Context and the site
Analysis theory

Semiotics

Semiotics is the study of signs and symbols and their use or interpretation. The origin from Greek σημειοτικός meaning ‘of signs.’ [Soanes, 2008:1309]

Semiotics studies signs relating to the recognition of the social and natural environment of an individual and their internal world. These signs constitute the denotative languages and connotative codes of culture.

- Denotative semiotics are the physical elements that the user encounters directly; the signifiers.
- Connotative semiotics are the connotations the user makes when associating with the physical elements of the city; the signifieds.

The theoretical discourse of this study will be split into two chapters. In the first section the denotative and connotative urban semiotics in the context of the proposed study area will be discussed. The second section will deal with the relationship of semiotics with architecture and nature as part of the design development of the study.

Urban semiotics look at material objects as vehicles of signification. Thus the symbolic act experienced by the user will always involve a physical object, for example, streets, squares, buildings, etc. Lynch’s theory in the *The Image of the City* identifies five physical semiotic features:

- Paths - are the channels along which the user moves. They may be street, walkways, transit lines, etc. The user reads the city while moving along these paths.
- Edges - are linear elements that are not used or considered as paths by the user. Edges form the boundaries between two distinct areas; they are the linear breaks in continuity, for example rivers and shorelines.
- Districts - are the larger sections of the city which have an identifiable character. These districts have a two-dimensional quality that the user enters mentally.
- Nodes - are strategic points within a city into which the user can enter. These nodes are the destinations to and from which the user travels, such as train stations, public squares, etc.
- Landmarks - are similar to nodes in that they also are points of reference but the user does not enter into them. These are usually physical objects like a building, mountain, sign, etc.

Fig. 6 nelson mandela blvd and kotzte str crossing
Fig. 7 apies river
Fig. 8 city hall piazza
Fig. 9 church square
Fig. 10 federal reserve bank and church
Fig. 11 lynch's analysis theory
Lynch however reduces the semiotic study to the activity of movement and orientation. Ledrut on the other hand, searches for the symbolic, connotative level of the urban image. Gottdiener and Lagopoulos claim that "urban structures act as stimuli because they have become symbols and not because they support behaviour by facilitating movement." [Gottdiener, 1986:8]

A semiotic approach to analysis is by no account objective, as every individual reads the discourse of the city differently. The city speaks to us differently due to our "values, lifestyle and culture." [Moore, 1983:36] Thus a connotative vision of the city is fundamentally tied to a society’s culture and history.

Ledrut poses the question: "How does the city speak to us?" which he answers: "As a work of art, which means as an object charged with meaning by the production and the use men make of it. The only way to learn what the city tells us, is to examine the field of the urban experience, the 'lived' city." [Gottdiener, 1986:120]
Fig. 14 sammy marks arcade

Fig. 15 jacaranda lined street

Fig. 16 off-ramp overhead nelson mandela blvd
Fig. 17 general motors dealership

Fig. 18 the old reflecting in the new

Fig. 19 lion bridge apartments
Fig. 20 paul kruger statue
Fig. 21 cafe riche
Fig. 22 applause
Precedents_ The Tshwane Inner City Development and Regeneration Strategy of 2005 and the 2006 abridged version state that -

- The stretch of the Nelson Mandela Boulevard leading up to Church Street is suitable for high quality commercial and upmarket residential development.

- The rest of the corridor North of Church Street needs to be redeveloped as a recreation and entertainment district for residents and tourists.

- The Nelson Mandela Boulevard and Church Street crossing should be celebrated with high profile landmark buildings. The New Caledonian Sports Grounds is the perfect location for a development of the scale proposed, the Tshwane Kopanong. However the sports grounds needs to be relocated.

The TICDRS along with numerous reports on the Apies River argues that the river needs to be rehabilitated and a green open space system needs to be introduced along the river. The crossing over the river should be easily identifiable and celebrated.

The Nelson Mandela Corridor Urban Development Framework by Urban Solutions propose that four nodal clusters are created along Nelson Mandela Boulevard.

- an automotive and commercial cluster

- a sports and recreation cluster

- a business and government cluster and,

- a arts and culture cluster

The group framework of this study derived its strategy from a conglomerate of the above mentioned precedents.
Fig. 23 nelson mandela blvd city scape

Fig. 24 framework precedent diagram
Group framework

Introduction. The study area in question is the Nelson Mandela Corridor, the gateway into the city from the South. A very important spine running along the Apies River feeding the city’s East/West orientated streets. It is the opinion of this group that Nelson Mandela Avenue represents a rip in the urban fabric of the city and this group proposes that this rip be repaired by adding buttons, or nodes along the affected area, thus 'buttoning up' the urban fabric but still providing enough play for the corridor to develop through a natural process. Four nodes are proposed, namely; Cultural; Business; active Recreational and passive Recreational nodes - placed on strategic crossings along Nelson Mandela Avenue.

Fig. 25 group1 framework diagram

*proposed nodal districts*

*integration of the east and west across nelson mandela boulevard*

*rehabilitation of apies river and open green spaces development*
Problem statement_ The Nelson Mandela Corridor is currently seen as an urban wasteland, a defragmenting agent between the East and the West, acting as a physical buffer between the city's two halves. The links and connections between the city and its surrounding neighbourhoods are very poor and needs addressing. Pedestrian integration along Nelson Mandela Avenue is also in a state of neglect - sidewalks are used as refuse depots, street furniture needs upgrading, shade is in short supply, etc. The natural features along the river are unmaintained. There is no informal economy, the buildings are all monofunctional. In short the Nelson Mandela Corridor is lacking an identity.

Aims_ The identified nodes are to act as catalysts which will promote positive, future developments. This catalytic development is aimed to progress in a East/West direction. The aim is to allow for the integration of the CBD towards the Eastern residential area which at the moment lack social development. This will be achieved through creating precinctal nodes which will promote the social/cultural, environmental and economic elements of the area.

- Social - the integration of the East with the West. Providing environments for activities which promote social integration.
- Environmental - the upgrading of the Apies river which will act as a spine for the creation of parks and public spaces into a social gathering and recreational hot spot. The emphasis will be on the historical and cultural heritage of the area and the biodiversity, which includes water quality and quantity of the river will also play an important factor in the development.
- Economic - the transformation of current land banking hot spots into a social and economic use. Currently many potential spaces have been lost due to the accommodation of garages for the automotive industry, which does not promote the social or economic well-being of the area. Job creation through potential hot spots via the social integration and gathering of people. As more people will occupy the area, naturally this will create more potential business opportunities which will be needed to cater for the increase of people.
Opportunities_Many opportunities exist along the Nelson Mandela Boulevard Corridor, such as;

· Wide Road Servitude - there is great potential in the wide road servitudes to create vibrant interactive spaces which links the different zones and hot spots together.

· Gateways and Landmarks into the city

· Creating a local identity which adheres to that specific area and creating a sense of place.

· Apies river and green pockets - the river is in a upset state and recreational areas along it has not been looked after or put to good use. Ideal opportunity to uplift the current state and introduce new interventions to promote the area into a positive and socially populated space.

· Social and Cultural heritage - a vast amount of social and cultural heritage exists in the area and these aspects must be brought out and form part of the whole identity of the area.

· Pedestrian lines - pedestrian access must connect to different spaces, the East/ West connections across Nelson Mandela Boulevard are the main concerns of this framework.

Fig. 29 landmarks legible public transport interchanges
Fig. 30 widen apies river
Fig. 31 increased informal trading along nelson mandela blvd
Fig. 32 urban intergration
Fig. 33 pedestrian movement network
Spatial framework

Promote and celebrate regional connections;
  · Johannesburg to the South
  · Soutpansberg to the North

Upgrade and create local area connections;
  · Promote the East/West connections
  · Promote urban integration

Promote and celebrate prominent public spaces;
  · Create new public spaces within the new nodal districts

Rejuvenate and upgrade existing public spaces;
  · The Overzicht Village and the banks of the Apies River are of top priority in this framework

Integrate a movement network;
  · Connecting the important nodes of the city with a reliable public transport system
  · Promote pedestrian routes

Celebrate the built fabric and promote the identity of the proposed nodal districts.

Create a sense of arrival into the city;
  · Nelson Mandela Development Corridor must be a gateway into the city

Celebrate and connect existing and proposed landmarks in the Nelson Mandela Corridor.
Green framework_ The Apies River must be developed as a green spine running through the city. All green spaces must conform to the following criteria:

- Accessible to the public
- Safe and create a sense of security
- Low maintenance
- Vibrant catalysts for social interaction
- Create a pedestrian friendly link through the city
- The river becomes a spine, linking all the green spaces
- The green spaces and Apies River upgrade should link all the nodes and public spaces
- Focus on interaction and blurred lines between the buildings, public spaces and open green spaces

Fig. 34 apies river meander

Fig. 35 apies river with ground water recharge

Fig. 36 apies river channel
Site proposal_ The proposed site is located on the North Eastern corner the Nelson Mandela Boulevard and Church Street crossing. Situated among a plethora of motor dealerships, related retail outlets and educational institutions. The latter make up a large portion of the proposed users of the final product.

Fig. 37 abandoned structure
Fig. 38 technical university of tshwane science campus
Fig. 39 general motors dealership
Fig. 40 audi dealership
Fig. 41 bmw bavaria dealership
Fig. 42 toyota dealership
Fig. 43 leo’s apartments
Fig. 44 lion bridge apartments
Fig. 45 carburator shop
Fig. 46 site proposal
Site analysis. The SWOT analysis revealed seven major influences associated with the proposed site.

Strengths - the location of the site is on the most important crossing in Tshwane making it a prime choice for a high priority development.

Weaknesses - predominant East/West orientated site, fast moving traffic and noise generated by the traffic poses possible design problems.

Opportunities - the Apies River, as mentioned previously, is a prime development opportunity. The historical significance and integration of Leeu Brug adds to the site's potential.

Threats - the Apies river represents a threat as well. Prone to flash floods a great amount of design consideration should be taken in developing the river.

Fig. 47 friendly neighbourhood construction workers

Fig. 48 swot analysis diagram
Fig. 49 northern panoramic collage of site
Fig. 50 southern panoramic collage of site
Fig. 51 eastern panoramic collage of site
Fig. 52 western panoramic collage of site
Historical context

Lion Bridge's name originates from the lions that roamed Arcadia Drift, the crossing point across the Apies River.

It was the gateway to the East of Southern Africa. The government engineer and architect, Sytze Wierda, designed a bridge for the Church Street crossing. The bridge suffered a lot of damage during heavy summer floods and had to be rebuilt a number of times.

Lion Bridge was opened by President Paul Kruger in June 1849. In 1981 Lion Bridge was proclaimed a national monument.

Fig. 53 looking east across lion bridge

Fig. 54 balustrade detail

Fig. 55 looking west across lion bridge