9/2/100/1

# GAMMA-OMEGA 765 Kv TRANSMISSION LINE Heritage Management Plan

# Prepared By:

The Agency for Cultural Resource Management Specialists in Archaeological Studies and Heritage Resource Management

#### On Behalf Of:

PD Naidoo & Associates

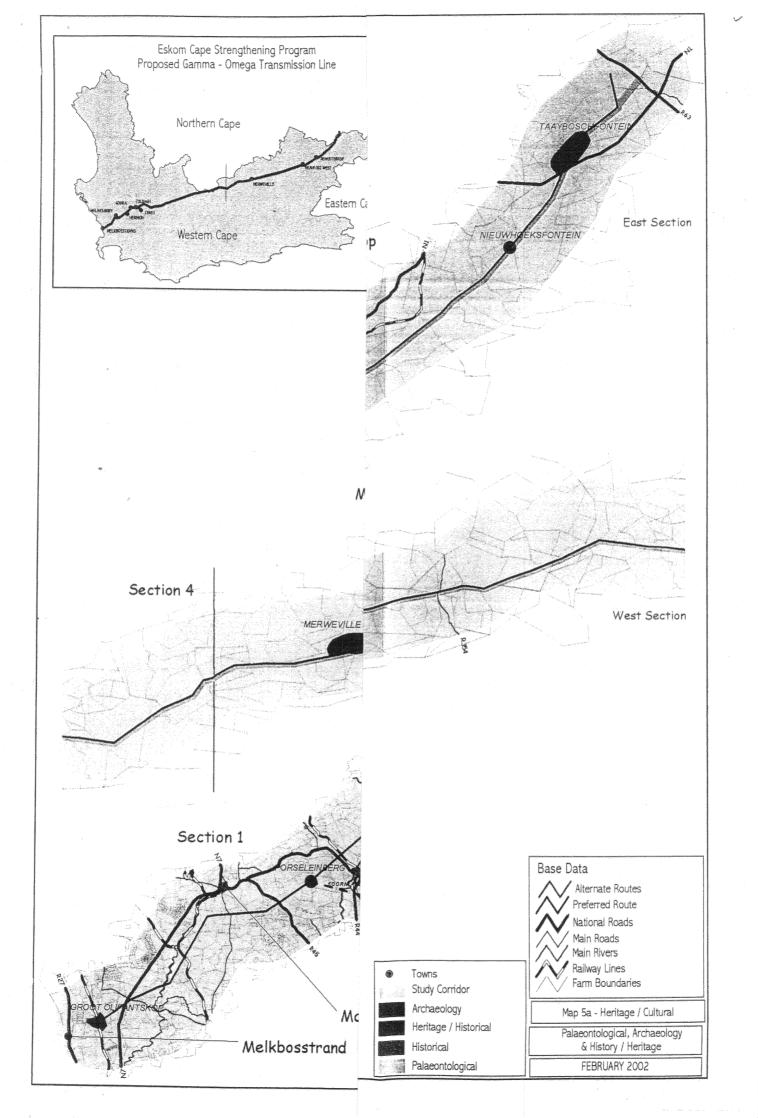
&

Pba International Ltd

December 2001

# **TABLE OF CONTENTS**

|  | Page                       |
|--|----------------------------|
| 1.0 INTRODUCTION   | 3                          |
| 1.1 Background   | 3                          |
| 2.0 TERMS OF REFERENCE   | 3                          |
| 3.0 CONSTRAINTS ASSUMPTIONS AND LIMITATIONS  | 3                          |
| 4.0 OPPORTUNITIES AND BENEFITS   | 4                          |
| 5.0 THE STUDY AREA   | 4                          |
| 6.0 STUDY APPROACH   | 5                          |
| 6.1 Method   | 5                          |
| 7.0 LEGISLATION  | 5                          |
| 8.0 RESULTS OF THE FIELD REVIEW AND DESK TOP STUDY   | 5                          |
| 8.1 Archaeological sites 8.1.1 Section 1 8.1.2 Section 2 8.1.3 Section 3 8.1.4 Section 4 8.1.5 Section 5 | 5<br>5<br>6<br>6<br>7<br>7 |
| 8.2 Palaeontological sites 8.2.1 Section 1 8.2.2 Section 2 8.2.3 Section 3 and 4 8.2.4 Section 5         | 8<br>8<br>8<br>8           |
| 8.3 Historical sites 8.3.1 Section 1 8.3.2 Section 2 8.3.3 Section 3 8.3.4 Section 4 and 5               | 9<br>9<br>10<br>11         |



#### 1.0 INTRODUCTION

### 1.1 Background

PD Naidoo & Associates and Pba International, requested the Agency for Cultural Resource Management to undertake a heritage review of the proposed Eskom Transmission Gamma-Omega 765kV Transmission Line between the proposed Gamma (Victoria West) and Omega substation (Koeberg) sites, as a basis for the Environmental Management Plan for the project.

Known as the Cape Strengthening Programme, the proposed project includes a range of services that will improve the reliability of electricity supply to the Western Cape.

The aim of the study was to assess the potential impact that the proposed 765kV-Transmission line will have on archaeological, palaeontological and historical sites along the proposed routes.

#### 2.0 TERMS OF REFERENCE

The terms of reference for the heritage review were:

- to identify sites of archaeological, palaeontological and cultural status in the study area;
- 2. to assess the likelihood of sensitive sites in the study area; and
- 3. to identify measures to protect from construction damage any valuable archaeological, palaeontological and cultural sites that may exist in the proposed powerline route.

## 3.0 CONSTRAINTS ASSUMPTIONS AND LIMITATIONS

The following constraints, assumptions and limitations apply to the heritage review.

- The review was severely constrained by a limited field study, which allowed only a cursory assessment of the proposed routes.
- The field study focused only on the archaeological status of the proposed routes, and to a limited extent on the historical status of the proposed routes.

#### 6.0 STUDY APPROACH

#### 6.1 Method

In order to address the objectives of the heritage review, the following method has been followed:

- a 4-day site assessment of the proposed routes.
- a desk top review.
- consultation with specialists.

#### 7.0 LEGISLATION

Archaeological and palaeontological sites, graves/cemeteries, battlefield sites, and buildings, structures and features over 60 years old, are protected under the National Heritage Resources Act (No. 25 of 1999).

According to the Act, it is an offence to destroy, damage, excavate, alter of remove from its original place, or collect, any archaeological, palaeontological and historical material or object, without a permit issued by the South African Heritage Resources Agency (SAHRA).

#### 8.0 RESULTS OF THE FIELD REVIEW AND DESK TOP STUDY

#### 8.1 Archaeological sites

28 location sites in Sections 1-5 of the proposed routes were visited and searched for archaeological remains.

#### 8.1.1 Section 1

Four locations were searched in Section 1.

No archaeological remains were located, but relatively large numbers of Middle Stone Age<sup>1</sup> (MSA) and Early Stone Age<sup>2</sup> (ESA) artefacts have been found during a number of heritage impact assessments undertaken in the Swartland and Berg River region (Hart 1987; Kaplan 1988, 1999, 2000a,b, 2001a,b,c,d).

<sup>&</sup>lt;sup>1</sup> A term referring to the period between 200 000 and 20 000 years ago.

<sup>&</sup>lt;sup>2</sup> A term referring to the period between 2 million and 20 000 years ago.

#### 8.1.4 Section 4

Five locations were searched in Section 4. These included the farms Klipfontein, Swaerskraal, Spitzkop, Fortuin and Bon Espirange. A few MSA tools were located on the farms Swaerkraal and Fortuin.

No detailed studies have been undertaken is this area (David Morris McGregor Museum, Kimberley, pers. comm.).

#### 8.1.5 Section 5

Nine locations were searched in Section 5. These included the farms Gabriels Baken, Phaisant Kraal, Tyboschfontein, Montana, Steenrotsfontein, La-De-Da, Vindragersfontein, Buffels Valley and Rietpoort.

Archaeological remains were located at four of the nine sites visited; at Phaisant Kraal, Steenrotsfontein, La-De-Da, and Buffels Valley. These included a handful of mainly MSA and some ESA tools, but a discreet, low density scatter of LSA tools and some ostrich eggshell were located on the farm La-De-Da.

According to David Morris of the McGregor Museum in Kimberley (pers. comm.), no heritage impact assessments have been undertaken in Sections 5 or 4 of the study area. But other studies have shown that scatters of stone tools are abundant around Victoria West and in the Upper Karoo and the Orange River Scheme (Goodwin & Van Riet Louw 1926; Jansen 1926; Humphreys 1979; Sampson 1972, 1984).

The Karoo in Sections 4 and 5 rocks are shot through by dolerite dykes, where the raw material hornfels/indurated shale is ubiquitous and superabundant and an excellent source for making stone tools (Parkington 1984).

Bushman rock paintings and rock engravings have also been recorded at Pampoempoort near Victoria West and in the Karoo National Park (Morris pers. comm.).

comm.). The Karoo National Park outside Beaufort West is also well known for its rich diversity of fossils

#### 8.3 Historical sites

Historical sites refer to buildings, graves, cemeteries, built structures and features in the landscape which have historical significance.

#### 8.3.1 Section 1

The Groot Oliphantskop homestead is located on the site of the proposed Gamma substation (Kaplan 1996). Built with 'opgekleide' walls, possibly around the late eighteenth or early nineteenth century, the farmhouse currently retains a T-form shape, but was originally L-shaped or even straight. Also of interest is a building behind the main house with riet ceilings, reputed to be older than the main house. (Kaplan 1996).

Despite being altered both internally and externally over time, the farm complex is considered conservation worthy (David Hart, South African Heritage Resources Agency, pers. comm.).

Additional historical features on the farm include two stone lined wells and an old cemetery.

The Mamre Road also passes through the farm, and although not a declared national monument, has been declared conservation-worthy by the South African Heritage Resources Agency (Hart pers. comm.).

According to the addendum to the Gamma-Omega draft scoping report (2001:34-35) the old transport route over the Porseleinberg may be impacted by the proposed Central Route. No evidence of the route was noted during the field study, and the route has most likely been destroyed by farming and related activities.

The Central Route also passes over a dilapidated Cape Dutch thatched-roof farmhouse on the farm Koomandsdrif on the Porseleinberg Road.

The proposed Central Route in Section 1 passes south of nearby Sonquasdrift, a ford across the Berg River that was used by the Dutch as was one of the routes used to gain access to the mountains and the Tulbach valley to the east. It remained an important Dutch outpost in the eighteenth century (Deacon 1993). In May 1701, it was attacked by the Ubiqua Khoikhoi who drove away most of the Dutch cattle (Smith et al 1991).

#### 8.3.3 Section 3

The Karoopoort Outspan (declared a national monument in 1981), is located alongside the Southern Alternative on the R46. The outspan, comprising a werf wall enclosing two buildings (a thatched roof langhuis and a large rectangular outhouse with tin roof), was used by early travellers to the north and was described by Burchell (1822).

#### 8.3.4 Section 4 and 5

No known historical sites occur in the proposed Central route (David Morris, McGregor Museum, Kimberley, pers. comm.). Unknown South African Anglo-Boer war graves may, however, occur in the study area.

#### 9.0 'RED FLAG' AND 'NO GO' AREAS

A sensitivity map for cultural heritage resources is illustrated in Map 5.

## 9.1 Archaeology

#### 9.1.1 Section 1

The Porseleinberg is regarded as a Moderate to High 'Red Flag' area.

#### 9.1.2 Section 2

The Bokkeveld, Agter Witsenberg and Ceres mountains are regarded as Moderate to High `Red Flag' areas.

#### 9.1.3 Section 3

The low-lying mountains on the western boundary of Section 3 are regarded as a Moderate `Red Flag' area.

#### 9.1.4 Section 4

The Komsberg and Moordernaars Karoo are regarded as a Moderate to High `Red Flag' area.

#### 9.1.5 Section 5

The mountainous areas of the Great Karoo are regarded as a Moderate to High 'Red Flag' area.

#### 9.3.5 Section 5

No 'Red Flag' or 'No Go' areas occur in Section 5.

#### 10.0 IMPACT DESCRIPTION AND ASSESSMENT

A summary of the significance of the archaeological, palaeontological and historical impacts is presented in Tables 1-3.

Impact assessment descriptions of the archaeological, palaeontological and historical impacts are presented in Tables 4-30.

#### 10.1 Section 1

**Archaeology** - other than the Porseleinberg, the potential impacts in Section 1 are regarded as Low.

Palaeontology - the potential impacts in Section 1 are regarded as Low.

**Historical** - other than the farms Groot Oliphantskop and Koomandsdrif, and Bushmans Rock and Slagterspad/Oude Kloof in the Central Route, and Bartholomeus Klip farm in the Southern Alternative, the potential impacts in Section 1 are regarded as Low.

#### 10.2 Section 2

Archaeology - the potential impacts in Section 2 are regarded as High-Medium.

Palaeontology - the potential impacts in Section 2 are regarded as High

Historical - the potential impacts in Section 2 are regarded as High-Medium.

#### 10.3 Section 3

Archaeology - the potential impacts in Section 3 are regarded as High-Low.

Palaeontology - the potential impacts in Section 3 are regarded as High.

**Historical** - other than the Karoopoort Outspan in the Southern Alternative, the potential impacts in Section 3 are regarded as Low.

- 8. Heritage remains uncovered or disturbed during bush clearing and earthworks should not be disturbed until inspected by the ECO and a professional archaeologist.
- 9. Heritage remains should be verified by the ECO during the course of bush clearing.
- 10. Should any human remains be disturbed, exposed or uncovered during earthworks, these should immediately be reported to the consultant archaeologist, or the office of the South African Heritage Resources Agency (SAHRA) in Cape Town. Contact Mrs Mary Leslie on (021) 462 4502.

Burial remains should be treated sensitively at all times. Human remains should not be removed until inspected by a professional archaeologist.

With regard to the palaeontological heritage, the following management actions, to be included in the Environment Management Plan, are required.

- 1. A pre-digging survey of the preferred route, all proposed new access roads and tower site locations, in Sections 2-5, is required.
- 2. All excavation trenches/cuttings, borrow pits and quarries in Sections 2-5 are to be inspected for fossil remains.
- Dr Roger Smith of the Department of Karoo Palaeontology at the South African Museum in Cape Town (021 424 3330) should be consulted further with regard to the potential palaeontological impacts arising out of the proposed project.
- 4. Methods of mitigation could also be determined following pegging of the final route and discussion with the Environmental Control Officer.

#### 12.0 REFERENCES

Burchell, W.J. 1822. Towards the interior of Southern Africa. London. Longman, Hurst, Rees.

Deacon, J. 1993. Management guidelines for rock art sites in nature conservation areas and forestry reserves in the Western Cape. Report prepared for the Department of Environmental Affairs and Tourism.

Fransen, H. & Cooke, M.A. 1980. Old buildings of the Cape. AA Balkema.

Gamma-Omega 765kV Transmission Line Environmental Impact Assessment Addendum to the Draft Scoping Report October 2001. Prepared for Eskom Transmission by PD Naidoo & Associates (Pty) Ltd, pba International & Acer (Africa).

Hart, T. 1987. Porteville survey. In Parkington, J. & Hall, M. (eds.). Papers in the prehistory of the Western Cape, South Africa. Oxford: BAR International Series 332:404-423.

Hart, T. 1989. Haaskraal and Volstruisfontein: Later Stone Age events in the Great Karoo, Unpublished MA thesis, University of Cape Town

Humphreys, A. J, B. 1979. The Holocene Sequence of the Northern Cape and its position in the prehistory of South Africa. Unpublished Ph.D. thesis: University of Cape Town.

Johnson, R.T., Rabinowitz, H & Sieff, P. Rock paintings at Katbakkies, Koue Bokkeveld, Cape. South African Archaeological Bulletin 14: 99-103.

Kaplan, J. 1996. Archaeological and cultural impact assessment, Omega substation. Report prepared for Ninham Shand Consulting Engineers.

Kaplan, J. 1998. Archaeological study, portion 5 of the farm Boontjiesrivier No. 262, Tulbach. Report prepared for Mr E. Spiers.

Kaplan, J. 1999. Archaeological study, proposed low cost housing project, Kalbaskraal. Report prepared for CK Rumboll & Associates.

Kaplan, J. 2000a. Archaeological and historical study, Sout River catchment management plan. Report prepared for Steffen Robertson and Kirsten.

Kaplan, J. 2000b. Archaeological study, portions 9, 10 and 11 of the farm Uitkamp No. 189, Durbanville. Report prepared for First Plan Town and Regional Planners