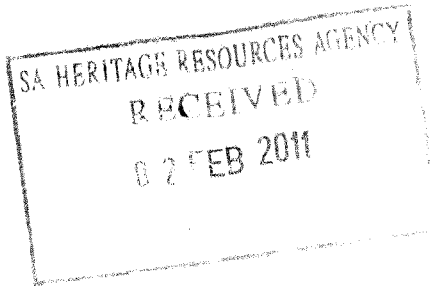
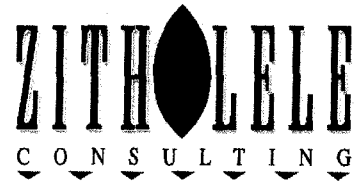


**Zitholele Consulting**

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case ID: 1775

Our Ref : 12627-Let-03

31 January 2011

Attention : To whom it may concern

Dear Madam / Sir

**KEY COMMENTING AUTHORITY REVIEW OF THE DRAFT SCOPING REPORT FOR THE PROPOSED DEVIATION OF A PORTION OF THE 400kV DUVHA-MINERVA POWER LINE TO THE EAST OF KUSILE POWER STATION**

Zitholele Consulting has been appointed by Eskom Holdings to undertake an Environmental Impact Assessment (EIA) for the proposed deviation of a portion of the 400kV Duvha-Minerva power line to the east of Kusile Power Station. We are currently in the scoping phase of the project and Draft Scoping Report is available for public comment.

As per Government Notice No. 33306 of June 2010, Chapter 2, (6), the Minister, MEC or competent authority (Department of Environmental Affairs) must consult with every state department that administers a law relating to a matter affecting the environment relevant to that application for an environmental authorisation when he or she considers an application. A state department consulted must submit its comments within 40 days from the date on which the Minister, MEC or competent authority requests such state department, in writing, to submit comments.

In terms of the above-mentioned Zitholele Consulting is in the process of distributing the Draft Scoping Report for the proposed project to the relevant state departments, such as yourself, for comment. The relevant state departments that have received a copy of the report are as follows:

- Mpumalanga Department of Economic Development, Environment and Tourism
- South African Heritage Resource Agency
- Emalahleni Local Municipality
- Kungwini Local Municipality
- Nkangala District Municipality

- Metsweding District Municipality

Please submit your comments to Zitholele Consulting and the Department of Environmental Affairs by the latest **29 March 2011**. You can submit your comments by fax or emails as follows (please remember to quote the reference number (DEA Ref No: 12/12/20/2101) on your comments).

- Zitholele Consulting:

Fax: 086 674 9950

E-mail: [andrej@zitholele.co.za](mailto:andrej@zitholele.co.za)  
[floencer@zitholele.co.za](mailto:floencer@zitholele.co.za)

- Department of Environmental Affairs:

Fax: (012) 320 7539

Email: [tphooko@environment.gov.za](mailto:tphooko@environment.gov.za)  
[emaradwa@environment.gov.za](mailto:emaradwa@environment.gov.za)

Yours faithfully

  
Patiswa Mngokoyi

Jacqui Hex

**ZITHOLELE CONSULTING (PTY) LTD**



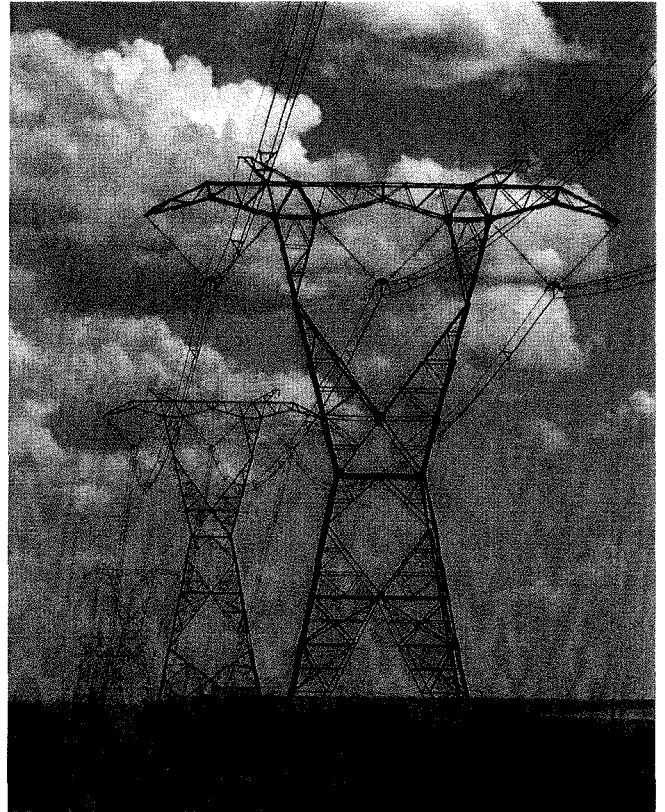
Konrad Kruger

**Attachments :**

Patiswa Mngokoyi

Z:\Projects\12627 - EIA for Duvha-Minerva 2 deviation\Correspondence\12627-03 - Letter to commenting authorities.docx

*The proposed deviation of a portion of the 400kV Duvha-Minerva power line to the east of Kusile Power Station.*



DEA REF NO: 12/12/20/2101

**Proponent: Eskom Transmission**

---

# DRAFT SCOPING REPORT

---

Project: ZPJ12627

## PURPOSE OF THIS DOCUMENT

Eskom is the South African utility that generates, transmits and distributes electricity. Eskom supplies about 95% of the country's electricity, and about 60% of the total electricity consumed in Africa. Eskom plays a major role in accelerating growth in the South African economy by providing a high-quality supply of electricity.

Eskom is in the process of undertaking major infrastructure investments, including the construction of power stations, sub-stations and transmission power lines. The construction of the Kusile Power Station and associated infrastructure near Witbank is an example of these investments.

Proposed mining operations to the east of the Kusile Power Station necessitates the deviation of the Duvha-Minerva 400kV transmission line, because it is currently located in the area where the proposed mining operations will be undertaken. In order to deviate the 400kV Duvha-Minerva power line a portion of the existing line must be decommissioned and the deviation (or new portion of the power line) must be constructed, which requires an EIA to be undertaken.

This deviation should be undertaken whilst maintaining the integrity of the surrounding environment and preserving a workable relationship with the local communities. In addition, all legal processes have to be adhered to so as to obtain the required Environmental Authorisation.

Eskom Transmission has appointed Zitholele Consulting (Pty) Ltd, an independent company, to conduct an Environmental Impact Assessment (EIA) to evaluate the potential environmental and social impacts of the proposed project. The Environmental Assessment Practitioner (EAP) is Mrs Jacqui Hex.

The first phase of an EIA is the Scoping Phase. This is the phase during which public issues, concerns and suggestions are identified so that they can be evaluated by the EIA technical specialists during the next phase (the Impact Assessment Phase) of the EIA.

According to the EIA Regulations, Interested and Affected Parties (I&APs) must have the opportunity to comment on the proposed project and verify that all the issues raised during the Scoping Phase have been recorded. This is the main purpose of this Draft Scoping Report (DSR), which is available for comment for the period 1 February to 12 March 2011. Comments received will be considered in the Final Scoping Report (SR) which will be submitted to the lead authority, the National Department of Environmental Affairs (DEA) for approval to proceed with the EIA.

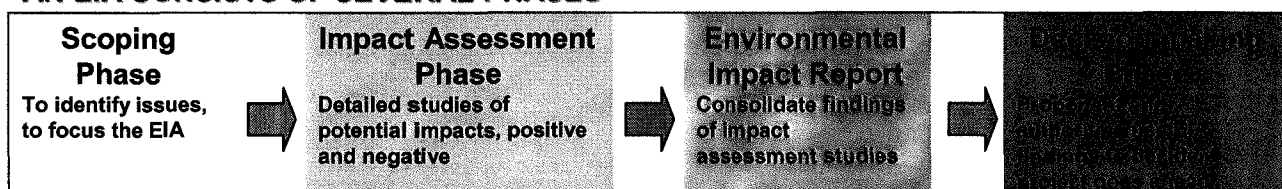
I&APs will also have an opportunity to comment on the findings of the EIA, which will be presented in a Draft Environmental Impact Report (EIR). After public review, the Draft EIR will be updated and submitted to the DEA for a decision about the project.

### Summary of what the Draft Scoping Report Contains

This report contains the following for comment by stakeholders:

- The background and description to the proposed project
- An overview of the EIA process, including the public participation process
- A description of the existing environment in the project area
- The potential environmental issues and impacts which have already been identified
- The terms of reference for the specialist studies
- A list of comments raised to date.

## AN EIA CONSISTS OF SEVERAL PHASES



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## ABBREVIATIONS

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DEA.....	Department of Environmental Affairs
DME.....	Department of Minerals and Energy
DWA.....	Department of Water Affairs
EA.....	Environmental Authorisation
EAP.....	Environmental Assessment Practitioner
ECA.....	Environment Conservation Act
EIA.....	Environmental Impact Assessment
EIR.....	Environmental Impact Report
EMProg.....	Environmental Management Programme
GNR.....	Government Notice Regulation
HIA.....	Heritage Impact Assessment
HDI.....	Historically Disadvantaged Individuals
I&APs.....	Interested and Affected Parties
IEM.....	Integrated Environmental Management
IEP.....	Integrated Energy Plan
ISEP.....	Integrated Strategic Electricity Planning
kV.....	Kilo Volts
Lt.....	Litres
Mamsl.....	metres above mean sea level
MLt.....	Mega Litres
MDEDET Mpumalanga	Department of Economic Development, Environment and Tourism
MVA.....	Mega Volt Ampere
NEMA.....	National Environmental Management Act
NEMWA.....	National Environmental Management Waste Act
NERSA.....	National Energy Regulator of South Africa
NIRP.....	National Integrated Resource Plan
NSBA.....	National Spatial Biodiversity Assessment
PoS.....	Plan of Study
SAHRA.....	South African Heritage Resources Agency
SANBI.....	South African National Biodiversity Institute
SR.....	Scoping Report
ToR.....	Terms of Reference

---

## **1 INTRODUCTION**

---

### **1.1 Who is the proponent?**

Eskom Holdings is the South African utility that generates, transmits and distributes electricity. Eskom supplies ~95% of the country's electricity, and ~60% of the total electricity consumed on the African continent. Eskom play a major role in accelerating growth in the South African economy by providing a high-quality supply of electricity.

### **1.2 Duvha-Minerva power line deviation Project**

Eskom is in the process of undertaking major infrastructure investments, including the construction of power stations, sub-stations and transmission power lines. The construction of the Kusile Power Station and associated infrastructure near Witbank is an example of these investments.

Proposed mining operations to the east of the Kusile Power Station necessitates the deviation of the Duvha-Minerva 400kV transmission line, because it is currently located in the area where the proposed mining operations will be undertaken. In order to deviate the 400kV Duvha-Minerva power line a portion of the existing line must be decommissioned and the deviation (or new portion of the power line) must be constructed, which requires an EIA to be undertaken.

This deviation should be undertaken whilst maintaining the integrity of the surrounding environment and preserving a workable relationship with the local communities. In addition, all legal processes have to be adhered to so as to obtain the required Environmental Authorisation.

### **1.3 Context of This Report**

This report is the Draft Scoping Report (SR), a key component of the environmental authorisation process for the proposed deviation of the 400kV Duvha-Minerva power line deviation near Witbank, Mpumalanga Province.

### **1.4 Environmental Impact Assessment Practitioner (EAP) Details**

Eskom appointed Zitholele Consulting to undertake the EIA for the proposed Duvha-Minerva deviation, in accordance with the EIA Regulations promulgated in June 2010 (effective as of 2 August 2010) in terms of the National Environmental Management Act ([NEMA] No 107 of 1998).

Zitholele Consulting is an empowerment company formed to provide specialist consulting services primarily to the public sector in the fields of Water Engineering, Integrated Water Resource Management, Environmental and Waste Services, Communication (public participation and awareness creation) and Livelihoods and Economic Development.

Zitholele Consulting has no vested interest in the proposed project and hereby declares its independence as required by the EIA Regulations.

In terms of the NEMA EIA regulations, the proponent must appoint an EAP to undertake the environmental assessment of an activity regulated in terms of the aforementioned Act. The details of the EAP representative are listed below.

Name: Jacqui Hex  
Company Represented: Zitholele Consulting (Pty) Ltd.  
Address: P O Box 6002, Halfway House, 1685  
Telephone: 011 207 2078  
Fax: 086 676 9950  
E-mail: [jacquih@zitholele.co.za](mailto:jacquih@zitholele.co.za)

Jacqui Hex, MSc (Env. Man.) (cum laude), BSc Hons (Geog), BSc Natural & Environmental Sciences

**Mrs. Jacqui Hex** joined Zitholele Consulting (Pty) Ltd in the January 2007 as an environmental scientist. She forms part of the Environment and Waste management sector of the Environment and Waste division of the company. She was awarded the top masters student award at the University of Johannesburg in 2006. She has also attended a course on Environmental Auditing, Environmental Impact Assessments and International Association in Public Participation. She has an in depth knowledge on EIA's, environmental law, strategic environmental assessment, integrated environmental management, social impact assessments, environmental auditing, environmental economics, environmental management frameworks and waste management. Jacqui is a certified EAP as per the Interim Certification Board of South Africa. A curriculum vitae of the EAP is provided in Appendix A.

## **1.5 Objectives of Scoping**

This report addresses the requirements for Scoping and the Plan of Study (PoS) for the EIA as outlined in the NEMA regulations. The aim of this Draft Scoping Report (SR) is to:

- Provide information to the authorities as well as interested and affected parties on the proposed project;
- Provide information regarding alternatives that have been considered;
- Indicate how interested and affected parties have been and are still being afforded the opportunity to contribute to the project, verify that the issues they raised to date have been considered, and comment on the findings of the impact assessments;
- Describe the baseline receiving environment;
- Define the Terms of Reference (ToR) for specialist studies to be undertaken in the Impact Assessment Phase of the EIA; and
- Present the findings of the Scoping Phase in a manner that facilitates decision-making by the relevant authorities

---

## **2 LEGAL REQUIREMENTS**

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Environmental legislation in South Africa was promulgated with the aim of, at the very least, minimising and at the most preventing environmental degradation. The following Acts and Regulations are applicable to the deviation Project:

### **2.1 The Constitution of the Republic of South Africa**

Section 24 of the Constitution (Act 108 of 1996) states that: Everyone has the right

- (a) *to an environment that is not harmful to their health or well-being; and*
- (b) *to have the environment protected, for the benefit of present and future generations, through reasonable legislative and other measures that-*
  - prevent pollution and ecological degradation;
  - promote conservation; and
  - secure ecologically sustainable development and use of natural resources, while promoting justifiable economic and social development

The current environmental laws in South Africa concentrate on protecting, promoting, and fulfilling the Nation's social, economic and environmental rights; while encouraging public participation, implementing cultural and traditional knowledge and benefiting previously disadvantaged communities.

### **2.2 National Environmental Management Act**

The EIA for this proposed project will be conducted in terms of the EIA Regulations that were promulgated in terms of Section 24 (5) of the NEMA (Act 107 of 1998). The National Department of Environmental Affairs (DEA) is the competent authority responsible for issuing environmental authorisation for the proposed project. The Mpumalanga Department of Economic Development, Environment and Tourism (MDEDET), the South African Resource Heritage Agency (SAHRA), and the Department of Water Affairs (DWA) are key commenting authorities.

#### **2.2.1 Environmental Impact Assessment Regulations: 543-546 of 18 June 2010**

A full EIA is applicable to all projects likely to have significant environmental impacts due to their nature or extent, activities associated with potentially high levels of environmental degradation, or activities for which the impacts cannot be easily predicted. In comparison a Basic Assessment is required for projects with less significant impacts or impacts that can easily be mitigated. The difference between the processes relates to the nature of the proposed development in terms of its potential impact on the environment, and this is reflected in the level of detail that information is collected in as well as the level of interaction with I&APs.

In terms of Government Notice Regulation (GNR) 545, activity 8, a full Environmental Impact Assessment comprising both Scoping and Impact Assessment, is necessary for the proposed deviation of the 400kV Duvha-Minerva power line. This main activity is listed as follows:

**Activity 8:** The construction of facilities or infrastructure for the transmission and distribution of electricity with a capacity of 275kV or more, outside an urban area or industrial complex.

***Proposed deviation of the 400kV power line***

The following activities in accordance with Regulation GNR 544 (Basic Assessment activities) are also included in the EIA application, to provide for supporting infrastructure associated with the proposed 400kV deviation project:

**Activity 10:** The construction of facilities or infrastructure for the transmission or distribution of electricity: -  
(ii) inside urban areas or industrial complexes with a capacity of 275kV or more.

***Proposed deviation of the 400kV power line (if applicable after assessment of alternatives)***

**Activity 13:** The construction of facilities or infrastructure for the storage, or for the storage and handling, of a dangerous good, where such storage occurs in containers with a combined capacity of 80 but not exceeding 500 cubic metres

***Storage of diesel for generators during construction***

**Activity 22:** The construction of a road, outside urban areas,  
(i) with reserve wider than 13.5 meters or;  
(ii) where no reserve exists where the road is wider than 8 meters.

***Construction of an access road, should no roads be available***

**Activity 24** The transformation of land bigger than 1000 square meters in size, to residential, retail, commercial, industrial or institutional use, where, at the time of the coming into effect of this Schedule such land was zoned open space, conservation or had an equivalent zoning.

***Transformation of land larger than 1000m<sup>2</sup> where it the zoning is currently unknown***

**Activity 26:** Any process or activity identified in terms of section 53(1) if the National Environmental Management: Biodiversity Act, 2004 (Act No. 10 of 2004)

***To be confirmed in the EIA process***

- Activity 27:** The decommissioning of existing facilities or infrastructure for  
 (ii) electricity transmission and distribution with a threshold of more than 132kV

***The decommissioning of a portion of the Duvha-Minerva 400kV power line that is located above the coal reserve***

- Activity 38:** The expansion of facilities for the transformation and distribution of electricity where the expanded capacity will exceed 275kV and the development footprint will increase.

***The deviation of the Duvha-Minerva 400kV power line***

- Activity 47:** The widening of a road by more than 6 meters, or the lengthening of a road by more than 1 kilometer:
- (i) there the existing reserve is wider than 13.5 meters; or where no reserve exists, where the existing road is wider than 8 meters.
  - (ii) Widening of an access road, should no roads be available or the width of the road not be sufficient

***Construction of a road parallel to the deviated power line***

An additional listing notice of activities was promulgated 18 June 2010 and came into effect on 2 August 2010. GNR 546, listing notice 3, requires a Basic Assessment process to be undertaken based on the geographical area and the sensitivity of the receiving environment, the following activities may be triggered by the proposed project:

- Activity 12:** The clearance of an area of 300 square meters or more of vegetation where 75% or more of the vegetation cover constitutes indigenous vegetation
- (a) Within any critically endangered or endangered ecosystem listed in terms of section 52 of the NEMBA or prior to the publication of such a list, within an area that has been identified as critically endangered in the National Spatial Biodiversity Assessment 2004;
  - (b) Within critical biodiversity areas identified in bioregional plans;
  - (c) Within the littoral active zone or 100 meters inland from high water mark of the sea or an estuary, whichever distance is the greater, excluding where such removal will occur behind the development setback line on erven in urban areas.

***Clearance of vegetation within the 400kV power line servitude***

- Activity 19:** The widening of a road by more than 4 meters, or lengthening of a road by more than 1 kilometer.
- (a) In Eastern Cape, Free State KwaZulu-Natal, Limpopo, Mpumalanga and Northern Cape provinces.
    - (iii) Outside urban area, in:
      - (bb) National Protected Area Expansion Strategy Focus areas;
      - (cc) Sensitive areas as identified in an environmental management framework as contemplated in chapter 5 of the Act and as adopted by the competent authority

- (ee) Critical biodiversity areas as identified in systematic biodiversity plans adopted by the competent authority or in bioregional plans;
- (ii) Areas on the watercourse side of the development setback line or within 100 meters from the edge of a water course where no such setback line has been determined
- (iv) Inside urban areas:
  - (aa) Areas zoned for as public open space;
  - (bb) Areas designated for conservation use in Spatial Development Frameworks adopted by the competent authority or zoned for a conservation purpose.

***Construction of a road parallel to the deviated power line***

The NEMA can be regarded as the most important piece of general environmental legislation. It provides a framework for environmental law reform and covers three areas, namely:

- Land, planning and development;
- Natural and cultural resources, use and conservation; and
- Pollution control and waste management.

The law is based on the concept of sustainable development. The objective of the NEMA is to provide for co-operative environmental governance through a series of principles relating to:

- The procedures for state decision-making on the environment; and
- The institutions of state which make those decisions.

The NEMA principles serve as:

- A general framework for environmental planning;
- Guidelines according to which the state must exercise its environmental functions; and
- A guide to the interpretation of NEMA itself and of any other law relating to the environment.

### **2.2.2 What are the NEMA principles?**

Some of the most important principles contained in NEMA are that:

- Environmental management must put people and their needs first;
- Development must be socially, environmentally and economically sustainable;
- There should be equal access to environmental resources, benefits and services to meet basic human needs;
- Government should promote public participation when making decisions about the environment;

- Communities must be given environmental education;
- Workers have the right to refuse to do work that is harmful to their health or to the environment;
- Decisions must be taken in an open and transparent manner and there must be access to information;
- The role of youth and women in environmental management must be recognised;
- The person or company who pollutes the environment must pay to clean it up;
- The environment is held in trust by the state for the benefit of all South Africans; and
- The utmost caution should be used when permission for new developments is granted.

### **2.3 Environment Conservation Act**

The Environment Conservation Act (ECA, Act 73 of 1989) is a law that relates specifically to the environment. Although most of this Act has been replaced by the NEMA there are still some important sections that remain in operation. These sections relate to:

- Protected natural environments;
- Littering;
- Special nature reserves;
- Waste management;
- Limited development areas;
- Regulations on noise, vibration and shock; and
- EIA.

### **2.4 Additional Acts and Frameworks**

In addition to the ECA and NEMA, the following Acts have some bearing on the proposed activities:

#### **National Water Act, 1998 (Act No. 36 of 1998)**

The water Act guides the management of water in South Africa as a common resource. The Act aims to regulate the use of water and activities which may impact on water resources through the categorisation of 'listed water uses' encompassing water extraction, flow attenuation within catchments as well as the potential contamination of water resources, where Department of Water Affairs (DWA) is the administering body in this regard. Should the proposed activities associated with the proposed substation extension or power line deviation impact on water resources e.g. cross through rivers, the applicant would be responsible to obtain a permit from DWA.

### National Environmental Management: Waste Act (Act 59 of 2008)

A new era of an integrated waste management system in South Africa through the NEM:WA has been established. The NEM:WA came into effect in July 2009. Provisions have been made in the form of legislative and regulatory tools to facilitate and ensure implementation of the Act by all spheres of government. To this end, the Minister of the Department of Water and Environmental Affairs (DWEA) published a Waste Management Activity List in July 2009 which has clear thresholds on waste activities that need authorisation prior to commencement. The published Waste Management Activity List effectively replaces Schedule 1 of the NEMA and all waste related activities listed in EIA lists.

All waste-related activities listed in terms of section 24(2) of the NEMA have been repealed at the same time that the Minister published the new list of waste management activities in order to align the NEM:WA and the EIA regulations and to avoid the necessity to submit two applications for the same activity.

### The National Heritage Resources Act (No. 25 of 1999)

The National Heritage Resources, 1999 (Act No. 25 of 1999) legislates the necessity for cultural and heritage impact assessment in areas earmarked for development, which exceed 0.5 ha. The Act makes provision for the potential destruction to existing sites, pending the archaeologist's recommendations through permitting procedures. Permits are administered by the South African Heritage Resources Agency (SAHRA). Should the proposed activities impact on heritage resources, application to SAHRA would be required to obtain the necessary permits.. The requirements of the National Heritage Resources Act have thus been addressed as an element of the EIA process, specifically by the inclusion of a Heritage Assessment.

### National Environmental Management: Biodiversity Act, 2004 (Act No. 10 of 2004)

The purpose of the Biodiversity Act is to provide for the management and conservation of South Africa's biodiversity within the framework of the NEMA and the protection of species and ecosystems that warrant national protection. As part of its implementation strategy, the National Spatial Biodiversity Assessment was developed. Should protected species and ecosystems be impacted on by the proposed substation upgrade or power line deviation, this Act may be applicable and the necessary measures should be taken for implementation.

### National Spatial Biodiversity Assessment

The National Spatial Biodiversity Assessment (NSBA) classifies areas as worthy of protection based on their biophysical characteristics, which are ranked according to priority levels.

### Protected species – Provincial Ordinances

Provincial ordinances were developed to protect particular plant species within specific provinces. The protection of these species is enforced through permitting requirements associated with provincial lists of protected species. Permits are administered by the provincial departments responsible for environmental affairs.

### Expropriation Act (No. 63 of 1975)

Eskom has a policy of “willing buyer, willing seller”, and therefore endeavours to purchase land where ever possible or necessary. However, the State and State-owned-enterprises can acquire the rights to use or possess the requisite land through the Expropriation Act (No 63 of 1975). The Expropriation Act requires the determination of compensation based on the principle of market value (i.e. what would the value be in the event of both a willing buyer and a willing seller trading the land). There is a suite of additional legislation, which, in conjunction with the Expropriation Act, would be used to determine the compensation value.

### Occupational Health and Safety Act (Act No 85 of 1993)

This Act makes provisions that address the health and safety of persons working at the proposed substation and power line. The Act addresses amongst others the:

- Safety requirements for the operation of plant machinery;
- Protection of persons other than persons at work against hazards to health and safety, arising out of or in connection with the activities of persons at work;
- Establishment of an advisory council for occupational health and safety; and
- Provision for matters connected therewith.

The law states that any person undertaking upgrades or developments for use at work or on any premises shall ensure as far as is reasonably practicable that nothing about the manner in which it is erected or installed makes it unsafe or creates a risk to health when properly used.

### Department of Environmental Affairs and Tourism Integrated Environmental Management Information Series

The Department of Environmental Affairs (DEA) Information Series of 2002 and 2006 comprise 23 information documents. The documents were drafted as sources of information about concepts and approaches to Integrated Environmental Management (IEM). The IEM is a key instrument of NEMA and provides the overarching framework for the integration of environmental assessment and management principles into environmental decision-making. The aim of the information series is to provide general guidance on techniques, tools and processes for environmental assessment and management.

### White Paper on the Energy Policy of the Republic of South Africa – 1998

Development within the energy sector in South Africa is guided by the White Paper on the Energy Policy, published by the Department of Minerals and Energy (DME) in 1998. This White Paper sets out five objectives for the further development of the energy sector. The five objectives are as follows:

- Increased access to affordable energy services;
- Improved energy governance;
- Stimulating economic development;
- Managing energy-related environmental and health impacts; and
- Securing supply through diversity.

Furthermore, the Energy Policy identified the need to undertake an Integrated Energy Planning (IEP) process in order to achieve a balance between energy demand and resource availability, whilst taking into account health, safety and environmental aspects. In addition, the policy identified the need for the adoption of a National Integrated Resource Planning (NIRP) approach to provide a long-term cost-effective resource plan for meeting electricity demand, which is consistent with reliable electricity supply and environmental, social and economic policies.

### The Tourism Act, 1993 (Act No. 72 of 1993)

Policy and legislation governing tourism in South Africa emphasizes the concepts of responsible tourism and sustainable tourism development. Tourism in South Africa is legislated in terms of the Tourism Act (Act No. 72 of 1993), which was amended as the Tourism Amendment Act (Act No. 105 of 1996 and the Tourism Second Amendment Act no. 70 of 2000. The 1996 White Paper on Development and Promotion of Tourism in South Africa introduces the concept of “responsible tourism”; i.e. tourism with a responsibility towards the environment, through sustainable use of resources, involvement of local communities, and commitment to safety and security of all concerned. Taking this further, the drive towards “sustainable tourism” development emphasizes the optimisation of benefits relating to tourism, without compromising future benefits.

## **2.5 Eskom Planning Processes**

The following section, although not legislative, provide supplementary information on some of Eskom’s planning processes.

### **2.5.1 Integrated Resource Plan for Electricity (IRP) – 2010**

The Integrated Resource Plan (IRP) is a long-term electricity capacity plan, which defines the need for new generation and transmission capacity for the country. The IRP outlines the concepts and development behind the IRP for the electricity industry in South Africa as well as the strategic objectives of the IRP including the policy and technical parameters that drive the planning process.

The National Energy Act of 2008 (Act 34 of 2008) obligates the Minister of Energy to develop and publish an IRP for energy. As electricity forms a sub-component of the energy sector the electricity IRP needs to be integrated into the outlook for energy. The system Operations and Planning Division in Eskom has been mandated by the Department of Energy (DoE), under the New Generation Capacity regulations, to produce the IRP for electricity in consultation with the DoE and the National Energy Regulator of South Africa (NERSA).

The objective of the IRP is to develop a sustainable electricity investment strategy for generation capacity and transmission infrastructure for South Africa over the next 25 years. The investment strategy includes implications arising from demand-side management (DSM) and pricing, and including capacity provided by generators (Eskom and independent power producers).

The IRP is intended to:

- Improve the long term reliability of electricity supply through meeting adequacy criteria over and above keeping pace with economic growth and development;
- Ascertain South Africa's capacity investment needs for the medium term business planning environment;
- Consider environmental and other externality impacts and the effect on renewable energy technologies;
- Provide the framework for Ministerial determination of new generation capacity (inclusive of the required feasibility studies) as envisaged in the New Generation Capacity regulations.

The table below provides a summary of the aforementioned and all other relevant legislation applicable to this proposed project.

**Table 2-1: Summary of relevant legislation.**

Legislation	Sections	Relates to
The Constitution Act (No 108 of 1996)	Chapter 2	Bill of Rights
	Section 24	Environmental rights
	Section 25	Rights in property
	Section 32	Administrative justice
	Section 33	Access to information
National Environmental Management Act (No 107 of 1998) as amended	Section 2	Defines the strategic environmental management goals, principles and objectives of the government. Applies through-out the Republic to the actions of all organs of state that may significantly affect the environment
	Section 24	Provides for the prohibition, restriction and control of activities which are likely to have a detrimental effect on the environment.
	Section 28	The developer has a general duty to care for the environment and to institute such measures as may be needed to demonstrate such care
Environment Conservation Act (No 73 of 1989) and regulations	The Act has been substantially repealed by NEMA. However, there are certain sections such as Section 19 on littering and Section 20 on waste which remain in force and will need to be complied with. There are also certain regulations under the Act which are still in operation such as the	

Legislation	Sections	Relates to
	National Noise regulations.	
NEM: Protected Areas Act (No 57 of 2003)	The Act came into operation on 01 November 2004. The aim of the Act is to provide for the protection and conservation of ecologically viable areas representative of South Africa's biological diversity, natural landscapes and seascapes. In 2004, the National Environmental Management: Protected Areas Amendment Act 31 of 2004 was promulgated to amend Act 57 of 2003 with regard to the application of that Act to national parks and marine protected areas. The NEM: Protected Areas Amendment Act was published for public information on 11 February 2005 and came into operation on 01 November 2005. The NEM: Protected Areas Act, as amended by the NEM: Protected Areas Act 31 of 2004 repeals sections 16, 17 & 18 of the ECA as well as the National Parks Act with the exception of section 2(1) and Schedule 1.	
The Conservation of Agricultural Resources Act (No 43 of 1983) and regulations	Section 6	Implementation of control measures for alien and invasive plant species
National Heritage Resources Act (No 25 of 1999)	Section 34	No person may alter or demolish any structure or part of a structure which is older than 60 years without a permit issued by the relevant provincial heritage resources authority.
	Section 35	No person may, without a permit issued by the responsible heritage resources authority destroy, damage, excavate, alter, deface or otherwise disturb any archaeological or palaeontological site.
	Section 36	No person may, without a permit issued by the South African Heritage Resource Agency (SAHRA) or a provincial heritage resources authority destroy, damage, alter, exhume, remove from its original position or otherwise disturb any grave or burial ground older than 60 years which is situated outside a formal cemetery administered by a local authority. "Grave" is widely defined in the Act to include the contents, headstone or other marker of such a place, and any other structure on or associated with such place.
	Section 38	This section provides for Heritage Impact Assessments (HIAs), which are not already covered under the ECA. Where they are covered under the ECA the provincial heritage resources authorities must be notified of a proposed project and must be consulted during the HIA process. The Heritage Impact Assessment (HIA) will be approved by the authorising body of the provincial directorate of environmental affairs, which is required to take the provincial heritage resources authorities' comments into account prior to making a decision on the HIA.
Atmospheric Pollution Prevention Act (No 45 of 1964) and regulations	Sections 27 – 35	Dust control
	Section 36 - 40	Air pollution by fumes emitted by vehicles
National Environmental Management: Air Quality Act (No 39 of 2004)	Section 32	Control of dust
	Section 34	Control of Noise
	Section 35	Control of offensive odours

Legislation	Sections	Relates to
Occupational Health and Safety Act (No 85 of 1993) and regulations	Section 8	General duties of employers to their employees
	Section 9	General duties of employers and self employed persons to persons other than their employees
National Environmental Management: Biodiversity Act, 2004 (Act 10 of 2004) (NEMBA),	Strategy for achieving the objectives of the United Nation's Convention on Biological Diversity, to which South Africa is a signatory	
	Sections 65-69	These sections deal with restricted activities involving alien species; restricted activities involving certain alien species totally prohibited; and duty of care relating to alien species
	Sections 71 and 73	These sections deal with restricted activities involving listed invasive species and duty of care relating to listed invasive species.
Fencing Act (No 31 of 1963)	Section 17	Any person erecting a boundary fence may clean any bush along the line of the fence up to 1.5 metres on each side thereof and remove any tree standing in the immediate line of the fence. However, this provision must be read in conjunction with the environmental legal provisions relevant to protection of flora.
National Water Act (No 36 of 1998) and regulations	Section 19	Prevention and remedying the effects of pollution.
	Section 20	Control of emergency incidents
	Chapter 4	Use of Water and licensing
Hazardous Substances Act (No 15 of 1973) and regulations	Provides for the definition, classification, use, operation, modification, disposal or dumping of hazardous substances	
Fertilisers, Farm Feeds, Agricultural Remedies and Stock Remedies Act (No 36 of 1947) and regulations	Sections 3 to 10	Control of the use of registered pesticides, herbicides (weed killers) and fertilisers. Special precautions must be taken to prevent workers from being exposed to chemical substances in this regard.
All relevant Provincial Legislation and Municipal bylaws		

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## 3 PROJECT DESCRIPTION

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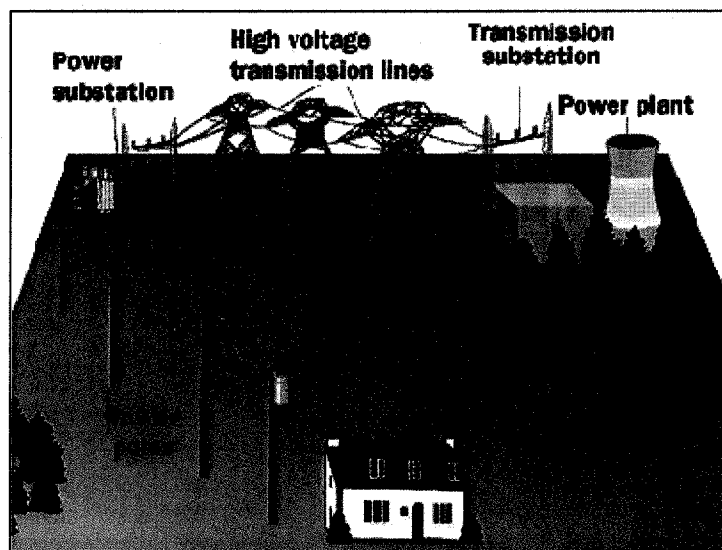
### 3.1 Project Description

The proposed project is for the deviation of a portion of the 400kV Duvha-Minerva power line located to the east of the Kusile Power Station near Witbank, Mpumalanga Province. Proposed mining operations to the east of the Kusile Power Station necessitates the deviation of the Duvha-Minerva 400kV transmission line, because it is currently located in the area where the proposed mining operations will be undertaken.

The section below provides a brief description of how a power grid works and where a transmission power line (such as Duvha-Minerva) is located in terms of the overall system. Thereafter the various components of the proposed deviation are explained and illustrated.

### 3.2 How Power Grids Work

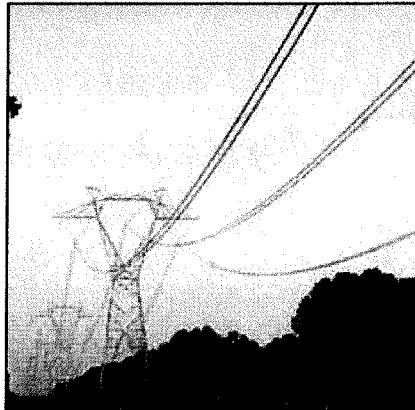
Figure 3-1 below provides an illustration of how a power grid operates and where exactly a high voltage transmission power line fits into the network that distributes power. Electricity always commences at the point where power is generated. The majority of electricity in South Africa originates at coal fired power stations. Coal fired power stations generate what is known as three-phase AC current. The three-phase AC current leaves the generator and enters a transmission substation near the power station.



**Figure 3-1: Power distribution from Power Plant to household user.**

This substation uses large transformers to convert the generator's voltage (which is at the thousands of volts level) up to **extremely high voltages for long-distance transmission on the transmission grid**. Typical voltages for long distance transmission are in the range of 155kV to 765kV in order to reduce line losses and are usually made of huge steel pylons / towers as illustrated in Figure 3-2 below. The Duvha-Minerva power line is a 400kV power line and therefore a high voltage transmission power line. All pylons like this have three wires for the three phases. Many pylons, like

the ones shown below, have extra wires running along the top of the pylons. These are ground wires and are there primarily in an attempt to attract lightning.

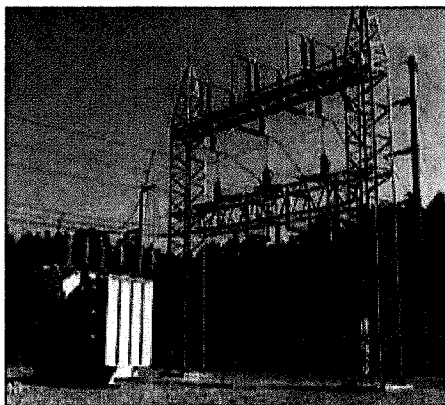


**Figure 3-2: Typical transmission power line.**

For power to be useful in a home or business, it comes off the transmission grid and is stepped-down to the distribution grid. This may happen in several phases. The place where the conversion from "transmission" to "distribution" occurs is in a substation. A substation typically does two or three things:

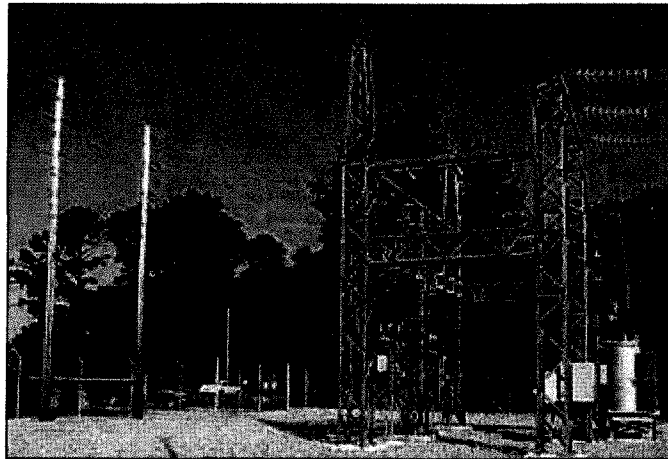
- It has transformers that step transmission voltages (in the tens or hundreds of thousands of volts range) down to distribution voltages (typically 33 kV).
- It has a "bus" that can split the distribution power off in multiple directions.
- It often has circuit breakers and switches so that the substation can be disconnected from the transmission grid or separate distribution lines can be disconnected from the substation when necessary.

Figure 3-3 below provides an example of a large transformer, incoming power from the transmission grid and a set of switches for the incoming power. Toward the right is a distribution bus plus three voltage regulators.



**Figure 3-3: Example of a transformer, incoming power from the transmission grid, a set of switches for the incoming power and distribution bus plus three voltage regulators.**

The power goes from the transformer to the distribution bus. In this case, the bus distributes power to two separate sets of distribution lines at two different voltages. The smaller transformers attached to the bus are stepping the power down to standard line voltage (usually 7,200 volts) for one set of lines, while power leaves in the other direction at the higher voltage of the main transformer. The power leaves this substation in two sets of three wires, each headed down the road in a different direction (Figure 3-4).



**Figure 3-4: Distribution bus and low voltage distribution power lines.**

### **3.3 Proposed Deviation of the 400kV Duvha-Minerva power line**

#### **3.3.1 Motivation for the deviation**

As mentioned above the existing Duvha-Minerva power line is located on a coal reserve east of the Kusile Power Station. The mine intends to commence mining the coal reserve. The power line therefore has to be relocated.

#### **3.3.2 Deviation infrastructure / components**

The following components for the deviation are being taken into consideration:

- **Location of the deviation:** The existing power line located on the coal reserve needs to be decommissioned by cutting the power line to the east and west of the coal reserve and dismantling the towers / pylons in the coal reserve footprint. Additionally a new route to deviate the power line around the coal reserve needs to be assessed. (Figure 3-5).
- **Size of the servitude:** It is proposed that a 150 metre wide corridor be assessed for the required 55m wide servitude (27.5m on either side). This is to enable Eskom to deviate slightly around sensitivities identified within the corridor once approved.
- **Length of the line to be deviated:** The length of the deviation is dependent on the alternative approved by the DEA (approximately 15 km). Additionally the length of the portion of the line to be decommissioned is between 13 and 16 km.
- **Tower Designs:** Various tower designs were assessed and are discussed below.

### **3.3.3 Location of the proposed deviation**

The 400kV Duvha-Minerva power line is located parallel to the N4 highway between Balmoral and Ogies. Previously the 400kV Duvha-Minerva power line ran from west to east directly through the Kusile Power Station construction site. After the approval of the Kusile Power Station project, the portion of the Duvha-Minerva power line located on Eskom property was deviated to the north of the Eskom property along the property boundary (Figure 3-5 in order for the construction of the power station to commence.

The coal reserve associated with the project is located east and south east of the Kusile Power Station. It is proposed that the coal reserve be mined towards the end of 2011. It is proposed that north-south strip mining take place starting in the western portion of the coal reserve moving eastwards. In order for the above ground mining operations to commence the portion of the power line located on the coal reserve will be decommissioned and the power line will be further deviated to the north of the coal reserve.

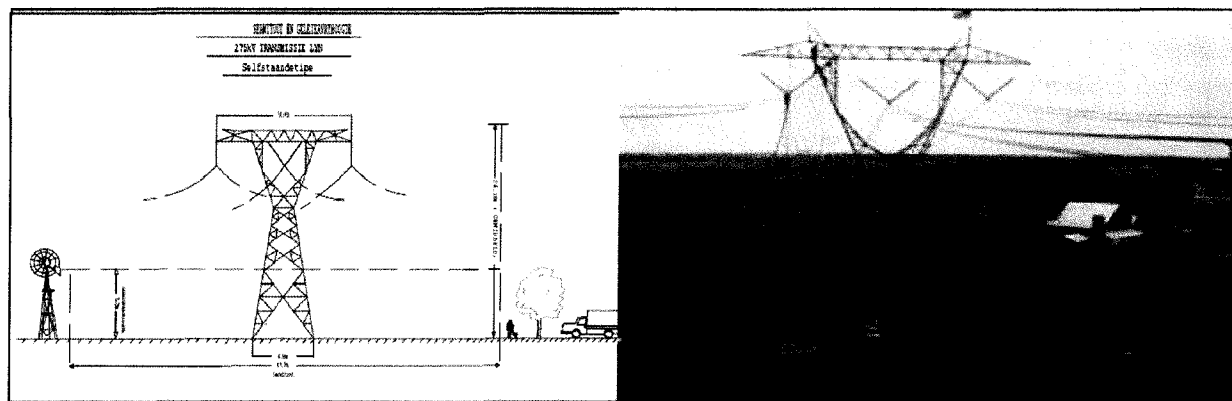
### **3.3.4 Towers Designs**

There are various types of tower designs that have different implications in terms of cost for implementation. The need for selecting a tower type will be determined by the project team that will consider the tower type that is most feasible and can still be a lower risk in terms of bird collisions. Self supporting suspension towers or self supporting strain towers are the towers that are suitable or viable for proposed deviation power line, additionally these towers are currently used for the existing power line however should there be bends in the power line route a strain tower will be used to support the line.

#### **Self-supporting suspension tower**

Self-supporting tower design is the one that is considered to be suitable for the proposed deviation. This was supported by the technical requirements of the proposed deviation as well as considering the needs of the land owners whereby this tower design does not require big portion of land. Furthermore, the existing Duvha-Minerva power line design is a self-supporting suspension tower and therefore Eskom would like to keep uniformity of tower designs within that specific project. Furthermore, birds are familiar with existing tower designs in the area and changing the design might lead to unfamiliar zones for the birds which could lead to collisions with power line.

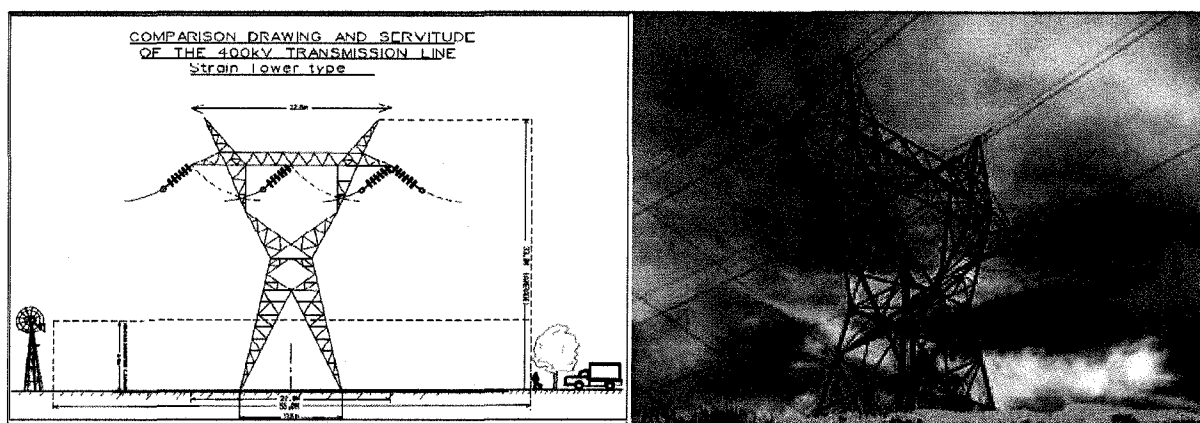
In terms of the economic feasibility of this tower, it was found that self supporting suspension towers are more costly as compared to other towers. The impetus to opt this tower design, though it is expensive, is because this tower does not require more land as compared to other ones and it is as well suitable for more bending within short distance.



**Figure 3-6: Self-supporting suspension tower.**

### Self-supporting strain tower

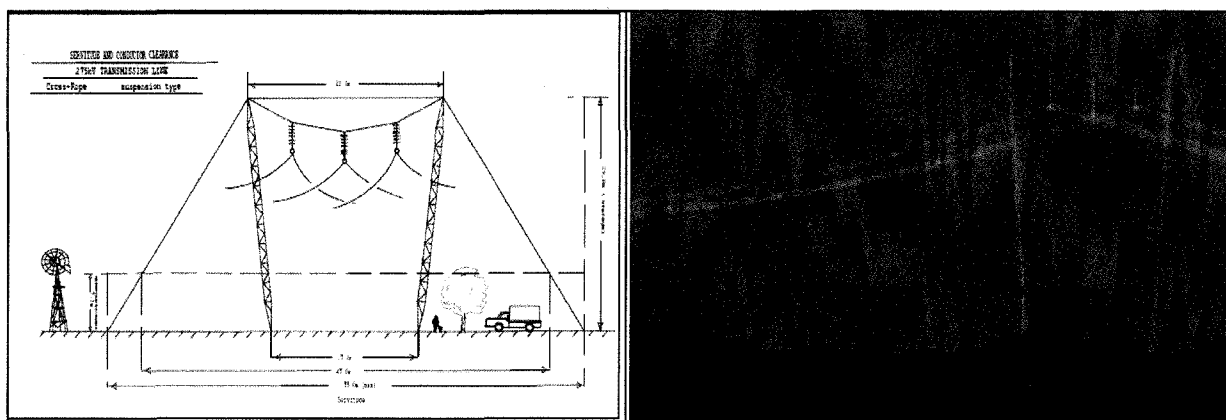
This tower is more or less the same as the self-supporting suspension tower.



**Figure 3-7: Self-supporting strain tower.**

### Cross rope suspension tower

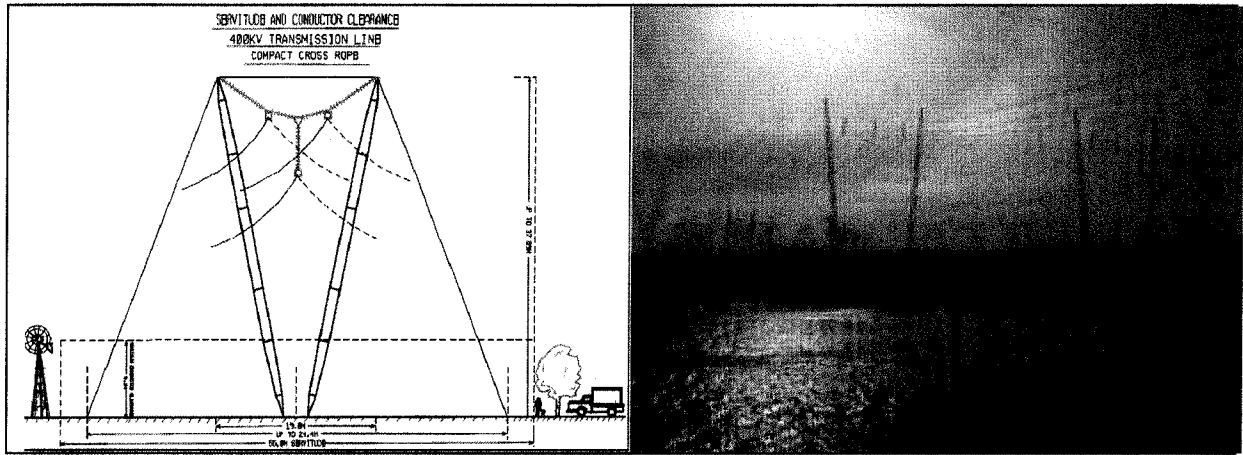
This tower is more suitable for long distance power lines where there are fewer bends and turns. This design is preferred in terms of power line impacts on birds however it requires more land.



**Figure 3-8: Cross rope suspension tower.**

### Compact cross rope suspension tower

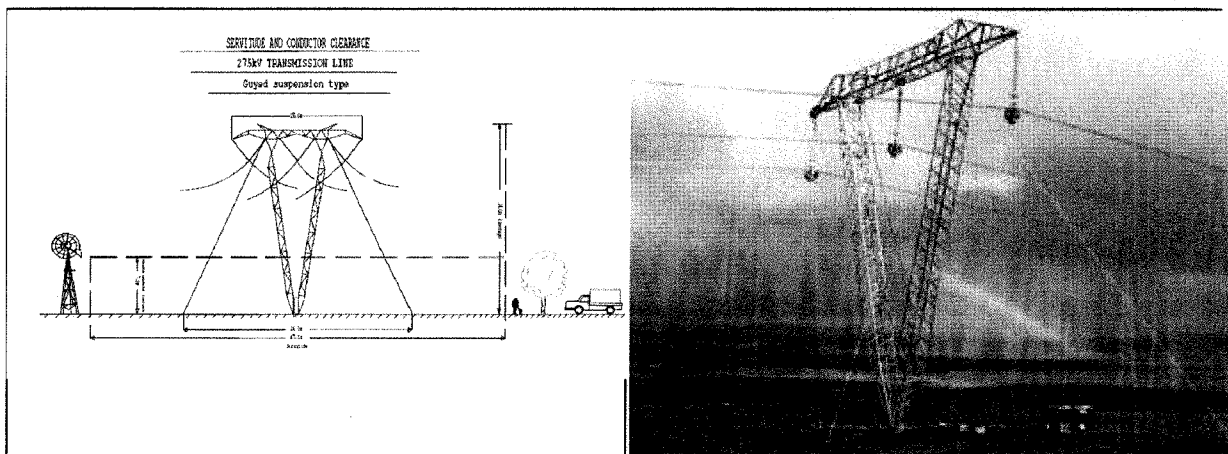
This tower is similar to a cross rope suspension tower and is also not suitable for short distances with several bends and turns. Therefore, this tower is technically not feasible for the proposed deviation.



**Figure 3-9: Compact cross rope suspension tower.**

### Guyed-V suspension tower

This tower is not ideal for transmission lines that have several bends and turns within a short distance of the length of the power line. This tower design is therefore not suitable for the proposed deviation.



**Figure 3-10: Guyed-V suspension tower.**

## **3.4 Majors Project Phases**

### **3.4.1 Construction Phase**

#### Construction Footprint

The proposed footprint for the deviation will be between approximately 15km x 55m depending on the approved alternative. Construction activities will be limited to the footprint within the approved corridor.

### Construction Activities

The construction phase for the project will include the decommissioning of a portion of the power line as well as the construction of the new deviated power line. The construction phase will entail the following:

- Removal of large trees and vegetation within the power line servitude;
- Erecting new pylons for the deviated power line;
- Stringing of the deviated 400kV power line; and
- Dismantling of 400kV pylons / towers within the coal reserve;

Eskom has decades of experience in the construction and operational use of high voltage equipment such as 400kV power lines. All equipment, commissioning and operational procedures and protocols are subject to strict specifications, which Eskom has had in place for many years. Construction is anticipated to begin in November 2011. During construction there should not be more than 10 people present on the site at any one time. Depending on the level and nature of construction activity taking place, there will be varying numbers of people housed on site in temporary accommodation. There will be ongoing monitoring and control of operations as well as planned and other maintenance work done on an ad hoc basis.

#### **3.4.2 Operation and Maintenance Phase**

During operations, Eskom requires access to the servitude for maintenance activities. Maintenance activities are specialised and are, therefore, carried out by Eskom employees. During the operational life of the power line, there will be no people housed on site.

#### **3.4.3 Overall Project Schedule**

The primary milestones for the proposed deviation EIA are described in Table 3-1 below.

**Table 3-1: Primary milestones of the Duvha-Minerva Project.**

<b>MILESTONES</b>	<b>DATE</b>
Final Scoping Report	March 2011
Undertake Specialist Studies opinions	March/April 2011
Draft EIR and EMProg	May 2011
Stakeholder Engagement on EIR / EMProg	May 2011
Finalise EIR and EMProg	June 2011
Submission to Relevant Authorities	June 2011
Environmental Authorisation	September 2011
Appeal Period	To be confirmed in the Impact Assessment Phase
Construction (including EMProg Auditing)	To be confirmed in the Impact Assessment Phase

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## **4 ALTERNATIVES CONSIDERED**

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Alternatives being assessed for the proposed deviation can be divided into the following categories:

- Corridor alternatives;
- Design alternatives; and
- The No-Go (no development) alternative.

These are discussed in the sections below.

### **4.1 Corridor Alternatives**

#### **Deviation - Alternative 1**

Alternative 1 exits the existing 400kV Duvha-Minerva power line at the north of the Eskom property, located 3 km south of the N4 highway. The corridor heads in a north easterly direction (~3.5km) towards the newly constructed 132kV distribution power line. Thereafter alternative 1 follows the exact alignment of the newly constructed 132kV distribution power line (~10km) before meeting the existing 400kV Duvha-Minerva power line (total length ~ 13.5 km).

#### **Deviation - Alternative 2**

Alternative 2 follows the same alignment as alternative 1 except 2.5km before re-joining the existing 400kV Duvha-Minerva power line, the alternative follows a straight south easterly path to the existing transmission line avoiding an additional bend tower (total length ~ 13.4 m).

#### **Deviation - Alternative 3**

Alternative 3 exits the existing 400kV Duvha-Minerva power line at the north of the Eskom property approximately 900m south east from alternative 1 starting point. Alternative 3 heads in a north easterly direction (~3.5km) crossing the 545 road and thereafter bending eastwards (~800m) before joining the newly constructed 132kV distribution power line (total length ~ 11.8 km).

#### **Deviation - Alternative 4**

Alternative 4 exits the existing 400kV Duvha-Minerva power line at the same location as alternative 3. The alternative heads in a south easterly direction (~1km) before crossing over the newly constructed 132kV distribution power line. Thereafter the alternative heads in a north easterly direction (~ 5km) before joining the newly constructed 132kV distribution power line (total length ~ 11.8 km).

### Deviation - Alternative 5

Alternative 5 exits the existing 400kV Duvha Minerva power line at the same location as alternative 3. The alternative heads in a south easterly direction (~600m) and the turns to a north easterly direction (~3km). Before meeting up with the newly constructed 132kV power line the alternative turns south easterly (~1.5km). The alternative heads over a portion of the coal reserve area in a south south easterly direction for approximately 4.5 km before turning in a south easterly direction (~1km) before rejoining the existing 400kV Duvha-Minerva power line approximately 1.5 km to the west of the end points for alternatives 1-4.

Please refer to Figure 3-5 and Figure 4-1 for an illustration of the alternatives.

## **4.2 Design Alternatives**

The design alternatives constitute the various tower designs as discussed in Section 3.3.4 above. The preferred design type is the self supporting tower.

## **4.3 The No-Go (no development) Alternative.**

The no-go alternative will also be assessed further in the EIA. In the case that the deviation of the power line is not approved, the coal reserve to the east of Kusile Power Station will not be mined. As a result this mine will not be able to supply the power station with the much required coal needed to fuel the power station. As a direct result the electricity crisis in the country will continue with the unreliable supply of coal and the expected black-outs.

## 5 RECEIVING ENVIRONMENT

The regional environment is described in the section below. For the context of this report the regional environment refers to a 10 km radius around the study area.

### 5.1 Climate

#### 5.1.1 Data Collection

Climate information was attained using the climate of South Africa database, as well as from Air Quality Impact Assessment for the Kusile power station by Airshed Planning Professionals<sup>1</sup>.

#### 5.1.2 Regional Description

The study area displays warm summers and cold winters typical of the Highveld climate. The region falls within the summer rainfall region of South Africa, rainfall occurs mainly as thunderstorms (Mean Annual Precipitation 662 mm) and drought conditions occur in approximately 12% of all years. The mean annual potential evaporation of 2 060 mm indicates a loss of water out of the system.

The region experiences frequent frosts, with mean frost days of 41 days. In addition to frost the area is prone to hail storms during the summer time. Winds are usually light to moderate, with the prevailing wind direction north-westerly during the summer and easterly during winter.

#### Ambient Temperature

The long-term average (2003) maximum, mean and minimum temperatures for Kusile is given in Table 2.

**Table 2: Long Term Temperature Data for Kendal (Airshed, 2006)**

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sept	Oct	Nov	Dec
	31	32	32	29	24	20	22	24	29	30	30	32
	21	22	20	18	13	10	10	12	18	20	21	22
	15	15	12	11	6	4	3	4	10	13	14	15

The annual maximum, minimum and mean temperatures for Kusile are given as 32°C, 3°C and 17°C, respectively, based on the 2003 record. The average daily maximum temperatures range from 32°C in December to 20°C in July, with daily minima ranging from 15°C in January to 3°C in July.

<sup>1</sup> Air Quality Impact Assessment for the Proposed New Coal-fired Power Station (Kendal North) in the Witbank Area. Report No.: APP/06/NMS-01 Rev 0.2, 2006.

## **5.2 Geology and Soils**

### **5.2.1 Methodology and Data Sources**

The geological analysis was undertaken through the desktop evaluation using a Geographic Information System (GIS) and relevant data sources. The geological data was taken from the Environmental Potential Atlas Data from the Department of Environmental Affairs (DEA).

#### **5.2.2 Regional Description**

The area is underlain by Magaliesberg, Arenite; Vryheid, Silverton, Shale; Wilge River, Conglomerate and Daspoort, Quartzite. Soils include Plinthic Cantenas where red soils are widespread in some areas.

None of these geologies provide any sensitivity to the construction of pylons/towers. The geologies described above are illustrated in Figure 5-1 below.

#### **5.2.3 Sensitivities**

No geology or drainage features within the study area are considered to be sensitive.

## **5.3 Topography**

### **5.3.1 Data Collection**

The topography data was obtained from the Surveyor General's 1:50 000 toposheet data for the region, namely 2529CC and 2528 DD. Contours were combined from the topographical mapsheets to form a combined contours layer. Using the Arcview GIS software the contour information was used to develop a digital elevation model of the region as shown in Figure 5-3 below.

#### **5.3.2 Regional Description**

The topography of the region is slightly to moderately undulating plains with some hills. Some small scattered dams and wetlands occur in the area with ridges forming part of the landscape features in the area. The altitude ranges between 1 460 – 1 580 metres above mean sea level (mamsl). Figure 5-3 provides an illustration of the topography of the site.

## **5.4 Surface Water**

### **5.4.1 Data Collection**

The surface water data was obtained from the WR90 database from the Water Research Council. The data used included catchments, river alignments and river names. In addition water body data was obtained from the CSIR land cover database (1990) to show water bodies and wetlands. This information was ground truthed during a site visit.

### **5.4.2 Regional Description**

The main drainage feature of the area is the Saalklapspruit which drains in a northerly direction. Several unnamed tributaries are also found in the area. In addition to the streams several dams can also be found in the region as illustrated in Figure 5-4 below. The streams and their associated dams support a number of faunal and floral species uniquely adapted to these aquatic ecosystems and therefore all surface water bodies are earmarked as sensitive features and should be avoided as far as possible.

### **5.4.3 Sensitivities**

From Figure 5-4 above, it is clear that the proposed deviation alternatives for the 400kV power line avoid all streams, rivers or dams. When a river is located adjacent to one of the alternatives it is proposed that the pylon footings be located outside of a buffer zone around each water body, thereby allowing the power line to straddle water bodies.

## **5.5 Land Use**

### **5.5.1 Data Collection**

The land use data was obtained from the CSIR Land Cover database and supplemented with visual observations on site.

### **5.5.2 Regional Description**

The land use is dominated by unimproved grasslands, cultivated farms and forest plantations. Mines, quarries and water bodies are present in the area. The study area is located to the north east of the Kusile Power Station construction site and to the north of the New Largo coal mine. Water bodies are the main land use regarded as sensitive.

## 5.6 Floral Biodiversity

### 5.6.1 Methodology and Data Sources

The floral data below is taken from The Vegetation of South Africa, Lesotho and Swaziland (Mucina and Rutherford 2006).

### 5.6.2 Regional Description

According to the South African National Biodiversity Institute, the study area falls within the Grassland Biome, where most of the country's maize production occurs. The vegetation of the area is classified as Soweto Highveld Grassland, extending from Mpumalanga to Gauteng and to a very small extent into Free State and North West.

The study area comprises of the Rand Highveld Grassland, Eastern Highveld Grassland and Eastern Temperate Freshwater Wetlands vegetation units as classified by Mucina and Rutherford<sup>2</sup>. Each of these vegetation units are described in more detail below.

#### Rand Highveld Grassland

Rand Highveld Grassland is found in the highly variable landscape with extensive sloping plains and ridges in the Gauteng, North-West, Free State and Mpumalanga Provinces. The vegetation type is found in areas between rocky ridges from Pretoria to Witbank, extending onto ridges in the Stoffberg and Roossenekal regions as well as in the vicinity of Derby and Potchefstroom, extending southwards and north-eastwards from there. The vegetation is species rich, sour grassland alternating with low shrubland on rocky outcrops. The most common grasses on the plains belong to the genera *Themeda*, *Eragrostis*, *Heteropogon* and *Elionurus*. High numbers of herbs, especially *Asteraceae* are also found. In rocky areas shrubs and trees prevail and are mostly *Protea caffra*, *Acacia caffra*, *Celtis africana* and *Rhus spp.*

This vegetation type is poorly conserved (approx 1 %) and has a target of 24 % of the vegetation type to be conserved. Due to the low conservation status this vegetation type is classified as endangered. Almost half of the vegetation type has been transformed by cultivation, plantations, urbanisation or dam-building. Scattered aliens (most prominently *Acacia mearnsii*) are present in the unit.

#### Eastern Highveld Grassland

The Eastern Highveld Grassland is found in the Mpumalanga and Gauteng Provinces on the plains between Belfast in the east and the eastern side of Johannesburg in the west and extending southwards to Bethal, Ermelo and west of Piet Retief. The landscape is dominated by undulating plains and low

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<sup>2</sup> The Vegetation of South Africa, Lesotho and Swaziland, Mucina and Rutherford 2006.

hills with short dense grassland dominating belong to the genera *Themeda*, *Aristida*, *Digitaria*, *Eragrostis*, *Tristachya*. Once again woody species are prevalent on the rocky outcrops.

In terms of conservation and disturbance, 44 % of the vegetation type is already transformed by cultivation, plantations, mines, and urbanisation. There is no serious alien invasion however *Acacia mearnsii* dominates in certain areas.

### Eastern Temperate Freshwater Wetlands

Another vegetation type associated with the region is the Eastern Temperate Freshwater Wetlands, found around water bodies and embedded within the Grassland biome. Eastern Temperate Freshwater Wetlands are typically found in flat landscapes or shallow depressions filled with (temporary) water bodies supporting zoned systems of aquatic and hydrophilous (water loving) vegetation of temporarily flooded grasslands and ephemeral herblands. Important species include *Cyperus congestus*, *Phragmites australis*, *Marsilea farinose*, *Rorippa fluviatilis*, *Disa zuluensis*, *Crassula tuberella* and the carnivorous herb *Utricularia inflexa*. These wetlands are one of the most sensitive vegetation units found in the region and have been extensively modified by mining and industrial activities in the region.

## **5.7 Infrastructure**

### **5.7.1 Methodology and Data Sources**

Infrastructure was identified using the 1:50 000 topocadastral maps of the area. A site visit to the area was undertaken to verify this information.

### **5.7.2 Regional Description**

Access to the proposed project area is via the N4 national road. The study area is traversed by the R545 road. The primary infrastructure within the study area is:

- The N4 national road between Bronkhorstspuit (towards Pretoria) and Emalahleni (Witbank);
- The R 104 road between Bronkhorstspuit and Balmoral;
- The R545 between Kendal and Balmoral;
- The new Eskom road (currently under construction) between the N12 and the R545 (running along the western portion of the Power Station);
- Numerous 400 kV power lines traversing the area;
- Several dirt farm roads;
- The New Largo coal mine; and
- The current Kusile power station construction site.

### **5.7.3 Sensitivities**

There are no infrastructure sensitivities in the study area.

## **5.8 Cultural and historical resources**

There are known heritage resources present within the proposed project area, such as graves. It is proposed that the occurrence of cultural and historical resources be further investigated during the EIA phase.

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## **6 SCOPING PROCESS**

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### **6.1 Technical Process**

For the Scoping Phase of this EIA, the following technical process has been followed:

#### **6.1.1 Pre-consultation meeting with client and Site Visit**

On notification and receipt of the appointment letter from Eskom, a project inception meeting was held on 1 November 2010 between Eskom and the Zitholele Consulting Project Team. During this project kick-off meeting the following was discussed:

- Project Scope and Requirements;
- Project Schedule; and
- Identification of key stakeholders and role players.

#### **6.1.2 Consultation with authorities, application forms and landowner consent**

The DEA EIA application form (Appendix B) for the proposed project was submitted to the DEA on 12 November 2010. As a point of departure, the I&AP database developed through other EIA processes in the study area were used for initial project notification. The list of potentially affected landowners is attached as Appendix C to this report. During the Scoping Phase the list of landowners will be confirmed.

#### **6.1.3 Draft Scoping Report and Plan of Study for EIA**

This Draft Scoping Report (SR) has been prepared with information and issues identified during the Scoping Phase activities. The Plan of Study (PoS) for EIA and the Terms of Reference (ToR) for the envisaged specialist studies are included in Chapter 8 of this report. The Draft SR and PoS for EIA will be updated based on comments from key commenting authorities, public review and comments obtained from I&APs. After the public review period, both the Final Scoping Report and the PoS for EIA will be submitted to the DEA for acceptance and approval.

### **6.2 Public Participation Process**

Public participation is an essential and legislative requirement for environmental authorisation. The principles that demand communication with society at large are best embodied in the principles of the National Environmental Management Act (Act 107 of 1998, Chapter 1), South Africa's overarching environmental law. In addition, Section 24 (5), Regulation 56 of GNR 385 under the National Environmental Management Act, guides the public participation process that is required for an Environmental Impact Assessment (EIA) process.

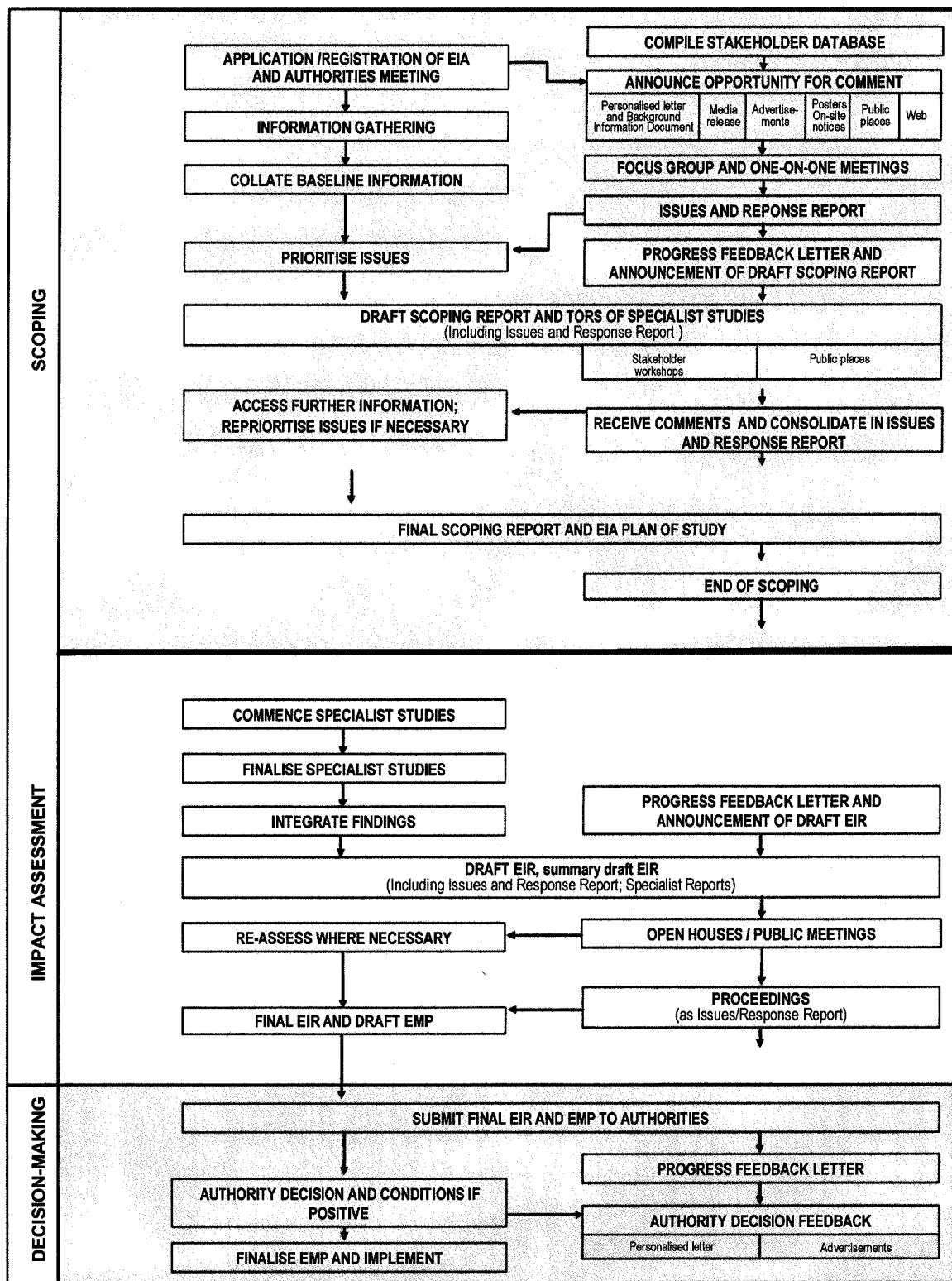
The public participation process for the proposed deviation of the Duvha-Minerva power line has been designed to satisfy the requirements laid down in the above legislation and guidelines. Figure 6-1 provides an overview of the EIA technical and public participation processes, and shows how issues and concerns raised by the public are used to inform the technical investigations of the EIA at various milestones during the process. This section of the report highlights the key elements of the public participation process to date.

### **6.2.1 Objectives of public participation in an EIA**

The objectives of public participation in an EIA are to provide sufficient and accessible information to I&APs in an objective manner sp as to:

- During Scoping:
  - Assist the I&APs with identify issues of concern, and providing suggestions for enhanced benefits and alternatives.
  - Contribute their local knowledge and experience.
  - Verify that their issues have been considered and to help define the scope of the technical studies to be undertaken during the Impact Assessment.
- During Impact Assessment:
  - Verify that their issues have been considered either by the EIA Specialist Studies, or elsewhere.
  - Comment on the findings of the EIA, including the measures that have been proposed to enhance positive impacts and reduce or avoid negative ones.

The key objective of public participation is to ensure transparency throughout the process and promote informed decision making.



**Figure 6-1: Technical and public participation process and activities that comprise the Environmental Impact Assessment for the proposed Duvha-Minerva Deviation Project.**

### 6.2.2 Identification of interested and affected parties

The identification of stakeholders is ongoing and is refined throughout the process. As the on-the-ground understanding of affected stakeholders improves through interaction with various stakeholders in the area the database is updated. The identification of key stakeholders and community representatives (land owners and occupiers) for this project is important as their contributions are valued. The identification of key stakeholders was done in collaboration with Eskom (through the I&AP database for the EIAs in the area), the local municipalities and other organisations in the study area.

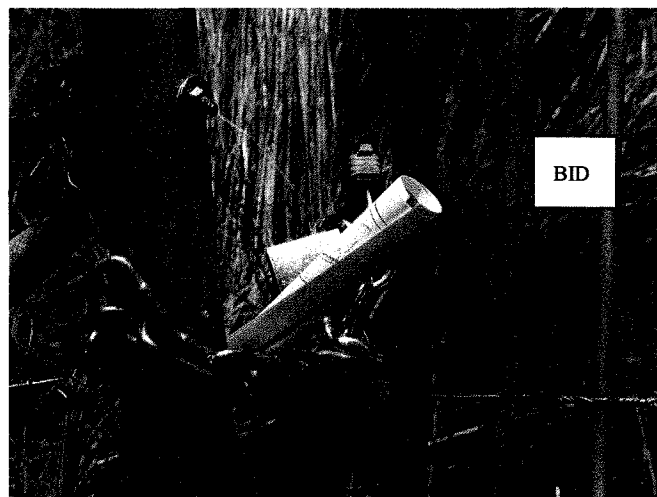
The stakeholders' details are captured on Maximiser 9, an electronic database management software programme that automatically categorises every mailing to stakeholders, thus providing an ongoing record of communications - an important requirement by the authorities for public participation. In addition, comments and contributions received from stakeholders are recorded, linking each comment to the name of the person who made it.

According to the NEMA EIA Regulations under Section 24(5) of NEMA, a register of I&APs must be kept by the public participation practitioner. Such a register has been compiled and is being kept updated with the details of involved I&APs throughout the process (See Appendix E)

### 6.2.3 Announcement of opportunity to become involved

The opportunity to participate in the EIA was announced in November 2010 as follows:

- Distribution of a letter of invitation to become involved, addressed to individuals and organisations, accompanied by a Background Information Document (BID) containing details of the proposed project, including a map of the project area, and a registration sheet (Figure 6-2 and Appendix G);



**Figure 6-2: Background Information Documents were distributed in the area.**

- Advertisements were placed in the following newspapers (Appendix C):

**Table 6-1: Advertisements placed during the announcement phase.**

NEWSPAPER	DATE
Streeknuus	17 November
Corridor Gazette	18 November
Ekasi News	19 November
Witbank News	19 November
Mpumalanga News	18 November
Middelburg Herald	12 November
Middelburg Observer	19 November
Ridge Times	19 November
The Echo	19 November
Springs Advertiser	17 November

- Notice boards were positioned at prominent localities during November 2010. These notice boards were placed at conspicuous places and at various public places (Appendix C). Site notices were placed prominently to invite stakeholder participation (Figure 6-3).

**Figure 6-3: Site notice boards were put up in the study area.**

#### **6.2.4 Obtaining comment and contributions**

The following opportunities are available during the Scoping phase for contribution from the I&APs:

- Completing and returning the registration/comment sheets on which space is provided for comment.
- Providing comment telephonically or by email to the public participation office.
- Attending stakeholder meetings that were widely advertised (see table below) and raise comments there.

Issues relevant to the current project configuration will be considered and carried forward into the Impact Assessment phase.

**Table 6-2: Stakeholder meeting that was advertised and held as part of the public review period of the Draft Scoping Report.**

DATE	VENUE
24 February 2011	El Toro Restaurant on the R545 near Kendal Power Station

The minutes of the public meetings will be attached to the Final Scoping Report in the form of an Issues and Response Report.

### **6.2.5 Issues and Response Report and acknowledgements**

The issues raised thus far, are captured in an Issues and Response Report Version 1, appended to this Draft SR (Appendix F). This report will be updated to include any additional I&AP contributions that may be received as the Scoping phase process proceeds, and as the findings of the EIA become available. The issues and comments raised during the public review period of the Draft Scoping Report will be added to the report as Version 2 of the Issues and Response Report. The contributions made by I&APs are acknowledged in writing.

### **6.2.6 Draft Scoping Report**

The purpose of the Public Participation Process (PPP) in the Draft SR is to enable I&APs to verify that their contributions have been captured, understood and correctly interpreted, and to raise further issues. At the end of Scoping, the issues identified by the I&APs and by the environmental technical specialists, will be used to define the Terms of Reference for the Specialist Studies that will be conducted during the Impact Assessment Phase of the EIA. A period of four weeks is available for public review of the Draft SR (from 1 February to 12 March 2011).

In addition to media advertisements and site notices that announced the opportunity to participate in the EIA, the opportunity for public review was announced as follows:

- In the Background Information Document (November 2010).
- In advertisements published (see Table 6-1 above and Appendix C) to advertise the proposed project.
- In a letter sent out on 8 November 2010, and addressed personally to all individuals and organisations on the stakeholder database.

The Draft Scoping Report, including the Issues and Response Report Version 1, has been distributed for comment as follows:

- Left in public venues within the vicinity of the project area. (These are listed in Table 8 below);
- Mailed to key stakeholders.

- Mailed to I&APs who requested the report.
- Copies have been made available at the public meetings

I&APs can comment on the report in various ways, such as completing the comment sheet accompanying the report, and submitting individual comments in writing or by email.

**Table 6-3: List of public places where the Draft Scoping Report is available.**

PLACE	CONTACT PERSON	TELEPHONE
Ms Suzie Wolvaardt	El Toro Restaurant on the R545 near Kendal Power Station	Tel: 013 648 1688
Ms Grace Kotlolo	Kungwini Public Library, Bronkhorstspuit	Tel: 013 932 6305

### 6.2.7 Final Scoping Report

The Final Scoping Report will be updated with additional issues raised by I&APs and may contain new information that may be generated as a result of this process. The Final SR will be distributed to the Authorities (DEA) and key I&APs, and to those individuals who specifically request a copy. I&APs will be notified of the availability of the report.

In the Impact Assessment Phase of the EIA Specialist Studies will be conducted to assess the potential positive and negative impacts of the proposed project, and to recommend appropriate measures to enhance positive impacts and avoid or reduce negative ones. Due to the significant number of specialist studies undertaken in the study area, where applicable specialist professional opinions will be undertaken *in lieu* of a detailed study. I&APs will be kept informed of progress with these studies.

### 6.2.8 Public participation during the Impact Assessment

Public participation during the impact assessment phase of the EIA will mainly involve a review of the findings of the EIA, presented in a Draft Environmental Impact Report (EIR), the Draft Environmental Management Programme (EMProg) and the volumes of Specialist Studies.

I&APs will be advised in good time of the availability of these reports, how to access them, and the dates and venues of public and other meetings where the contents of the reports will be presented for comment.

## 7 ISSUES IDENTIFIED FOR IMPACT ASSESSMENT

The proposed deviation of the Duvha-Minerva power line is anticipated to impact on a range of biophysical and socio-economic aspects of the environment. The main purpose of the EIA process is to evaluate the significance of these potential impacts and to determine how they can be minimized or mitigated.

It should be noted that a comprehensive Environmental Management Programme (EMProg) will be developed and implemented to regulate and minimize the impacts during the construction and operational phases. The potential environmental impacts identified during the Scoping Phase, which will be investigated further in the EIA phase of the project are summarised in Table 7-1 below.

**Table 7-1: Potential Environmental Impacts to be investigated in the EIA Phase.**

ENVIRONMENTAL ELEMENT	POTENTIAL ENVIRONMENTAL IMPACT
Topography and Land Use	<b>Visual Environment</b> 1.) The Deviation of the 400kV power line may alter the visual environment. A decrease in the quality of the visual environment may affect land uses to a small extent due to the already existing infrastructure.
Geology, Soil and Land Capability, and Drainage Features	<b>Geotechnical</b> 1.) Due to the lack of dolomite or sensitive geology, no impact is expected on the geological receiving environment. <b>Drainage Features</b> 1.) Insufficient rehabilitation during and post construction may result in erosion of the landscape. Eroded materials may enter the surface water environment contributing to sedimentation of the local surface water resources. <b>Soil and Land Capability</b> 1.) Insufficient control measures during the construction phase may result in erosion, compaction, and sterilisation of soil resources. 2.) A consequence of impacts to the soil resource is a reduction in land capability. 3.) Poor soil amelioration measures during the rehabilitation phase may result in a lack of vegetation establishment. Thus contributing to the failure of rehabilitation measures.
Climate	Local climate conditions do not appear to be of a significant concern to the project. The project will not contribute to local or global climate change.
Infrastructure	<b>Power Lines</b> 1.) The 400kV Duvha-Minerva power line is an already existing infrastructure where a portion of the power line is required to be deviated / moved. Therefore the presence of this power line is an already existing impact.

ENVIRONMENTAL ELEMENT	POTENTIAL ENVIRONMENTAL IMPACT
	<p><b>Construction Camp</b></p> <ol style="list-style-type: none"> <li>1.) The construction camp, although temporary, may negatively impact several environmental elements as a result of:               <ol style="list-style-type: none"> <li>a. Hydro-carbon storage and handling on site;</li> <li>b. Handling, storage, and management of dangerous / hazardous goods on site i.e. welding, paints, cleaning solvents etc;</li> <li>c. Vegetation clearing and site establishment;</li> <li>d. Vehicle maintenance;</li> <li>e. Transportation and handling of construction materials; and</li> <li>f. Cement batching in the batching plant.</li> </ol> </li> </ol>
Flora	<p><b>Vegetation Clearing</b></p> <ol style="list-style-type: none"> <li>1.) Vegetation clearing at the construction camp and along the power line servitude will result in negative impacts to the flora on site.</li> </ol> <p><b>Alien Invasive Species</b></p> <ol style="list-style-type: none"> <li>1.) Disturbed areas will be prone to Alien Invasive species infestation.</li> </ol>
Fauna	<p>The impacts to vegetation will negatively impact on habitat, and consequently the faunal elements of the receiving environment.</p>
Cultural and Historical Resources	<p>Graves and buildings older than 60 years may be damaged by the proposed project.</p>
Socio-Economic Environment	<p><b>Traffic</b></p> <ol style="list-style-type: none"> <li>1.) During the construction phase increased heavy vehicle traffic should be expected. Without management, such increased traffic loads may negatively impact existing traffic flow.</li> <li>2.) Unmanaged construction vehicles may decrease road safety to other road users.</li> <li>3.) Uncontrolled movement of construction vehicles may result in unnecessary impacts to the environment through vegetation and habitat destruction.</li> </ol> <p><b>Noise</b></p> <ol style="list-style-type: none"> <li>1.) Uncontrolled construction activities may negatively impact on the ambient noise levels in the area.</li> <li>2.) The site is near the Kusile Power Station construction site and therefore the ambient noise levels are already at an elevated level and therefore no major noise impact is anticipated.</li> </ol> <p><b>Employment and Community Related Impacts</b></p> <ol style="list-style-type: none"> <li>1.) The news of employment opportunities may result in an influx of workers to the area, thereby impacting existing community networks and perceptions of safety and crime levels.</li> <li>2.) Unmanaged workers may result in illegal township establishment and increased numbers of informal settlements. Such settlements often negatively impact a range of</li> </ol>

ENVIRONMENTAL ELEMENT	POTENTIAL ENVIRONMENTAL IMPACT
	<p>environmental elements.</p> <p><b>Consultation</b></p> <ol style="list-style-type: none"><li>1.) Unmanaged and insufficient consultation with communities and land owners often generates negative sentiment towards developments that persist beyond the construction phase of a project.</li><li>2.) Insufficient consultation may result in unnecessary impacts to local inhabitants and land owners.</li></ol>

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## **8 PLAN OF STUDY FOR EIA**

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### **8.1 Technical Process**

#### **8.1.1 Prepare Specialist Investigations**

The scoping phase investigations have reviewed some potential environmental impacts associated with the proposed development. From the assessment, which was informed by authorities input, interested and affected parties and various professionals, a shortlist of some potentially significant environmental impacts were identified for investigation during the Impact Assessment phase. At this stage it is important to note that several specialist studies have recently been undertaken in the area. Information from these studies will be used to formulate specialist opinions for this project where necessary. The specialist studies / opinions to be conducted during the EIA-phase of this project will consist of the following studies:

- Heritage and Archaeological Assessment;
- Soils and Land Capability Assessment (including agricultural potential);
- Terrestrial Ecology (Fauna and Flora)
- Avi-fauna Assessment;
- Wetlands and Surface Water Assessment; and
- Visual Assessment.

The findings of these investigations as well as previous specialist studies undertaken in the area will be reflected in the EIA Report. The proposed Terms of Reference (ToR) for each of these specialist opinions is indicated in Section 8.1.2 below.

#### **8.1.2 Specialist Studies: Terms of Reference (ToR)**

##### **ToR: Heritage and Archaeological**

A Heritage Impact Assessment (HIA) investigation will be conducted to comply with Section 38 of the National Heritage Resources Act (No 25 of 1999). Specific objectives of this study will be:

- Desktop study (consulting heritage data banks and appropriate literature);
- Literature review of previous HIAs conducted in the study area;
- Determine whether any of the types and ranges of heritage resources as outlined in Section 3 of the Act (No 25 of 1999) do occur in the project area;
- Determine what the nature, the extent and the significance of these remains are;

- Determine whether any heritage resources (including graves) will be affected by the development project; and
- If any heritage resources are to be affected by the development project mitigation measures (Phase II studies) has to be undertaken and management proposals have to be set for heritage resources which may continue to exist unaffected in or near the project area.
- Compile a report which would:
  - Identify the potential impacts of construction and operation of the proposed development on such resources, with and without mitigation;
  - Offer an opinion on a the project in terms of this specialist field; and
  - Provide mitigation measures to ameliorate any negative impacts on areas of heritage significance.

#### ToR: Soils and Land Capability (including agricultural potential)

A soil and land capability investigation will be conducted for the project. The objectives of this study will be:

- Review existing information available;
- An aerial photographic study to assess the accessibility, vegetation cover, drainage lines, slope aspects and percentage outcrop of each of the three routes;
- A field visit to verify the aerial photographic study observations. Additionally, during the visit, the depth and properties of regolith will be judged from natural exposure (dongas) and hand augering where applicable;
- A map will be compiled of each of the alternative routes, indicating the features observed; and
- Assess the potential impacts and their significance on the agricultural potential of each alternative;
- Propose mitigation measures to reduce or mitigate potential impacts;
- A short report will be compiled, in which the alternatives will be prioritized based on the results of the study.

#### ToR: Ecology and Avi-fauna

An ecological and avifauna assessment will be conducted for the proposed project. The objectives of this studies will be:

- Review existing ecological and avi-fauna reports for the study area and determine the occurrence of any red data and vulnerable species;
- Provide mitigation measures to prevent and/or mitigate any environmental impacts that may occur due to the proposed project;

- Compile an ecological and avi-fauna report, indicating findings, recommendations and maps indicating sensitive and/or no-go areas.

#### ToR: Visual Assessment

A Visual Assessment will be conducted on the proposed project. Specific objectives of this study will be:

- Desktop study (consulting existing and appropriate literature);
- Assess the visual impact of the proposed development;
- Suggest any recommendation / mitigation measures that can be done to decrease the impacts of the proposed development;
- Compile a visual assessment report, indicating findings, fatal flaws, recommendations and maps indicating sensitive and/or no-go areas.

#### ToR: Wetlands and Surface Water

A wetland and surface water investigation will be conducted for the proposed project. The objectives of this study will be:

- Review existing information available;
- An aerial photographic study to assess the accessibility, vegetation cover, drainage lines, slope aspects and percentage outcrop of each of the three routes;
- A field visit to identify all wetlands and surface water features in the study area;
- Identify impacts associated with the proposed development on the water bodies and provide mitigation measures for the identified impacts;
- A map will be compiled of each of the alternative routes, indicating the features observed; and
- A report will be compiled, in which the alternatives will be prioritized based on the results of the study.

### **8.1.3 Impact Analysis**

The significance (quantification) of potential environmental impacts identified during scoping and identified during the specialist investigations will be determined using a ranking scale, based on the following:

- Occurrence
  - Probability of occurrence (how likely is it that the impact may occur?), and
  - Duration of occurrence (how long may it last?)

- Severity
  - Magnitude (severity) of impact (will the impact be of high, moderate or low severity?), and
  - Scale/extent of impact (will the impact affect the national, regional or local environment, or only that of the site?)

Each of these factors has been assessed for each potential impact using the following ranking scales:

<b><i>Probability:</i></b> 5 – Definite/don't know 4 – Highly probable 3 – Medium probability 2 – Low probability 1 – Improbable 0 – None	<b><i>Duration:</i></b> 5 – Permanent 4 – Long-term (ceases with the operational life) 3 – Medium-term (5-15 years) 2 – Short-term (0-5 years) 1 – Immediate
<b><i>Scale:</i></b> 5 – International 4 – National 3 – Regional 2 – Local 1 – Site only 0 – None	<b><i>Magnitude:</i></b> 10 – Very high/don't know 8 – High 6 – Moderate 4 – Low 2 – Minor

The environmental significance of each potential impact was assessed using the following formula:

$$\text{Significance Points (SP)} = (\text{Magnitude} + \text{Duration} + \text{Scale}) \times \text{Probability}$$

The maximum value is 100 Significance Points (SP). Potential environmental impacts were rated as high, moderate or low significance on the following basis:

- More than 60 significance points indicates high environmental significance.
- Between 30 and 60 significance points indicates moderate environmental significance.
- Less than 30 significance points indicates low environmental significance.

#### 8.1.4 Draft EIA Report and EMProg

Findings and/or recommendations of the specialist studies will be integrated into a report that will be updated as comments are received from I&APs. The Final EIA report together with a draft construction and operation EMProg will be submitted to DEA for environmental authorisation.

## 8.2 Public Participation

The public participation process for the EIA will involve the following proposed steps:

- Announcement of the availability and public review of the draft Environmental Impact Report;
- Announcement of the availability of the final Environmental Impact Report; and
- Notification of the authorities' decision with regard to Environmental Authorisation.

Information about each step is provided below.

### **8.2.1 Announcing the availability of the Draft EIR and EMProg**

At this point, specialist assessments would have been conducted and the Draft EIR and EMProg would be ready for public review. A letter will be circulated to all registered I&APs, informing them of progress made with the study and that the Draft EIR and EMProg are available for comment. The report will be distributed to public places and also presented at a stakeholder workshop / open house.

### **8.2.2 Public review of Draft EIR and EMProg**

The EIA Guidelines specify that stakeholders must have the opportunity to verify that their issues have been captured and assessed before the EIA Report will be approved. The findings of the specialist assessments will be integrated into the Draft EIR. The report will be written in a way accessible to stakeholders in terms of language level and general coherence. The Draft EIR will have a comprehensive project description, motivation, and description of alternatives considered and also the findings of the assessment and recommended mitigation measures. It will further include the Issues and Responses Report, which will list every issue raised, with an indication of where the issue was dealt with in the EIR. The findings of the assessment and recommended mitigation measures will also be incorporated into the EIR.

As part of the process to review the Draft EIR and EMProg, stakeholder workshops with an open house component will be arranged to afford stakeholders the opportunity to obtain first-hand information from the project team members and also to discuss their issues and concerns.

Contributions at this meeting will be considered in the Final EIR. It is proposed that the same public places be used as in the scoping phase and also that stakeholder meeting be conducted at the same venues as during scoping.

### **8.2.3 Announcing the availability of the Final EIR and EMProg**

After comments from I&APs have been incorporated, all stakeholders on the database will receive a personalised letter to report on where we are in the process, to thank those who commented to date and to inform them that the Final EIR and EMProg have been submitted to the lead authority for consideration.

#### **8.2.4 Announce authorities' decision on Environmental Authorisation**

Based on the contributions by the stakeholders, the decision of the authorities may be advertised through the following methods:

- Personalised letters to individuals and organisations on the mailing list;
- Advert in local or regional newspapers.

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## **9 CONCLUSION AND WAY FORWARD**

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Eskom appointed Zitholele Consulting to undertake the EIA for the proposed deviation of the existing 400kV Duvha-Minerva power line. This Scoping study is being undertaken with the aim of investigating potential impacts both positive and negative on the biophysical and social environment and identifying issues, concerns and queries from I&APs. The Scoping report documents the process followed, the findings and recommendations of the Scoping study, and the proposed Plan of Study for the EIA Phase to follow.

The way forward recommended by this study is as follows:

- The report is to be made available for public review of four weeks;
- All issues and comments received during the public comment period will be documented and responded to in the Issues and Response Report (version 2);
- All issues and comments received from the public will be considered and integrated in the Final Scoping Report and submitted to the relevant authority for approval prior to proceeding with the EIA phase of the project;
- Upon approval of the Scoping Report all participating stakeholders are to be notified of the conditions of the relevant authority for proceeding with the EIA;
- Amend the Plan of Study as required by conditions recommended by the relevant authority;
- Execute the Plan of Study for the EIA phase of the project;

**ZITHOLELE CONSULTING (PTY) LTD**

Jacqui Hex

Konrad Kruger

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## **Appendix A: EAP CV**

## Jacqui S Hex

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**Education** MSc (Environmental Management) (cum laude) University of Johannesburg 2006  
BSc Honours (Geography) University of Johannesburg 2005  
BSc Natural & Environmental Sciences (Mathematics & Geography) Rand Afrikaans University 2004

### **Courses Attended**

May 2008  
National Environmental Management Waste Act Seminar

April 2007  
International Certificate in Public Participation

March 2007  
New EIA Regulations

December 2006  
Environmental Auditing

**Affiliations** International Association of Impact Assessments (IAIA)

**Experience** **Zitholele Consulting (Pty) Ltd** **Midrand, South Africa**  
January 2007 to date *Environmental Scientist*  
Currently project manager's both environmental and waste management projects. Is responsible for EIAs, EMPs, environmental auditing, waste management and hazard rating of waste.

January 2006 to December 2006 **University of Johannesburg** **Johannesburg, South Africa**  
*Tutor & Demonstrator*  
Assist students with practical exercises and theory. Mark student's assignments and tests.

January 2005 to December 2005 **Rand Afrikaans University** **Johannesburg, South Africa**  
*Demonstrator*  
Assist students with practical exercise and mark mapwork.

**Jacqui S Hex**

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**Eskom – Pipeline and Road Search and Rescue**

**Mpumalanga, South Africa**

Project manager for the Search and Rescue of rare and endangered species for the construction of the Kusile access road and water supply pipeline.

**Eskom – Surface and Ground Water Monitoring of the Kusile Power Station**

**Mpumalanga, South Africa**

Project manager for the monthly surface and ground water monitoring of the Kusile Power Station construction site.

**Eskom – Tutuka Landfill Site**

**Mpumalanga, South Africa**

Environmental consultant for the extension of the Tutuka Landfill Site at Tutuka Power Station in Standerton.

**Eskom**

**Witbank, South Africa**

Project manager for two separate Bravo Search and Rescue projects near Witbank.

**Johannesburg Road Agency**

**Johannesburg, South Africa**

Project manager for the authorisation of environmental projects for Johannesburg Road Agency.

**Lesotho Highlands Water Project**

**Free State, South Africa**

Analyse the impact of Katse Dam water on water quality in the Ash, Liebenbergsvlei and Wilge Rivers and the Vaal Dam.

**Manganese Metal Company**

**Nelspruit, South Africa**

Basic Assessment for closure of the Pappas Quarry hazardous landfill site.

**Pikitup**

**Johannesburg, South Africa**

Airspace estimation calculations for Ennerdale, Goudkoppies, Marie Louise and Robinson Deep.

**Rustenburg Local Municipality**

**North West, South Africa**

The Basic Assessment for closure of the Townlands Landfill site.

## **Appendix B: EIA Application Form**



## **environmental affairs**

Department:  
Environmental Affairs  
REPUBLIC OF SOUTH AFRICA

### **APPLICATION FORM FOR ENVIRONMENTAL AUTHORISATION**

File Reference Number:  
NEAS Reference Number:  
Date Received:

(For official use only)

12/12/20/

DEAT/EIA/

Application for authorisation in terms of the National Environmental Management Act, 1998 (Act No. 107 of 1998), as amended and the Environmental Impact Assessment Regulations, 2010

### **PROJECT TITLE**

**EIA FOR THE PROPOSED DEVIATION OF THE 400KV DUVHA-MINERVA POWER LINE**

#### **Kindly note that:**

1. This application form is current as of 2 August 2010. It is the responsibility of the applicant to ascertain whether subsequent versions of the form have been published or produced by the competent authority.
2. The application must be typed within the spaces provided in the form. The sizes of the spaces provided are not necessarily indicative of the amount of information to be provided. Spaces are provided in tabular format and will extend automatically when each space is filled with typing.
3. Where applicable black out the boxes that are not applicable in the form.
4. Incomplete applications may be returned to the applicant for revision.
5. The use of the phrase "not applicable" in the form must be done with circumspection. Should it be done in respect of material information required by the competent authority for assessing the application, it may result in the rejection of the application as provided for in the Regulations.
6. This application must be handed in at the offices of the relevant competent authority as determined by the Act and regulations.
7. No faxed or e-mailed applications will be accepted.
8. Unless protected by law, all information filled in on this application will become public information on receipt by the competent authority. Any interested and affected party should be provided with the information contained in this application on request, during any stage of the application process.

## SITE IDENTIFICATION AND LINKAGE

Please indicate all the Surveyor-general 21 digit site (erff/arm/portion) reference numbers for all sites (including portions of sites) that are part of the application.

THE APPLICATION IS FOR A LINEAR ACTIVITY 16KM IN LENGTH. THEREFORE NO SURVEYOR GENERAL INFORMATION IS INCLUDED. THIS INFORMATION WILL BE SUBMITTED WHEN IT BECOMES AVAILABLE.

[illegible]

(If there are more than 6, please attach a list with the rest of the numbers)

(These numbers will be used to link various different applications, authorisations, permits etc. that may be connected to a specific site)

Indicate the number and date of the relevant notice:

Activity No (s) (in terms of the relevant notice) :

Describe each listed activity as per project description<sup>1</sup>:

e.g. 544, 18 June 2010	1(a)	Construction of a 600 mW generator
NO. 33306, 18 JUNE 2010 – R544	10	The construction of facilities or infrastructure for the transmission or distribution of electricity: - (i) Inside urban areas or industrial complexes with a capacity of 275kV or more.  Construction of the 400kV Duvha-Minerva power line approximately 15km in length
	13	The construction of facilities or infrastructure for the storage, or for the storage and handling, of a dangerous good, where such storage occurs in containers with a combined capacity of 80 but not exceeding 500 cubic metres  Storage of diesel for generators during construction
	22	The construction of a road, outside urban areas: (i) with reserve wider than 13.5 meters or; (ii) where no reserve exists where the road is wider than 8 meters,  Construction of a road parallel to the deviated power line
	24	The transformation of land bigger than 1000 square meters in size, to residential, retail, commercial, industrial or institutional use, where, at the time of the coming into effect of this Schedule such land was zoned open space, conservation or had an equivalent zoning.  Transformation of land larger than 1000 square meters where the zoning is currently unknown
	26	Any process or activity identified in terms of section 53(1) of the National Environmental Management: Biodiversity Act, 2004 (Act No. 10 of 2004).  To be determined during Scoping
	27	The decommissioning of existing facilities or infrastructure for: (i) electricity transmission and distribution with a threshold of more than 132kV  The decommissioning of a portion of the Duvha-Minerva 400kV power line that is located above the coal reserve
	38	The expansion of facilities for the transformation and distribution of electricity where the expanded capacity will exceed 275kV and the development footprint will increase.  The deviation of the Duvha-Minerva 400kV power line
	47	The widening of a road by more than 6 meters, or the lengthening of a road by more than 1 kilometer: (i) where the existing reserve is wider than 13.5 meters; or (ii) where no reserve exists, where the existing road is wider than 8 meters.  Construction of a road parallel to the deviated power line
NO 33306, 18 JUNE 2010 –	8	The construction of facilities or infrastructure for the transmission and distribution of electricity with a capacity of 275kV or more, outside an urban area or industrial

<sup>1</sup> Please note that this description should not be a verbatim repetition of the listed activity as contained in the relevant Government Notice, but should be a brief description of activities to be undertaken as per the project description

#### 4. DECLARATIONS

##### 4.1 The Applicant

I, **MMAMOLOKO SEABE**, declare that I -

- am, or represent<sup>2</sup>, the applicant in this application;
- have appointed / will appoint (delete that which is not applicable) an environmental assessment practitioner to act as the independent environmental assessment practitioner for this application / will obtain exemption from the requirement to obtain an environmental assessment practitioner<sup>3</sup>;
- will provide the environmental assessment practitioner and the competent authority with access to all information at my disposal that is relevant to the application;
- will be responsible for the costs incurred in complying with the Environmental Impact Assessment Regulations, 2010, including but not limited to –
  - costs incurred in connection with the appointment of the environmental assessment practitioner or any person contracted by the environmental assessment practitioner;
  - costs incurred in respect of the undertaking of any process required in terms of the Regulations;
  - costs in respect of any fee prescribed by the Minister or MEC in respect of the Regulations;
  - costs in respect of specialist reviews, if the competent authority decides to recover costs; and
  - the provision of security to ensure compliance with conditions attached to an environmental authorisation, should it be required by the competent authority;
- will ensure that the environmental assessment practitioner is competent to comply with the requirements of these Regulations and will take reasonable steps to verify whether the EAP complies with the Regulations;
- will inform all registered interested and affected parties of any suspension of the application as well as of any decisions taken by the competent authority in this regard;
- am responsible for complying with the conditions of any environmental authorisation issued by the competent authority;
- hereby indemnify the Government of the Republic, the competent authority and all its officers, agents and employees, from any liability arising out of the content of any report, any procedure or any action which the applicant or environmental assessment practitioner is responsible for in terms of these Regulations;
- will not hold the competent authority responsible for any costs that may be incurred by the applicant in proceeding with an activity prior to obtaining an environmental authorisation or prior to an appeal being decided in terms of these Regulations;
- will perform all other obligations as expected from an applicant in terms of the Regulations;
- all the particulars furnished by me in this form are true and correct; and

<sup>2</sup> If this is signed on behalf of the applicant, proof of such authority from the applicant must be attached.

<sup>3</sup> If exemption is obtained from appointing an EAP, the responsibilities of an EAP will automatically apply to the person conducting the environmental impact assessment in terms of the Regulations.



## **environmental affairs**

Department:  
Environmental Affairs  
REPUBLIC OF SOUTH AFRICA

Private Bag X 447· PRETORIA · 0001· Fedsure Building · 315 Pretorius Street · PRETORIA  
Tel (+ 27 12) 310 3911 · Fax (+ 2712) 322 2682

Reference: 12/12/20/2101

Enquiries: Thabiso Phooko / Ephron Maradwa

Tel: 012 310 3290 Fax: 012 320 7539

E-mail: TPhooko@environment.gov.za / EMaradwa@environment.gov.za

Ms Jacqui Hex  
Zitholele consulting (Pty) Ltd  
PO Box 6002  
**HALFWAY HOUSE**  
1685

Fax: 086 676 9950

PER FACSIMILE / MAIL

Dear Ms Hex

### **APPLICATION FOR ENVIRONMENTAL AUTHORISATION: PROPOSED DEVIATION OF THE 400KV DUVHA-MINERVA POWER LINE, MPUMALANGA PROVINCE**

The Department confirms having received the details of all potentially affected landowners and proof of notification of EIA to Interested and Affected Parties submitted by you on 29 November 2010 for environmental authorisation for the abovementioned project. You have submitted these documents to comply with the Environmental Impact Assessment Regulations, 2010.

The Application is accepted on condition that proof of consultation with potentially affected land owners, as described Section 12 (2) (b) (i) of the EIA Regulations, 2010 be submitted in due course.

You are hereby reminded that the activity may not commence prior to an environmental authorisation being granted by the Department.

Yours sincerely

Ms Lize McCourt

Chief Director: Environmental Impact Management

Department of Environmental Affairs

Letter signed by: Ms Hilda Bezuidenhout

Designation: Assistant Director: Environmental Impact Evaluation

Date: 24/12/2010

## **Appendix C: Newspaper Advertisements and Site Notices**

Adverts for the announcement phase were placed in the following newspapers:

<b>PUBLICATION</b>	<b>INSERTION DATE</b>
Streeknuus	17 November 2010
Corridor Gazette	18 November 2010
Ekasi News	19 November 2010
Witbank News	19 November 2010
Mpumalanga News	18 November 2010
Middelburg Herald	12 November 2010
Ridge Times	19 November 2010
The Echo	19 November 2010
Springs Advertiser	17 November 2010
Citizen	17 November 2010
Beeld	18 November 2010

# OMGEWINGSINVLOEDBEPALING

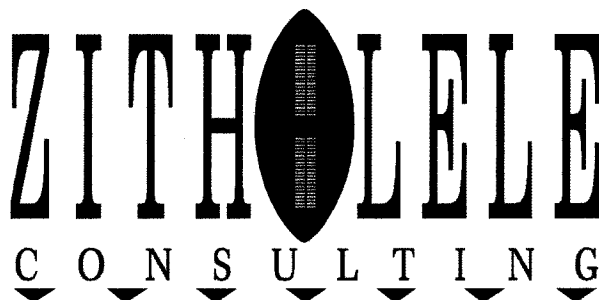
## VOORGESTELDE VERLEGGING VAN DIE 400 kV DUVHA-MINERVA TRANSMISSIELYN

Ingevolge die Omgewingsimpakbepalingsregulasies, afgekondig in Goewermentskennisgewings 543-546 in Staatkoerant No. 33306 van 18 Junie 2010 kragtens artikel 24 (5) van die Wet op Nasionale Omgewingsbestuur, 1998 (Wet No. 107 van 1998), word hierby kennis gegee van Eskom se voorneme om die volgende gelyste aktiwiteit uit te voer waarvoor omgewingsmatiging vereis word: 'n Verlegging van ongeveer 15 km van die 400kV Duvha-Minerva transmissielyn oos van die Kusile Kragstasie

## OPENBARE KOMMENTAAR AANGEMOEDIG

**Belanghebbende en Geaffekteerde Partye (B&GP's)  
word genooi om deel te neem deur kommentaar te  
lewer en moontlike kwellings te opper.**

Om as 'n B&GP te registreer, en om 'n eksemplaar van die Agtergrondinligtingsdokument te ontvang, skakel asb met:



André Joubert / Florence Rambuda

Zitholele Consulting (Edms) Bpk

Posbus 6002, HALFWAY HOUSE, 1685

Tel: (011) 207 2077/ 2075 - Faks: 086 676 9950

e-pos: [andrej@zitholele.co.za](mailto:andrej@zitholele.co.za) of [florencer@zitholele.co.za](mailto:florencer@zitholele.co.za)

**Hierdie impakbepaling word namens Eskom gedoen**

## ENVIRONMENTAL IMPACT ASSESSMENT

### PROPOSED DEVIATION OF THE 400 kV DUVHA-MINERVA TRANSMISSION LINE

Notice is hereby given, in terms of Section 24 (5) of the National Environmental Management Act, (Act No 107 of 1998) and the new Regulations (GNR 543 - 546 - Government Gazette No. 33306) which were published on 18 June 2010, of Eskom's intent to carry out the following listed activity that requires environmental authorisation: A deviation of approximately 15km of the 400kV Duvha-Minerva transmission line east of the Kusile Power Station.

### PUBLIC COMMENT ENCOURAGED

Interested and Affected Parties (I&APs) are invited to participate by providing comments and raising any issues of concern that they may have.

To register as an I&AP, and to receive a copy of the Background Information Document, please contact:

**ZITHOLELE**  
CONSULTING

André Joubert / Florence Rambuda

Zitholele Consulting (Pty) Ltd

P O Box 6002, HALFWAY HOUSE, 1685

Tel: (011) 207 2077/ 2075 - Fax: 086 676 9950

email: [andre@zitholele.co.za](mailto:andre@zitholele.co.za) or [florence@zitholele.co.za](mailto:florence@zitholele.co.za)

This assessment is being conducted on behalf of Eskom

November 18, 2010

Corridor Gazette

## ENVIRONMENTAL IMPACT ASSESSMENT

### PROPOSED DEVIATION OF THE 400kV DUVHA-MINERVA TRANSMISSION LINE

Notice is hereby given, in terms of Section 24 (5) of the National Environmental Management Act, (Act No 107 of 1998) and the new Regulations (GNR 543 - 548 - Government Gazette No. 33306) which were published on 18 June 2010, of Eskom's intent to carry out the following listed activity that requires environmental authorisation: A deviation of approximately 15km of the 400kV Duvha-Minerva transmission line east of the Kusile Power Station.

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email: [andre@zitholele.co.za](mailto:andre@zitholele.co.za) or [florence@zitholele.co.za](mailto:florence@zitholele.co.za)

This assessment is being conducted on behalf of Eskom

WITBANK NEWS, FRIDAY 19 November 2010

## ENVIRONMENTAL IMPACT ASSESSMENT

### PROPOSED DEVIATION OF THE 400 kV DUVHA-MINERVA TRANSMISSION LINE

Notice is hereby given, in terms of Section 24 (5) of the National Environmental Management Act (Act No 107 of 1998) and the new Regulations (GNR 543 - 548 - Government Gazette No. 33308) which were published on 18 June 2010, of Eskom's intent to carry out the following listed activity that requires environmental authorisation: A deviation of approximately 15km of the 400kV Duvha-Minerva transmission line east of the Kusile Power Station.

### PUBLIC COMMENT ENCOURAGED

Interested and Affected Parties (I&APs) are invited to participate by providing comments and raising any issues of concern that they may have.

To register as an I&AP, and to receive a copy of the Background Information Document, please contact:

**ZITHOLELE**  
CONSULTING

André Joubert / Florence Rámbuda  
Zitholele Consulting (Pty) Ltd  
P O Box 6002, HALFWAY HOUSE, 1685  
Tel: (011) 207 2077/ 2075 - Fax: 086 676 9950  
email: [andrej@zitholele.co.za](mailto:andrej@zitholele.co.za) or [florence@zitholele.co.za](mailto:florence@zitholele.co.za)

This assessment is being conducted on behalf of Eskom

## ENVIRONMENTAL IMPACT ASSESSMENT

### PROPOSED DEVIATION OF THE 400KV DUBHA-MINERVA TRANSMISSION LINE

Notice is hereby given, in terms of Section 24 (5) of the National Environmental Management Act, (Act No 107 of 1998) and the new Regulations (GNR 543 - 546 - Government Gazette No. 33306) which were published on 18 June 2010, of Eskom's intent to carry out the following listed activity that requires environmental authorisation: A deviation of approximately 15km of the 400KV Dubha-Minerva transmission line east of the Kusile Power Station.

### PUBLIC COMMENT ENCOURAGED

Interested and Affected Parties (I&APs) are invited to participate by providing comments and raising any issues of concern that they may have.

To register as an I&AP, and to receive a copy of the Background Information Document, please contact:

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P O Box 6002, HALFWAY HOUSE, 1685

Tel: (011) 207 2077 / 2075 - Fax: 086 676 9950

email: [andrej@zitholele.co.za](mailto:andrej@zitholele.co.za) or [florence@zitholele.co.za](mailto:florence@zitholele.co.za)

This assessment is being conducted on behalf of Eskom

RIDGE TIMES News

NOVEMBER 19, 2010

## ENVIRONMENTAL IMPACT ASSESSMENT

### PROPOSED DEVIATION OF THE 400 kV DUXHA-MINERVA TRANSMISSION LINE

Notice is hereby given, in terms of Section 24 (5) of the National Environmental Management Act, (Act No 107 of 1998) and the new Regulations (GNR 543 - 546 - Government Gazette No. 33360) which were published on 18 June 2010, of Eskom's intent to carry out the following listed activity that requires environmental authorisation: A deviation of approximately 15km of the 400kV Duxha-Minerva transmission line east of the Kusile Power Station.

### PUBLIC COMMENT ENCOURAGED

Interested and Affected Parties (I&APs) are invited to participate by providing comments and raising any issues of concern that they may have.

To register as an I&AP, and to receive a copy of the Background Information Document, please contact:

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CONSULTING

André Joubert / Florence Rambuda  
Zitholele Consulting (Pty) Ltd  
P O Box 6002, HALFWAY HOUSE, 1685  
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email: [andrej@zitholele.co.za](mailto:andrej@zitholele.co.za) or [florence@zitholele.co.za](mailto:florence@zitholele.co.za)

This assessment is being conducted on behalf of Eskom

## OMGEWINGSINVLOEDBEPALING

### VOORGESTELDE VERLEGGING VAN DIE 400 kV DUVHA-MINERVA TRANSMISSELYN

Ingevolge die Omgewingsimpakbeoordelingsregulasies, aangekondig in Goewarnienkennigings 543-546 in Staatskoerant No. 33806 van 18 Junie 2010 kragtens artikel 24 (5) van die Wet op Nasionale Omgewingsbestuur, 1998 (Wet No. 107 van 1998), word hierby kennis gegee van Eskom se voorneme om die volgende gelyste aktiviteit uit te voer waarvoor omgewingsmatiging vereis word: 'n Verlegging van ongeveer 16 km van die 400kV Duvha-Minerva transmissielyn oos van die Kustle Kragstasie

### OPENBARE KOMMENTAAR AANGEMOEDIG

Belanghebbende en Geaffekteerde Partye (B&GP's) word genooi om deel te neem deur kommentaar te lewer en moontlike kwelings te opper.

Om as 'n B&GP te registreer en om 'n eksemplaar van die Agtergrondinligtingsdokument te ontvang, skakel asb met:

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CONSULTING

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Hierdie impakbeoordeling word namens Eskom gedoen

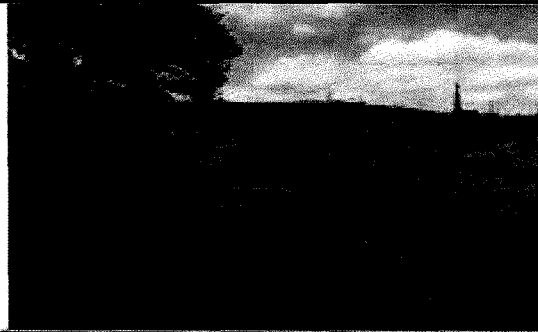
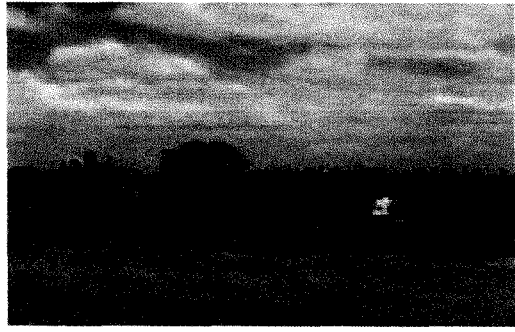
Reël 4: Donderdag 18 November 2010

Site visit on 11 November 2010 to hand out background information documents and put up site notices to announce the EIA for the proposed Duvha-Minerva deviation

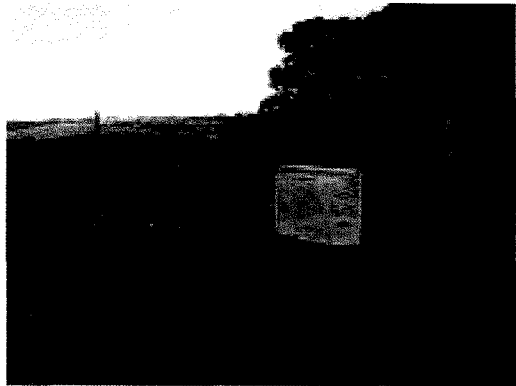



## **EIA FOR PROPOSED DEVIATION OF THE 400 KV DUVHA-MINERVA TRANSMISSION LINE**

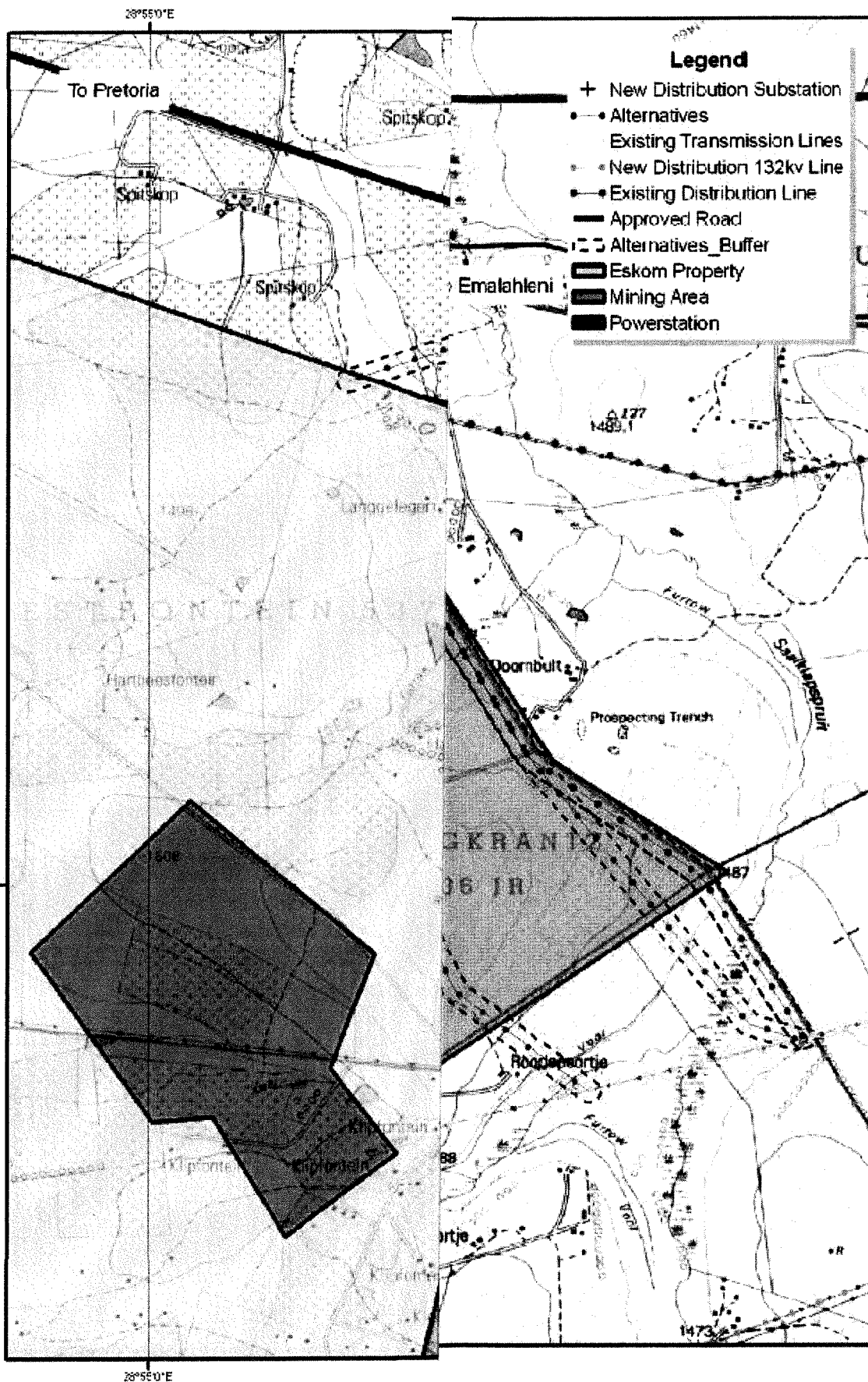
**Table 1:** Indicates the location of site notices placed

<b>Item</b>	<b>Co-ordinates</b>	<b>Description of the location of notice</b>	<b>Picture/photo</b>
1	25°52'45.76"S 28°58'13.39"E	On the R545 one kilometre south of the N4.	
2	25°53'13.68"S 28°58'18.94"E	On the R545 three kilometres south of the N4.	

**EIA FOR PROPOSED DEVIATION OF THE 400 KV DUVHA-MINERVA TRANSMISSION LINE**

Item	Co-ordinates	Description of the location of notice	Picture/photo
5	25°53'29.94"S 28 57'58.84"E	On a dirt road west of the R104 and north east of Kusile Power Station.	
6	25°52'49.01"S 29 00'27.45"E	On the R104 east of the R545 and south of the N4	

## **Appendix D: Project Location Map**



## **Appendix E: I&AP Database**

## **Stakeholder Database – Duvha Minerva**

<b><u>Last Name</u></b>	<b><u>First Name</u></b>	<b><u>Company</u></b>	<b><u>City</u></b>
Addison	Graeme	South African River Residents Association	IRENE
Ah Shene	Carolyn	Birdlife South Africa	RANDBURG
Batchelor	Garth	Department of Economic Development Environment and Tourism	NELSPRUIT
Botha	Amanda	Witbank News	WITBANK
Botha	Hannes	Mpumalanga Tourism and Parks Agency	GROBLERSDAL
Botha	Ida	Kungwini Local Municipality	BRONKHORSTSPRUIT
Campbell	Graeme	Streeknuus	BRONKHORSTSPRUIT
Claassen	Koot	Mpumalanga Agricultural Union	DELMAS
de Fontaine	Marc	Rand Water Rietspruit Blesbokspruit Forum	JOHANNESBURG
du Plessis	Deon	Department of Minerals and Energy	WITBANK
Engelbrecht	Adam	eMalahleni Local Municipal Council	WITBANK
Fenyane	Priscilla	eMalahleni Local Municipality	WITBANK
Floyd	Brian	Witbank Chamber of Commerce	WITBANK
Friedman	Yolanda	Endangered Wildlife Trust	PARKVIEW
Gobodo	Nomfundo	Legal Resources Centre	JOHANNESBURG
Govender	Jayshree	South African National Roads Agency Limited (SANRAL)	LYNNWOOD RIDGE
Govender	Len	Petronet - Witbank and Kendal	WITBANK
Grobler	Japie	Agri SA	PRETORIA
Hertzog	Barry & Heleen	Witbank District Agricultural Union	BRONKHORSTSPRUIT
Hlatshwayo	Bongani	Mpumalanga News	NELSPRUIT
Hoffman	Andre	Mpumalanga Tourism and Parks Agency	GROBLERSDAL
Hudson	Carla	Wildlife and Environment Society of South Africa (WESSA)	FERNDAL
Jansen van Vuuren	Vere	Telkom South Africa	MIDDELBURG
Kadiaka	M	Department of Water Affairs (DWA)	NELSPRUIT
Keet	Marius	Department of Water Affairs (DWA)	PRETORIA
Kekana	Mpho	Kungwini Local Municipality	BRONKHORSTSPRUIT
Kekana	Seoketsa	Kungwini Local Municipality	BRONKHORSTSPRUIT
Kemp	Piet	Transvaal Agricultural Union of SA	ERMELO
Kgobe	Lesiba	Department of Water Affairs and Forestry	BRONKHORSTSPRUIT
Kleyns	David	Department of Agriculture, Forestry and Fisheries (DAFF)	PRETORIA
Leegemaad	C	Bronkhorstspuit District Agricultural Union	RAYTON
Lewis	Mary	Klipkop Land Owners Association	WELBEKEND
Liefferink	Mariette	Federation for a Sustainable Environment (FSE)	RIVONIA
Love	Janet	Legal Resources Centre	JOHANNESBURG
Mabuza	David	Mpumalanga Province Office of the Premier	NELSPRUIT
Macevele	Stanford	Department of Water Affairs (DWA)	BRONKHORSTSPRUIT
Machete	Nkosazana	South African Heritage Resources Agency (SAHRA)	NELSPRUIT
Mahlangu	Jabulani	Economic Development, Environment and Tourism (Mpumalanga)	NELSPRUIT
Makola	Charles	Nkangala District Municipality	MIDDELBURG
Makula	Richard	Kungwini Local Municipality	BRONKHORSTSPRUIT
Malinga	Meshack	Department of Agriculture, Rural Development and Land	NELSPRUIT
Marx	Karin	Wildlife and Environment Society of South Africa (WESSA)	FERNDAL
Mashilo	Speedy	Nkangala District Municipality	MIDDELBURG
Matlala	Motsepe	National African Farmers Union (NAFU)	CENTURION
Mazibuko	Mandla	Department of Economic Development, Environment and Tourism	NELSPRUIT
Mnguni	TRC	Department of Water Affairs (DWA)	PRETORIA
Mntambo	Fanyana	Department of Water Affairs (DWA)	NELSPRUIT
Mondlane	Musa	Mpumalanga Department of Agriculture and Land Administration	WITBANK
Monyeke	George	Environmental Justice Networking Forum (EJNF)	BRAAMFONTEIN
Mthembu	Dumisani	Department of Environmental Affairs (DEA)	PRETORIA
Ndobochani	Nonofho	South African Heritage Resources Agency (SAHRA)	CAPE TOWN
Nieuwoudt	Henry	Anglo American	MARSHALLTOWN
Nkabinde	Erald	eMalahleni Local Municipality	WITBANK
Pillay	Nava	Metswedding District Municipality	PRETORIA
Rossouw	Pierre	Nkangala District Municipality	MIDDELBURG
Sithole	Nelisiwe	Agriculture, Rural Development and Land Administration	NELSPRUIT
Smit	Gert	Witbank Agricultural Union	WITBANK
Smit	Hennie	Department of Water Affairs (DWA)	PRETORIA
Smith	Brenda	Kungwini Public Library	BRONKHORSTSPRUIT
Stander	Jan	Telkom South Africa	MIDDELBURG
Stapelberg	Leon	Eskom	MIDDELBURG
Steele	Teresa	Anglo American Corporation of SA Ltd	JOHANNESBURG
Steyn	Andries	Transvaal Agricultural Union of SA	BRONKHORSTSPRUIT
Suttill	Malcolm	Wildlife and Environment Society of South Africa (WESSA)	WITBANK

## **Appendix F: Issues and Response Report**

**No comments or issues have been received during the announcement of the project, however comments are still encouraged to be submitted to the public participation office**

## **Appendix G: Background Information Document**

# Environmental Impact Assessment for the deviation of the 400 kV Duvha-Minerva transmission line

## BACKGROUND INFORMATION DOCUMENT

November 2010

This Background Information Document (BID) provides Interested and Affected Parties (I&APs) with information on the Environmental Impact Assessment (EIA) that is being conducted by Zitholele Consulting (Pty) Ltd for the deviation of the 400 kV Duvha-Minerva transmission line.

This BID also provides I&APs with the opportunity to:

- Register as stakeholders in the public participation process; and
- Comment on the proposed project.

The purpose of an EIA is to identify and evaluate potential impacts, to recommend measures to avoid or reduce negative impacts and to enhance positive impacts. The decision-making authority for this EIA is the Department of Environmental Affairs in accordance with Section 24(5) of the National Environmental Management Act, Act No 107 of 1998.

### Register by 15 December 2010

You will be included on the stakeholder database and receive further documents for comment. Your comments will ensure that all relevant issues are incorporated. Submit the enclosed registration, write a letter, call or e-mail the public participation office, if you wish to raise any concerns regarding this EIA.

All EIA documents will be available on the internet at [www.eskom.co.za](http://www.eskom.co.za) and [www.zitholele.co.za](http://www.zitholele.co.za).

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## BACKGROUND

Eskom is the South African utility that generates, transmits and distributes electricity. Eskom supplies about 95% of the country's electricity, and about 60% of the total electricity consumed in Africa. Eskom plays a major role in accelerating growth in the South African economy by providing a high-quality supply of electricity.

Eskom is in the process of undertaking major infrastructure investments, including the construction of power stations, substations and transmission power lines.

The construction of the Kusile Power Station and associated infrastructure near Witbank is an example of these investments.

Proposed mining operations to the east of the Kusile Power Station necessitates the deviation of the Duvha-Minerva 400kV transmission line, because it is currently located in the area where the proposed mining operations will be undertaken.

The construction of a 400kV power line and the decommissioning of the 400kV power line located in the footprint of the proposed coal mine are listed activities in terms of Section 24(5) of the National Environmental Management Act (NEMA), Act No 107 of 1998 and therefore require environmental authorisation from the Department of Environmental Affairs (DEA).

## PROPOSED PROJECT

The main objective of the proposed project is to obtain Environmental Authorisation for the deviation of approximately 15 km of the Duvha-Minerva 400kV power line east of the Kusile Power Station, whilst maintaining the integrity of the surrounding environment and preserving a workable relationship with the local community.

In addition, all legal processes have to be adhered to so as to obtain the required Environmental Authorisation.

The current Duvha-Minerva 400 kV transmission line that is required to be deviated is located east of the Kusile Power Station over rich coal deposits needed for the power station.

Alternatives routes, each route having a corridor 150 meters wide, will be investigated during this EIA. The average distance of the alternatives is around 15 km and the routes run over mining properties and commercial farms.

These alternatives will be screened during the scoping phase of the EIA to determine if they are environmentally feasible, to identify any high level fatal flaws and to propose other alternatives if applicable. The alternatives will be assessed by specialists before the decision making authority, the

decide whether to grant or refuse authorisation and determine the alternative with the least impact on the environment as the proposed transmission line corridor.

A 400 kV transmission line needs pylons, also called a towers, with an average height of 40 meters and the line requires a servitude of 55 m wide – 27.5 m on either side of the centre line.

The reason for investigating a 150 meter wide corridor while a servitude of only 55 m is needed for the transmission line, is once an alternative has been approved by the DEA a "walk down" of the approved corridor will take place by Eskom's team of negotiators together with relevant EIA specialists. This is to ensure that deviations of the route can still be made within the approved corridor should any environmental, social or economic sensitivities be observed or negotiations with landowners require the route to slightly deviate.

**ZITHOLELE**

## PHASES OF AN EIA

### SCOPING PHASE OF THE EIA

The **first phase** of an EIA is the Scoping Phase, which is conducted to gain understanding of the potential environmental issues that are relevant to the project and to determine where further information is required, in the form of specialist studies/ investigations.

The Scoping Report and Plan of Study for the EIA are submitted to the Department of Environmental Affairs (DEA) for review and to approve the proposed approach to the detailed investigation required in the next phase of the process.

The Mpumalanga Department of Economic Development, Environment and Tourism is a key commenting authority on the study.

Activities involved in the Scoping Phase include:

- Meetings with authorities to agree on process and study requirements;
- The placing of site notices, the distribution of letters, this Background Information Document and an

invitation to contribute to the EIA process to Interested and Affected Parties in the project area and beyond;

- Advertisements in local and regional newspapers to announce opportunities to participate;
- Progress feedback letter to be issued and announcements to be made of the availability of the Draft Scoping Report (DSR) and Issues and Responses Report (IRR);
- Distribution of a DSR, including IRR, for comment;
- Convening stakeholder workshops in the project area to obtain comment on the DSR;
- Submission of a Final Scoping Report (FSR), capturing all issues raised for the impact assessment, to the DEA;
- Submit the Plan of Study for the EIA to the DEA;
- Distribution of the FSR for information; and
- Progress feedback letter to stakeholders.

### IMPACT ASSESSMENT PHASE OF THE EIA

The **second phase** of the EIA is an Impact Assessment Phase which entails undertaking various specialist studies, compiling an Environmental Impact Report (EIR) and a Draft EMProg.

As part of the assessment, an EMProg for the project will also be submitted to the DEA for their approval. Following the EMProg, pre and post construction, will ensure compliance to environmental regulations during the planning, construction, operation and decommissioning (if applicable) phases.

The list of identified specialist studies required for this EIA (to date) is listed below:

- Terrestrial Ecology Assessment (Fauna and Flora);
- GIS for mapping purposes;
- Soils and Land Capability Assessment;
- Visual Impact Assessment;
- Wetlands and Surface Water;
- Avi-fauna Specialist Study; and
- Heritage Impact Assessment.

The names of the specialists who will undertake these studies are available from the public participation office.

Specific activities in this phase will include:

- Specialist studies focused on outcomes of the Scoping Phase and issues raised by stakeholders;
- Progress feedback to stakeholders;
- Compilation of a Draft EIR indicating the potential positive and negative impacts and measures to enhance positive impacts and to reduce or avoid negative impacts;
- Environmental Impact Statement, highlighting the preferred alternative and reasons thereof;
- Advertise the availability of the Draft EIR in local and regional newspapers;
- Distribution of the Draft EIR, including Issues and Responses Report, for comment; and
- Stakeholder meetings in the project area to present the findings of the EIA for stakeholder comment.

The Draft EIR will then be finalised and submitted to the DEA for a decision.

### DECISION-MAKING PHASE OF THE EIA

The **third phase** involves a decision by the decision-making authority, the DEA in this case. The DEA must accept or reject this report within 105 days. Stakeholders will be advised of the DEA's decision if Environmental Authorisation has been granted or not and the appeal procedure should they wish to appeal the decision.

**REGISTRATION AND COMMENT SHEET****Environmental Impact Assessment for the  
proposed deviation of the 400 kV  
Duvha-Minerva transmission line**

Inserted in the Background Information Document  
November 2010

**EIA Public Participation Office**

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*Please complete by 15 December 2010 and return to the EIA Public Participation Office (as above)*

TITLE		FIRST NAME			
INITIALS		SURNAME			
ORGANISATION		EMAIL			
POSTAL ADDRESS					
TEL NO		POSTAL CODE			
DATE		FAX NO			
Please formally register me as an interested and affected party (I&AP) so that I may receive further information and notifications during the Environmental Impact Assessment process			<table border="1"><tr><td>YES</td><td>NO</td></tr></table>	YES	NO
YES	NO				
I would like my notifications by			Letter (mail)		
			Email		
			Fax		
			Telephone		
I would like to receive documents for comment as follows			Paper copies		
			By email		
			On CD		
In terms of Regulations GNR 543 - 546 – Government Gazette No. 33306 of 18 June 2010 ( <i>EIA process regulations</i> ) I disclose below any direct business, financial, personal or other interest that I may have in the approval or refusal of the application: ..... .....					

**COMMENTS** (please use separate sheets if you wish)

I suggest that the following issues of concern be investigated in the Environmental Impact Assessment:

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Any other comments:

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Please ask the following of my colleagues/friends to register as I&APs for this project:

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**THANK YOU FOR YOUR CONTRIBUTION**