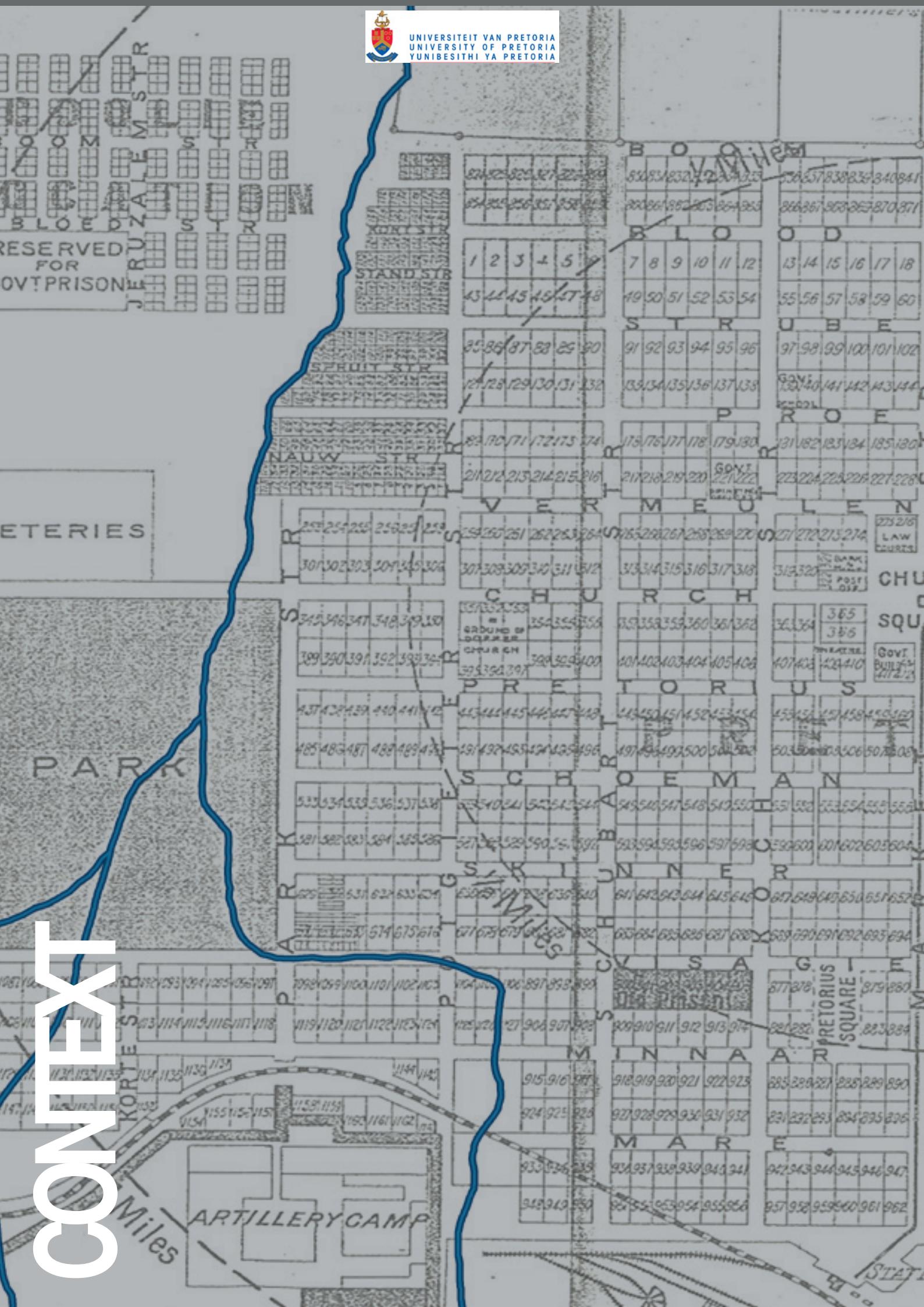




UNIVERSITEIT VAN PRETORIA
UNIVERSITY OF PRETORIA
YUNIBESITHI YA PRETORIA



CONEX

CHAPTER 4 CONTEXT

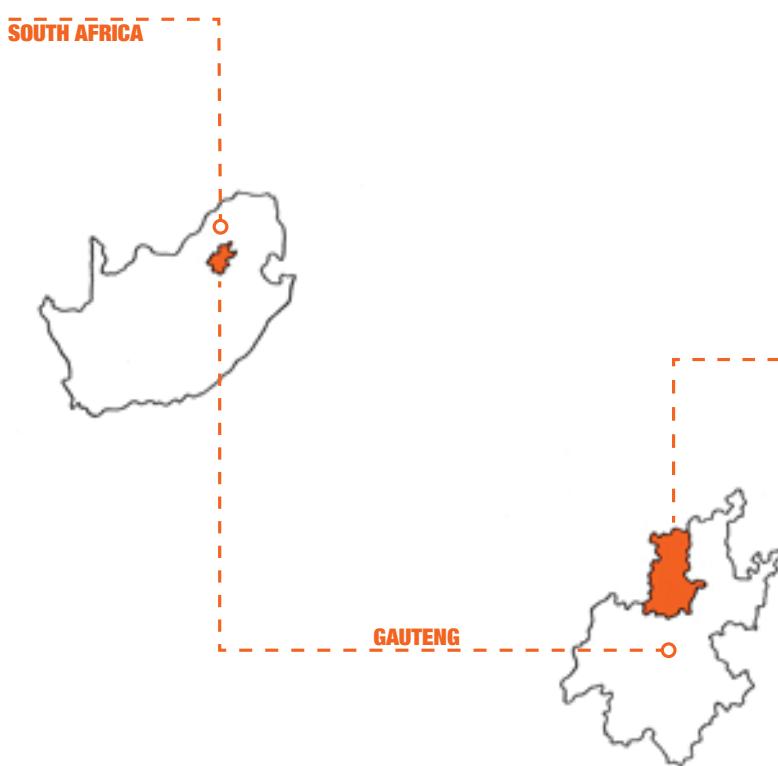


Figure 24: Pretoria Location Diagram

CONTEXTUAL PROBLEM

The site is located on a cross roads between the three main organisational elements of the city. Where these elements meet the “rhythm” of the city is broken and planning of “urban island” created by these intersections become problematic.

“Urban islands” can be defined as sites that have urban form, access and edge condition that makes integration into the greater urban fabric difficult.

The site is one example of such an “urban island”, creating indeterminate spaces (lacking definite function) in its immediate proximity.

The site suffers from poor edge response and access to the natural river edge.

SITE SELECTION

The site is located between a prominent (yet seemingly forgotten) natural element (the Apies river) and the urban core (historic city edge), this serves as an appropriate laboratory to explore the tension that

exists between techno-sphere and biosphere giving the designer an opportunity to address this problem.

Figure 25 indicates the location of the city within the broader context. Our site is located on the crossing of 3 linear routes / systems Church Street, Nelson Mandela Drive & the Apies River. This provides the opportunity to explore 3 strong aspects of Pretoria’s identity:

- Church Street – Historic Identity: linking site with Church Square & Union Buildings
- Nelson Mandela Drive – Modern City Identity – New road system linking site with freedom park development.
- Apies River – Natural Heritage: Opportunity to expose strong natural backbone of the city.

Site is located on a threshold between two spatial systems (identities): CBD & Arcadia providing an opportunity to define transition or a gateway into the city.



INTRODUCTION

THE CITY AND TWO RIVERS BREAKING WITH RHYTHM

The site and context investigation will focus on the elements in the context that have a direct impact on the contextual problems.

The research and analysis will therefore start with a short discussion of the broader context and history of the Pretoria CBD followed by an analysis of the three organisational elements of the city, the orthogonal grid, ring road and river system.

All three these elements form edges to the chosen site, providing very defined contextual elements to respond to.



Figure 26: Site Location, Macro Scale

PRETORIA CITY

HISTORY

The historic city of Pretoria dates back to the early 1850s when it was established by the ruling Boer community as the capital of their Zuid-Afrikaansche Republiek. The area's historic significance however dates back to many years before to this event. (BRT, 2009, p.32)

Traces of the earliest human settlements have been found in this area. Archaeologists have found stone tools probably used by Homo ergaster during the earlier Stone Age near the zoo that could be as old as a 100 000 years. Iron Age implements have also been discovered dating back to between AD 550 and 700. (BRT, 2009, p.32)

Before the arrival of the Boer trekkers the Pretoria region was occupied by the nguni-speaking Southern Ndebele people who had inhabited these lands for about 300 to 400 years. The area was also briefly occupied by Mzilikazi and his amaKhumalo during the 1820s before eventually migrating to Zimbabwe to establish the Matabele. (WELSH, F., 2000, p.146)

The two great migrations of South Africa: The Great Trek and The Mfecane (or Difeqane) led to the eventual settlement of Boer trekkers in this area and the displacement of the earlier bantu communities. (WELSH, F., 2000, p.147)

The Mfecane forced the original nguni-speaking settlers out of this river valley as Mzilikazi and his raiders moved through the villages forcing them to abandon their homes or be absorbed into his regiments. (WELSH, F., 2000, p.136)

The arrival of the boer settlers (1841) in the area resulted in a series of confrontations between Mzilikazi and the Voortrekkers, who suffered great loss of human life and livestock. General Hendrik Potgieter eventually managed to force Mzilikazi to flee across the Limpopo creating a power vacuum that allowed the Voortrekkers to take control over the area. (GREYLING, P J, 2000)

A later trek under the leadership of Andries Pretorius also settled in the area. Marthinus Wessels Pretorius (son of Andries Pretorius) purchased two farms (Elandpoort and Koedoespoort) and founded a town in 1853 which later became known as Pretoria. The efforts of Pretorius led to the British granting the ZAR independence in 1852. (WELSH, F., 2000, p.221)

Following the discovery of gold in the Witwatersrand (1886) the city (and region) went through a period of British colonial rule leading to the first and second Anglo Boer Wars. This also led to a great increase in population and the transformation of a once rural community into a urban society. (GREYLING, P J, 2000)

The city grew along an orthogonal grid system that emanated from the central square (Church Square) and cross roads where the church could be found. This grid has proven to be one of the most lasting historic features of the city still clearly legible today. (CORTEN, J.P. and van Dun, P., 2009, p.13)

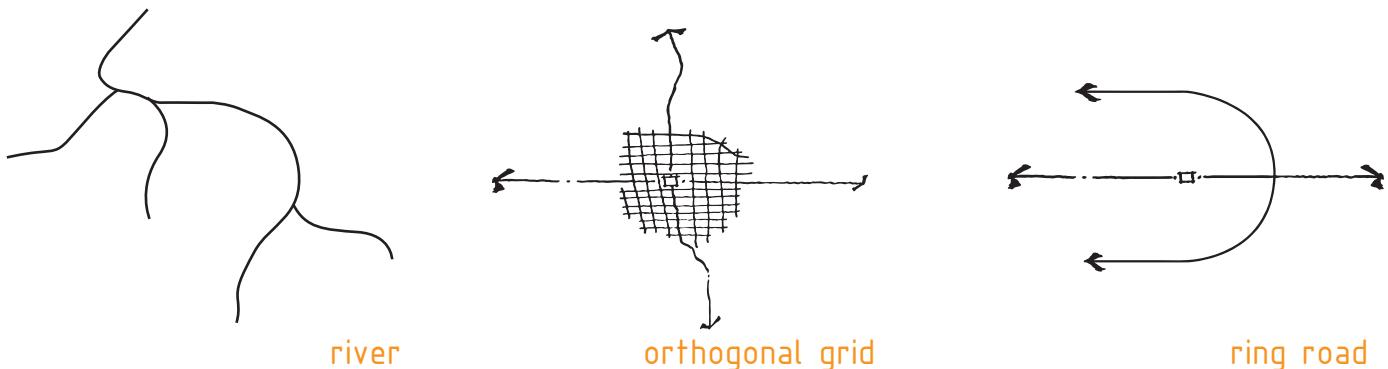


Figure 27: Pretoria city organizing elements

STUDY AREA

NATURAL HERITAGE: APIES RIVER

The Apies River is one of Tshwane's major natural resources, but has been neglected and destroyed over a number of years. (Gerald Garner)

Based on the vision from the city of Tshwane, the Apies River was to be developed as an accessible, safe and pleasant public open space from Fountains Valley to Bon Accord Dam. Even though the framework for this vision has been in place since 1999, very little has been done to re-instate the Apies river as a accessible natural element.

The extent of the Apies river system is far reaching connecting the CBD with the greater metropolitan area. The Apies River begins just south of the quartzite ridges south of Pretoria and flows north to join the Pienaars River, in an area of plains and lowlands, which together flow into the Crocodile River. (Department of Water Affairs, 2011)

Some tributaries join the Apies River from the Wonderboom/Sinoville (east) area (Wonderboom Spruit) and Pretoria North/Akasia/Rosslyn (west) area (Boepens Spruit) at or before entering the Bon Accord Dam. (Department of Water Affairs, 2011)

The Apies River drains the Pretoria CBD, parts of the central-eastern suburbs and most of the western Pretoria industrial and urban areas. Increased high surface water runoff is channelled into the Apies River from these areas. (Department of Water Affairs, 2011)



Figure 28: Apies River system

The heritage and cultural importance of the Apies river is as far reaching. The river is also known as the Apiesrivier in Afrikaans (in which “Apies” means “small monkeys”), and is traditionally also called the Tshwane River by the indigenous peoples. Pretoria itself also came to be referred to as Tshwane by the African communities, after the river, and that name is currently the centre of a controversial, politically driven attempt to rename the city itself to Tshwane. (Bolsman, 2001: 170)

Nguni-speaking settlers, who became known as the Ndebele, are thought to have been the first people to recognise the suitability of the Apies River valley as a place to put down roots. They named the river after one of the chiefs, Tshwane (“little ape”), which was later translated into the Afrikaans “Apies”. (Bolsman, 2001: 170)

The Mamelodi township also draws its name from the name of the river, with the full name being “Mamelodi ya Tshwane”, meaning “Whistler of the Apies River”, a nickname given to Paul Kruger.

In 1909 the Apies River is transformed into a raging torrent after a heavy rainstorm resulting in huge damage of property and loss of life.

Work is started on the canalisation of the river beginning at Proes Street and working upwards to the south. Work lasted until the late 1930s.
(VAN DER WAAL, G M, 1998)

The process of canalization resulted in an unattractive, dangerous river edge with little resemblance to the natural river reach of the past.
(VAN DER WAAL, G M, 1998)

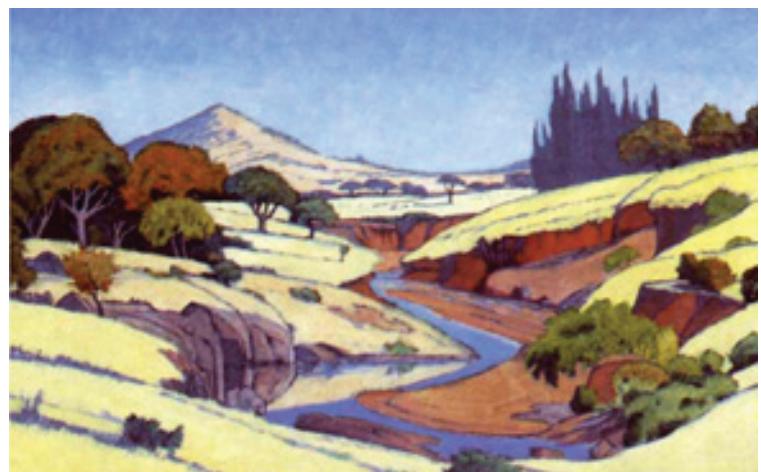


Figure 29: Apies River with Meintjies Kop, Henk Pierneef



Figure 30: Pretoria in 1872, Thomas Baines



Figure 31: Canalization of the Apies River, Pieter Wenning



CULTURAL HERITAGE : ORTHOGONAL GRID

The grid is a city ordering device that was used in the 19th century in South Africa during the settlement of towns, the Roman *urbs quadrata*, where the town is quartered by the intersecting cross of kardo and decumanus, symbolising a stable rational cosmos - an order needed for an effective and controlled settlement. The regular town grid symbolised rational order and republican democracy and was in direct contrast to the natural world which was seen as a threat which had to be tamed - boundaries for civilized human habitation were made.

The urban grid was ordered around the church at the crossing of Church and Paul Kruger Streets and related both to the cosmic order (the universal model of the city as "mandala") and to the "poorte" in the mountain ranges surrounding Pretoria (repeated at the later Church Square). This rational orthogonal system was combined with the demands of the open furrow water supply system originating at Fountains Valley. (Meiring, A.L. 1955: 151)

Figure 32: The first Map of Pretoria

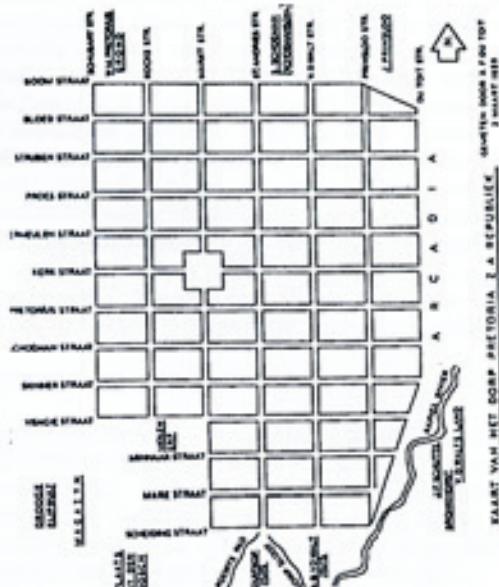


Figure 33: The Roman *urbs quadrata*



Figure 34: Figure ground of current day Pretoria, grid form still visible.

RING ROAD: NELSON MANDELA DRIVE

What is currently known as Nelson Mandela Drive forms part of a larger Ring Road scheme that dates back to 1967. (JORDAAN, Gerrit, 2002)

The road was originally planned from the fountains road system in the South to the Soutpansberg road in the North. The main purpose of this road being to provide additional carrying capacity (additional 6500 cars per hour) in a North-South direction. It was thought that this would help alleviate congestion in Prinsloo, Beatrix, Van Der Walt and Hamilton street. (JORDAAN, Gerrit, 2002)

The plan was for a total of 13 roads to feed into the 2.6km dual carriage road, extending around the city centre in a ring road configuration. The original freeway connections were later changed to "Super Streets" with at-grade intersections. The idea being that this would alleviate traffic congestion by allowing fast moving traffic to move around the cbd on route to destinations North-South or East-west of the city itself.

Part of management scheme included restricting residential developments along the edges of these main routes. The land use along the new road edges was therefore changed to mainly commercial activity. (JORDAAN, Gerrit, 2002)

As can be seen on Figure 29 below the original intended ring road scheme was never fully implemented however some of the main routes including Skinner Street and Nelson Mandela Drive were constructed.

The alignment of the road closely follows that of the Apies river giving it an organic shape. The presence of large numbers of fast moving automobiles along this mobility route does not make for a pedestrian friendly environment. Access to sites directly from Nelson Mandela drive is also made difficult by the speed of traffic that it carries.

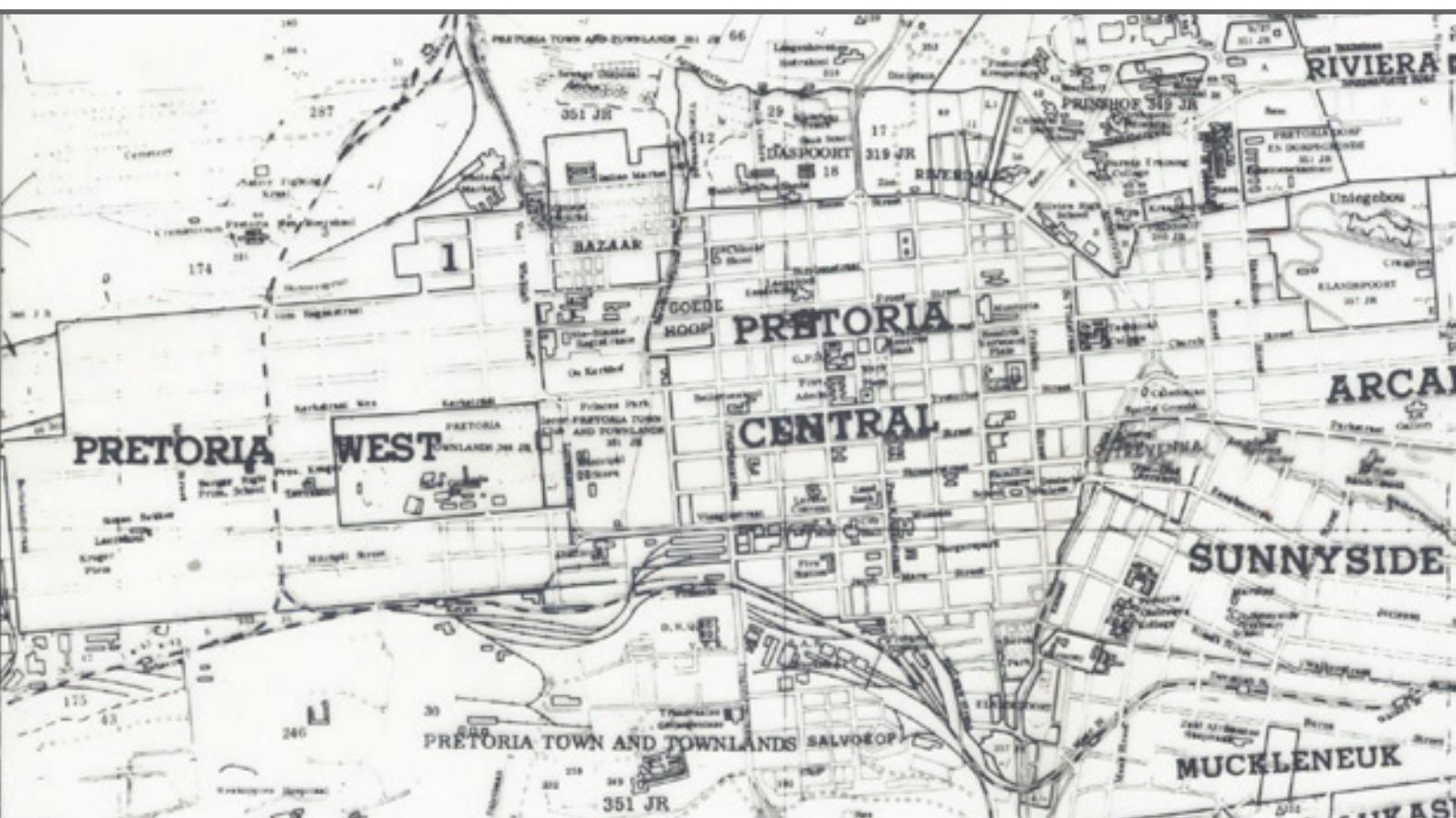
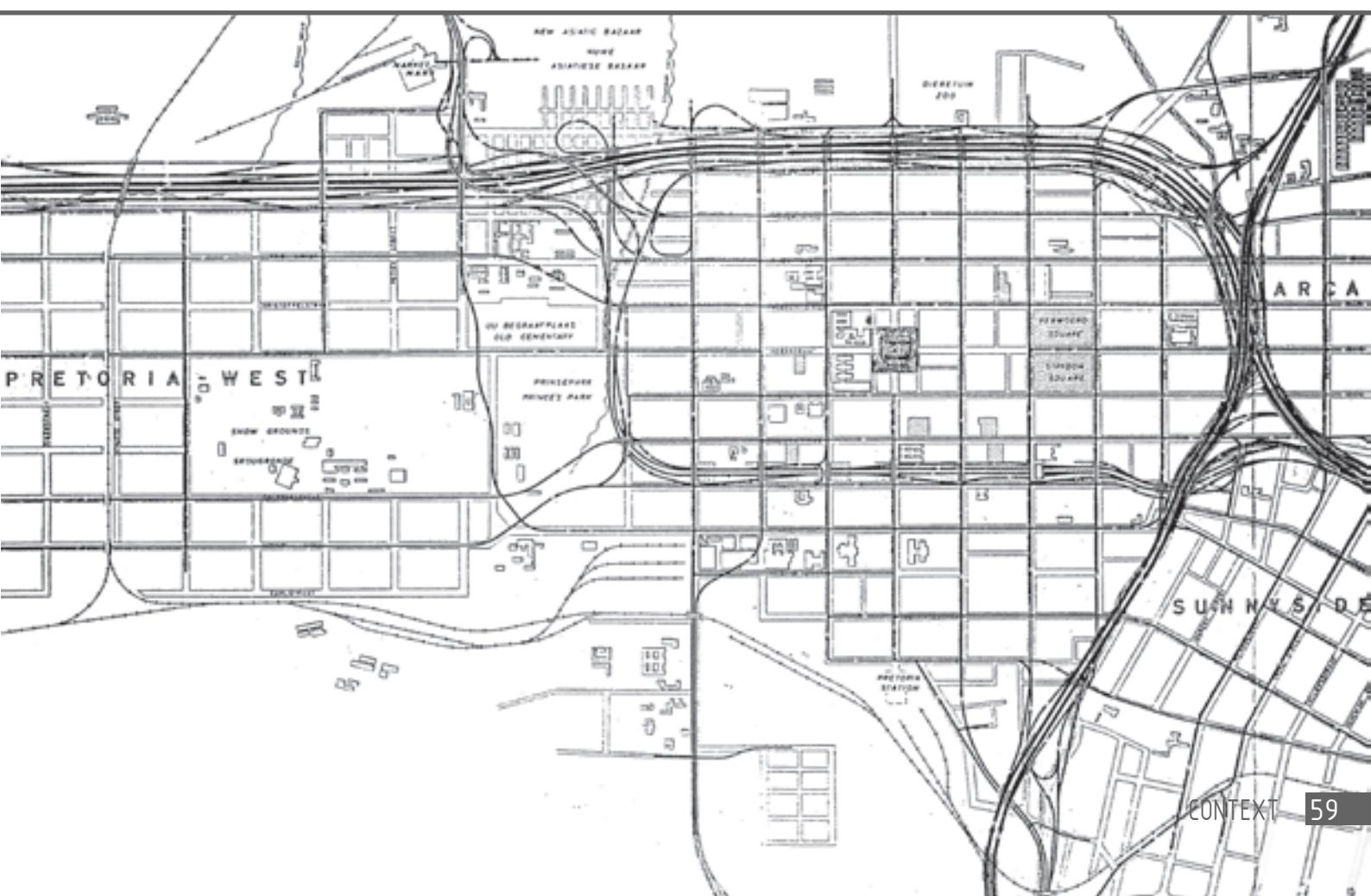


Figure 35: Pretoria Road Map (Before Nelson Mandela Drive)



Figure 36: Photo: Automotive dominated character of Nelson Mandela Drive.





THE CITY AND RIVER IN TENSION

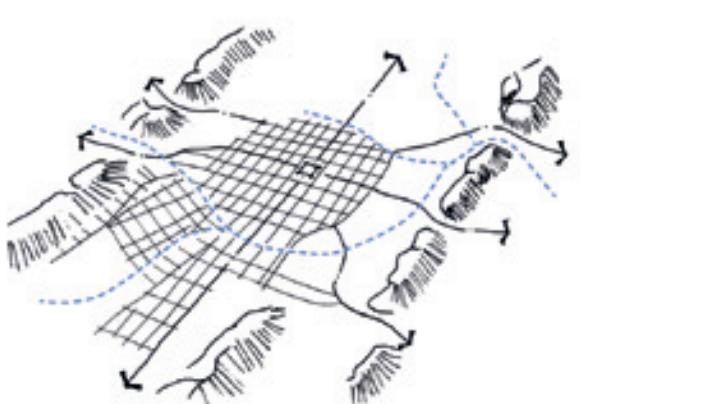
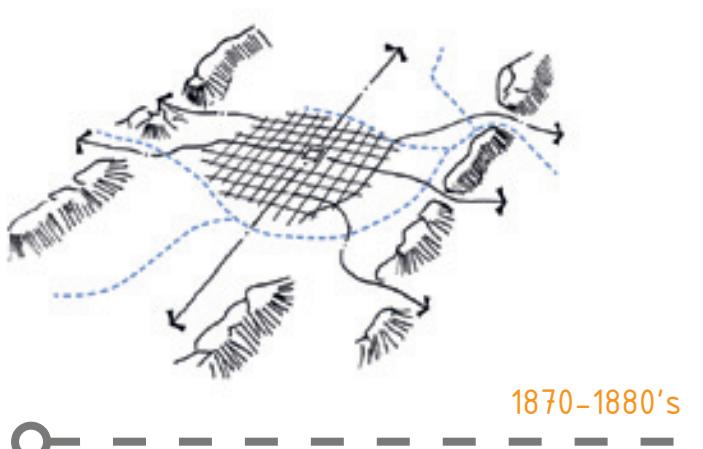
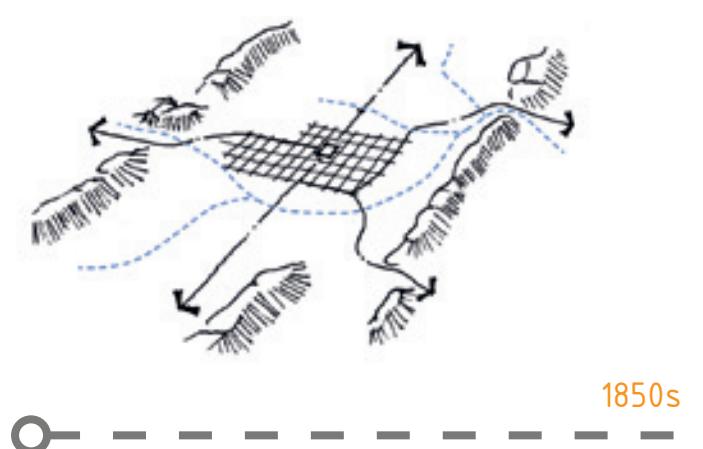
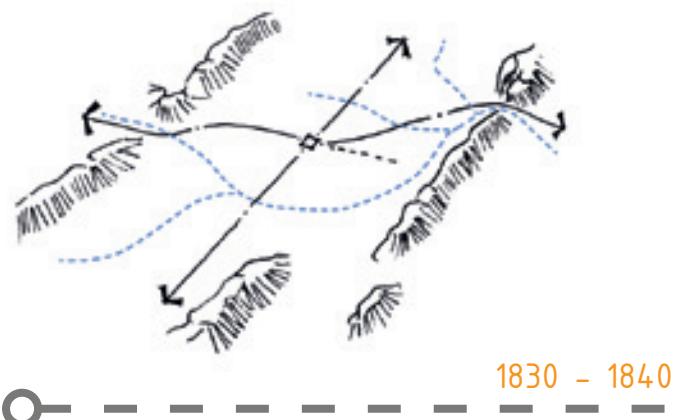
The diagram illustrates how the development of Pretoria from a small settlement into a Modern City impacted on the edge condition of the Apies river resulting in tension between the urban and natural elements.

First Voortrekkers (such as the families of Cornelis and Lukas Bronkhorst and Andries van der Walt) settled along the Apies River. The city begins as a small rural settlement focused mainly on agricultural activities. (VAN DER WAAL, G M, 1998)

As the city expanded it came into contact with its natural boundaries being the ridges to the north and south and the river system (the Apies river and Steenhoven Spruit). In the 1970s the first large plots were established on the banks of the Apies River, east of Du Toit Street and north of Boom Street. (VAN DER WAAL, G M, 1998)

Roads were constructed to follow natural "Poorts" through the ridges and bridges and drifts were used to cross the water ways.

The development pressures and human engineering of the natural river system through bridge construction and canalization eventually changes the river bed from a natural threshold into a dangerous barrier.

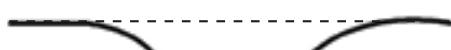


CITY DEVELOPMENT

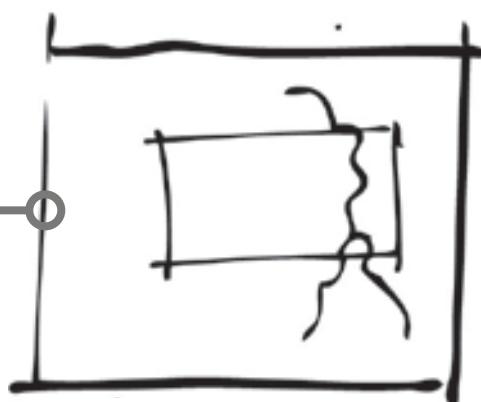


Rural Village:
Settlement in Nature

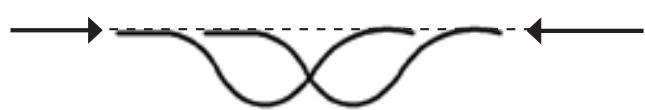
RIVER THRESHOLD



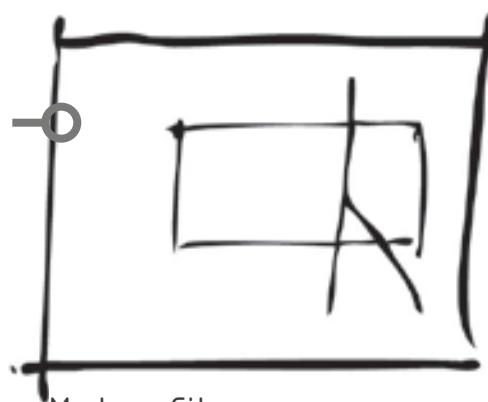
natural threshold



Historic City:
Nature in city limits.



development pressure



Modern City:
Man engineers nature.



resulting barrier

Figure 37: City Development diagram showing impact on river threshold.