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**CULTURAL HERITAGE ASSESSMENT OF THE PROPOSED  
EROS-GRASSRIDGE 400KV TRANSMISSION LINE,  
EASTERN CAPE AND KWAZULU-NATAL, SOUTH AFRICA**

**Assessment and report by**



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**for**

**Eyethu Engineers cc**

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## Introduction

Eskom Transmission intends to construct a new 400 kV transmission line from the Eros Substation in KwaZulu-Natal to the Grassridge Substation in the Eastern Cape. This transmission line will commence at Harding in KwaZulu-Natal (Eros) and will continue through the former Transkei region, passing close by Umtata. From there it will proceed via Grahamstown to the Neptune Sub-Station at East London and ultimately to Port Elizabeth (Grassridge). The total distance of the line is approximately 650km. The new line will make provision for projected increases in power requirements to towns and settlements in the Eastern Cape and, in particular, the pending Coega harbour development programme.

## 1. Terms of reference

eThembeni Cultural Heritage was appointed by Eyethu Engineers cc to undertake a cultural heritage assessment of the corridor and route alignment options for the proposed Eros-Grassridge 400 kV Transmission Line, in terms of the South African Heritage Resources Management Act No 25 of 1999 and the KwaZulu-Natal Heritage Act No 10 of 1997.

Section 38 of the national Act requires a cultural heritage assessment in case of:

- (a) the construction of a road, wall, powerline, pipeline, canal or other similar form of linear development or barrier exceeding 300 m in length;
- (b) the construction of a bridge or similar structure exceeding 50 m in length;
- (c) any development or other activity which will change the character of a site –
  - (i) exceeding 5 000 m<sup>2</sup> in extent; or
  - (ii) involving three or more existing erven or subdivisions thereof; or
  - (iii) involving three or more erven or subdivisions thereof which have been consolidated within the past five years; or
  - (iv) the costs of which will exceed a sum set in terms of regulations by SAHRA or a provincial heritage resources authority;
- (d) the re-zoning of a site exceeding 10 000m<sup>2</sup> in extent; or
- (e) any other category of development provided for in regulations by SAHRA or a provincial heritage resources authority.

Section 27 of the provincial Act requires a cultural heritage assessment in terms of subsection 1 in case of:

- (a) construction of a road, wall, power line, pipeline, canal or other similar form of linear development or barrier exceeding 300 m in length;
- (b) construction of a bridge or similar structure exceeding 50 m in length; and
- (c) any development, or other activity which will change the character of an area of land, or water –
  - (i) exceeding 10 000 m<sup>2</sup> in extent;
  - (ii) involving three or more existing erven or subdivisions thereof; or
  - (iii) involving three or more erven, or subdivisions thereof, which have been consolidated within the past five years; or
- (d) the costs of which will exceed a sum set in terms of regulations; or
- (e) any other category of development provided for in regulations.

A cultural heritage assessment is not limited to archaeological artefacts, historical buildings and graves. It is far more encompassing and includes intangible and invisible resources such as places, oral traditions and rituals. Both the national and provincial heritage Acts define a heritage resource as any place or object of cultural significance i.e. of aesthetic, architectural, historical, scientific, social, spiritual, linguistic or technological value or significance.

This includes the following wide range of places and objects:

- (a) places, buildings, structures and equipment;
- (b) places to which oral traditions are attached or which are associated with living heritage;

- (c) historical settlements and townscapes;
- (d) landscapes and natural features;
- (e) geological sites of scientific or cultural importance;
- (f) archaeological and palaeontological sites;
- (g) graves and burial grounds
- (h) movable objects,  
but excluding any object made by a living person;
- (i) battlefields;
- (j) traditional building techniques.

## 2. Methodology

A general literature survey of the cultural historical sequence of the study area was undertaken (references provided in section 5 below). The heritage databases for the Eastern Cape (housed at the Albany Museum; see Appendix A) and the Natal Museum Archaeological Recording Centre were also consulted. Since the Albany and Natal Museums are recognised regional recording centres it is assumed that heritage site records held at the Universities of Transkei and Fort Hare are duplicated at the former institutions.

Time frames relating to human occupation of the south eastern seaboard have been established by anthropological, archaeological and historical research. The following summary of these time frames might assist readers to interpret our findings and discussions more readily:

<b>E arly</b>	1.5 million to 180 000 years ago	Only stone artefacts remain from
<b>S tone</b>		this time period, including large
<b>A ge</b>		choppers, cleavers and hand axes
<b>M idle</b>	180 000 to 35 000 years ago	Stone tools smaller than in ESA;
<b>S tone</b>		include blades and flakes; human
<b>A ge</b>		and animal remains also found
<b>L ater</b>	35 000 years ago to the time	Variety of artefacts made from
<b>S tone</b>	of European settlement	organic and inorganic materials;
<b>A ge</b>		human remains, shell middens etc

<b>E arly</b>	400 – 500 AD	Mzonjani phase
<b>I ron</b>	500 – 700 AD	Msuluzi phase
<b>A ge</b>	700 – 900 AD	Ndondondwane phase
	900 – 1200 AD	Ntshekane phase
<b>L ate</b>	1200 – 1500 AD	Settlement by Nguni speakers
<b>I ron</b>	1500 – 1700 AD	Introduction of maize
<b>A ge</b>	1700 – 1850 AD	Pre-European settlement
	1850 AD to present	Historical

A range of heritage sites has been recorded within and adjacent to the study area. These include Early, Middle and Later Stone Age sites, Early and Late Iron Age sites and Historical sites. Early and Late Iron Age sites occurring between the Great Kei and Great Fish river valleys are of particular significance as they represent the most southerly and westward expansion of black farming communities prior to the historical or colonial contact period.

The region is further significant in historic times as a frontier between hunter-gatherers, pastoralists, Nguni-speaking farming communities and European settlers. As a consequence of contact between people on the frontier, historical sites occur widely throughout the area and include domestic, trade, war and battle sites and trade routes.

### 3. Field Observations

The proposed transmission corridor was surveyed by low-level helicopter flight on 11 March 2003. Our observations are recorded according to provisional tower numbers from Eros to Neptune and Neptune to Grassridge Substations, respectively. Unless observed (**O**), potential heritage site occurrence is rated as low (**L**), (**M**) and high (**H**).

#### 1. Harding to Umtata

Tower Nos ex Eros	Comments	Potential Site Occurrence
1 - 9	Within plantation firebreak and along drainage line	L
10 - 11	Traverses Pondoland grasslands and Mtamvuna Valley	L
12 - 13	Traverses Pondoland grasslands; well marked and very visible graves	O
13 - 14	Abandoned homestead with adjacent fallow field: potential graves	M
14 - 15	Historic mission station	O
15 - 16	Traverses Pondoland grasslands, maize fields, communal grazing lands and wattle woodlots	L
16 - 20	Ditto above: <b>Note</b> : Cemetery at 17	O
20 - 21	Extensive wattle plantation west of Flagstaff	L
21 - 22	<b>Note:</b> Graveyard at 22	O
22 - 27	Dense rural settlement on interfluves of broken valley landscape with maize fields in valley bottoms	L
27 - 32	Mzimvubu river valley: line traverses the gorge; "chopper" installation – impact minimum. <b>Note:</b> SIA needs to address Eskom presence with cannabis growers.	L
32 - 34	Exposed, open grasslands, maize fields, communal grazing lands and wattle woodlots	L
34 - 35	Traverses Mgazi river; very deeply incised valley	L
35 - 36	Grassland into wattle forest WNW of Libode; fallow fields dominated by Festuca spp.	L
36 - 38	Grasslands; cultivated and fallow fields	L
38 - 40	To Umtata: peri-urban settlement	L

## 2. Umtata to East London

Tower Nos Ex Eros	Comments	Potential Site Occurrence
40 - 42	Line crosses N2 at Speadville; peri-urban; graves and graveyard between <b>40 and 41</b>	<b>O</b>
42 - 44	Numerous abandoned homesteads marked by stone walling and Aloe arborescens – <b>Note:</b> possible graves	<b>M</b>
44 - 46	East of Qunu; open grasslands; communal grazing	<b>L</b>
46 - 52	Bashee river valley: high potential for Early Iron Age sites – <b>Note:</b> ground survey required	<b>H</b>
52 - 56	“Wattle savanna” and open grassland; communal grazing; follows existing line	<b>L</b>
56 - 60	Follows existing line, crossing N2 and past Butterworth Dam	<b>L</b>
60 - 61	Graves: require further investigation when tower positions are finalised	<b>M</b>
61 - 67	Follows existing line and traverses Great Kei river valley, crosses N2 at 66 - 67: Iron Age sites are recorded within the lower valley (Binneman et al 1992)	<b>M</b>
67 - 69	Broken valley landscape: potential Iron Age sites	<b>M</b>
69 - 72	Gonubie river valley: potential Iron Age sites	<b>M</b>
72 →→	To Neptune Substation: requires ground survey	<b>M</b>

## 3. East London to Port Elizabeth

Tower Nos ex Neptune	Comments	Potential Site Occurrence
1 - 3	Neptune Substation W past Nahoon Dam	<b>L</b>
3 - 6	Line crosses Nahoon river and N2 within existing 44kV servitude; houses in rural settlement within servitude to be moved. <b>SIA</b> to check for presence of graves	<b>L</b>
6 - 10	Line crosses dam on Buffalo river and follows existing 16 kV servitude to kwaDubisa. Potential for Iron Age sites. See Nogwaza (1994).	<b>M</b>
10 - 14	Line on existing grid line into previous Ciskei and east of Keiskamma river; clustered rural settlements eg. Boschplaas: extensive overgrazing and erosion	<b>L</b>
14 - 19	Great Fish River Valley – line to east of GFR Conservation Complex within canal and road servitudes	<b>L</b>
19 - 22	Alternative routes considered around Grahamstown. Ground survey required when route and tower positions are finalised.	<b>M</b>
22 - 25	Passes Thomas Baines Nature Reserve. Ground survey required when route and tower positions are finalised.	<b>M</b>
25 - 27	Extensive commercial livestock farming. Ground survey required when route and tower positions are finalised.	<b>M</b>
27 - 36	Shamwari Conservation Area. Line probably within N2 servitude. Ground survey required when route and tower positions are finalised.	<b>M</b>
36 →	Via Colchester to Grassridge. Ground survey required from <b>36</b> to Colchester when route and tower positions are finalised.	<b>M</b>

#### **4. Summary of findings in terms of the South African Heritage Resources Management Act No 25 of 1999, Section 38 (3) and the KwaZulu-Natal Heritage Act No 10 of 1997, Section 27 (3)**

##### **(a) the identification and mapping of all heritage resources in the area affected**

Approximate site locations determined during the helicopter survey are indicated on 1:50 000 maps provided by the client. Ground surveys will have to be undertaken at those areas indicated as having high and medium site potential once the tower positions have been finalised by Eskom. Only once the field surveys have been completed will final mapping be possible.

##### **(b) an assessment of the significance of such resources in terms of the heritage assessment criteria set out in regulations**

Heritage significance, as determined by the criteria provided in Appendix B, will only be possible once the ground surveys have been undertaken.

##### **(c) an assessment of the impact of development on such heritage resources**

Sensitive placement of tower positions should have **medium to low** impact on identified heritage sites. However, access and maintenance tracks and camping and temporary storage sites can damage heritage remains. These routes and envisaged locations must be provided to the cultural heritage assessors prior to commencement of the field survey.

##### **(d) an evaluation of the impact of the development on heritage resources relative to the sustainable social and economic benefits to be derived from the development**

The socio-economic benefits of the proposed development are of high regional and national significance. If proposed mitigation measures are implemented, these benefits will outweigh any direct impact on heritage resources.

##### **(e) the results of consultation with communities affected by the proposed development and other interested parties regarding the impact of the development on heritage resources**

Eyethu Engineers and Eskom have implemented a public participation process to address this issue, as required by relevant legislation. The Social Impact Assessment will provide a further forum for issues relating to ancestral graves and other places of cultural significance pertinent to specific communities.

##### **(f) if heritage resources will be adversely affected by the proposed development, the consideration of alternatives**

The identification, recording and significance rating of heritage resources, as undertaken during this assessment, will provide the basis for mitigation. Since the significance of impacts to any heritage sites will probably be **medium to low**, large-scale changes to the proposed development are unlikely.

##### **(g) plans for mitigation of any adverse effects during and after completion of the proposed development**

A cultural heritage manager should be available during the construction phase to advise on the mitigation of any heritage resources that might be uncovered.

**This report may be submitted to the South African Heritage Resources Agency and Amafa aKwaZulu-Natali for permission to proceed with the development. However, both the national and provincial heritage Acts require that a developer cease all work immediately and notify SAHRA and / or Amafa should any heritage resources, as defined in the Acts, be uncovered during the course of construction.**

## 5. References

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- Nogwaza T.** 1994. Early Iron Age pottery from Canasta Place, East London District. *Southern African Field Archaeology* **3**(2): 103-106.
- Prins F. E.** 1993. Aspects of Iron Age ecology in Transkei. Unpublished MA thesis: University of Stellenbosch.
- Prins F. E.** and **Granger J.E.** 1993. Early farming communities in northern Transkei: the evidence from Ntsitsana and adjacent areas. *Natal Museum Journal of Humanities* **5**: 153-174.
- Robey, T. S.** 1985. Final report on archaeological research in the Mbashe River catchment. Unpublished report: University of Transkei.
- Robey, T. S. and Feely, J. M.** 1987. New dates for the Iron Age and Later Stone Age in Transkei. Unpublished report: University of Transkei.

## **APPENDIX A**

(Letter from Dr Johan Binneman at the Albany Museum included in hard copy only of this report.)



## APPENDIX B

### SIGNIFICANCE AND VALUE OF HERITAGE RESOURCE SITES

The following guidelines for determining site significance were developed by the South African Heritage Resources Agency in 2003. We use them in conjunction with tables of our own formulation (see that for the Southern African Iron Age, below) when considering intrinsic site significance and significance relative to development activities, as well as when recommending mitigatory action.

#### Type of Resource

Place  
Structure  
Archaeological Site  
Palaeontological Site  
Geological Feature  
Grave

#### Type of Significance

##### 1. Historical Value

###### **It is important in the community, or pattern of history**

- Importance in the evolution of cultural landscapes and settlement patterns
- Importance in exhibiting density, richness or diversity of cultural features illustrating the human occupation and evolution of the nation, Province, region or locality.
- Importance for association with events, developments or cultural phases that have had a significant role in the human occupation and evolution of the nation, Province, region or community.
- Importance as an example for technical, creative, design or artistic excellence, innovation or achievement in a particular period

###### **It has strong or special association with the life or work of a person, group or organisation of importance in history**

- Importance for close associations with individuals, groups or organisations whose life, works or activities have been significant within the history of the nation, Province, region or community.

###### **It has significance relating to the history of slavery**

- Importance for a direct link to the history of slavery in South Africa.

##### 2. Aesthetic Value

###### **It is important in exhibiting particular aesthetic characteristics valued by a community or cultural group**

- Importance to a community for aesthetic characteristics held in high esteem or otherwise valued by the community.
- Importance for its creative, design or artistic excellence, innovation or achievement.
- Importance for its contribution to the aesthetic values of the setting demonstrated by a landmark quality or having impact on important vistas or otherwise contributing to the identified aesthetic qualities of the cultural environs or the natural landscape within which it is located.
- In the case of an historic precinct, importance for the aesthetic character created by the individual components which collectively form a significant streetscape, townscape or cultural environment.

##### 3. Scientific Value

###### **It has potential to yield information that will contribute to an understanding of natural or cultural heritage**

- Importance for information contributing to a wider understanding of natural or cultural history by virtue of its use as a research site, teaching site, type locality, reference or benchmark site.
- Importance for information contributing to a wider understanding of the origin of the universe or of the development of the earth.
- Importance for information contributing to a wider understanding of the origin of life; the development of plant or animal species, or the biological or cultural development of hominid or human species.
- Importance for its potential to yield information contributing to a wider understanding of the history of human occupation of the nation, Province, region or locality.

###### **It is important in demonstrating a high degree of creative or technical achievement at a**

**particular period**

- Importance for its technical innovation or achievement.

**4. Social Value**

**It has strong or special association with a particular community or cultural group for social, cultural or spiritual reasons**

- Importance as a place highly valued by a community or cultural group for reasons of social, cultural, religious, spiritual, symbolic, aesthetic or educational associations.
- Importance in contributing to a community's sense of place.

**Degrees of Significance**

**Rarity**

**It possesses uncommon, rare or endangered aspects of natural or cultural heritage**

- Importance for rare, endangered or uncommon structures, landscapes or phenomena.

**Representivity**

**It is 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.

**Sphere of Significance**

	<b>High</b>	<b>Medium</b>	<b>Low</b>	
International	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
National	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Provincial	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Regional	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Local	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Specific Community	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	-----

**What other similar sites may be compared to this site?**

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**Southern African Iron Age**

	Significance		
	- low	- medium	- high
Unique or type site			Yes
Formal protection			Yes
Spatial patterning	?Yes	?Yes	?Yes
Degree of disturbance	75 – 100%	25 – 74%	0 – 24%
Organic remains (list types)	0 – 5 / m <sup>2</sup>	6 – 10 / m <sup>2</sup>	11 + / m <sup>2</sup>
Inorganic remains (list types)	0 – 5 / m <sup>2</sup>	6 – 10 / m <sup>2</sup>	11 + / m <sup>2</sup>
Ancestral graves			Present
Horizontal extent of site	< 100m <sup>2</sup>	101 – 1000m <sup>2</sup>	1000 + m <sup>2</sup>
Depth of deposit	< 20cm	21 – 50cm	51 + cm
Spiritual association			Yes
Oral history association			Yes
➤ Research potential			High
➤ Educational potential			High

Please note that this table is a tool to be used by qualified cultural heritage managers who are also experienced site assessors.