

**A SURVEY OF CULTURAL RESOURCES IN THE  
PROPOSED KLEINFONTEIN MINING AREA,  
MPUMALANGA PROVINCE**

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## SUMMARY

**A survey of cultural resources in the proposed Kleinfontein mining area, Mpumalanga Province**

A survey to establish the nature, extent and significance of cultural resources were made in the area of the proposed Kleinfontein mining area, Middelburg district, Mpumalanga Province.

A number of sites were identified during the survey. These all date to the historical period. Although it is recommended that the mining activities can continue, this can only be done after suitable mitigation measures were implemented.

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## A SURVEY OF CULTURAL RESOURCES IN THE PROPOSED KLEINFONTEIN MINING AREA, MPUMALANGA PROVINCE

### 1. AIMS OF THE SURVEY

The National Cultural History Museum was requested by **Amcoal Environmental Services** to survey a portion of the farm Kleinfontein 491S in the Middelburg district of Mpumalanga. It is planned to do open cast mining of this area. The aim was therefore to locate, identify, evaluate and document sites, objects and structures of archaeological, historical and cultural importance within the boundaries of the proposed development.

### 2. TERMS OF REFERENCE

The **Terms of Reference** for the study were

- 2.1 Identify all the known and potential cultural resources in the proposed area of development. These resources include the areas of historical, scientific and cultural importance.
- 2.2 Assess the significance of the known and potential cultural resources in the area of interest.
- 2.3 Determine the possible impacts on the known and potential cultural resources in the area of interest. Impacts will be determined or predicted for pre-construction, construction, operation and post-operation phases.
- 2.4 Develop mitigation or control measures for impact minimization and cultural resources preservation.
- 2.5 Develop procedures to be implemented if previously unidentified cultural resources are uncovered during construction phase.

### 3. DEFINITIONS

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

- **Cultural resources** are all nonphysical and physical human-made as well as

natural occurrences that are associated with human activity. These include all sites, structures and artifacts of importance, either individually or in groups, in the history, architecture and archaeology of human (cultural) development.

- The **significance** of the sites and artifacts is 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.
- Significance is site specific and relates to the content and context of the site. 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.
- The latitude and longitude of an archaeological site are to be treated as sensitive information by the developer, and should not be disclosed to members of the public.
- All recommendations are made with full cognisance of the current legislation, in this case the **National Monuments Act (No 28 of 1969, as amended)**.

## 4. METHODOLOGY

### 4.1 Preliminary investigation

#### 4.1.1 Survey of the literature

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

#### 4.1.2 Data sources

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

#### 4.1.3 Other sources

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

### 4.2 Field survey

The survey was conducted according to generally accepted archaeological practices, and was aimed at locating all possible sites, objects and structures. This was done by dividing

the whole area into blocks, making use of natural and human-made topographical elements. Areas with a potential for human use were investigated. Special attention was given to outcrops, cliffs were inspected for rock shelters, while stream beds and unnatural topographical occurrences such as trenches, holes and clusters of trees were investigated.

#### 4.3 Documentation

All sites, objects and structures identified were documented according to the general minimum standard accepted by the archaeological profession. Coordinates of individual localities were determined by means of the **Global Positioning System (GPS)**<sup>1</sup> and plotted on a map. The information was added to the description to facilitate the identification of each locality.

#### 4.4 Presentation of the information

In discussing the results of the survey, a chronological rather than a geographical approach was followed to present an overview of human occupation and land use in the area. This helps the reader to better understand and facilitate the potential impact of the development. The individual sites and structures that were identified, are presented in Appendix 2.

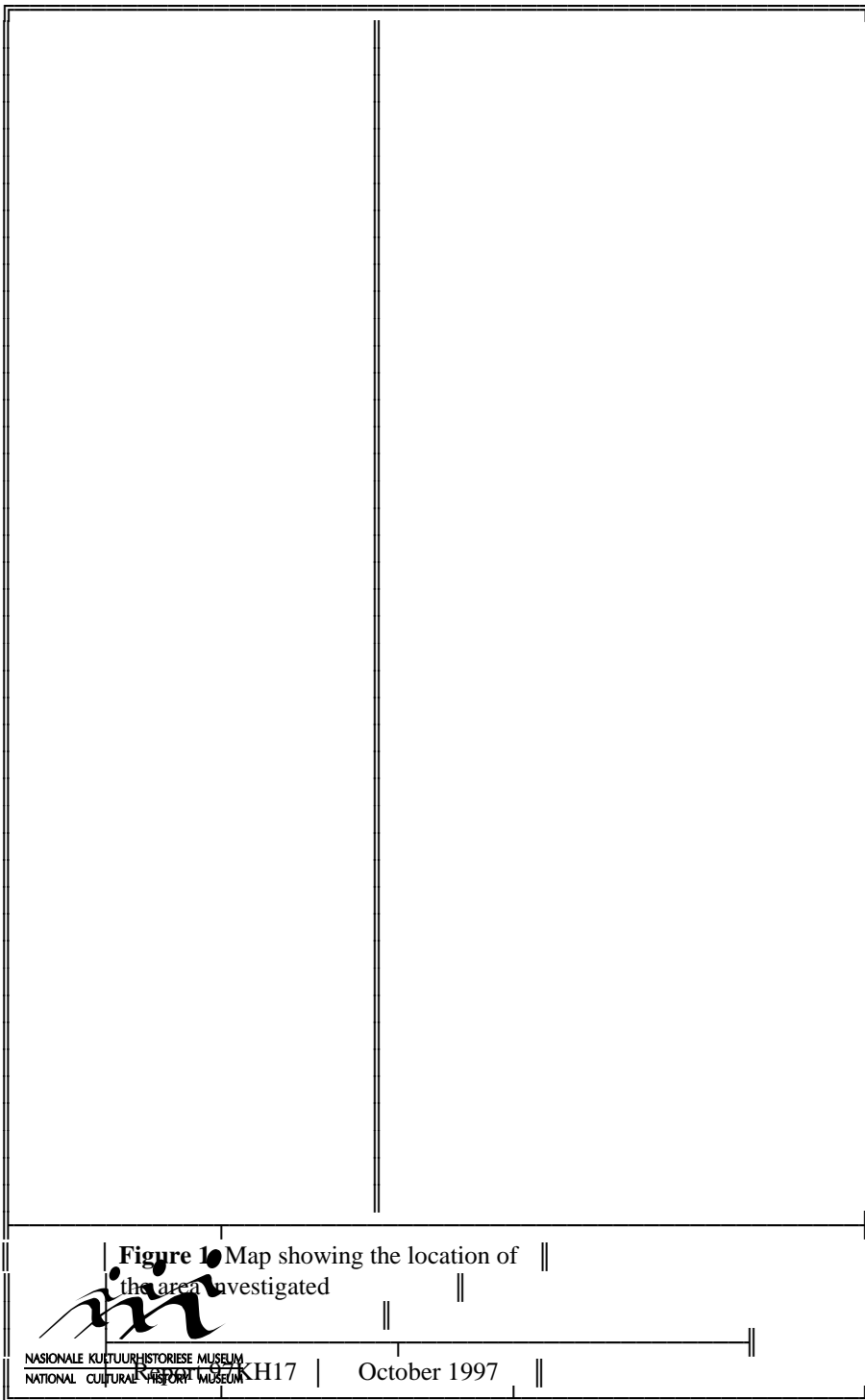
### 5. DESCRIPTION OF THE AREA SURVEYED

The area under investigation (Figure 1) is in the form of an irregular block of land. Generally speaking, this is gently rolling highveld, with the most important geographical features being the Olifants River which is running through the area. Some rocky outcrops, in which small cave shelters are present, are located on the northern edge of the study area. Outcrops also occur in the southern section of the study area.

It is assumed that any possible habitation of the area in the past would have taken place close to the water, but in this particular case these areas can be classified as too wet and is accordingly not suitable for human habitation. Most of the rest of the area under consideration is subjected to intensive agricultural activities, with the result that any archaeological indicators visible on the surface would have been destroyed or disturbed out of context.

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1. 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 correlate it with reference to the physical environment before plotting it on the map.





**Table 1: Summary of impact description and assessment of the Kleifontein mining area** (see Appendix 2)

Site no.   site	Type of   of impact	Significance   prediction	Certainty of   of impact	Status	Recommended management action   requirement	Legal
2629AB2	Historic	Medium	Definite	Negative	4 = documentation necessary	NM permit
2629AB3	Historic	Medium	Definite	Negative	Relocated   permit	NM permit; TO
2629AB4	Historic	Medium	Definite	Negative	Relocate   permit	NM permit; TO
2629AB5	Historic	Medium	Definite	Negative	Relocate   permit	NM permit; TO

## 6. DISCUSSION

Very few objects, sites or structures of cultural significance were identified in the area that was surveyed. A few Middle Stone Age cores and flakes were noticed as surface material in some areas. They are viewed not to be in a primary context and are therefore not viewed as of much significance. A small number of possible Late Stone Age flakes were found in the shelters located on the banks of the Olifants River. These shelters, however, show no further sign of human habitation and the flakes are therefore also not viewed as of much significance. In this same area, but on the plateau above the shelters, some potsherds were identified. Being very small and undecorated, it is not possible to make any statement on their age and origin.

The most important sites of cultural significance in the area, are the various cemeteries and the old farm house. The graves located close to this house seems to date back quite a number of years, possibly even to the early part of this century. The inscriptions on the headstones are, however, difficult to read and will maybe only become readable when rubbings are made. The old house is possibly one of the few remaining older type of farmsteads in the area and in all probability dates from the same period as the graves.

## 7. RECOMMENDATIONS

It is recommended that the mining can continue, but only after suitable mitigation measures for the identified sites and structures were implemented. This consists of:

7.1 The relocation of all the graves, their contents and headstones, in the various cemeteries.

7.2 The old farmstead must be documented in full by a knowledgeable person, and this documentation should be deposited at a museum for safekeeping.

## 8. REFERENCES

### 8.1 Unpublished sources

#### 8.1.1 Data base

Archaeological Data Recording Centre, (former) Tvl section, National Cultural History Museum, Pretoria.

### 8.2 Published sources

### 8.2.1 Books and journals

- 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.
- Mason, R. 1962. Prehistory of the Transvaal. Johannesburg: Witwatersrand University Press.
- 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.

### 8.2.2 Maps

- 1: 50 000 Topocadastral maps - 2629AB Vandyksdrift

## 9. PROJECT TEAM

J van Schalkwyk - project leader

## 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

### Status of the impact:

With mitigation and the resultant recovery of material, a negative impact can be turned positive. Describe whether the impact is positive (a benefit), negative (a cost) or neutral

### 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 necessary
- 2 = controlled sampling and/or mapping of the site necessary
- 3 = test excavations to determine if further work is necessary
- 4 = preserve site if possible, otherwise extensive salvage excavation and/or mapping necessary
- 5 = 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

[See Appendix 1 for definitions of the conventions used in assessing of the cultural remains]

### 1. Site number: 2629AB2<sup>2</sup>

Location: Kleinfontein 49I S: 26°10'40.8" S; 29°25'00.1" E [X 2896392.502; Y - 41653.559]

Description: An old farm house, currently in a bad state of neglect.

Discussion: Although the house is badly neglected, it is quite likely one of a very few older homesteads in the larger geographical area that has not been demolished due to mining activities.

Significance of impact: Medium

Certainty of prediction: Definite

Status of impact: Negative

Legal requirements: This structure is in all probability older than 50 years and is therefore protected by the National Monuments Act. To demolish it, a permit must be obtained from the National Monuments Council.

Recommended management action: 4 = extensive mapping of the site necessary.

### 2. Site number: 2629AB3

Location: Kleinfontein 49I S: 26°10'46.8" S; 29°24'56.5" E [X 2896576.878; Y - 41569.662]

Description: An informal cemetery (ie, no fencing, maintenance, etc.) consisting of approximately 6 graves. Some have headstones, on which the writing is largely illegible.

Discussion: These graves are situated in the area that is to be mined and should therefore be relocated. This becomes a matter of obtaining permission from descendants (directly), or by advertising in the newspapers about the pending move. This is followed by permission from the Department of Health of the relevant province, as well as permission from the premier of that province. A commercial firm of undertakers then relocates the graves to a mutually agreed site.

Significance of impact: Medium

Certainty of prediction: Definite

Status of impact: Negative

Legal requirements: These are not war graves, and as such do not fall under the jurisdiction of the War Graves Commission. Some do have headstones older than 50 years and are therefore protected by the National Monuments Act. The relocation of the graves will therefore have to be done in accordance with **Transvaal Ordinance (No. 7 of 1925)** and the **National Monuments Act (Act No. 28 of 1969)**. However, the local Authority might also have its own requirements concerning this matter, which will have

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2. Numbers 2629AB1 relate to other known sites on this particular ¼ degree sheet already documented in the ADRC, and does not necessarily refer to sites occurring on or close to the specific area of development.

to be pursued by the developer self.

**Recommended management action:** All the graves must be relocated.

### 3. **Site number:** 2629AB4

**Location:** Kleinfontein 49I S: 26°11'42.3" S; 29°24'13.8" E [X 2898265.671; Y - 40370.358]

**Description:** A cemetery consisting of approximately 15 graves, some with headstones.

**Discussion:** These graves fall in the area that is to be mined and should therefore be relocated. This becomes a matter of obtaining permission from descendants (directly), or by advertising in the newspapers about the pending move. This is followed by permission from the Department of Health of the relevant province, as well as permission from the premier of that province. A commercial firm of undertakers then relocates the graves to a mutually agreed site.

**Significance of impact:** Medium

**Certainty of prediction:** Definite

**Status of impact:** Negative

**Legal requirements:** These are not war graves, and as such do not fall under the jurisdiction of the War Graves Commission. Some do have headstones older than 50 years and are therefore protected by the National Monuments Act. The relocation of the graves will therefore have to be done in accordance with **Transvaal Ordinance (No. 7 of 1925)** and the **National Monuments Act (Act No. 28 of 1969)**. However, the local Authority might also have its own requirements concerning this matter, which will have to be pursued by the developer self.

**Recommended management action:** All the graves must be relocated.

### 4. **Site number:** 2629AB5

**Location:** Kleinfontein 49I S: 26°09'03.3" S; 29°25'45.7" E [X 2893380.829; Y - 42940.886]

**Description:** A cemetery consisting of more than 50 graves, some with headstones.

**Discussion:** It is not sure if this cemetery falls in the area that is to be mined. If that is the case, they should be relocated. This becomes a matter of obtaining permission from descendants (directly), or by advertising in the newspapers about the pending move. This is followed by permission from the Department of Health of the relevant province, as well as permission from the premier of that province. A commercial firm of undertakers then relocates the graves to a mutually agreed site.

**Significance of impact:** Medium

**Certainty of prediction:** Possible

**Status of impact:** Negative

**Legal requirements:** These are not war graves, and as such do not fall under the jurisdiction of the War Graves Commission. Some do have headstones older than 50 years and are therefore protected by the National Monuments Act. The relocation of the graves will therefore have to be done in accordance with **Transvaal Ordinance (No. 7 of 1925)** and the **National Monuments Act (Act No. 28 of 1969)**. However, the local Authority might also have its own requirements concerning this matter, which will have to be pursued by the developer self.

Recommended management action: All the graves must be relocated if this site falls within the area that is to be mined.

### 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