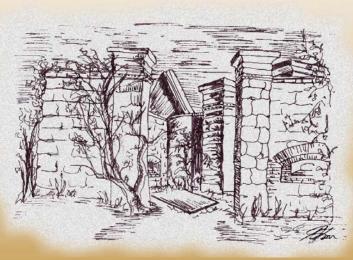




# SETTING: SITE ANALYSIS





- 1. INTRODUCTION
- 2. LARGER CONTEXT
- 3. SITE CLIMATE, GEOLOGY, FAUNA AND FLORA-ANALYSIS
- 4. CULTURAL AND BIOPHYSICAL ASPECTS OF WONDERBOOM NATURE RESERVE
- 5. THE SITE'S CONTRASTING FACTORS/ASPECTS
- 6. SWOT ANALYSIS
- 7. CONCEPT
- 8. CONCLUSION

The site analysis explores the cultural and biophysical aspects of the site, their history and present significance as well as the present exisiting site uses/program.

#### 5.1 Introduction

The Wonderboom Nature Reserve is a nature island in the middle of Pretoria, an urban city, which surrounds this magnificent biophysical gem. It was seen as a sanctuary since the first humans set foot on this piece of land. In the adult and in the child it arouses a dormant, innate interest in nature. It stimulates the pride of every inhabitant of Pretoria as a co-owner of the reserve. The reserve itself becomes a living source of knowledge and pleasure to the numerous educational institutions of the capital and the whole country, because of its richness in history and heritage. There are various layers of history to be unfolded by the visitor.

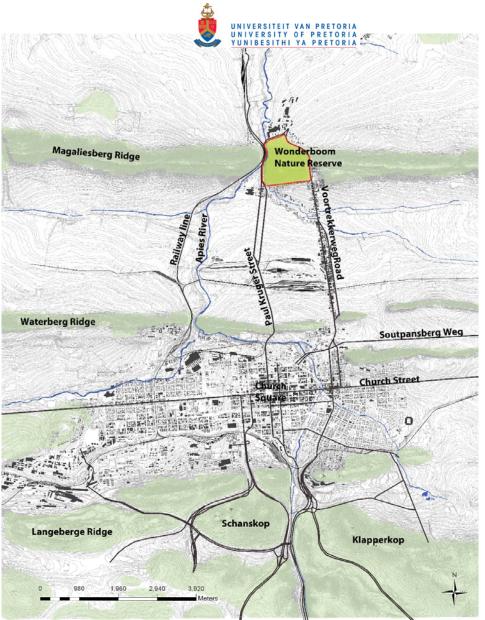
The analysis of this significant place starts by looking at the larger context of the area. The next step will be to zoom in on the existing site, to analyse how it is being used, what is already there and what the climate and geology of the site is. The historical background of the nature reserve and its important elements will be investigated to discover the significance, genuis loci of the place and to define the cultural and biophysical aspects of the site —the first research question as set out in the first chapter. The analysis will go into defining the archaeological data of the site and to discuss the suggested management thereof by Anton van Vollenhoven (2008). A SWOT analysis will be conducted to see where the strengths and weaknesses of the site lie.

#### 5.2 The larger context

#### 5.2.1 Site location

The site under investigation is the Wonderboom Nature reserve, located on the Magaliesberg ridge in Pretoria north. Refer to chapter 1 for a full site location description and illus. 10.

The Wonderboom Nature Reserve is placed in a larger context before one moves in on the site itself. Refer to illus. 85.

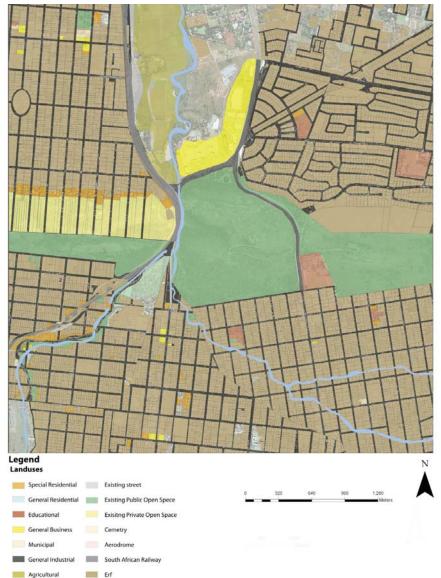


Illus. 85: Larger context of the Pretoria area with the Wonderboom Nature Reserve located to the North of Pretoria. (Author, 2011)



#### 5.2.2 Land uses

It is important to have a understanding of the different landuses around the studie area. The landuse around Wonderboom Nature Reserve is mostly residential which makes the location of the reserve ideal to function as a regional park.



Illus. 86: The land uses within the larger context. (Geography at the University of Pretoria GIS database, modified by the author, 2011)

#### 5.3 Wonderboom Nature Reserve

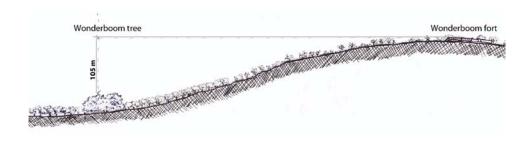
#### 5.3.1 Existing site

To understand the study site, the following will be discussed in the site analysis:

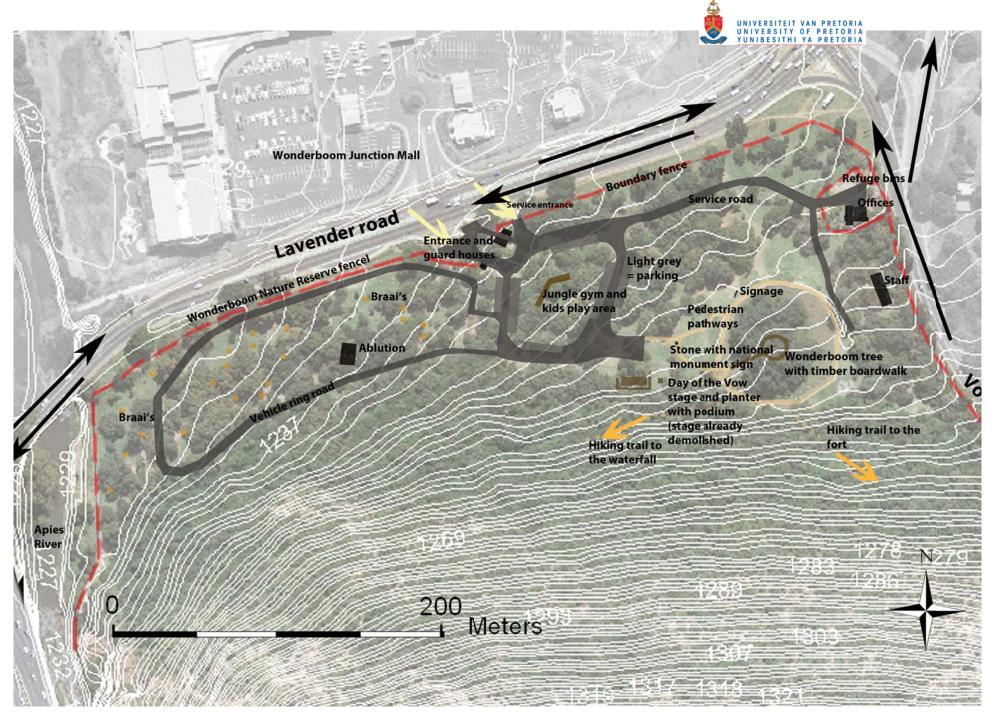
- 1. The exisitng site (resort area)
- 2. The exisiting program and uses of the resort
- 3. The climate
- 4. Geology and topography
- 5. Flora and fauna

#### 5.3.1.1 Existing plan of the resort area

The Wonderboom Reserve is a small portion of the Magaliesberg bordered on the west by the Apies River and on the east and north east by the extension of Voortrekker Road across Wonderboom Nek. Its northern boundary runs just more than 91m north of the Wonderboom while Lombard Street, Wonderboom south, is its southern boundary. Refer to illus.10 and 88.



Illus.87: Section through Wonderboom Nature Reserve. The wonderboom tree in relation to the ridge and the wonderboom fort. (Author, 2011)



Illus. 88: Aerial photograph of the resort area of the nature reserve indicating the existing facilities. (Geography at the University of Pretoria GIS database, modified by the author, 2011)

#### 5.3.1.2 Current program and uses

The Wonderboom Nature Reserve is currently used as a regional park (refer to chapter 1 charts - people from over Pretoria visit the nature reserve), with the following program:

- Wonderboom tree interpretive trail 0.5km (This trail consist of a few information boards in the resort area around the tree.)
- Fort Hiking trail (2km)
- Waterfall hiking trail (1km)
- Joost Becker guided trail 2.6km
- Bird watching
- Picnic areas
- Braai facilities
- Abseiling (This can only be done per bookings)

#### 5.3.1.3 Climate

A consideration of some climatological factors: (Refer to fig. 21)

- The area concerned has an annual rainfall of about 630mm practically confined to the summer months.
- The average dates of occurrence of the frost and last frosts are respectively the 20th May and 31st August. (Collett, 1956: 67-87)
- The direction of prevailing winds is not very constant, particularly during winter. During summer they are mainly north-east. During winter, south and west winds occur slightly more than in the summer but the seasonal variation is very slight.
- The mean hourly wind velocity for the year is 12.8 k.p.h.
- The average percentage frequency of wind direction for the year shows it to be most frequent in the north-east quadrant. (Collett, 1956: 67-87)
- The slope of the Magaliesberg is tilted northwards at an angle of 20° or 40°, thus the slope receives the full impact of the sun's rays throughout the day and the upper parts are usually hot and dry.
- Northern part dryer, but receive a lot of run-off perennial streams. (Information plates, 2011)

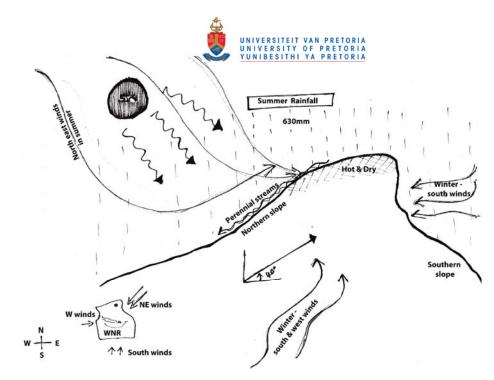


Fig 18: Sketch representation of the climatological factors at the Magaliesberg.(Author, 2011)

#### 5.3.1.4 Geology and topography

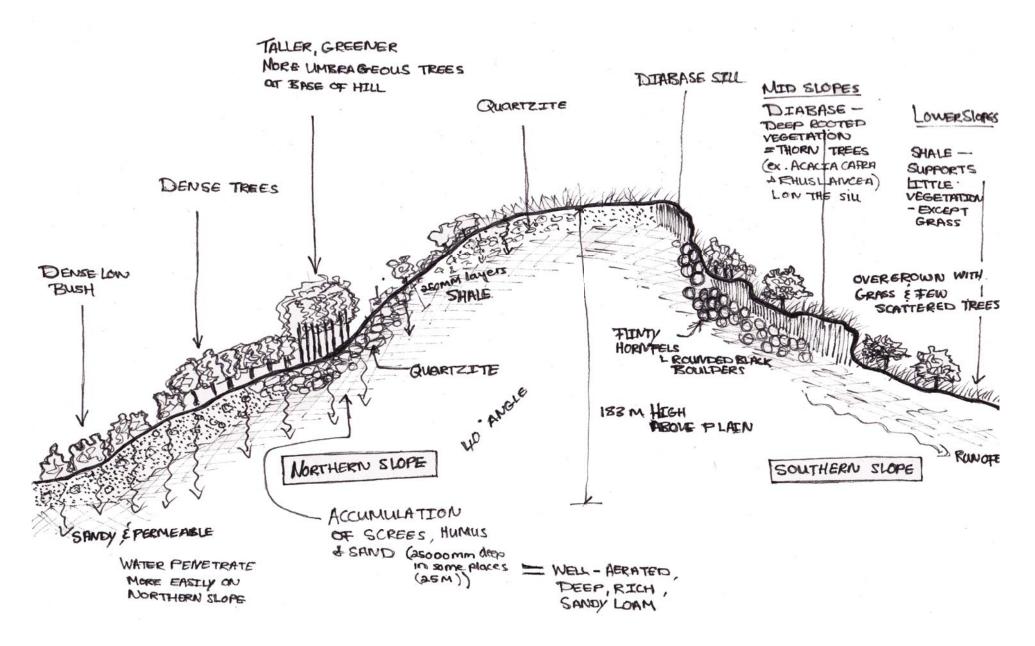
The range rises to an elevation of some 183 meters above the plain.

According to Visser (1956) the visitor will see fine examples of current-bedded and ripple-marked quartzite displayed at their best as paving stones in the footpaths.

Considering the general geology of the area, a two-fold division is at once apparent from the topography. On the south side of the ridge, the hill slope is smooth and gentle and overgrown with grass and few scattered trees. Near the summit the weather-resisting quartzites form bold krantzes facing southwards while a steep dipslope, rather densely overgrown with bush and trees, faces northwards. This striking difference is brought about by the presence of shales below the succession of thickly-bedded quartzites which determine the ridge. (Visser, 1956: 35-41) The tree growth is encouraged by quartzite boulders. Animals are a major cause of erosion on the slopes. Soil is moderately deep on the lower part. It is sandy and permeable because of the high quartzite content and it supports a good plant cover including some substantial shrubs and trees. (information plates, 2011). Refer to illus. 89.

For a more indepth study of the geology and topography refer to appendix D.





Illus. 89: Sketch representation of the soil and vegetation types at the Magaliesberg.(Author, 2011)







Illus. 90: Examples of the quartzite rocks, white to pale pinkish and the ripple formation on some of the rocks (Author, 2011)

#### 5.3.1.5 Fauna

A list of animals found in the nature reserve will be provided in the appendix.

Apart from the zebra, impala, rock hyrax, porcupine, various small mammals, reptiles and amphibians which can be seen. At least 200 bird species occur on the nature reserve. Amongst these are the Verreauxs/Black eagles which breed regularly on the reserve. (Wonderboom Nature Reserve pamphlet) Four zebras were placed in the reserve from Zkukuza in the Kruger National Park in 1965.



Illus. 91: These red bucks were spotted on one of the site visits to the nature reserve in 2011. (Author, 2011)



Illus. 92: These Zebras were spotted on one of the site visits to the nature reserve in 2011. (Author, 2011)

# 5.3.1.6 Flora (Botanical feat

The Wonderboom Nature Reserve is situated within the Gold Reef Mountain Bushveld. which features rocky hills, and ridges often west-east trending with more dense woody vegetation often on the south-facing slopes associated with distinct floristic differences. (Wonderboom Nature Reserve pamphlet). Refer to illus 89.

Refer to 5.3.1.4 Geology. Consequently from the facts mentioned previously, it is not surprising to find an abundant and luxuriant growth, of a diversity of kinds of umbrageous trees not elsewhere common in Pretoria. The famous Wonderboom is one of these species. The 'tree' itself is an evergreen Wild Fig, technically known as Ficus pretoriae Burtt-Davy.

According to Mogg (1956), there are many examples of this species in the district, especially along the northern base of the Magaliesberg range, and fine specimens have been recorded as far west as Mexico. The best known individual tree is the Klein Wonderboom, which is to be found a quarter of a mile to the west of Wonderboompoort. Farther afield the species occurs in the Waterberg, the Lowveld areas of the Transvaal, in Portuguese East Africa, tropical East Africa, and Socotra, an island in the Indian Ocean, off the north-eastern tip of Africa.

Refer to illus 89 indicating a typical section through the mountain. Which shows the type of planting and soil found on the Magaliesberg ridges.

The following trees are found at the resort (park) and at the fort. Refer to heading 5.3.1.6.1



## 5.3.1.6.1 Trees of the Wonderboom Nature Reserve and their cultural significance

The following tree species are found at the Wonderboom Nature Reserve. These were identified at the park area and on top at the Wonderboom fort.

Sclerocarya birrea subsp. Caffra SA. No: 360 Marula/Maroela

#### Interesting facts:

- In Marula trees the different sexes can be either on separate trees or on the same tree.
- Both the fruit and nuts are edible. The fruit can be used to make Marula beer, preserve or jelly.
- The nuts have a high oil and protein content. The oil has been used cosmetically.
- A single fruit can contain up to 4 times as much vitamin C as an orange.

#### **Cultural significance:**

Most traditional healers have a marula stone amongst their divining dice.

Various parts of the tree are used in tradi-

tional medicine. The powdered bark is given to pregnant woman to ensure that the child is of the desired sex: for female child bark from a female tree is used, while for a male child the bark of a male tree is used.

(Palgrave, 2002: 122)



Illus. 95: Marula bark. (Author, 2011)



Illus. 96: Marula leaves. (Author, 2011)



Illus. 94: Marula tree (Author, 2011)

Illus. 97: Marula fruits. (Author, 2011)



Zisiphus mucronata SA. No: 447 Buffalo Thorn / Blinkblaar-wag-'n-bietjie

#### Interesting facts:

- The tree is widely browsed by game and stock.
- The trees, if planted close together, form an impenetrable barrier.
- Fruit is edible. Dried fruit is ground and made into a type of porridge.
- The seeds can be roasted and ground and used as a substitute for coffee.
- Young leaves are boiled and eaten as a vegetable



Illus. 98: Buffalo thorn (Author, 2011)

#### Cultural significance:

The tree is widely used in traditional medicine. Leaves are boiled into porridge and used as antiseptic. An infusion of the roots is used for indigestion. (Palgrave, 2002: 241)



Illus. 99: Buffalo thorn bark. (Author, 2011)



Illus. 100: Buffalo thorn leaves. (Author, 2011)



Illus. 101: Buffalo thornfruits. (Author, 2011)



Ficus Salicifolia (vahl) (F. pretoriae Burtt Davy) (F. Cordata Thunb. Subsp.) Salicifolia (vahl) C.C. Berg)

SA No:60 Wonderboom fig/vy

#### General:

Typically a spreading medium sized tree, seldom exceeding 9m; occurs in valleys along water courses on rocky outcrops and also in open woodland, semi-deciduous losing its leaves once every number of years.



Illus. 102: The Wonderboom tree - Fig (Author, 2011)

**Bark:** Dark grey and rough, but paler grey to smooth in young trees.

**Leaves:** Ovate to elliptic, or oblong, sides almost parallel, usually about 70 x 350mm, clear green, thick leathery, the main pair of veins at the base curling around running parallel to the lobe margin and unbranched, net veining clearly visible below, lateral viens very distinct on underside, apex broadly tapering to almost rounded, base square to shortly tapering to almost rounded, base square to shortly lobed, margin entre: petiole 5 x 50mm long, stipule falling early.

Figs: Massed along the branches in the leaf axils small, 5-8 mm in diameter, white turning yellowish pink or red with white dot, August – May (Palgrave, 2002: 147-148)

Senegalia nilotica (Acacia nilotica) SA. No: 179 Scented Thorn/lekkerruikpeul

#### Interesting facts:

- The tree is often associated with sweetveld.
- The pods are widely eaten by stock and game. Consuming large quantities of pods induces abortion amongst goats.
- Pods and bark can be used for tanning leather.
- Gum is edible and widely taken and can be used as glue.
- Furniture and fence posts have been made from the wood.
- The inner bark is used for making rope.
- Roots and dried pods can be boiled to produce ink.



Illus. 105: The Scented thorn tree (Author, 2011)

#### **Cultural significance:**

Numerous medicinal uses have been recorded.

Parts of the tree were used to treat eye diseases, as a tranquiliser, and as an aphrodisiac. A root extract was used to treat tuberculosis, impotence, diarrhoea, sores caused by leprosy, stomach ulcers, indigestion and haemorrhage.

(Palgrave, 2002: 110)



Illus. 103: Fig bark. (Author, 2011)



Illus. 104: Fig leaves. (Author, 2011)



Illus. 106: Scented thorn bark. (Author, 2011)



Illus. 107: Scented thorn leaves. (Author, 2011)



Illus. 108: Scented thorn. (Author, 2011)



Dichrostachys cinerea SA. No:190 Sickle Bush/Sekelbos

#### Interesting facts:

- Sickle bush is regarded as a pioneer plant and is often associated with areas that have been subjected to overgrazing
- The leaves and pods are browsed by stock and game
- Strong rope can be made from the inner bark.
- The thorns are extremely hard and often puncture vehicle tyres.



Illus. 109: Sickle bush (Author, 2011)

#### **Cultural significance:**

The plant has limited medicinal uses. Powdered bark has been used for the treatment of various skin complaints. The roots are chewed and applied to snake bite and scorpion stings.

(Palgrave, 2002: 100)

Pappea capensis SA. No:433 Indaba Tree/ Doppruim

#### Interesting facts:

- The tree is widely browsed by game and stock. The edges of the young leaves are heavily serrated and spiny to discourage browsing, as the leaves mature the edges become entire.
- The fruit is edible and is used to make an alcoholic drink and vinegar.
- The seed yields heavy yellow oil which has been used as gun oil and in soap making.



#### **Cultural significance:**

Various parts of the tree are used in traditional medicine. The oil is said to cure ringworm, and stimulate hair growth. Infusions of the leaves are used to treat sore eyes.

The name Indaba tree refers to the practice amongst the woman to gossip in the shade of this tree as well as the fact that the traditional court or 'Kgoro' was often held in its shade.

(Palgrave, 2002: 132)



Illus. 110: Sickle bush bark. (Author, 2011)



(Author, 2011)



Illus. 112: Sickle bush fruits. (Author, 2011)



Illus. 114: Indaba tree bark. (Author, 2011)



Illus. 115: Indaba tree leaves. (Author, 2011)



Illus. 116: Indaba tree fruits. (Author, 2011)



Searsia lancea (Rhus lancea) SA. No: 386 Karee / Karree

#### Interesting facts:

- Occuring over a variety of altitudes and habitats, in open woodland, along river and stream banks, on termite mounds and often on calcareous substrates.
- Bark used for tanning.
- The edible fruits are either soaked in milk or mixed with sour milk before eaten.
- A pleasant tasting tea can be made from the dried fruits.
- Branchlets once used to make bows.
- Fruit pounded with water and brewed into a tasty beer.
- Widely cultivated as a garden ornament, drought and frost resistant.
- The wood has a sweet, spicy scent, but the trunks are frequently so twisted and crooked that they cannot be made into satisfactory planks.

Illus. 117: The Karee tree

(Author, 2011)

- The trunks can be used as fencing posts and are used to make implement handles, bowls and tobacco pipes.
- The trunks make good firewood.
- Young, long branches are used for thatching.
- The bark is used for tanning leather brown.
- The trifoliate leaves are high in tannin and are only browsed in times of drought. They can taint milk. (Palgrave, 2002: 574)



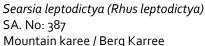
Illus. 118: Karee bark. (Author, 2011)



Illus. 119: Karee leaves. (Author, 2011)



Illus. 120: Karee flower and leaves (Author, 2011)



#### Interesting facts:

- Occuring in busveld and grassland , often on rocky (particularly granite) ridges.
- Beer is brewed from the fruit.
- A decorative garden subject but sensitive to severe frost.
- An intoxicating liquor can be made from the fruits.
- Important horticultural plant



Illus. 121: Mountain karee tree (Author, 2011)

#### **Cultural significance:**

Various parts are used in traditional medicine.

(Palgrave, 2002: 574)



Illus. 122: Mountain karee bark. (Author, 2011)



Illus.123: Mountian kareeleaves. (Author, 2011)



Illus. 124: Mountain karee flower (Author, 2011)

## 5.4 Cultural and Biophysical aspects of the Wonderboom Nature Reserve

The following biophysical and cultural aspects can be found on site (mentioned in the column on the side). This was acquired after an in depth analysis of the history of the Wonderboom Nature Reserve and its important aspects. Only after thorough investigation and exploration of these aspects could all of the biophysical and cultural components be identified to be used throughout the design process with regards to access, awareness and semiotics. And to include in the design narrative. This aided in achieving an informed design proposal. The complete discussion and analysis of the historical background and important aspects can be found in appendix E with photo's and images.

An archaeological data analysis was done to determine what is archaeologicaly important on site, where the locations are and what may be done to that specific heritage site.

The following historical sites were identified on site (Wonderboom Nature Reserve):

- 1. Two Stone Age sites
- 2. Five Iron Age sites
- Seven 'other cultural sites' (This can include man-made holes, remnants of artefacts, refuse midden, man-made waterfall, Day-of the-Vow remnants and a small cement dam.)
- 4. Military features (This can include fortification walls, block house remnants, holes, fort, water furrows, cement platforms etc.)
- 5. 'Remains, icons not from a specific period in time' (This can include the two caves, and the wonderboom tree.)

The above mentioned archaeology sites were analysed and discussed completely in appendix F. For more information refer to appendix F.

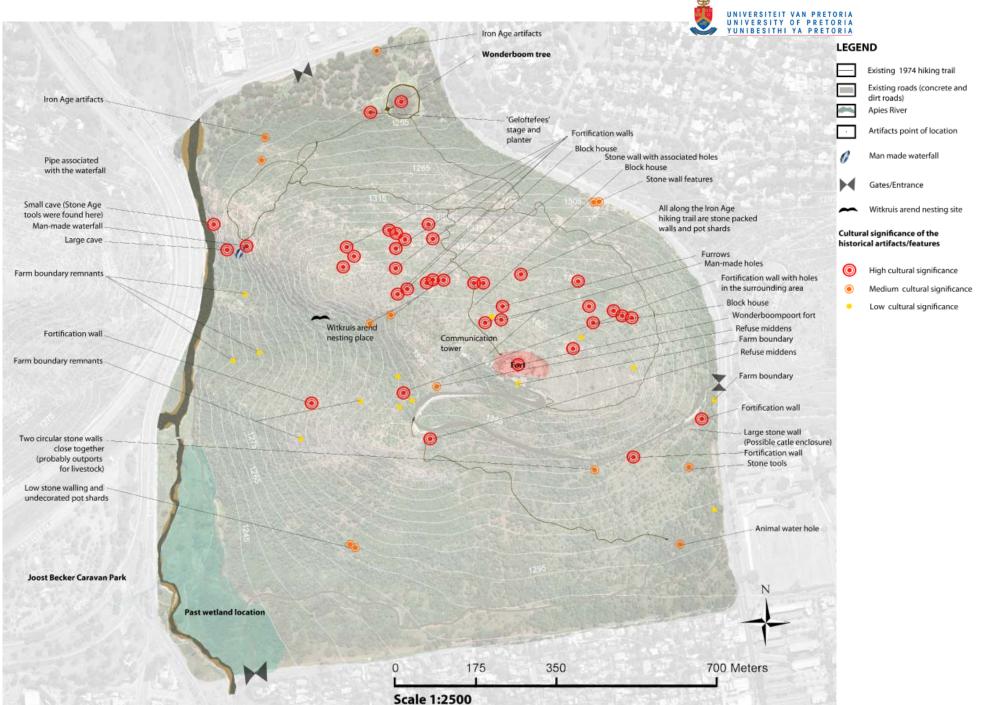
The different cultural and biophysical sites and their cultural significance were mapped out together with illustrations of the main elements found on site. (Refer to illus. 125,126 & 129)

#### **Biophysical Aspects**



- 1. Vegetation
  - Rocky highveld grassland (grassland biome)
  - Mixed bushveld (Savanna biome)
  - Tree species of the Magaliesberg
- 2. Geology
  - Soil rock layers
  - The quartzite rocks
- Magaliesberg mountain
- 3. Wonderboom Tree (icon)
  - Ficus salicifolia a natural phenomena
- 4. Caves
  - Natural rock formation in the Magaliesberg
- 5. Different animal and bird species
  - Red data,
- Rare species
- Rare bird species
- General game
- 6. Apies River
  - One of Pretoria's main rivers
- 7. Nature Reserve (conservation area)
- Protected nature area

- 1. Wonderboompoort Fort
  - Ruin of the Boer fort, dates back to the history of the Anglo Boer Wars
- Architecture in its most brutal form
- 2. Wonderboom Tree
- Cultural meaning thereof
- 3. Historical features
  - Boundary line remnants
  - Man-made holles
  - Fortification walls,
  - Block houses remnants
  - Remnants
- 4. Stone Age sites and artifacts
  - Stone tools
  - Remnants
- 5. Iron Age sites and artifacts
  - Stone circle enclosures
  - Iron smelter remnants
  - Remnants
- 6. Day -of -the -Vow
- Remnants of the stage and planter
- 7. Man-made waterfall
  - In cellebration of the Union



Illus. 125: Mapping of the cultural and biophysical aspects on site. (Refer to appendix E and F for more information regarding these components. (Author, 2011)



Illus. 126: The main components on site. (Refer to appendix E and F for more information regarding these components. (Author, 2011)

#### 5.5 The site's contrasting factors/aspects

From the site analysis a definite contrast character comes to the surface. The following constrasting qualities could be distinguished:

- 1. The known and the unknown
- One knows about the reserve and its facilities
- The unknown is the history, the fort ruin, etc
- 2. The seen and the unseen
  - Park can be seen but,
  - The historic layers cannot be seen unless it is known
- 3. The all at once and discovery
  - Wonderboom tree approach
  - The fort is a discovery
- 4. Past and present
  - Historical layers, artefacts, the ruin and the tree are from the past
  - The contemporary reserve (park area)
- 5. Tangible and intangible
- Tangible all the physical elements
- Intangible memory, meaning, history,
- 6. Permanent and temporary
  - Structures, and infrastructure are permanent elements
  - Ruin is temporary
- 7. Visual and the obscure
- The tree and that which are right infront of you, the mountain all are visual
- The fort, the route, noise and city is obscure at certain points and level
- 8. City and nature
  - The city lies beneath the
  - Ridges of Pretoria
- 9. Cultural and the natural
- Cultural aspects vs.
- Biophysical aspects

### ic

UNIVERSITEIT VAN PRETORIA UNIVERSITY OF PRETORIA YUNIBESITHI YA PRETORIA

### 5.6 SWOT analysis

A SWOT analysis was done on the site. It was divided into three categories, namely; the socio-economic function, ecological function and the spatial function. The strength and weaknesses of each category were identified and documented, as well as its opportunities and threats. Some of the findings may overlap. Refer to table 2-4.

SWOT Analysis ocio-Economic Function (Cultural aspects)							
	T			1			
1	Meeting outdoor users needs	Budget contrains	Community benefits	Security			
2	Tourism	Man power	Legislative environment	Vandalism			
3	Aesthetic ('Genuis loci' sense of place), Topophilia (love of place)	Do not live up to its real value and potential	Park rangers				
4	Sanctuary to the city dwellers	Lack of awareness of function	EIA				
5	Park (natural area)	Lack of awareness of the history and heritage of the place and the importance thereof by the public to the public	Employment				
6	Historical value (Heritage)	No advertisement, no attraction anchor to bring people in and closer to appreciate what is there	Awareness - Environment and heritage education				
7	Awareness/Appreciation for environment	Some heritage features are obscrured by vegetation, thus visitors not aware of them	Tourism				
8	Job opportunities		Regional Park				
9	Health		Gateway to the north				
10	Sense of well-being		Connection to the overall Pretoria				
11	Psychological		Green corridor				
12	Existing enforcement by laws (ordinances)_Protected 'nature area' and ridge conservation, etc.		Sanctuary to the city dwellers				

Table. 2: SWOT anlaysis of the socio-economic function in the Wonderboom Nature Reserve (Author, 2011)

SWOT Analysis								
patial Function (Contextual aspect)								
	Strengths	Weakness	Opportunities	Threats				
1	Identity	Awareness	Connectivity	Vandalism				
2	Orientation	disconnectivity	Tourism	Security				
3	Vistas/vantage points	Random	Regional park opportunity	Little man power				
4	Well defined entrances - gateway,		Coherance and					
	landmarks		complexibility					
5	Aesthetic value - sense of place		Interest and discovery					
6	Meaning		Didactic design					
7	Experience		Narrative					
8			Semiotic design approach					
9			Green corridor					
10			Urban link					

Table. 3: SWOT anlaysis of the spatial function in the Wonderboom Nature Reserve (Author, 2011)

	SWOT Analysis							
colo	gical Function (Natural As	pects) Weakness	Opportunities	Threats				
	<u> </u>							
	There are a approved EMP for	Awareness - people are not	Higher usage = higher	Ecological degradation due t				
1	Wonderboom	aware of these natural	awareness, better	lack of planning and				
1		phenomena or biodiversity of	conservation and security	understanding				
		plant and animal species.						
2	Proximity - accessibility	Communication of natural	Quality of life	Alien vegetation				
2		elements						
	Unique interfaces - Magaliesberg		Sustainable development of	Vandalism				
3			open space with urban					
			framework					
4	Heritage value		Education	Little man power				
5	Representation of biodiversity		Linkage of the north and the					
•	protection and red data presence		south					
6	River running past - Apies river		Green corridor					
7	The wonderboom tree icon		Sustainable design in the					
,			reserve itself					
8	Economic benefits		Icon of the north					
9	High species diversity							
10	Historical & cultural site in							
10	ecological areas							
11	Fair level of connectivity							
12	Environmental education							
13	Visual relief							
14	Protected natural area							

Table. 4: SWOT anlaysis of the ecological function in the Wonderboom Nature Reserve (Author, 2011)

To conclude, allot of these aspects identified or suggested informed the theory and design, because one needs to know what is there on site to inform your theory and in turn your design. In the case of this dissertation the site informed the theory explored which in turn drived the design development. The heritage and history element on site informed the dicision to apply a narrative approach to the design.

Out of this SWOT analysis the fact of 'little awareness' is mentioned a few times and can be considered a big issue but also a great opportunity. Communication of the history and heritage of the site with regards to its biophysical and cultural aspects are lacking. There are some information boards, but the opportunity for more creative information transfer is there. This can be done to educate but also provide for experience, identity growth, meaning, interest and discovery in the landscape.

The threats are also identified which should be dealt with in the design development.

This SWOT analysis can therefore serve as design guidelines.

#### 5.7 Concept for the entire site

Unveiling the heritage/historic layers of the Wonderboom Nature Reserve through a didactic narrative. The three typologies (layers) namely; cultural symbols, biophysical aspects, and the contempory are unveiled. Under each typology are layers to be unveiled and explored, these are:

Refer to fig.19

Cultural symbols (history):

- 1. The fort and wonderboom tree,
- 2. Caves and man-made waterfall,
- 3. Stone Age and Iron Age remnants,
- Geloftefees features and festivities

Biophysical aspects (history):

- 1. Caves, once again,
- 2. Magaliesberg ridge, and
- 3. Wonderboom tree (icon)

#### Contemporary:

- Recreational opportunities,
- 2. Tourist attraction,
- 3. Destination and being a sanctuary

There are 4 important elements to consider throughout the entire design and research:

- 1. Wonderboompoort fort
- 2. Stone Age and Iron Age Remnants
- 3. Wonderboom tree
- 4. The caves



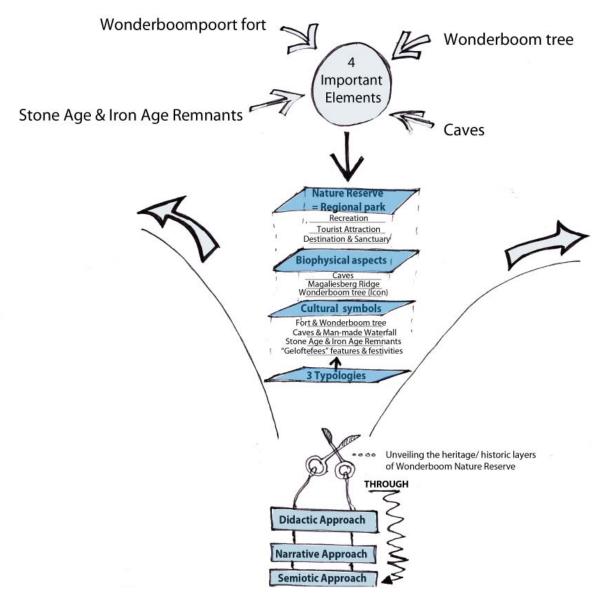


Fig. 19: Concept diagram of unveiling the historic layers (Author, 2011)

#### 5.8 Conclusion

From the above site analysis one gets a clear understanding of the biophysical and cultural aspects of the site. The cultural and biophysical aspects were identified and discussed in detail in appendix E and F. In this analysis the different history layers were unfolded and explained (appendix E & F).

One can conclude that the Wonderboom Nature Reserve is used as a regional park, from the statistics that showed that people from all over Pretoria are using the site. (Refer to questionnaire in chapter 1) But at the same time one can conclude that people need to be made aware of the significance of the nature reserve, its history and heritage as well as biophysical aspects. People are unaware of these aspects. (Refer to questionnaire in chapter 1)

The site analysis informed the designer of the different biophysical and cultural aspects that needs to be communicated to the visitor. Certain approaches and principles were discussed in chapter 3 which serve as guidelines to methods of communication, different approaches and principles that need to be implemented. The charters discussed in chapter 6 serve as heritage principles which can be applied to the design.

#### Guidelines derived from the SWOT analysis:

- 1. Highlight the genius loci of the site.
- 2. Enhance awareness of the history and heritage of the place and the importance thereof by the public to the public.
- 3. Enhance the awareness of its environmental significance and the protection thereof.
- 4. The need of an anchor attraction to bring people in and closer to be able to appreciate what the site can offer.
- 5. The heritage features should be unobscured so that people can notice and access them.
- 6. Access to the different heritage sites is important to create awareness and interest.
- 7. Education and communication of the history and different aspects on site.
- 8. The site is random and disconnected, one can apply the following principles; coherence and complexity, interest and discovery.