

**Heritage impact assessment for the
PROPOSED DEVELOPMENT ON PORTION 105 OF THE FARM ZWAVELPOORT
373JR, GAUTENG PROVINCE**



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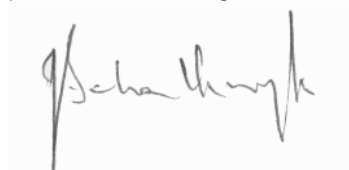
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Declaration:

I, J.A. van Schalkwyk, declare that I do not have any financial or personal interest in the proposed development, nor its developers or any of their subsidiaries, apart from the provision of heritage assessment and management services.



J A van Schalkwyk (D Litt et Phil)
Heritage Consultant
May 2010

EXECUTIVE SUMMARY

HERITAGE IMPACT ASSESSMENT FOR THE PROPOSED DEVELOPMENT ON PORTION 105 OF THE FARM ZWAVELPOORT 373JR, GAUTENG PROVINCE

It is proposed to develop a housing estate, with a hotel and wedding chapel on Portion 105 of the farm Zwavelpoort 373JR, east of Pretoria.

In accordance with Section 38 of the NHRA, an independent heritage consultant was appointed by **Interdesign Landscape Architects** to conduct a Heritage Impact Assessment (HIA) to determine if any sites, features or objects of cultural heritage significance occur within the boundaries of the area where the proposed development is to take place.

- A large Late Iron Age site was identified in the study area. In terms of Section 7 of the NHR Act, No. 25 of 1999, it is evaluated to be a Grade III site, with medium significance on a regional level. This site is protected by the Heritage Act and therefore, if it is to be impacted on by the proposed development, a permit for its destruction should be obtained from SAHRA.
- As a plan of the proposed development is not yet available, it is taken that the site will be impacted on.
- The mitigation recommended for this site, in the case of an impact due to the proposed development, is that it should be documented (mapped and photographed) and small test excavations done by an archaeologist to retrieve material in order to place the site in its correct cultural and temporal context.

Therefore, from a heritage point of view we recommend that the proposed development can continue, on condition of acceptance of the above mitigation measures. Furthermore, we request that if archaeological sites or graves are exposed during construction work, it should immediately be reported to a heritage consultant so that an investigation and evaluation of the finds can be made.



J A van Schalkwyk
Heritage Consultant
May 2010

TECHNICAL SUMMARY

Property details						
Province	Gauteng					
Magisterial district	Pretoria					
Topo-cadastral map	2528CD					
Closest town	Pretoria					
Farm name	Zwavelpoort 373JR					
Portions/Holdings	105					
Coordinates	Polygon					
	No	Latitude	Longitude	No	Latitude	Longitude
	1	S 25.82281	E 28.36854	2	S 25.82401	E 28.37018
	3	S 25.82817	E 28.36647	4	S 25.82697	E 28.36489

Development criteria in terms of Section 38(1) of the NHR Act	Yes/No
Construction of road, wall, power line, pipeline, canal or other linear form of development or barrier exceeding 300m in length	No
Construction of bridge or similar structure exceeding 50m in length	No
Development exceeding 5000 sq m	Yes
Development involving three or more existing erven or subdivisions	No
Development involving three or more erven or divisions that have been consolidated within past five years	No
Rezoning of site exceeding 10 000 sq m	No
Any other development category, public open space, squares, parks, recreation grounds	No

Development	
Description	Housing estate and hotel
Project name	

Land use	
Previous land use	Farming
Current land use	Small holdings

Heritage sites assessment		
<i>Site type</i>	<i>Site significance</i>	<i>Site grading (Section 7 of NHRA)</i>
Late Iron Age	Medium on regional level	III

Impact assessment		
<i>Impact</i>	<i>Mitigation</i>	<i>Permits required</i>
	2 = controlled sampling and/or mapping of the site necessary	SAHRA

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GLOSSARY OF TERMS AND ABBREVIATIONS

TERMS

Study area: Refers to the entire study area as indicated by the client in the accompanying Fig. 1 - 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 900
Middle Iron Age	AD 900 - AD 1300
Late Iron Age	AD 1300 - AD 1830

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

ABBREVIATIONS

ADRC	Archaeological Data Recording Centre
ASAPA	Association of Southern African Professional Archaeologists
BP	Before Present
CS-G	Chief Surveyor-General
EIA	Early Iron Age
ESA	Early Stone Age
LIA	Late Iron Age
LSA	Later Stone Age
HIA	Heritage Impact Assessment
MSA	Middle Stone Age
NASA	National Archives of South Africa
NHRA	National Heritage Resources Act
PHRA	Provincial Heritage Resources Agency
SAHRA	South African Heritage Resources Agency

HERITAGE IMPACT ASSESSMENT FOR THE PROPOSED DEVELOPMENT ON PORTION 105 OF THE FARM ZWAVELPOORT 373JR, GAUTENG PROVINCE

1. INTRODUCTION

It is proposed to develop a housing estate, with a hotel and wedding chapel on Portion 105 of the farm Zwavelpoort 373JR, east of Pretoria.

South Africa's heritage resources, also described as the 'national estate', comprise a wide range of sites, features, objects and beliefs. However, according to Section 27(18) of the National Heritage Resources Act (NHRA), No. 25 of 1999, no person may destroy, damage, deface, excavate, alter, remove from its original position, subdivide or change the planning status of any heritage site without a permit issued by the heritage resources authority responsible for the protection of such site.

In accordance with Section 38 of the NHRA, an independent heritage consultant was appointed by **Interdesign Landscape Architects** to conduct a Heritage Impact Assessment (HIA) to determine if any sites, features or objects of cultural heritage significance occur within the boundaries of the area where the proposed development is to take place.

2. TERMS OF REFERENCE

The scope of work for this study consisted of:

- Conducting of a desk-top investigation of the area, in which all available literature, reports, databases and maps were studied;
- A visit to the proposed development area.

The objectives were to

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

3. HERITAGE RESOURCES

3.1 The National Estate

The NHRA (No. 25 of 1999) defines the heritage resources of South Africa which are of cultural significance or other special value for the present community and for future generations that must be considered part of the national estate to include:

- places, buildings, structures and equipment of cultural significance;
- places to which oral traditions are attached or which are associated with living heritage;
- historical settlements and townscapes;
- landscapes and natural features of cultural significance;
- geological sites of scientific or cultural importance;
- archaeological and palaeontological sites;
- graves and burial grounds, including-
 - ancestral graves;

- royal graves and graves of traditional leaders;
- graves of victims of conflict;
- graves of individuals designated by the Minister by notice in the Gazette;
- historical graves and cemeteries; and
- other human remains which are not covered in terms of the Human Tissue Act, 1983 (Act No. 65 of 1983);
- sites of significance relating to the history of slavery in South Africa;
- movable objects, including-
 - objects recovered from the soil or waters of South Africa, including archaeological and palaeontological objects and material, meteorites and rare geological specimens;
 - objects to which oral traditions are attached or which are associated with living heritage;
 - ethnographic art and objects;
 - military objects;
 - objects of decorative or fine art;
 - objects of scientific or technological interest; and
 - books, records, documents, photographic positives and negatives, graphic, film or video material or sound recordings, excluding those that are public records as defined in section 1(xiv) of the National Archives of South Africa Act, 1996 (Act No. 43 of 1996).

3.2 Cultural significance

In the NHRA, Section 2 (vi), it is stated that “cultural significance” means aesthetic, architectural, historical, scientific, social, spiritual, linguistic or technological value or significance. This is determined in relation to a site or feature’s uniqueness, condition of preservation and research potential.

According to Section 3(3) of the NHRA, a place or object is to be considered part of the national estate if it has cultural significance or other special value because of

- its importance in the community, or pattern of South Africa's history;
- its possession of uncommon, rare or endangered aspects of South Africa's natural or cultural heritage;
- its potential to yield information that will contribute to an understanding of South Africa's natural or cultural heritage;
- its importance in demonstrating the principal characteristics of a particular class of South Africa's natural or cultural places or objects;
- its importance in exhibiting particular aesthetic characteristics valued by a community or cultural group;
- its importance in demonstrating a high degree of creative or technical achievement at a particular period;
- its strong or special association with a particular community or cultural group for social, cultural or spiritual reasons;
- its strong or special association with the life or work of a person, group or organisation of importance in the history of South Africa; and
- sites of significance relating to the history of slavery in South Africa.

4. STUDY APPROACH AND METHODOLOGY

4.1 Extent of the Study

This survey and impact assessment covers the area as presented in Section 5 and as illustrated in Figures 1 - 2.

4.2 Methodology

4.2.1 Preliminary investigation

4.2.1.1 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 anthropological, archaeological and historical sources were consulted.

- Some information was obtained from publications dealing with events and places in the larger region (Van Vollenhoven & Van den Bos 1997; Van Schalkwyk & Pelser 1999; Van Schalkwyk, Pelser & Van Vuuren 1996; Van Vuuren 2006).
- Some information was obtained from previous heritage impact assessment studies done in the region (De Jong 2005, 2008, Van Schalkwyk 2003 2004, 2006, 2010).

4.2.1.2 Data bases

The *Heritage Atlas Database*, the *Environmental Potential Atlas*, the *Chief Surveyor-General* and the *National Archives of South Africa* were consulted.

- Database surveys produced a number of sites located in the larger region of the proposed development.
- No information was found in the National Archives of South Africa or with the Chief Surveyor-General.

4.2.1.3 Other sources

Aerial photographs and topocadastral and other maps were also studied - see the list of references below.

- Information of a very general nature were obtained from these sources

4.2.2 Field survey

The area that had to be investigated was identified by **Interdesign Landscape Architects** by means of maps. The survey was done by walking a number of transects across the site.

4.3 Limitations

None at present

5. DESCRIPTION OF THE AFFECTED ENVIRONMENT

5.1 Site location and description

The study area is a rectangular piece of land, consisting of Portion 105 of the farm Zwavelpoort 373JR, which is located some distance to the southeast of Pretoria (Fig. 1). For more information, please see the Technical Summary presented above.

The study area is located on the western side of the Bronberge, a low ridge running from northwest to southeast past Pretoria. This ridge, for some unknown reason, has been subdivided by giving it specific names. In the region of the study area, it is known as Zwavelpoortrant. The ridge as well as the larger area is made up of quartzite. The original vegetation is classified as Moist Cool Highveld Grassland. Some previous development has taken place on the site - the western lowland section has been developed with houses and gardens.



Fig. 1. Location of the study area (green outline) in regional context.
(Map 2528: Chief Surveyor-General)

5.2 Regional overview

5.2.1 Stone Age

Stone tools dating to the various phases of the Stone Age occur in some areas of the larger region. Stone Age tools associated with the Early and Middle Stone Age are common, especially along the spruits and rivers where they cut through ridges and at the lower parts of the ridges and larger outcrops. These are viewed as find spots rather than sites per se. That means that as most of these are surface finds, they are viewed to be out of context and do not have any significance. Only a few stratified sites are known in the Magaliesberg range, but even these have little significance as the deposits have either eroded away, or have been impacted upon by later occupants of the shelters.

5.2.2 Iron Age

Although the Early Iron Age date back to c. AD 200, such sites are not known from the larger region. The closest one is the famous Broederstroom site located to the south of Hartebeestpoort dam in North West Province.

Sites dating to the Late Iron Age are found all over the region as well as the study area. Some of them can be related to the Tswana-speakers, whereas others to the Ndebele-speakers and possibly a few also to the Ndebele of Mzilikazi (see Van Schalkwyk et al 1996; Van Schalkwyk et al 1999 & Van Vuuren 2006).

The Iron Age sites tend to cluster in the Bronberg as well as on the more open flatlands, especially in areas where outcrops (dolorite, etc.) occur. It is possible, although not yet proven, that this distinction can be linked to the difference between the Sotho and Ndebele settlement preference referred to above.

5.2.3 Historical period

Early white farmers selected farms (such as Zwavelpoort) and then provided a description of the farm to the local landdrost, who noted the detail in a registration book and gave the claimant a copy. Claimed land was then inspected before a title and deed were issued. Since the registration of land entailed registration costs and annual land taxes, it was often delayed as long as possible. As a result, the registration of land claimed on the basis of burgher rights continued well into the 1890s.

The government of the Transvaal Boer republic (ZAR) granted the original farm Zwavelpoort 323JR to J.G.S. Bronkhorst in September 1859. By 1899 it had already been subdivided into the current farm portions.

Of course, this was also the area over which the British troops advanced during the 2nd Anglo-Boer War, before engaging in battle, on 11 and 12 June 1900, that was later to become known as the "Battle of Diamond Hill" or, the "Slag van Donkerhoek". It was one of the largest battles that took place during the war and the remains of gun placements, trenches and fortifications can still be found, however, mostly to the east and north of the study area (Van Vollenhoven & Van den Bos 1997).

Since its founding in 1855, urban development of Pretoria remained concentrated in the central area around Church Square. Elsewhere, settlement was mainly agricultural, characterized by the subdivision of the original farms to accommodate children. During the 1940-1950 era there was a large increase in the urban population and many new suburbs were developed on the periphery of the urban area.

Parallel with urban development was the development and settlement of smallholdings around the urban centres. Agricultural smallholdings developed in the Transvaal after World War I, but a real increase in the number of smallholdings only took place between 1935 and 1939. Smallholdings, such as Montana, Olympus and Willow Glen, eventually grew into proper residential suburbs. On Zwavelpoort and adjacent farms such as Kleinfontein, Mooiplaats, Boschkop and Rietfontein, more smallholdings sprung up in the 1960s, falling under the jurisdiction of the Transvaal Peri-Urban Areas Health Board (De Jong 2008).

5.3 Identified sites

The following cultural heritage resources were identified in the study area:

5.3.1 Stone Age

- No sites, features or objects dating to the Stone Age were identified in the study area.

5.3.2 Iron Age

- A complex of stone walled sites dating to the Late Iron Age was identified in the study area. Although made up of at least five sections, it is believed that this forms a single homestead, occupied by a man with his various wives occupying different sections. It might also be that some of the units were occupied by his elder, married, sons with their own families.

5.3.3 Historic period

- No sites, features or objects dating to the historic period were identified in the study area.

6. SITE SIGNIFICANCE AND ASSESSMENT

6.1 Heritage assessment criteria and grading

The NHRA stipulates the assessment criteria and grading of archaeological sites. The following categories are distinguished in Section 7 of the Act:

- **Grade I:** Heritage resources with qualities so exceptional that they are of special national significance;
- **Grade II:** Heritage resources which, although forming part of the national estate, can be considered to have special qualities which make them significant within the context of a province or a region; and
- **Grade III:** Other heritage resources worthy of conservation, on a local authority level.

The occurrence of sites with a Grade I significance will demand that the development activities be drastically altered in order to retain these sites in their original state. For Grade II and Grade III sites, the applicable of mitigation measures would allow the development activities to continue.

6.2 Statement of significance

In terms of Section 7 of the NHRA, all the sites currently known or which are expected to occur in the study area are evaluated to have Grade III significance. This is based on the large number of similar sites known to exist in the region.

- A complex of stonewalled sites dating to the Late Iron Age was identified. It can be linked with either the Ndebele or Tswana occupation of the larger region after 1700. The sites occur in a line along the western edge of the Bronberge. Different core sections were identified, probably making up various households in a larger homestead. Each of these core sections were probably occupied by a different wife of the homestead owner.

6.3 Impact assessment

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

- The site consists of a number of sections (with some laying outside the study area) forming an integrated whole. An impact on one section would therefore have an indirect impact on the larger whole. Although the owner/developer is emphatic in his wish to protect the site, it is proposed to use the stone walling as a backdrop for a hotel, or a wedding chapel or a dining area (barbeques). Even if this takes place off the site, it will still have a secondary impact on the site, impacting on the sense of place as well as that people might look for artefacts to remove. As a plan of the proposed development is not yet available, it is taken that the site will be impacted on.

7. RECOMMENDED MANAGEMENT MEASURES

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.

7.1 Objectives

- Protection of archaeological, historical and any other site or land considered being of cultural value within the project boundary against vandalism, destruction and theft.
- The preservation and appropriate management of new discoveries in accordance with the National Heritage Resources Act (Act No. 25 of 1999), should these be discovered during construction.

7.2.1 Construction phase

General management objectives and commitments:

- To avoid disturbing sites of heritage importance; and
- To avoid disturbing burial sites.

The following shall apply:

- Known sites should be clearly marked in order that they can be avoided during construction activities.
- The contractors and workers should be notified that archaeological sites might be exposed during the construction work.
- Should any heritage artefacts be exposed during excavation, work on the area where the artefacts were discovered, shall cease immediately and the Environmental Control Officer shall be notified as soon as possible;
- All discoveries shall be reported immediately to a museum, preferably one at which an archaeologist is available, so that an investigation and evaluation of the finds can be made. Acting upon advice from these specialists, the Environmental Control Officer will advise the necessary actions to be taken;
- Under no circumstances shall any artefacts be removed, destroyed or interfered with by anyone on the site; and
- Contractors and workers shall be advised of the penalties associated with the unlawful removal of cultural, historical, archaeological or palaeontological artefacts, as set out in the National Heritage Resources Act (Act No. 25 of 1999), Section 51. (1).

7.2.2 Operation phase

General management objectives and commitments:

- To avoid disturbing sites of heritage importance.

The following shall apply:

- Continued care should be taken to observe discovery of any sites of heritage significance during operation. Should any archaeological artifacts and palaeontological remains be exposed during operations, work on the area where the artefacts were found, shall cease immediately and the appropriate person shall be notified as soon as possible;
- Upon receipt of such notification, an Archaeologist or Palaeontologist shall investigate the site as soon as practicable. Acting upon advice from these specialists, the necessary actions shall be taken;
- Under no circumstances shall archaeological or palaeontological artefacts be removed, destroyed or interfered with by anyone on the site during operations; and
- The operator shall advise its workers of the penalties associated with the unlawful removal of cultural, historical, archaeological or palaeontological artefacts, as set out in the National Heritage Resources Act (Act No. 25 of 1999), Section 51(1).

In order to achieve this, the following should be in place:

- A person or entity, e.g. the Body Corporate, should be tasked to take responsibility for the heritage sites and should be held accountable for any damage.