG. 2010.) It is an exceptionally appropriate name for not only the area, but also the hospice, as the site is full of tall slender trees, which create a shaded, wooded environment year round. Many of the businesses and functions on and around the site bear this name, making it an exceedingly important aspect to both the identity of the area and to the heritage of the site. "In the shade of trees" implies both a protective and natural progression. The trees provide shelter and beauty.

HOW THE DESIGN RESPONDS

The trees become the focal point, dictating external sacred spaces, orientation and position of building. But the concept of the tree is taken further. The idea of shelter and protection is paramount in the design of the hospice wards



130. Design Concept Sketch

8.8 TECHNICAL AND DESIGN CONCEPT

During the research conducted within the body of this document it was discovered that in order to create a space which has intrinsic soul and life it must embody memory, meaning, integration and choice, as well as keeping within principles of juxtaposition, movement, tension, dialogue and texture.

The concept sketch shown in figure 130, describes both the design and technical concept. It shows the identification and demarcation of sacred spaces, embodying both meaning and memory. These sacred spaces are largely dictated by the heritage of the site created by the towering trees. The tree defines axis and the outdoor modulation of the plan. The design begins to revolve around the creation of outside-inside spaces - in other words large, irregular courtyard environments both in a reaction to security concerns as well as the need to relate to such a vast green space.

As stated before, the design integrates itself through the harnessing of social spaces and functions designed to draw

the community into the facility, but this is taken further by juxtaposition with the natural surroundings of the site. The design both opposes and reflects its natural elements.

Choice is exemplified through the harnessing of movement and the provision of varying spaces, heights, shading and texture. The idea of movement is taken further through the use of the tension between straight elements and curves, with the curves carrying the eye and their opposing elements anchoring the design.

However, when the detailed design is considered these overarching concepts soften and refine into the creation of spaces that shelter, protect and seem to grow. The roofs and walls of the buildings curve over their occupants protecting and sheltering them, softening in more natural and growing forms of weaving and strength, using natural materials. ■