



*"A place of wilderness and war,
a mountain chain
linking the magnificence of nature
with the turbulent history
of our society"
(Carruthers, 2000)*

INTRODUCTION 01

1. BACKGROUND TO THE PROBLEM
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Chapter one provides an overview of the main idea of the study. It summarises what the author's objectives are and how she will go about achieving them.



1.1 Background to the Problem

Many past events go unmarked and unremembered, and eventually lose their significance.

It is only in the late 1900's that South Africa started to protect its heritage and realized the importance of its conservation. The Simon van der Stel Foundation, known today as Heritage South Africa, was established in 1959 and is currently the largest and oldest non-governmental organisation involved in heritage conservation (Heritage SA, 2011). South Africa only became part of UNESCO (United Nations Educational, Scientific and Cultural Organization), again in 1994, (South Africa was a member state during 1946 - 1956) (UNESCO Worldwide, 2007). ICOMOS (International Council on Monuments and Sites) was founded in 1965 in Warsaw (Poland), only in the last four decades. "It is the only international non-governmental organisation dedicated to promoting the application of theory, methodology, and scientific techniques to the conservation of the architectural and archaeological heritage." (ICOMOS, 2009) South Africa has only eight recognised world heritage sites. (UNESCO -SA, 2011) There are many more heritage sites worth conserving and treasuring, but the public needs to be made aware of their existence.

According to Lynch (1960), "Many symbolic and historic locations in a city are rarely visited by its inhabitants, but the survival of these unvisited, hearsay settings conveys a *sense* of security and continuity." History provides for a *sense* of belonging. Some South African heritage goes unnoticed and the neglect of these historically significant sites results in South Africans losing their identity.

For example, most of the public and tourists visiting Pretoria aren't aware of the significant fortifications within the cityscape, or their history. Most of the tourists and/or public are not aware of the fort, wonderboom tree or the existence of the Wonderboom Nature Reserve.

A questionnaire-survey was taken by 100 residents from Pretoria east, west, north and south, during March - June 2011 (Author, 2011). According to the results obtained 30% of the people was aware of the Wonderboom Nature Reserve and has visited it at some stage in their lives, 25% of the people was aware of the Wonderboom Nature Reserve, but has never been there and 40% of the people wasn't aware of the Wonderboom Nature Reserve. Upon closer inspection of the awareness of the reserve's main biophysical icon, the wonderboom tree, only 25% was aware of the tree, 29% was aware of it but has never visited it and 45% of the people wasn't aware of the tree at all. Looking at the main cultural aspect of the nature reserve, the fort, only 17% of the people was aware of it and has visited it in the past, 19% was aware of it but has never seen it and 64% wasn't aware of it.

Only three of the seven forts of Pretoria have been restored and studied by archaeologists, the rest were lost for ruins. These forts and places of heritage should be made more accessible to the public and the public should be made aware of these significant places.

"South Africa's natural and cultural heritage resources are continually being threatened as a result of unsustainable development, urban encroachment, and a lack of urgency to protect habitats, species, heritage sites and values." (Bewsher, 2005: 2)

Urbanisation has also played an enormous role in placing pressure on the conservation of the mountains. Valleys have been dammed, farming has moved into 'batteries' and hothouses, recreational facilities are proliferating and traditional land use has become less profitable than intensive development according to Carruthers (2000: 4). The need for conservation is now greater than ever.

Breedlove (2002) states that cultural heritage has been recognised as consisting of those ideas, things, and places we have inherited from past generations and desire to leave as our legacy for future generations.

Van Schalkwyk (in, Breedlove, 2002), states that someone without a tangible, visible, knowable past is indeed poor, no matter how many contemporary riches they may possess. Cultural heritage is important because it helps us to define who we are, where we have been, and where we are going. Breedlove (2002) defines cultural heritage as the "language, belief systems, knowledge, and ideas, as well as the more tangible places and things." All aspects of culture are interrelated. "The landscape provides the context for the built environment, and together they provide the context for understanding the present, by examining the past." (Breedlove, 2002: 16)

"Considering that, in a society where living conditions are changing at an accelerating pace, it is essential for man's equilibrium and development to preserve for him a fitting setting in which to live, where he will remain in contact with nature and the evidences of civilisation bequeathed by past generations, and that, to this end, it is appropriate to give the cultural and biophysical heritage an active function in community life and to integrate into an overall policy the achievements of our time, the values of the past and the beauty of nature" (UNESCO Document 17 C/107 1972)

This dissertation will aim to look at the cultural and biophysical past of Wonderboom Nature Reserve and plan for its future. It is an attempt design to integrate Wonderboom Nature Reserve as part of Pretoria's identity.

Hampton Adams rightfully says that: Only by looking at the past, can we plan the future.

1.2 Core research question (problem)

How can a design narrative create awareness of the cultural and biophysical aspects of a site and ultimately create meaning and identity?

1.3 Hypothesis

The nature of the design proposal should be a didactic narrative that will create interest and discovery and through experience strengthen the local identity.

1.4 Sub-questions

1. What are the cultural and biophysical aspects of Wonderboom Nature Reserve?
2. How can narrative be used in design communication?
3. How can didactics be used in design communication?
4. How can identity of place be strengthened?
5. How do you create interest and discovery in the landscape?
6. How do you provide better access to a site?
7. How do you enhance awareness of a site?



1.5 Vision

A landscape which tells the story of the place, and unveils the heritage and history of the site in such a way that visitors will have an exciting but informative experience of the past events. The site can become a tourist attraction, a destination, a place everyone would go to and a place to get in contact with nature without being far away from the city. In a larger scheme this site can be the northern link and gateway into the Pretoria city, and a green corridor for people to experience the city in a different manner.

Illus 9: Sunset at the Wonderboom fort. (Author, 2011)

1.6 Introduction to the site

1.6.1 Study area

The Wonderboom Nature Reserve located on the Magaliesberg at Wonderboompoort in Pretoria north. The nature reserve is owned by the Tshwane City Council. See Illus. 10. (For greater/ in-depth discussion of the site refer to chapter 5.)

1.6.1.1 Historical context

Wonderboom Nature Reserve's history dates back 2300 million years with the beginning of the Magaliesberg ridge formation. This specific site is classified as the site with the longest period of human settling in this area. Traces of Stone Age and Iron Age settlements and artefacts were found in the nature reserve and surrounding area. One of the four forts was built on the mountain ridge, called Wonderboompoort fort which dates back to 1897. The Wonderboom is located in the nature reserve which is 1000 years old. The day-of-the-vow commemorations have been held underneath this tree for the past 77 years. Wars between Ndebeles and other indigenous tribes and Voortrekkers were fought in these mountains. A man-made waterfall on the western cliff celebrates the Union of South Africa and was constructed in 1960. (For in-depth discussion of the site's history refer to chapter 2 and 5.)

The presence of water made the area suitable for keeping livestock. Mountainous areas also provide suitable shelter for people. The natural terracing may also have provided suitable agricultural space for prehistoric people. One would, therefore, suspect that the area have been used in the past by people as the environment suited their needs just fine. During times of turmoil the mountain would also have provide a safe haven from attacks. (Van Vollenhoven, 2008: 19)

1.6.1.1 Physical context

The Wonderboom Nature Reserve is situated on part of the old farm Wonderboom. The Magaliesberg Mountain runs through the nature reserve from east to west and covers the entire southern side of the reserve.

The vegetation on the property mainly consists of natural indigenous species, but disturbance is evident via invader and pioneer species in certain areas, especially close to the river (west) and on the southern side of the reserve. According to Van Vollenhoven (2008, 19) this was probably caused by grazing of livestock as the farm used to be a commercial farm in the days of the old South African Republic (ZAR – Zuid-Afrikaansche Republiek).

On the western side: the boundary of the reserve is formed by the Apies River and a tributary thereof. The river drains the area in a northern direction. The northern boundary is formed by the extension of Lavender Road and the eastern boundary by the extension of Voortrekker Road. Lombard Street forms the southern boundary of the reserve. On this side residential dwellings are found just across the street. (See illus. 10)

The geology of the reserve is part of the Gold Reef Mountain Bushveld. It features rocky hills and ridges with more dense woody vegetation on south-facing slopes with distinct floristic differences. Historical information mentions a large variety of plant species in the area. (Van Vollenhoven, 2008:19)

The topography of the area is very steep due to the Magaliesberg Range running through it from east to west. On the western side: the mountain has vertical cliffs, giving access to some caves. A ravine cuts the western slope into two areas. The southern slope is less steep and some natural terraces are formed before the summit is reached. The eastern slope is steeper than the south, but not as much as the west. The northern slope also shows signs of natural terracing resulting in steep rocky areas alternated by flat areas. The summit of the mountain is relatively flat.

The part of the reserve furthest to the north is used as the resort area. This area is flat with a very slight fall from south to north. This area has been developed in the past and includes offices, an entrance building, picnic and braai facilities as well as some roads. The famous Wonderboom tree is situated in the northeast of this area.

Fauna species currently include impala, rock hyrax (dassie), porcupine, zebra and smaller mammals, amphibians and reptiles. The reserve hosts at least 200 bird species including the black eagle which regularly breeds here. Historical information shows that the environment surrounding the Wonderboom tree had an abundance of animals. Hunter-gatherer societies would therefore have found it a suitable habitat to settle in. (Van Vollenhoven, 2008: 20). (Refer to illus. 10)

1.6.1.1 Social context

Currently, the Wonderboom Nature Reserve is surrounded by residential development on both sides of the Magaliesberg mountain. Some commercial activities are found on the northern side of the reserve opposite the resort. This commercial node is a new development in this area and brings about a lot of potential users. This commercial node is called 'Wonderboom Junction' and is a very busy node. The other commercial nodes close to the nature reserve are situated on the south western side of the reserve and along Voortrekker road to the south. A caravan park is located across the Apies river to the western side of the nature reserve and also provides some feet to go through the reserve. The "Boerefort Primary school" is located on the south eastern side of the nature reserve. (Refer to Illus. 10)



Illus 10: Wonderboom Nature Reserve and surroundings (Aerial photo, Geography building, University of Pretoria and modifications by Author, 2011)

1.6.2 User

1.6.2.1 Present user

Currently, the site is mostly being used by people from the Pretoria north area, as well as, to a certain extent, by people from other parts of Pretoria.

Refer to Table 1 for the current visitor data of Wonderboom Nature Reserve for the 2010/2011 book year and refer to Fig 1, illustrating the table data in graph format.

From the table and graph it is clear that a thousand plus people visit the nature reserve monthly, some of which are adults, pensioners, pre-schoolers and children. From this data one can argue that the resort area as well as the entire nature reserve must accommodate for different age groups and levels of interest. During December and January more visitors can be expected, as can be derived from the visitors' data table. During those months more minibusses and busses visit the reserve. From this information one can conclude that the facilities should be able to cater for the number of visitors. (Refer to the graph fig.1) As can be deduced from the graph and table, the majority of visitors are adults. This creates the opportunity to attract more children and pensioners through better access and awareness.

1.6.2.1.1 Questionnaire

A questionnaire-survey was conducted over a period of 3 months. A hundred people completed the questionnaire. The questionnaire was specifically intended for people living in Pretoria, thus people from Pretoria north, south, east and west regions completed the forms. A summary of the results and a sample of the questionnaire form can be found in appendix A and B.

Questionnaire analysis

The questionnaire analysed the following:

- People's awareness within Pretoria east, west, north, south, and within different age groups.
- How people perceive the place and what they really know and understand about the nature reserve and its elements.
- How did the people come to know about the Wonderboom Nature Reserve?
- How people use the Wonderboom Nature Reserve.
- What the Wonderboom Nature Reserve means to the people.

Wonderboom Nature Reserve												
Monthly Visitors												
Bookyear:	Months											
2010/2011	July	August	September	October	November	December	January	February	March	April	May	June
Adults	866	1723	1680	1868	1625	4673	3061	730	696	946	1083	
Pensioners	62	112	104	135	72	283	127	96	71	43	113	
Pre-School	96	173	336	238	110	204	290	38	46	109	95	
Children	205	391	278	331	154	192	409	50	79	95	121	
Sub Total	1229	2399	2398	2572	1961	5352	3887	914	892	1193	1412	0
Hiking Trail												
Minibus				6		13	13			1	1	
Coasters			1									
Quantum						1	2					
Large Bus				3			1	1				
Total	1229	2399	2399	2581	1961	5366	3903	915	892	1194	1413	0

Table 1: Visitors' data for the past book year of the Wonderboom Nature Reserve, 2010/2011. (Wonderboom management, 2011)

Visitors' data for Wonderboom Nature Reserves 2010/2011 book year.

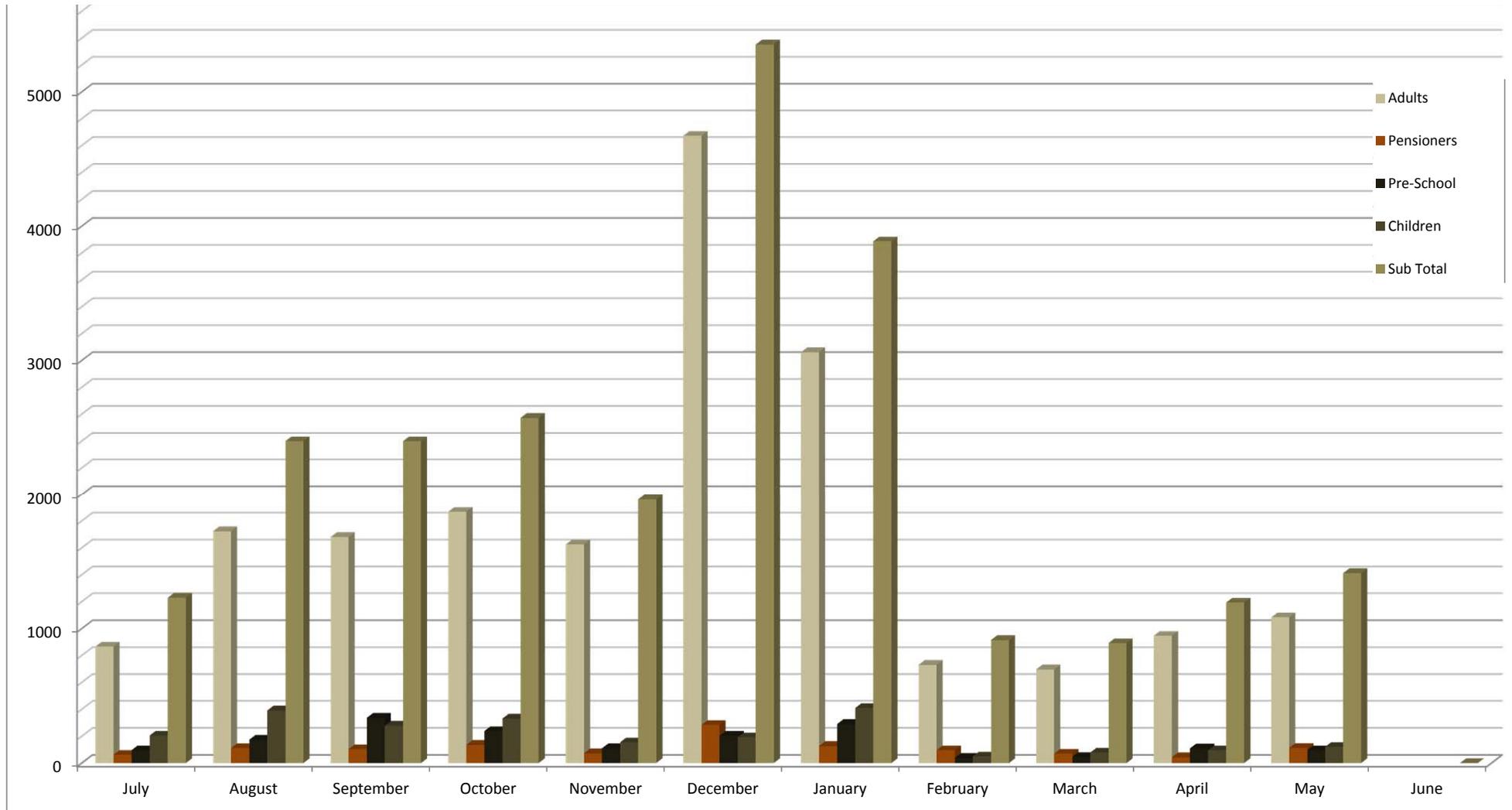


Fig. 1: Indicates the data in table 1 in graph format. (Wonderboom management, 2011)

What did the data reveal?

Figure 2 illustrates the hundred people from the different regions and age groups who took part in the questionnaire. 30% of the people comes from Pretoria CPD region, 24% Pretoria north, 9% Pretoria south, 30% Pretoria east and 6% comes from Pretoria west.

This data indicates the spread over all these regions of Pretoria, and of all of them 72% of the people answered 'yes' to knowing the location of the Wonderboom Nature Reserve, and 31% is aware and visited the Wonderboom Nature Reserve. One can deduce that the resort part of the reserve is used as a regional park. This implies that one will need to take that into consideration in the design for future development.

The different regions and age groups who took part in the questionnaire

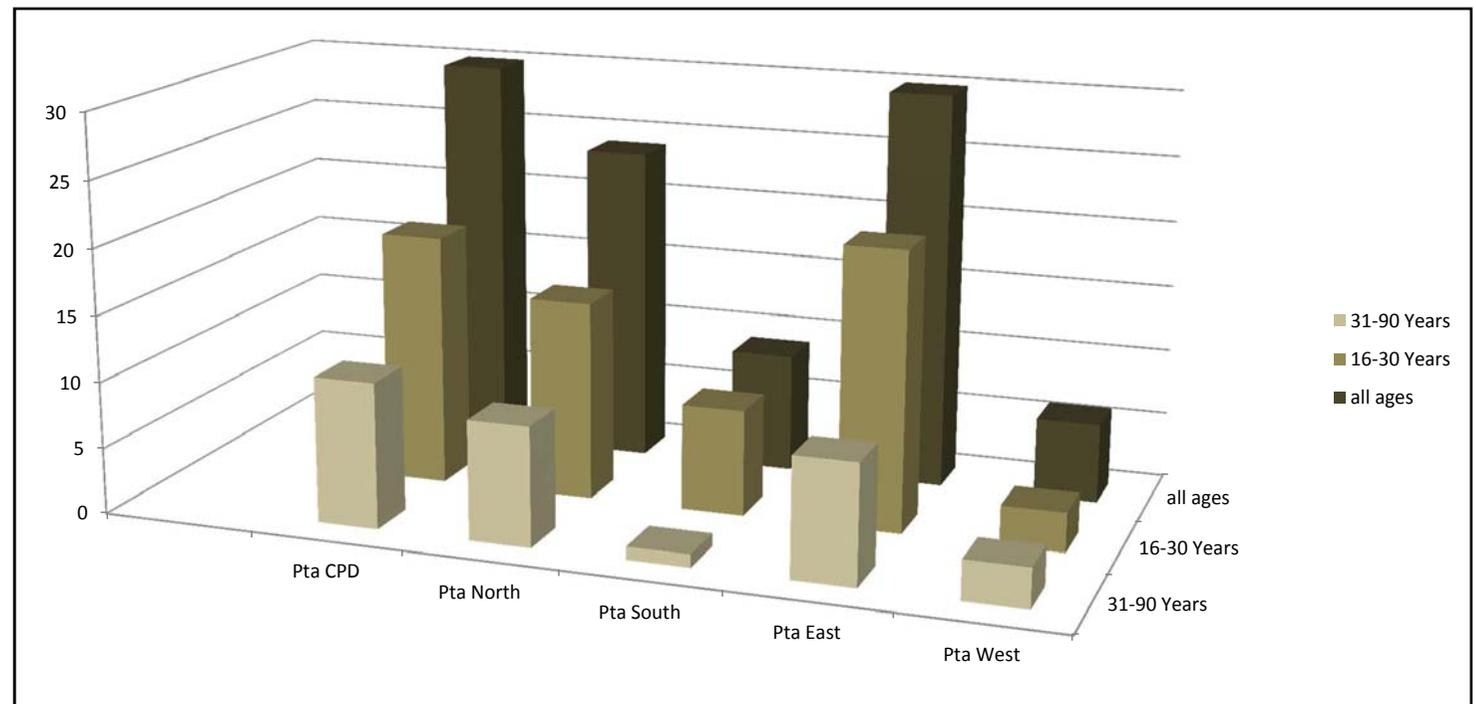


Fig. 2: The different regions and age groups of the people questioned (Author, 2011)

Visitors' knowledge about the Wonderboom Nature Reserve

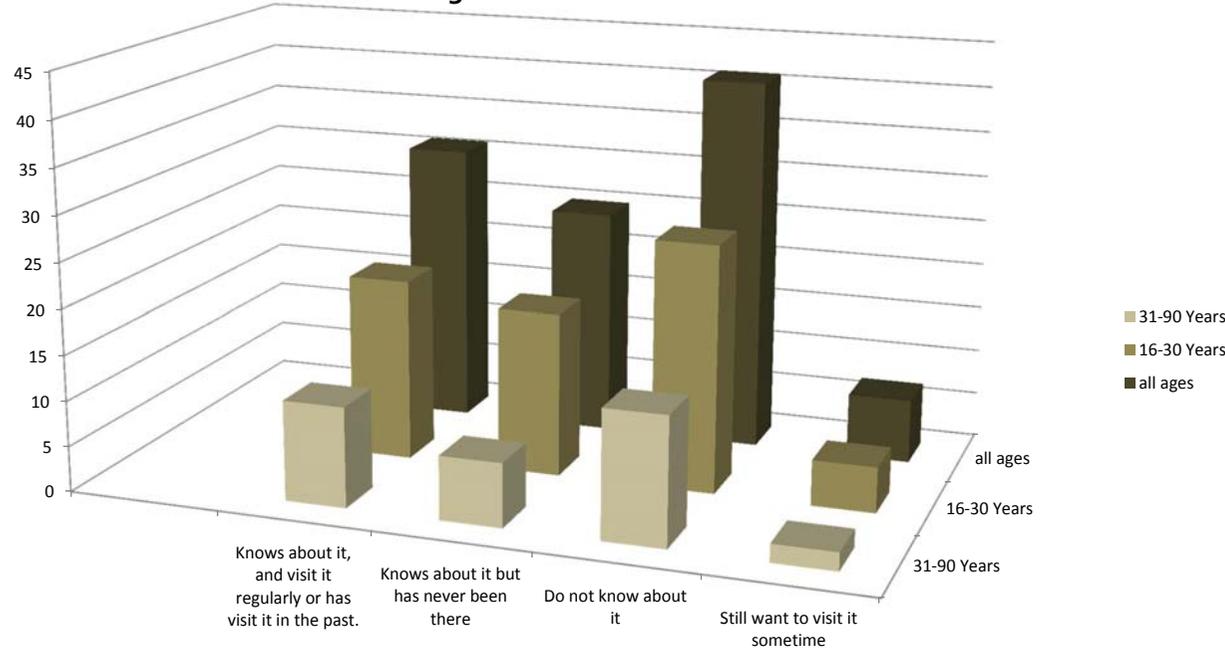


Figure 3 refers to the different knowledge levels of the different age groups.

From this data one can conclude that very few people really know about the Wonderboom Nature Reserve, and people would like to go there if they knew about it. It is interesting to find that more young people know about the reserve than older people ranging from the age of 31 and up. A lot of people is aware of the place, but has never been there, it could be that they have no understanding of the importance, uniqueness, cultural value and recreational opportunities of the Wonderboom Nature Reserve.

Fig. 3: The different age groups' knowledge about the Wonderboom Nature Reserve (Author, 2011)

Visitors' knowledge about the Wonderboom tree

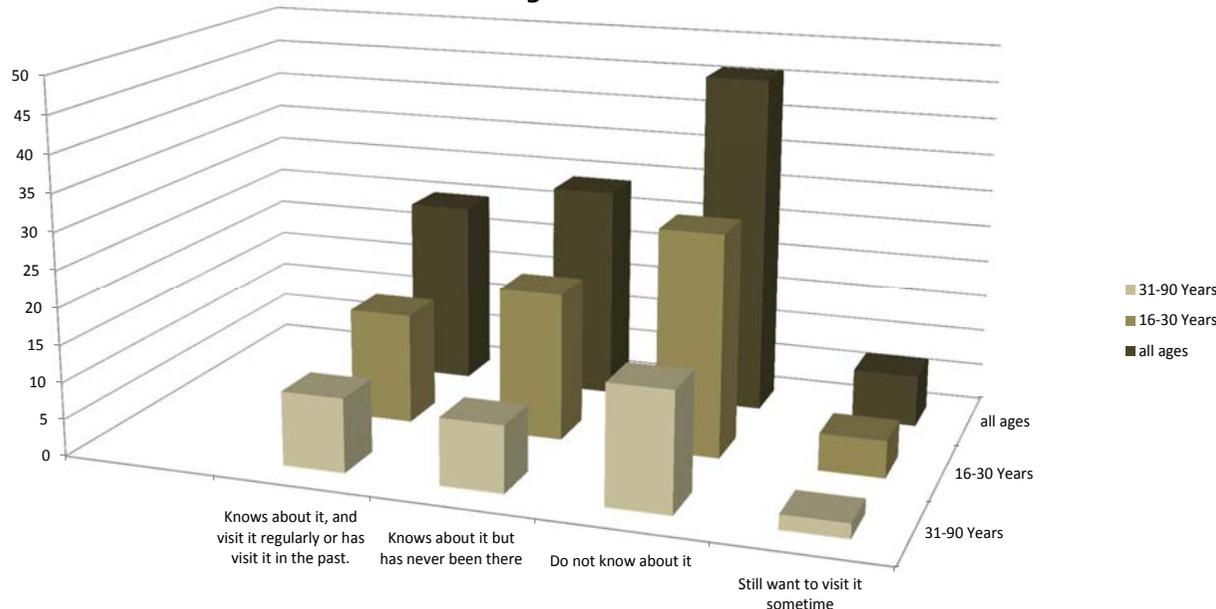


Figure 4 and 5 indicates the knowledge that people have of the existence of the Wonderboom tree and boer fort respectively.

From both figure 4 and 5 one can conclude that less people are aware of the wonderboom tree than the nature reserve itself and even fewer of the fort on top of the mountain. Once again, the younger generation knows more about the tree and fort than the older generation. People would like to visit these areas if they were informed.

Fig. 4: The different age groups knowledge about the Wonderboom tree (Author, 2011)

Visitors' knowledge about the fort at Wonderboom Nature Reserve

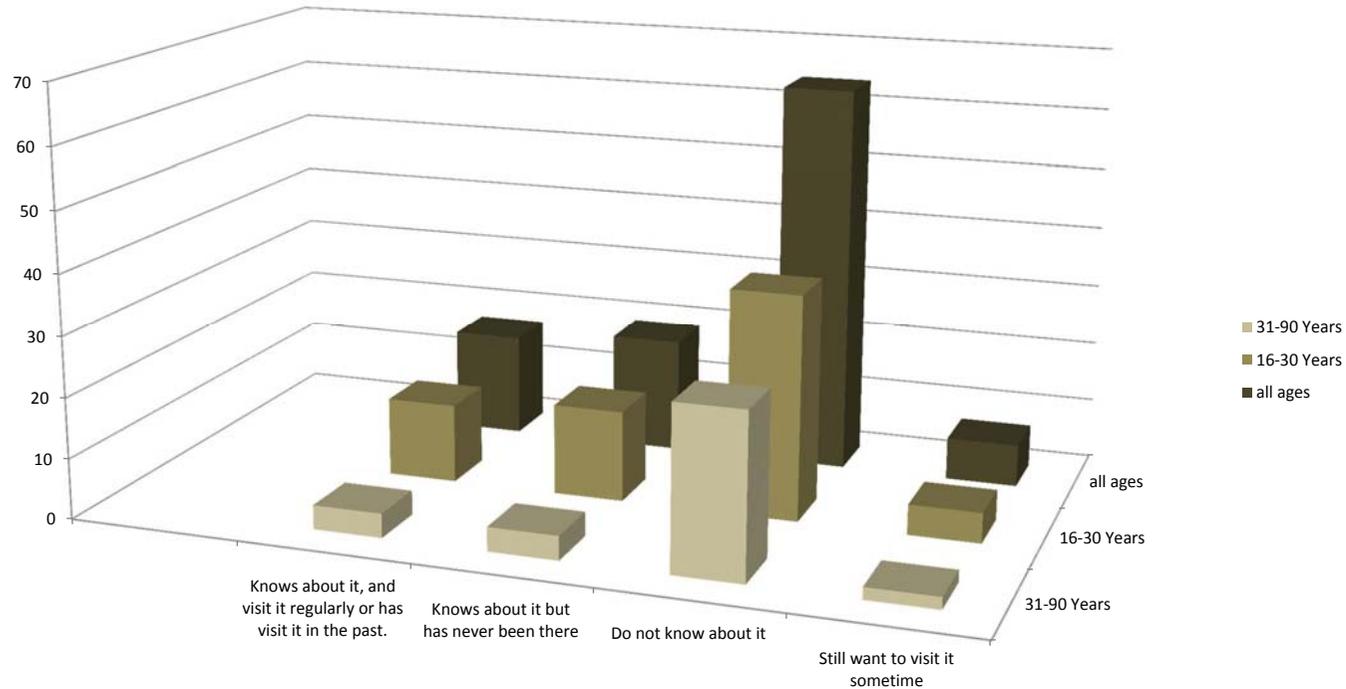
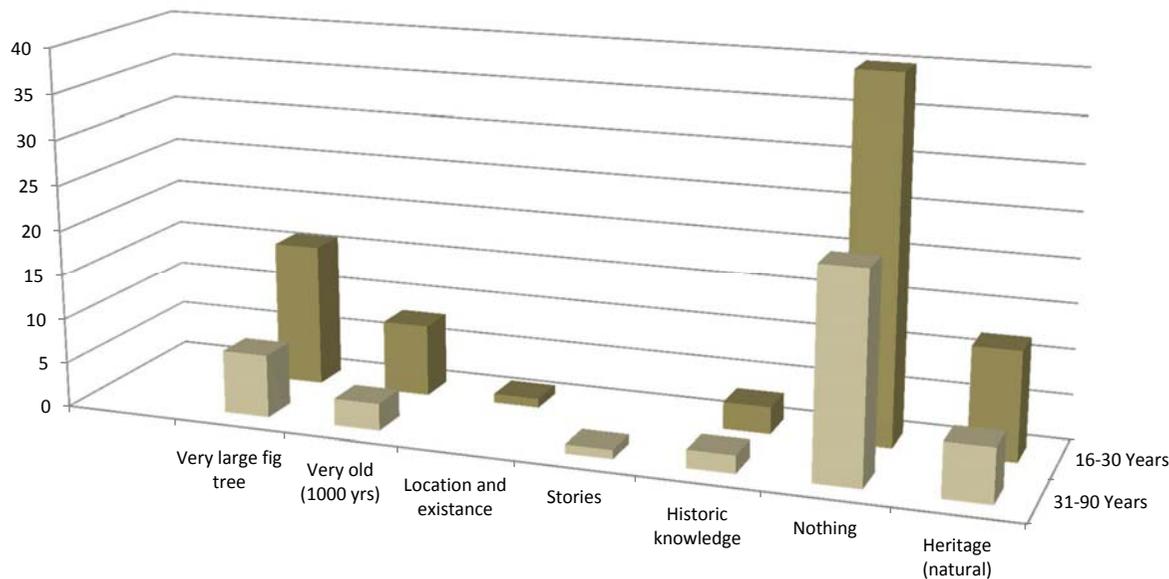


Fig. 5: The different age groups' knowledge about the fort at Wonderboom Nature Reserve (Author, 2011)

Information about the tree that the people know about



From the data in fig. 6 it is clear that most of the people who know something, knows that the tree is big and old. The majority knows nothing and only a few know something more or different, for instance that it has heritage value and some truly know the history.

Fig. 6: Information on what the people know about the wonderboom tree (Author, 2011)

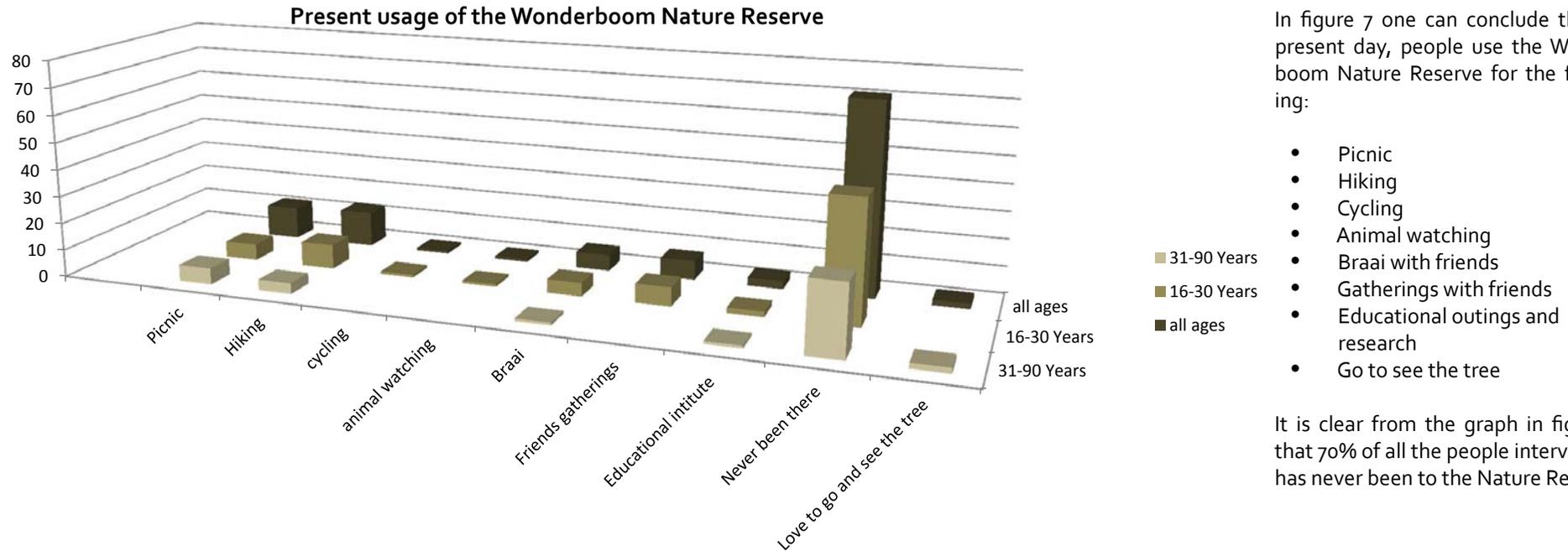


Fig. 7: Present usage of the Wonderboom Nature Reserve (Author, 2011)

Summary

30% of people is aware of the wonderboom nature reserve and has visited it at some stage in their lives, 25% of the people is aware of the Wonderboom Nature Reserve, but has never been there and 40% of the people doesn't know about the Wonderboom Nature Reserve. Upon closer inspection of the awareness of the reserve's main biophysical icon, the wonderboom tree, only 25% is aware of the tree, 29% is aware of it but has never visited it and 45% of the people do not know about it. Looking at the main cultural aspect of the nature reserve, the fort, only 17% of the people is aware of it and has visited it in the past, 19% is aware of it but has never seen it and 64% do not know about it.

The data revealed that most of the people are unaware of Wonderboom fort and have never visited it. For this reason the author decided to focus on the fort for the design intervention (on sketchplan level).

The lack of awareness of the Wonderboom Nature Reserve, Wonderboom tree and Wonderboom fort is eminent. Some visitors who visit the nature reserve are in some cases unaware of the heritage and history of the place, they are unaware of the importance of the place and see it as a normal park. This leads to the possibility that there is a lack of information about the site's significance, identity and character as well as little encouragement to promote interest and discovery.

In figure 7 one can conclude that at present day, people use the Wonderboom Nature Reserve for the following:

- Picnic
- Hiking
- Cycling
- Animal watching
- Braai with friends
- Gatherings with friends
- Educational outings and research
- Go to see the tree

It is clear from the graph in figure 7 that 70% of all the people interviewed, has never been to the Nature Reserve.

1.6.2.2 Future user

The site should attract, local residents, regional visitor's, national and international tourism. Tourists, who would want to see the Wonderboom fort in its original state, experience the landscape intervention and the iconic Wonderboom tree. This site can then become a regional park, and conservation area with the accessibility to all the rich historic layers on the reserve.

1.6.3 Client

The client is the City Council of Pretoria. The Wonderboom Nature Reserve also belongs to the City Council.

1.6.4 Possible sponsors

- The Government
- World Wildlife Fund
- SAHRA (South African Heritage Resources Agency)
- Local Chamber of Commerce in the Moot area
- Friends of the Wonderboom Nature Reserve
- Covenant (Geloftefees) Committee

1.7 Methodology

The research methodology involved in this document is directed towards the end goal of a landscape intervention and the experience thereof. Thus the emergent theory is not confined to the written word, but rather embodies the eventual, proposed landscape intervention.

In order to formulate a design question and subsequent solution, the extent of the problem has to be investigated using a research methodology. Refer to fig. 8.

Considering the nature of the site, it has the contrasting aspects of the tangible and intangible, the seen and the unseen, known and the unknown, all at once or discovery, past and present, the temporary and permanent, the visual and the obscure, city and nature, and lastly the natural and cultural. With this in mind the study will investigate these aspects, which will be discussed in chapter 3 and 5.

The intangible refers to the inherent potential (the significance of place), heritage and history of the existing site and the experience it can offer the user: the memory. The tangible refers to the physical and numerically definable attributes of the site and environment investigated in a site analysis. Aspects such as movement, hydrology, sustainability, biophysical and cultural aspects.

Methods:

1. An analytical survey was conducted during the analysis phase of the project. This includes mapping and data gathering.
2. A questionnaire was conducted to determine the public awareness of the nature reserve and its heritage elements. A hundred questionnaires were distributed to students, visitors on the site, people from the south, north, west and east of Pretoria.
3. A historical method will be used to investigate the full extent of the history and heritage of the site, not only the cultural history, but also the natural history. A historical method refers to the understanding of the background of past events. Qualitative and Quantitative variables can be used in the collection of historical information. The conclusion of a historical method is recorded in a meaningful narrative. Historical research is the process of systematically examining past events to give an account of what has happened in the past, but it involves an interpretation of these events, and to communicate an understanding of past events.

These methods will continually shape and feed the theoretical argument that will culminate in a relevant design solution.

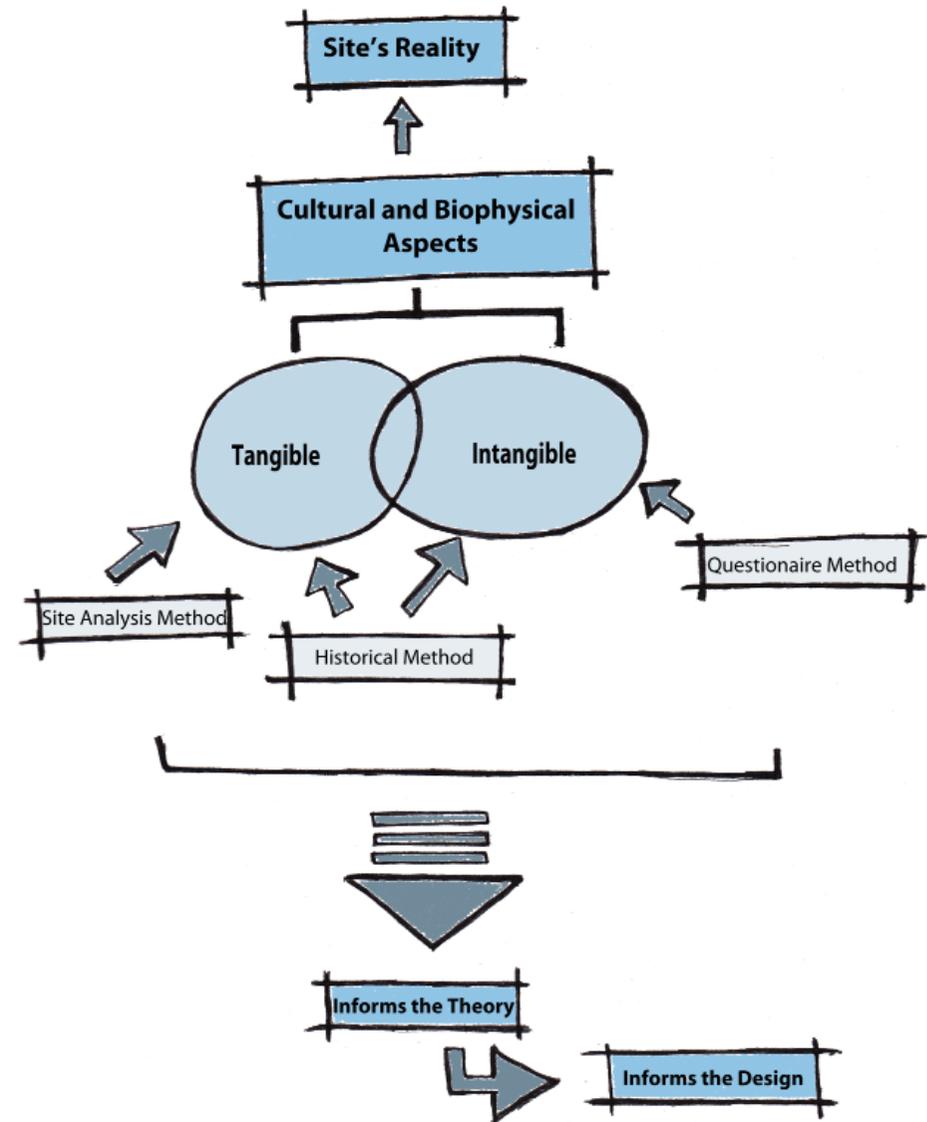


Fig. 8: Diagram showing the methodological approach (Author 2011)

1.8 Delimitations and assumptions

Delimitations:

- Because of the limited time and the size and complexity of the site an in-depth research into all the aspects could not be performed.
- I am a landscape architect and therefore I have a limited knowledge of archaeological processes. I can only derive my own understanding and design accordingly.
- All information required on the fort could not be obtained, for example the foundational drawings of the fort could not be found and some activities of the fort during its operation are not clear, (e.g. whether they had some sort of sanitary facility).

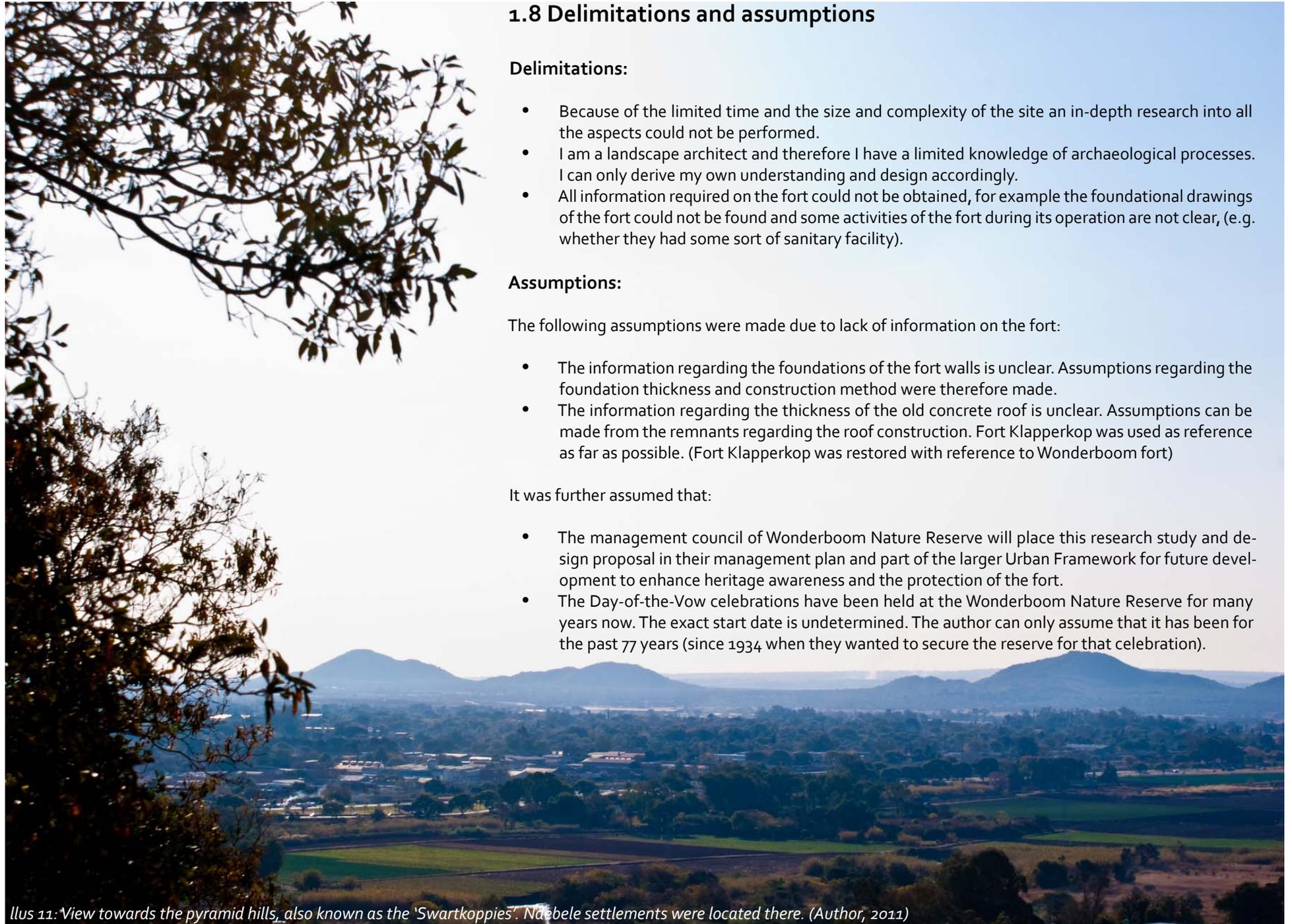
Assumptions:

The following assumptions were made due to lack of information on the fort:

- The information regarding the foundations of the fort walls is unclear. Assumptions regarding the foundation thickness and construction method were therefore made.
- The information regarding the thickness of the old concrete roof is unclear. Assumptions can be made from the remnants regarding the roof construction. Fort Klapperkop was used as reference as far as possible. (Fort Klapperkop was restored with reference to Wonderboom fort)

It was further assumed that:

- The management council of Wonderboom Nature Reserve will place this research study and design proposal in their management plan and part of the larger Urban Framework for future development to enhance heritage awareness and the protection of the fort.
- The Day-of-the-Vow celebrations have been held at the Wonderboom Nature Reserve for many years now. The exact start date is undetermined. The author can only assume that it has been for the past 77 years (since 1934 when they wanted to secure the reserve for that celebration).



Illus 11: View towards the pyramid hills, also known as the 'Swartkoppies'. Ndebele settlements were located there. (Author, 2011)