

**HERITAGE IMPACT ASSESSMENT FOR THE PLANNED RIETVALLEI
180IQ DEVELOPMENT, KRUGERDORP MUNICIPAL DISTRICT,
GAUTENG PROVINCE**

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EXECUTIVE SUMMARY

HERITAGE IMPACT ASSESSMENT FOR THE PLANNED RIETVALLEI 180IQ DEVELOPMENT, KRUGERDORP 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 a housing estate.

The remains of structures that are typical of farming activities and what one would expect on a small holding were identified in the area and on site. These consists of water tanks, small outbuildings, cement slabs that served as the basis/foundations for structures, water furrows, accommodation for labourers, etc. As most of these are very run down and damaged, they are viewed to have very low significance and need no further attention. Fortunately, also, most are located on adjacent Portions of the farm and would not be impacted on by the proposed development. Only one site (see 4.2.3.2), the origin of which is somewhat uncertain, is flagged as sensitive. We therefore recommend that the proposed development can continue on condition of an archaeologist being in attendance when work commences in that particular area.

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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 **Prism Environmental Management Services** to survey an area in which it is proposed to develop a 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 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 north of the R28 and west of the junction with the N4 in the Krugersdorp municipal district of Gauteng (Fig. 1). The centre point of the area is c.: S 26.06115, E 27.81789. It include portions 14 and 82 of the farm Rietvallei 180IQ.

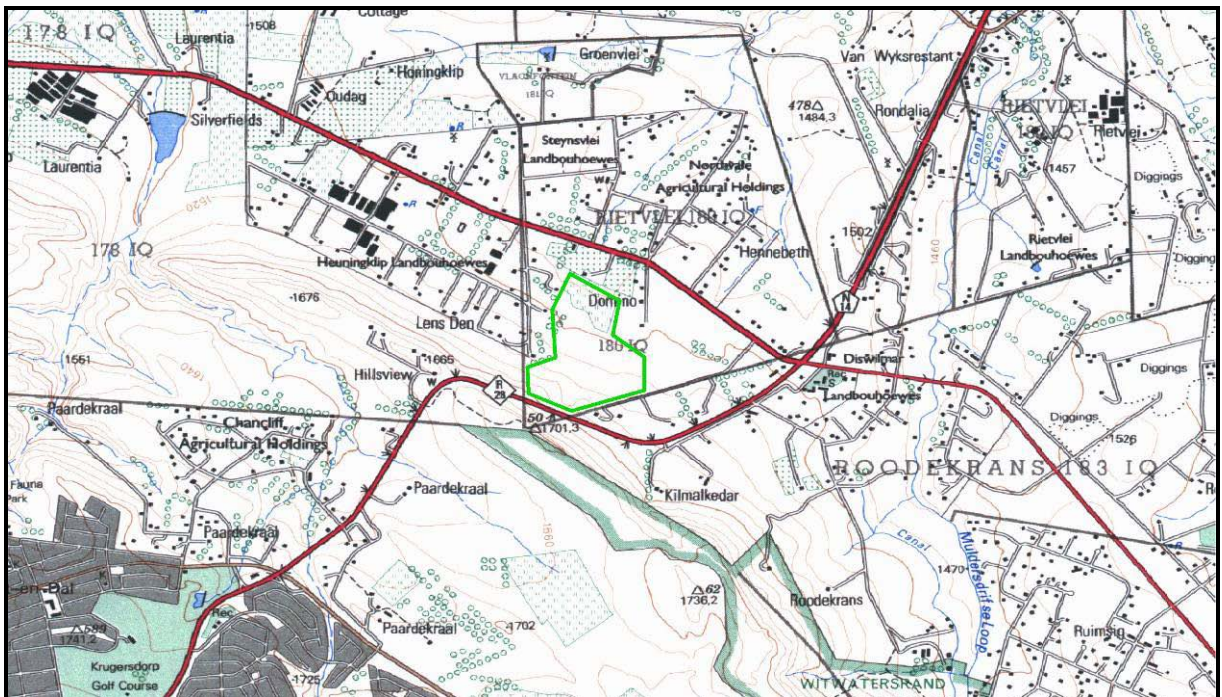


Figure 1. Location of the study area, outlined in green. (Map, courtesy of the Government Printer).

The geology is made up of quartzite and the original vegetation of the area is classified as Rocky Highveld Grassland. In large sections of the study area, this grassland has been replaced by fields for the cultivation of hay.

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

No sites, or objects indicating Iron Age occupation of the area were found.

4.2.3 Historic period

Parts of the area are littered with rubble and the remains of structures that are typical of farming activities and what one would expect on a small holding. These consists of water tanks, small outbuildings, cement slabs that served as the basis/foundations for structures, water furrows, accommodation for labourers, etc. As most of these are very run down and damaged, they are viewed to have very low significance.

4.2.3.1 Grave

A grave was found on an adjacent property, Portion 35 of Rietvallei 180IQ, close to one of the modern dwellings. As it is very overgrown with grass, it cannot be dated nor can the deceased be identified. However, the owner of the of the property under study was aware of the grave and pointed out that a female person, the maid of the then owner of Portion 35, the late Mrs Rosemary Mähne, was buried there.

Location: S 26.06018; E 27.81972

This feature would not be impacted on by the proposed development.



Fig. 2. The identified grave.

4.2.3.2 Structure

A feature that might be farming related was identified close to a demolished farmhouse and borehole. It probably served as a base for the mounting of equipment. However, due to its overgrown state and appearance, this cannot be confirmed and the possibility that it might be a grave cannot be discounted. Based on its size, it might be that of a child. The area is therefore flagged as sensitive.

Location: S 26.05952; E 27.81517

It is recommended that when development starts, an archaeologist is on standby to monitor this area and that if it turns out to be a grave, to institute proper procedures.



Fig. 3. The second identified feature.

4.2.3.3 Homestead

The remains of a structure built from local stone and cement was identified. Due to its current state of preservation and the way it is overgrown with trees, it is difficult to determine its use and age, but it was possibly farming related. It is located on the adjacent Portion 55.

Location: S 26.06009; E 27.81417

This feature would not be impacted on by the proposed development.



Fig. 4. The front side of the structure.

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.

Although a number of sites are mentioned in this report, only one (see 4.2.3.2 above) would actually be impacted on by the proposed development. In accordance to Section 7 of the HRA Act, it is judged to have a low significance.

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 a housing estate.

The remains of structures that are typical of farming activities and what one would expect on a small holding were identified in the area and on site. These consists of water tanks, small outbuildings, cement slabs that served as the basis/foundations for structures, water furrows, accommodation for labourers, etc. As most of these are very run down and damaged, they are viewed to have very low

significance and need no further attention. Fortunately, also, most are located on adjacent Portions of the farm and would not be impacted on by the proposed development. Only one site (see 4.2.3.2), the origin of which is somewhat uncertain, is flagged as sensitive. We therefore recommend that the proposed development can continue on condition of an archaeologist being in attendance when work commences in that particular area.

8. REFERENCES

Acocks, J.P.H. 1975. *Veld Types of South Africa*. Memoirs of the Botanical Survey of South Africa, No. 40. Pretoria: Botanical Research Institute.

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9. PROJECT TEAM

J van Schalkwyk: principal investigator

F Teichert, field surveyor

APPENDIX 1: 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.