

**HERITAGE IMPACT SCOPING REPORT FOR THE PROPOSED
VAAL VRESAP 88KV LINE AND NEW VRESAP SUBSTATION,
HEIDELBERG DISTRICT, GAUTENG**

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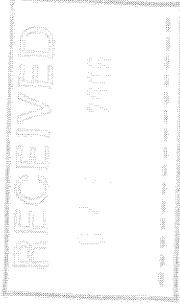
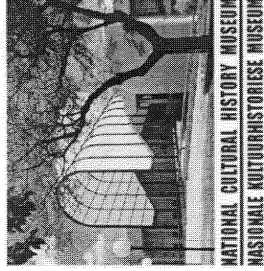
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SUMMARY

Heritage impact scoping report for the proposed Vaal Vresap 88kV line and new Vresap substation, Heidelberg district, Gauteng

The aim of the survey was to locate, identify, evaluate and document sites, objects and structures of cultural significance found within the boundaries of the area in which it is proposed to develop the Vaal Vresap 88kV line and Vresap substation.

Two sites are located close to the corridor of Alternative 1. However, as this is the area where the pump station for the pipeline is to be erected, mitigation measures are already under way to address these two sites.

Based on what was found and its evaluation, it is anticipated that the development can take place in either of the proposed corridors and at the substation, on condition of acceptance of the management measures as set out in Section 7 of this report. The most important of this would be the conducting of a full Phase 1 archaeological survey of the selected corridor in accordance with the requirements of Section 38(3) of the National Heritage Resources Act (Act 25 of 1999) once the final alignment has been determined.

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HERITAGE IMPACT SCOPING REPORT FOR THE PROPOSED VAAL VRESAP 88KV LINE AND NEW VRESAP SUBSTATION, HEIDELBERG DISTRICT, GAUTENG

1. INTRODUCTION

The National Cultural History Museum¹ 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 Vaal Vresap 88kV electricity sub-transmission line and Vresap substation is to be developed.

Comment [r1]: Same as the above comment.

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 the new substation. Two corridors were identified for investigation. The aim was therefore to determine if there are any heritage sites that would be impacted on negatively by the proposed development. This could be achieved by identifying areas/locations of possible high significance that consequently should be avoided.

Comment [r2]: No expansion of the substations, the project is just for the 132 kV line between the substations.

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

¹ The National Cultural History Museum is affiliated to the Northern Flagship Institution, which act as parent body for a number of museums, all of which resorts under the Department of Arts and Culture.

Not much is known about the archaeology of this particular area, largely as very little research has been done here in the past. Most of the work relates to surveys in specific areas (e.g. Van Schalkwyk 2004, 2005), or specific types of sites (e.g. Maggs 1976).

3.2 Assumptions and limitations

Based on the above, it must be stated that this is not a final survey of the corridor, but an evaluation based on existing information and a short field visit, to determine which of the corridors would be the preferred option. It is assumed that when all factors have been considered and a decision has been made, the selected corridor would then have to be subjected to a full Phase I assessment by a suitably qualified archaeologist.

3.3 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 archaeology of the larger 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 short field trip, from which an overview of the area was gained and an idea of the potential problem areas and expected heritage sites could be formulated.

4. STUDY AREA

The location and extent of the study area can be determined from the map in Figure 1. Both alternatives crosses the farm Boschkop 480JR, which is located some distance east of the village of Vaal Marina.

Topographically, the area can be described as hilly, with the Vaal River the largest feature in the area. The geology is made up of lava and the vegetation is classified as Moist Cool Highveld Grassland.

4.1 Description of affected environment

Stone Age

This section of the highveld area has been inhabited since Early Stone Age (ESA) times, continuing right down to the Late Stone Age. Tools dating to all these period are mostly found in the vicinity of watercourses, e.g. the Vaal River gravels in the Vereeniging area. However, none were noticed in the study area and it is believed that most of the sites containing this type of material would now be inundated by the water of the Vaal Dam.

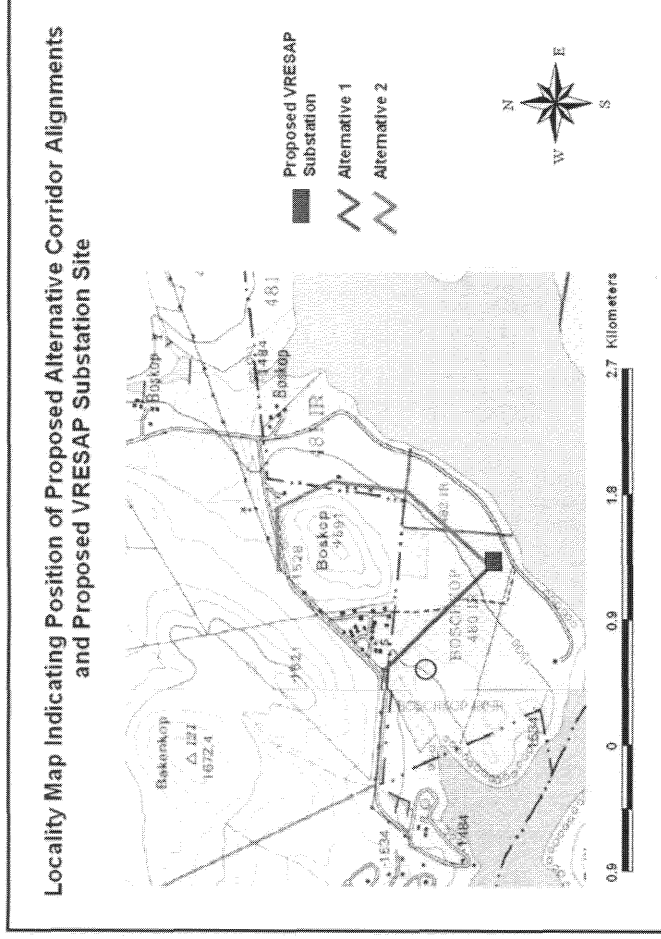


Figure 1. Location of the study area. The identified sites (see discussion below) are located inside the area circled in black.

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 Hartbeespoort 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.

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 a 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. As a result of this troubled period, Sotho-Tswana people concentrated into large towns for defensive purposes. Because of the lack of trees they built their settlements in stone. These stone-walled villages were almost always located near cultivatable soil and a source of water.

Arrival of the Iron Age agro-pastoralists, did not completely drive out the previous Khoes and San inhabitants. There is sufficient evidence to confirm that they lived together in some sort of relation that was beneficial to all. This, for example is reflected in the rock art found in the area.

Stone walled sites are known to exist in the hill areas outside the development area. A small stone circle was identified just outside the corridor of Alternative 1.

Historic period

White settlers moved into the area during the first half of the 19th 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 gold. During the Anglo-Boer War, a number of skirmishes took place in the larger area.

Some stone cairns were identified just outside the corridor of Alternative 1. Although it is believed that it is not graves, members of the local community claim it to be.

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 Resources 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 site classified as grade I, or even II, are located in the survey area.

Nature and Extent of the impacts

From a heritage perspective, it is anticipated that neither of the identified corridors would have an impact on heritage sites. The two sites located close to the corridor of Alternative I,

would not present a problem as this is the area where the pump station for the pipeline is to be erected. As a result, mitigation measures are already under way to address these two sites.

Selection of the preferred corridor is based on the criteria of the least number of sites that would be impacted on. Based on current knowledge, this would be Alternative 1 as the shortest, with Alternative 2 as second choice.

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 on, 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 the erection of a pole structure. If a particular pole structure impacts on a heritage site but cannot be shifted, mitigation measures, i.e. the controlled excavation of the site prior to development, can be implemented. This can only be done by a qualified archaeologist after obtaining a valid permit from the PHRA (Provincial Heritage Resources Agency) (or SAHRA, if it is a category 1 site).
- The same action holds true 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.
- In this particular part of the country, Iron Age people also preferred to settle on the saddle (or neck) between mountains (hills/outcrops). These areas should also be avoided.
- 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 survey was to locate, identify, evaluate and document sites, objects and structures of cultural significance found within the boundaries of the area in which it is proposed to develop the Vaal Vresap 88kV line and Vresap substation.

Two sites are located close to the corridor of Alternative 1. However, as this is the area where the pump station for the pipeline is to be erected, mitigation measures are already under way to address these two sites.

Based on what was found and its evaluation, it is anticipated that the development can take place in either of the proposed corridors and at the substation, on condition of acceptance of the management measures as set out in Section 7 of this report. The most important of this would be the conducting of a full Phase 1 archaeological survey of the selected corridor in accordance with the requirements of Section 38(3) of the National Heritage Resources Act (Act 25 of 1999) once the final alignment has been determined.

9. REFERENCES

9.1 Data bases

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

9.2 Literature

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9.3 Maps

1: 50 000 Topocadastral maps – 2628CC, 2628CD



APPENDIX I. 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