9-2-206-0005-20041001-NCHM 9/2/2005

HERITAGE IMPACT SCOPING REPORT FOR THE ZANDFONTEIN SUB-TRANSMISSION LINE AND SUBSTATION, HIGHVELD RIDGE DISTRICT, MPUMALANGA

For:

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REPORT: 2004KH44

Date of survey: August 2004 Date of report: August 2004

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SUMMARY

Heritage impact scoping report for the Zandfontein sub-transmission line and substation, Highveld Ridge District, Mpumalanga

The aim of the study was to undertake a scoping review of cultural heritage resources that might occur and as a result be impacted on in an area in which the Zandfontein sub-transmission line and substation is to be developed.

Some heritage resources are known to occur in the larger geographical area, but according to current knowledge and understanding of the development, only two informal cemeteries occur close to the proposed corridors. Therefore, the initial impact on heritage sites is anticipated to be of low significance.

Based on what was found and its evaluation, it is anticipated that the development can take place in any of the proposed corridors, as well as the site for the proposed Zandfontein Substation, on condition of acceptance of the management measures as set out in Section 7 of this report.

CONTENTS

HERITAGE IMPACT SCOPING REPORT FOR THE ZANDFONTEIN SUB-TRANSMISSION LINE AND SUBSTATION, HIGHVELD RIDGE DISTRICT, MPUMALANGA

1. INTRODUCTION

The National Cultural History Museum was contracted by Bohlweki Environmental to undertake a scoping review of cultural heritage resources that might occur and as a result be impacted on in an area in which the Zandfontein sub-transmission line and substation is to be developed.

Cultural heritage resources are broadly defined as all non-physical and physical human-made occurrences, as well as natural occurrences that are associated with human activity. These include all sites, structures and artefacts of importance, either individually or in groups, in the history, architecture and archaeology of human (cultural) development.

2. BACKGROUND AND BRIEF

This report gives an overview of the cultural heritage potential of the area in which it is proposed to build the sub-transmission line and new substation. The client identified possible corridors. The aim was therefore to identify which of the corridors would be the most suitable for the proposed development. This could be achieved by identifying areas/locations of possible high significance that consequently should be avoided.

The scope of work consisted of:

- 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. STUDY APPROACH

3.1 *Information base*

Archaeologically speaking, the proposed corridors are not in an area of high significance, as environmental constraints possibly forced people, especially during pre-colonial times, to select other areas to live in.

3.2 *Methodology*

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. A few published sources pertaining to the historical events that took place in the larger geographical area was found.

The *Archaeological Data Recording Centre* (ADRC), housed at the National Cultural History Museum, Pretoria, was consulted. This was used to draw up a preliminary map to indicate the existence of known sites of cultural significance, indicating potential problem areas.

This preliminary study was followed by a field trip, from which an overview of the area was gained and an idea of the potential problems and expected heritage sites could be formulated. Fortunately, the area is well known to the researcher as a result of previous work done here for various mining companies, road and railway developments, etc.

4. STUDY AREA

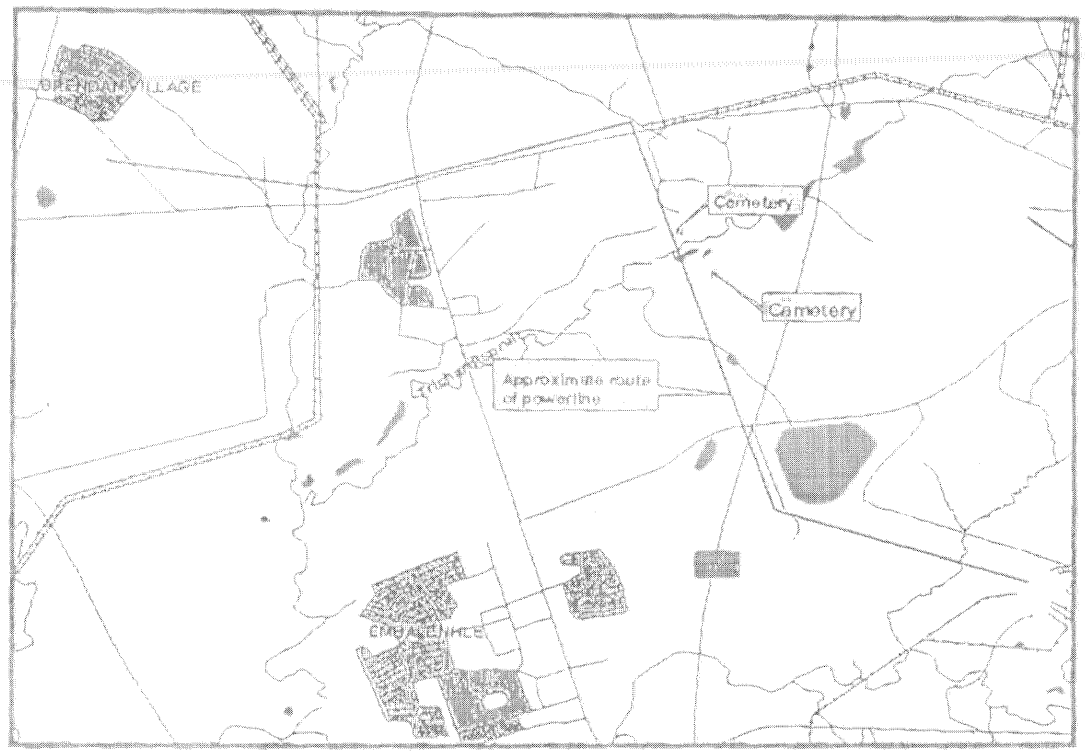

Fig. 1. Location of the study area and the identified heritage sites.

The location and extent of the study area can be determined from the map in Figure 1. It would run from the substation at Middelbult in a north western direction, crossing the R546 and the Trichardt spruit after which it turns to the west to stop just south of the village of Brendan.

4.1 *Description of affected environment*

- Stone Age

No sites or objects dating to this period were identified in the study area.

Little information about Stone Age habitation of the area is available. It is unlikely that Early Stone Age people would have occupied the area specific, as it would have been to cold.

- **Iron Age**

Iron Age people started to settle in southern Africa c. AD 300, with one of the oldest known sites at Silver Leaves, south east of Tzaneen dating to AD 270. However, Iron Age occupation of the eastern highveld area (including the study area) did not start much before the 1500s. Although no such sites were identified in the study area, they are known to exist to the east, north and west of the town of Evander.

- **Historic period**

The historical period in this area starts with the arrival of early settlers who took up farms and settled permanently in the area. The establishment of towns such as Bethal soon followed. After the discovery of minerals such as coal and gold, development industrial and urban development took place on a large scale.

Two informal cemeteries are known to exist in the area (see Appendix 2). As teir locations are known, it would be easy to avoid them.

5. LEGISLATIVE REQUIREMENTS

Aspects concerning the conservation of cultural heritage are mainly dealt within the Heritage Resources Act (Act 25 of 1999) and, to a lesser extent, the Environment Conservation Act (Act 73 of 1989).

5.1 National Heritage Resource Act

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.

In terms of Section 7(1) of the Act, SAHRA, in consultation with the Minister and the MEC of every province, must by regulation establish a system of grading of places and objects which form part of the national estate, and which distinguishes between at least the categories-

(a) Grade I: Heritage resources with qualities so exceptional that they are of special national significance. Examples would be Mapungubwe Iron Age Site or the Castle in Cape Town.

(b) Grade II: Heritage resources that, although forming part of the national estate, can be considered to have special qualities that make them significant within the context of a province or a region. Examples would be sites containing rock art, or the house of a person important in the history of the country.

(c) Grade III: Other heritage resources worthy of conservation. Examples would be houses showing architectural merit, etc.

It is unlikely that any sites classified as grade I, or even II, are located in the survey area.

6. IDENTIFICATION OF RISK SOURCES

Scoping exercises usually focus on two phases of a proposed development: the **construction** and **operation** phases.

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

TABLE 1:

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

7. 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.

Impact analysis and resultant management of cultural resources under threat of the proposed development, are based on the present understanding of the construction and operation of a sub-transmission line. The following objectives

and design standards, if adhered to, can eliminate, minimise or enhance potential impacts.

- The developer must ensure that an archaeologist inspects each site selected for any infrastructure development such as access routes, construction campsites, etc.

- In the past, people used to settle near water sources. Therefore riverbanks, rims of pans and smaller watercourses should be avoided as far as possible.

- Avoid all patches bare of vegetation unless previously inspected by an archaeologist. These might be old settlement sites.

- Rock outcrops might contain rock shelters, engravings or stone walled settlements, and should therefore be avoided unless previously inspected by an archaeologist.

- Communities living close to the proposed corridor should be consulted as to the existence of sites of cultural significance, e.g. graves, as well as sites that do not show any structures but have emotional significance, such as battlefields, etc.

- All graves or cemeteries should be avoided, unless when totally impossible. The correct procedure, i.e. notification of intent to relocate them, consultation with descendants and permit application, should then be followed in relocating the graves. If any of the graves are older than 60 years, they can only be exhumed by an archaeologist. Graves of victims of conflict requires additional permits from SAHRA before they can be relocated.

- Archaeological material, by its very nature, occurs below ground. The developer should therefore keep in mind that archaeological sites might be exposed during the construction work. If anything is noticed, work in that area should be stopped and the occurrence should immediately be reported to a museum, preferably one at which an archaeologist is available. The archaeologist should then investigate and evaluate the find.

- Any mitigation measures applied by an archaeologist, in the sense of excavation and documentation, should be published in order to bring this information into the public domain.

8. DISCUSSION

The aim of the study was to undertake a scoping review of cultural heritage resources that might occur and as a result be impacted on in an area in which the Zandfontein sub-transmission line and substation is to be developed.

Some heritage resources are known to occur in the larger geographical area, but according to current knowledge and understanding of the development, only two informal cemeteries occur close to the proposed corridors. Therefore, the initial impact on heritage sites is anticipated to be of low significance.

Based on what was found and its evaluation, it is anticipated that the development can take place in any of the proposed corridors, as well as the site for the proposed Zandfontein Substation, on condition of acceptance of the management measures as set out in Section 7 of this report.

9. REFERENCES

9.1 Data bases

Archaeological Data Recording Centre, National Cultural History Museum, Pretoria.

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9.2 Literature

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

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9.3 Maps

1: 50 000 Topocadastral maps – 2629AC, 2629CA

10. PROJECT TEAM

J van Schalkwyk

APPENDIX 1: SURVEY RESULTS

[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.]

Map datum used: Hartebeeshoek 94 (WGS84)

1. Site number: 2629CA14
Location: Goedverwachting 287IS: S 26°30'46"; E 29°05'30"
Description: Informal cemetery with approximately 100 graves, all marked only with stone cairns.
Discussion: Fortunately this site in located some distance from the proposed development and in would have no impact on it.
Significance of impact: Low
Certainty of prediction: Definite
Recommended management action: No further action necessary
Legal requirements: None

2. Site number: 2629CA15
Location: Goedverwachting 287IS: S 26°30'33"; E 29°05'20"
Description: Informal cemetery with approximately 10 graves, most marked with headstones. Some are older than 60 years.
Discussion: Fortunately this site in located some distance from the proposed development and in would have no impact on it.
Significance of impact: Low
Certainty of prediction: Definite
Recommended management action: No further action necessary
Legal requirements: None

APPENDIX 2. 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

PHRA – Provincial Heritage Resources Agency

SAHRA - South African Heritage Resources Agency