



Figure - 5.1 - Photograph of cattle being processed in the Rietvlei Abattoir (By Author).

URBAN CRITIQUE - MIND THE GAPP

An urban framework called the *Tsotoso Program* was submitted to the COT council in February of 2011 by GAPP. This programme focuses on the urban spatial redevelopment of the selected and greater study area of Mamelodi and Nelmapius.

STRATEGY AND MECHANISMS

The GAPP spatial development plan proposes a string bead like nodal development called the *City Structuring Model* across Mamelodi building on existing nodes and corridors for future development. The five proposed strategic outcomes of the Tsotoso Programme are to:

- Create community activity centres and focal points (nodes)
- Strengthen activity linkages (spines/corridors)
- Transform transport interchanges into civic termini
- Enhance the pedestrian environment
- Enrich the public environment

The proposal consists of 13 formal nodes across Mamelodi, Nelmapius and Eerste Rust whilst utilising six existing movement corridors, connecting these nodes and proposing a seventh corridor connecting Mamelodi Central to Nelmapius extension 4. The programme extends the development of Nelmapius extension 3 and 4 south from the rail to connect to Hans Strijdom Drive which is outlined as an activity spine.

The proposal further aims to stimulate economic activity through grouping appropriate land uses into hierarchal nodes linked by activity corridors:

- Making facilities and services easily accessible by public transport and pedestrian movement.

Providing road and service infrastructure.

Allowing for self generation of economy and attracting investment.

Catalytically allowing a spill over effect into neighbouring districts.

And in turn aid in the development of:

- An hierarchical road network
- Retail, Commerce and Manufacturing
- Residential Areas
- Social and Community Facilities
- Public Transport and Connections
- An Open Space Network
- Service Infrastructure

The proposal outlines a series of precincts associated with the new and existing nodes. These nodes are as follows:

- Tsamaya Road
- Metropolitan Core
- Precinct Max City
- Pienaarspoort
- Love Drive**
- Swartkoppies

5.1



Figure - 5.2 - The Nodal development as proposed by GAPP.

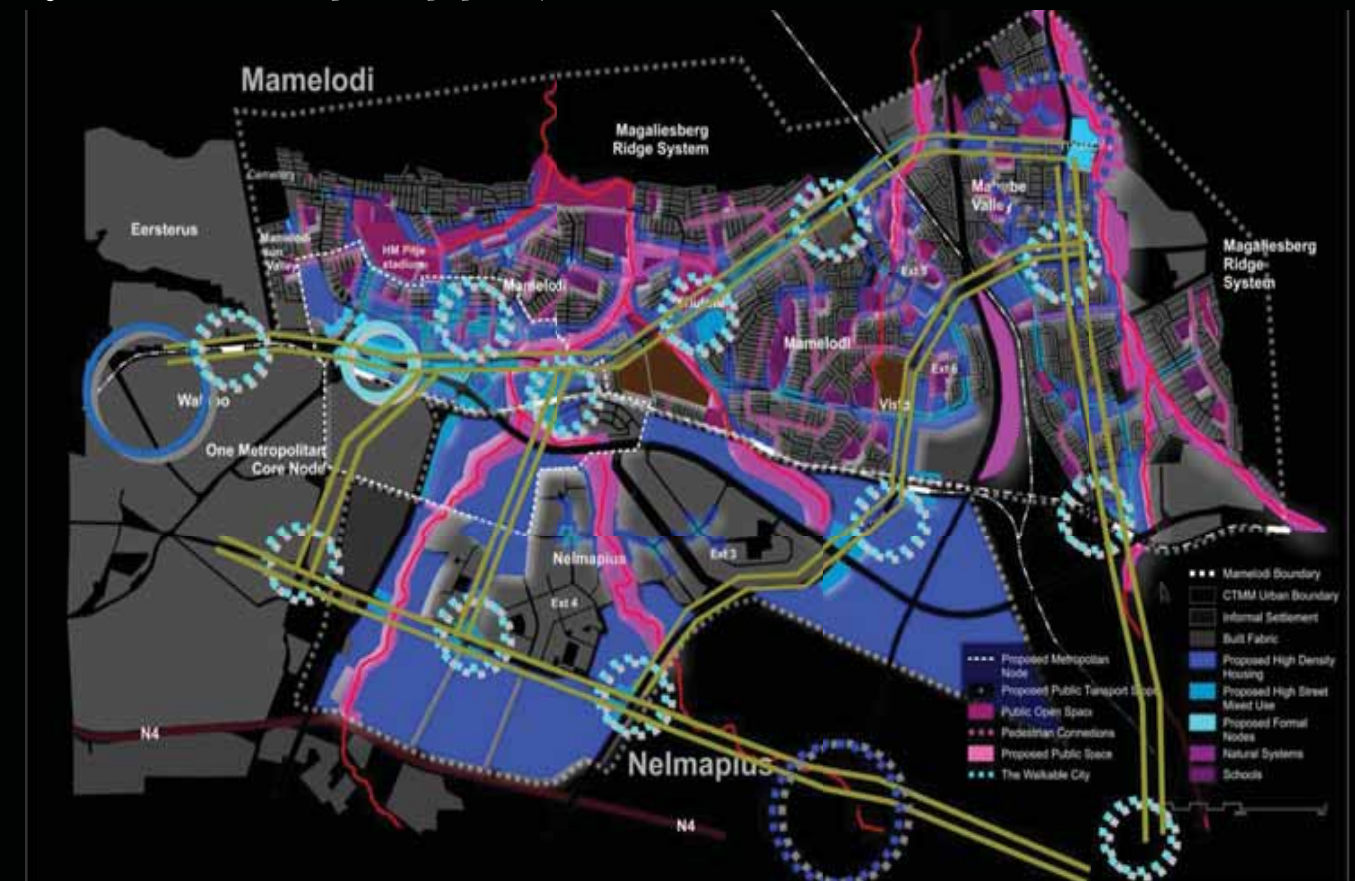


Figure - 5.3 - Proposed node, activity spines and areas by GAPP.

GAPP PROPOSAL FOR STUDY AREA

The chosen site for the dissertation falls within the Love Drive precinct as outlined by the GAPP proposal. The following is a brief summary of the GAPP proposal for the selected study area.

EERSTE FABRIEKE PRECINCT - MACRO CONTEXT

Eerste Fabrieke Station, Pienaars River and Tsemaya road form barriers in and around the site.

Site forms node between Nellmapius and Mamelodi.

Proposal utilises the rail and Tsemaya road to connect nodes.

Development to Nellmapius through Love Drive and finally connects to Hans Strijdom.

Development to the north is unrealistic - development does not happen in such a pattern.

High Street proposal on Eerste Fabrieke site - to be utilised.

EERSTE FABRIEKE PRECINCT PROPOSAL BY GAPP - MICRO CONTEXT

PROBLEMS

Majority of proposal is high density housing.

Layout of proposal not an economic use of land.

Lacks connection to Nellmapius.

Site does not connect Nellmapius and Mamelodi.

The important heritage of the site is not celebrated.

The proposal does not utilise the site's privileged position.



Figure - 5.4 - Proposal for the chosen working area by GAPP.



Figure - 5.5 - GAPP proposes medium and high density housing for the chosen site and under utilises the importance of the site.

URBAN DESIGN

STRATEGIES AND MECHANISMS

The dissertation proposes a new development for the entire Eerste Fabrieke station site which will continue the developmental trend set by the GAPP proposal. The framework for development will be based on the following interventions as proposed by GAPP:

Nodes

Activity spines

Public open space/public environment

These interventions aim to:

To establish clustering, linkages, consolidation and a collective development effort. This enables the establishment of a significant economic threshold.

They either comprise a cluster of projects that form one whole and are interdependent or a single project.

Eerste Fabrieke Precinct - Framework Proposal

INTRODUCTION

The framework proposal will adhere to a brief set up after the investigation was made of the Tsosoloso Program proposed by GAPP. The brief aims to address pertinent issues within the GAPP proposal and explore further mechanisms and strategies for future development in and around the Eerste Fabrieke site.

FRAMEWORK BRIEF

Utilise existing Infrastructure around Eerste Fabrieke Station.

Use heritage as generator for urban development.

Site forms node for possible southern connection to Nellmapius.

Restructure the proposed layout done by GAPP & include more diverse programming.

Site to become production node.

Small Business Incubation model to be investigated to initiate development on site.

Site to be a mix of Industry, commerce and high and medium density housing.

Bridging connections from Nellmapius over the Pienaars River to increase pedestrian access.

New layout of site to be investigated - more economical use of land.

Propose more development along Love Drive and Pienaars River to the south.

Existing cattle farm to be moved to the west, opposite the Pienaars River.

After the compilation of the brief, research was done regarding the historical development of the Eerste Fabrieke precinct and what possible design generators could emerge from the site's history.

HISTORICAL DEVELOPMENT OF SITE

The Eerste Fabrieke Hatherly distillery complex was developed on this specific site due to its connection to the rail and to the Pienaars River. Production on site made use of the Pienaars River in the distillery process and later in the glass works.

The distillery complex was developed around a ceremonial

Figure - 5.6 (Right)- 1937 Aerial photograph of the Eerste Fabrieke precinct indicating the first industrial complex.



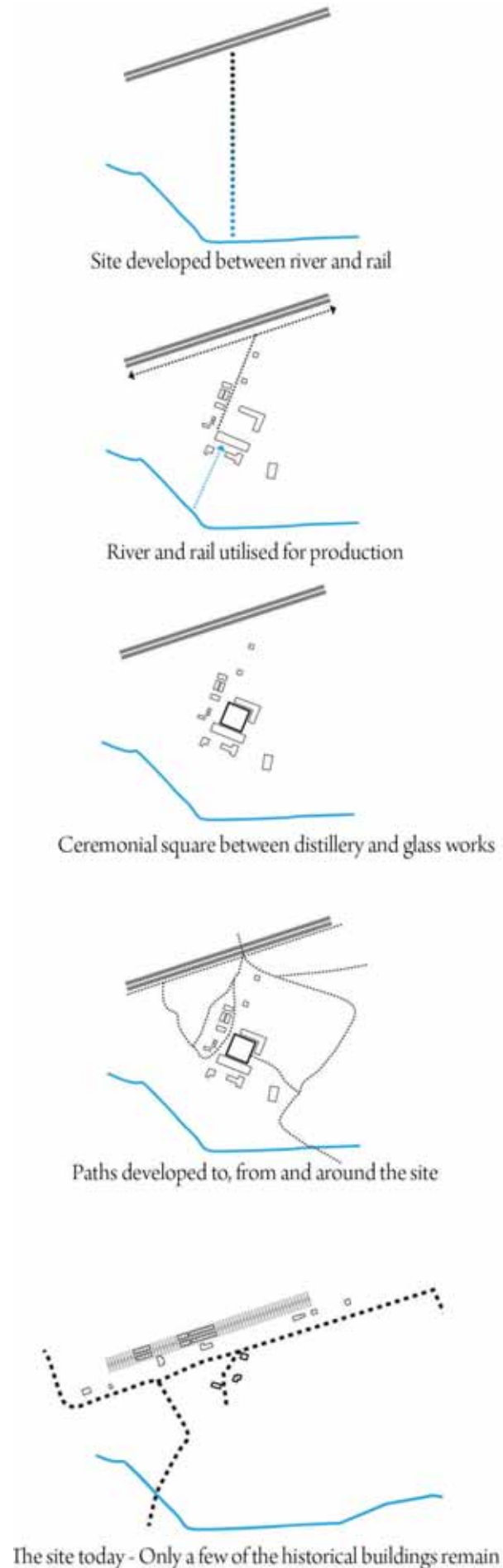
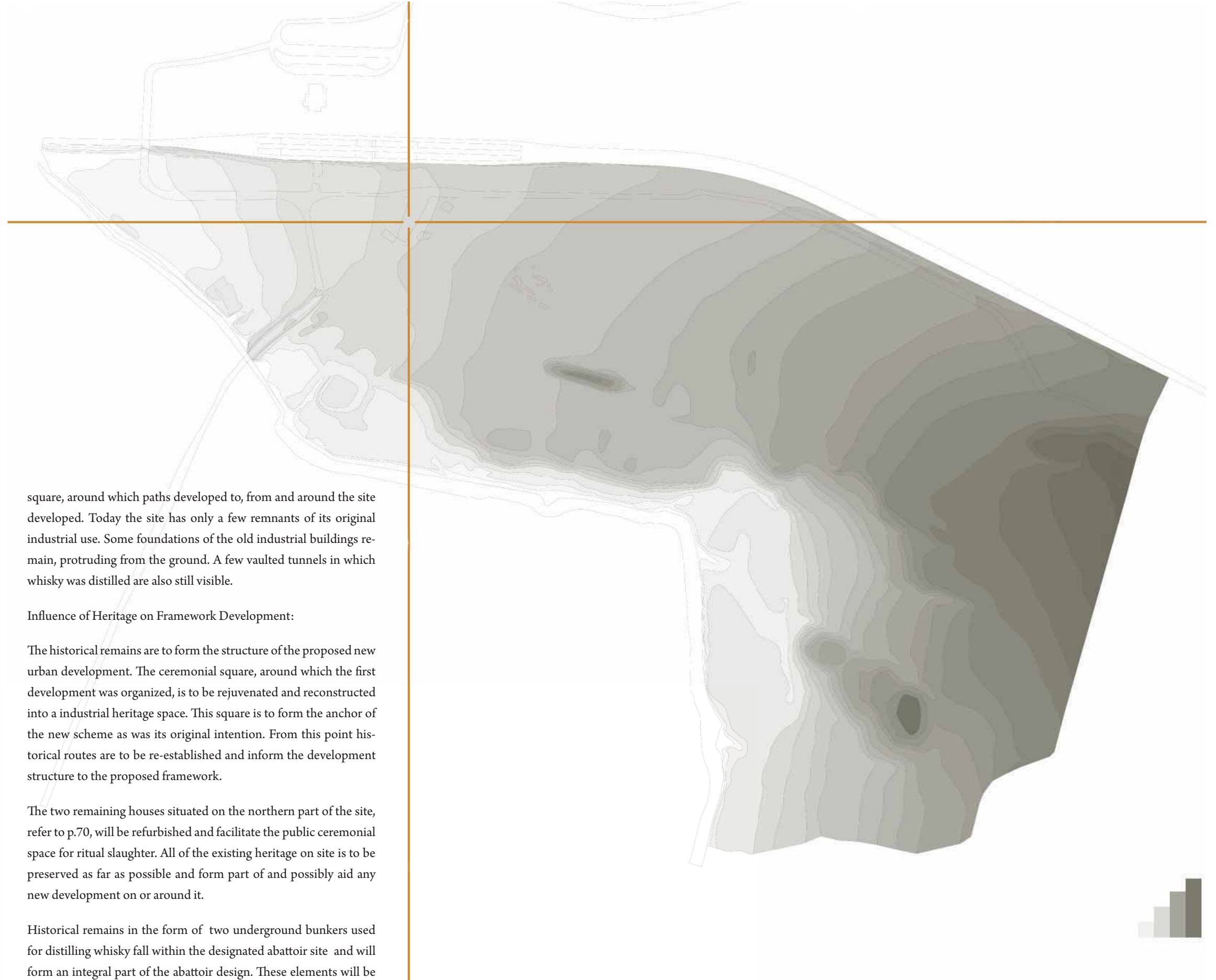


Figure - 5.7 - Historical development of site (By Author).



square, around which paths developed to, from and around the site developed. Today the site has only a few remnants of its original industrial use. Some foundations of the old industrial buildings remain, protruding from the ground. A few vaulted tunnels in which whisky was distilled are also still visible.

Influence of Heritage on Framework Development:

The historical remains are to form the structure of the proposed new urban development. The ceremonial square, around which the first development was organized, is to be rejuvenated and reconstructed into a industrial heritage space. This square is to form the anchor of the new scheme as was its original intention. From this point historical routes are to be re-established and inform the development structure to the proposed framework.

The two remaining houses situated on the northern part of the site, refer to p.70, will be refurbished and facilitate the public ceremonial space for ritual slaughter. All of the existing heritage on site is to be preserved as far as possible and form part of and possibly aid any new development on or around it.

Historical remains in the form of two underground bunkers used for distilling whisky fall within the designated abattoir site and will form an integral part of the abattoir design. These elements will be further discussed in the design development chapter (8).

Figure - 5.8 - The topographical characteristics of the site - falling towards the Pienaars River (By Author).



Figure - 5.9 - The urban proposal for the Eerste Fabrieke Precinct (By Author).

FRAMEWORK PROPOSAL

PART 1: INITIATION

The framework proposal focuses on a nodal development based on the historical structure of the site. Nodes are placed along old pedestrian routes and old site nodes such as the ceremonial square. The framework aims, through nodal development, to connect Nellmapius extension 3 & 4 and connect Mamelodi to Nellmapius through the Eerste Fabrieke precinct site. The proposal keeps the existing high street proposal by GAPP with the Tsosoloso Programme which runs parallel to the rail on the northern edge of the site.

The structure of the framework layout adds two new connections to the existing Love Drive connection, one across the Pienaars River to Nellmapius extension 4 and one to the east, connecting to Nellmapius extension 3. A further pedestrian connection is made to Mamelodi through a submerged pedestrian tunnel underneath the railway to the north.

The proposal consists of ten nodes with activity spines and corridors connecting them. The nodes are to be conceived as a public square of mixed use function and tri modal transportation interchanges. Ten nodes make up the proposal, their programming is as follows:

Node 1: Love Drive Node - Entrance to graveyard and cattle farm precinct to west, entrance to Nellmapius North to East.

Node 2: Heritage Square - Rebirth of old ceremonial distillery square, now to become a square celebrating the industrial heritage of the site. This can become a tourist node.

Node 3: Eerste Fabrieke Square - Pedestrian entrance/exit to and from Mamelodi, underneath rail. It is located on the old railway crossing to Mamelodi.

Node 4: Production Node 1 - Situated on old route across site

dating back to the distillery, becomes production node via small business incubation supported by abattoir.

Node 5: Production Node 2 - Also situated along old pedestrian route along site, the node also becomes a small business incubation hub supported by the abattoir.

Node 6: Mixed Use Node 1 - along connecting axis to new Nellmapius East residential development, node consists of mixed use, commercial, production and high density residential development.

Node 7: Mixed Use Node 2 - along connecting axis to new Nellmapius East residential development, node consists of mixed - use, commercial, production and medium density residential development.

Node 8-10: Residential Node - along connecting axis to new Nellmapius East residential development which connects with Nellmapius extension 3, node consists of mixed use, commercial & medium density residential development.

Node 9: Crossing Node: The node acts as a river crossing connecting to Nellmapius ext. 4, node is situated in the green belt along the river, recreational development will happen around this node.

Node 10: Production Node: This node extends the production of the Eerste Fabrieke Precinct into the Nellmapius ext. 4 area.

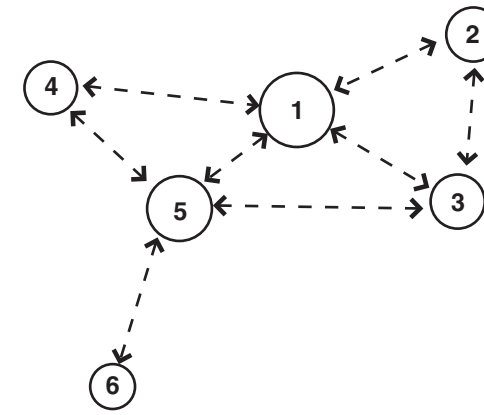


Figure - 5.10 - Concept - Initiation

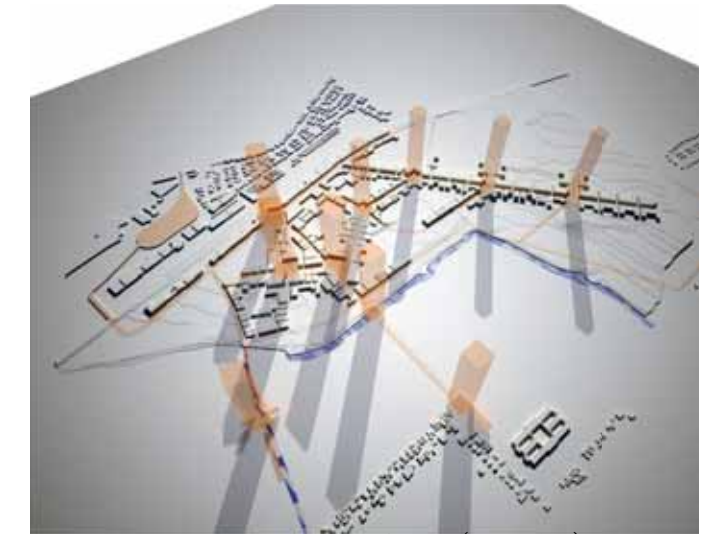


Figure - 5.11 - Conceptual render of nodes (By Author).

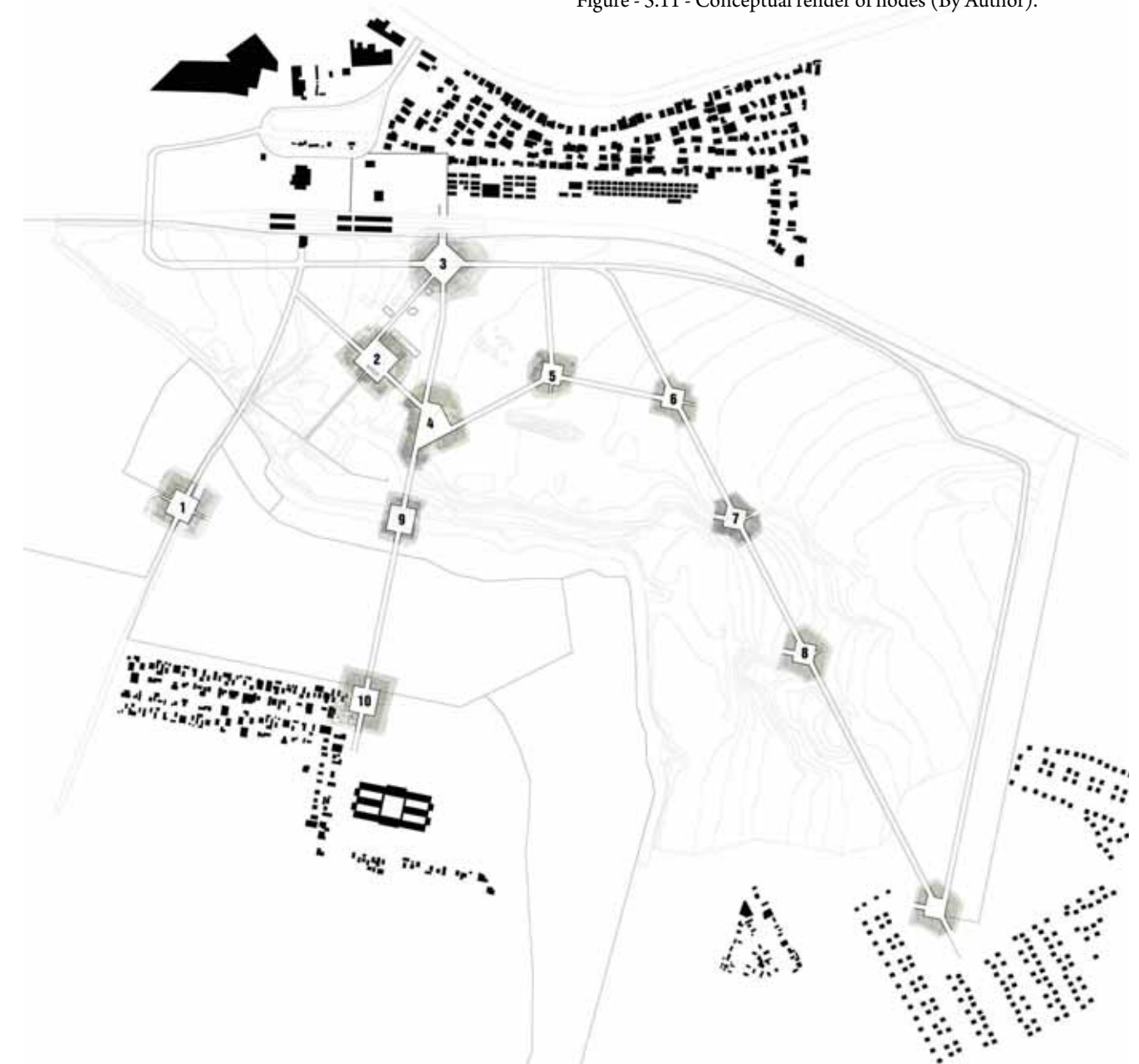


Figure - 5.12 - Nodes placed strategically across site. Nodes determined by the historical development of the site (By Author).

PART 2: ACTIVATION

The second part of the urban framework strategy is to activate these nodes and initiate development to and from nodes along the designated activity spines and corridors. The abattoir is a wasteful process and the opportunity therefore arises to recycle directly from the offshoot waste products from the abattoir.

The strategy employed is to introduce a series of Small Business Incubators (SBI's), which in some instances produce from the waste of the abattoir and in other instances provide a platform for local small businesses to achieve a foothold for development where after they can move out to provide space for new small businesses.

The model is based on the Business Incubation Centre in Pramtal, Austria by Spittelwiese Architekten. This centre was the product of 13 municipalities working together to provide a platform for small start-ups and businesses. The incubator consists of two volumes made up of a flexible production area in the back and an administrative volume at the front, with a service and communal amenities space in the middle. A centrally situated green atrium supplies the intermediate area with daylight and creates a focussed, yet bright working atmosphere for the young entrepreneurs. The low construction costs were made possible through the centre's consistent modular design and lack of basement space.

The low construction cost made it possible for very low letting rates for the start-up businesses, which add to the overall success of the concept and the final building.



Figure - 5.13 - Business Incubation Centre in Pramtal, Austria by Spittelwiese Architekten.



Figure - 5.14 - Plan of Business Incubation Centre in Pramtal, Austria by Spittelwiese Architekten.

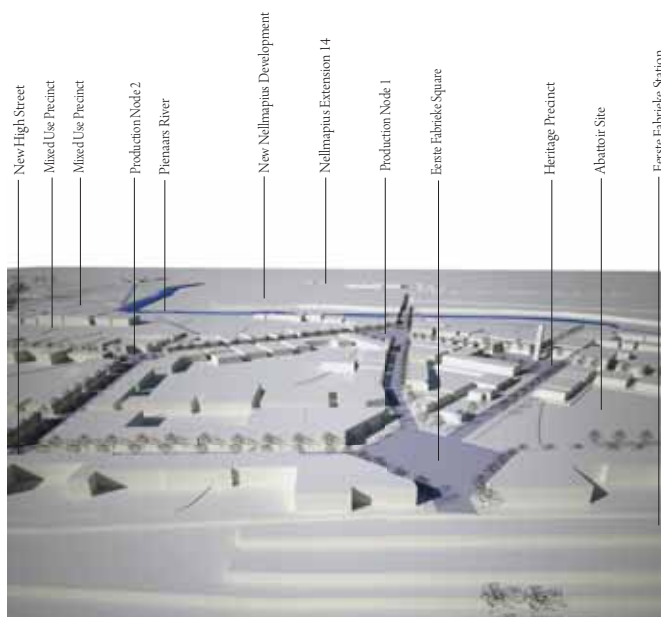


Figure - 5.15 - View to the south from the Eerste Fabriekes Station (By Author).

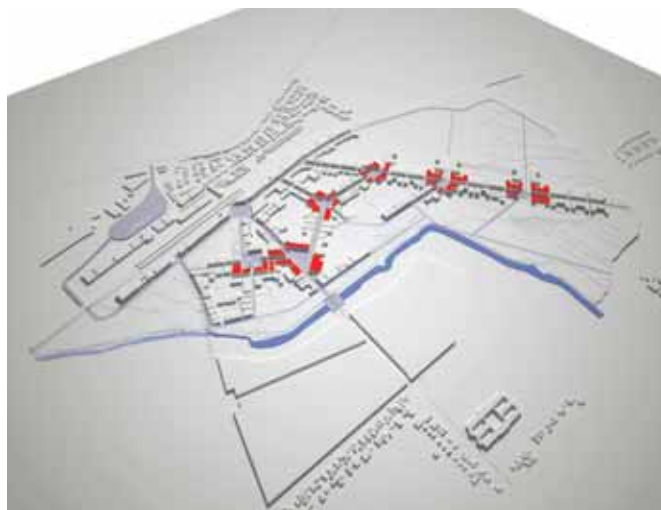


Figure - 5.16 - Small Business Incubators placed on the nodes to initiate development (By Author).

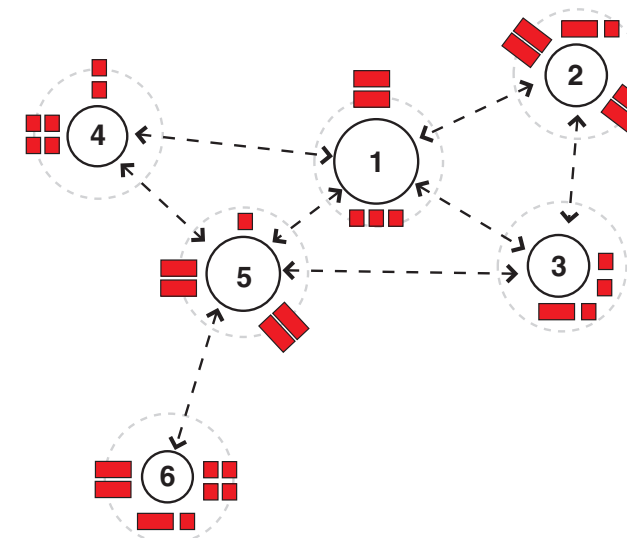


Figure - 5.17 - Concept - Activation

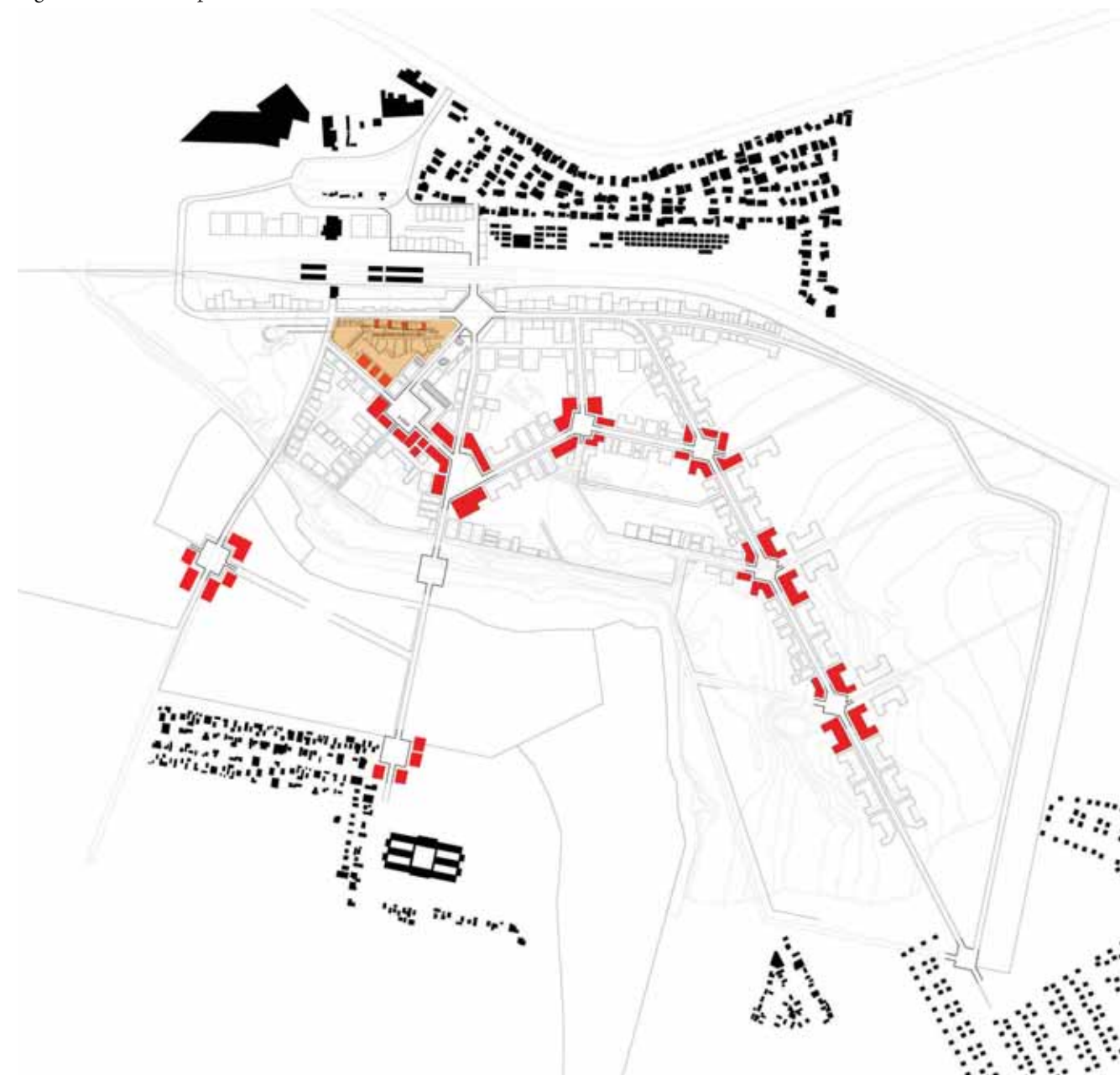


Figure - 5.18 - The Small Business Incubators indicated in red (By Author). Site indicated in orange.

PART 3: INVASION

The third and final part of the framework is the development around the nodes. If the nodes are to become successful, the areas between them will be filled with appropriate industry and commerce.

The central nodes (2-5) will be mainly focussed on industry and production to aid in the creation of a local economy for the Mamelodi and Nellmapius areas. Nodes 6-10 are proposed mixed use areas of commerce, high and medium density residential areas.

Nodes 2 and 3 define the public realm with the high street and heritage square which aims to attract commuters, pedestrians and foreign investment. Nodes 3-4 set up the connecting axis to Nellmapius which will be defined by wide sidewalks to accommodate the pedestrian movement to and from the Eerste Fabrieke Station to Nellmapius and its environs.

When fully developed, the framework represents a production node with a high degree of public engagement through ample commerce, heritage and residential function. The site now becomes a destination and a node in itself, connecting Mamelodi and Nellmapius where it previously acted as a barrier. The framework aims to help establish a local economy for the area by helping small start-ups and businesses through SBI's. The abattoir provides opportunity for production from its waste like hide processing, gut processing and other extremity processing that can be converted into a myriad of products.



Figure - 5.19 - View across development looking east (By Author).

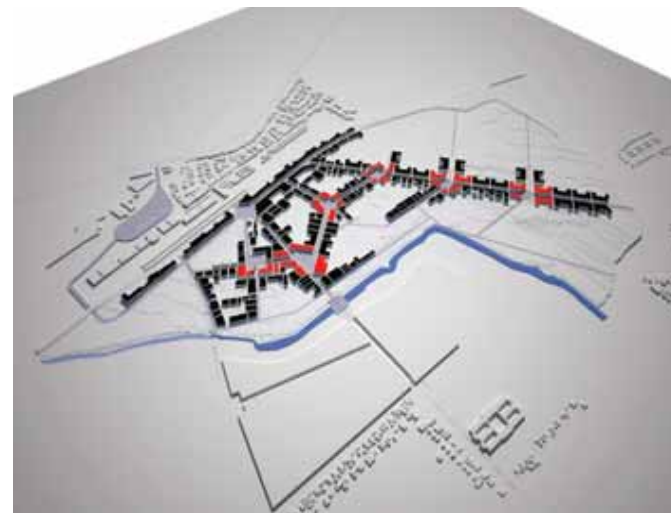


Figure - 5.20 - Further development initiated by the Small Business incubators (By Author).

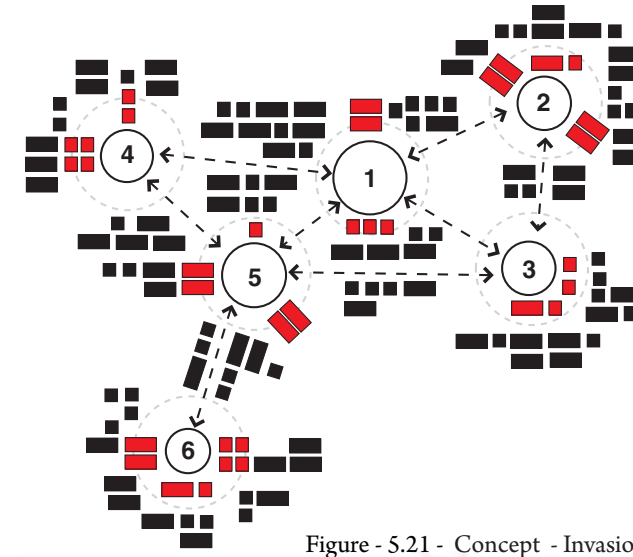


Figure - 5.21 - Concept - Invasion (By Author).

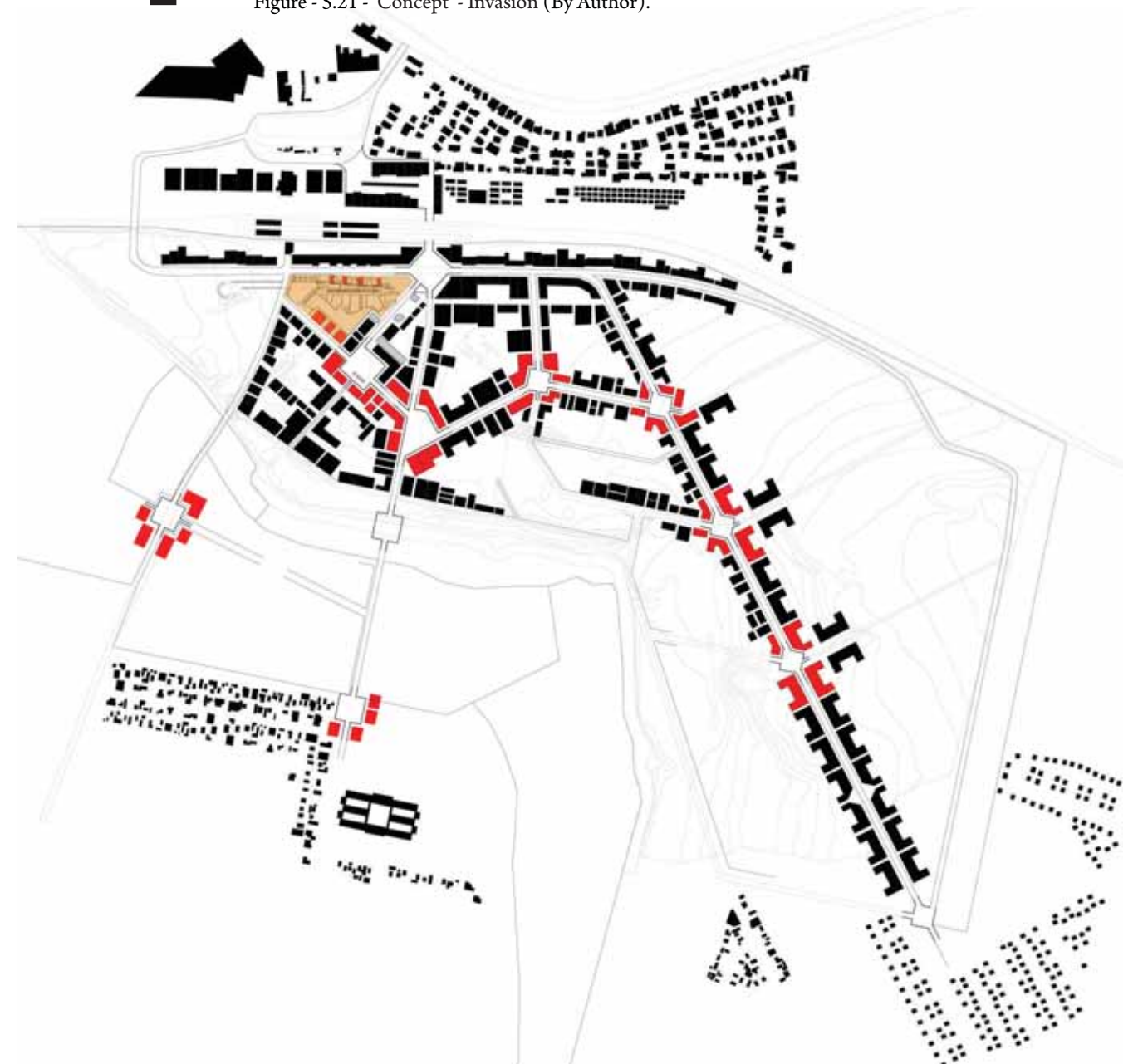


Figure - 5.22 - Further development indicated in black (By Author). Site indicated in orange.

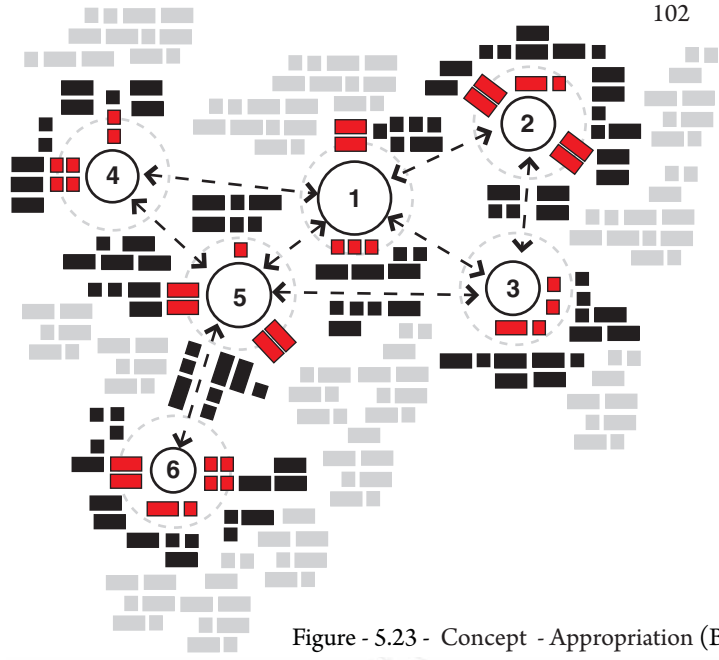


Figure - 5.23 - Concept - Appropriation (By Author).



Figure - 5.24 - Further development between nodes as area becomes appropriated (By Author).
Site indicated in orange.



Figure - 5.25 - Final Conceptual render of development indicating the invasion level of development (By Author).

ZONING

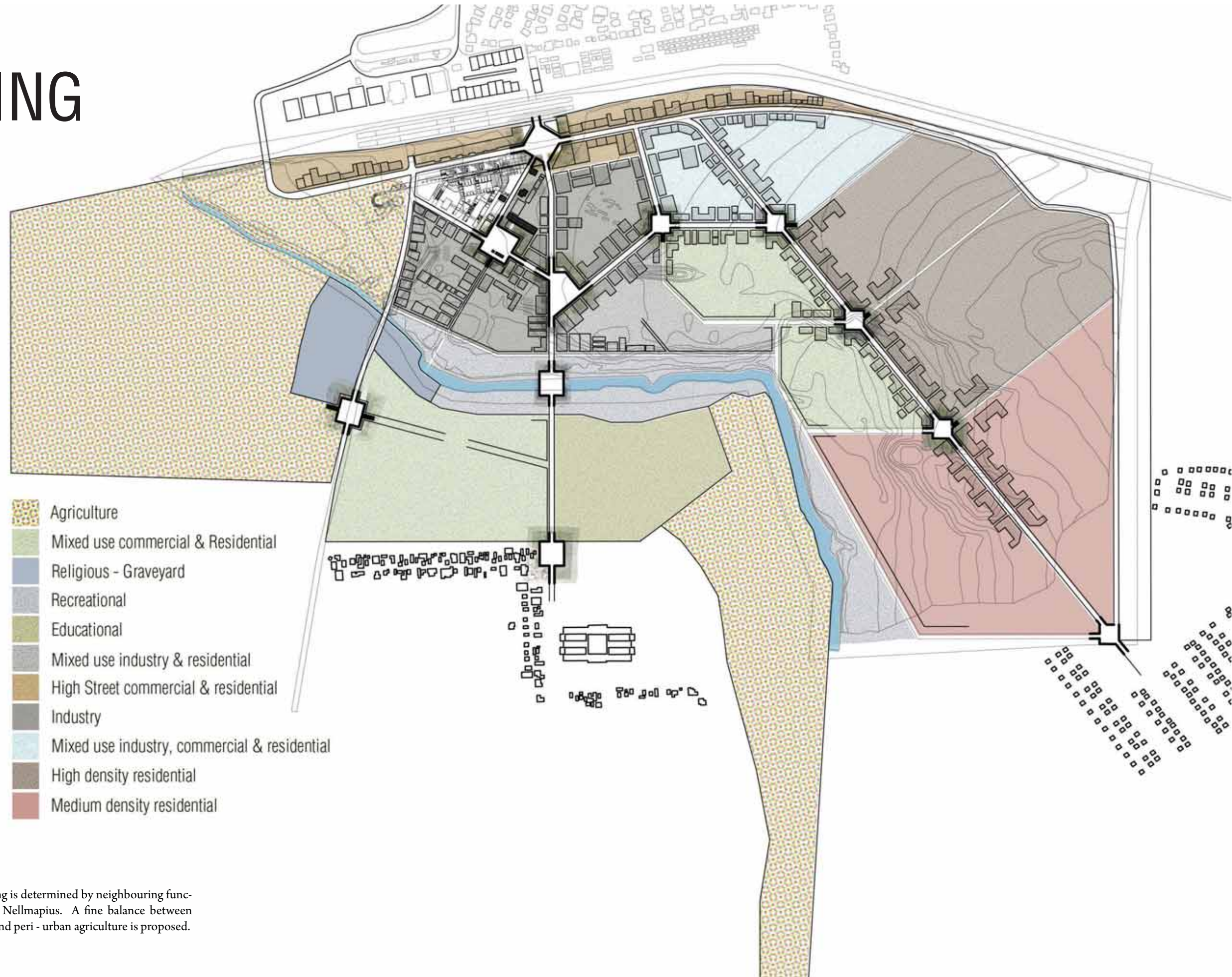


Figure - 5.26 - The zoning is determined by neighbouring functions of Mamelodi and Nellmapius. A fine balance between light industry, housing and peri - urban agriculture is proposed.

ROUTES

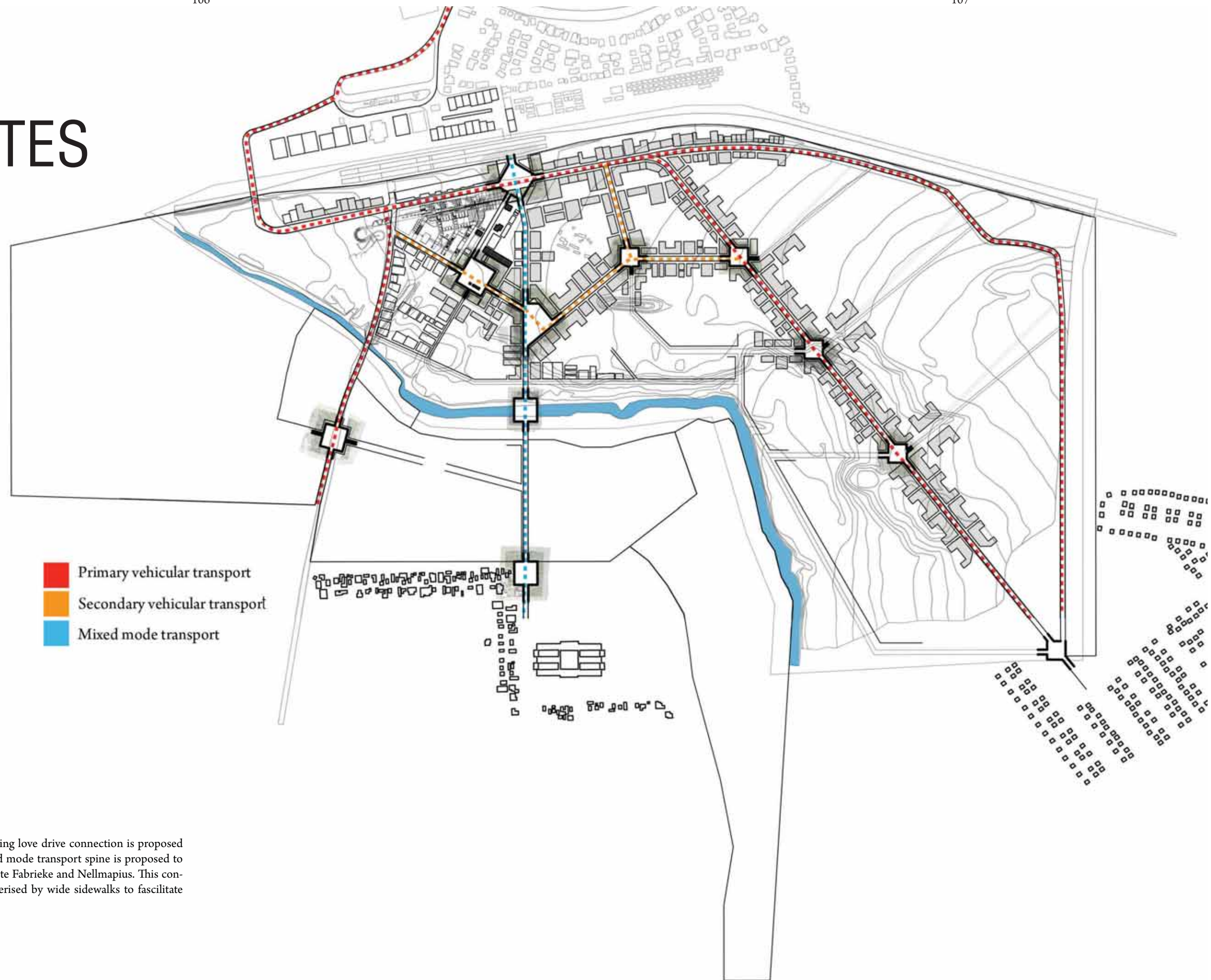


Figure - 5.27 - The existing love drive connection is proposed to be upgraded. A mixed mode transport spine is proposed to connect Mamelodi, Eerste Fabrieke and Nellmapius. This connection is to be characterised by wide sidewalks to facilitate pedestrians and cyclists.

SITE

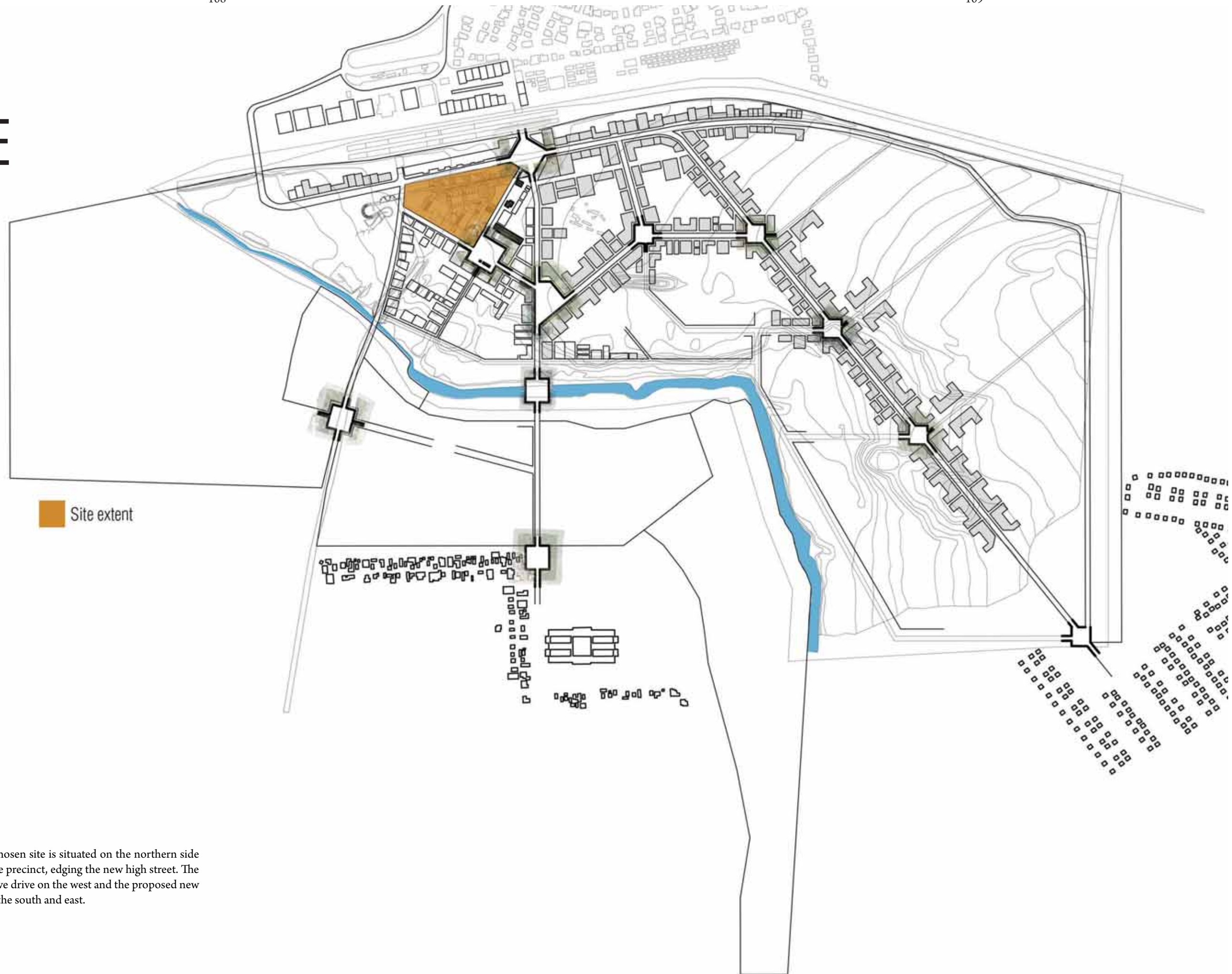


Figure - 5.28 - The chosen site is situated on the northern side of the Eerste Fabrieke precinct, edging the new high street. The site is bordered by Love Drive on the west and the proposed new heritage precinct on the south and east.

Figure - 5.29 - Rendered perspective view looking east from the site. The production nodes beyond the site become clear as it forms a productive network. The heritage square to the south, the Eerste Fabrieke square to the north (creating the entrance to the site) and the high street running east to west across the site can be seen.



Figure - 5.30 - Rendered perspective view looking north up through the mixed modal circulation spine. This corridor is characterised by wide pavements to accommodate pedestrians and cyclists. The corridor also acts as the linking mechanism between Nellmapius, Eerste Fabrieke and Mamelodi.

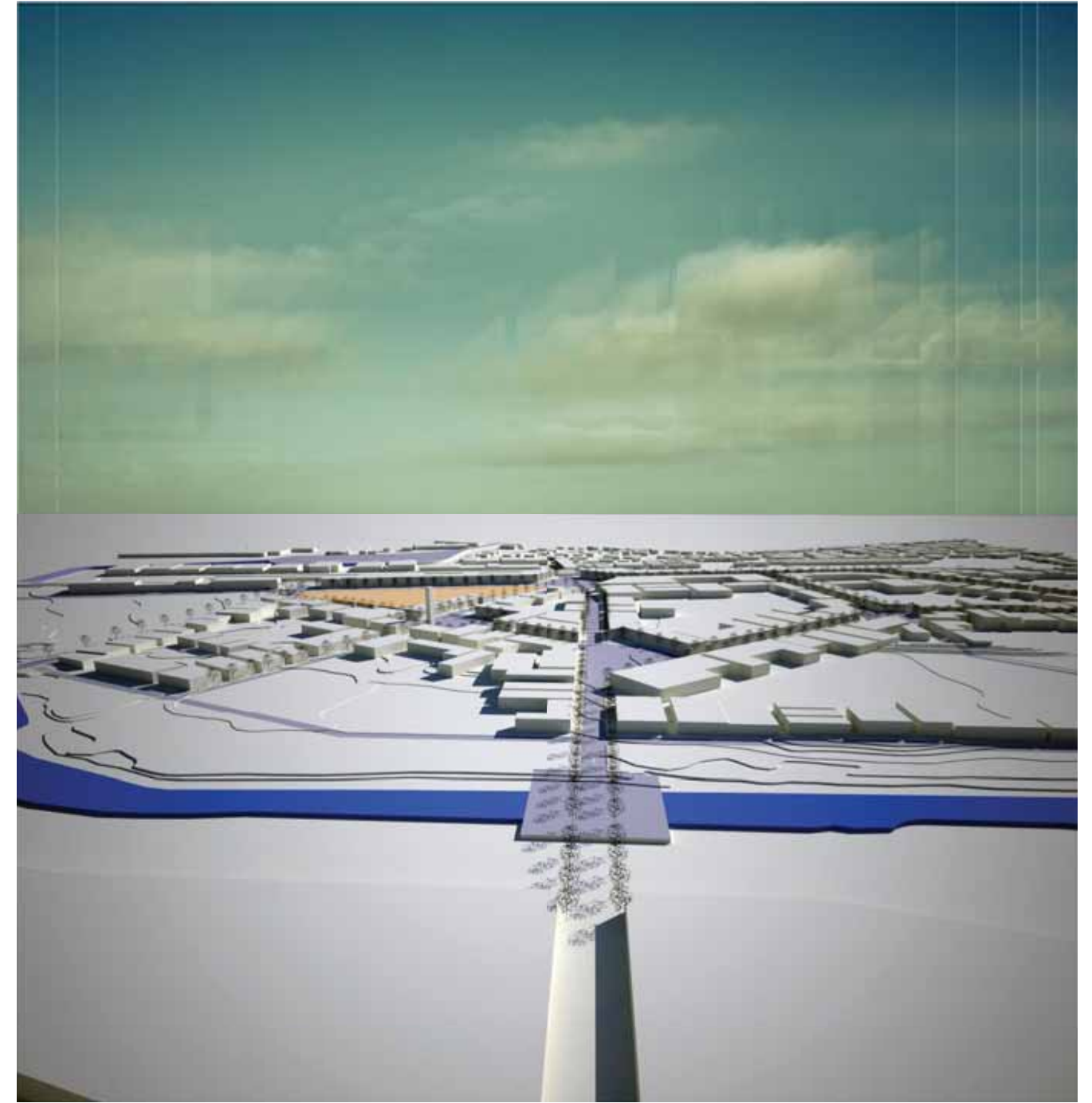


Figure - 5.31 - Rendered perspective view looking east from the mixed use housing and light industry area. The node at the bottom of the image is where the development transitions from that of a productive area to a more medium density housing development.



Figure - 5.32 - Rendered perspective view looking south down towards Nellmapius extension 3. This activity corridor acts as the connecting mechanism between the Eerste Fabrieke development and the residential area of Nellmapius. The left side of the corridor will be characterised by medium to high density housing and the right side by mixed use industry and medium density residential.





Figure - 5.33 - Rendered perspective view of the heart of the development around the heritage square. String and bead like nodes connect the otherwise unstructured site based on the historical events of the site. The dislocated Nellmapius area is now connected to Mamelodi through the new development on the Eerste Fabrieke precinct.