

**Heritage impact assessment for the
PROPOSED TLHABOLOGANG 132KV SUBSTATION DEVELOPMENT,
COLIGNY MAGISTERIAL DISTRICT,
NORTH WEST PROVINCE**

**HERITAGE IMPACT ASSESSMENT FOR THE PROPOSED
TLHABOLOGANG 132KV SUBSTATION DEVELOPMENT, COLIGNY
MAGISTERIAL DISTRICT, NORTH WEST PROVINCE**

Report No: 2011/JvS/063
Status: Final
Revision No: 0
Date: August 2011

Prepared for:
ENVIROLUTION CONSULTING
Representative: Ms N Khandhela

Postal Address: Unit 25, Sunninghill Office Park, 4 Peltier Road, Sunninghill, 2157
Tel: 086 144 4499
E-mail: nk hensani@envirolution.co.za

Prepared by:
J van Schalkwyk (D Litt et Phil), Heritage Consultant
ASAPA Registration No.: 168
Principal Investigator: Iron Age, Colonial Period, Industrial Heritage

Postal Address: 62 Coetzer Avenue, Monument Park, 0181
Mobile: 076 790 6777
Fax: 086 611 3902
E-mail: jvschalkwyk@mweb.co.za

Declaration:

I, J.A. van Schalkwyk, declare that I do not have any financial or personal interest in the proposed development, nor its developers or any of their subsidiaries, apart from the provision of heritage assessment and management services.



J A van Schalkwyk (D Litt et Phil)
Heritage Consultant
August 2011

EXECUTIVE SUMMARY


HERITAGE IMPACT ASSESSMENT FOR THE PROPOSED TLHABOLOGANG 132KV SUBSTATION DEVELOPMENT, COLIGNY MAGISTERIAL DISTRICT, NORTH WEST PROVINCE

As part of an on-going process of upgrading of the electricity supply, ESKOM proposes the construction of a 132kV substation on the northern outskirts of the town of Coligny in North West Province.

In accordance with Section 38 of the NHRA, an independent heritage consultant was appointed by **Enviroolution Consulting** to conduct a Heritage Impact Assessment (HIA) to determine if any sites, features or objects of cultural heritage significance occur within the boundaries of the area where it is planned to develop the project.

- As no heritage sites occur in the study area, there would be no impact resulting from the proposed development.

Therefore, from a heritage point of view we recommend that the proposed development can continue. However, we request that if archaeological sites or graves are exposed during construction work, it should immediately be reported to a heritage practitioner so that an investigation and evaluation of the finds can be made.



J A van Schalkwyk
Heritage Consultant
August 2011

TECHNICAL SUMMARY

Property details						
Province	North West Province					
Magisterial district	Coligny					
Topo-cadastral map	2626AD					
Closest town	Coligny					
Farm name	Rietvly 70IP					
Portions/Holdings	-					
Coordinates	Centre point					
	No	Latitude	Longitude	No	Latitude	Longitude
	1	S 26.32456	E 26.30961	2	S 26.32451	E 26.30860
	3	S 26.32361	E 26.30864	4	S 26.32364	E 26.30964

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

Development	
Description	Construction of a electricity substation
Project name	Thlabologang Substation

Land use	
Previous land use	Farming
Current land use	Farming

Heritage sites assessment		
<i>Site type</i>	<i>Site significance</i>	<i>Site grading (Section 7 of NHRA)</i>
None		

Impact assessment		
<i>Impact</i>	<i>Mitigation</i>	<i>Permits required</i>
None		

TABLE OF CONTENTS

	Page
EXECUTIVE SUMMARY	II
TECHNICAL SUMMARY	III
TABLE OF CONTENTS	IV
LIST OF FIGURES.....	IV
GLOSSARY OF TERMS AND ABBREVIATIONS	V
1. INTRODUCTION.....	6
2. TERMS OF REFERENCE	6
3. HERITAGE RESOURCES	7
4. STUDY APPROACH AND METHODOLOGY	8
5. DESCRIPTION OF THE AFFECTED ENVIRONMENT	9
6. SITE SIGNIFICANCE AND ASSESSMENT	12
7. CONCLUSIONS	13
8. REFERENCES.....	14
APPENDIX 1: CONVENTIONS USED TO ASSESS THE SIGNIFICANCE OF HERITAGE RESOURCES	15
APPENDIX 2. RELEVANT LEGISLATION	16

LIST OF FIGURES

	Page
Fig. 1. Location of the study area in regional context.	10
Fig. 2. Views over the study area.....	10
Fig. 3. Typical house in town and the local cemetery.	11
Fig. 4. The study area, showing known heritage sites.....	12

GLOSSARY OF TERMS AND ABBREVIATIONS

TERMS

Study area: Refers to the entire study area as indicated by the client in the accompanying Fig. 1 and 2.

Stone Age: The first and longest part of human history is the Stone Age, which began with the appearance of early humans between 3-2 million years ago. Stone Age people were hunters, gatherers and scavengers who did not live in permanently settled communities. Their stone tools preserve well and are found in most places in South Africa and elsewhere.

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

Iron Age: Period covering the last 1800 years, when new people brought a new way of life to southern Africa. They established settled villages, cultivated domestic crops such as sorghum, millet and beans, and they herded cattle as well as sheep and goats. These people, according to archaeological evidence, spoke early variations of the Bantu Language. Because they produced their own iron tools, archaeologists call this the Iron Age.

Early Iron Age	AD 200 - AD 900
Middle Iron Age	AD 900 - AD 1300
Late Iron Age	AD 1300 - AD 1830

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

ABBREVIATIONS

ADRC	Archaeological Data Recording Centre
ASAPA	Association of Southern African Professional Archaeologists
CS-G	Chief Surveyor-General
EIA	Early Iron Age
ESA	Early Stone Age
LIA	Late Iron Age
LSA	Later Stone Age
HIA	Heritage Impact Assessment
MSA	Middle Stone Age
NASA	National Archives of South Africa
NHRA	National Heritage Resources Act
PHRA	Provincial Heritage Resources Agency
SAHRA	South African Heritage Resources Agency

HERITAGE IMPACT ASSESSMENT FOR THE PROPOSED TLHABOLOGANG 132KV SUBSTATION DEVELOPMENT, COLIGNY MAGISTERIAL DISTRICT, NORTH WEST PROVINCE

1. INTRODUCTION

As part of an on-going process of upgrading of the electricity supply, ESKOM proposes the construction of a 132kV substation on the northern outskirts of the town of Coligny in North West Province.

South Africa's heritage resources, also described as the 'national estate', comprise a wide range of sites, features, objects and beliefs. However, according to Section 27(18) of the National Heritage Resources Act (NHRA), Act 25 of 1999, no person may destroy, damage, deface, excavate, alter, remove from its original position, subdivide or change the planning status of any heritage site without a permit issued by the heritage resources authority responsible for the protection of such site.

In accordance with Section 38 of the NHRA, an independent heritage consultant was appointed by **Enviroolution Consulting** to conduct a Heritage Impact Assessment (HIA) to determine if any sites, features or objects of cultural heritage significance occur within the boundaries of the area where it is planned to develop the project.

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 is intended for submission to the South African Heritage Resources Agency (SAHRA).

2. TERMS OF REFERENCE

2.1 Scope of work

The scope of work for this study consisted of:

- Conducting of a desk-top investigation of the area, in which all available literature, reports, databases and maps were studied;
- A visit to the proposed development area.

The objectives were to

- Identify possible archaeological, cultural and historic sites within the proposed development area;
- 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.

2.2 Limitations

- It must be remembered that archaeological material, by its very nature, occurs below ground level and in many cases such buried cultural remains are difficult to detect.

Table 1: Applicable category of heritage impact assessment study and report.

Type of study	Aim	SAHRA involved	SAHRA response
Heritage Impact Assessment	<p>The aim of a full HIA investigation is to provide an informed heritage-related opinion about the proposed development by an appropriate heritage specialist. The objectives are to identify heritage resources (involving site inspections, existing heritage data and additional heritage specialists if necessary); assess their significances; assess alternatives in order to promote heritage conservation issues; and to assess the acceptability of the proposed development from a heritage perspective.</p> <p>The result of this investigation is a heritage impact assessment report indicating the presence/ absence of heritage resources and how to manage them in the context of the proposed development.</p> <p>Depending on SAHRA's acceptance of this report, the developer will receive permission to proceed with the proposed development, on condition of successful implementation of proposed mitigation measures.</p>	Provincial Heritage Resources Authority	Comments on built environment and decision to approve or not
		SAHRA Archaeology, Palaeontology and Meteorites Unit	Comments and decision to approve or not

3. HERITAGE RESOURCES

3.1 The National Estate

The NHRA (No. 25 of 1999) defines the heritage resources of South Africa which are of cultural significance or other special value for the present community and for future generations that must be considered part of the national estate to include:

- places, buildings, structures and equipment of cultural significance;
- places to which oral traditions are attached or which are associated with living heritage;
- historical settlements and townscapes;
- landscapes and natural features of cultural significance;
- geological sites of scientific or cultural importance;
- archaeological and palaeontological sites;
- graves and burial grounds, including-
 - ancestral graves;
 - royal graves and graves of traditional leaders;
 - graves of victims of conflict;
 - graves of individuals designated by the Minister by notice in the Gazette;
 - historical graves and cemeteries; and
 - other human remains which are not covered in terms of the Human Tissue Act, 1983 (Act No. 65 of 1983);
- sites of significance relating to the history of slavery in South Africa;
- movable objects, including-
 - objects recovered from the soil or waters of South Africa, including archaeological and palaeontological objects and material, meteorites and rare geological specimens;

- objects to which oral traditions are attached or which are associated with living heritage;
- ethnographic art and objects;
- military objects;
- objects of decorative or fine art;
- objects of scientific or technological interest; and
- books, records, documents, photographic positives and negatives, graphic, film or video material or sound recordings, excluding those that are public records as defined in section 1(xiv) of the National Archives of South Africa Act, 1996 (Act No. 43 of 1996).

3.2 Cultural significance

In the NHRA, Section 2 (vi), it is stated that “cultural significance” means aesthetic, architectural, historical, scientific, social, spiritual, linguistic or technological value or significance. This is determined in relation to a site or feature’s uniqueness, condition of preservation and research potential.

According to Section 3(3) of the NHRA, a place or object is to be considered part of the national estate if it has cultural significance or other special value because of

- its importance in the community, or pattern of South Africa's history;
- its possession of uncommon, rare or endangered aspects of South Africa's natural or cultural heritage;
- its potential to yield information that will contribute to an understanding of South Africa's natural or cultural heritage;
- its importance in demonstrating the principal characteristics of a particular class of South Africa's natural or cultural places or objects;
- its importance in exhibiting particular aesthetic characteristics valued by a community or cultural group;
- its importance in demonstrating a high degree of creative or technical achievement at a particular period;
- its strong or special association with a particular community or cultural group for social, cultural or spiritual reasons;
- its strong or special association with the life or work of a person, group or organisation of importance in the history of South Africa; and
- sites of significance relating to the history of slavery in South Africa.

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 Figures 1 and 2.

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.

- A few publications dealing with events and places in the larger region were identified (Horn 1996; Mason 1969; Raper 2004; Van den Bergh 1996), but none that deal with the study area specifically.

4.2.1.2 Data bases

The *Heritage Atlas Database*, the *Environmental Potential Atlas*, the *Chief Surveyor General (CS-G)* and the *National Archives of South Africa (NASA)* were consulted.

- Database surveys produced a number of sites located in the larger region of the proposed development.
- The original Title Deed of the farm was not located.

4.2.1.3 Other sources

Aerial photographs and topocadastral and other maps were also studied - see the list of references below.

- Information of a very general nature were obtained from these sources

4.2.2 Field survey

The area that had to be investigated was identified by **Envirolution Consulting** by means of maps. The site was surveyed by walking two transects across it.

5. DESCRIPTION OF THE AFFECTED ENVIRONMENT

5.1 Site location and description

The site is located on the north western outskirts of the town of Coligny and east of the township of Tlhabologang in the Coligny magisterial district of North West Province (Fig. 1). It is located on the farm Rietvly 70IP. For more information, please see the Technical Summary presented above.

The geology of the area is made up of sand, changing to granite in the south. The topography can be described as slightly undulating plains and the only significance change is brought about by the Taaibosspuit that passes a few kilometres to the south of the study area. The original vegetation is classified as Dry Sandy Highveld Grassland. However, this vegetation has completely being changed on the site due to current farming activities as well as urban expansion.

Informal settlement has expanded in the region and is only prevented from spreading eastwards due to the existence of a railway line.

The formal town cemetery occurs to the south of the study area, i.e. on the on the northern outskirts of the town. It has in recent years expanded outside the original boundaries due to the large number of informal settlers that has moved into the area.

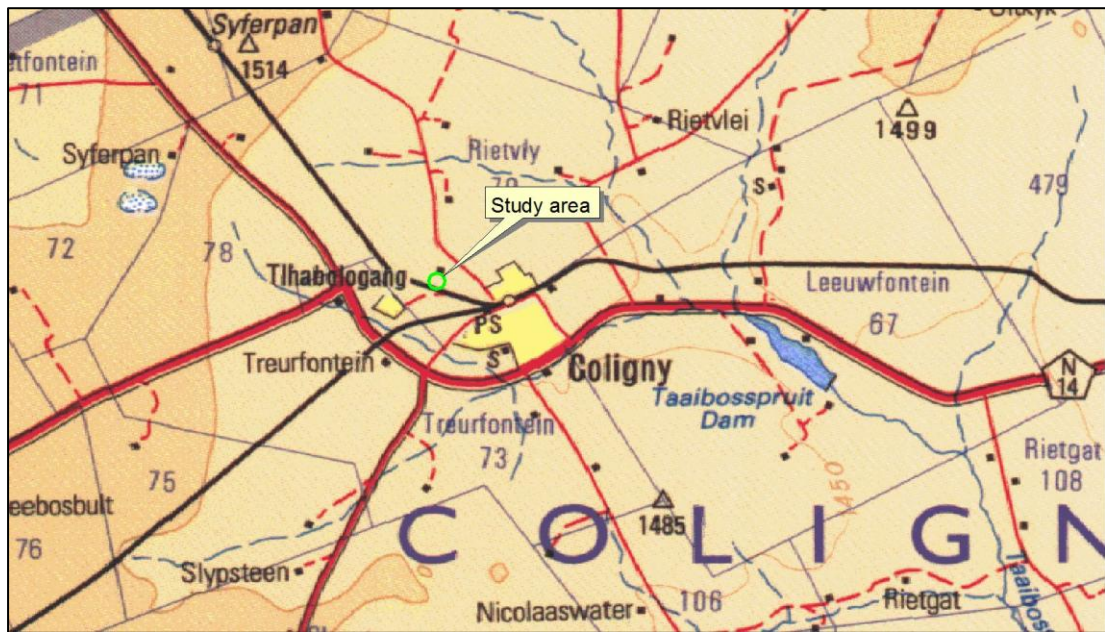


Fig. 1. Location of the study area in regional context.
(Map 2626: Chief Surveyor-General)



Fig. 2. Views over the study area.

5.2 Development overview

The development is a typical 132kV electricity substation, with overhead lines coming in and going out. The total area that is required for this development is approximately 100 x 100 metres in size.

5.3 Overview of the region

5.3.1 Stone Age

Very little information regarding the occupation of the region during Stone Age times was obtained. Records indicated that rock engravings occur far to the south and west of the region. This absence of occupation can probably be attributed to this being a somewhat inhospitable region, with a lack of suitable places to live, e.g. rock shelters, as well as the fact that the area is quite open and with little open water.

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.

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 Magaliesberg (Horn 1996). However, no sites are known from this period in the larger region.

5.3.3 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. This remained so up to the present day. The only alternative activity was some sporadic diamond mining that took place in the region. During the Anglo Boer War some fighting took place in the larger region. Many soldiers that died during these battles were later reburied in a cemetery on the western side of the town of Coligny.

Coligny was first named Treurfontein, but in 1923 when it became a town its name was changed to in honour of Gaspard de Coligny, a 16th century Huguenot leader.

NHRA Category	Buildings, structures, places and equipment of cultural significance
Protection status	
General Protection - Section 34: Structures older than 60 years	

NHRA Category	Graves, cemeteries and burial grounds
Protection status	
General Protection - Section 36: Graves or burial grounds	



Fig. 3. Typical house in town and the local cemetery.

5.4 Identified sites

The following sites, features and objects of cultural heritage significance were identified in the study area:

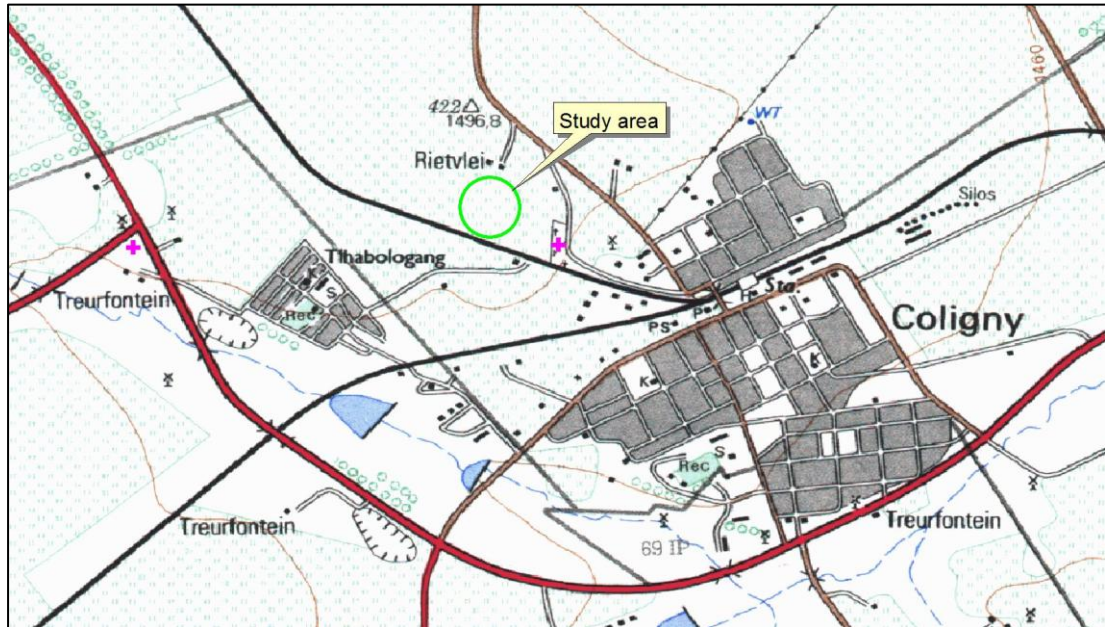


Fig. 4. The study area, showing known heritage sites.
(Map 2626AD: Chief Surveyor-General)

5.3.1 Stone Age

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

5.3.2 Iron Age

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

5.3.3 Historic period

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

6. SITE SIGNIFICANCE AND ASSESSMENT

6.1 Heritage assessment criteria and grading

The NHRA 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, on a local authority level.

The occurrence of sites with a Grade I significance will demand that the development activities be drastically altered in order to retain these sites in their original state. For Grade II and Grade III sites, the applicable of mitigation measures would allow the development activities to continue.

6.2 Statement of significance

In terms of Section 7 of the NHRA, all the sites currently known or which are expected to occur in the study area are evaluated to have Grade III significance.

6.3 Impact assessment

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

- As no heritage sites occur in the study area, there would be no impact resulting from the proposed development of the combined business and commercial site.

7. CONCLUSIONS

The aim of the survey was to locate, identify, evaluate and document sites, objects and structures of cultural significance found within the area in which it is proposed to construct the electricity substation.

- As no heritage sites occur in the study area, there would be no impact resulting from the proposed development.

Therefore, from a heritage point of view we recommend that the proposed development can continue. However, we request that if archaeological sites or graves are exposed during construction work, it should immediately be reported to a heritage practitioner so that an investigation and evaluation of the finds can be made.

8. REFERENCES

8.1 Data bases

Chief Surveyor General

Environmental Potential Atlas, Department of Environmental Affairs and Tourism.

Heritage Atlas Database, Pretoria.

National Archives of South Africa

8.2 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.

Horn, A.C. 1996. Okkupasie van die Bankeveld voor 1840 n.C.: 'n sintese. *South African Journal of Ethnology* 19(1):17-27.

Mason, R.J. 1969. *Prehistory of the Transvaal*. Johannesburg: Witwatersrand University Press.

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

Van den Bergh, G. 1996. *24 Battles and Battle Fields of the North West Province*. Potchefstroom: The North West Tourism Association.

8.3 Maps and aerial photographs

1: 50 000 Topocadastral maps: 2626AD

Google Earth

APPENDIX 1: CONVENTIONS USED TO ASSESS THE SIGNIFICANCE OF HERITAGE RESOURCES

Significance

According to the NHRA, 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.

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

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

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.