

HERITAGE IMPACT ASSESSMENT  
FOR THE RIETFOONTEIN NATURE RESERVE,  
RANDBURG DISTRICT, GAUTENG

For:

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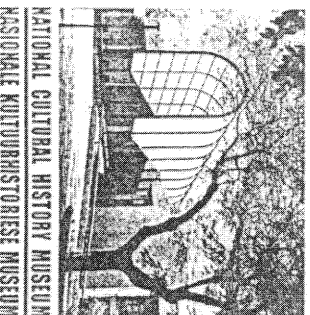
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## SUMMARY

### **Heritage impact assessment for the Rietfontein Nature Reserve, Randburg District, Gauteng**

The aim of the survey was to locate, identify, evaluate and document sites, objects and structures of cultural significance found within the boundaries of the area in which it is proposed to develop a variety of facilities in the nature reserve.

Based on what was found and its evaluation, it is recommended that the proposed development can continue, on condition of acceptance of the following recommendations:

- If archaeological sites are exposed during construction work, it should immediately be reported to a museum, preferably one at which an archaeologist is available, so that an investigation and evaluation of the finds can be made.

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## HERITAGE IMPACT ASSESSMENT FOR THE RIETFONTein NATURE RESERVE, RANDBURG DISTRICT, GAUTENG

### 1. THE SURVEY

The National Cultural History Museum was contracted by Bohlweki Environmental to survey an area in which it is proposed to develop site-specific facilities in the Rietfontein Nature Reserve. The rest of the reserve was also surveyed. 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 that is to be impacted by the developed.

### 2. TERMS OF REFERENCE

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;
- Recommend mitigation measures to ameliorate any negative impacts on areas of archaeological, cultural or historical importance.

### 3. DEFINITIONS AND ASSUMPTIONS

The following aspects have a direct bearing on the survey and the resulting report:

- X **Cultural resources** are all nonphysical 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.
- X 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.

- X Sites regarded as having low significance have already been recorded in full and require no further mitigation. Sites with medium to high significance require further mitigation.
- X The latitude and longitude of archaeological sites are to be treated as sensitive information by the developer and should not be disclosed to members of the public.

#### 4. LEGISLATIVE REQUIREMENTS

Aspects concerning the conservation of cultural resources are mainly dealt within two acts. These are the South Africa Heritage Resources Act (Act 25 of 1999) and the Environmental Conservation Act (Act 73 of 1989).

##### 4.1 South African Heritage Resources Act

###### **Archaeology, palaeontology and meteorites**

In terms of Section 35(4) of this act, no person may, without a permit issued by the responsible heritage resources authority destroy, damage, excavate, alter, deface or otherwise disturb any archaeological or palaeontological site or material or any meteorite; bring onto, or use at an archaeological or palaeontological site any excavation equipment or any equipment that assists in the detection or recovery of metals or archaeological and palaeontological material or objects, or use such equipment for the recovery of meteorites.

###### **Structures:**

Section 34(1) of this act states that no person may alter or demolish any structure or part of a structure which is older than 60 years without a permit issued by the relevant provincial heritage resources authority.

“Structure” means any building, works, device or other facility made by people and which is fixed to land, and includes any fixtures, fittings and equipment associated therewith;

“Alter” means any action affecting the structure, appearance or physical properties of a place or object, whether by way of structural or other works, by painting, plastering or other decoration or any other means.

###### **Human remains:**

In terms of Section 36(3) of the National Heritage Resources Act, no person may, without a permit issued by the relevant heritage resources authority:

- (a) destroy, damage, alter, exhume or remove from its original position of otherwise disturb the grave of a victim of conflict, or any burial ground or part thereof which contains such graves;
- (b) destroy, damage, alter, exhume or remove from its original position or otherwise disturb any grave or burial ground older than 60 years which is situated outside a formal cemetery administered by a local authority; or
- (c) bring onto or use at a burial ground or grave referred to in paragraph (a) or (b) any excavation, or any equipment which assists in the detection or recovery of metals.

Human remains that are less than 60 years old are subject to provisions of the Human Tissue Act (Act 65 of 1983) and to local regulations.

## **4.2 Environmental Conservation Act**

This act states that a survey and an evaluation of cultural resources should be undertaken in areas where development, which will change the face of the environment, is to be made. The impact of the development on the cultural resources should also be determined and proposals to mitigate this impact are to be formulated.

## **5. METHODOLOGY**

### **5.1 Preliminary investigation**

#### **5.1.1 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 - see the list of references below.

#### **5.1.2 Data bases**

The **Archaeological Data Recording Centre (ADRC)**, housed at the National Cultural History Museum, Pretoria, was consulted. The **Environmental Potential Atlas** was also consulted.

#### **5.1.3 Other sources**

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

### **5.2 Field survey**

The field survey was done according to generally accepted archaeological practices, and was aimed at locating all possible sites, objects and structures. The area that had to be investigated was identified by Bohlweki Environmental by means of maps. Local staff members assisted as guides and informants. The area was investigated by walking across it in a grid pattern. Special attention was given to unnatural topographical occurrences such as trenches, holes, outcrops and clusters of trees were investigated.

### **5.3 Documentation**

All 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)**<sup>1</sup> and plotted on a map. This information is added to the description in order to facilitate the identification of each locality.

Map datum used: Hartheeshoek 94 (WGS84).

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<sup>1</sup> 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.

## 6. DESCRIPTION OF THE AREA



Figure 1. Location of the study area.

The area that was investigated is located on a portion of the farm Rietfontein 21R, directly west of the suburb of Paulshof in the Randburg District of Gauteng (Fig. 1). It has been used as a nature reserve for some time, but prior to that it was a small-holding.

The topography of the area consists of a small granite ridge, running roughly north to south. The highest point of the ridge is located on the eastern site of the reserve. The original vegetation is classified by Acocks as Rocky Highveld Grassland, but this has been heavily impacted on in the past.

## 7. DISCUSSION

The prehistory of the larger region has been clearly mapped out, especially by Revil Mason, and other authors as well.

Mason's research has indicated that enough sites inhabited by Stone Age people exists in order to deduce that they would have been in the area, sheltering in the more wooded valleys by night, hunting and gathering on the open grass plains by day (Mason 1951, 1962). However, little evidence of their activities would have remained in a primary context due to the intensive development of the area over the past hundred years.

Mason's comprehensive study dealing with the Iron Age occupation of the area, similarly indicates the existence of a number of archaeological sites in the larger area (Mason 1986:521), although none of these are situated close to the area under investigation.

Early Iron Age people have been living in the larger area since c. AD 460 at Broederstroom to the west of Johannesburg. Originally these communities were few and far between. In contrast, during the late Iron Age and especially the period from c. AD 1600, large numbers of people settled in the area. Late Iron Age sites are found at Lone Hill, Suikerbosrand, Klipriviersberg, Melville Koppies, etc. (Horn 1996, Mason 1971, 1986). It is well known that in this area they built megasites using stone walling to create complex settlement units (Maggs 1976, Mason 1962). A few, smaller sites in the immediate vicinity of the Rietfontein Nature Reserve are found, for example, at Lone Hill and Melville Koppies nature reserves. These are very noticeable in the landscape and would, unless deliberately destroyed, be easily identified on old photographs.

Johannesburg as city only started to develop only after the discovery of gold. Previously, the area was divided into different farms. However, due to the rapid urban spread, most of these remains have long since being torn down.

#### **7.1 Stone Age**

No stone tools were noticed and no sites likely to be inhabited by Stone Age people occur in the study area.

#### **7.2 Iron Age**

No sites dating to the Iron Age were identified.

#### **7.3 Historical period**

The remains of a few old structures that were demolished during the past decade or two, occurs in different places in the study area. However, from what little remains of these structures, it is judged that little information would be obtained from them and that the features have no cultural significance.

One feature that was speculated to be a grave was investigated. It is our opinion that this is not the case. This seems to be building rubble that was dumped here, that included a piece of slate. On this somebody drew some graffiti, creating the illusion that this might be a grave.

### **8. IDENTIFICATION OF RISK SOURCES**

The following project actions may impact negatively on archaeological sites and other sites of cultural importance. The actions are most likely to occur during the construction phase of the proposed project.

- Excavation of trenches for foundations of buildings, sewerage disposal, etc., might exposed archaeological material



## 9. RECOMMENDATIONS

The aim of the survey was to locate, identify, evaluate and document sites, objects and structures of cultural significance found within the boundaries of the area in which it is proposed to develop a variety of facilities in the nature reserve.

Based on what was found and its evaluation, it is recommended that the proposed development can continue, on condition of acceptance of the following recommendations:

- If archaeological sites are exposed during construction work, it should immediately be reported to a museum, preferably one at which an archaeologist is available, so that an investigation and evaluation of the finds can be made.

## 10. REFERENCES

### 10.1 Data bases

Archaeological Data Recording Centre, National Cultural History Museum, Pretoria.  
Environmental Potential Atlas, Department of Environmental Affairs and Tourism.

### 10.2 Literature

- Acocks, J.P.H. 1975. *Veld Types of South Africa*. Memoirs of the Botanical Survey of South Africa, No. 40. Pretoria: Botanical Research Institute.
- Holm, S.E. 1966. *Bibliography of South African Pre- and Protohistoric archaeology*. Pretoria: J.L. van Schaik.
- Horn, A.C. 1996. Okkupasie van die Bankeveld voor 1840 n.C.: 'n sintese. *South African Journal of Ethnology* 19(1):17-27.
- Maggs, T.M.O'C. 1976. *Iron Age communities of the Southern Highveld*. Occasional Publications of the Natal Museum No. 2. Pietermaritzburg: Natal Museum.
- Mason, R.J. 1962. *Prehistory of the Transvaal*. Johannesburg: Witwaterstrand University Press.
- Mason, R.J. 1971. *Prehistoric man at Melville Koppies*. Occasional Paper No. 6. Johannesburg: Archaeological Research Bulletin.
- Mason, R. 1986. *Origins of Black people of Johannesburg and the Southern Western Central Transvaal, AD 350-1880*. Occasional Paper No. 16. Johannesburg: Archaeological Research Unit.
- Norwich, O. 1986. *A Johannesburg Album*. Johannesburg: AD. Donker.
- Van der Waal, G-M. 1986. *Van Mynkamp tot Metropolis*. Johannesburg: Chris van Rensburg Publikasies

Richardson, D. 2001. *Historic sites of South Africa*. Cape Town: Struik Publishers.

Van Riet Lowe, C. n.d. *The distribution of Prehistoric rock engravings and paintings in South Africa*. Archaeological Survey, Archaeological Series No. 7.

Van Warmelo, N.J. 1977. *Anthropology of Southern Africa in Periodicals to 1950*. Pretoria: Government Printer.

### 10.3 Maps

1 : 50 000 Topocadastral maps – 2628AA

## 11. PROJECT TEAM

J van Schaikwyk

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

### 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

### 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.

## **APPENDIX 2: SURVEY RESULTS<sup>2</sup>**

[Previous site numbers relate to other known sites on a particular ¼ degree sheet already documented in the ADRG, and does not necessarily refer to sites occurring on or close to the specific area of development.]

Map datum used: Hartebeeshoek 94 (WGS84).

Nil

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<sup>22</sup> See Appendix 1 for an explanation of the conventions used in assessing the cultural remains.

### APPENDIX 3: GLOSSARY AND ABBREVIATIONS

This section is included to give the reader some necessary background. It must be kept in mind, however, that these dates are all relative and serve only to give a very broad framework for interpretation.

#### STONE AGE

Early Stone Age (ESA)	2 000 000 - 150 000 Before Present
Middle Stone Age (MSA)	150 000 - 30 000 BP
Late Stone Age (LSA)	30 000 - until c. AD 200

#### IRON AGE

Early Iron Age (EIA)	AD 200 - AD 1000
Late Iron Age (LIA)	AD 1000 - AD 1830

#### HISTORICAL PERIOD

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

ADRC - Archaeological Data Recording Centre

core - a piece of stone from which flakes were removed to be used or made into tools

SAHRA - South African Heritage Resources Agency