

**A SURVEY OF CULTURAL RESOURCES FOR THE MIDDELBULT  
MINING DEVELOPMENT, HIGHVELD RIDGE DISTRICT,  
MPUMALANGA PROVINCE**

For:

**ORYX ENVIRONMENTAL**

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## **SUMMARY**

### **A survey of cultural resources for the Middelbult mining development, Highveld Ridge district, Mpumalanga 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 the mine and its infrastructure.

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

- All graves should be relocated, but only after consultation with the local community.
- Some sites that fall outside the development area are indicated in the survey. This serves to indicate the richness of the area. The implication is that no development (eg, roads, routes, borrow pits, etc. can be developed unless those specific areas were investigated by an archaeologist.
- The developer should also be notified that archaeological sites might be exposed during the construction work. If anything is noticed, 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.

## CONTENTS

SUMMARY . . . . .	i
CONTENTS . . . . .	ii
1. AIMS OF THE SURVEY . . . . .	1
2. TERMS OF REFERENCE . . . . .	1
3. DEFINITIONS . . . . .	1
4. LEGISLATIVE REQUIREMENTS . . . . .	2
5. METHODOLOGY . . . . .	3
6. DESCRIPTION OF THE AREA . . . . .	4
7. DISCUSSION . . . . .	5
8. RECOMMENDATIONS . . . . .	5
9. REFERENCES . . . . .	6
10. PROJECT TEAM . . . . .	6
APPENDIX 1 . . . . .	7
APPENDIX 2 . . . . .	8
APPENDIX 3 . . . . .	14

**A SURVEY OF CULTURAL RESOURCES FOR THE MIDDELBULT  
MINING DEVELOPMENT, HIGHVELD RIDGE DISTRICT,  
MPUMALANGA PROVINCE**

## 1. AIMS OF THE SURVEY

The National Cultural History Museum was contracted by **Oryx Environmental** to survey an area in which it is proposed to extend existing coal mining activities. 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 **Terms of Reference** for the study were to:

- 2.1 Identify all objects, sites, occurrences and structures of an archaeological or historical nature located in the area of the proposed development.
- 2.2 Assess the significance of the cultural resources in terms of their historical, social, religious, aesthetic and scientific value.
- 2.3 Determine the possible impacts on the known and potential cultural resources in the area of interest.
- 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 the construction.

## 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 artifacts of importance, either individually or in groups, in the history, architecture and archaeology of human (cultural) development.
- X The **significance** of the sites and artifacts 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**

Section 35(4) of this act states that no person may, without a permit issued by the responsible heritage resources authority:

- (a) destroy, damage, excavate, alter, deface or otherwise disturb any archaeological or palaeontological site or any meteorite;
- (b) destroy, damage, excavate, remove from its original position, collect or own any archaeological or palaeontological material or object or any meteorite;
- (c) trade in, sell for private gain, export or attempt to export from the Republic any category of archaeological or palaeontological material or object, or any meteorite; or
- (d) bring onto or use at an archaeological or palaeontological site any excavation equipment or any equipment which assists in the detection or recovery of metals or archaeological and palaeontological material or objects, or use such equipment for the recovery of meteorites.

The above mentioned may only be disturbed or moved by an archaeologist, after receiving a permit from the South African Heritage Resources Agency.

###### **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 or 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 is subject to provisions of the Human Tissue Act (Act 65 of 1983) and to local regulations.

Exhumation of graves must conform to the standards set out in the **Ordinance on Excavations (Ordinance no. 12 of 1980)** (replacing the old Transvaal Ordinance no. 7 of 1925). Permission must also be gained from the descendants (where known), the National Department of Health, Provincial Department of Health, Premier of the Province and local police. Furthermore, permission must also be gained from the various landowners (ie where the graves are located and where they are to be relocated) before exhumation can take place.

Human remains can only be handled by a registered undertaker or an institution declared under the **Human Tissues Act (Act 65 of 1983 as amended)**.

#### 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 is 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. Nothing pertaining to the archaeology of this particular area was found, although a number of survey reports from adjacent areas exist. Some source on historical events that took place in the area also exists.

##### 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 Oryx Environmental on maps. This area was then investigated by driving and walking across it. Special attention was given to unnatural topographical occurrences such as trenches, holes, outcrops and clusters of trees were investigated.

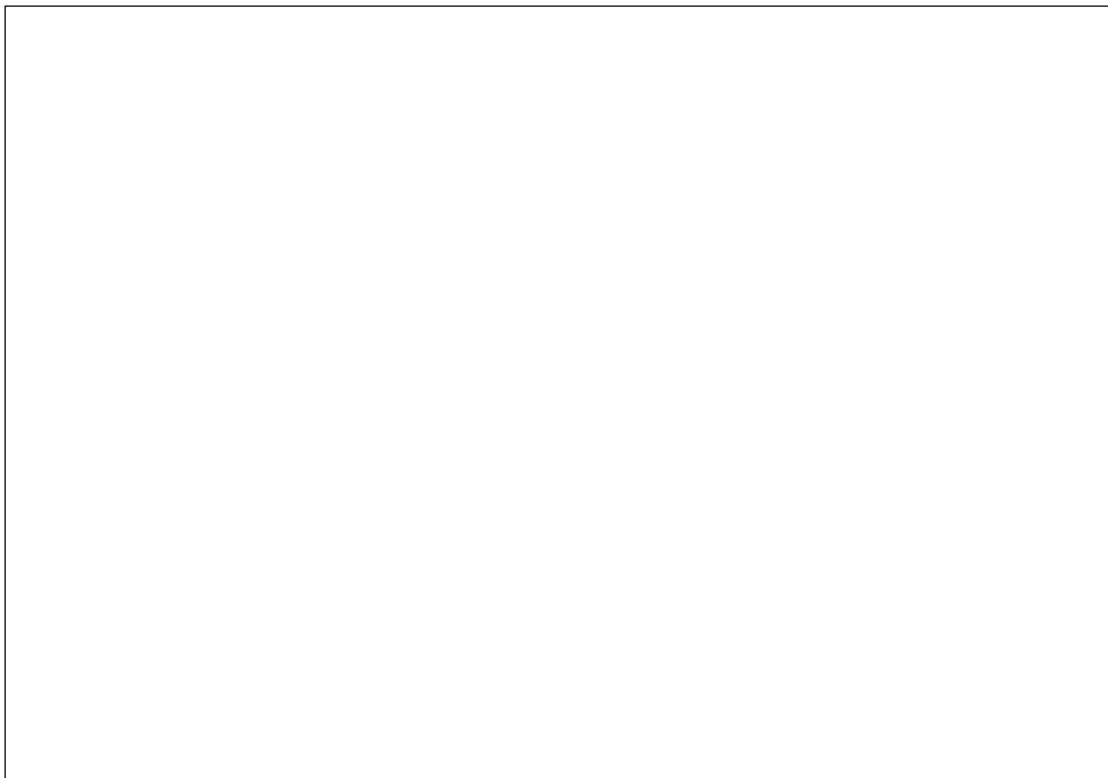
Where possible, local people were interviewed in an effort to obtain information on the existence of known sites.

#### 5.3 **Documentation**

All sites, objects and structures identified were documented according to the general minimum standards accepted by the archaeological profession. Coordinates of individual

localities were determined by means of the **Global Positioning System (GPS)**<sup>11</sup> and plotted on a map. This information was added to the description in order to facilitate the identification of each locality.

## 6. DESCRIPTION OF THE AREA



**Figure 1. General location of the area that was surveyed.**

The topography of the area can be described as slightly undulating plains, bisected by a number of smaller rivers, such as the Waterval River and Rolspruit. The original vegetation of the area consists of Themeda Veld (Turf Highveld). However, agricultural activities – ploughing and grazing – now takes place over most of the area, changing the environment to a large extent.

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<sup>11</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 correlate it with reference to the physical environment before plotting it on the map.



## 7. DISCUSSION

This type of area was not preferred for occupation by humans in pre-colonial times. It was only with the arrival of white farmers that large scale habitation took place. The result is that most of the heritage resources in the area dates only to that period.

Although all possible effort was made to locate all graves, it is probable that some were missed. This is largely due to the fact that during the field survey visibility was limited because of dense vegetation, natural as well as agricultural. It is our experience that graves occur in some out of the way places, eg. in the corner of a ploughed field, and can easily be missed because of the high growth of the vegetation.

A number of old farmsteads were also identified. Most of these are in ruins, with only the outer walls remaining. Investigation indicates that these are largely similar in material, style and layout to farmsteads found in areas that would not be impacted. They are therefore judged not to be of much significance.

## 8. RECOMMENDATIONS

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 the mine and its infrastructure.

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

- All graves should be relocated, but only after consultation with the local community.
- Some sites that fall outside the development area are indicated in the survey. This serves to indicate the richness of the area. The implication is that no development (eg, roads, routes, borrow pits, etc. can be developed unless those specific areas were investigated by an archaeologist.
- The developer should also be notified that archaeological sites might be exposed during the construction work. If anything is noticed, 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.

## 9. REFERENCES

### 9.1 Unpublished sources

#### 9.1.1 Data base

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

### 9.2 Published sources

#### 9.2.1 Books and journals

Holm, S.E. 1966. *Bibliography of South African Pre- and Protohistoric archaeology*.  
Pretoria: J.L. van Schaik.

Mason, R.J. 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. 1935. *A Preliminary survey of the Bantu Tribes of South Africa*.  
Ethnological Publications No. 5. Pretoria: Government Printer.

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

#### 9.2.2 Maps

1: 50 000 Topocadastral maps – 2628BD, 2628DB, 2629AC, 2629CA

## 10. PROJECT TEAM

J van Schalkwyk  
S Moifatswane

## **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 ADRC, and does not necessarily refer to sites occurring on or close to the specific area of development.]

1. Site number: 2628DB2

Location: Roodebank 323IS - S 26 35'41.4"; E 28 59'58.3"

Description: Large cemetery with graves going back to 1920s – Ras, Labuschagne, Van Aswegen. Very interesting 'folk art' on some of the headstones.

Discussion: This feature actually falls outside the area, but is included for future reference.

Significance of impact: Low

Certainty of prediction: Definite

Recommended management action: 1 = no further investigation/action necessary

Legal requirements: None

2. Site number: 2628DB3

Location: Leeuwpan 532IR - S 26 34'08.3"; E 28 57'41.2"

Description: Ruins of old farmstead, built from dressed sandstone blocks.

Discussion: Not much remain of this feature

Significance of impact: Low

Certainty of prediction: Definite

Recommended management action: 1 = no further investigation/action necessary

Legal requirements: None

3. Site number: 2628DB4

Location: Leeuwpan 532IR - S 26 33'45.6"; E 28 58'47.6"

Description: According to local people, there are supposed to be at least three graves here, but the vegetation is too dense to locate them.

Discussion: If open cast mining takes place, this feature will be impacted upon

Significance of impact: High

Certainty of prediction: Definite

Recommended management action: Relocate graves if necessary, otherwise avoid area

Legal requirements: If relocate, notification, consultation, permits

4. Site number: 2628DB5

Location: Rietkuil 531IR - S 26 32'38.5"; E 28 58'11.2"

Description: Informal cemetery containing ± 15 graves of farm labourers, only two with headstones.

Discussion: If open cast mining takes place, this feature will be impacted upon

Significance of impact: High

Certainty of prediction: Definite

Recommended management action: Relocate graves if necessary, otherwise avoid area

Legal requirements: If relocate, notification, consultation, permits

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

5. Site number: 2629CA4

Location: Springbokdraai 277IS - S 26 32'15.1"; E29 00'32.9"

Description: Informal cemetery with  $\pm$  50 graves, some with headstones – only one with inscription.

Discussion: If open cast mining takes place, this feature will be impacted upon

Significance of impact: High

Certainty of prediction: Definite

Recommended management action: Relocate graves if necessary, otherwise avoid area

Legal requirements: If relocate, notification, consultation, permits

6. Site number: 2628BD3

Location: Rolspruit 127IS – S 26 23'32.0"; E 28 59'12.1"

Description: Cemetery with a number of graves of farm labourers

Discussion: If open cast mining takes places, this feature will be impacted upon

Significance of impact: High

Certainty of prediction: Definite

Recommended management action: Relocate graves if necessary, otherwise avoid area

Legal requirements: If relocate, notification, consultation, permits

7. Site number: 2628BD4

Location: Klipfontein 357IR - S 26 27'07.7"; E 28 58'20.8"

Description: Cemetery with  $\pm$  12 graves, all with headstones – Van Rensburg, Nel, Venter, etc. – some going back more than 60 years

Discussion: If open cast mining takes place, this feature will be impacted upon

Significance of impact: High

Certainty of prediction: Definite

Recommended management action: Relocate graves if necessary, otherwise avoid area

Legal requirements: If relocate, notification, consultation, permits

8. Site number: 2629CA5

Location: Springbokdraai 277IS - S 26 31'55.8"; E 29 01'34.3"

Description: Number of graves of farm workers without headstones, but date on stone – 22/7/1948. Also grave of S.J. Scheepers, died 22/7/1921, but stone is much more recent than that. Ruins of houses of farm labourers in the immediate vicinity.

Discussion: If open cast mining takes place, this feature will be impacted upon

Significance of impact: High

Certainty of prediction: Definite

Recommended management action: Relocate graves if necessary, otherwise avoid area

Legal requirements: If relocate, notification, consultation; permits

9. Site number: 2629CA6

Location: Springbokdraai 277IS - S 26 32'00.4"; E 29 01'39.7"

Description: Cemetery with  $\pm$  10 graves, 2 with headstones

Discussion: If open cast mining takes place, this feature will be impacted upon

Significance of impact: High

Certainty of prediction: Definite

Recommended management action: Relocate graves if necessary, otherwise avoid area

Legal requirements: If relocate, notification, consultation, permits

10. Site number: 2629CA7

Location: Grootspuit 279IS – S 26 31'23.4"; E 29 02'04.5"

Description: Rudimentary stone walling – significance unknown.

Discussion: Probably historical, considering vegetation (trees) in vicinity.

Significance of impact: High

Certainty of prediction: Definite

Recommended management action: 1 = no further investigation/action necessary

Legal requirements: None

11. Site number: 2629CA8

Location: Zandfontein 130IS - S 26 31'14.5"; E 29 01'56.3"

Description: Old farmstead. Not much remains of the different structures

Discussion: Probably not much different than other similar sites in the larger area

Significance of impact: High

Certainty of prediction: Definite

Recommended management action: 1 = no further investigation/action necessary

Legal requirements: None

12. Site number: 2629CA9

Location: Zandfontein 130IS - S 26 31'28.5"; E 29 01'56.7"

Description: Circular structures in stone, spread over large area. Probably Late Iron Age or early historical period

Discussion: If this site is impacted upon by the mine, it should be investigated further

Significance of impact: High

Certainty of prediction: Definite

Recommended management action: 2 = controlled sampling and/or mapping of the site necessary

Legal requirements: SAHRA permit

13. Site number: 2629CA10

Location: Grootspuit 279IS - S 26 31'37.4"; E 29 02'01.7"

Description: Stone walled cattle kraal, historical in dating.

Discussion: The associated structures are all pretty much destroyed

Significance of impact: High

Certainty of prediction: Definite

Recommended management action: 1 = no further investigation/action necessary

Legal requirements: None

14. Site number: 2629CA11

Location: Grootspuit 279IS - S 26 31'41.4"; E 29 02'01.9"

Description: Stone walled cemetery with 5 graves, three with headstones – all illegible. Probably whites.

Discussion: If open cast mining takes place, this feature will be impacted upon

Significance of impact: High

Certainty of prediction: Definite

Recommended management action: Relocate graves if necessary, otherwise avoid area

Legal requirements: If relocate, notification, consultation, permits

15. Site number: 2629CA12

Location: Grootspuit 279IS - S 26 31'50.5"; E 29 02'15.2"

Description: Stone walled cemetery with 4 graves – Roets, 1940s

Discussion: If open cast mining takes place, this feature will be impacted upon

Significance of impact: High

Certainty of prediction: Definite

Recommended management action: Relocate graves if necessary, otherwise avoid area

Legal requirements: If relocate, notification, consultation, permits

16. Site number: 2629CA13

Location: Zandfontein 130IS - S 26 30'54.7"; E 29 01'55.2"

Description: Old farmstead, quite extensive in size

Discussion: Only ruins remain

Significance of impact: High

Certainty of prediction: Definite

Recommended management action: 1 = no further investigation/action necessary

Legal requirements: None

17. Site number: 2629CA14

Location: Goedverwachting 287IS - S 26 30'45.8"; E 29 05'29.8"

Description: Informal cemetery with  $\pm$  20 graves

Discussion: If open cast mining takes place, this feature will be impacted upon

Significance of impact: High

Certainty of prediction: Definite

Recommended management action: Relocate graves if necessary, otherwise avoid area

Legal requirements: If relocate, notification, consultation, permits

18. Site number: 2629CA15

Location: Goedverwachting 287IS - S 26 30'33.2"; E 29 05'20.1"

Description: Cemetery with  $\pm$  12 graves, dating between 1900-1916. ? Genl. Lucas Joubert?

Discussion: If open cast mining takes place, this feature will be impacted upon

Significance of impact: High

Certainty of prediction: Definite

Recommended management action: Relocate graves if necessary, otherwise avoid area

Legal requirements: If relocate, notification, consultation, permits

19. Site number: 2628BD5

Location: Klipfontein 357IR - S 26 27'53.0"; E 28 56'59.2"

Description: Cemetery with  $\pm$  50 graves of farms labourers, some with headstones, but no inscriptions.

Discussion: If open cast mining takes place, this feature will be impacted upon

Significance of impact: Definite

Certainty of prediction: High

Recommended management action: Relocate graves if necessary, otherwise avoid area

Legal requirements: If relocate, notification, consultation, permits

20. Site number: 2628BD6

Location: Rolspruit 127IS - S 26 23'58.2"; E 28 59'17.0"

Description: Old farmstead, possibly graves in the area. This structure is possibly older than 60 years

Discussion: If open cast mining takes place, this structure should be documented, at least photographically.

Significance of impact: High

Certainty of prediction: Probable

Recommended management action: 2 = controlled sampling and/or mapping of the site necessary

Legal requirements: If older than 60 years, SAHRA permit

21. Site number: 2628BD7

Location: Rolspruit 127IS - S 26 25'51.5"; E 28 59'33.3"

Description: Three graves, one with headstone

Discussion: If open cast mining takes place, this feature will be impacted upon

Significance of impact: High

Certainty of prediction: Definite

Recommended management action: Relocate graves if necessary, otherwise avoid area

Legal requirements: If relocate, notification, consultation, permits

22. Site number: 2629AC33

Location: Uitkyk 136IS - S 26 27'37.0"; E 29 08'49.7"

Description: Grave of Schenck father and son (1997)

Discussion: It is unlikely that future development will impact upon this feature

Significance of impact: Low

Certainty of prediction: Definite

Recommended management action: 1 = no further investigation/action necessary

Legal requirements: None

23. Site number: 2629AC34

Location: Winkelhaak 135 IS - S 26 28'16.2"; E 29 04'58.7"

Description: Brick fenced cemetery

Discussion: It is unlikely that future development will impact on this feature

Significance of impact: Low

Certainty of prediction: Definite

Recommended management action: 1 = no further investigation/action necessary

Legal requirements: None

24. Site number: 2629AC35

Location: Leeuwspuit 134IS - S 26 27'18.4"; E 29 03'55.4"

Description: Harmony Gold Mine Memorial – 16 September 1986.

Discussion: It is unlikely that future development will impact on this feature

Significance of impact: Low

Certainty of prediction: Definite

Recommended management action: 1 = no further investigation/action necessary

Legal requirements: None

25. Site number: 2629AC36

Location: Witkleifontein 131IS - S 26 29'39.1"; E 29 04'09.8"

Description: Cemetery containing at least 15 graves.

Discussion: Some of the headstones dates back more than 80 years and exhibit interesting folk art.

Significance of impact: High

Certainty of prediction: Definite

Recommended management action: Relocate graves if necessary, otherwise avoid area

Legal requirements: If relocate, notification, consultation, permits

26. Site number: 2629AC37

Location: Witkleifontein 131IS - S 26 29'44.1"; E 29 04'12.4"

Description: Old farmstead consisting of different buildings.

Discussion: Only some outer walls remain.



Significance of impact: Low

Certainty of prediction: Definite

Recommended management action: 1 = no further investigation/action necessary

Legal requirements: None

27. Site number: 2629AC38

Location: Kromdraai 128IS - S 26 27'30.7"; E 29 01'56.9"

Description: Old farmstead, consisting of different structures.

Discussion: Only outer walls remain.

Significance of impact: Low

Certainty of prediction: Definite

Recommended management action: 1 = no further investigation/action necessary

Legal requirements: None

28. Site number: 2629AC39

Location: Winkelhaak 135IS - S 26 25'26.3"; E 29 04'35.2"

Description: Farmstead, probably much older than 60 years.

Discussion: It is unlikely that future development will impact on this feature, as it falls just outside the area of impact.

Significance of impact: Low

Certainty of prediction: Definite

Recommended management action: 1 = no further investigation/action necessary

Legal requirements: None

### 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

BP – Before Present

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

SAHRA - South African Heritage Resources Agency

