

Appendix 4: Notice Letters and Background Information Document



Margen
INDUSTRIAL SERVICES

P. O. Box 12822
Leraatsfontein, 1038
Cnr. Collyer/Jellicoe
Tel: (013) 656 1212
Fax: (013) 656 2233
e-mail: delno@telkomsa.net
CK No: 2002/087973/23

Date:

Dear Mr./Mrs

Notice of Zeus Substation Upgrade (DEAT Reference Number: 12/12/20/827)

Eskom Holdings 2002/015527/06 Transmission Division is proposing to expand and upgrade Zeus Substation near Standerton to accommodate a new 765 kV Transmission Power line between Zeus substation in Mpumalanga and Mercury substation in the Free State. The site did form part of the full EIA study for the associated 765kV Power lines that took place between August 2005 and July 2006, and which has been submitted to DEAT for authorisation.

An application for exemption from complying with Sections 21, 22 and 26 of the Environment Conservation Act (Act No. 73 of 1989), has been submitted to the Department of Environmental Affairs and Tourism.

It is required by law that landowners surrounding the site and other identified I&APs be notified about the proposed development. To enable you to raise issues of concern and comments regarding the project, a Background Information Document and a Comment sheet is herewith enclosed for your information.

To comment on the project please complete the comment sheet and return to the above address or fax before 12 November 2006.

Objections to this proposed exemption can be submitted in writing (with reasons) to:

The Deputy Director: Environmental Impact Management
Department of Environmental Affairs and Tourism
Private Bag X 447
Pretoria, 0001
Tel: (012) 310 3031 Fax: (012) 320 7539

I trust you find this in order.

Yours faithfully

Moses Mahlangu
PUBLIC PARTICIPATION MANAGER

**PROPOSED EXEMPTION FROM
ENVIRONMENTAL IMPACT ASSESSMENT REGULATIONS**

Please complete and return by **Monday, 12 November 2006** to:
Moses Mahlangu, P. O. Box 12822, Leraatsfontein, 1038.
E-mail: delno@telkomsa.net

TITLE		FIRST NAME	
INITIALS		SURNAME	
ORGANIZATION			
ADDRESS			
		POSTAL CODE	
TEL. NO.		FAX NO.	
E-MAIL			

COMMENTS:

1. My comment on the proposed development is as follows: _____

2. Do you have any issue or concern that you want to raise regarding the substation upgrade? _____

3. Your farm(s) adjacent or near the substation is/are: _____

4. **I, Mr/Mrs/Ms the owner (representative of the owner) of the farm
 confirm that I have been informed about
 the proposed development.**

5. Any other person you feel must be contacted (Please give contact details): _____

THANK YOU FOR YOUR PARTICIPATION



BACKGROUND INFORMATION DOCUMENT

PROPOSED EXEMPTION FROM ENVIRONMENTAL IMPACT ASSESSMENT REGULATIONS

PURPOSE OF THIS DOCUMENT

The purpose of this document is to inform the public that the National Department of Environmental Affairs and Tourism (DEAT), Directorate: Environmental Impact Management is considering granting exemption to **Eskom Holdings 2002/015527/06 Transmission Division** from complying with Sections 21, 22 and 26 of the above Act for the expansion and upgrade of Zeus Substation to accommodate 765 kV Transmission Power lines. [This application is conducted under the old regulations].

In compliance with the basic principle of Integrated Environmental Management this background information document is made available to Interested and/or Affected Parties (I&APs) to give them the opportunity to make an input regarding the proposed development by way of raising issues, concerns and comments.

Key Stakeholders to be consulted during the 28 days comment period will mainly include:

- Landowners surrounding the Zeus Substation
- Lekwa Local Municipality

Queries and comments regarding this application should be referred to:

Margen Industrial Services
P. O. Box 12822,
Leraatsfontein, 1038.
Tel: (013) 656 1212 Fax: (013) 656 2233



BACKGROUND

Zeus Substation is located north of Standerton on the farm VLAKFONTEIN 328IS/20 in Mpumalanga. The proposed exemption is subject to notifying surrounding landowners and comments from relevant municipality being sought. The site did form part of the full EIA for the associated 765kV Power lines that took place between August 2005 and July 2006, and which has been submitted to DEAT for authorisation.

During the period of conducting the full impact assessment for the project three phases of robust technical investigations and public consultations were conducted as follows:

- Pre-feasibility study – July/August 2005
- Scoping phase – August 2005 to February 2006
- EIA Phase – March 2006 to July 2006

Reports submitted to the authorities at different time intervals included findings that related to the substations and the 765 kV transmission power lines.

PROJECT MOTIVATION

Electricity demand in the Eastern Cape is increasing at a higher rate than previously planned. The current planned demand from Coega will exceed the capacity of the network between the Eastern Cape and Mpumalanga. There is sufficient generation capacity in Mpumalanga to meet the expected demand in the short to medium-term, but the transmission network will need strengthening. This will include:

- Provision of a new 765 kV line from Zeus Substation in Standerton (Mpumalanga Province) to the Eastern Cape, This line will go via Mercury Substation in Vierfontein (Free State Province).
- Provision at a later stage of another new 765 kV line from Zeus Substation to Perseus Substation in Deallesvile (Free State Province)
- Alpha substation is Gas Insulated Substation (GIS). Expansion of this substation is expensive. For this reason and network security, it is planned to use Zeus (near Alpha) for the new lines.

TECHNICAL DETAILS

Zeus Substation Upgrade:

- Location: Existing Zeus Substation is north of Standerton on the farm VLAKFONTEIN 328IS/20 at 26° 41.555'S & 29° 04.994'E.
- Footprint size: The size of the proposed expansion is 466m x 355m.
- Extra land required: The amount of land to be purchased by Eskom to accommodate the expansion is
 - 40m x 600m on the western side of the substation yard and
 - 60m x 466m on the southern side
- The schematic representation of the extended yard layout is attached.

STAKEHOLDER CONSULTATION PROCESS

The following approach to stakeholder's consultation is adopted to ensure that I&APs are afforded the opportunity to raise issues and comment on the proposed project:

- Advertise in local newspapers in English and Afrikaans
- Put posters on site for 28 days
- Allow 28 days comment period
- Consult with landowners surrounding the substation.
- Meet with representatives of the local municipality.
- Elicit comments from the technical specialists involved on the 765kV power lines study.
- Submit a report that includes the consultation process and the comments from the technical specialists.

ISSUES ALREADY CONSIDERED

Issues of concern that were considered by the Study Team and in some cases raised by I&APs during the consultation process (Scoping and EIA Phase) are addressed in the reports already submitted and are mainly in the following categories:

- **WELL BEING:** Electromagnetic field; Health and safety; Impact of construction camps: Dust, noise & Fire.
- **AESTHETICS:** Visual impacts; Loss of sense of place.
- **LAND ISSUES:** Compensation; Property value reduction.
- **FARMING RELATED ISSUES:** Access to properties; Access roads; Seasons for construction activities.
- **NATURAL ENVIRONMENT:** Erosion; Impact on fauna & flora; Impact on avifauna
- **HERITAGE:** Impact on Palaeontological, archaeological and historical sites.

ENVIRONMENTAL MANAGEMENT TOOLS

The construction and operation of the substations must take into account environmental issues and mitigation measures, as identified during the EIA process. Eskom uses an Environmental Management System (ISO 14001) and Environmental Management Plan (EMP) as tools to minimize any negative impact and enhance positive impacts on the environment. The EMP is prepared on the basis of the substation site and route identified in the Final Environmental Impact Report. From the onset, the EMP will seek to address environmental concerns and issues, identified through the EIA process. It is intended to update the EMP throughout the project life.

Extract from EIA Report

ZEUS SUBSTATION EXPANSION

The Zeus Substation expansion of some 28ha will more than double the substation yard area. The site is in an open agricultural setting, though there are a number of Transmission lines currently linked to the substation, and power stations form part of the backdrop to the east.

The environmental impacts of the substation expansion relative to those of the associated new 765kV power lines is considered to be small. These are summarised below.

Visual impacts & sense of place:

The open countryside surrounding the substation makes it visible from some distance from the site. The height of the new infrastructure is understood to be up to 15m higher than the existing infrastructure, but still lower than the 765 kV towers that will link up with the substation. The expansion will increase the visibility of the existing site, but the net effect is not seen to be significant given the presence of the existing substation and associated 400kV power lines.

Intensity of impact:	High, localised
Extent of impact:	Localised
Duration of Impact:	Long-term /permanent
Significance:	Low
Opportunities for Mitigation:	Minimal

Landuse and loss of agricultural land:

The use of the land for agricultural purposes will be lost permanently, or until the land is rehabilitated once the substation is decommissioned. Though it is understood that the land has potential for extensive (as opposed to intensive) cropping, the current landuse is extensive grazing. This is perhaps due to the cluster of 400kV towers as the existing lines converge on the substation. Within this context the loss of agricultural potential is seen to be low. Associated potential economic concerns are addressed below.

Intensity of impact:	High
Extent of impact:	Localised, immediate area only
Duration of Impact:	Long-term /permanent
Significance:	Low
Opportunities for Mitigation:	Minimal

Economic impacts:

Direct economic impacts and loss of potential income will be experienced by the landowner. However, the approach adopted by Eskom is to purchase the land from the landowner at a rate negotiated with the landowner (though it is understood this will be guided by current market values). It is therefore assumed the sale of the land will adequately balance the loss of agricultural production of the area at present.

The economic loss to the region, and even the nation, of the agricultural production potential of the site is seen to be low. The 28ha is small in this context, and given the reported losses to the national economy due to recent power failures in the Western Cape, it is considered there is greater economic benefit to the nation in committing the site to the substation expansion development.

Intensity of impact:	High
Extent of impact:	Localised, immediate area only
Duration of Impact:	Long-term /permanent
Significance:	Low to negligible
Opportunities for Mitigation:	Minimal

Social impact:

Given the economic compensation to the landowner mentioned above, the extent of social impacts are seen to be low. No relocation of dwellings is anticipated and no disruption of services (including access roads) is anticipated other than as may be associated with the construction of the power lines.

Intensity of impact:	High
Extent of impact:	Localised, immediate area only
Duration of Impact:	Long-term /permanent
Significance:	Low to negligible
Opportunities for Mitigation:	Minimal

The potential for both negative and positive social impacts during construction is potentially more significant, but will be the same as assessed for the associated 765kV power lines. Please refer to the main EIA Report for further details in this regard.

Impacts on ecology:

The ecology of the area has been substantially affected by both agricultural practices and the existing substation and surrounding power lines. The vegetation type for the area is Themeda Veld, a valuable grassland that has been severely affected in the wider area by cropping practices. In general, this area is not as sensitive as similar areas that are in better condition to the south and south-west of the site. The soils are among the more sensitive to disturbance and erosion if not properly maintained, but the site is flat and with careful construction management the long-term maintenance of the site can be kept low. This is apparently the case with the existing site. In general the site is seen to have low faunal and floral diversity, the ecological significance is seen to be low.

Intensity of impact:	High
Extent of impact:	Localised, immediate area only
Duration of Impact:	Long-term /permanent
Significance:	Low to negligible
Opportunities for Mitigation:	Careful construction management with minimal disturbance to the surrounding area. Ensure good drainage management of the site.

See also drainage and herbicide management.

Drainage and water pollution:

Stormwater runoff from the expanded yard will be significantly greater than the current condition. Both erosion control and pollution control measures will need to be considered.

The soils are sensitive to erosion, but the ground surface is relatively flat so that discharge direct onto the grasslands should be acceptable. Water velocity control will be required at the outfalls, but most standard measures will be acceptable mitigation.

Pollution concerns arise from two main sources:

- spillage of transformer oils, and
- use of herbicides to control weeds within the yard area.

The concern regarding transformer oils has been reduced with the removal of PCBs from the oil. The persistent toxicity of the earlier oils is therefore removed from the current oils used. However, spillage of the oils is still a concern as a pollutant of both surface water and groundwater in the vicinity. To address this, spillage containment sumps are provided under each transformer with sufficient capacity to hold the entire contents of the transformer. Secondly, the drainage network within the substation is provided with a number of shut-off points to further contain any spillages that may occur outside of the sumps.

Furthermore, the water resources (groundwater and surface) surrounding the site are very limited resources, and in the worst case scenario any oil spillage is expected to be substantially attenuated in the surface soils near any of the site outfalls, allowing emergency spillage cleanup operations to be effective.

Concern with respect to use of herbicides arises from their application by mechanical spray within the yard area to control weeds. It is understood from Eskom that the herbicides are applied by a trained operator, are only applied in favourable conditions (no wind or rain), and they biodegrade rapidly once applied. Risk of pollution of the surrounding environment is seen to be low if applied under these circumstances.

Intensity of impact:	High
Extent of impact:	Localised, immediate area only
Duration of Impact:	Long-term /permanent
Significance:	Moderate in an uncontrolled situation; Low in a well designed and maintained drainage system.
Opportunities for Mitigation:	Apply proper (now standard) drainage designs with spillage sumps and shut-off valves. Also apply herbicides in accordance with Eskom's ISO14001 procedures.

Furthermore, the surrounding environment is seen to have low sensitivity, and inspection around the existing substation suggests little effect from either of the two concerns raised here.

Access:

The existing access road is seen to be sufficient for the expanded site. No new impacts are anticipated other than any damage occurring construction. See below.

Construction:

The environmental risks associated with the construction of the substation expansion are seen to be very similar to those raised and assessed for the power lines. These are set out in the main EIA Report. It is suggested all the same recommendations apply to the construction of the substation and are not repeated here.

Intensity of impact:	High
Extent of impact:	Localised, immediate area only
Duration of Impact:	Short-term
Significance:	Potentially high, but low if careful construction management procedures are applied.
Opportunities for Mitigation:	<i>The Environmental Management Plan for construction will set this out in more detail</i>