

**HERITAGE IMPACT ASSESSMENT FOR THE PLANNED WITPOORT
FARMSTYLE LIVING DEVELOPMENT, BRONKHORSTSPRUIT
MUNICIPAL DISTRICT, GAUTENG PROVINCE**

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EXECUTIVE SUMMARY

HERITAGE IMPACT ASSESSMENT FOR THE PLANNED WITPOORT FARMSTYLE LIVING DEVELOPMENT, BRONKHORSTSPRUIT MUNICIPAL DISTRICT, GAUTENG PROVINCE

The aim of the survey was to locate, identify, evaluate and document sites, objects and structures of cultural importance found within the boundaries of the area in which it is proposed to develop an housing estate.

Sites were identified and can be categorised into two groups. The first dates to the Anglo Boer War and are small structures, called sangars, in which soldiers hid (in contrast to trenches). As this was a defensive position, it present as a linear feature that covers more than 700 metres in length on top of the ridge. Some sections of this feature fall outside the area of proposed development. Although the developer has every intension to keep these structures, and therefore there would be no primary impact on them due to the proposed development, it is felt that there eventually will be a secondary impact. This is largely anticipated to be in the form of curios visitors, who might damage the structures or remove artifacts. We therefore recommend the following:

- That the structures are recorded, even those outside the study area as it forms a unit, by mapping and photography, and that SAHRA issues a permit to collect all objects (cartridge cases, etc.) for safekeeping in a museum.
- That some form of commemoration takes place on site. This can be a small plaque centrally situated, detailing the events that took place.

The second group of sites, dating to the Iron Age, all fall outside the study area. However, this is only by a few metres and one can similarly expect a secondary impact to take place here as well. We therefore recommend the following:

- That the structures are recorded by means of mapping and photography and that some test excavations are done by a qualified archaeologist. This can only be done after SAHRA has issued a permit for excavation.
- That some form of commemoration takes place on site. This can be a small plaque centrally situated, detailing the origin and function of these structures.

Lastly, archaeological material, by its very nature, occurs below ground. The developer should therefore keep in mind that archaeological sites might be exposed during the development activities. It is therefore recommended that

- If anything is noticed, work in that area should be stopped and the occurrence should immediately be reported to a museum, preferably one at which an archaeologist is available. The archaeologist should then investigate and evaluate the finds.

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GLOSSARY OF TERMS

Study area: Refers to the entire study area as indicated by the client in the accompanying Fig. 1 and 2.

Stone Age: The first and longest part of human history is the Stone Age, which began with the appearance of early humans between 3-2 million years ago. Stone Age people were hunters, gatherers and scavengers who did not live in permanently settled communities. Their stone tools preserve well and are found in most places in South Africa and elsewhere.

Early Stone Age	2 000 000 - 150 000 Before Present
Middle Stone Age	150 000 - 30 000 BP
Late Stone Age	30 000 - until c. AD 200

Iron Age: Period covering the last 1800 years, when new people brought a new way of life to southern Africa. They established settled villages, cultivated domestic crops such as sorghum, millet and beans, and they herded cattle as well as sheep and goats. These people, according to archaeological evidence, spoke early variations of the Bantu Language. Because they produced their own iron tools, archaeologists call this the Iron Age.

Early Iron Age	AD 200 - AD 1000
Late Iron Age	AD 1000 - AD 1830

Historical Period: Since the arrival of the white settlers - c. AD 1840 - in this part of the country

LIST OF ABBREVIATIONS

ADRC	Archaeological Data Recording Centre
EIA	Early Iron Age
ESA	Early Stone Age
LIA	Late Iron Age
LSA	Late Stone Age
MSA	Middle Stone Age
NHRA	National Heritage Resources Act
PHRA	Provincial Heritage Resources Agency
SAHRA	South African Heritage Resources Agency

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1. INTRODUCTION

The National Cultural History Museum¹ was contracted by **Exigent Engineering Consultants** to survey an area in which it is proposed to develop a farm-style housing estate. The aim of the survey was to determine the nature and potential of cultural heritage resources found within the boundaries of the area that is to be impacted by the developed.

Cultural heritage resources are broadly defined as all non-physical and physical human-made occurrences, as well as natural occurrences that are associated with human activity. These include all sites, structures and artefacts of importance, either individually or in groups, in the history, architecture and archaeology of human (cultural) development.

2. BACKGROUND AND BRIEF

The scope of work consisted of conducting a Phase 1 archaeological survey of the site in accordance with the requirements of Section 38(3) of the National Heritage Resources Act (Act 25 of 1999).

This include:

- Conducting a desk-top investigation of the area;
- A visit to the proposed development site.

The objectives were to

- Identify possible archaeological, cultural and historic sites within the proposed development areas;
- Evaluate the potential impacts of construction, operation and maintenance of the proposed development on archaeological, cultural and historical resources;
- Indicated which would be the preferred site for the proposed development;
- Recommend mitigation measures to ameliorate any negative impacts on areas of archaeological, cultural or historical importance.

¹ The National Cultural History Museum is affiliated to the Northern Flagship Institution, which act as parent body for a number of museums, all of which resorts under the Department of Arts and Culture.

3. STUDY APPROACH

3.1 Information base (sources)

A few resources dealing with specific events that took place in the region were identified.

3.2 Methodology

3.1 Preliminary investigation

3.1.1 Survey of the literature

A survey of the relevant literature was conducted with the aim of reviewing the previous research done and determining the potential of the area. In this regard, various reports, anthropological, archaeological and historical sources were consulted - see the list of references below.

3.1.2 Data bases

The *Heritage Sites Database* and the *Environmental Potential Atlas* was consulted.

3.1.3 Other sources

Topocadastral and other maps were also studied - see the list of references below.

3.2 Field survey

The area was divided into blocks by using natural (e.g. streams) as well as manmade (e.g. roads, fences) boundaries, and each block was surveyed walking a number of transects across it. Fences and rivers obviously necessitated a deviation from this strategy.

3.3 Documentation

Sites, objects and structures that are identified are documented according to the general minimum standards accepted by the archaeological profession. Coordinates of individual localities are determined by means of the *Global Positioning System (GPS)*² and plotted on a map. This information is added to the description in order to facilitate the identification of each locality.

Map datum used: Hartebeeshoek 94 (WGS84).

² According to the manufacturer a certain deviation may be expected for each reading. Care was, however, taken to obtain as accurate a reading as possible, and then to correlate it with reference to the physical environment before plotting it on the map.

3.4 Limitations

Dense vegetation (natural as well as intrusive) encountered during the survey period, made it difficult to identify sites, as well as to establish their extent (size).

4. STUDY AREA

4.1 Description of the study area

The location and extent of the study area can be determined from the map in Figure 1. It is to the east of the R25 and north of the R50 in the Bronkhorstspruit municipal district of Gauteng (Fig. 1). The centre point of the area is c.: S 25.97589, E 28.52546. It include portions 10 and 17 of the farm Witpoort 551JR.

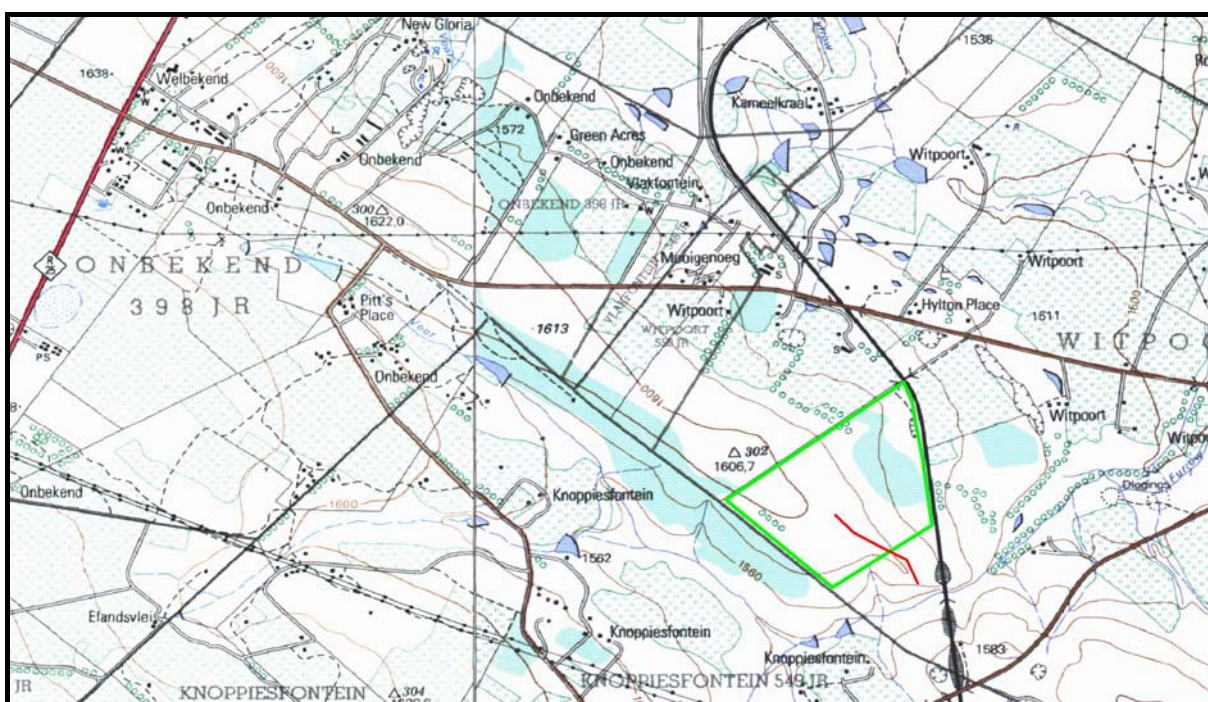


Figure 1. Location of the study area (in green), with the identified features indicated by the red line. (Map, courtesy of the Government Printer).

The geology is largely made up of quartzite, forming the ridge, with some shale in the northern section. The original vegetation of the area is classified as Moist Cool Highveld Grassland. In large sections of the study area, this has been replaced by black wattle trees.

4.2 Description of affected environment

A number of sites were identified and must be considered during development work. These are contextualized in chronological order below

4.2.1 Stone Age

No sites or object indicating Stone Age occupation of the area were found.

4.2.2 Iron Age

Some stone walling occur on the eastern side of the ridge, outside the study area. These walls were built in typical Iron Age manner, consisting of a large inner circle, with a number of smaller scallops on the outside. Because of its layout, size and location close to the river, it is guessed that this might have been a cattle outpost.

Iron Age occupation of the larger region mostly dates to the Late Iron Age, especially the period from 1500 onwards. These could be related to the Tswana or early Ndebele settlement, which is found extensively in the Bronberge, and further north in the Magaliesberge.



Fig. 2. One of the Late Iron Age sites. The shrubs at the back of the walling indicates the scallops.

4.2.3 Historic period

A number of structures are located on the ridge (see red line in Fig. 1). Based on their strategic position, different building technique (in contrast to the Iron Age walling) and the occurrence of loopholes, these are judged to be military in origin and to date to the Anglo Boer War.

To the northwest of the study area, the Battle of Cornwall Hill took place on 4 June 1900. The British forces, under command of Lord Roberts, were marching north, in the vicinity of Irene Station, with the aim to occupy Pretoria. The Boer forces, under Gen. Botha and Smuts, were harassing them, in order to prevent this. The Boers had gun placements, trenches and smaller fortifications to the south, east and north east of Irene Station (Van der Byl 1999). Needless to say, the Boers were unsuccessful in preventing the occupation and as result then followed a strategy of harassing anybody trying to enter or leave Pretoria.

This led, about a week later, to the Battle of Diamond Hill (in Afrikaans known as “Die Slag van Donkerhoek”). This battle was probably one of the largest one’s (considering the number of soldiers that took part on both sides) fought during the Anglo Boer War and took place on 11 and 12 June 1900. The British were advancing eastward from Pretoria over a wide front to engage with the Boers that were occupying the higher ground (i.e. Magaliesberge) north and east of Pretoria. In preparation the defend themselves, the Boers built numerous small fortifications on the ridges. Eventually the British succeeded to drive the Boers out, after which they took over the fortifications, expanding and enlarging them to keep the Boers at bay (Pelser 1999).

However, they were not very successful and the Boers kept on harassing them. Eventually, it was decided put and end to this. Gen. Hutton, commanding the Mounted Infantry Brigade, and assisted by a number of other units, set out from Irene south and eastwards in the direction of Delmas and Springs. Part of their strategy was to secure the old Natal wagon road (now the R50). Towards this end, they again built a number of small forts in strategic places. Some smaller skirmishes took place, e.g. on 7 July 1900 at Witklip near Bapsfontein and 11 July 1900 at Witpoort Pass, near the southern end of the Bronberge. All over the area the opposing forces were digging in, fortifying defensive positions. It all came to a head on 16 July 1900. After some heavy opening shelling by cannons from both sides, the Boers (under Gen. Viljoen) launched an attack, which in some areas ended up in hand to hand fighting, with the Boers seemingly to get the upper-hand. However, with the arrival of reinforcements, the British eventually succeeded in driving off the Boers, with the result that they eventually moved out of the area towards Middelburg and beyond (Panagos 1999).



Fig. 3. One of the small fortifications or sangars built by British troops.

5. SITE SIGNIFICANCE AND ASSESSMENT

Impact analysis of cultural resources under threat of the proposed development, are based on the present understanding of the development.

The **significance** of a heritage site and artefacts is determined by its historical, social, aesthetic, technological and scientific value in relation to the uniqueness, condition of preservation and research potential. It must be kept in mind that the various aspects are not mutually exclusive, and that the evaluation of any site is done with reference to any number of these.

Sites regarded as having low significance are viewed as being recorded in full after identification and would require no further mitigation. Impact from the development would therefore be judged to be low. Sites with a medium to high significance would therefore require mitigation. Mitigation, in most cases the excavation of a site, is in essence destructive and therefore the impact can be viewed as high and as permanent.

The two categories of sites in this area are rated as follows

- The Iron Age sites have a high significance on a regional basis, as they are quite rare in this area.
- The Anglo Boer War sites have a high significance on a regional basis, as there is still an interest in them by people, local as well as international (according to the farm owner, Mr Opperman, they had some international visitors in the past).

6. IDENTIFICATION OF RISK RESOURCES

An Environmental Impact Assessment is focused on two phases of a proposed development: **the construction and operation phases**. However, from a cultural heritage perspective, this distinction does not apply. Heritage sites are fixed features in the environment, occurring within specific spatial confines. Any impact upon them is permanent and non-reversible. Those resources that cannot be avoided and that are directly impacted by the development can be excavated/recorded and a management plan can be developed for future action. Those sites that are not impacted, can be written into the management plan, whence they can be avoided or cared for in the future.

Construction phase:

Possible Risks	Source of the risk
Actually identified risks	

- damage to sites	Construction work
Anticipated risks	
- looting of sites	Curios workers

Operation phase:

Possible Risks	Source of the risk
Actually identified risks	
- damage to sites	Not keeping to management plans
Anticipated risks	
- damage to sites	Unscheduled construction/developments
- looting of sites	Visitors removing objects as keepsakes

7. CONCLUSION

The aim of the survey was to locate, identify, evaluate and document sites, objects and structures of cultural importance found within the boundaries of the area in which it is proposed to develop an housing estate.

Sites were identified and can be categorised into two groups. The first dates to the Anglo Boer War and are small structures, called sangars, in which soldiers hid (in contrast to trenches). As this was a defensive position, it present as a linear feature that covers more than 700 metres in length on top of the ridge. Some sections of this feature fall outside the area of proposed development. Although the developer has every intension to keep these structures, and therefore there would be no primary impact on them due to the proposed development, it is felt that there eventually will be a secondary impact. This is largely anticipated to be in the form of curios visitors, who might damage the structures or remove artifacts. We therefore recommend the following:

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8. REFERENCES

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9. PROJECT TEAM

J van Schalkwyk: principal investigator

APPENDIX 1: STANDARDIZED SET OF CONVENTIONS USED TO ASSESS THE IMPACT OF PROJECTS ON CULTURAL RESOURCES

Significance

The *significance* of the sites and artefacts are determined by means of their historical, social, aesthetic, technological and scientific value in relation to their uniqueness, condition of preservation and research potential. It must be kept in mind that the various aspects are not mutually exclusive, and that the evaluation of any site is done with reference to any number of these.

Matrix used for assessing the significance of each identified site/feature

1. Historic value				
Is it important in the community, or pattern of history				
Does it have strong or special association with the life or work of a person, group or organisation of importance in history				
Does it have significance relating to the history of slavery				
2. Aesthetic value				
It is important in exhibiting particular aesthetic characteristics valued by a community or cultural group				
3. Scientific value				
Does it have potential to yield information that will contribute to an understanding of natural or cultural heritage				
Is it important in demonstrating a high degree of creative or technical achievement at a particular period				
4. Social value				
Does it have strong or special association with a particular community or cultural group for social, cultural or spiritual reasons				
5. Rarity				
Does it possess uncommon, rare or endangered aspects of natural or cultural heritage				
6. Representivity				
Is it important in demonstrating the principal characteristics of a particular class of natural or cultural places or objects				
Importance in demonstrating the principal characteristics of a range of landscapes or environments, the attributes of which identify it as being characteristic of its class				
Importance in demonstrating the principal characteristics of human activities (including way of life, philosophy, custom, process, land-use, function, design or technique) in the environment of the nation, province, region or locality.				
7. Sphere of Significance		High	Medium	Low
International				
National				
Provincial				
Regional				

Local				
Specific community				
8. Significance rating of feature				
1.	Low			
2.	Medium			
3.	High			

Significance of impact:

- low where the impact will not have an influence on or require to be significantly accommodated in the project design
- medium where the impact could have an influence which will require modification of the project design or alternative mitigation
- high where it would have a “no-go” implication on the project regardless of any mitigation

Certainty of prediction:

- Definite: More than 90% sure of a particular fact. Substantial supportive data to verify assessment
- Probable: More than 70% sure of a particular fact, or of the likelihood of that impact occurring
- Possible: Only more than 40% sure of a particular fact, or of the likelihood of an impact occurring
- Unsure: Less than 40% sure of a particular fact, or the likelihood of an impact occurring

Recommended management action:

For each impact, the recommended practically attainable mitigation actions which would result in a measurable reduction of the impact, must be identified. This is expressed according to the following:

- 1 = no further investigation/action necessary
- 2 = controlled sampling and/or mapping of the site necessary
- 3 = preserve site if possible, otherwise extensive salvage excavation and/or mapping necessary
- 4 = preserve site at all costs
- 5 = formalise cemetery or, alternatively, relocate graves if need be

Legal requirements:

Identify and list the specific legislation and permit requirements which potentially could be infringed upon by the proposed project, if mitigation is necessary.