

**Heritage impact survey report for the  
PROPOSED MINING DEVELOPMENT ON THE FARM  
ELANDSPRUIT 291JS, MIDDELBURG MAGISTERIAL  
DISTRICT, MPUMALANGA PROVINCE**

**THE PROJECT:**

Development of open cast mine facilities.

**THIS REPORT:**

HERITAGE IMPACT SURVEY REPORT FOR THE PROPOSED MINING DEVELOPMENT ON THE FARM ELANDSPRUIT 291JS, MIDDELBURG MAGISTERIAL DISTRICT, MPUMALANGA PROVINCE

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## EXECUTIVE SUMMARY

### HERITAGE IMPACT SURVEY REPORT FOR THE PROPOSED MINING DEVELOPMENT ON THE FARM ELANDSPRUIT 291JS, MIDDELBURG MAGISTERIAL DISTRICT, MPUMALANGA PROVINCE

Shanduka Collieries is planning to expand their coal mining activities by opening up a new open cast mine on the farm Elandspruit 291JS, south west of the town of Middelburg, Mpumalanga.

An independent heritage consultant was appointed by **Cabanga Concepts** to conduct a survey to locate, identify, evaluate and document sites, objects and structures of cultural importance found within the boundaries of the area where the mining activities is going to take place.

This HIA report forms part of the Environmental Impact Assessment (EIA) as required by the EIA Regulations in terms of the National Environmental Management Act, 1998 (Act No. 107 of 1998) and was done in accordance with Section 38 of the National Heritage Resources Act, No. 25 of 1999 and is intended for submission to the South African Heritage Resources Agency (SAHRA).

Five sites were identified in study area (see Appendix 3):

- Three of these are homesteads dating to the recent past. These sites are viewed to have a low significance on a regional level.
- One site consists of farming related structures and is viewed to have a low significance on a regional level.
- One mining related feature was identified. It is viewed to have a low significance on a regional level.

In terms of Section 7 of the NHR Act, No. 25 of 1999, all the sites are evaluated to have a Grade III significance. All the sites are viewed to be documented in full after inclusion in this report and they can be demolished, pending SAHRA's approval of this report.

Therefore, based on what was found and its evaluation, it is recommended that any development can continue in the area, on condition of acceptance of the following recommendation:

- As there is a slight possibility of graves occurring in two areas, these areas should be identified by the developer and, when the vegetation has been burned off, the sites should be investigated again to confirm the presence or absence of graves.



J A van Schalkwyk  
Heritage Consultant

## TECHNICAL SUMMARY

<b>Property details</b>						
Province	Mpumalanga					
Magisterial district	Middelburg					
Topo-cadastral map	2529CD					
Farm name & no.	Elandspruit 291JS					
Portions/Holdings	3,14 & 35					
Coordinates	Polygon					
	No	Latitude	Longitude	No	Latitude	Longitude
	1	S 25.82189	E 29.36323	5	S 25.82863	S 29.40605
	2	S 25.82542	E 29.38674	6	E 25.83423	E 29.39289
	3	S 25.82043	E 29.38621	7	S 25.82382	S 29.37365
	4	S 25.81974	E 29.40242	8	E 25.82225	E 29.36298

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

<b>Development</b>	
Description	Development of opencast mining activities
Project name	Elandspruit

<b>Land use</b>	
Previous land use	Farming/Mining
Current land use	Farming

<b>Heritage sites assessment</b>		
Site type	Site significance	Site grading (Section 7 of NHRA)
Homesteads	Low on a regional level	III
<b>Impact assessment</b>		
Impact	Mitigation	Permits required
High	None	

<b>Heritage sites assessment</b>		
Site type	Site significance	Site grading (Section 7 of NHRA)
Farming	Low on a regional level	III
<b>Impact assessment</b>		
Impact	Mitigation	Permits required
High	None	None

<b>Heritage sites assessment</b>		
Site type	Site significance	Site grading (Section 7 of NHRA)
Mining	Low on a regional level	III
<b>Impact assessment</b>		
Impact	Mitigation	Permits required
High	None	None

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**GLOSSARY OF TERMS AND ABBREVIATIONS****STONE AGE**

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

**IRON AGE**

Early Iron Age	AD 200 - AD 1000
Late Iron Age	AD 1000 - AD 1830

**HISTORIC PERIOD**

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

ASAPA	Association of Southern African Professional Archaeologists
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

# HERITAGE IMPACT SURVEY REPORT FOR THE PROPOSED MINING DEVELOPMENT ON THE FARM ELANDSPRUIT 291JS, MIDDELBURG MAGISTERIAL DISTRICT, MPUMALANGA PROVINCE

## 1. INTRODUCTION

Shanduka Collieries is planning to expand their coal mining activities by opening up a new open cast mine on the farm Elandspruit 291JS, south west of the town of Middelburg, Mpumalanga.

An independent heritage consultant was appointed by **Cabanga Concepts** to conduct a survey to locate, identify, evaluate and document sites, objects and structures of cultural importance found within the boundaries of the area where the mining activities is going to take place.

This HIA report forms part of the Environmental Impact Assessment (EIA) as required by the EIA Regulations in terms of the National Environmental Management Act, 1998 (Act No. 107 of 1998) and was done in accordance with Section 38 of the National Heritage Resources Act, No. 25 of 1999 and is intended for submission to the South African Heritage Resources Agency (SAHRA).

## 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:

- *Cultural resources* are 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.

- According to the NHR Act, Section 2(vi), the **significance** of heritage sites and artefacts is determined by its aesthetic, architectural, historical, scientific, social, spiritual, linguistic or technical value in relation to the uniqueness, condition of preservation and research potential.
- 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, if they are to be impacted on by the proposed development.
- The latitude and longitude of archaeological sites are to be treated as sensitive information by the developer and should not be unduly disclosed to members of the public.

## 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 Figure 1 - 3.

### 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 - see the list of references below.

One of the more comprehensive surveys in the region, done by Cultmatrix (Nkangale District Municipality 2004), did not identify any sites, features or objects of cultural significance in the current study area.

##### 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. None of these resources produced any relevant information.

##### 4.2.1.3 Other sources

Aerial photographs and topocadastral and other maps were also studied - see the list of references below. Aerial photographs revealed the existence of stone walled sites on adjacent Portions, no. 4, 16 and 72, of the same farm.

#### 4.2.2 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 **Cabanga Concepts** by means of maps. During the field survey, the archaeologist was accompanied by Mr. N Pillay, chief surveyor at the mine, and Mr. P Skhozana, one of the affected landowners. The area was investigated by driving and



walking across it in a number of transects. Special attention was given to topographical occurrences such as trenches, holes, outcrops and clusters of trees were investigated.

#### 4.2.3 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: Hartebeeshoek 94 (WGS84).

#### 4.3 Limitations

In some areas the grass cover as well as the black wattle plantations was dense, which limited archaeological visibility to some extent.

### 5. DESCRIPTION OF THE AFFECTED ENVIRONMENT

#### 5.1 Site location

The study area is located southwest of the town of Middelburg in Mpumalanga (Fig. 1). It includes Portions 3, 14 and 35 of the farm Elandspruit 291JS. For more detail, see the Technical Summary presented above.

#### 5.2 Site description

The geology of the area is made up of arenite, with an intrusion of tillite in the southern part of the study area. The original vegetation is classified as Moist Sandy Highveld Grassland, but in most of the area this has been replaced due to agricultural activities or black wattle plantations.

#### 5.3 Regional overview

##### 5.3.1 Stone Age

This section of the highveld area has been very sparsely populated during the Stone Age. Sites dating to the ESA and the MSA are known from the Loskop Dam area, with a few occurrences reported on the highveld region south of Middelburg.

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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.

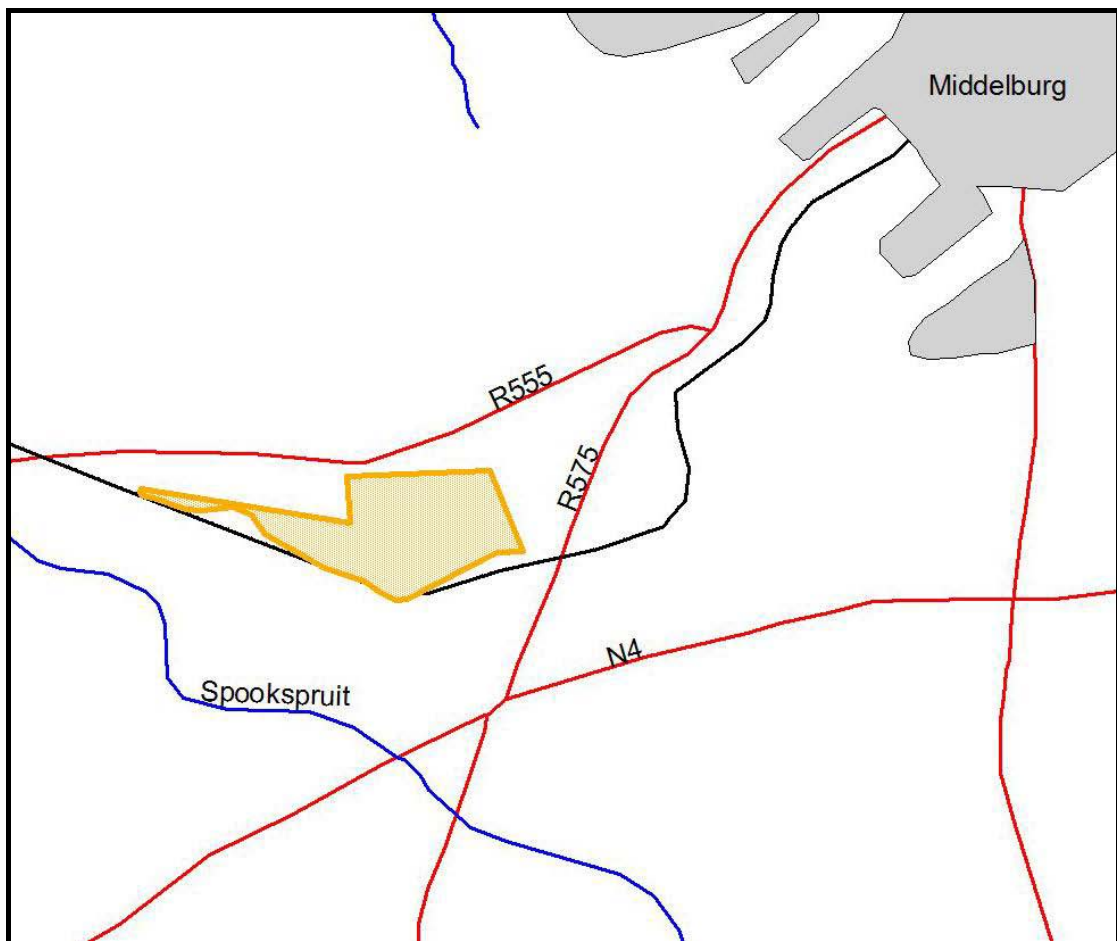


Fig. 1. Location of the study area (yellow polygon) in regional context.

### 5.3.2 Iron Age

Iron Age people started to settle in southern Africa c. AD 300, with one of the oldest known sites at Broederstroom south of Hartebeespoort Dam dating to AD 470. Having only had cereals (sorghum, millet) that need summer rainfall, Early Iron Age (EIA) people did not move outside this rainfall zone, and neither did they occupy the central interior highveld area. Because of their specific technology and economy, Iron Age people preferred to settle on the alluvial soils near rivers for agricultural purposes, but also for firewood and water. River valleys such as that of the Steelpoort and Olifants Rivers were densely populated during this period.

The occupation of the larger geographical area (including the study area) did not start much before the 1500s. By the 16th century things changed, with the climate becoming warmer and wetter, creating condition that allowed Late Iron Age (LIA) farmers to occupy areas previously unsuitable, for example the Witwatersrand and the treeless plains of the Free State. This was also the period when Iron Age communities moved into the Middelburg region, as is evidenced by sites located on the northern section of the farm Elandspruit.

### 5.3.3 Historic period

White settlers moved into the area during the first half of the 19<sup>th</sup> century. They were largely self-sufficient, basing their survival on cattle/sheep farming and hunting. Few towns were established and it remained an undeveloped area until the discovery of coal. During the Anglo-Boer War, a number of skirmishes occurred in the larger area, especially in the vicinity of the railway line to Mozambique.

The town of Middelburg was established in 1866 and was originally called Nazareth. In 1873 it was renamed Middelburg (Raper 2004).

## 5.4 Identified sites

### 5.4.1 Stone Age

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

### 5.4.2 Iron Age

No sites, features or objects of cultural significance dating to the Iron Age were identified in the study area.

### 5.4.3 Historic period

A number of features dating to the historic period were identified in the study area. This includes the remains of old homesteads, possible graves and old mining activities (see Appendix 3).

## 6. SITE SIGNIFICANCE AND ASSESSMENT

### 6.1 Statement of significance

According to the NHR Act, Section 2(vi), the **significance** of heritage sites and artefacts is determined by its aesthetic, architectural, historical, scientific, social, spiritual, linguistic or technical 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, by means of this report lodged at SAHRA, after identification and would require no further mitigation. Sites with a medium to high significance would 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.

Five sites were identified in study area (see Appendix 3):

- **Three of these are homesteads dating to the recent past. These sites are viewed to have a low significance on a regional level.**
- **One site consists of farming related structures and is viewed to have a low significance on a regional level.**

- **One mining related feature was identified. It is viewed to have a low significance on a regional level.**

In terms of Section 7 of the NHR Act, No. 25 of 1999, all the sites are evaluated to have a Grade III significance.

## 6.2 Impact assessment

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

- Although five sites were identified, none of them are viewed to be of any significance and they can be demolished, pending SAHRA's approval of this report.
- As there is a slight possibility of graves occurring in two areas, these areas should be identified by the developer and, when the vegetation has been burned off, the sites should be investigated again to confirm the presence or absence of graves.

## 7. IDENTIFICATION OF RISK SOURCES

A Heritage Impact Assessment is focused on two phases of a proposed development: **the construction and operation phases**. The following project actions may impact negatively on archaeological sites and other features of cultural importance. The actions are most likely to occur during the construction phase of a project.

### Construction phase:

Possible Risks	Source of the risk
Actually identified risks	
- damage to sites	Construction work
Anticipated risks	
- looting of sites	Curious 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

## 8. 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.

### 8.1 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.

#### 8.2.1 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).

#### 8.2.2 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).

## **9. RECOMMENDATIONS**

Five sites were identified in study area (see Appendix 3):

- Three of these are homesteads dating to the recent past. These sites are viewed to have a low significance on a regional level.
- One site consists of farming related structures and is viewed to have a low significance on a regional level.
- One mining related feature was identified. It is viewed to have a low significance on a regional level.

In terms of Section 7 of the NHR Act, No. 25 of 1999, all the sites are evaluated to have a Grade III significance. All the sites are viewed to be documented in full after inclusion in this report and they can be demolished, pending SAHRA's approval of this report.

Therefore, based on what was found and its evaluation, it is recommended that any development can continue in the area, on condition of acceptance of the following recommendation:

- As there is a slight possibility of graves occurring in two areas, these areas should be identified by the developer and, when the vegetation has been burned off, the sites should be investigated again to confirm the presence or absence of graves.

## 10. REFERENCES

### 10.1 Data bases

Chief Surveyor General

Environmental Potential Atlas, Department of Environmental Affairs and Tourism.

Heritage Atlas Database, Pretoria.

National Archives of South Africa

### 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.

Nkangale District Municipality (2004). *Formalization of Cultural and Historic sites*. Compiled by Cultmatric cc, Pretoria.

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

Raper, P.E. 2004. *South African place names*. Johannesburg: Jonathan Ball Publishers.

### 10.3 Maps and photographs

1: 50 000 Topocadastral maps – 2529CD

Google Earth

## APPENDIX 1: CONVENTIONS USED TO ASSESS THE IMPACT OF PROJECTS ON HERITAGE RESOURCES

### Significance

According to the NHRA, Section 2(vi) the **significance** of a heritage sites and artefacts is determined by it aesthetic, architectural, historical, scientific, social, spiritual, linguistic or technical 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.

Matrix used for assessing the significance of each identified site/feature

<b>1. Historic value</b>				
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				
<b>2. Aesthetic value</b>				
It is important in exhibiting particular aesthetic characteristics valued by a community or cultural group				
<b>3. Scientific value</b>				
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				
<b>4. Social value</b>				
Does it have strong or special association with a particular community or cultural group for social, cultural or spiritual reasons				
<b>5. Rarity</b>				
Does it possess uncommon, rare or endangered aspects of natural or cultural heritage				
<b>6. Representivity</b>				
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.				
<b>7. Sphere of Significance</b>		High	Medium	Low
International				
National				
Provincial				
Regional				
Local				
Specific community				
<b>8. Significance rating of feature</b>				
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 = retain or relocate graves

**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. RELEVANT LEGISLATION

All archaeological and palaeontological sites, and meteorites are protected by the National Heritage Resources Act (Act no 25 of 1999) as stated in Section 35:

(1) Subject to the provisions of section 8, the protection of archaeological and palaeontological sites and material and meteorites is the responsibility of a provincial heritage resources authority: Provided that the protection of any wreck in the territorial waters and the maritime cultural zone shall be the responsibility of SAHRA.

(2) Subject to the provisions of subsection (8)(a), all archaeological objects, palaeontological material and meteorites are the property of the State. The responsible heritage authority must, on behalf of the State, at its discretion ensure that such objects are lodged with a museum or other public institution that has a collection policy acceptable to the heritage resources authority and may in so doing establish such terms and conditions as it sees fit for the conservation of such objects.

(3) Any person who discovers archaeological or palaeontological objects or material or a meteorite in the course of development or agricultural activity must immediately report the find to the responsible heritage resources authority, or to the nearest local authority offices or museum, which must immediately notify such heritage resources authority.

(4) 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 assist in the detection or recovery of metals or archaeological and palaeontological material or objects, or use such equipment for the recovery of meteorites.

In terms of cemeteries and graves the following (Section 36):

(1) Where it is not the responsibility of any other authority, SAHRA must conserve and generally care for burial grounds and graves protected in terms of this section, and it may make such arrangements for their conservation as it sees fit.

(2) SAHRA must identify and record the graves of victims of conflict and any other graves which it deems to be of cultural significance and may erect memorials associated with the grave referred to in subsection (1), and must maintain such memorials.

(3) No person may, without a permit issued by SAHRA or a provincial 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, 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 equipment, or any equipment which assists in the detection or recovery of metals.

(4) SAHRA or a provincial heritage resources authority may not issue a permit for the destruction or damage of any burial ground or grave referred to in subsection (3)(a) unless it is satisfied that the applicant has made satisfactory arrangements for the exhumation and re-interment of the contents of such graves, at the cost of the applicant and in accordance with any regulations made by the responsible heritage resources authority.

The National Heritage Resources Act (Act no 25 of 1999) 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, and which prescribes heritage resources assessment criteria, consistent with the criteria set out in section 3(3), which must be used by a heritage resources authority or a local authority to assess the intrinsic, comparative and contextual significance of a heritage resource and the relative benefits and costs of its protection, so that the appropriate level of grading of the resource and the consequent responsibility for its management may be allocated in terms of section 8.

Presenting archaeological sites as part of tourism attraction requires, in terms 44 of the Act, a Conservation Management Plan as well as a permit from SAHRA.

(1) Heritage resources authorities and local authorities must, wherever appropriate, co-ordinate and promote the presentation and use of places of cultural significance and heritage resources which form part of the national estate and for which they are responsible in terms of section 5 for public enjoyment, education, research and tourism, including-

- (a) the erection of explanatory plaques and interpretive facilities, including interpretive centres and visitor facilities;
- (b) the training and provision of guides;
- (c) the mounting of exhibitions;
- (d) the erection of memorials; and
- (e) any other means necessary for the effective presentation of the national estate.

(2) Where a heritage resource which is formally protected in terms of Part I of this Chapter is to be presented, the person wishing to undertake such presentation must, at least 60 days prior to the institution of interpretive measures or manufacture of associated material, consult with the heritage resources authority which is responsible for the protection of such heritage resource regarding the contents of interpretive material or programmes.

(3) A person may only erect a plaque or other permanent display or structure associated with such presentation in the vicinity of a place protected in terms of this Act in consultation with the heritage resources authority responsible for the protection of the place.

### APPENDIX 3: SURVEY RESULTS

See Appendix 1 for an explanation of the conventions used in assessing the cultural remains.

Map datum used: Hartebeeshoek 94 (WGS84).

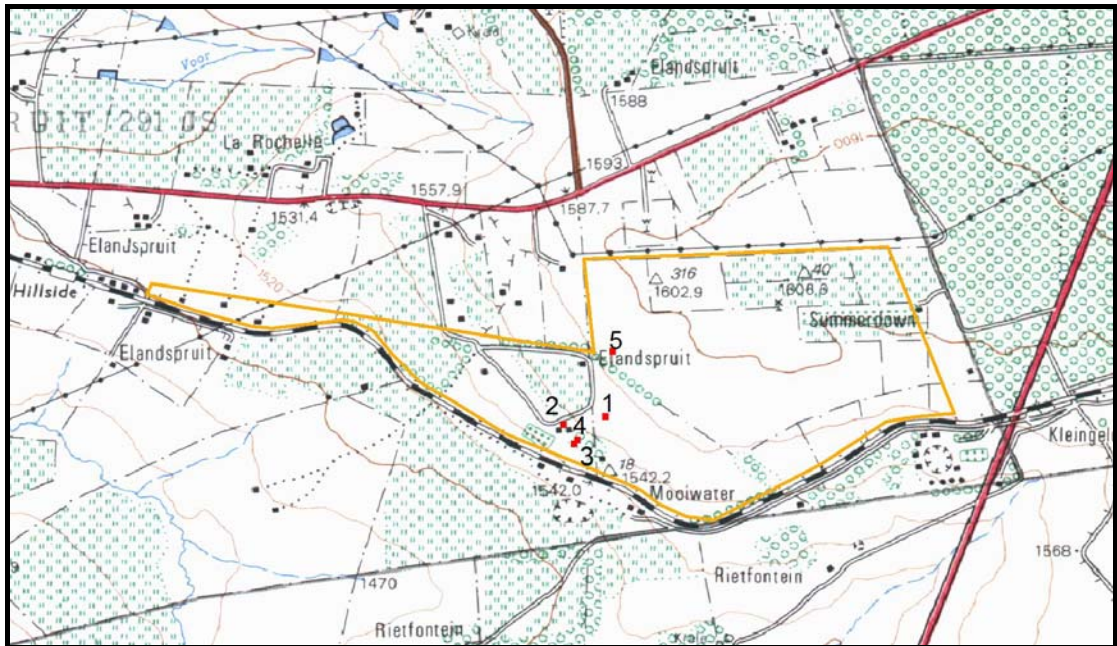


Fig. 2. The study area, showing the location of the identified sites.

Map 2529CD: Chief Directorate Survey and Mapping.

1. Location: Elandspruit 291JS – S 25.82883, E 29.38743

Description: This seems to have been an old homestead of a farm labour tenant. However, according to Mr. Shosana, the features remind him of graves, rather than anything else. If it is a old homestead, the chances of there being graves in the vicinity is also quite good. Due to the dense vegetation growth on the site, it was impossible to determine the nature of these features with certainty.

Discussion: At present, the exact identification of this feature is still unsure. It is therefore approached from the most sensitive point of view, i.e. that it contains graves. Therefore, this area should be red-flagged by the developer and must be re-evaluated at a later stage, e.g. after the grass has been burned down.

Evaluation of significance: High on a local level

Significance of impact: High

Certainty of prediction: Definite

Recommended management action: 5 = retain or relocate graves

Legal requirements: SAHRA permit



Fig. 3. Location of the possible graves.





Fig. 4. One of the identified features of packed stones.

2. Location: Elandspruit 291JS – S 25.82924, E 29.38519

Description: Old farmhouse. It is rectangular, with a corrugated iron roof. According to Mr Skhosana, it was built during the 1950s. A small outbuilding, in similar style, occurs to the back of the main house.

Discussion: This feature shows no originality and is probably not older than 60 years. And is judged not to be conservation worthy.

Evaluation of significance: Low on a regional level

Significance of impact: High

Certainty of prediction: Definite

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

Legal requirements: None



Fig. 5. The old farmstead.

3. Location: Elandspruit 291JS – S 25.83028, 29.38577

Description: Old mine dump, resulting from coal that was mined in the area.

Discussion: It is difficult to date this feature and no reference as to previous mining activities on the site could be located.

Evaluation of significance: Low on a regional level.

Significance of impact: High

Certainty of prediction: Definite

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

Legal requirements: None



Fig. 6. One of the old mine dumps.



4. Location: Elandspruit 291JS – S 25.83006, E 29.38592

Description: Two farming related features. One is an old cattle kraal, built with stone. It is rectangular. Large sections of the walls have fallen over. The second feature is an old pigsty. It is built with more recent material, but equally dilapidated.

Discussion: In all probability, the cattle kraal is quite old, whereas the pigsty dates to a much more recent period. Both these structures were probably part of the larger farmstead presented in No. 2 above. None of these features show interesting or unique elements that can be viewed as conservation worthy.

Evaluation of significance: Low on a regional level

Significance of impact: High

Certainty of prediction: Definite

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

Legal requirements: SAHRA permit



Fig. 7. The old cattle kraal.



Fig. 8. Part of the old pigsty.



5. Location: Elandspruit 291JS – S 25.82535, E 29.38780

Description: Old homestead of which only the foundations remain. Due to the tall grass, it is difficult to determine the nature and size. However, it can be classified as a farm labour tenant homestead. It consisted of a number of rectangular structures arranged in line.

Discussion: There might be graves in the vicinity, but due to the tall grass, this could not be further investigated. Therefore, this area should be red-flagged by the developer and must be re-evaluated at a later stage, e.g. after the grass has been burned down.

Evaluation of significance: Low on a regional level.

Significance of impact: High

Certainty of prediction: Definite

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

Legal requirements: None



Fig. 9. Foundation of one of the structures.

**APPENDIX 4: ILLUSTRATIONS**



Fig. 10. View across the study area, showing the two types of vegetation encountered.



Fig. 11. View across the old agricultural fields.