



**PHASE 1 HERITAGE IMPACT ASSESSMENT FOR THE PROPOSED
ESTABLISHMENT OF THE ANDERSON 400kV SUBSTATION IN
BROEDERSTROOM, NORTH WEST PROVINCE**

Prepared by:

Leonie Marais-Botes

*BA (Cultural History and Archaeology) (UP), BA (Hons) Cultural History (UP),
Post Grad Dip Museology (UP), Restoration of Traditional Buildings (Univ of
Canberra) Post Grad Dip: Heritage (Wits)*

Heritage experience: 17 years

*PO Box 1514
GROENKLOOF
0027*

tel: 082 576 6253

For

NEMAI CONSULTING

P O Box 2193

Sunninghill

2157

tel: (011) 781 1730

fax: (011) 781 1731

March 2011

ACKNOWLEDGEMENTS

Primary Source Investigation

The National Archives, in particular the “Transvaalse Argiefbewaarpark” database.

Publications

Australia ICOMOS. *The Burra Charter*.

National Heritage Resources Act (Act 25 of 1999)

Report by Mountain Club of South Africa (Northern Transvaal Section. The Preservation of the Magaliesberg. 1974

Internet Sources

<http://www.sa-meanders.co.za>

CONTENTS PAGE

<u>CONTENTS</u>	<u>PAGE</u>
ABOUT THIS REPORT	4
EXECUTIVE SUMMARY	5
INTRODUCTION	6
DESCRIPTION OF THE STUDY AREA	7
METHOD	8
PROPOSED NEW ANDERSON SUBSTATION	
1. BRIEF BACKGROUND HISTORY	9
2. FINDINGS	9
2.1 PRE-COLONIAL HERITAGE SITES	9
2.2 HERITAGE STRUCTURES OLDER THAN 60 YEARS	9
2.3 ORIGINAL LANDSCAPE	9
2.4 INTANGIBLE HERITAGE	11
3. CATEGORIES OF HERITAGE VALUE (ACT 25 OF 1999)	11
3.1 HERITAGE VALUE WEIGHED AGAINST CULTURAL SIGNIFICANCE CATEGORIES	13
3.2 SPECIFIC CATEGORIES INVESTIGATED AS PER SECTION 3 (1), (2) AND (3) OF ACT 25 OF 1999	16
4. TABLE INDICATING KNOWN HERITAGE RESOURCES	19
5. OPPORTUNITIES, RESTRICTIONS AND IMPACTS	19
6. THE WAY FORWARD	19

ABOUT THIS REPORT

The heritage report must reflect that consideration has been given to the history and heritage significance of the study area and that the proposed work is sensitive towards the heritage resources and does not alter or destroy the heritage significance of the study area.

The heritage report must refer to the heritage resources currently in the study area.

The opinion of an independent heritage consultant is required to evaluate if the proposed work generally follows a good approach that will ensure the conservation of the heritage resources.

The National Heritage Resources Act (Act 25 of 1999) and the National Environmental Management Act (Act 107 of 1998) are the guideline documents for a report of this nature.

Leonie Marais-Botes was requested by Nemaï Consulting to carry out a Phase 1 Heritage Impact Assessment (HIA) for the proposed new Anderson Substation site.

EXECUTIVE SUMMARY

Eskom Holdings Limited is proposing the construction of a new 400kV Transmission Line, and a proposed new 400kV Substation as part of their Tshwane Strengthening Scheme Project. The proposed powerline will be approximately 40km in length and will run between the proposed new Anderson Substation, which will be located to the north of the Nuclear Energy Corporation of South Africa (NECSA), located in Broederstroom, to the existing Dinaledi Substation which is located approximately 8km North East of Brits.

The proposed powerline will be constructed in the following two Municipal Areas: Madibeng Local Municipality (North West) and the City of Tshwane Local Municipality (Gauteng). The proposed substation is earmarked for construction within the Madibeng Local Municipality. Please note that a separate Environmental Impact Assessment (EIA) process is being undertaken for the proposed Anderson-Dinaledi 400kV Powerline.

The project (as described above) may impact on any types and ranges of heritage resources that are outlined in Section 3 of the National Heritage Resources Act (Act 25 of 1999). Subsequently a Heritage Impact Assessment was commissioned by Nema Consulting and conducted by Leonie Marais-Botes (Heritage Foundation).

The main types and ranges of heritage resources that were identified in the greater study area were:

- Monument
- Graves
- Structures

All graves and cemeteries are of high significance and are protected by various laws. Legislation with regard to graves included the National Heritage Resources Act (Act 25 of 1999) whenever graves are 60 years and older. Other legislation with regard to graves includes those when graves are exhumed and relocated, namely the Ordinance on Exhumations (no 12 of 1980) and the Human Tissues Act (Act 65 of 1983 as amended)

INTRODUCTION

Electricity is generated, supplied and distributed by Eskom via a network called a “Grid”. The amount of electricity being fed into the grid must always match what the customers are taking out. The amount of electricity required by the customers varies not just from day to day, but from minute to minute. As electricity demand increases, and loads are connected, more power stations and associated substations and lines need to be built to meet the electricity demands.

Eskom Holdings Limited is proposing the construction of a new 400kV Transmission Line, and a proposed new 400kV Substation as part of their Tshwane Strengthening Scheme Project. The proposed powerline will be approximately 40km in length and will run between the proposed new Anderson Substation, which will be located to the north of the Nuclear Energy Corporation of South Africa (NECSA), located in Broederstroom, to the existing Dinaledi Substation which is located approximately 8km North East of Brits.

The proposed powerline will be constructed in the following two Municipal Areas: Madibeng Local Municipality (North West) and the City of Tshwane Local Municipality (Gauteng). The proposed substation is earmarked for construction within the Madibeng Local Municipality. Please note that a separate Environmental Impact Assessment (EIA) process is being undertaken for the proposed Anderson-Dinaledi 400kV Powerline.



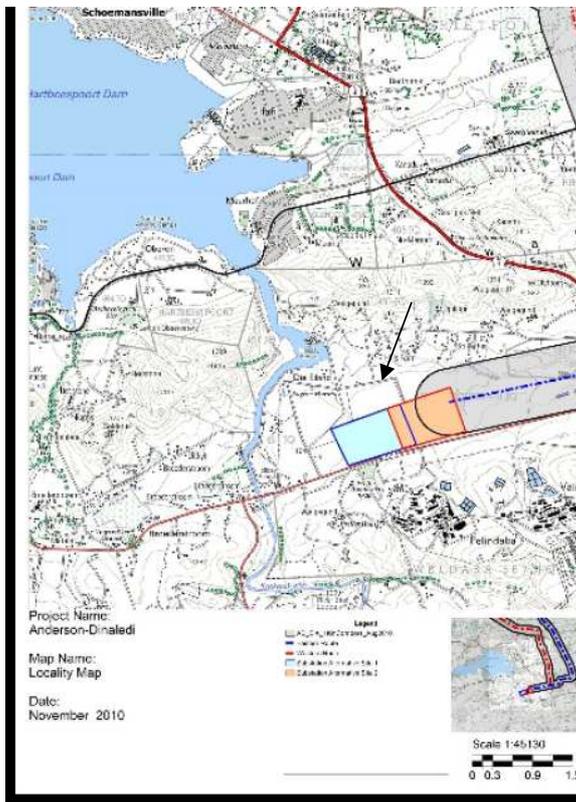
Receiving environment

Other activities in the greater study area include:

- Agricultural activities
- Tourism
- Commercial Activities
- Mining
- Formal and Informal Housing

DESCRIPTION OF THE STUDY AREA

Two site alternatives are being investigated for the proposed construction of the Anderson Substation. These two site alternatives are located directly to the north of NECSA, in Broederstroom, within the Madibeng Local Municipality, North West Province.



The arrow indicates the two alternatives identified for the Anderson Substation

Site 1

Portion 82 of the Farm Weldaba 567 JQ

Total Portion = 2737ha

(Size of Portion location north of the R104 which is earmarked for possible substation construction = 200ha)

Site 2

Portion 82 of the Farm Weldaba 567 JQ (see above)

Portion 65 of the Farm Welgedund 491 JQ 42.82ha

Portion 25 of the Farm Welgedund 491 JQ 168.3ha

METHOD

The objective of this study was not to undertake a detailed heritage survey, but to gain an overall understanding of the heritage sensitivities of the area and indicate how they may be impacted on through development activities. The survey took place on 1 March 2011.

The entire study area was covered with a vehicle. At certain pre-determined points foot surveys were conducted to establish an overall understanding of the study area and the sensitivities associated with it in heritage context. In extensive study areas it is difficult to do a foot survey of the entire area in the limited time available. 1:50 000 maps were studied to determine possible sensitive areas previously identified. The study took place in late summer, early autumn. Due to good rainfall the vegetation was dense and visibility limited.

After the field studies a literature and archival search were conducted to find additional and contextual information.

In order to establish heritage significance the following method was followed:

- Investigation of primary resources (archival information)
- Investigation of secondary resources (literature and maps)
- Physical evidence (site investigation)
- Determining Heritage Significance

PROPOSED ANDERSON SUBSTATION DEVELOPMENT

1. BRIEF BACKGROUND HISTORY

In the Broederstroom area archaeologists have uncovered the remains of at least two stratified villages that date back to between AD 550 and 700, each with evidence of iron forging.¹

Broederstroom was founded in 1903 with the opening of a trading post in the area by the Jallapor family.²

The history of this area is mainly nestled in farming and commercial activities and this is emphasized by important 19th and early 20th century farm and store buildings located in this area.³ Unfortunately not a large number of the above mentioned survived development.

2. FINDINGS

2.1 PRE-COLONIAL HERITAGE SITES

No pre-colonial heritage sites were observed in the study area. This can be attributed to farming activities in the area.

2.2 HERITAGE STRUCTURES OLDER THAN 60 YEARS

No heritage structures older than 60 years are located in the study area.

2.3 ORIGINAL LANDSCAPE

The original landscape on both the substation alternatives was altered by various farming activities in the past.

¹ Mountain Club of SA, The Preservation of the Magaliesberg, p. 9.

² <http://www.sa-meanders.co.za>

³ Mountain Club of SA, The Preservation of the Magaliesberg, p. 9.



Portion 82 of the Farm Weldaba 567 JQ



Portion 65 of the Farm Welgedund 491 JQ



Portion 25 of the Farm Welgedund 491 JQ

2.4 INTANGIBLE HERITAGE

The intangible history of a study area such as this is mainly found in stories and experiences of past and present inhabitants of the area.

3. CATEGORIES OF HERITAGE VALUE (ACT 25 OF 1999)

The National Heritage Resources Act (Act 25 of 1999) identifies the following categories of value under section 3(1) and (2) of the Act under the heading "National Estate":

“3 (1) For the purpose of this Act, those heritage resources of South Africa which are of cultural significance or other special value for the present community and for future generations must be considered part of the national estate and fall within the sphere of operations of heritage resources authorities.

(2) Without limiting the generality of subsection (1), the national estate may include-

(a) places, buildings, structures and equipment of cultural significance;

- (b) places which oral traditions are attached or which are associated with living heritage;
- (c) historical settlements and townscapes;
- (d) landscapes and natural features of cultural significance;
- (e) geological sites of scientific or cultural importance;
- (f) archaeological and palaeontological sites;
- (g) graves and burial grounds, including-
 - (i) ancestral graves;
 - (ii) royal graves and graves of traditional leaders;
 - (iii) graves of victims of conflict;
 - (iv) graves of individuals designated by the Minister by notice in the Gazette
 - (v) historical graves and cemeteries; and
 - (vi) other human remains which are not covered in terms of the Human Tissue Act, 1983 (Act No. 65 of 1983);
- (h) sites of significance relating to the history in South Africa;
- (i) movable objects, including-
 - (i) objects recovered from the soil or waters of South Africa including archaeological and palaeontological objects and material, meteorites and rare geological specimens;
 - (ii) objects to which oral traditions are attached or which are associated with living heritage;
 - (iii) ethnographic art and objects;
 - (iv) military objects
 - (v) objects of decorative or fine art;
 - (vi) objects of scientific or technological interests; and
 - (vii) 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 I (xiv) of the National Archives of South Africa Act, 1996 (Act No. 43 of 1996).

- (3) Without limiting the generality of the subsections (1) and (2), a place or object is to be considered part of the national estate if it has cultural significance or other special value because of-
- (a) Its importance in the community, or pattern of South Africa's history;
 - (b) Its possession of uncommon, rare or endangered aspects of South Africa's natural or cultural heritage;
 - (c) Its potential to yield information that will contribute to an understanding of South Africa's natural or cultural heritage;
 - (d) Its importance in demonstrating the principal characteristics of a particular class of South Africa's natural or cultural objects;
 - (e) Its importance in exhibiting particular aesthetic characteristics valued by a community or cultural group;
 - (f) Its importance in demonstrating a high degree of creative or technical achievement at a particular period;
 - (g) Its strong or special association with a particular community or cultural group for social, cultural or spiritual reasons;
 - (h) Its strong or special association with the life and work of a person, group or organisation of importance in the history of South Africa; and
 - (i) Sites of significance relating to the history of slavery in South Africa."

3.1 HERITAGE VALUE OF SUBSTATION ALTERNATIVES WEIGHED AGAINST SIGNIFICANCE CATEGORIES

3.1.1 Spiritual value

There is no indication of any spiritual activity in the study area. Spiritual activities in the study area ARE contained in places of formal worship.

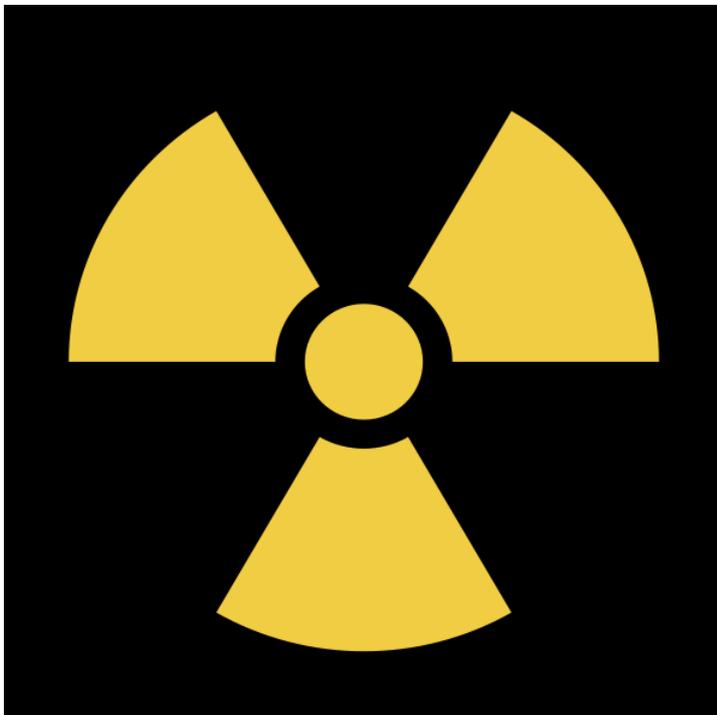
3.1.2 Scientific value

The structures and associated infrastructure in the specific study area does not contain any scientific value in terms of section 3(3)(d) of the Act. No natural feature or other infrastructure associated with scientific importance could be identified in the study area.

Opposite the study area the site and structures associated with the Nuclear Energy Corporation of South Africa (NECSA) can be regarded of national scientific importance.



The NECSA site situated opposite the study area



3.1.3 Historical value

The identified alternatives do not contain any evidence of any historical happenings or structures. The nearest monument is located to the north of the identified sites and commemorates the death of the South African writer and poet Eugene N. Marais.



Located at S 25° 46' 54.4" E 027° 56' 31.9"

3.1.4 Aesthetic value

No heritage item with exceptional aesthetic (architectural) value was identified in the study area.

3.1.5 Social value

The study area does not contain sites that are associated with social value. These sites may include meeting places, parks ect.

3.2 SPECIFIC CATEGORIES INVESTIGATED AS PER SECTION 3 (1), (2) AND (3) OF THE NATIONAL HERITAGE LEGISLATION (ACT 25 OF 1999)

3.2.1 Do the sites provide the context for a wider number of places, buildings, structures and equipment of cultural significance?

The study area does not provide context for a wider number of places, buildings, structures and equipment of cultural significance. The reason can be accredited to the non existence of heritage related structures in the study area.

3.2.2 Do the sites contain places to which oral traditions are attached or which are associated with living heritage?

Due to the non existence of a particular tribe or clan in the area no indication of oral traditions could be found.

3.2.3 Do the sites contain historical settlements?

No historical settlement or remains of such a settlement were identified in the study area as indicated on the study area map.

3.2.4 Do the sites contain landscapes and natural features of cultural significance?

The specific study area although situated in an area known for its geological formations contain no landscapes or natural features of cultural significance.

3.2.5 Do the sites contain geological sites of cultural importance?

Although the greater study area is known for its geological importance the landscape associated with the specific study area contain no such features of cultural importance.

3.2.6 Do the sites contain a wide range of archaeological sites?

No surface archaeological deposits were observed. There is a slight possibility of sub-surface archaeological material being uncovered during the construction phase and it is advised that a heritage practitioner be placed on stand-by if required.

3.2.7 Do the sites contain any marked graves and burial grounds?

There are no graves or cemeteries located in the study area. The nearest graves are located in the Jones's cemetery. Located at S 25° 46' 46.0" E 027° 56' 31.9".



Jones cemetery

The possibility of the uncovering of sub-surface unmarked graves during the construction phase is a possibility and it is advised that a heritage practitioner be put on stand-by in order to manage such a situation if incurred.

3.2.8 Do the sites contain aspects that relate to the history of slavery?

This is not an area associated with the history of slavery.

3.2.9 Can the places be considered as a place that is important to the community or in the pattern of South African history?

Although the greater study area can be regarded as important to the community in terms of farming and other activities, the specific study area can not be considered a place of this importance.

3.2.10 Do the sites embody the quality of a place possessing uncommon, rare or endangered aspects of South Africa's natural and cultural heritage?

The identified alternatives do not possess uncommon, rare or endangered aspects of South Africa's natural and cultural heritage. This can be attributed to the low density of heritage items situated in the study area.

3.2.11 Do the sites demonstrate the principal characteristics of South Africa's natural or cultural places?

The sites do not demonstrate the principal characteristics of South-Africa's natural or cultural places. No natural or cultural item of such a nature is located on the alternatives.

3.2.12 Do the site exhibit particular aesthetic characteristics valued by the community or cultural groups?

The study area does not exhibit particular aesthetic characteristics valued by the community or cultural groups.

3.2.13 Do the sites contain elements, which are important in demonstrating a high degree of creative technical achievement?

The sites do not contain elements, which are important in demonstrating a high degree of creative technical achievement.

3.2.14 Do the sites have strong and special associations with particular communities and cultural groups for social, cultural and spiritual reasons?

From primary and secondary sources it was established that the sites in question do not have strong and special associations with particular communities and cultural groups for social, cultural and spiritual reasons.

3.2.15 Do the sites have a strong and special association with the life or work of a person, group or organisation?

From primary and secondary sources it was established that the sites in question do not have strong and special association with the life or work of a person, group or organisation.

4. **Table indicating known heritage resources in the vicinity the proposed Phase 1 development.**

Substation Alternatives	Heritage Resource	Level of Significance	Magnitude of Impact
Anderson Alternative 1	None	Low	Low
Anderson Alternative 2	None	Low	Low

5. **OPPORTUNITIES, RESTRICTIONS, IMPACTS**

- There is no reason, in heritage terms, that the proposed development cannot take place.
- In heritage context both the identified sites are suitable for development.
- See 3.2.6 and 3.2.7.

6. **THE WAY FORWARD**

It is advised that this Heritage Impact Assessment be submitted to the North West Heritage Resources Authority as per section 38 of the National Heritage Resources Act, Act 25 of 1999, for comment/approval.