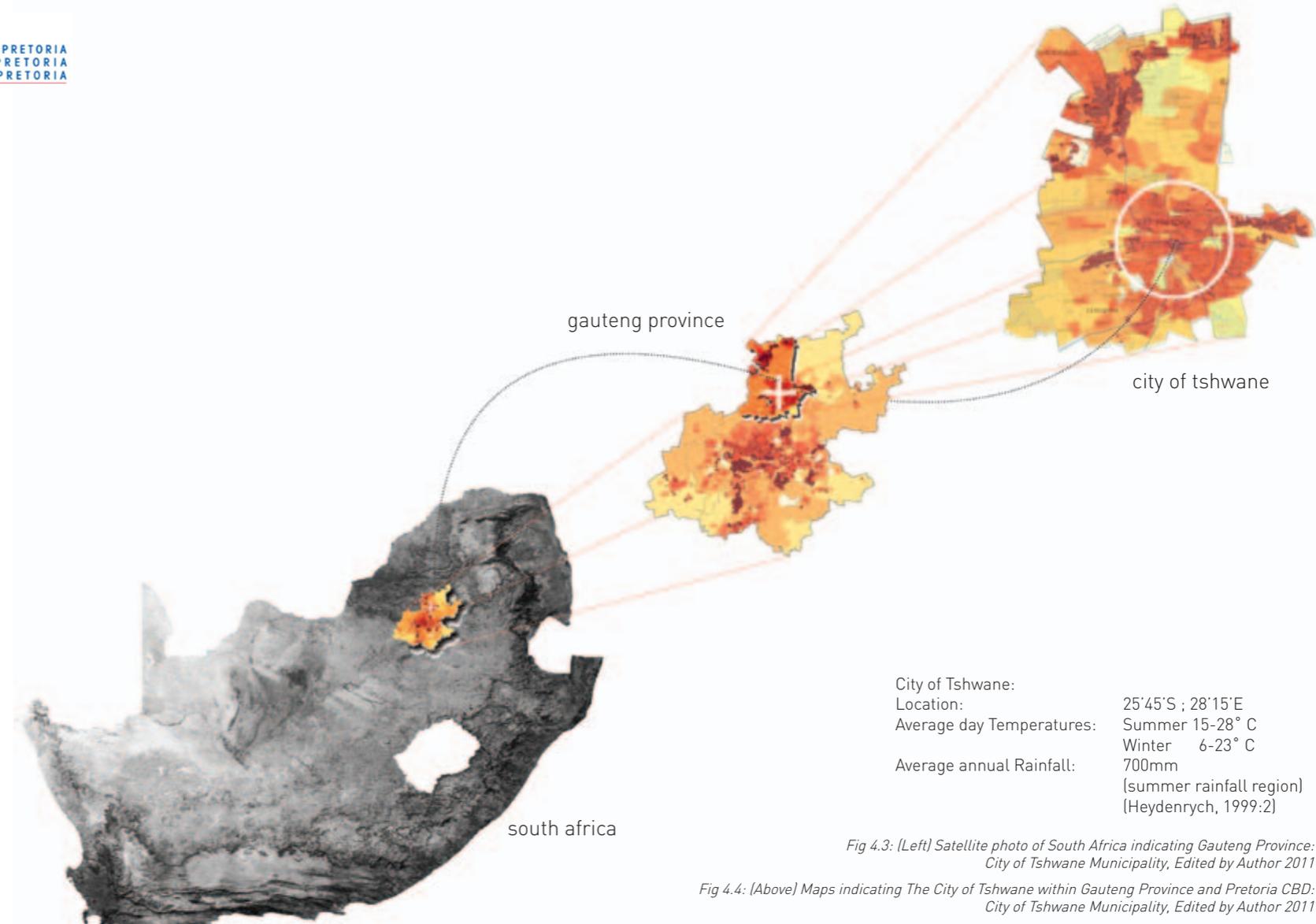




Fig 4.1: Superimposed maps of context, Edited by Author 2011



Fig 4.2 Typographic World Map
(VladStudio 2010), Edited by Author 2011



City of Tshwane:
Location: 25°45' S ; 28°15' E
Average day Temperatures: Summer 15-28° C
Winter 6-23° C
Average annual Rainfall: 700mm
(summer rainfall region)
(Heydenrych, 1999:2)

Fig 4.3: (Left) Satellite photo of South Africa indicating Gauteng Province:
City of Tshwane Municipality, Edited by Author 2011

Fig 4.4: (Above) Maps indicating The City of Tshwane within Gauteng Province and Pretoria CBD:
City of Tshwane Municipality, Edited by Author 2011

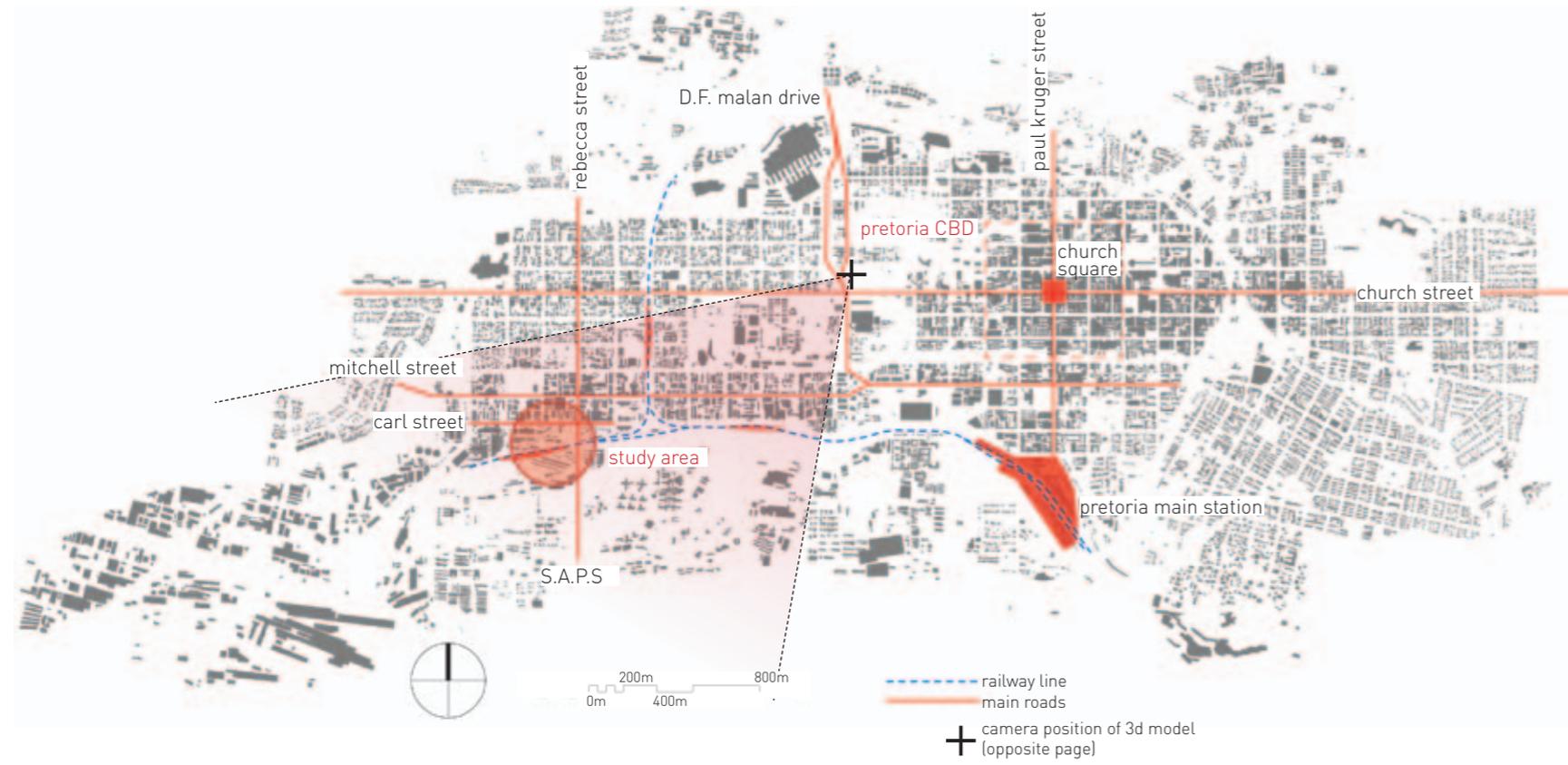


Fig 4.5: Proposed study area in context of Pretoria CBD:
City of Tshwane Municipality, Edited by Author 2011

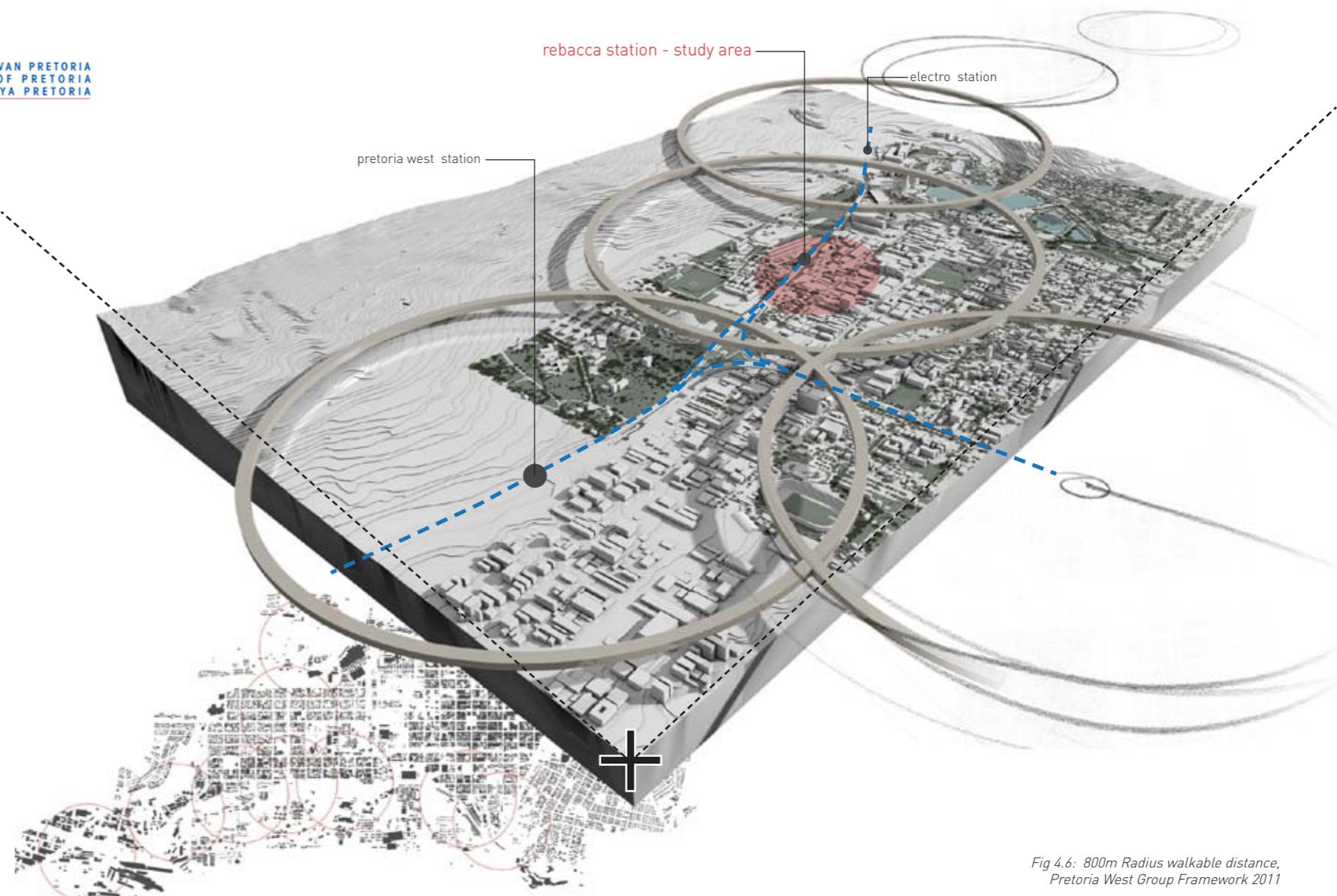
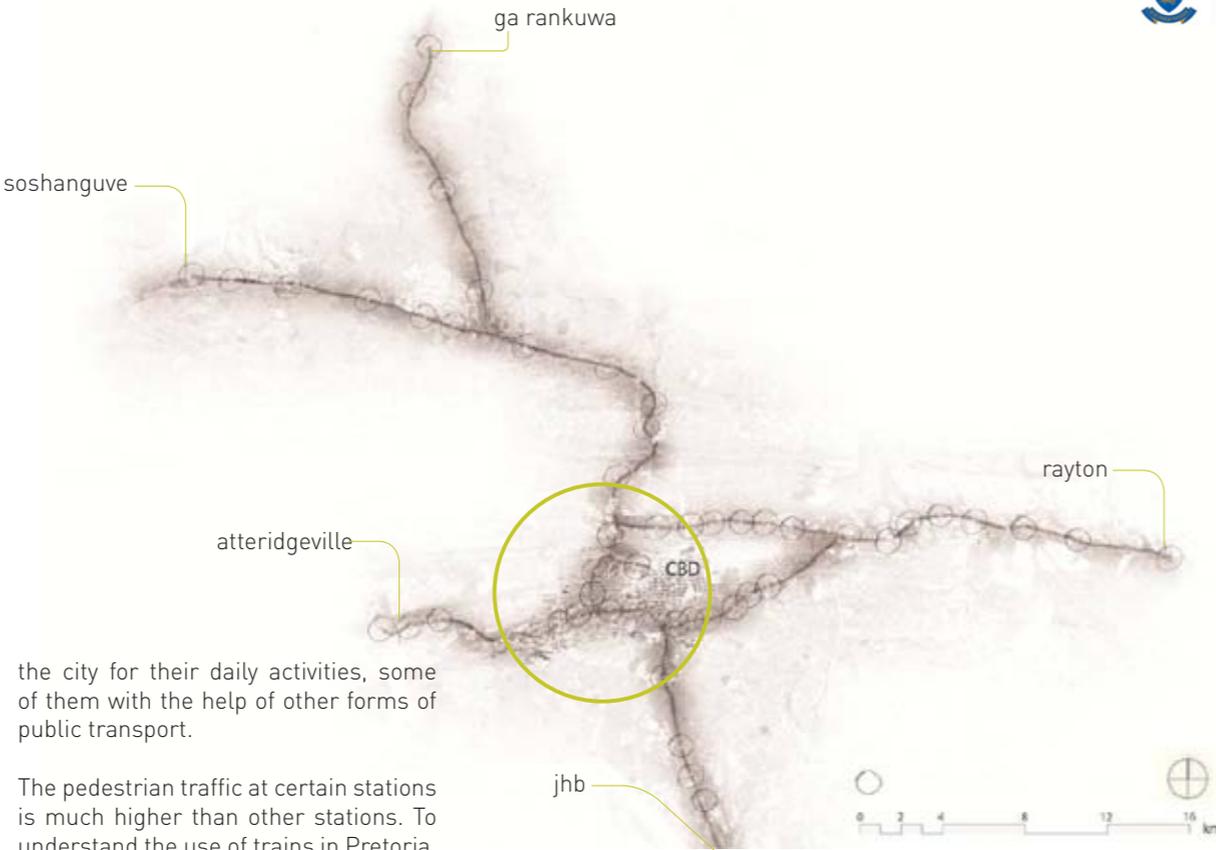


Fig 4.6: 800m Radius walkable distance,
Pretoria West Group Framework 2011

4.1 Railway System

Due to the nature of the context and the location of the proposed site, the railway line plays an important role in the proposed framework. According to the *Station Mapping* study (4.2), the majority of labourers who work in the surrounding industrial area do not live in the City of Tshwane and has to travel from settlements outside the city. Transport by train forms a central part of Pretoria West, as it serves the industry, but most of all, it serves the people who makes the industrial area work and grow.

The settlements surrounding the greater Pretoria region have been identified in order to understand their connection to the City of Tshwane. The *Station Mapping* (4.2), indicated that majority of people coming in and out of the precinct on a daily basis live in Soshanguve, Ga rankuwa and Atteridgeville. The railway routes connecting these settlements converge in Pretoria West, Belle Ombre (Marabastad) and Pretoria Main Station. From these points, people disperse into



the city for their daily activities, some of them with the help of other forms of public transport.

The pedestrian traffic at certain stations is much higher than other stations. To understand the use of trains in Pretoria, the links between important sites and the different train stations has been researched, exploring why particular stations are used, and by whom.

Fig 4.7: Railway line connecting to surrounding settlements, Pretoria West Group Framework 2011

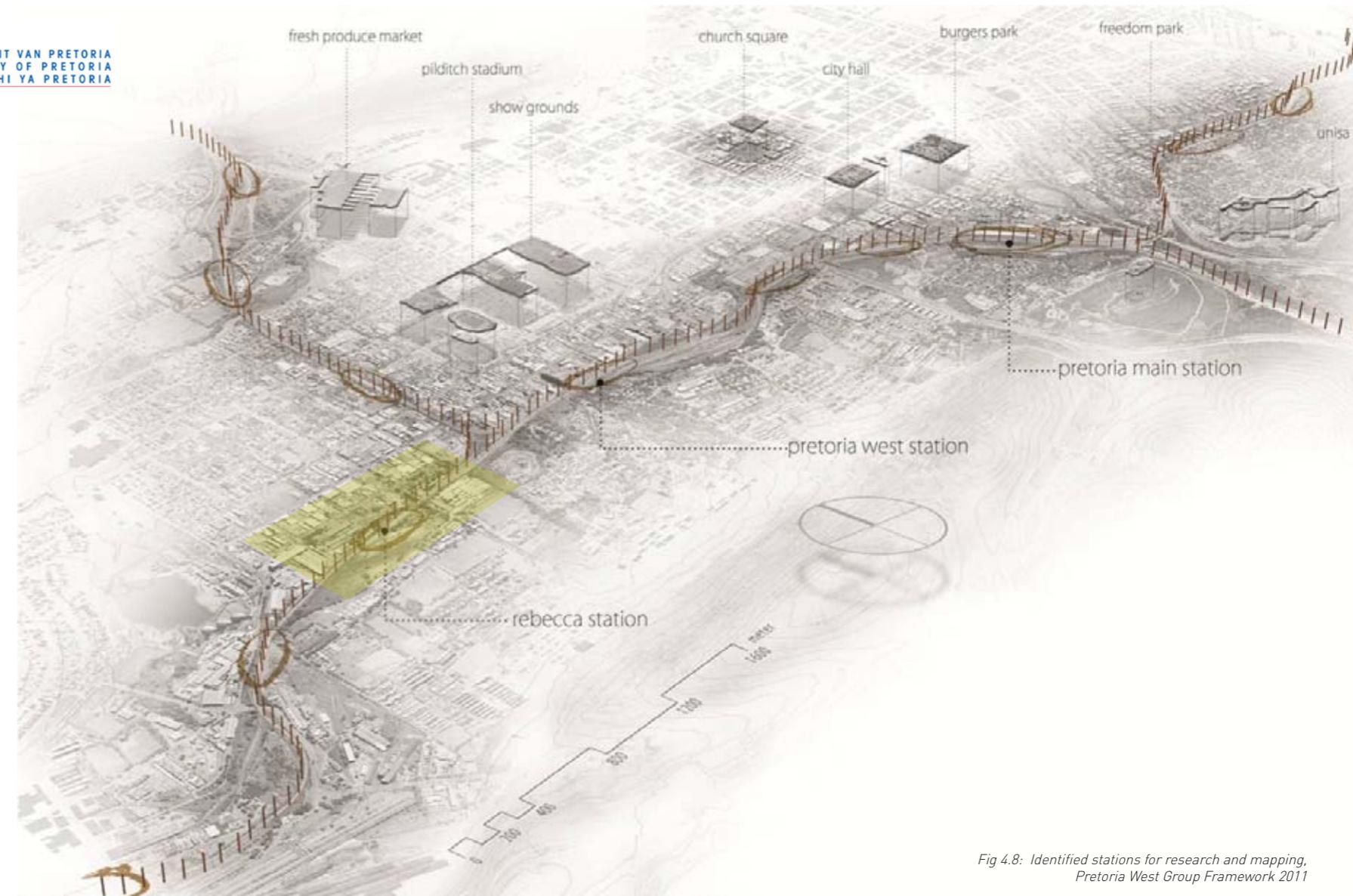


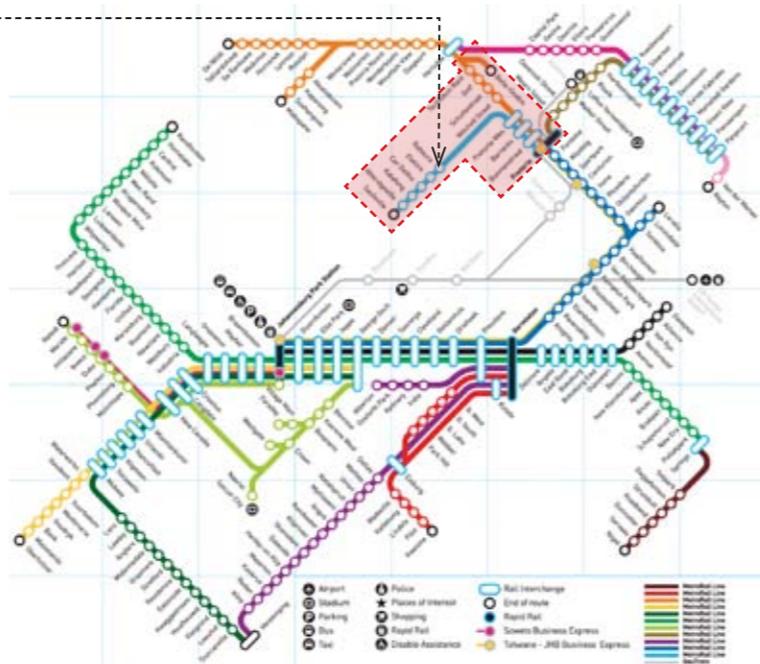
Fig 4.8: Identified stations for research and mapping, Pretoria West Group Framework 2011

4.2 Movement Analysis



Fig 4.9: (Left) View of railway line (Rebecca Station) adjacent to the proposed site, Pretoria West Group Framework 2011

Fig 4.10: (Bottom) Position of Pretoria West railway within the Gauteng railway system, City of Tshwane Municipality, Edited by Author 2011



4.2.1 Influence on Pretoria:

Relevant to the improvement of Pretoria's railway station and the surrounding urban environment, the framework raises the following important points.

- The railway should inform the city's structure to promote transformation of the urban area.

- The metropolitan area is well served by rail infrastructure and although the integration of the different rail systems will be a major challenge, it could in the future form the core of a public transportation system for the entire region.

The Gautrain rapid rail link should also contribute a great deal towards an improved public transport system.

- New large-scale development initiatives should be planned around public transportation facilities, with a strong pedestrian focus.

The dependency on private automobiles should be minimised through the development of a first class public transportation system.

The large volumes of commuters en-

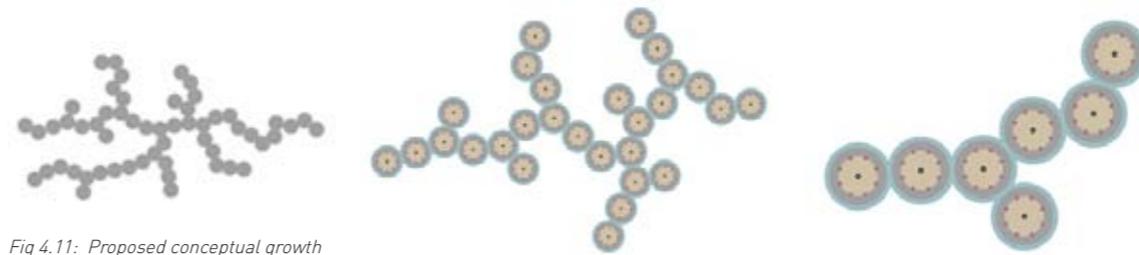


Fig 4.11: Proposed conceptual growth for Pretoria - Ideal for shrinking the hard urban fabric, allowing for green belts on outer perimeters, Pretoria West Group Framework 2011

tering and leaving the CBD during the peak periods need to be addressed. The regional public transport arrival points should be linked to a dedicated feeder distribution.

The aim of this is to move people around the inner city in a convenient, safe, and comfortable manner that will reduce the need for private automobile use in line with national policy.

- The existing railway infrastructure of the metropolitan area is well located around the city to fulfil this function in the future.

- Other public transport infrastructure should be integrated with the railway system in order to facilitate and to contribute to the sustainability of the city.

Application in Pretoria West Precinct:

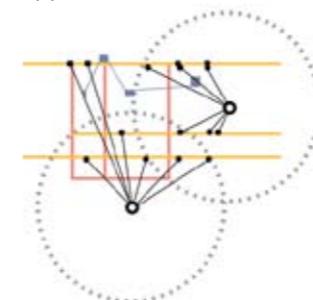


Fig 4.12: Linked fast and medium transport systems, Pretoria West Group Framework 2011

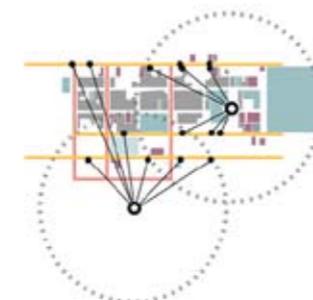


Fig 4.13: Transport and residential buildings, Pretoria West Group Framework 2011

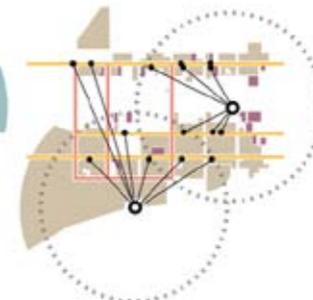


Fig 4.14: Transport and commercial areas highlighting current housing systems, Pretoria West Group Framework 2011

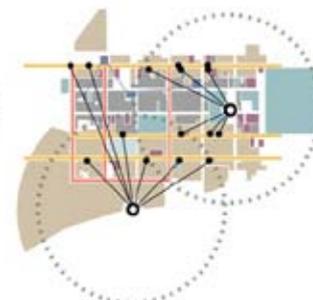


Fig 4.15: Diagram of all links, commercial, recreation and residential, Pretoria West Group Framework 2011

4.2.2 Railway Nodes:

In order to gather information on how the train stations in the City of Tshwane operate, each station has been mapped individually in terms of the number of people who use the station, the average time a commuter spends on the station and the connection the station has with the city.

The two most frequented stations are Pretoria Main Station and the Belle Ombre Station in Marabastad further north of the city's CBD. Both stations serve the greater area of the central four quadrants of Pretoria with important nodes such as: Church Square, Burgers Park, Freedom Park (Salvokop), Pretoria Zoo and the residential area of Marabastad. These stations are well catered for with public toilets, informal trading spaces and other transport possibilities connected to the city.

The Pretoria West Precinct is served

by Elektro- (near the Power Station), Rebecca-, Schutte Straat- and Pretoria West Stations. All these stations are busy during peak hours, and are connected with the city by important nodes and have adequate access and sheltering.

The mapping exercise proved the underutilization of Rebecca Station, although it is an important transport node in the precinct.



Fig 4.16: Railway Repair Warehouses. Illustrated by Bertus van Sittert 2010



Fig 4.17: View of Rebecca Station, Photo by Author 2011

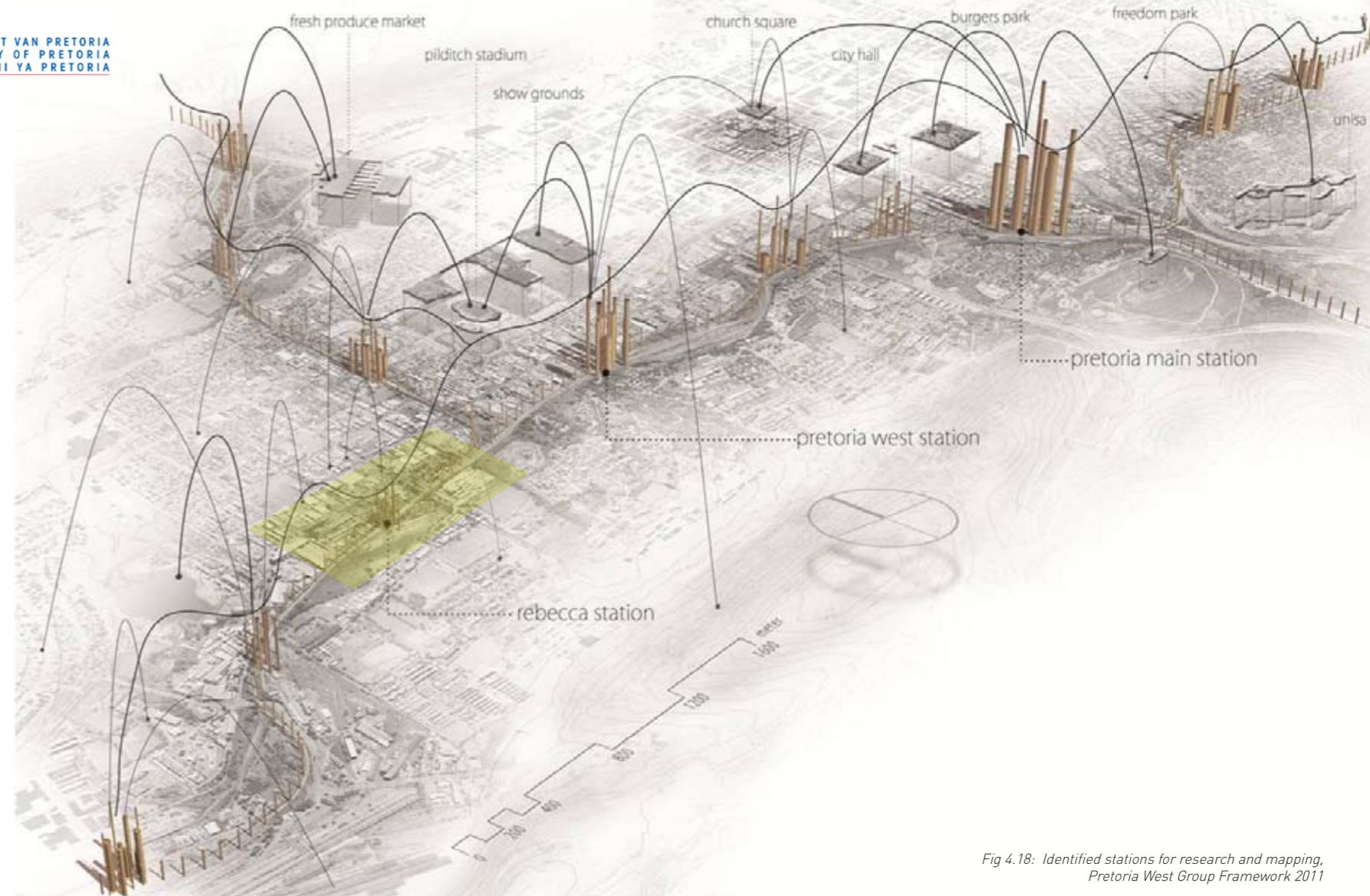


Fig 4.18: Identified stations for research and mapping, Pretoria West Group Framework 2011

4.3 Pretoria West Precinct

4.3.1 Macro Scale:

It is clear that in the existing urban fabric of Pretoria West there is a lack in density compared to the blocks of the city's CBD. The grid layout, which extends from the city centre to the west, results in equal block sizes, but urban density cavities exist.

In order to link all the activities and programs of the city, the lost urban spaces need to be filled to result in a consistent density pattern throughout the city. The intention of the proposed site and various programs is to form a catalyst for urban renewal and future growth (emergence) process.

Pretoria West could be developed into a productive district in the city. The density will not try to compete with that of the inner city blocks, but rather allow for a gradual transition from the city centre to Pretoria West.

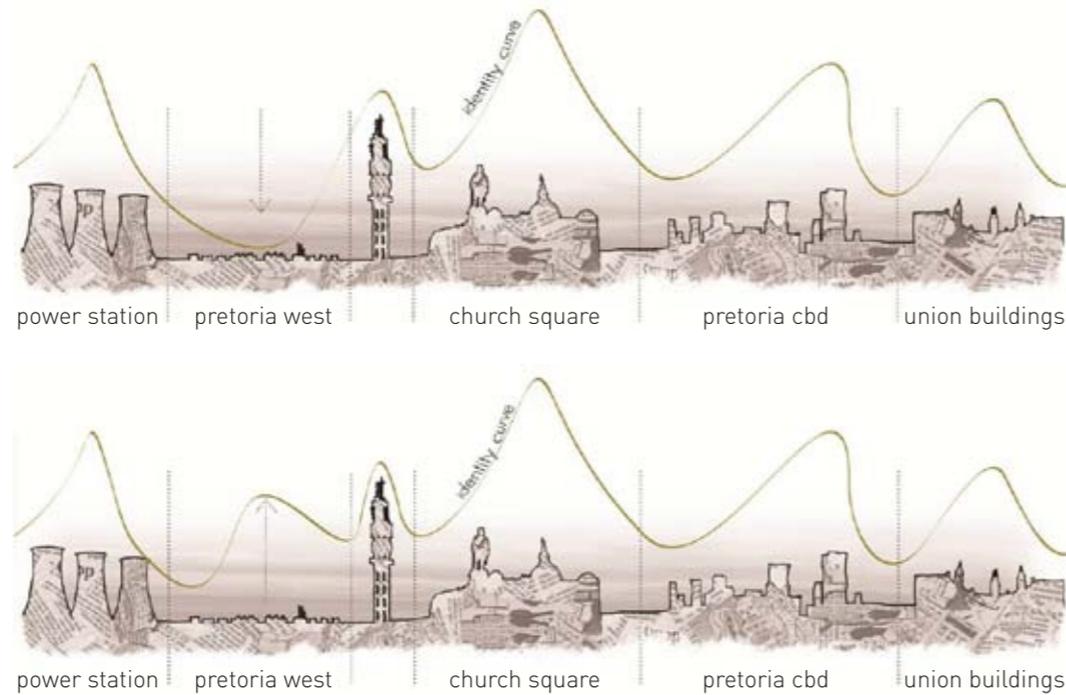


Fig 4.19: Identity Curve of Pretoria West in comparison to the rest of the City, Pretoria West Group Framework 2011



Fig 4.20: View of Pretoria West Industrial in relation to the city's CBD, Photo by Author 2011

Basic Infrastructure

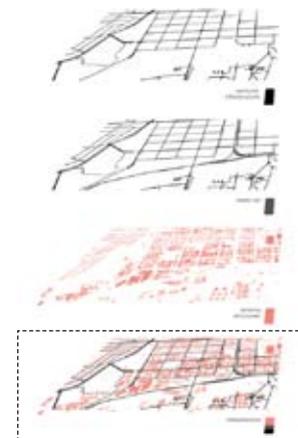
Rebecca Station is within 5 minutes walking distance to major industrial buildings and roads that link the site with Pretoria CBD and Atteridgeville. The site is also within 10 minutes walking

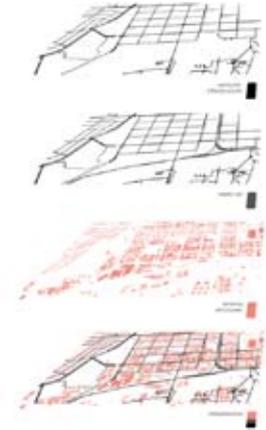
distance of the S.A.P.S training facilities and the residential suburb to the north.



Fig 4.21: Basic Infrastructure, Pretoria West Group Framework, 2011

Fig 4.22: Existing urban fabric of Pretoria West, Pretoria West Group Framework 2011





Open Spaces

Due to the industrial nature of the area, there exist open, hard surfaced areas between structures. These spaces are used as circulation and storage by the factories and warehouses.

The proposed site contains two open lots and dilapidated warehouses, which will play host to a wide range of proposed programs.

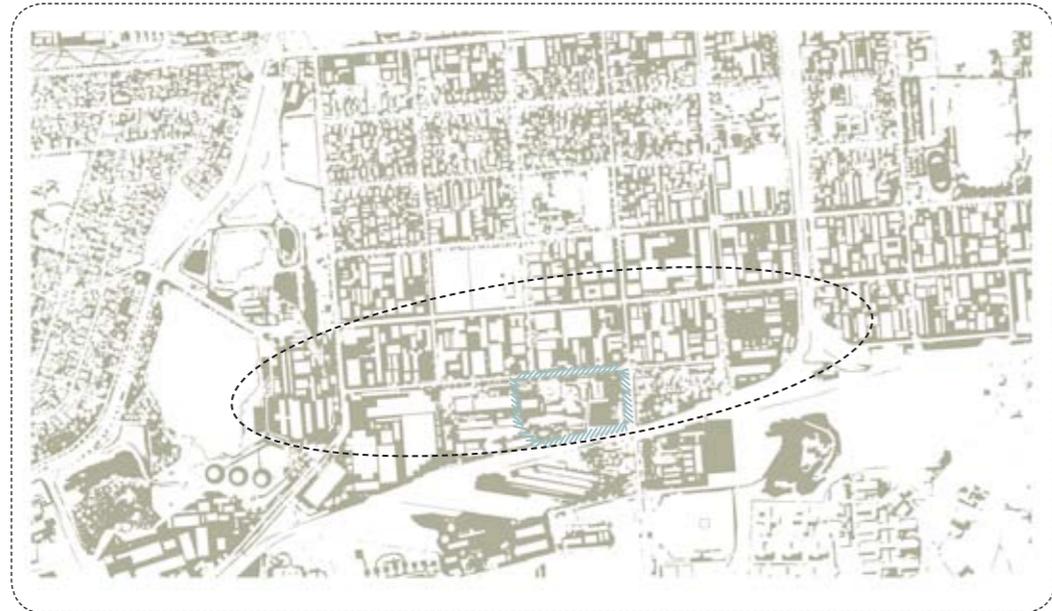


Fig 4.23: Open Spaces, Pretoria West Group Framework 2011



Fig 4.24: Open spaces in Pretoria West, Pretoria West Group Framework 2011





Green Scape

The map indicates a healthy green scape in the residential area (north of the industrial warehouses), on Proclamation Hill (North West), the Government Institutions (South) as well as a

large water body within the Pretoria West Power Station. However, the core industrial district consists of very little vegetation due to hard surfaces.

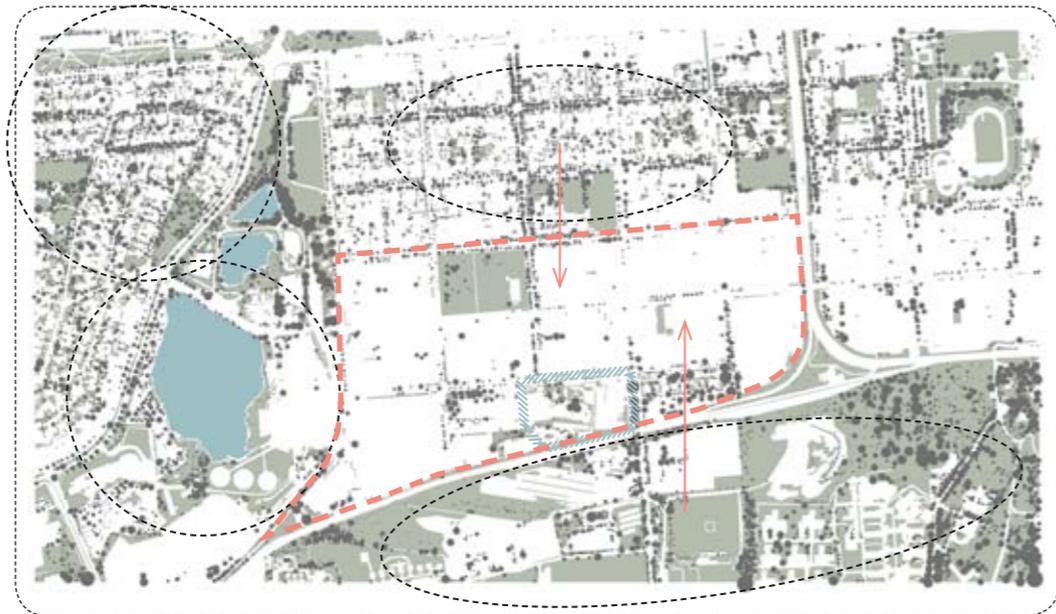


Fig 4.25: Green Scape, Pretoria West Group Framework 2011

Fig 4.26: Green Scape of Pretoria West, Pretoria West Group Framework 2011





Full Layering

The layering of all the levels illustrate that Pretoria West has potential to be regenerated as a healthy precinct where the industrial and social characteristics can be connected to form a

sustainable environment - The position of the proposed site is in close proximity to all the programs of the precinct.

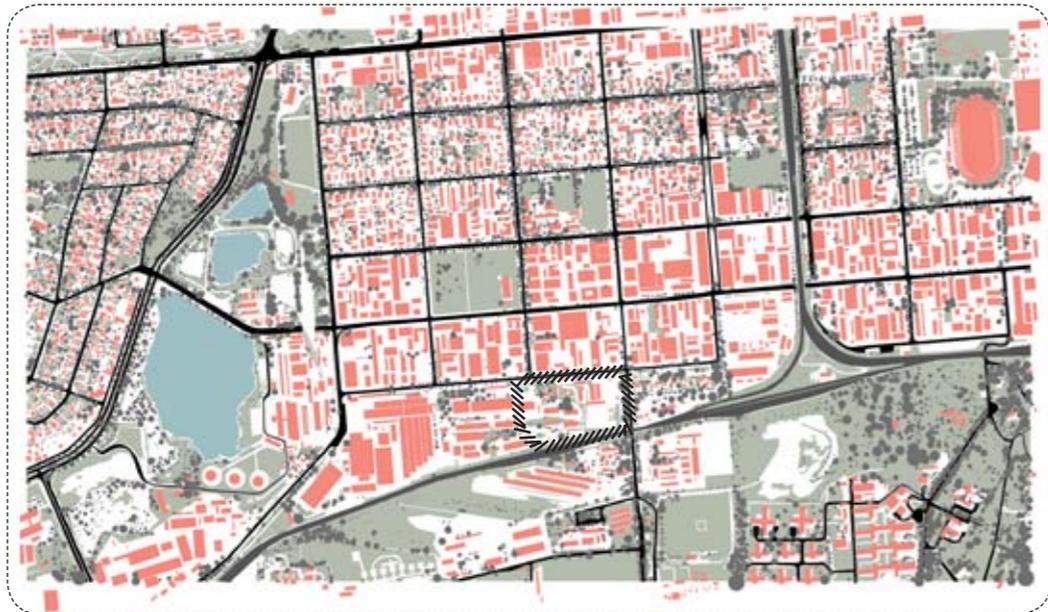
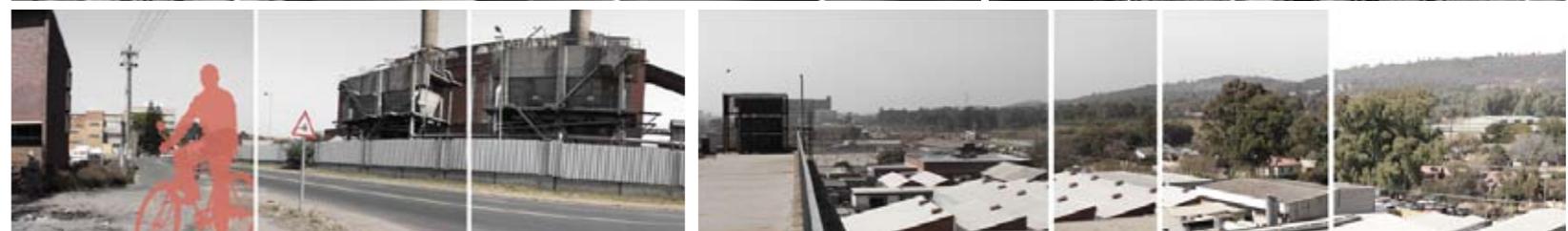


Fig 4.27: Full Layering, Pretoria West Group Framework 2011

Fig 4.28: (Opposite) Various elements of Pretoria West Group Framework



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4.3.2 Meso Scale:

Apart from the Pretoria West Power Station and neighbouring glass facility, the area can be characterized as a small to medium sized industrial zone, with most of the businesses focusing on repair and maintenance work rather than production.

This being said, the area consists of a number of sites that contain unused technical/industrial mass. These materials could be reintroduced into the surrounding 'technosphere'. The sites containing large amounts of unused materials are regarded as lost/discarded urban spaces and add to the low density problem of the area.

The area is clustered with car-related businesses, panel beaters, scrap yards, parts shops, mechanics, paints shops and open lots filled with disposed cars. A specific number of sites will be chosen as proposed resource sites.

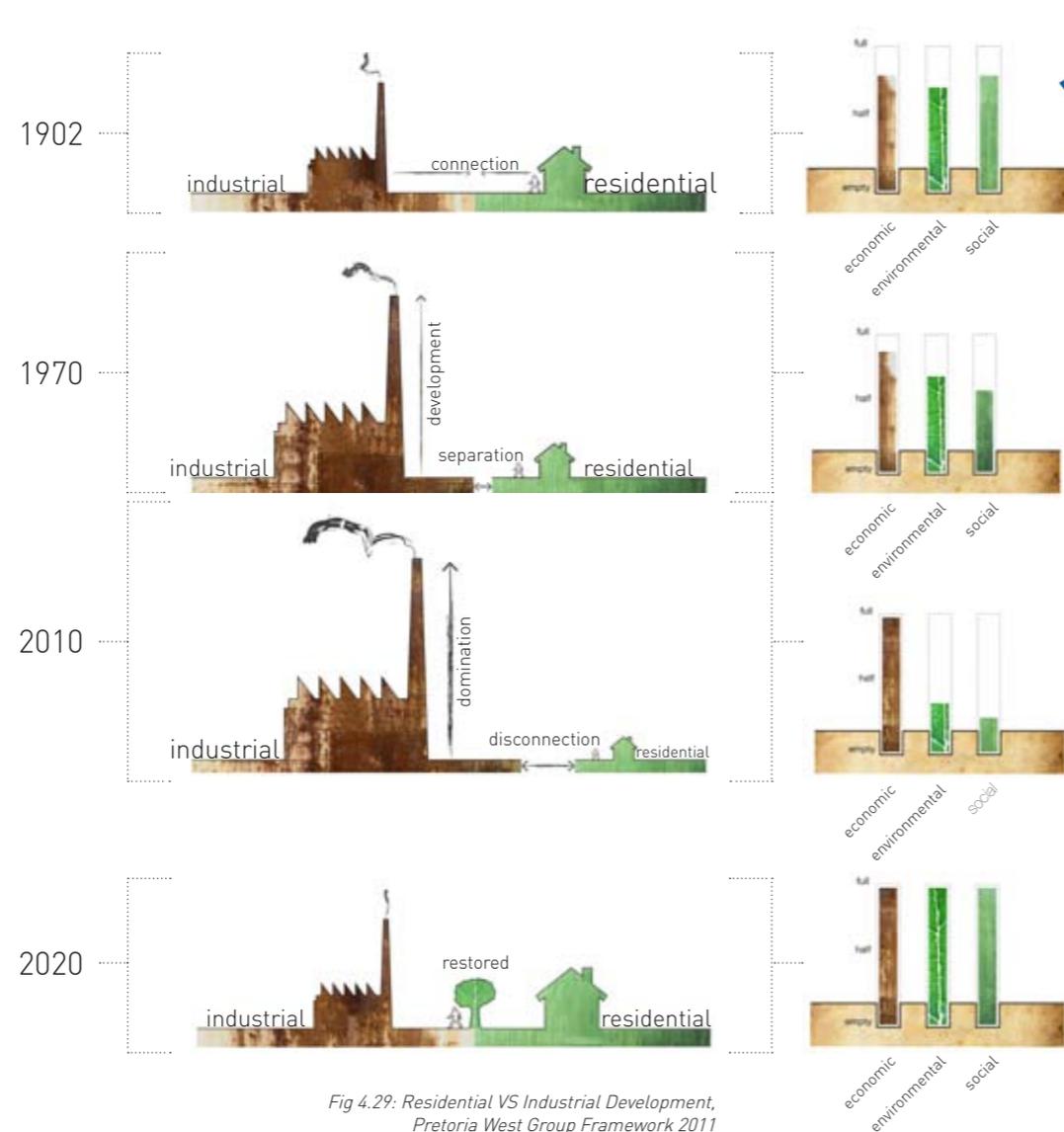


Fig 4.29: Residential VS Industrial Development, Pretoria West Group Framework 2011



Fig 4.30: Zeller Street with water channel, Illustrated by Bertus van Sittert 2010



Fig 4.32: Mitchell Street with car dealerships, Illustrated by Bertus van Sittert 2010



Fig 4.31: Walking route adjacent to proposed site, Illustrated by Bertus van Sittert 2010

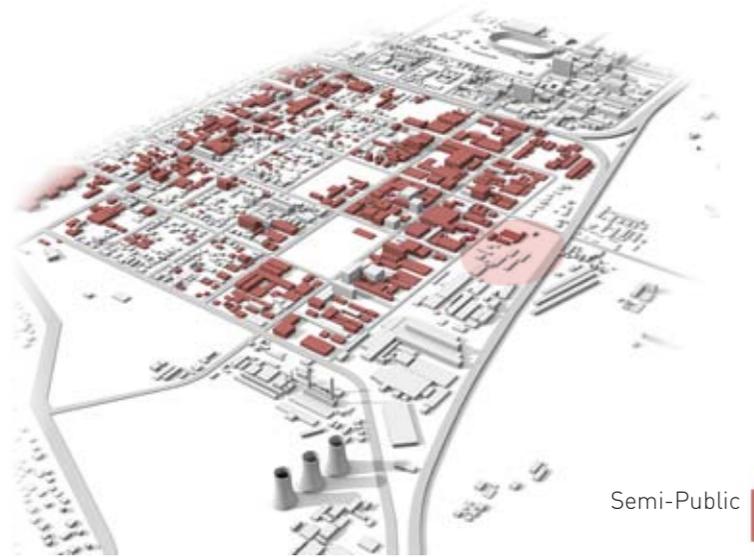


Fig 4.33: Zeller Street with water channel, Illustrated by Bertus van Sittert 2010

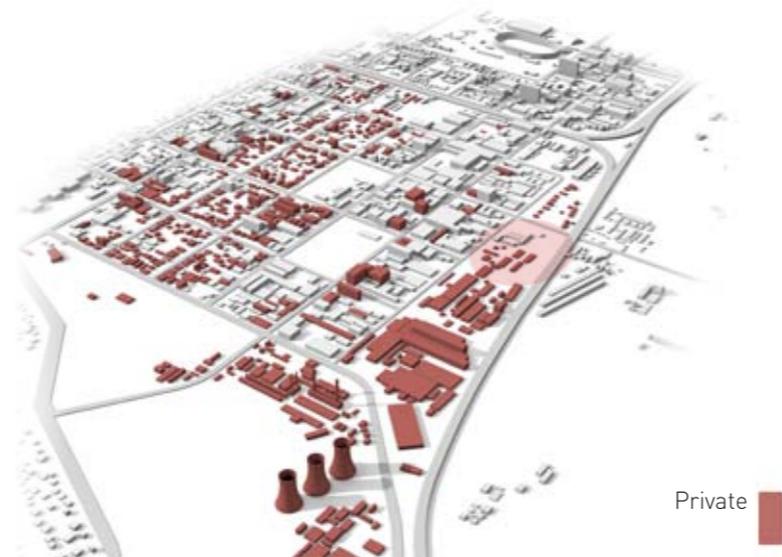
Fig 4.34: (Left) Semi-Public Spaces in Precinct, Pretoria West Group Framework 2011

Fig 4.35: (Right) Private Spaces in Precinct, Pretoria West Group Framework 2011

Fig 4.37: (Right) Educational & Sports Facilities in Precinct, Pretoria West Group Framework 2011



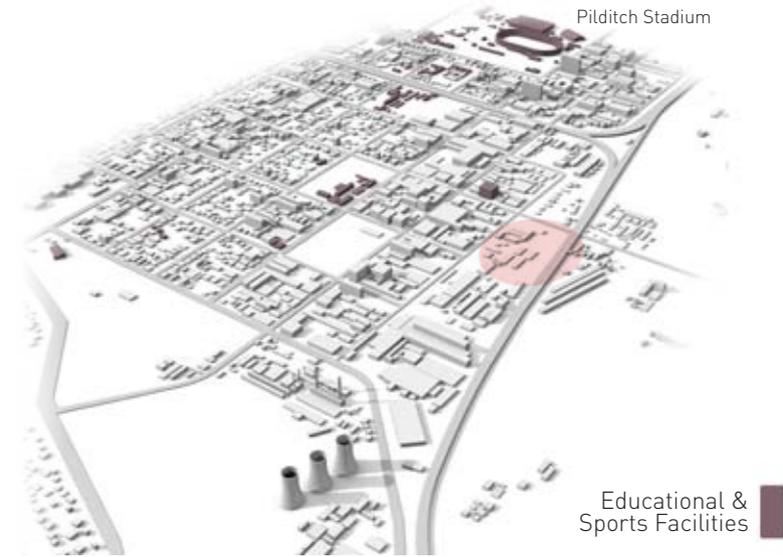
The semi-public spaces consist of local businesses and industrial buildings with limited access due to health and safety regulations.



A large amount of the precinct consists of spaces which are considered to be private: the residential houses to the north and government facilities like the Department of Water Affairs and the Pretoria West Power Station form part of this zone.

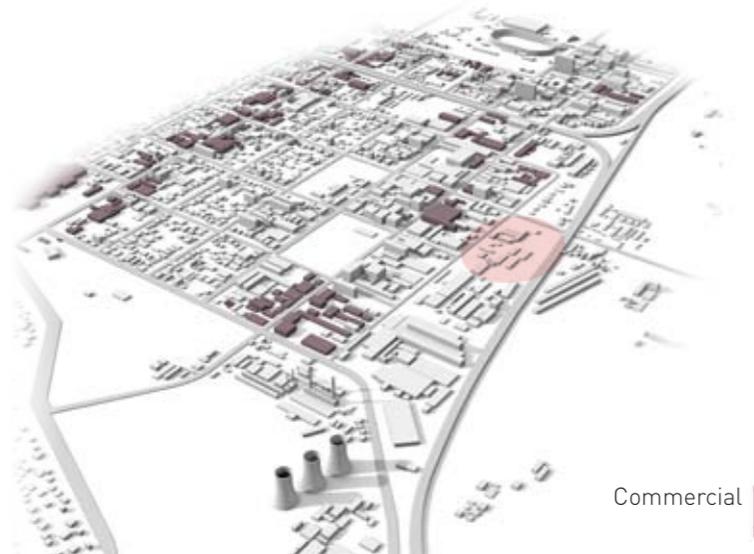


The precinct has adequate access to bus services. These transport nodes should be connected to train stations of the area.



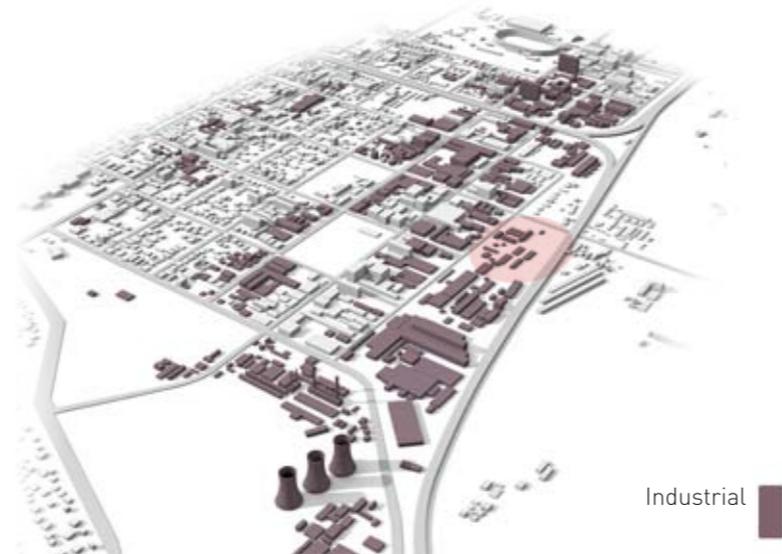
The most prominent sports facility in the area is Pilditch Stadium, which is located next to the Show Grounds to the east.

Fig 4.38: (Left) Commercial buildings in Precinct, Pretoria West Group Framework 2011 & Fig 4.41: Residential buildings in Precinct, Pretoria West Group Framework 2011
 Fig 4.39: (Right) Industrial buildings in Precinct, Pretoria West Group Framework 2011



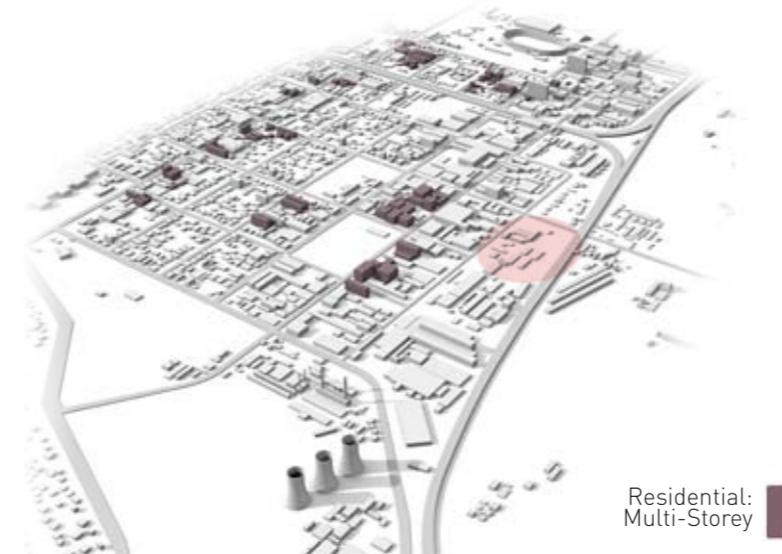
Commercial

The commercial buildings consist mainly of car related businesses like panel beaters, parts shops, fitting centres and spray painting.



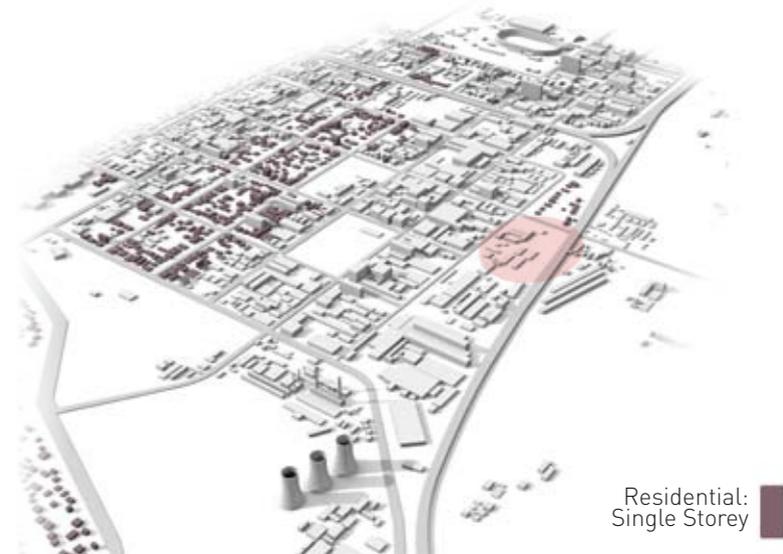
Industrial

A wide range of industrial buildings is located in the area, all of which can be classified as small to medium in size.



Residential: Multi-Storey

The area consists of very low densities with little multi-storey residential buildings. Part of the framework will be to propose new housing development around the parks in the area.



Residential: Single Storey

The old Goede Hoop houses covers a large part of the area, these houses are older than sixty years and are protected by the Heritage Act.



Fig 4.42: (Opposite) Aerial photo of Train stations in the Pretoria West Precinct: City of Tshwane Municipality, Pretoria by Author 2011



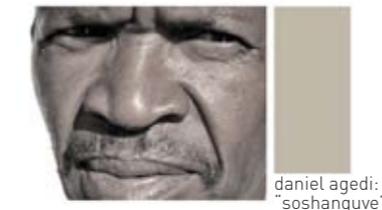
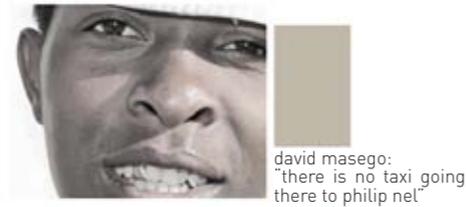
Fig 4.43: Industrial, Commercial and Residential Zoning in the Pretoria West precinct, Pretoria West Group Framework 2011



Local People

A diverse range of people attend to their daily business in the streets of Pretoria West, conversations with some of them gave another perspective of the precinct.

Fig 4.44: Local People of Pretoria West: Pretoria West Group Framework 2011



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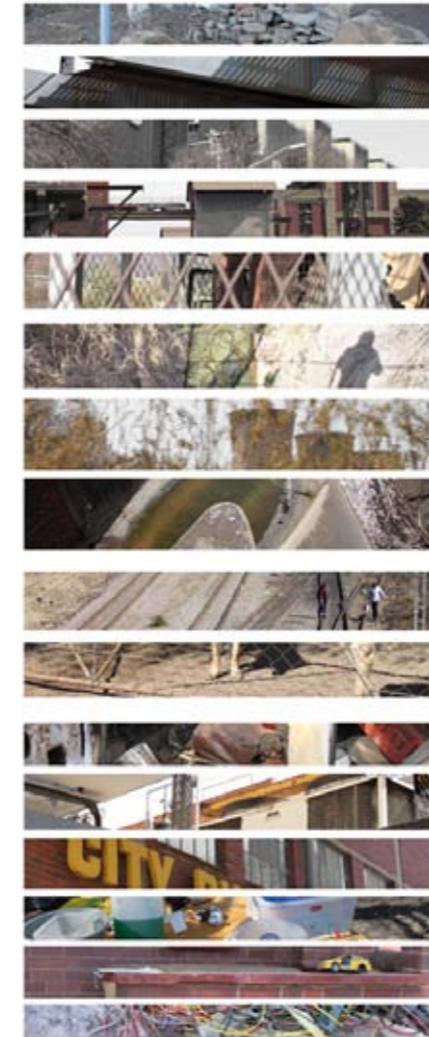


Fig 4.45: The soul of Pretoria West, Pretoria West Group Framework 2011

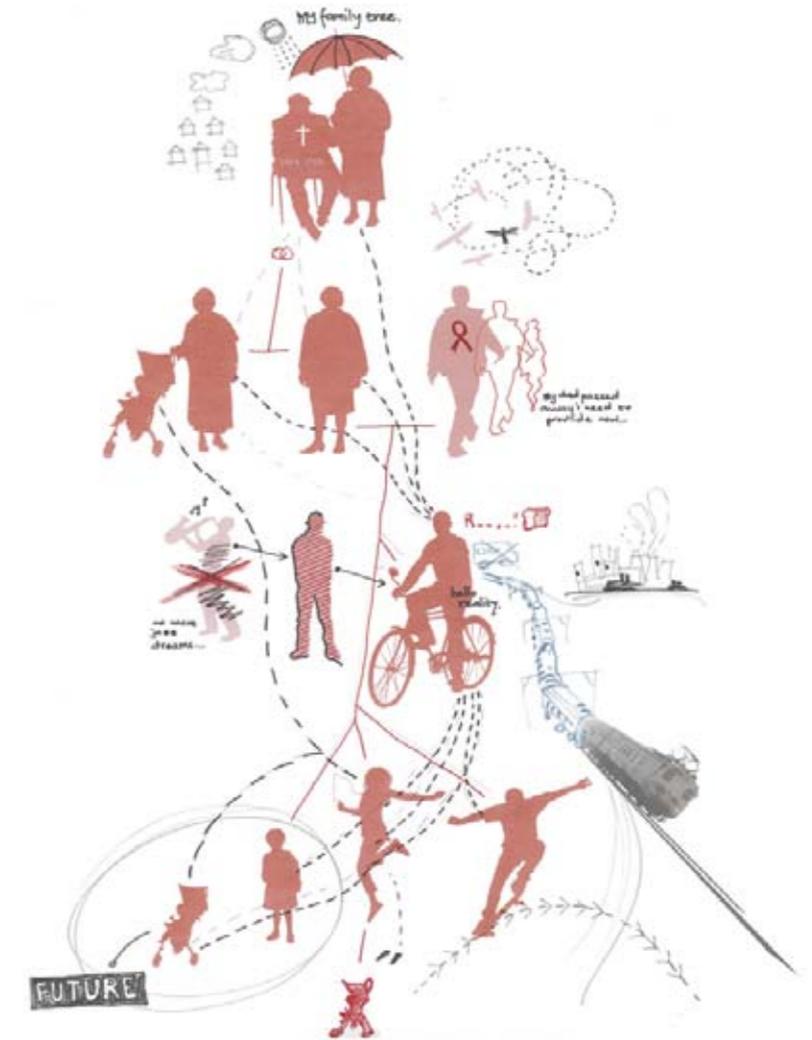


Fig 4.46: Family tree of an interviewed local, Pretoria West Group Framework 2011



Fig 4.47: Identified resource sites in Pretoria West, Group Framework 2011



1. Proposed site - c/o Rebecca and Carl Street
Owner: Municipality of Tshwane
Use: Waste Containers Storage

Legend:



Resource Sites:

②



2: Car Scrap Yard - Mitchell Street
Amount of Cars: 55
Distance from Site: 0.9km



③



3: Car Spare Parts - Ct Street
Engine & Body Spares
Distance from Site: 0.7km



④



4: Car Spare Parts - Ct Street
Engine & Body Spares
Distance from Site: 1.1km



⑤



5: Old Car Tyres - Souter Street
Amount of Tyres: 500 (approximately)
Distance from Site: 0.9km



⑥



6: Car Scrap Yard - Souter Street
Amount of Cars: 30
Distance from Site: 1.9km



⑦



7: Car Scrap Yard - Souter Street
Amount of Cars: 47
Distance from Site: 1.9km



⑧



8: Car Scrap Yard - Mitchell Street
Amount of Cars: 72
Distance from Site: 1.3km



⑨



9: Car Scrap Yard - Carl Street
Amount of Cars: 37
Distance from Site: 0.4km



Fig 4.48: Identified resource sites in Pretoria West, Photos by Author 2011

4.3.3 Rebecca Station:

The station is situated at the foot of the industrial area, bordered by the railway line itself. Its five minute walking radius is able to serve more than 70% of the industrial warehouses and residential area to the north.

Transport of industrial materials played an important part in the history of the station (Jordaan 1989: 29). The shunting yards, where train carriages were parked for loading of industrial materials south of the railway line, are not in operation due to the increased use of other modes of transport over the last few decades.

However, the main reason for the station not having reached its full potential is because of the lack of access to the site and to the station itself. The small number of people using the station by day gain access by a secluded path next to the proposed site from Carl Street,

crossing the railway lines by foot to the raised concrete structure that form the base of the station.

A number of interviews with users of the station indicated that this is the easier access route to take, rather than the official pedestrian route which is far more dangerous (Interviews by Author 2011).



Fig 4.49: Views of Rebecca Station, Photos by Author 2011

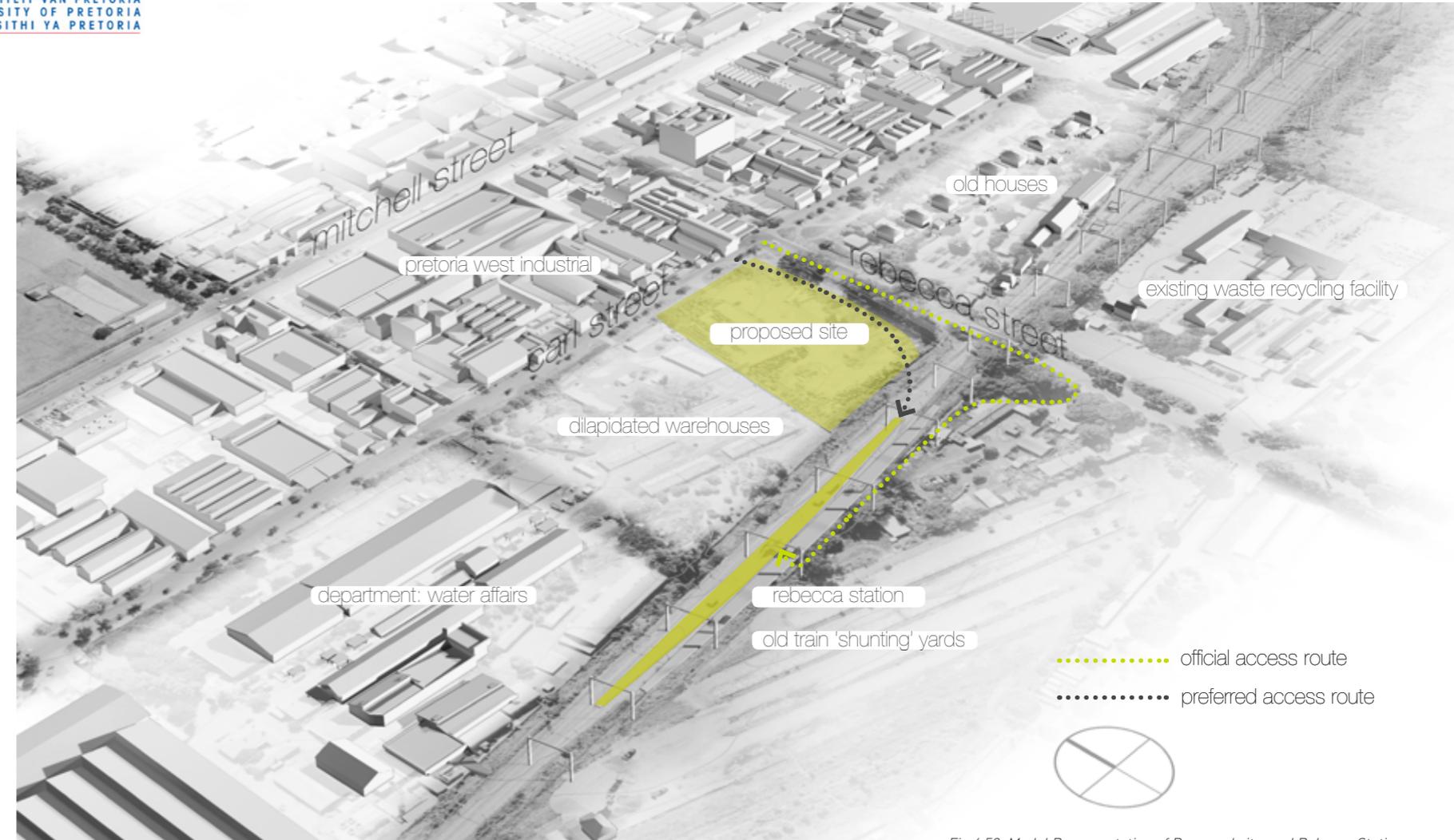


Fig 4.50: Model Representation of Proposed site and Rebecca Station, Pretoria West Group Framework 2011

Fig 4.52: (Opposite) View of Structures surrounding the proposed site
Photos by Authc



Fig 4.51: Model Representation of Study Area, Pretoria West Group Framework 2011

4.3.4 Micro Scale:

The selected site is currently owned by the Municipality of Tshwane and is used as temporary storage for waste containers. Waste trucks transport filled containers to the site, and the waste is then transported across the railway line to an existing waste recycling facility less than five hundred meters away. The proposed intervention aims to cater for and strengthen this established recycling system as an extended component of the new building's main program.

The site's location is directly adjacent to Rebecca Station, which is connected with Pretoria Main Station and Elektro Station in an East-West direction by the railway line. The site plays host to an informal and dangerous connection corridor for pedestrians who commute to/from Rebecca Station [crossing the railway line by foot], resulting in the under utilization of the station.

4.4 Synthesis of Context Analysis

Urban problems associated with the study area:

1. Vacant Lots
adds to poor urban character of the area
2. Dilapidated Warehouses
structures are no longer in use
3. Rebecca Station
the station is cut off from the precinct & the railway line is no longer used for industrial purposes
4. Shunting Yards
taking up a large area of land
5. Workshops
structures remain empty and unused
6. Mixed Waste Recycling Facility
facility lacks access to appropriate transport
7. Old 'Goede Hoop' Houses
significance of historic houses not celebrated
8. Light Industrial Buildings
poor urban spaces and street edges
9. Department: Water Affairs
private government buildings - no pedestrian access

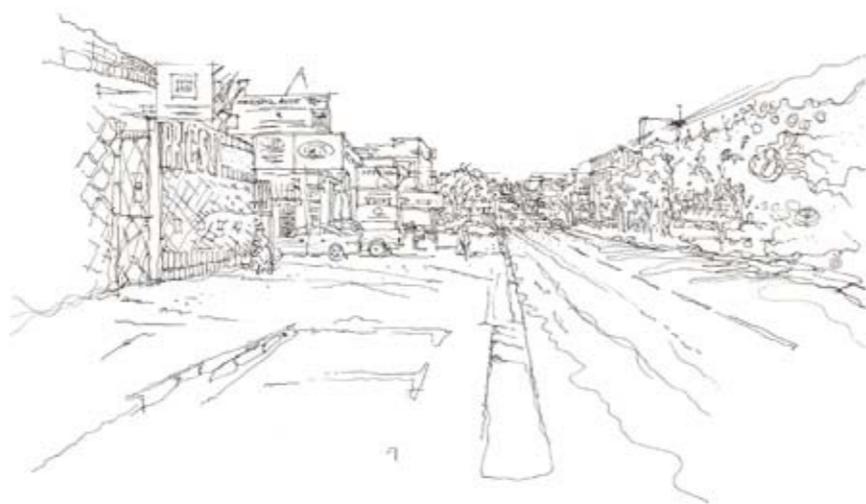


Fig 4.53: Mitchell Street with car dealerships,
Illustrated by Bertus van Sittert 2010

These problems will be investigated in *Chapter 6: Design Development* by means of new interventions and opportunities, resulting in a proposed site development and vision for the area.

Ultimately, the proposed Vehicle Disassembly Plant should plug into the existing urban fabric through the newly developed site proposal.

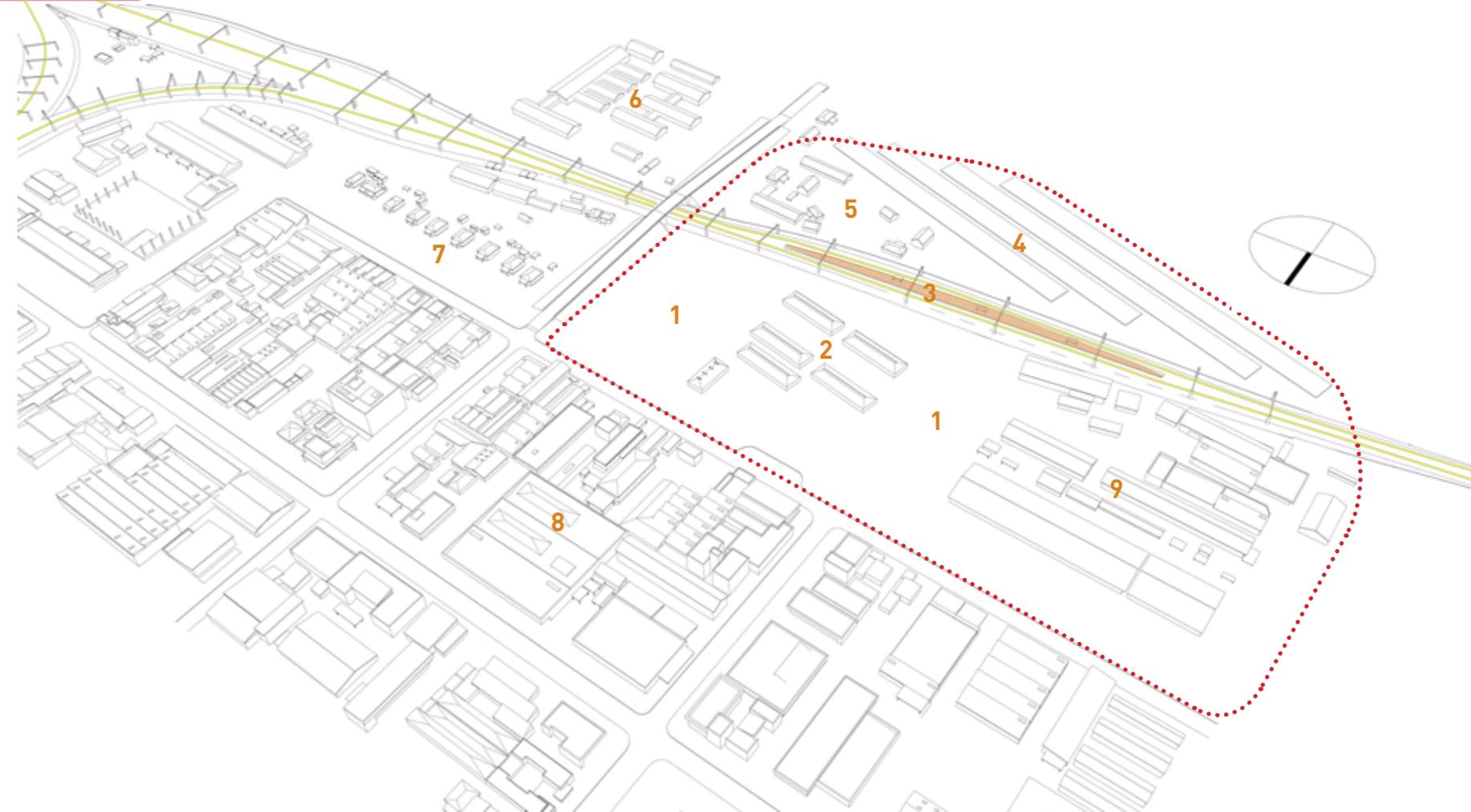


Fig 4.54: Urban problems associated with the study area,
Pretoria West Group Framework 2011