

03

SITE AND CONTEXT

The site, together with the context, will be analysed and described. The analysis will focus on the history of the context as well as the history of the Staatsmuseum. A description of the current building condition is also included as part of this chapter. The outcome is to identify why an intervention is needed.

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Figure 3.1 Panoramic photograph of the inner city of Pretoria from the Daspoort ridge in the zoo



3.1 URBAN CONTEXT OF SITE

3.1.1 Location

The *Staatmuseum* is situated in the north-eastern quadrant of the inner city of Pretoria, symmetrically on the axis where Thabo Sehume Street intersects with Boom Street. The museum falls just outside the governmental boulevard development proposal of the Tshwane Vision 2055. The museum is situated on the same erf as the National Zoological Gardens (NZG). The old ZAR *Staatmuseum* is the focus site of this study.

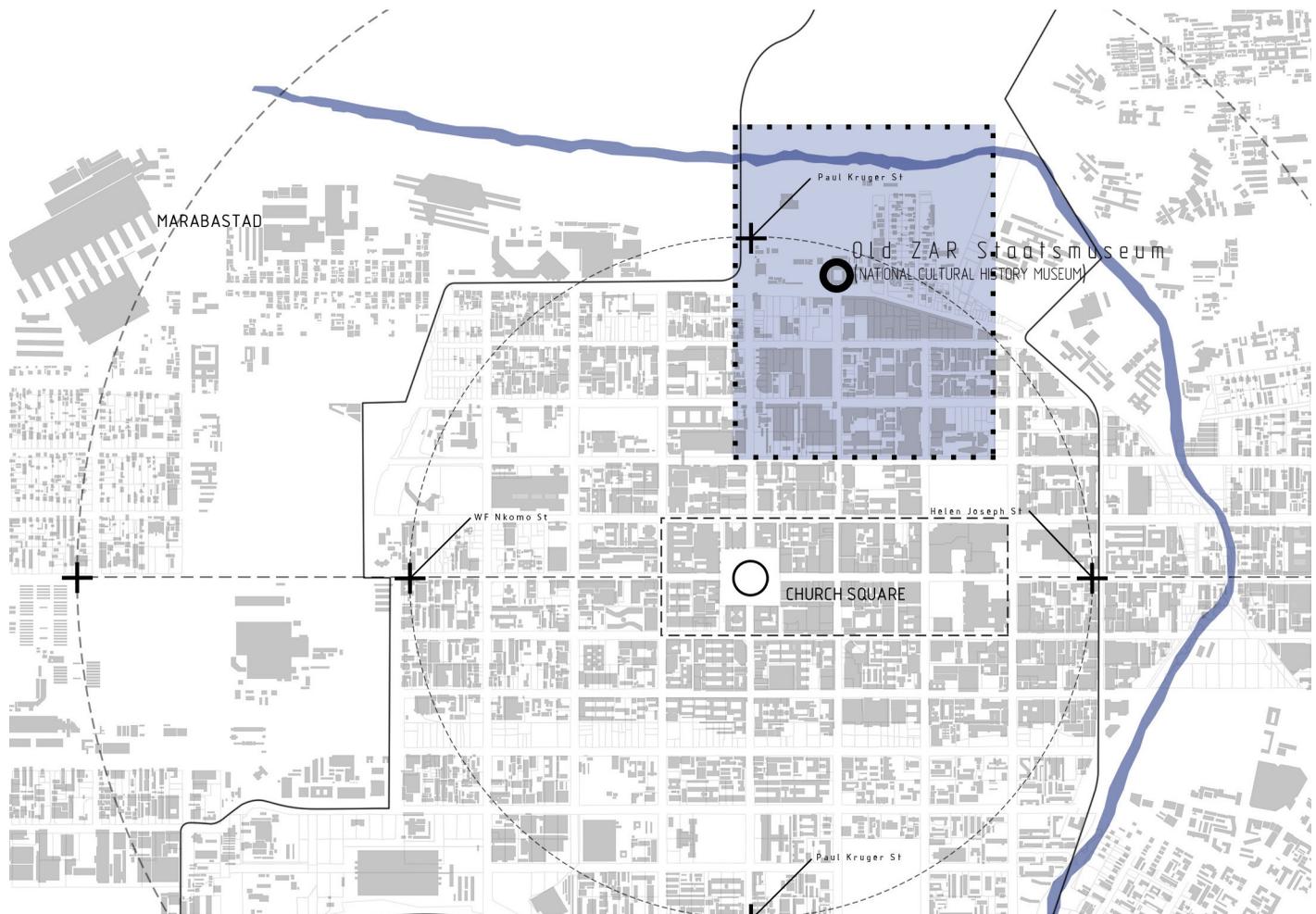


Figure 3.2 Location map indicating the physical location of the Staatsmuseum and larger study area



Figure 3.3 Location map indicating the study area

3.1.2 Owner/Custodian

The National Research Foundation (NRF) is the current custodian of both the *Staatmuseum* and the NZG (National Zoological Gardens).

3.1.3 Climate

Pretoria's climatic condition, is described as a semi-arid cool climate according to (Pretoria. climatemps.com) with average annual temperatures of 17.3 degrees Celsius. The average monthly temperatures fluctuate by 10.5 degrees Celsius.

Total annual precipitation averages 732mm or 732 l/m² which is summer seasonal rainfall. Typical of its Highveld setting, afternoon thunderstorm precipitation rates can peak at 90 to 100mm/hour. Hailstorms, which can be quite severe, are also common.

Prevailing winds are very calm and sporadic, blowing from a north-easterly direction in the morning and north-westerly direction in the afternoon. Strong winds can however occur during thunderstorms, which are additionally funneled by the Daspoort Ridge (Niebuhr 2007:15, Tayob 1999: 90).

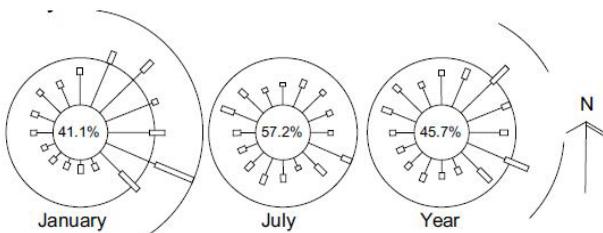


Figure 3.4 Wind roses of Pretoria

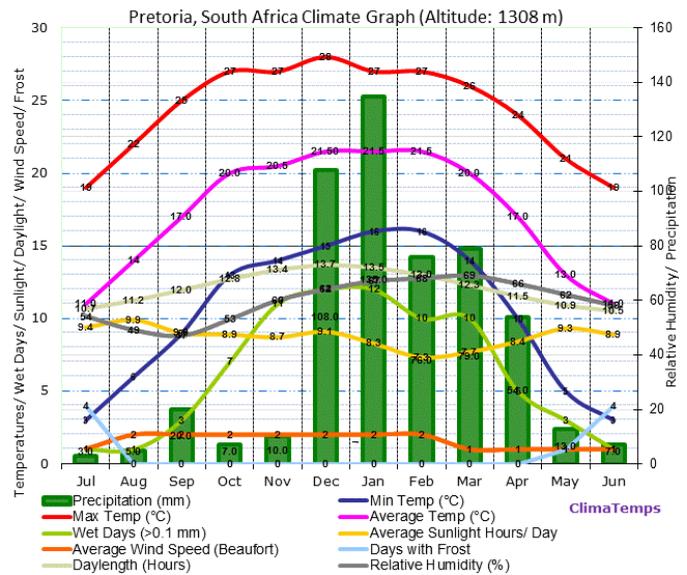


Figure 3.5 Climatic graph of Pretoria

3.1.4 Topography

The site has a mild to harsh slope of 1:27 from Boom Street (see Figure 3.6) to the Apies River, but is more severe along the old *Staatmuseum* where the site has a fall of 2.8 meters (see Figure 3.7) from the road to the northern wing of the building towards the Apies River.

3.1.5 Geology

The geological composition of the soil layers, as indicated on a geological map, is predominantly localised Andesitic lava with agglomerate, shale and turf. This geological composition is safe for normal building practices.

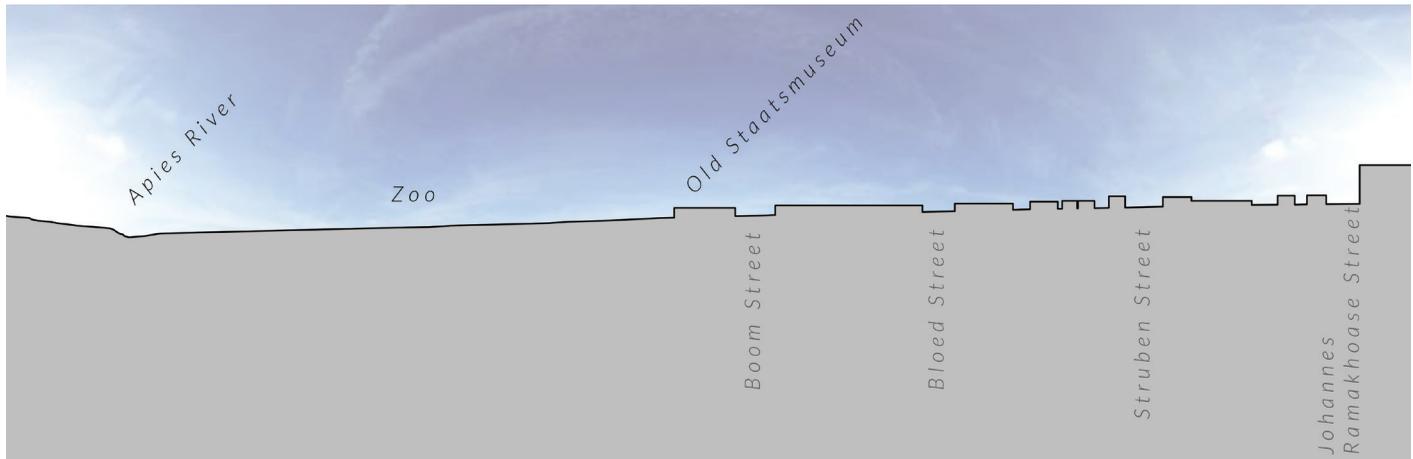


Figure 3.6 North-south section through Pretoria city centre with specific focus on the Apies River towards the city

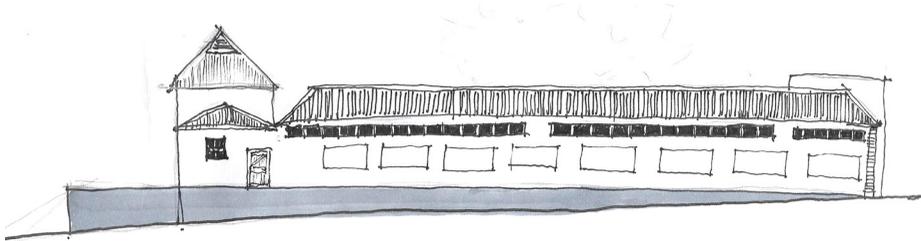


Figure 3.7 North-south elevation showing the slope of the landscape at the Staatsmuseum

3.1.6 Development Proposals

The most recent development proposal of the NRF in the zoo precinct is aimed at the old *Staatsmuseum* building. The current custodian of the museum, the National Research Foundation (NRF), has called for tenders to introduce a Life Science Centre in the old building, as part of an adaptive re-use project (Otto 2015:22).

According to a newspaper article on the 28 of February 2015 the NRF has made a public announcement that the project is going ahead and the new proposed Life Science Centre will be housed in the building.

3.2 ZOO: HISTORY AND CONTEXT

The National Zoological Gardens, as it is known today, was established in 1899 by the then director of the *Staatmuseum*, Dr. Jan Boudewyn Gunning. The farm, *Rus en Urbe* (translated meaning: rest in the city) was acquired by the government in 1895, for the establishment of the zoological gardens. In the early years, the government could not afford many animals, and the zoo was predominantly used to house animals in transit between Africa and Europe or America (National Zoological Gardens of South Africa 2015). The zoo, under guidance of Dr. Gunning, did however expand and acquired national status in 1916, from when it was known as the National Zoological Gardens of South Africa. Today the NZG is rated under the top eight zoos internationally (Forbes has named the best zoos of the world 2007).

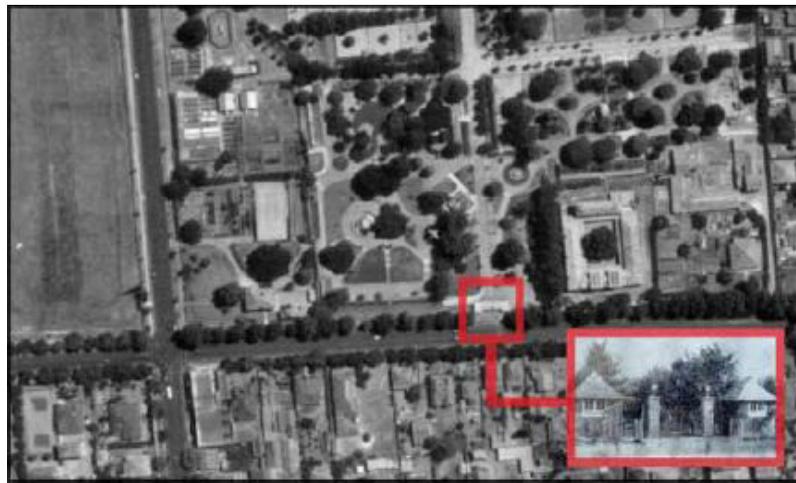


Figure 3.8 Historical map of the study area

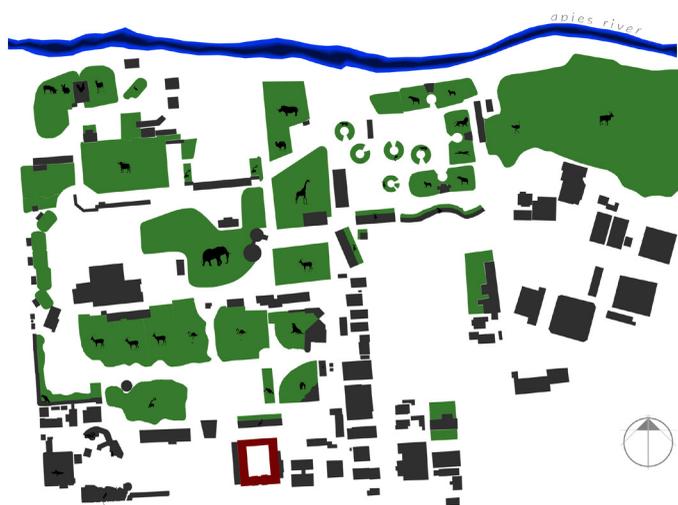


Figure 3.9 Zoo layout map (south of the Apies River)

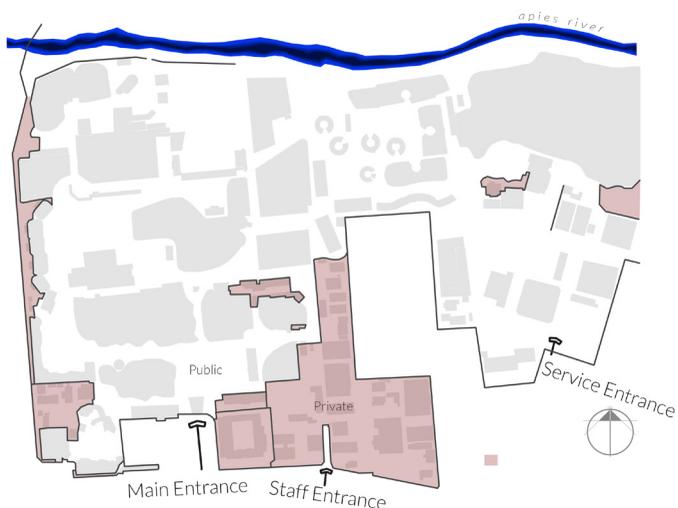


Figure 3.10 Map of the public and private spaces in the zoo. This map also depicts the segregated nature of the NZG towards the city in the way it is fenced off from the city

The NZG today (at the main facility in Pretoria) is home to approximately 5 000 different mammals, birds, fish, reptiles, amphibians and invertebrates (see Figure 3.9), comprising of around 600 species and sub-species (National Zoological Gardens of South Africa 2015).

Between 1902 and 1913 the old *Staatmuseum* housed a large amount of artefacts, which according to (Küsel, 2000:69] was once one of the largest collections of natural and cultural significant artefacts in the world. The fact that these two places had such a prominent collection of cultural history, of living and preserved (deceased) animals, including insects, birds, fish and reptiles, places emphasis on these two places as two of the most important places with regard to exhibiting and more importantly the conservation and education of the natural world. The fact that the zoo is not only the Pretoria Zoological Gardens, but the National Zoological Gardens, places further emphasis on the importance of the NZG, as the ambassador of zoological gardens in South Africa, and perhaps more importantly, the role of conservation and education on nature, in our society.

A place such as the NZG, with significance and focus on conservation and education, should be well integrated with the urban fabric, as it plays a vital role in the community.

The current condition of the NZG, in terms of its relationship with the urban context, shows little importance of place. The entire NZG is, not only fenced off from the city, but it also turns its back on the city, neglecting any form of relationship with its context and the city dweller (see Figure 3.10).

The current entrance is situated in Boom Street. There is an amalgamation of various structures, to define the entrance (see Figures 3.12-3.15). The first of these structures, is an ad-hock stone building, which provide some space for curio-traders to sell their African goods. This building is situated between the main parking area and Boom Street (see Figure 3.12). It faces Boom Street and has no relation with the parking area, and even less of a relationship with the zoo, other than the fact that it is situated on the same erf, as it only lives out to the street.

An open parking area is framed by the curio building, the reptile enclosure, the penguin enclosure and an administrative building (see Figure 3.13). This parking is relatively small, hence a spill over parking area is located across the road, in Boom Street.

The entrance building, also forms part of the amalgamated structures, and can be said to be

the most defined, in terms of “way finding” of all the buildings because of the two spiking masonry towers in front of the building (see Figure 3.14).

The suggested route, to the spiking towers of the main entrance, has been decorated with gum-pole and slat structures, to create a boulevard, or route to the entrance. This route terminates at the entrance, and once one enters the zoo there is an open green space (see Figure 3.15).

The *Staatmuseum*, forms the eastern boundary of the entrance boulevard, but is separated from the entrance by a stone wall that veils the building. The building is hugged by the NZG on all sides, except on the street edge (see Figure 3.10 and Figure 3.11). It is however, a noteworthy tragedy that there has never been any form of physical association between the NZG and the *Staatmuseum*, as both of these buildings turn their backs on one another, even though the buildings are managed by the same governmental department, the National Research Foundation (NRF).

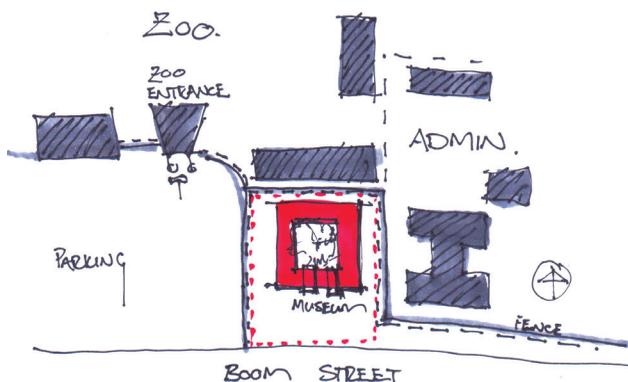


Figure 3.11 Diagram indicating the lack of relationship between the *Staatmuseum* and the NZG

CONTEXT



Figure 3.12 Photograph of the existing pedestrian entrance route



Figure 3.13 Photograph of spill out space in the zoo



Figure 3.14 Photograph of the curio building and parking area



Figure 3.15 Photograph of administrative building



Figure 3.16 Photograph of the entrance route to the zoo and the Staatsmuseum's western boundary



3.3 THE STAATSMUSEUM: A BRIEF HISTORY

The property on which the *Staatmuseum* stands today, was originally the property of J.F. Cilliers, and was known as the farm *Rus en Urbe* which translates as ‘Rest in the City’. It was bought by the Government in 1895, for their long-term plan to develop the Pretoria National Zoological Gardens (NZG) on the site.

As part of this long term investment and goal, the president of the “Zuid Afrikaansche Republiek” or ZAR (Republic of South Africa) between 1883 and 1900, Pres. Paul Kruger, was of the opinion to turn the *Transvaal* into a model state and to do this, the *Transvaal* would need infrastructure and buildings (Fisher & Clarke 2014:11). Professionals who had the skills and knowledge, regarding architecture and construction, were imported from the Netherlands. One such professional was Sytze Woepkes Wierda. He was a dutch architect who arrived in Pretoria in November 1887, after being appointed as Government Architect (Fisher & Clarke 2014:94) for the Department of *Publieke Werken* (department of Public Works).

The influence from the Dutch professionals, resulted in an architectural design aesthetic, that was mainly influenced by Dutch architecture and building styles. A style that is known today as Wilhelmiens architecture. The museum, as designed under guidance of Sytze Wierda, is one of the examples of what we today refer to as Wilhelmiens architecture in Pretoria. Some other buildings in the Wilhelmiens style in Pretoria include the “old Government Press”, the “*Staatsartillerie*”, “*Wesfort*” and probably, the most well-known, the “old *Raadsaal*” building (see Figure 3.18) on Church Square, to only name a few.

The *Staatmuseum* was commissioned under the Department of Public Works in 1898, after the two previous spaces (the New Council Chambers and later a small building at the Fresh

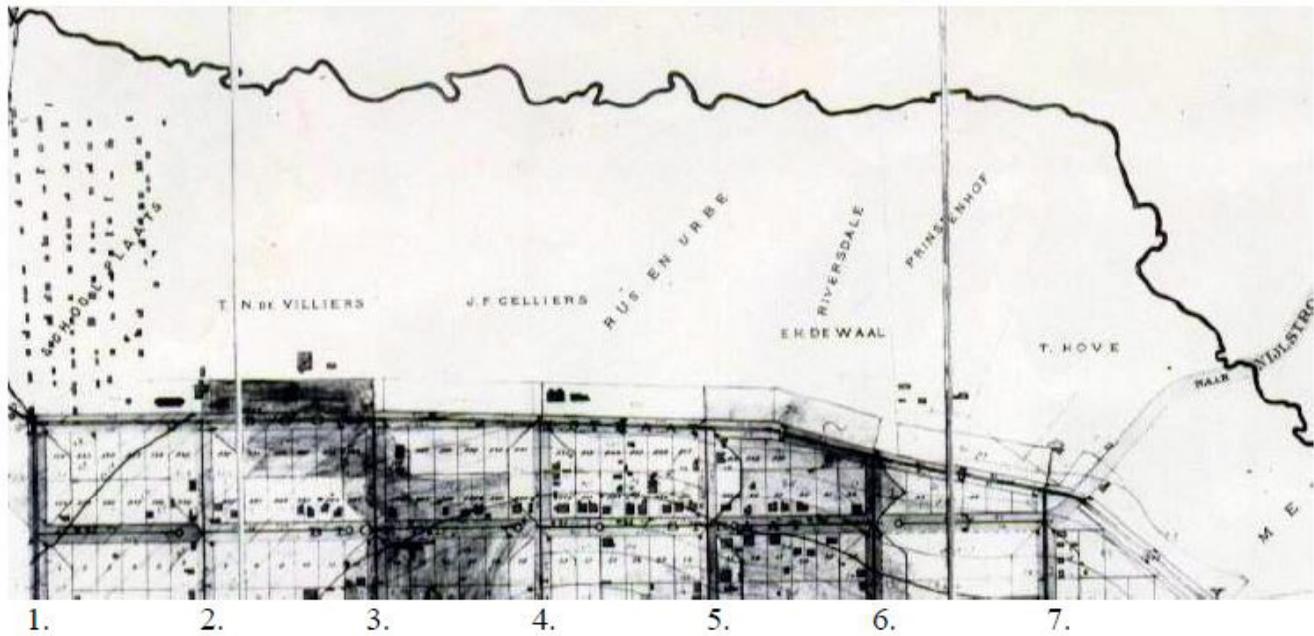
Produce Market, known today as, the Sammy Marks Square), that hosted a growing collection of artifacts and specimens of natural history from across the globe, became too small (Z*% Old ZAR Government Museum 2012). According to Grobler (1994:17) the museum’s mission was set to improve and maintain public awareness toward valuable cultural aspects, with definite focus on historic, ethnographic, archaeological and natural sciences.

In 1899, with the outbreak of the Second Anglo-Boer War, construction of the museum was disrupted. The construction was resumed in 1902, under British rule and completed in 1904 (Z*% Old ZAR Government Museum 2012) as per the design of Wierda.

After the war and under British rule in 1902, the museum became known as the *Transvaal Museum* (Küsel 2000:69). This would imply that by the completion of the museum in 1904, it was already renamed to be the *Transvaal Museum*.

In 1913 a new building was erected in Paul Kruger Street to become the new *Transvaal Museum* but it was already too small to host the entire collection from the old museum, and so only the natural history collections were moved, leaving the cultural history collections behind in the old museum (Küsel, 2000:69).

According to Küsel (2000:69), the old *Staatmuseum* began to slowly deteriorate until 1990 when the eastern wing of the museum was flooded after a water pipe from the fire sprinkler burst. One year later a water pipe burst in the western wing and caused a flooding there. The museum was closed down because the damage to the collections, exhibitions and building was severe. The offices and the remaining cultural collections were moved to premises all over Pretoria.



- 1. Potgieterstraat 2. Schubartstraat 3. Kochstraat [Bosmanstraat]
- 4. Markstraat [Paul Krugerstraat] 5. St. Andriesstraat [Andriesstraat]
- 6. Van der Waltstraat 7. Prinsloostraat

Figure 3.17 Historic map of the urban context and the farm: 'Rus en Urbe'



Figure 3.18 Photo of the Raadsaal (Council Chamber)



Figure 3.19 Historic photo of the Staatsmuseum c.1904

This caused, the largest collection of South African cultural history, to be without a museum and in 1992, the old Mint building was secured to

be the new building to exhibit the remaining cultural collections (Küsel 2000:69).

Doornade H. B.

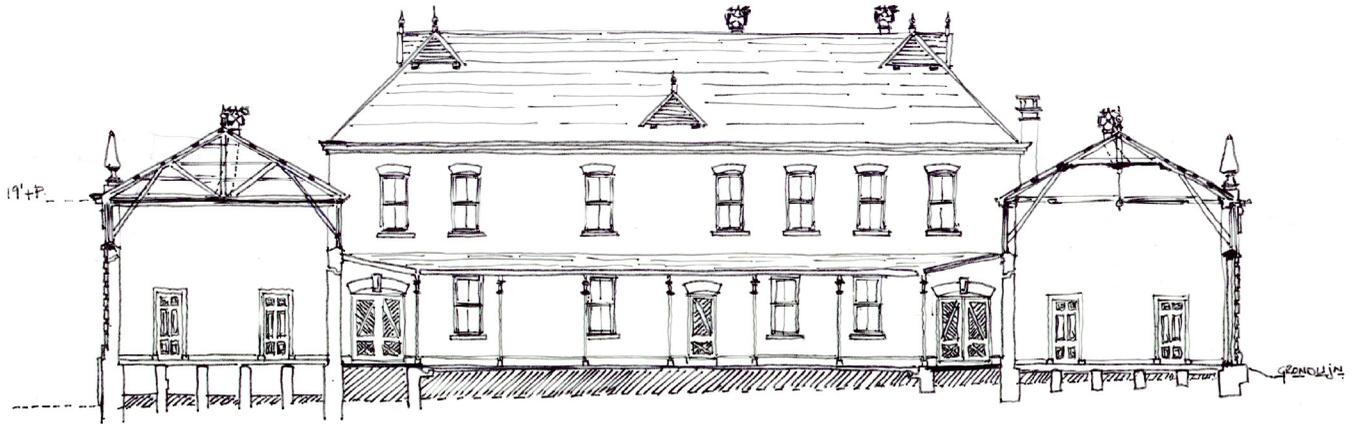


Figure 3.21 Hand drawn copy of an original section through the Staatsmuseum

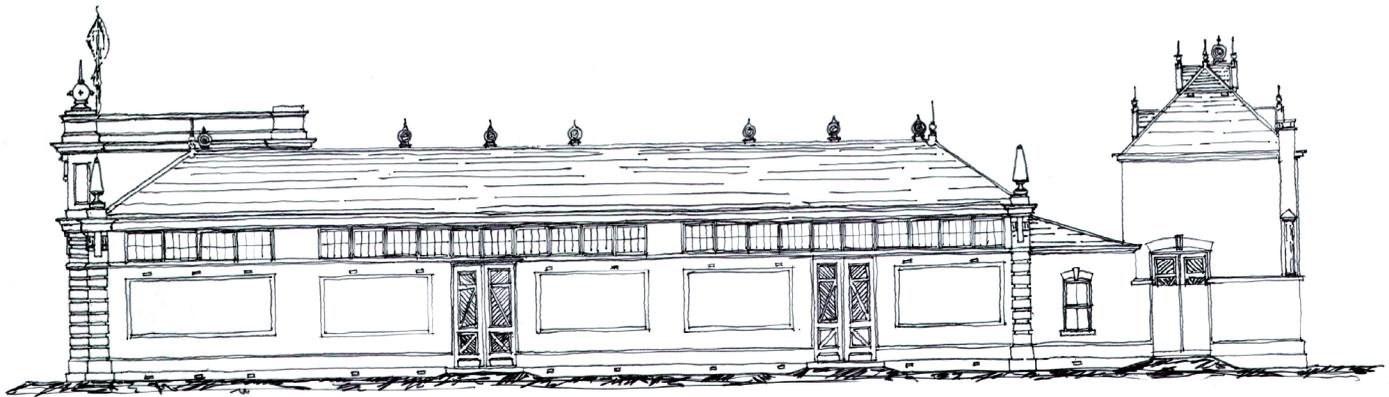
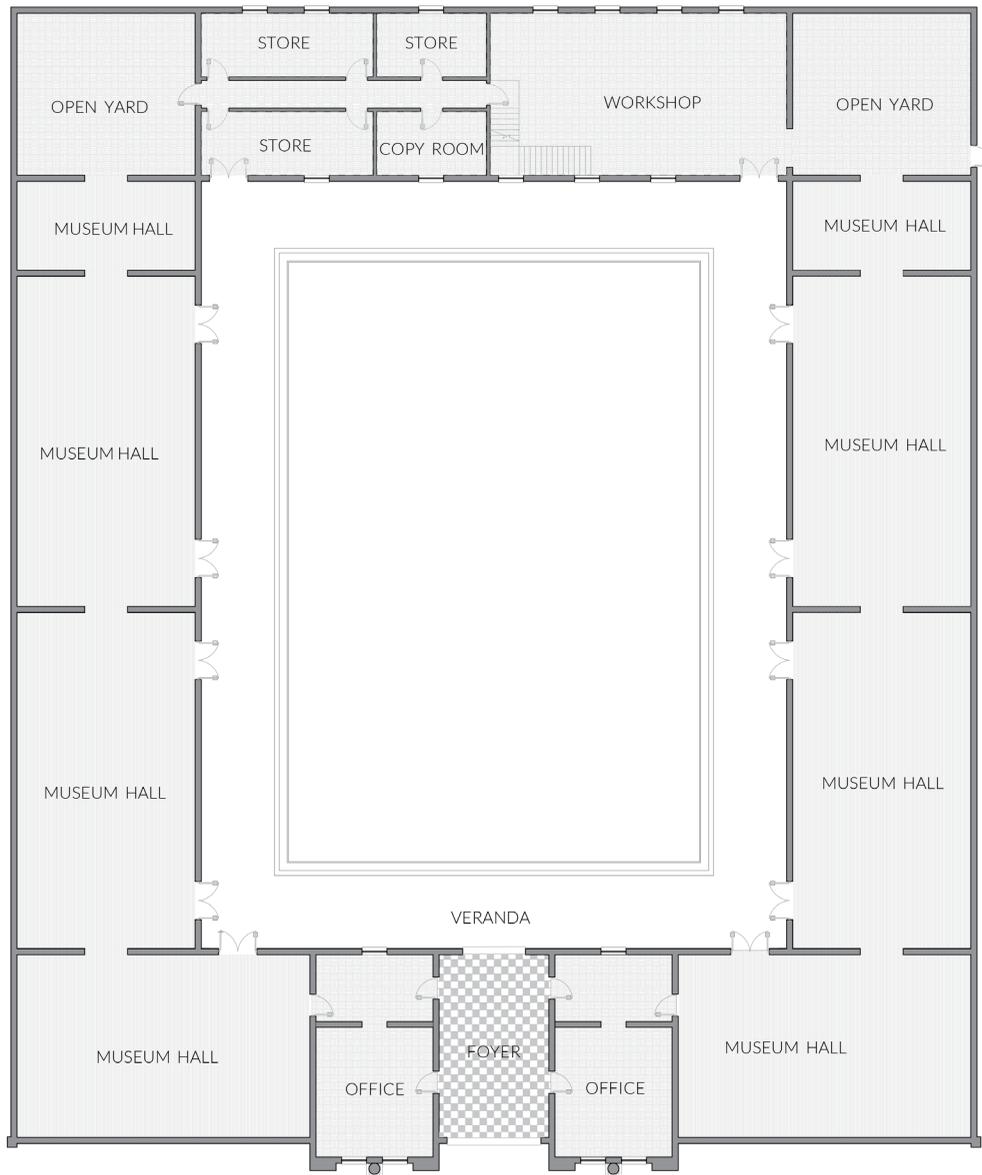


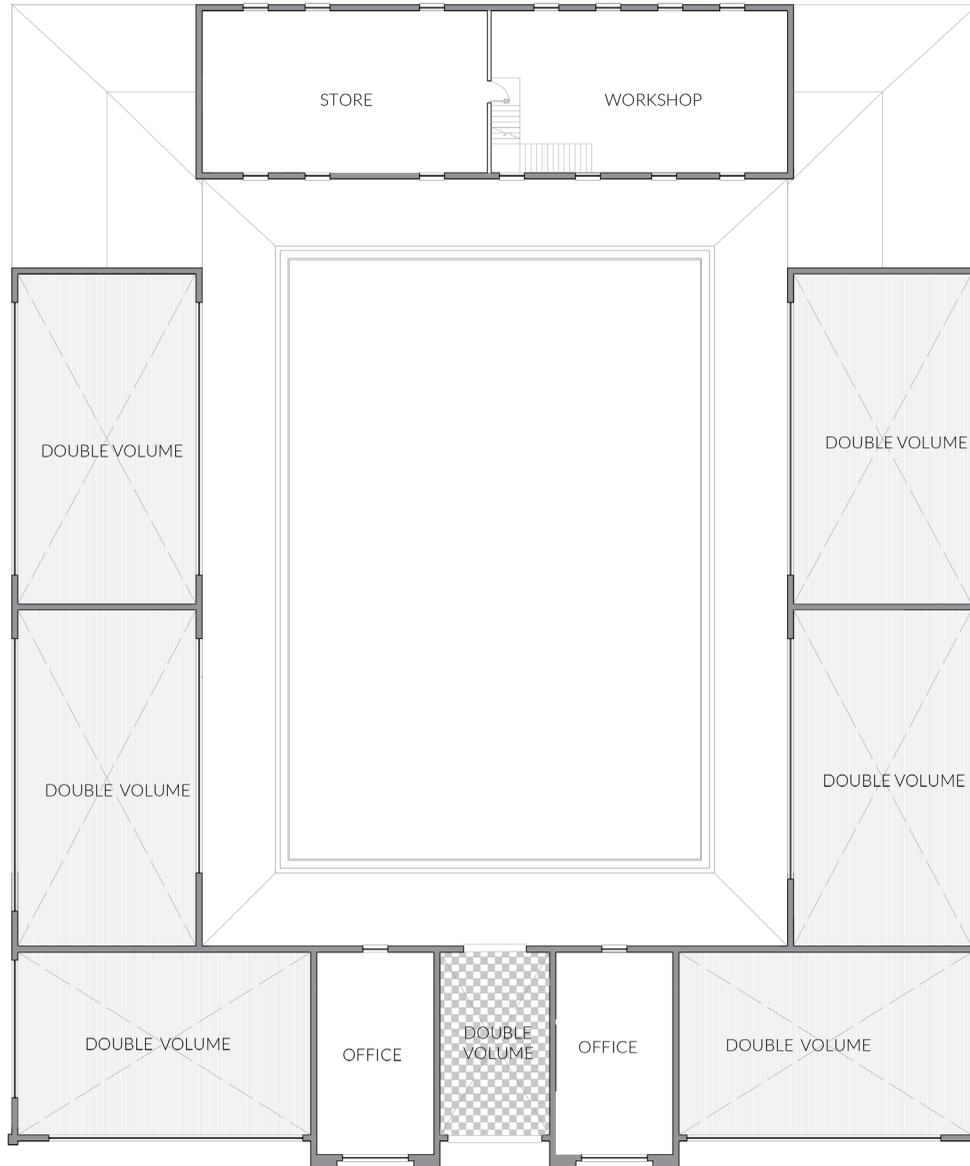
Figure 3.22 Hand drawn copy of the original east elevation of the Staatsmuseum

CONTEXT



ORIGINAL GROUND FLOOR PLAN

Figure 3.23 CAD representation of original ground floor plan



ORIGINAL FIRST FLOOR PLAN

Figure 3.24 CAD representation of original first floor plan

3.4 THE STAATSMUSEUM: FORM, SPACE AND FLOW

As a museum, the building was designed as a very private building in that it lived in on itself. The building has one main grandiose entrance, (see Figure 3.20) situated symmetrically in the southern wing on Boom Street, and one service entrance on the east wall of the northern wing. Two large doors (4m in height), in the western wing, allows for large exhibition elements to be easily moved in and out of the building. Horse carriages offloaded the building material and so the door openings had to be big enough to accommodate the carriages. The main entrance penetrates the rectangular building, straight into the central courtyard space (see Figure 3.25).

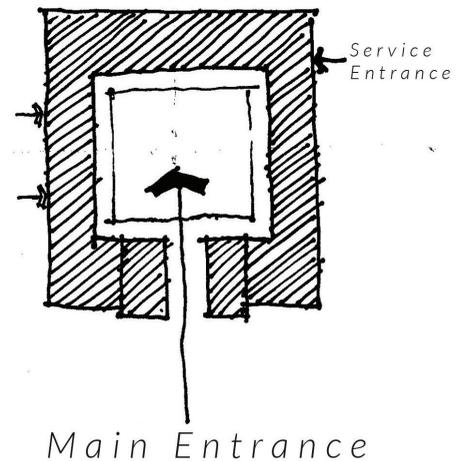


Figure 3.25 Diagram indicating the flow into the building

The spatial arrangement of the building is designed around the courtyard, establishing the courtyard as the most important and main space of the building, as illustrated in Figure 3.26.

It used to be a popular design decision for architects, to design exhibition spaces around an atrium (University of Pretoria 2013). It was considered to be a “security frame” around the artefacts and the collections of interest.

The building further consists of six large exhibition spaces, which are symmetrically organised around the central courtyard space, two office spaces on either side of the main entrance in the southern wing and work- and service spaces in the northern wing of the building, as seen on the original plan drawing (see Figure 3.21 and Figure 3.23).

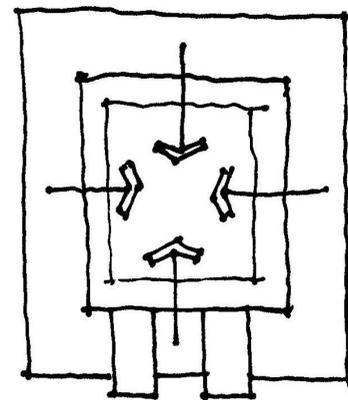


Figure 3.26 Diagram indicating the flow onto the courtyard

CONTEXT

The northern and southern wings, both have a first floor with office spaces, while the exhibition spaces are double volume spaces (see Figure 3.24). The northern wing has, in addition to the first floor, a basement space that is accessed through a hatch door in the ground floor. This basement is nestled in the thick granite foundation walls of the building and is a result of the site's topography which has a 2.8m fall from one end to the other. The negative of this, is the fact that the northern wing of the building, was never designed to interact with the site beyond, and was functionally planned as the service core of the building. At the same time, the building has no relation with the, then open landscape and today the zoo. The zoo also interacts with the building on this edge, only in terms of services, as the space between the building and the zoo, is used as a quarantine area for the birds in the cages, next to that edge, cordoning off that space as completely private (see Figure 3.29).

The building has few windows at eye level, allowing the interior spaces to house wall-to-wall exhibitions (see Figure 3.27), with very little relationship to the surrounding context. The central courtyard space, strengthens the inward persona of the building, as all the exhibition spaces have large doors opening onto the courtyard. A veranda frames the courtyard, as threshold space, between the open-air courtyard and the internal exhibition spaces.

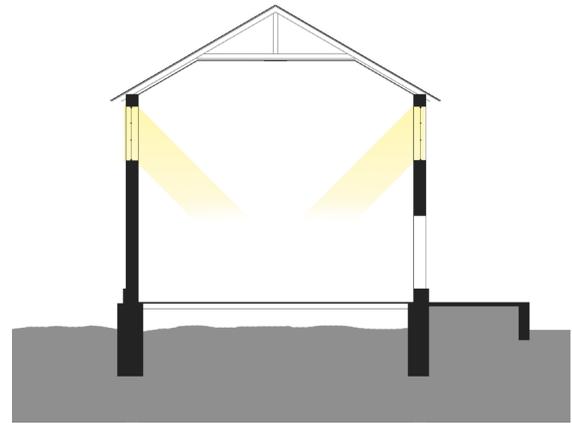


Figure 3.27 Section indicating clerestory windows and open interior spaces

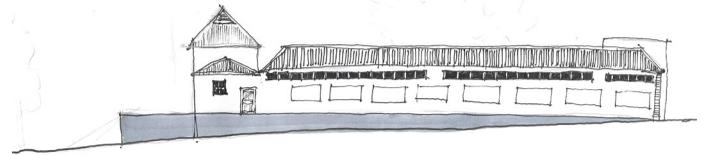


Figure 3.28 Elevation indicating 2.8m fall in topography

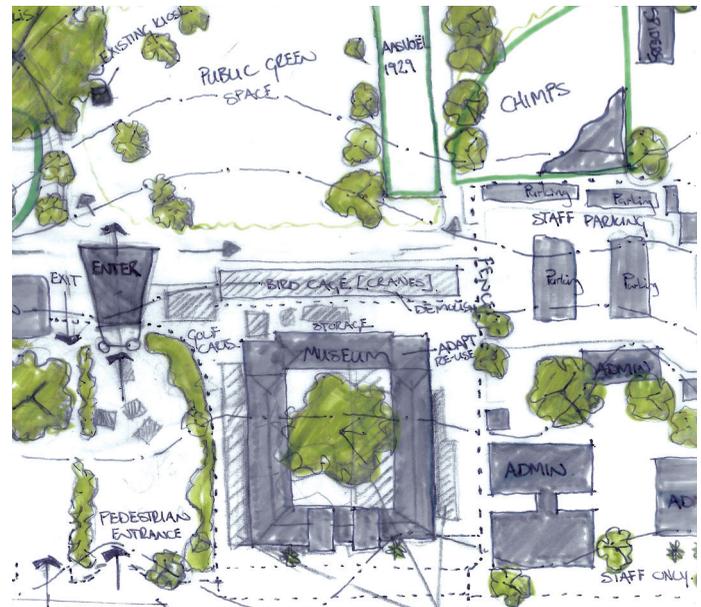


Figure 3.29 Context drawing indicating the interaction between the zoo and the north of the Staatsmuseum

3.5 CURRENT BUILDING CONDITION

Any building, left vacant for extended periods of time, will deteriorate and decompose. The same is evident in the *Staatmuseum*, as the building has been vacant since 1991, and it has deteriorated significantly. The result of this, is that the deterioration has accumulated and worsened over time, as a result of no maintenance (University of Pretoria 2013).

3.5.1 Exterior

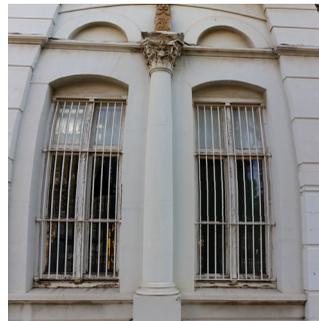
Walls and Paint

The building has originally been finished with a lime plaster. The plaster is giving way and is peeling off in various places. Hairline cracks, are also visible in the plaster, due to the lack of maintenance and water seeping into the walls. The bricks, used for the construction of the building, are very soft and porous, and easily erodes when coming in contact with water.



Windows

The clerestorey windows on the southern side as well as the western side has been painted, and so no light can penetrate through. This makes the southern wing and the western wing very dark inside.



Doors

Some doors have been vandalised and have broken panels. There are also traces of repair work carried out on doors, in an attempt to close holes in the timber. Doors to the foyer space, have been nailed into a semi-closed position.



Roof

Gutters and downpipes are rusted and weathered, and at some places missing.

The roof panels are very old, and at places rusted through, causing water to seep into the building.

The roof structure is very old, and although an investigation of the trusses could not be made, it is advised that the trusses be inspected for structural integrity and replaced or strengthened where needed.



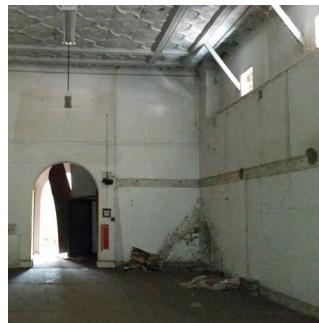
3.5.2 Interior

The interior in general, has been preserved rather well.

Interior walls have also been finished with a lime plaster. In order to prevent paint, that was later added, to seep into the walls, a pitted plaster was added to the interior walls (Niebuhr 2007:157). It is still best advised to use a lime based paint on all walls.

At some places the paint is peeling off, and where roof panels have sustained major damage, water has in turn also caused major damage to the plaster. This is mostly evident on the first floor of the northern wing.

The original pressed steel ceiling panels are rusted in places and the paint is also peeling in some areas.



CONTEXT

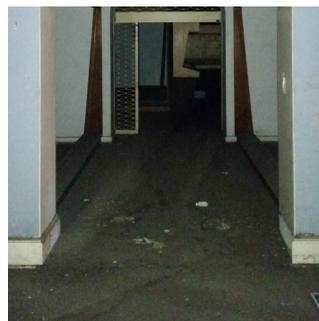
Various partitions (for exhibition show cases), have been added to the interior at later stages, but have, with the building being vacated, been damaged and half-removed. Partitions have been added to define different office spaces in the northern wing of the building, but have been vandalized and are in a poor condition.



Clerestory windows in the exhibition halls of the southern wing, have been painted black, presumably in order to have better control over light. This has a very negative impact on the interior space, due to the lack of both natural and proper/ focused artificial light in the space. External, horizontal asbestos louvres have also been added by one of the previous zoo directors (Niebuhr 2007:163). It is presumed that these louvres have been installed to prevent any direct (specifically eastern and western) sunlight from entering the spaces, but they block most of the natural light from entering the spaces, and have a negative effect on the spaces.



The imported black and white checkered marble floor in the entrance foyer, is in a good condition. The original 110mm Oregon Pine timber floors have, sustained minor dents and breakages to planks. The floors were been covered with battleship lino floor covering in the western wing and with "Hunt Leuchars & Hepburn" parquet flooring in the eastern wing in the late 1960s.



Additions

The addition of a toilet, shower and wash hand basin, to the administrative wing of the building, has been done poorly without a conscious response to the building fabric in a respectful manner.



The staircase to the first floor, of the administrative wing, has been built according to the original plan, but goes past a window right up against the wall, and is a poor execution of a staircase in the space with relation to the façade. This window has consequently been boarded up.



A large part of the roof, of the added building section in the courtyard, has collapsed due to water. This space is in a very poor condition and is badly vandalised.



3.5.3 Courtyard

Roof

The veranda roof has due to a lack of maintenance, corroded severely. Various roof panels are rusted through, which has damaged ceiling panels. Some of the timber beams are rotten and not structurally sound any more. The timber columns are also rotten at places, and some are even missing in total.



Floor

Local Blue slate slabs (presumably from the Erasmuskloof quarry), have cracked at some places. Half of the veranda has been covered with a building addition in the courtyard, and the floor has been covered over with a new floor covering.



Doors

The roof has ensured that most of the doors opening out onto the veranda have been preserved fairly well. The only need for maintenance is missing ironmongery and paint.



Garden

The oak tree in the center of the courtyard, has presumably been planted after completion of the building work. The roots of the tree have not been cut back in recent years, and is causing some disruptions with the foundations and with water and drainage pipes.



The garden in general, has been neglected and most of the plants have died. The garden, as

designed on the original plan, does not seem to exist anymore.

3.5.4 Basement

The granite foundation walls of the basement have been painted and the paint is peeling due to dampness on the walls.

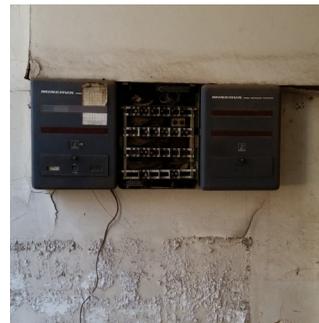
Later additions are also evident in the way arches and openings have been closed, in order to create separate spaces within the basement.



3.5.5 Services

Electricity

There are very few indications of electricity being part of the original building design. According to a previous study and analysis of the building, as part of her Masters dissertation, I Niebuhr (2007:163) had found an old chandelier hanging from the ceiling in the entrance foyer of the building. The chandelier is not present in the building any longer. An old breaker switch is however, still present in the foyer, which is indicative that some sort of old electrical installation had been part of the building from an early stage. Other electrical installations only include fluorescent lighting in some areas as well as an electrical geyser, which are evidently later additions. The electrical supply and wiring of the building is very old, and might not be in safe working order.



Sewerage

There exists no evidence of water or sanitation being part of the original building. A toilet, wash hand basin and a shower, have been added to the northern wing of the building. A wash hand basin has also been added to the western tower of the building. A 100mm galvanized steel pipe is visible in the eastern tower, and it is assumed that the pipe was used to relay water from the central foyer's roof. A 100mm LCC (London Country Council) cast iron vent pipe (Niebuhr, 2007:164) is also present in the northern tower. This pipe, is also taken right past the windows of the basement, in order to connect to the sewerage connection at Boom Street.



3.6 IDENTIFYING THE PROBLEM(S): WHY INTERVENTION IS NEEDED

the lost part of the city. There is great opportunity for better integration of the NZG and the city, with a lot of potential energy that is present in the city on a daily basis as identified in Chapter 2.

The non-existence of any relationship between the *Staatmuseum* and the zoo is also problematic, in that the building could have a very close relationship with the zoo, even if it is only based on the themes of both places being so closely related to one another, as both places falls under the same custodian, the National Research Foundation (NRF). The *Staatmuseum*, in the way it is orientated, only relates to Boom Street, and forms an obstacle or boundary between the street edge and the zoo at that point. This shortcoming should be addressed.

Since the final artefacts have been moved out of the building, the building has stood empty and

without any purpose. The fact that the building has no programmatic function and contributes in no functional way to the city, should be addressed. If the building continues to stand empty, it will only deteriorate, and will make conservation efforts worthless.

This study will attempt to find the best possible way of responding to these issues, specifically with relation the *Staatmuseum*, within the guidelines of legislation, such as the National Heritage Resources Act of 1999. This response will have to allow for the preservation of the building through adaptive re-use, while also allowing a new program to be introduced in the building, that responds well to the list of problems and possibilities set out in this section.