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# Situating

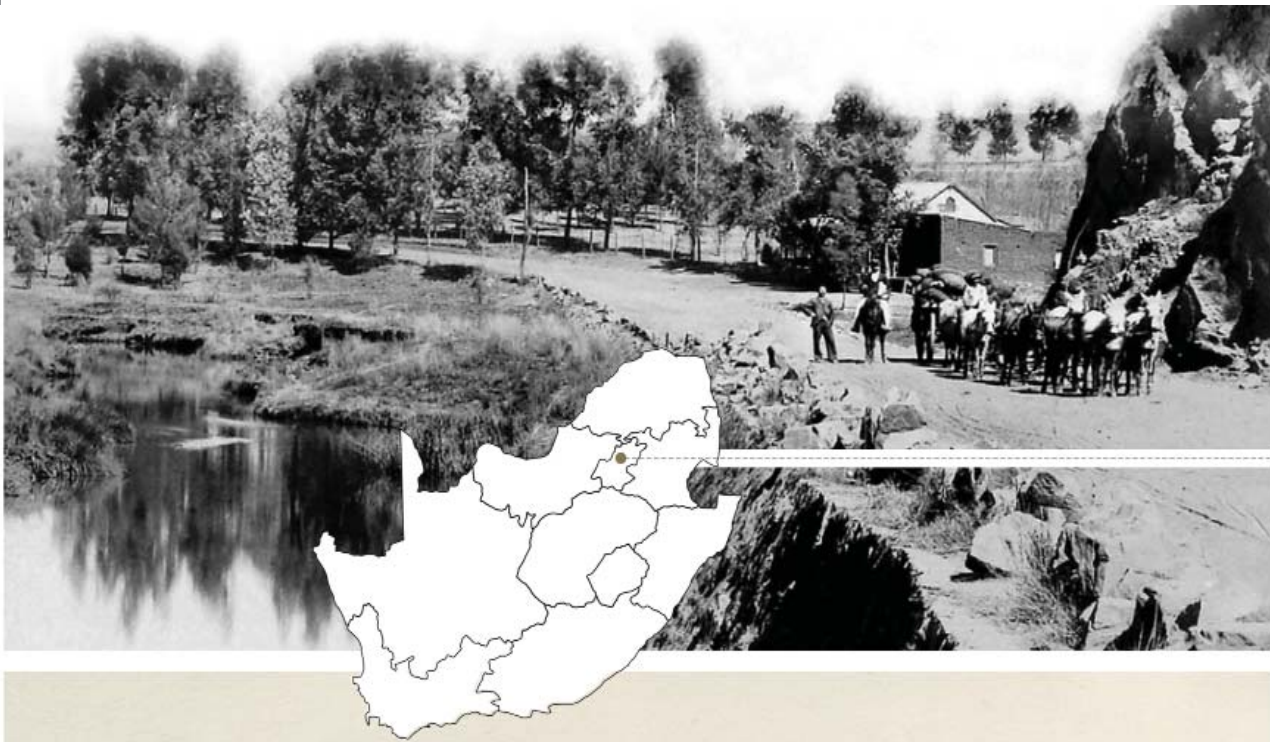
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N<sup>o</sup> 2

# The valley between the Ridges and the Rivers

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PRETORIA

As the town of Pretoria expanded into a city, the surrounding natural landscape and river network gradually lost significance

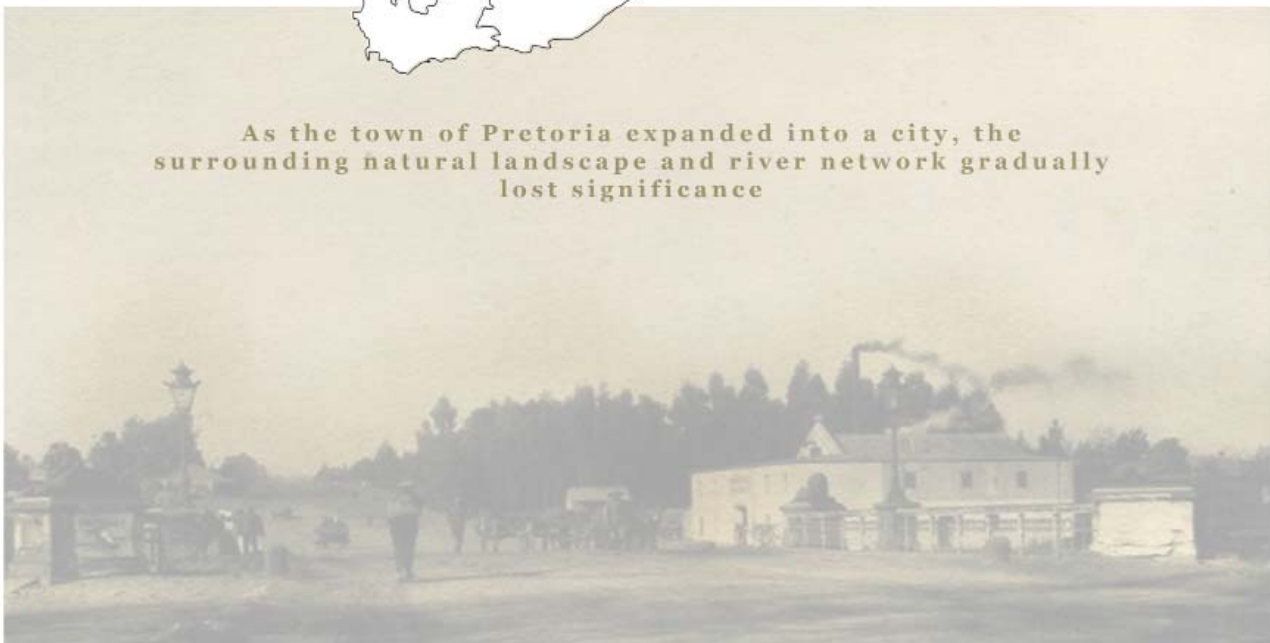


Figure 2.1 ~ Early Pretoria.psd  
Early Pretoria, established in the valley between the ridges and rivers  
Source: Hilton T

## 2.1 Ridges and Rivers



Figure 2.2 ~ Pierneef paintings.jpg  
Apies river, collection of paintings by J.H. Pierneef  
Source: JH Pierneef (artnet.com)

**T**he fertile valley between the ridges of Magaliesberg to the north, Daspoort to the south and Timeball Hill south of the latter, with its abundance of game and crystal clear water, have attracted many inhabitants since the Middle stone ages (Van Biljon, 1993:37).

Prior to the arrival of the settlers, many tribes such as the Bakwena and Matabele settled in the valley and the area known today as Pretoria. In 1836 the first Voortrekkers arrived in the area with the brothers Bronkhorst settling in the Fountains Valley on the farms Elandspoor and Groenkloof in 1939 (Dippenaar, 2013:19). A

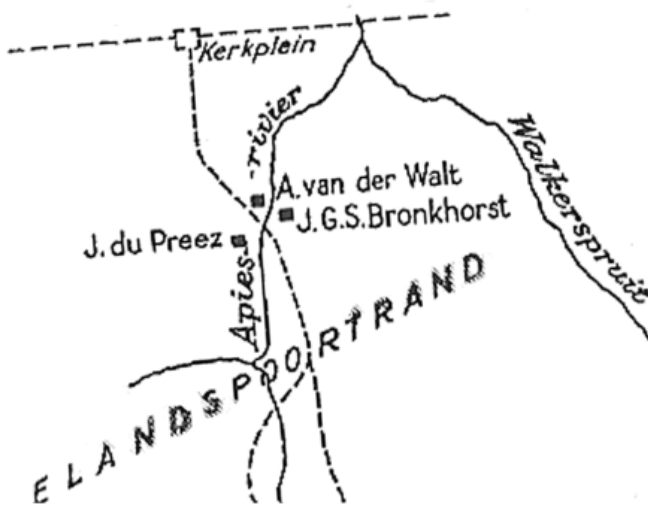
community of Voortrekkers set up in the area and soon the densely vegetated valley became a convenient stopover for traders and travellers en route to Delagoa Bay (Maputo). On 16 November 1855 the town of Pretoria (named after its founder A.W. Pretorius), nestled in the valley between the ridges and rivers, was officially founded and declared the Capital of the Zuid Afrikaanse Republiek (ZAR) (Van Biljon, 1993:38). The continuous supply of fresh water from springs of the Upper and Lower Fountains, the source of the Apies River, and the area's "cosmic" genius loci undoubtedly influenced the establishment of Pretoria (Dippenaar, 2013; Van Biljon, 1993).

## 2.1 The Apies River Chronicle, the Tale of two Orders

The Apies River formed a natural edge along the east and west of the early town of Pretoria and would later become the edge of the inner city. Flowing in a northerly direction from its origin at the Fountains Valley springs, the Apies River and its tributary streams, the Steenhoven Spruit and Walker Spruit were described by settlers as strong flowing water courses and provided a constant supply of fresh water (Van Biljon, 1993:38). The river banks became a popular picnic spot to the town residents on Sundays (Archive photos, Van der Waal collection).

The founding year of Pretoria involved the construction of a holding dam at the springs as well as a water furrow to transport water from the river to the town. Church Square, then called Kerkplaats, formed the focal point and nucleus of the town from which the rest of the town was set out: three streets to the west, four to the east, five to the north and four to the south. The town layout followed a typical pioneer grid and was orientated in a north-south direction to allow natural drainage and permit the future implementation of water furrows along the street grid (Van Biljon, 1993:39).

GJ Jordaan's interpretation of Norberg-Schultz's 1980 *Genius Loci: Towards a Phenomenology of Architecture*, suggests that Pretoria evolved from two orders. The first, the rational system of man's functionality, as described above, and the second the natural order of "place", which is generated by the ridges stretching from west to east over the landscape. Jordaan describes Pretoria as a type of hybrid consisting of the natural cosmic order of the genius loci overlain by a classical grid order with the Apies



Archive map indicating Pretoria's establishment in relation to the Apies River, Walker spruit, Church Square and the Elandspoor farm.

Source: Africana collection

Figure 2.3 ~ Origins of Pretoria.psd



River forming the eastern border and the Steenhoven Spruit forming the western border of the town (Van Biljon, 1993:39).

In 1863, after purchasing the Upper and Lower Fountains, the ZAR designed and constructed slate and brick lined water furrows to transport water directly, via gravity, from the Springs to Church Square, located approximately 4.8 km from the springs. An 1890 water plan, drawn by Campbell and Dickson, illustrates the Fountains Valley water scheme where water was reticulated and distributed from Church Square via the urban grid. Water from the furrows was used for irrigation and domestic purposes and any form of pollution of the water source, such as washing, was strictly prohibited (Dippenaar, 2013:20).

Fountains Valley with its precious and sacred water springs was declared a protected area by the ZAR president, Paul Kruger, in 1895 (Dippenaar, 2013:23). The fate of the Apies River and its tributary streams unfortunately took a different turn.

Diverting water directly to the city from the source vastly reduced the natural flow of the river network, but seasonal factors often lead to the river bursting its banks and, after large scale destruction to properties caused by a severe flood in 1880, the channelisation of the Apies River as well as the Steenhoven Spruit and later the Walker Spruit was initiated (Perez, 2014). Construction started in 1909 and by 1930 the rivers were channelised throughout the majority of the city and sunken from ground level to 4 m/5 m below the surface (South African History Online, 2016).

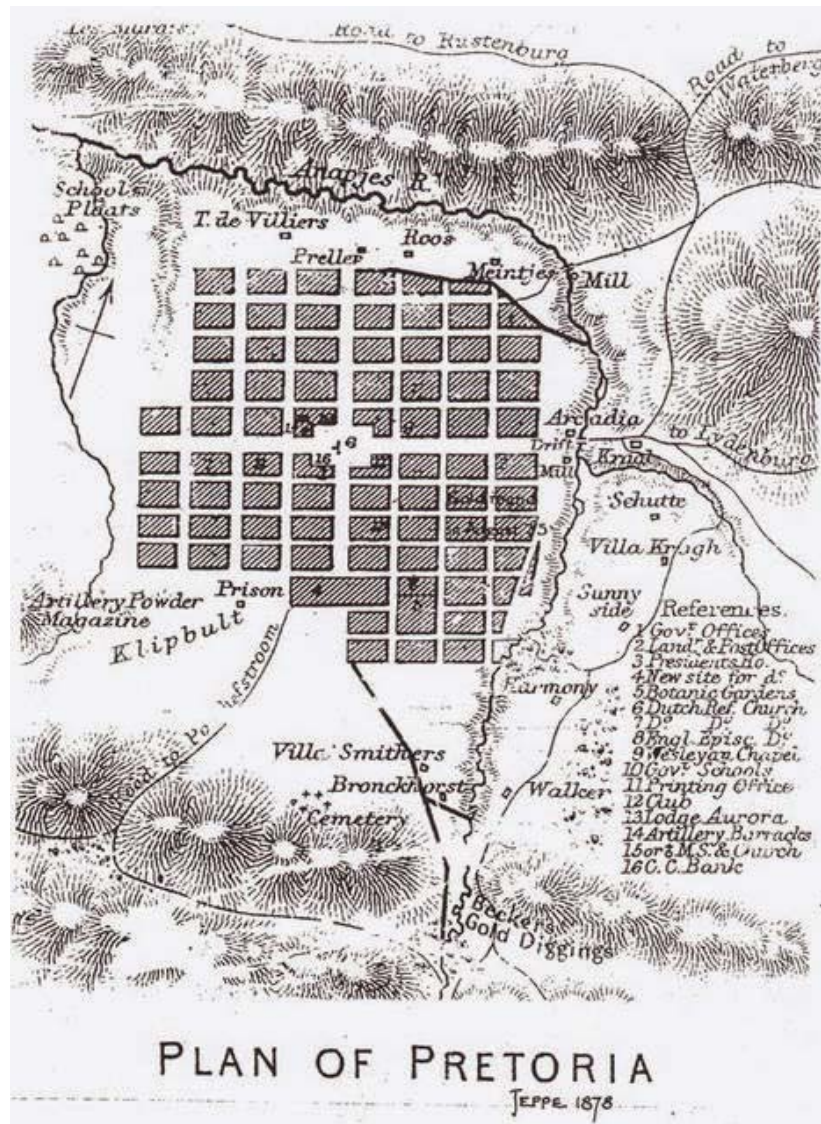


Figure 2.4 ~ Pretoria 1878.jpg  
 Pretoria's two spatial orders, the urban grid and natural landscape.  
 1878 archive map  
 Source: <http://melvinresidence.blogspot.co.za/2015/02/timeline-of-pretorias-history.html>





As the town expanded and the demand for water increased, other means to provide a greater supply of water were required. The British Army constructed a concrete aqueduct in 1902 diverting more water from the source. The altered water flow combined with the channelisation of the river eventually rendered the river superfluous (Perez, 2014).

By 1923 the city's first municipal steam engine pump station (later replaced with electrical motors) supplied Pretoria with 4.47 million gallons (21.48 Mℓ) of water. The supply capacity of the Fountains Springs was 5.06 million gallons (23 Mℓ) per day (Water Institute of Southern Africa, 2016) and, as the demand surpassed the Fountains supply capacity in 1927, additional water had to be sourced from other sources, the Grootfontein and Rietvlei Springs with Rietvlei Dam completed in 1934.

The Apies River network ultimately lost its significance as a natural resource due to the altered water flow and its channelisation. The degraded and hidden river channel was reduced to a storm water system stripped of its ecological, social and cultural value, which severed the river's connection to place, city and people. In its current state it does not resemble the natural resource it once was (Perez, 2014). The contaminated and neglected river channel serves as an example of man's disconnection from nature and its natural systems in the city of Pretoria.

Figure 2.5 ~ Pretoria water plan.psd  
Pretoria Waterplan  
Description: 1879 Archive map clearly indicating the two orders (nature & urban grid) interwoven in Pretoria's development  
Source: historic photographs

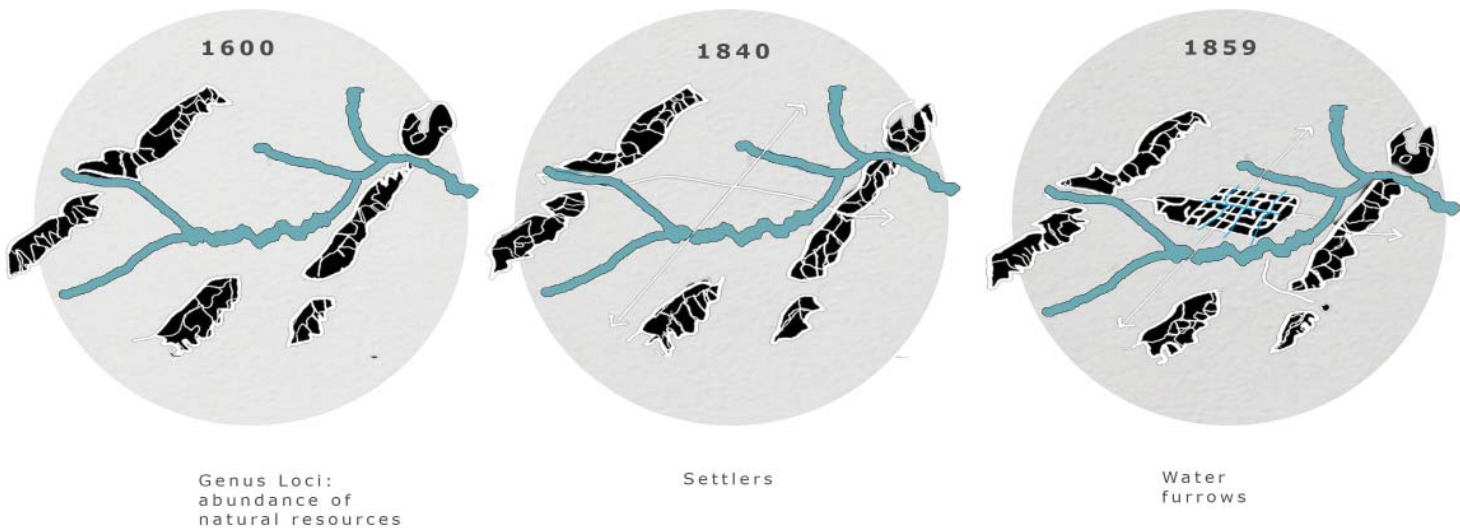


Figure 2.6 ~ Development diagrams.psd  
Pretoria's development patterns  
Description: A Cosmic and Classical landscape combined.  
Source: Jordaan 1987 in VAN BILJON, L. 1993. Pretoria: Genesis and successive layers of its evolution. Planning History. Bulletin of the International Planning History Society.Vol.15 No.2 1993. Middlesex University, diagrams adapted by author

Historical image collage

1. Fishing along the Apies river (Circa 1895)
  2. Leisure activities at Fountain Valley 1950 (Hilton T Collection)
  3. Bon Accord Dam, tributary of the Apies river network Circa 1900 (Hilton T collection)
  4. British-built Pumping Station at Fountains valley 1898 (<http://samilitaryhistory.org>)
  5. Apies river flooding in Arcadia 1890 (University of Pretoria)
  6. Reminders of the brick and slate lined water furrows constructed from 1863 can be seen in the inner city today (University of Pretoria)
- Source: Author



Figure 2.7 ~ Water history.jpg

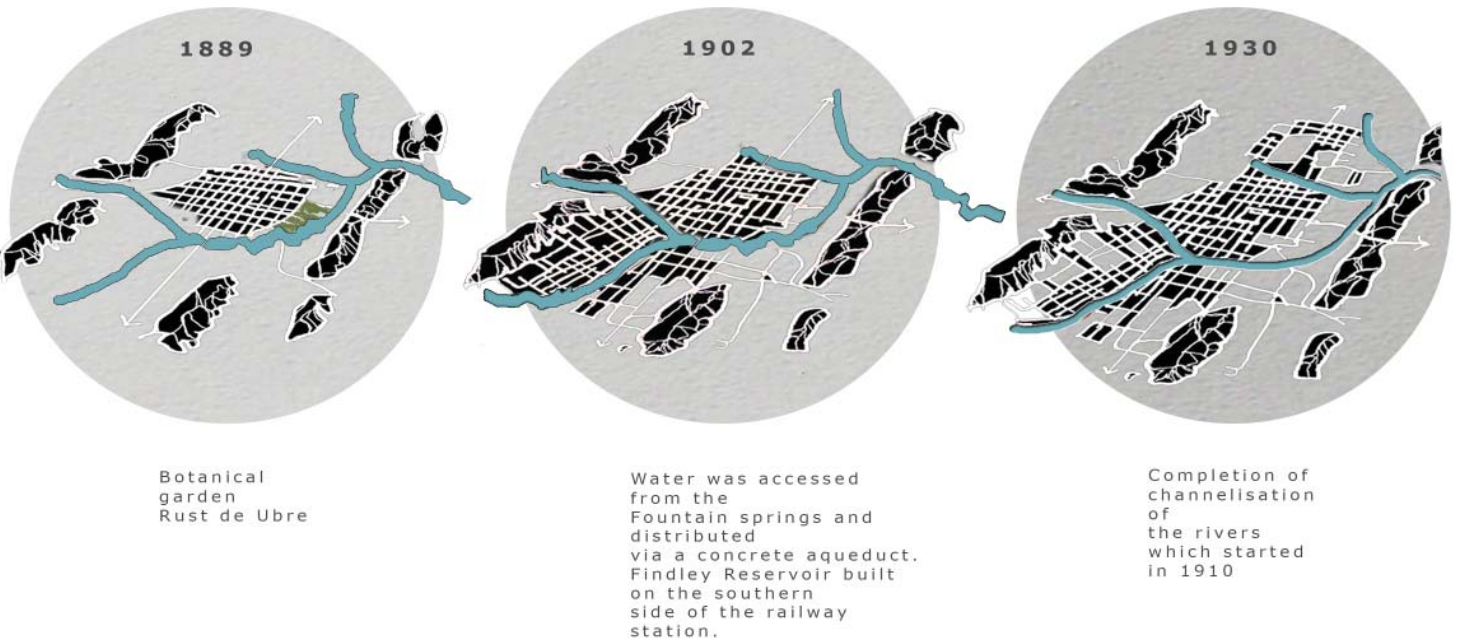






Figure 2.8 ~ Apies river, Lion bridge.jpg  
Source: Author





Figure 2.9 ~ Channelised Apies River.psd  
Source: Author