

# Tswelopele Environmental (Pty) Ltd

Registration Number: 2000/028925/07

Directors: Margaret Kalule-Sabiti, Teboho Nkhahle

P.O. Box 2083, Pinegowrie  
2123, South Africa  
Telephone: (011) 789-7170  
E-mail: mail@eims.co.za

259 Kent Ave  
Ferndale, Randburg, South Africa  
Facsimile: (011) 787-3059  
Web: <http://www.eims.co.za>



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Department of Environmental Affairs and Tourism  
Fedsure Building  
315 Pretorius Street  
Pretoria  
0002

**Attn: Koobendran Samie**

Dear Kooben:

**Scoping Report: Proposed Garona-Aries 400kV Transmission Powerline and Upgrade of Existing Garona Substation, Northern Cape Province**

Your additional requirements regarding the Final Environmental Scoping Report detailed in the fax dated 06/07/2006 has reference.

This letter as well as the associated attachments serve to address each point as requested in the said facsimile. The response is structured such that the written responses to your queries are contained in this letter itself while supporting documentation is attached. The attachments are as follows:

1. A layout map of the proposed Garona Sub-station extension;
2. The detailed design of the existing Garona sub-station as well as the proposed extension;
3. The details requested with respect to the public participation process; as well as the
4. Updated Issues and responses report.

**General Comments**

**Point 1:** Liam Whitlow has supplied additional maps to your offices on the 10<sup>th</sup> of July 2006. We are of the understanding that these maps meet your requirements.

Please note that the route of the proposed transmission power line has been amended slightly from the original route detailed in the Final Scoping Report, following Eskom's technical appraisal of the original route alignment. The adjustment in the route alignment is minor and therefore does not significantly alter the findings of the Scoping phase of this EIA. All I&APs will be given access to maps detailing the location of the proposed route alternatives during the EIA phase.

**Point 2:** A brief description of potential impacts that transmission powerlines impose on the environment are listed in point form below with a short summary explanation for each. Significant impacts identified during Scoping will be assessed in the EIA phase:

BIOPHYSICAL ASPECTS

## **Geology**

- Mineral deposits and impacts on rights and possible future mining
- Geo-technical issues, major fault lines, etc.

No obvious mining activity was identified within the study area, and this issue was not raised as a concern by other stakeholders during the Scoping Process. It is normal practice for Eskom Transmission to investigate and survey the geotechnical conditions of each pylon position once the preferred line has been identified.

## **Topography and major land features**

- Slopes
- Slope stability
- Access

As stated in Section 5.2 of the Scoping Report, there are a variety of topographical features that make up the study area. The vast majority of the topography consists of a flat, sparsely vegetated landscape. Within the study area, there exist farmsteads, rivers, power lines, a railway line, rocky outcrops, hills, sand dunes and vineyards. These features are by no means the predominant landscape feature as the study area consists of approximately 3652 km<sup>2</sup>. Slope stability is not of major concern in the majority of the study area comprises flat landscape however the construction EMP will detail mitigation measures around the hilly areas to ensure the stability of these slopes. There is constant mention throughout the Scoping Report that the existing service road of the railway line is the preferred access for the proposed transmission line. By utilizing this existing road, no new roads will be required which greatly reduced the impact of this development on the environment. Eskom's negotiations with affected farmers will detail particulars of access to their farms when the line requires servicing.

## **Geomorphology**

- Soils
- Suitability for construction founding
- Soil potential for agriculture
- Erosion probability

The Agricultural Research Council has undertaken a desktop Soil Investigation. The findings of the study, as detailed in the Scoping Report, indicate that the proposed development will not be significantly affected by soils due to the majority of the area consisting of shallow, often rocky soils. These soils will provide good founding for the pylons. The only soils with the potential for agriculture occur along the Orange River banks and as such are planted with vineyards. The impact of the proposed line in this area will consist of the pylon footprints and as such is regarded as minimal. Agricultural practices can still occur below the spans of transmission cable. A small increase in wind erosion is possible if certain soil types become exposed. These soil types include the Af broad soil pattern (red, sandy soils with dunes), the Ae broad soil pattern (red, sandy soils without dunes) and the Ah broad soil pattern (yellow, sandy soils without dunes). The areas that contain these soil types are marginal within the study area and the extent of any one pylon footprint is negligible. Mitigation measures will be included in the construction EMP to minimize this concern.

## **Climate**

- Lightning
- Snowfalls and access
- Temperature
- Rainfall
- Wind direction and speed

As detailed in the Scoping Report, climate is not considered a major concern regarding the proposed transmission line. Lightning protection will be installed on each pylon. Snowfalls are not common to the area and as such do not pose a problem. The minimum and maximum temperature does not pose a concern to this development. Annual rainfall is relatively low (189mm/year) and the average wind direction and speed will not pose a concern to the pylons and conductor cables (which have a very low wind resistance).

## **Hydrology and drainage**

- Rivers
- Dongas
- Wetlands

- Seasonally wet areas
- Major dam

The Scoping Report details the hydrological features that will/may be impacted upon due to the linear nature of the development. The main area of concern has been the Orange River crossing, however, specialist input has been gathered for all major concerns (avi-faunal, ecological, visual, social, etc.). Numerous mitigation measures are proposed in the Scoping Report to mitigate this concern. Where possible, the route alignment has been shifted to exclude areas containing seasonal drainage lines. The pylons for the proposed transmission line will not be placed within the 1:50 year floodlines or within any existing donga's or wetlands.

### **Fauna and Flora**

- Impact on birds, habitats
- Impact on insects, butterflies, habitats etc
- Mammals, movement and habitat
- Threatened and endangered species
- Natural vegetation
- Invader species
- Agricultural crops
- Rare habitats
- Endemic and red data species

Specialist ecological and avi-faunal studies have been undertaken as a part of this EIA process. The findings of these studies have been included in the Scoping Report and no fatal flaws have been identified with regards to the proposed alignments. Mitigation measures have been proposed, especially from an avi-faunal perspective as this represents the prime concern with regards to high voltage transmission lines. During the EIR phase of this study, further mitigation measures for specific spans of line within sensitive areas (Orange River crossing, seasonal pans, etc) will be addressed. Only one *vulnerable* plant species has been identified in the study area (*Aloe dichotoma* subsp. *dichotoma*) that has been taken into consideration during the alternative route alignment selection process.

The proposed pylon positions will be individually inspected prior to construction to ensure that no red data or threatened species are impacted upon.

### **Conservation areas**

- Nature reserves and conservancies
- Natural heritage sites
- Conservation worthy sites
- National parks
- Biosphere reserves
- Natural forests
- Protected areas (Fynbos)
- Mountain catchment areas

No specific conservation areas were identified in the study area. Certain Centres of Plant Endemism were identified and are described fully in the Ecological Specialist Study.

### **Pollution**

- Air pollution impact on line performance
- Salt pollution
- Air pollution during construction
- Noise pollution during construction
- Noise pollution due to corona, audible noise
- Impact on water quality and supply, siltation of rivers and streams
- Visual pollution of the land through littering

Pollution issues and mitigation measures will be addressed in the comprehensive construction and operational EMP to be prepared for this transmission line. Noise is not considered as a significant impact as the potential receptors are typically large distances away from the proposed transmission lines. During operation of the transmission line audible noise can be generated as a result of the Corona effect of the live line. The corona effect could cause a noise nuisance to residences close to the transmission line. This was considered when determining the alternative route alignments as effort was made to prevent the

transmission line from passed next to existing residential properties. The Construction phase noise impacts are of short duration as they are limited to the construction of the pylon structures. The control of litter during construction and routine maintenance will be controlled by the Environmental management plan as well as the routine maintenance procedures.

## *SOCIO-ECONOMIC ASPECTS*

### **Social impacts**

- Land-use and property size
- Impacts on land values and property values
- Job creation
- Safety and security
- Loss of amenities
- Disease spreading (Aids and Measles in animals)
- Urban and rural areas, smallholdings and informal settlements
- A comprehensive Social Impact Assessment has been undertaken and the findings of this study are well documented in the Scoping Report.

### **Forestry and wooded areas**

- Commercial forestry
- Not applicable to this development.

### **Agriculture**

- Crops (types, intensity, height restrictions, irrigation systems)
- Livestock
- Game farming and associated hunting and tourism

These impacts are well documented in the Scoping Report and mitigation measures have been proposed in areas posing these issues. Alternative route alignments have been included to limit the impact on future identified game farming in the area (Thuru Lodge).

### **Existing and future developments**

- IDP's
- Housing
- Townships (formal and informal)
- Industrial areas
- Mining

These issues have been dealt with in the comprehensive SIA undertaken for this project and discussed in the Scoping Report. The construction of the transmission lien would not typically influence development patterns on this area as the power supply is eventually intended for another demand center. Industrial developments are typically retained close to or within the rural town boundary. An attempt has been made in selecting the proposed alternatives to not infringe on the town areas and to where possible, follow existing man-made structures already traversing or impacting on the receiving environment (e.g. the railway line).

### **Airfields**

Not applicable to this application as none exist within or near to the study area.

### **Military areas, especially shooting ranges**

No designated military areas or shooting ranges have been identified in close proximity to the proposed route alignments.

### **Railway lines**

The presence of the railway line within the study area has been identified and considered. Spoornet has been contacted for comment in this regard.

### **Major pipelines**

- Fuel

- Water
- Gas

No major pipelines have been identified during the Scoping Process.

#### **Major highways (links with tourism routes)**

Where the proposed route alignments crosses highways or major tourist routes (specifically the N10 between Upington and De Aar and the R 27 between Keimos and Kenhardt) an attempt has been made to located the proposed alternative route alignments as close to existing visual influences as possible (e.g. the existing railway line). A visual impact assessment has been commissioned which will quantify the visual disturbance that the line may have on road users.

#### **Toll roads**

Not applicable to this application.

#### **Provincial roads**

One provincial road will be crossed as stated in the Scoping Report. Mitigation measures are proposed to reduce possible impacts in this regard (mainly visual impacts).

### *SOCIO-CULTURAL ASPECTS*

#### **Historical sites**

- Monuments
- Battlefields
- Graveyards
- Grave sites
- Historical sites
- Religious sites

A heritage impact assessment undertaken by a respected archaeologist and historian has been undertaken and no fatal flaws have been indicated as stated in the Scoping Report. The proposed pylon positions will be inspected by the relevant archaeologist prior to construction to ensure that this impact is adequately mitigated.

#### **Archaeological and palaeontological sites**

Same as above.

#### **Tourism**

- Current and future potential
- Eco-tourism

A Tourism Impact Assessment has been undertaken as detailed in the Scoping Report. No fatal flaws have been indicated in this regard. Mitigation measures around the Thuru Lodge (alternative alignment) have been investigated.

#### **The visual impact of the line or substation (Aesthetics)**

A comprehensive Visual Impact Assessment has been undertaken as detailed in the Scoping Report. Alternative alignments around sensitive features have been proposed.

#### **Sense of place**

Same as above.

#### **Proximity to developed areas and farmhouses**

Same as above.

### *CONSTRUCTION IMPACTS*

- Contractors campsite position and layout
- Sanitation, animal disease and water supply
- Littering
- Rubble removal
- Noise
- Safety and security, job-seekers, loitering

- Speed limits on roads, dust pollution
- Private road usage and damage to road infrastructure
- Gates, fences and poaching
- Animal theft
- Crop damage
- Veld fires
- Damage to other infrastructure
- Electricity supply interruptions
- Claims for damages and settlement

A comprehensive construction and operational EMP will be prepared for this proposed project and will address all potential impacts.

The required servitude width of 55m has been taken into consideration during the entire EIA process (see Scoping Report). A 500m corridor will be applied for to account for slight variation in the final pylon position due to unforeseen biophysical conditions and recommendations of the EIA. It is intended that during the surveying of the pylon positions relevant ecological, environmental and archaeological representatives will visit the proposed pylon positions and should it become necessary to relocate any pylon position due to environmental sensitivities these would be restricted to the identified corridor.

**Point 3:** Specialists have provided significance rating system to each of the alternatives as part of the Environmental Impact Report. Alternative Route 1A is not regarded as the most feasible, in fact 1B is the preferred route from the specialists point of view. Final recommendations will be made in the Environmental Impact Report.

**Point 4:** Mitigation and alternatives are suggested in the specialist avi-faunal study (pg 17). Additional mitigation measures will be proposed in the Final Environmental Impact Report.

**Point 5:** Eskom Transmission has provided the following details on opportunities for job creation:

Pre Construction: Bush Clearing, Relocation of Informal Settlements, Steel Manufacturing

During Construction: Building and Civil Works, Environmental Management, Rehabilitation Work.

After Construction: Vegetation Management (Grass cutting and bush clearing), Fixing Erosion, Installation of Bird Guards, Installation of Gates. Where feasible unskilled and skilled labour will be sourced from the local communities.

**Specific Comments:**

**Point 1(a):** Higher resolution A0 maps have been provided to DEAT by Liam Whitlow on the 10<sup>th</sup> of July 2006.

**Point 1(b):** The number of orthophotos required for the entire study area are extensive. It is understood that the Maps provided to DEAT provide the necessary detail for informed decision making.

**Point 1(c):** Done

**Point 1(d):** Done

**Point 1(e):** Refer to attached Map.

**Point 2:** Details on substations:

Garona substation:

- Farm Name: Bok Poort 390 (Registered owner: Chris Honiball)

- Coordinates: 28°44'20.0"S; 21°59'44.998"E
- Size of property: approximately 5ha including the proposed extension.
- The location/alignment of the access roads to the substation is visible on the A0 map

Aries substation:

- Farm Name: Klein Zwart Bast 188 (Portion 2) (Registered owner: Eskom Holdings Ltd.)
- Coordinates: 29°29'38.68"S; 20°47'40.59"E
- Size of property: approximately 24ha
- The location/alignment of the access roads to the substation is visible on the A0 map

**Point 3 (a):** The need for the substation upgrade is detailed in the Scoping Report under Section 4.1.2.

A schematic diagram of the proposed upgrade is attached. The actual Garona sub-station extension will only encompass 182m towards the North East and 88m to the North West, from the eastern corner of the existing site. In addition to the typical electrical infrastructure (including bus bars and transformers) the sub-station extension will require the erection of a 21m high lattice mast structure to be utilized for telecommunications.

**Point 3 (b):** Details of the pylon structures as well as profile views are available in the Background Information Document (BID) included in Appendix H of the Scoping Report. As mentioned in the Scoping Report, the Anchored-Suspension Towers are preferred on straight sections and the Self-Supporting Towers are an Eskom requirement on all bends in the line due to their superior structural integrity.

**Brief description of how the environment may be affected (description of potential impacts)**

**Point 1 (a):** Birds/Fauna – These impacts have been detailed in Sections 5.7.2 and 5.7.3 of the Scoping Report which was informed by the Avi-faunal and Ecological Specialist Studies.

**Point 1 (b):** Sensitive ecosystems and habitats – These impacts have been detailed in Section 5.7 of the Scoping Report which was informed by the Ecological Specialist Study.

**Point 1 (c):** Vegetation/Flora – These impacts have been detailed in Section 5.7 of the Scoping Report which was informed by the Ecological Specialist Study.

**Point 1 (d):** Archaeological/Cultural/Historical resources - These impacts have been detailed in Section 5.8 of the Scoping Report which was informed by the Heritage Impact Assessment.

**Point 1 (e):** Other significant environmental attributes – A Specialist Visual Impact Assessment has been undertaken and these impacts are detailed in Section 5.9 of the Scoping Report.

**Point 2:** The receiving environment is arid with very little material available for burning i.e. the fuel source is discontinuous. Fire is has not been identified as a significant impact.

**Point 3:** The alignment (route) of the proposed transmission line will not be in close proximity to any human settlements and thus no threat from electromagnetic fields will be present. In addition Eskom requires a 55m servitude which has been identified as a no-go area for dwellings of any type.

**Point 4:** To be undertaken during the EIA phase.

**Point 5:** Done

**Point 6:** Done. (Visual impacts are mitigated through the proximity of the proposed transmission line to existing railway line (common visual disturbance), access roads mitigated by recommending the use of the existing railway service road, etc.).

**Description of all alternatives identified**

**Point 1 (a):** The Scoping report describes the alternatives identified during Scoping. The location alternatives (route alternatives) will be assessed and compared in the EIA phase as detailed in the Plan of Study for EIA submitted to DEAT for consideration.

**Point 1 (b):** Detailed and site-specific mitigation will be looked at during the EIA phase.

**Point 1 (c):** No Action Alternative- the no go alternative was described in the Scoping Report under Status Quo. This alternative was not identified as an alternative which requires assessment in the EIA phase (please refer to the Scoping Report for the motivation for this). With reference to the comment that the no-go alternative is useful in providing a benchmark against which to weigh impacts associated with the alternatives, this is noted. The Plan of Study for EIA defines the proposed methodology which Tswelopele intends utilizing for the assessment of the alternative routes and this methodology specifically makes allowance for the identification and assessment of impacts associated with each route alternative against the current state i.e. when assessing impacts for significance the ratings are applied as the rating against the current state (e.g. when the magnitude is rated as moderate it is a rating of the magnitude of the impact as compared to the current state).

- (i) Purpose and need for the project is detailed in Section 4.1.
- (ii) Positive and adverse impacts\_The adverse impacts of the no-go option have been discussed in section 4.2 and tie in with the motivation for the project in its entirety. The positive impacts would obviously be that the negative impacts associated with the proposed transmission line, as detailed in the Scoping Report, would not occur.

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## **Public participation process / List of interested and affected parties and their comments**

### **Consultation with previously disadvantaged and marginalized communities**

As indicated on the map of the study area, the study area consists of predominantly stock farming and vineyards from Kenhardt through to Groblershoop (with some tourism activity (game farms) located within the study area. As such, upon consultation with local authorities and ward councillors, Isak Afrika and Tommie Claasen, the only disadvantaged community identified is the community of Wegdraai. Close consultation was held with the ward councillor Tommie Claasen, as the community does not have access to communication channels such as e-mail and fax. As such, Tommie provided a means of disseminating information to the community. The Public Participation Process (PPP) associated with the above community, was based on a concept of Ongoing Consultation and Public Involvement. It was integrated with the Social Impact Assessment, for which preliminary data was obtained (to form the baseline socio-economic profile) during the initial site visit.

### ***Initial Site Visit and Compilation of Baseline Socio-cultural Profile***

From the initial site visit, a baseline socio-cultural profile of the study area, was drawn up. The profile was description of the social and cultural dimension of the area. It included a brief description of the demographic and economic characteristics of the population (including livelihood, land tenure and economic activities). As such, many people in the community are unemployed and their livelihood depends on some subsistence farming at the farm, Wegdraai, which is community owned. A follow –up site visit was conducted by Brian Whitfield, in order to assist the specialist studies undertaken, as well as the public participation process. It was determined that there were no other disadvantaged community groups located within the study area. Local authorities of all the towns, cities and regions through which the transmission line may pass were consulted. The Local authorities (Kai !Garib and !Kheis Local Municipalities) were consulted in identifying sensitive areas, community profiles and contacts.

### ***Public meeting***

A series of public meetings were held (in Kenhardt, at Kleinbegin and one for the community of Wegdraai), in order to afford the public the opportunity to raise issues, note concerns, ask questions or make comments. The most suitable time for the meeting (when landowners were present in town) was negotiated with the local ward councillor, Tommie Klaasen, during the site visit. The meeting was held at the Wegdraai Community Hall, located within Wegdraai. Provision was made for the BID's provided at the meeting, to be

available in English as well as Afrikaans (predominant language spoken). The meeting was also addressed in Afrikaans, with provision for translation for the Eskom negotiator, who was also present. The community was informed about the meeting via site notices placed in and around Wegdraai (during the second site visit), communication via the ward councillor (who used loud hailers to make announcements) as well as by Ms Veronica Cloete, an employee of the municipality, who provided light refreshments at the meeting. Initially the community were unclear about the purpose of the meeting and as such, they provided comments relating to provision of services such as power supply (and power shortages) they were appreciative of the presence of Eskom Transmission and positive about the proposed development (especially with respect to job creation and remuneration and compensation from usage of land).

***Ongoing Communication***

After the public meeting, the draft scoping report was completed and distributed to all registered interested and affected parties, with provision made for the review period as well as opportunities for the public to respond. For those who did not have access to e-mail or Internet, the draft scoping report was distributed to public venues. In the case of Wegdraai, Tommie Claasen suggested that the scoping report be placed at the Wegdraai Betaalkantoor (Jeugstraat, Groblershoop). The draft scoping report was sent via courier and was collected by Tommie Claasen at Groblershoop Police station.

Please see attached documentation of hard copies of all correspondence to and from I&AP's as well as the issues and response report.

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Tswelopele trusts that the DEAT now has sufficient information in order to make an informed decision and eagerly awaits such.

Feel free to contact the undersigned should you have any comments or queries regarding the above.

Sincerely,

Brian Whitfield