DRAFT

BASIC ASSESSMENT REPORT

PROPOSED ESKOM KHANYAZWE - BUFFELSPRUIT 132kV POWER LINE,
NKOMAZI LOCAL MUNICIPALITY,
MPUMALANGA PROVINCE.

FEBRUARY 2013

Ref: 14/12/16/3/3/1/623

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PROPOSED ESKOM KHANYAZWE - BUFFELSPRUIT 132kV POWER LINE, NKOMAZI LOCAL MUNICIPALITY, MPUMALANGA PROVINCE.

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WANDIMA ENVIRONMENTAL SERVICES PEOPLE • PLANET • PROSPERITY	Eskom Distribution

PROJECT INFORMATION

REPORT TITLE:	Basic Assessment Report
REPORT STATUS:	Draft
PROJECT TITLE:	Proposed Eskom Khanyazwe - Buffelspruit 132kV power line, Nkomazi Local Municipality, Mpumalanga
CLIENT:	Eskom Distribution
ENVIRONMENTAL CONSULTANTS:	Wandima Environmental Services
DEA REFERENCE NUMBER:	14/12/16/3/3/1/623
WES REFERENCE NUMBER:	12/09/50/06

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EXECUTIVE SUMMARY

1. ACTIVITY INFORMATION

1.1 Background

There is an urgent need to supply electricity to rural areas within Mpumalanga Province therefore ESKOM intends to construct a 132kV Kingbird overhead power line from the existing Khanyazwe switching Station at Malelane to the existing Buffelspruit substation at Buffelspruit. The current electricity infrastructure is overloaded and power shortages are often experienced in this area. The Nkomazi area is the strategic location to implement projects to supply electricity to rural people. The success of the rollout of these projects in this area will enable ESKOM to meet its demand to supply electricity to the remotest areas of the province.

1.2 Proposed Activities

The proposed project includes:

- Build ±38.79km of kingbird conductor 132kV line from Khanyazwe Switching Station to Buffelspruit Substation, including the 48 Core OPGW according to the Telecomms Design package.

1.3 Activity Listing

The **construction of facilities or infrastructure for the transmission and distribution of electricity** is a listed activity according to the Environmental Impact Assessment (EIA) Regulations, 2010 and it must be adhered to in terms of Sections 24(2)(a) and 24(d) of the National Environmental Management Act (NEMA), Act no 107 of 1998. The proposed activity is listed in:

Listing Notice 1, R544 of June, 2010:

- **Activity No 10(i):** The construction of facilities or infrastructure for the transmission and distribution of electricity outside urban areas or industrial complexes with a capacity of more than 33 but less than 275 kilovolts;
- **Activity No 23(ii):** The transformation of undeveloped, vacant or derelict land of more than 1 ha but less than 20 ha to institutional use outside and urban area.

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- **Activity 3(b)(ii)(gg):** The construction of masts or towers for telecommunication broadcasting or radio transmission purposes where the mast and will exceed 15m in height. Outside urban areas, within 10km from a national park.
- **Activity 4(ii)(gg):** The construction of a road wider than 4m outside urban areas, within 10km from a national park.

This listing requires the **Applicant** has to carry out a Basic Assessment Process.

1.4 Alternatives

Two alternative routes were identified and investigated. The following is the summary of the routes.

A. Route Alternative 1

This alternative starts from the Khanyazwe Switching Station, runs along the R570 and terminates at the Buffelspruit Substation. From the Khanyazwe Switching Station the proposed power line runs south east for 1.5km and turns north east, running for 3.5km until it joins the R570. It then runs adjacent to the R570 in a south easterly direction and after 9.4km turns in a south westerly direction for 18.56km, terminating at the Buffelspruit Substation. The proposed power line will be next to an existing power line for the first 14,4 km. **The total length of this proposed line will be 32.958km.**

B. Route Alternative 2

This alternative route is the same as Alternative 1 for the first 14,4km, but turns away from the R570, still in a south eastern direction runs for 12.3km where it then turns south west for 16.4 km across the country and connects with the existing power line. It then runs 4.37km North West till it ends at the Buffelspruit Substation. The first 26,7km and last 4,37km will be next to an existing power line. **The total length of the second proposed power line will be ±42 km.**

C. No Go Alternative

The no go alternative means that the proposed power lines will not be constructed and the result will be:

- Problems of low capacity power within the Nkomazi area will not be resolved.
- Employment opportunities for local community will be lost.
- Eskom will not be able to fulfill its bigger mandate of supplying power to all South Africans

2. PROPERTY DESCRIPTION

2.1 Location and Particulars of Property

The preferred route for the proposed Khanyazwe - Buffelspruit 132kV power line will be Alternative 1, along the R570 road. A number of farm portions will be affected and the list of registered I&AP and farm portions is attached in Appendix E.

2.2 Current Land Use & State

The properties on which the line is proposed to cross are used for various purposes ranging from agriculture activities such as grazing and cultivation of crops (sugarcane, mangos and oranges), dense natural vegetation (alternative 2), existing power lines and into roads reserves.

2.3 Description of the Environment

The Nkomazi area is typical Lowveld climate with seasonal summer rainfall, warm temperatures and dry winters. The mean average precipitation (MAP) is 654mm ranging between 600 to 1100mm per year (increasing with altitude) with infrequent frost. The topography is characterized by an undulating landscape and varies from mountainous Bushveld to plains Bushveld. The most serious transformation of the natural environment consists of cultivation of crops, formal and informal settlements which have transformed natural land in the past few years significantly (Van der Walt, 2012).

According to Mucina & Rutherford, 2006 the proposed power line will be constructed in several distinct vegetation units which includes **Kaalrug Mountain Bushveld, Barberton Serpentine Sourveld, Granite Lowveld and Lowveld Riverine Forest**. Vegetation communities that were identified are described as: **Mountain woodland, Plains woodland, Riparian thickets and cultivated lands**. According to the Mpumalanga Biodiversity Conservation Plan (MBCP) from Lotter, 2006 indicates that the sensitivity of the area varies from "no natural habitat remaining" to "irreplaceable" and "protected" (Van der Walt, 2012).

The general geology of the area consists of granite and gneiss, mostly of the Nelspruit suite, forming hills with large boulders. Soils are shallow, coarse lithosols, comprised of Glenrosa or Mispah soil types.

3. PUBLIC PARTICIPATION PROCESS

3.1 Approach

A public participation process (PPP) was followed according to the 2010 EIA regulations, R543, section 54.
This process was executed as follows:
All possible Interested & Affected parties (I&AP's) were contacted and afforded an opportunity to meaningfully participate in the process. Contact was made with property owners and key interested & affected parties. Public open days and one-on-one consultations were held with the respective landowners. Some issues and concerns were raised during the consultations and all these issues are recorded in the Public participation report. (See attached Appendix E for the PPP Report).

All issues raised were properly addressed and before the report is submitted to the competent authority, it will be subjected to public review for forty (40) days for scrutiny and comments thereof. This also gives the I&AP's an opportunity to voice their concerns regarding the proposed project. The draft report will also be available on the Environmental Assessment Practitioner (EAP) website for download to review.

3.2 Further Participation

After the forty (40) day I&AP comment period, all issues raised will be recorded and included in the Final Draft BAR. The Final Draft BAR will be available for reviewing for another 21 days. After the issuing of the Environmental Authorization (EA), the decision will be communicated to all registered I&AP's and will be afforded the opportunity to appeal against any decision.

4. IMPACT ASSESSMENT

This phase identified and analyzed the potential impacts of the activities of the proposal on the biophysical and socio-economic components of the environment. Activities throughout the project; i.e. Design/Preconstruction, construction, operational and decommissioning phases were considered during the assessment. Both negative and positive impacts were assessed, negative for mitigation and positive for enhancement. The assessment also covered four (4) areas of specialization such as Biodiversity, Bird, Visual and Heritage.

4.1 Findings of Specialists

The Specialist studies for the proposed construction and operation of the proposed 132kV power line was undertaken to determine the possible impacts likely to arise due to the construction and operational phase. The findings of the four (4) specialists are summarized as follows:

4.1.1 Terrestrial Biodiversity

Due to the requirement of vegetation removal for ESKOM power lines they impact on vegetation community. Servitude (corridors) of 31m wide is required for the 132kV distribution lines. In dense (closed) and medium to high vegetation communities, the practice will be to remove all the vegetation across the servitude width for fear of damage of the power lines due to the falling of trees and accidental fires which can cause power failures. Loss of habitat will thus be of a much higher magnitude in woodlands and especially forests as compared to grasslands where the structure is short with no or minimal emergent trees.

Four legally protected tree species and four Red Data List (RDL) plant species were identified in the affected area. The possibility exists that several important fauna species may occur in the proposed servitude of Alternative 2, but due to the mobility of most terrestrial fauna, it is not anticipated that any of the taxa will be directly threatened by the activities. Animals can return to disturbed areas during the operation phase and after the termination of construction. The major impact on fauna is the loss of habitat. Impact on terrestrial fauna and important species can be minimized by firstly aligning the servitude to make use of existing access road and disturbed areas and avoiding sensitive habitats such as rocky outcrops, wetlands and forests areas, and secondly by placing of structures/poles on preselected sites of low fauna importance.

The investigation has determined that several different habitats and a diverse range of biota may be affected by any one of the alternative alignments. The significance of anticipated impacts has been evaluated and recommendations and deductions could be made. If these findings are correlated with the different alignment alternatives, the cumulative impacts are minimal and definite alignment recommendations can be made. Each of the alignment alternatives vary in sensitivity from a *"Low"* to a *"High"* rating depending on specific aspects and features. With adequate mitigation, the anticipated impacts on biodiversity can be controlled and reduced to a satisfactory level to ensure a minimal effect on biodiversity. **Alternative 1 is recommended as the preferred alternative by the ecologist, Mr. D. Van der Walt** (see attached Appendix D for the Biodiversity Report, August 2012).

4.1.2 Avi-fauna Assessment

The construction of the proposed new Khanyazwe - Buffelspruit 132kV power line poses a limited threat to the birds occurring in the vicinity of the new infrastructure. The power line poses a medium collision risk, mostly to non-Red Data species and a medium electrocution risk, in particular to vultures. The habitat transformation caused by the power line will have a Low-Medium impact and should only affect non Red Data species at local level, provided the large trees are not extensively destroyed.

Both the proposed alignments emerged with low scores, indicating that the environment has already been impacted significantly as far as birds are concerned. **Alternative 1 is recommended as the preferred alternative by the Bird Specialist, Mr. MC Van Rooyen.** (See attached the Appendix D for the Bird Impact Assessment Study, September 2012).

4.1.3 Visual impact assessment

The construction and operation of the proposed Khanyazwe - Buffelspruit 132kV power line and its associated infrastructure will have a visual impact on the scenic resources of the region. The power line infrastructure will be visible within an area that is generally seen as having a high quality natural and scenic landscape and a negative result on potential tourism value. The infrastructure would thus be visible within an area that incorporates various sensitive visual receptors who would consider visual exposure to this type of infrastructure to be intrusive. Both alternative alignments will be visually exposed to large areas within their respective 5000m offsets due to the tall line infrastructure. **Alternative 1 is recommended as the preferred alternative by Mr. S Henwood.** (See attached Appendix D for the Visual Assessment Report).

4.1.4 Heritage Impact Assessment

The fieldwork conducted by Dr Van Vollenhoven revealed no sites of cultural heritage significance. The area is largely disturbed by human activities such as different agricultural fields.

Alternative 1 is more disturbed and is shorter than Alternative 2, therefore the chances to find heritage sites are less. **Alternative 1 is recommended as the preferred alternative by Dr A AC Van Vollenhoven.** (See attached Appendix D for the Cultural Heritage Report, August 2012).

4.2 Summary of Impact Assessment

According to the findings of the four (4) specialists, the nature of predicted impacts, there extent, duration, intensity, probability and significance are summarized in Table 1.

Table 1: Summary of Impact Assessment

ALTERNATIVE S1 (PREFERRED ALTERNATIVE)							
						Significance	
Phase	Nature of Impact	Extent	Duration	Intensity/ Severity	Probability/ Certainty	Before	After mitigation
Planning	Topography & Geology	Site	Long term	Low	Definite	Medium	Low
	Fauna & Flora	Local	Long term	Medium	Probable	Medium	Low
	Land use	Site	Long term	Low	Definite	Low	Low
	Locality	Site	Long term	Low	Definite	Low	Low
Construction	Topography & Geology	Local	Short term	Low	Probable	Low	Low
	Surface & groundwater quality	Site	Short term	High	Definite	High	Low
	Waste management	Site	Short term	Low	Definite	Medium	Low
	Loss of Fauna & Flora	Site	Long term	Medium	Unsure	Low	Low
	Air quality	Site	Short term	Low	Probable	Low	Low
	Noise	Site	Short term	Low	Unsure	Low	Low
	Visual impacts	Local	Short term	Medium	Unsure	Low	Low
	Social Impact	Local	Short term	Medium	Definite	High-Medium	Low
Operational	Topography & Geology	Site	Short-term	Low	Unsure	Low	Low
	Surface & groundwater quality	Local/ downstream	Long term	Low	Unsure	Low	Low
	Waste management	Local	Long term	Low	Unsure	Low	Low
	Fauna: Birds	Local	Long-term	Medium	Probable	Medium	Low
	Visual impacts	Local	Long term	High	Definite	Medium	Low
	Social impact: Work force	Site	Short term	Medium	Definite	Medium	Low
	Social Impacts: available electricity	Local	Long term	High	Definite	High	No mitigations

4.3 Proposed Mitigation Measures

The following preventative and mitigation measures must be incorporated in the planning, construction and operational phases of the power line.

I. Planning Phase

- The proponent must be committed to a conservation approach during the planning phase;
- Sensitive habitats must be avoided or least sensitive crossings must be used as mitigation;
- Riparian vegetation at river crossings and indigenous forests must be avoided altogether where possible by by-passing or by suspending the lines across from high ground to higher ground. If this is not achievable such habitats must only be disturbed where absolutely necessary and prominent trees must be avoided. It is recommended that only a minimal opening, large enough for the lines to cross without interference is created in such areas;

- Of special importance is the 4 legally protected tree species and the 4 RDL species that was identified in the affected areas and could be affected by the construction phase.
- The necessary plant destruction permits must be obtained from the regulating authorities prior to construction;
- A specialist must assist the surveyor to ensure that the above recommendations are followed.

II. Construction Phase

- The proponent must be committed to a conservation approach of practice and the actual footprint of construction/disturbance must be kept to a minimum;
- As much of the natural environment as possible must be conserved (minimal construction of access roads and bush clearing);
- Relocation of important species, identification and demarcation of specimens and sub-habitats not to be disturbed will have to be done beforehand by a specialist;
- Important species (fauna as well as flora) that will be threatened by the development must be relocated to safer habitats by suitable specialists;
- Preventative erosion control measures to be put in place;

III. Operational Phase

- Maintenance crews must be educated with regards to the importance of biodiversity;
- Maintenance of the lines and servitudes must be done in such a manner to conserve vegetation and create the least disturbance as possible, especially at river crossings and in pristine natural areas and habitats;
- The operational phase must be monitored by ESKOM environmental officials to ensure that adequate mitigation measures are in place and to take reactive measures in places where impacts pose problems.

5. CONCLUSIONS AND RECOMMENDATIONS

For an option or project to be sustainable, it needs to demonstrate economic viability, social equity and soundness, and ecological integrity within a framework of good governance. All three of these dimensions of sustainability need to be taken into account when assessing a proposed option or project, taking due cognizance that the three dimensions are seldom in perfect balance, often dictated by local circumstances. Thus the preferred route chosen at the end of the analysis is one that has minimal impacts both ecologically, socially and in terms of heritage.

From the analysis given in the specialist reports and other site impact assessments, Route Alternative 1 was suggested by all the specialists as the route that will have the minimal impacts and thus is the recommended

route. It is however recommended that the mitigation measures presented in the Environmental Management Program (EMPr) be fully implemented. If there is vagueness in the wording and actions to be undertaken, clarifications must be sought from the environmental consultant and specialists involved in the compilation of the reports and the contact details are presented within the main report.

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Definition of Terms

"Activity" means an activity identified in Government Notice No. R. 544 and No. R. 545 of 2010 as a listed activity

"Alternatives", in relation to a proposed activity, means different means of meeting the general purpose and requirements of the activity, which may include alternatives to property, activity, design or technology.

"Associated Infrastructure" means any building or infrastructure that is necessary for the functioning of a facility or activity or that is used for an ancillary service or use from the facility.

"Cumulative impact", in relation to an activity, means the impact of an activity that in itself may not be significant but may become significant when added to the existing and potential impacts eventuating from similar or diverse activities or undertakings in the area.

"Environmental impact assessment', means the process of collecting, organizing, analyzing, interpreting and communicating information that is relevant to the consideration of that application.

"Environmental management programme" means a detailed plan of action prepared to ensure that recommendations for enhancing positive environmental impacts and/or limiting or preventing negative environmental impacts are implemented during the life-cycle of a project.

"Interested and Affected Party" means any person, group of persons or organization interested in or affected by an activity; and any organ of state that may have jurisdiction over any aspect of the activity;

"Public Participation Process" means a process in which potential interested and affected parties are given an opportunity to comment on, or raise issues relevant to, specific matters;

"Significant impact" means an impact that by its magnitude, duration, intensity or probability of occurrence may have a notable effect on one or more aspects of the environment;

"The Act" means the National Environmental Management Act, 1998 (Act No.107 of 1998).

Abbreviations

BA	Basic Assessment
BID	Background Information Document
DEAT	Department of Environment, Agriculture and Tourism
DEDET	Department of Economic Development, Environment and Tourism
DAFF	Department of Agriculture, Forestry and Fishery
DWA	Department of Water Affairs
DWA&E	Department of Water Affairs and Environment
EA	Environmental Authorization
EAP	Environmental Assessment Practitioner
ECO	Environmental Control Officer
EIA	Environmental Impact Assessment
EMPr	Environmental Management Program
I&APs	Interested and Affected Parties
MAP	Mean Annual Precipitation
MDEDET	Mpumalanga Department of Economic Development, Environment and Tourism
MTPA	Mpumalanga Tourism and Parks Agency
NEMA	National Environmental Management Act, Act No 107 of 1998
NEM:WA	National Environmental Management: Waste Act, Act No 59 of 2008.
SABS	South African Bureau of Standards
RDL	Red Data List
RoD	Record of Decision
WES	Wandima Environmental Services

ASSUMPTIONS & LIMITATIONS

For the purpose of this report it has been assumed that all information received from the owner has been correct.

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environmental affairs

Department:
Environmental Affairs
REPUBLIC OF SOUTH AFRICA

(For official use only)

File Reference Number:	
Application Number:	
Date Received:	

Basic assessment report in terms of the Environmental Impact Assessment Regulations, 2010, promulgated in terms of the National Environmental Management Act, 1998 (Act No. 107 of 1998), as amended.

Kindly note that:

1. This **basic assessment report** is a standard report that may be required by a competent authority in terms of the EIA Regulations, 2010 and is meant to streamline applications. Please make sure that it is the report used by the particular competent authority for the activity that is being applied for.

2. The report must be typed within the spaces provided in the form. The size of the spaces provided is not necessarily indicative of the amount of information to be provided. The report is in the form of a table that can extend itself as each space is filled with typing.

3. Where applicable **tick** the boxes that are applicable in the report.

4. An incomplete report may be returned to the applicant for revision.

5. The use of "not applicable" in the report must be done with circumspection because if it is used in respect of material information that is 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 report must be handed in at offices of the relevant competent authority as determined by each authority.

7. No faxed or e-mailed reports will be accepted.

8. The report must be compiled by an independent environmental assessment practitioner.

9. Unless protected by law, all information in the report will become public information on receipt by the competent authority. Any interested and affected party should be provided with the information contained in this report on request, during any stage of the application process.

10. A competent authority may require that for specified types of activities in defined situations only parts of this report need to be completed.

SECTION A: ACTIVITY INFORMATION

Has a specialist been consulted to assist with the completion of this section?	NO	

If YES, please complete the form entitled "Details of specialist and declaration of interest" for appointment of a specialist for each specialist thus appointed:
Any specialist reports must be contained in Appendix D.

1. ACTIVITY DESCRIPTION

Describe the activity, which is being applied for, in detail[1]:

1.1 Background to Proposed Project

There is an urgent need to supply electricity to rural areas within Mpumalanga Province therefore ESKOM intends to construct a 132kV Kingbird overhead power line from the existing Khanyazwe switching Station at Malelane to the existing Buffelspruit substation at Buffelspruit. The current electricity infrastructure is overloaded and power shortages are often experienced in this area. The Nkomazi area is the strategic location to implement projects to supply electricity to rural people. The success of the rollout of these projects in this area will enable ESKOM to meet its demand to supply electricity to the remotest areas of the province.

1.2 Proposed Activities

The proposed project includes:

- Build ±38.79km of conductor 132kV line from Khanyazwe Switching Station towards Buffelspruit Substation, including the 48 Core OPGW, according to the Telecomms Design package.

1.3 Listed Activities

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Listing Notice 1, R544 of June, 2010:

- **Activity No 10(i):** The construction of facilities or infrastructure for the transmission and distribution of electricity outside urban areas or industrial complexes with a capacity of more than 33 but less than 275 kilovolts;
- **Activity No 23(ii):** The transformation of undeveloped, vacant or derelict land of more than 1 ha but less than 20 ha to institutional use outside and urban area.

Listing Notice 3, R546 of June, 2010:

- **Activity 3(b)(ii)(gg):** The construction of masts or towers for telecommunication broadcasting or radio transmission purposes where the mast and will exceed 15m in height. Outside urban areas, within 10km from a national park.
- **Activity 4(ii)(gg):** The construction of a road wider than 4m outside urban areas, within 10km from a national park.

According to this listing requires the **Applicant** has to carry out a Basic Assessment Process.

[1] 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.

2. FEASIBLE AND REASONABLE ALTERNATIVES

"alternatives", in relation to a proposed activity, means different means of meeting the general purpose and requirements of the activity, which may include alternatives to—

(a) the property on which or location where it is proposed to undertake the activity;
(b) the type of activity to be undertaken;
(c) the design or layout of the activity;
(d) the technology to be used in the activity;
(e) the operational aspects of the activity; and
(f) the option of not implementing the activity.

Describe alternatives that are considered in this application. Alternatives should include a consideration of all possible means by which the purpose and need of the proposed activity could be accomplished in the specific instance taking account of the interest of the applicant in the activity. The no-go alternative must in all cases be included in the assessment phase as the baseline against which the impacts of the other alternatives are assessed. The determination of whether site or activity (including different processes etc.) or both is appropriate needs to be informed by the specific circumstances of the activity and its environment. After receipt of this report the competent authority may also request the applicant to assess additional alternatives that could possibly accomplish the purpose and need of the proposed activity if it is clear that realistic alternatives have not been considered to a reasonable extent.

Two alternative routes were identified and investigated. The following is the summary of the routes.

A. Route Alternative 1

This alternative starts from the Khanyazwe Switching Station, runs with the R570 and terminates at the Buffelspruit Substation. From the Khanyazwe Switching Station the proposed power line runs south east for 1.5km and turns north east, running for 3.5km until it joins the R570. It then runs adjacent to the R570 in a south easterly direction and after 9.4km turns in a south westerly direction for 18.56km, terminating at the Buffelspruit Substation. The proposed power line will be next to an existing power line for the first 14.4 km. **The total length of this proposed line will be 32.958km.**

B. Route Alternative 2

This alternative route is the same as Alternative 1 for the first 14.4km where from Khanyazwe Switching Station the proposed power line runs in a south easterly direction for about 1.5km, turns north for 3.5km until it joins the R570. It then runs adjacent to the R570 in a south eastern direction for 9.4km, turns away from the R570, still in a south eastern direction runs for 12.3km where it then turns south west for 16.4 km across the country where it connects with the existing power line. It then runs 4.37km North West till it ends at the Buffelspruit Substation. The first 26.7km and last 4.37km will be next to an existing power line. **The total length of the second proposed power line will be ±42 km.**

C. No Go Alternative

The no go alternative means that the proposed power lines will not be constructed and the result will be:

- Problems of low capacity power within the Nkomazi area will not be resolved.
- Employment opportunities for local community will be lost.
- ESKOM will not be able to fulfil its bigger mandate of supplying power to all South Africans

Paragraphs 3 – 13 below should be completed for each alternative.

3. ACTIVITY POSITION

Indicate the position of the activity using the latitude and longitude of the centre point of the site for each alternative site. The co-ordinates should be in degrees and decimal minutes. The minutes should have at least three decimals to ensure adequate accuracy. The projection that must be used in all cases is the WGS84 spheroid in a national or local projection.

List alternative sites, if applicable.

Alternative:

	Latitude (S):		Longitude (E):	
Alternative S1[2] (preferred or only site alternative)	°	'	°	'
Alternative S2 (if any)	°	'	°	'
Alternative S3 (if any)	°	'	°	'

In the case of linear activities:

Alternative:

	Latitude (S):		Longitude (E):	
Alternative S1 (preferred or only route alternative)				
• Starting point of the activity	25°	30' 31.88"S	31°	31' 47.86"E
• Middle/Additional point of the activity	25°	34' 02.07"S	31°	36' 46.58"E
• End point of the activity	25°	40' 33.76"S	31°	31' 40.33"E
Alternative S2 (if any)				
• Starting point of the activity	25°	30' 31.88"S	31°	31' 47.86"E
• Middle/Additional point of the activity	25°	34' 44.15"S	31°	40' 05.83"E
• End point of the activity	25°	40' 33.76"S	31°	31' 40.33"E
Alternative S3 (if any)				
• Starting point of the activity				
• Middle/Additional point of the activity				
• End point of the activity				

For route alternatives that are longer than 500m, please provide an addendum with co-ordinates taken every 250 meters along the route for each alternative alignment.

[2] "Alternative S.." refer to site alternatives.

4. PHYSICAL SIZE OF THE ACTIVITY

Indicate the physical size of the preferred activity/technology as well as alternative activities/technologies (footprints):

Alternative:	**Size of the activity:**
Alternative A1[3] (preferred activity alternative)	m^2
Alternative A2 (if any)	m^2
Alternative A3 (if any)	m^2

or, for linear activities:

Alternative:	**Length of the activity:**
Alternative A1 (preferred activity alternative)	33km
Alternative A2 (if any)	42km
Alternative A3 (if any)	

Indicate the size of the alternative sites or servitudes (within which the above footprints will occur):

Alternative:	**Size of the site/servitude:**
Alternative A1 (preferred activity alternative)	33km
Alternative A2 (if any)	42km
Alternative A3 (if any)	

5. SITE ACCESS

Does ready access to the site exist?	YES
If NO, what is the distance over which a new access road will be built	N/A

Describe the type of access road planned:

The proposed power line will be accessed through the existing provincial roads and farm service roads that network throughout the study area.

Include the position of the access road on the site plan and required map, as well as an indication of the road in relation to the site.

6. SITE OR ROUTE PLAN

A detailed site or route plan(s) must be prepared for each alternative site or alternative activity. It must be attached as Appendix A to this document.

The site or route plans must indicate the following:

6.1 the scale of the plan which must be at least a scale of 1:500;
6.2 the property boundaries and numbers of all the properties within 50 metres of the site;
6.3 the current land use as well as the land use zoning of each of the properties adjoining the site or sites;
6.4 the exact position of each element of the application as well as any other structures on the site;
6.5 the position of services, including electricity supply cables (indicate above or underground), water supply pipelines, boreholes, street lights, sewage pipelines, storm water infrastructure and telecommunication infrastructure;
6.6 all trees and shrubs taller than 1.8 metres;

[3] "Alternative A.." refer to activity, process, technology or other alternatives.

6.7 walls and fencing including details of the height and construction material;
6.8 servitudes indicating the purpose of the servitude;
6.9 sensitive environmental elements within 100 metres of the site or sites including (but not limited thereto):
- rivers;
- the 1:100 year flood line (where available or where it is required by DWA);
- ridges;
- cultural and historical features;
- areas with indigenous vegetation (even if it is degraded or invested with alien species);

6.10 for gentle slopes the 1 metre contour intervals must be indicated on the plan and whenever the slope of the site exceeds 1:10, the 500mm contours must be indicated on the plan; and
6.11 the positions from where photographs of the site were taken.

7. SITE PHOTOGRAPHS

Colour photographs from the centre of the site must be taken in at least the eight major compass directions with a description of each photograph. Photographs must be attached under Appendix B to this form. It must be supplemented with additional photographs of relevant features on the site, if applicable.

8. FACILITY ILLUSTRATION

A detailed illustration of the activity must be provided at a scale of 1:200 as Appendix C for activities that include structures. The illustrations must be to scale and must represent a realistic image of the planned activity. The illustration must give a representative view of the activity.

9. ACTIVITY MOTIVATION

9(a) Socio-economic value of the activity

What is the expected capital value of the activity on completion?	Uncertain	
What is the expected yearly income that will be generated by or as a result of the activity?	Uncertain	
Will the activity contribute to service infrastructure?	YES	
Is the activity a public amenity?	YES	
How many new employment opportunities will be created in the development phase of the activity?	Uncertain	
What is the expected value of the employment opportunities during the development phase?	Uncertain	
What percentage of this will accrue to previously disadvantaged individuals?	Uncertain	
How many permanent new employment opportunities will be created during the operational phase of the activity?	Uncertain	
What is the expected current value of the employment opportunities during the first 10 years?	Uncertain	
What percentage of this will accrue to previously disadvantaged individuals?	Uncertain	

9(b) Need and desirability of the activity

Motivate and explain the need and desirability of the activity (including demand for the activity):

NEED:			
1.	Was the relevant provincial planning department involved in the application?		NO
2.	Does the proposed land use fall within the relevant provincial planning framework?	N/A	

3.	If the answer to questions 1 and / or 2 was NO, please provide further motivation / explanation:
	ESKOM does its own planning and only consults provincial planning department later.
	N/A

DESIRABILITY:			
1.	Does the proposed land use / development fit the surrounding area?	YES	
2.	Does the proposed land use / development conform to the relevant structure plans, SDF and planning visions for the area?	YES	
3.	Will the benefits of the proposed land use / development outweigh the negative impacts of it?	YES	
4.	If the answer to any of the questions 1-3 was NO, please provide further motivation / explanation:		
	N/A		
5.	Will the proposed land use / development impact on the sense of place?	YES	
6.	Will the proposed land use / development set a precedent?		NO
7.	Will any person's rights be affected by the proposed land use / development?	YES	
8.	Will the proposed land use / development compromise the "urban edge"?		NO
9.	If the answer to any of the question 5-8 was YES, please provide further motivation / explanation.		
	The proposed lines will transverse within properties which are used for various purposes such as agriculture (grazing and cultivation of crops such as sugarcane, mango and orange orchards and maize) and natural areas. The I&AP's (property owners) and specialist assessments (bird, ecology, archaeology and visual Specialist Reports) have opted for Alternative 1 as a preferred route as there is a dire need for electricity supply in the area to guard against load shedding (blackouts).		

BENEFITS:			
1.	Will the land use / development have any benefits for society in general?	YES	
2.	Explain: The objective of the proposed line is to increase the power supply to the rural communities in the Nkomazi area in general and to reduce the power cuts that have been a problem for local business and residential establishments within the area.		
	Local contractors will benefit both during the construction and operational phases of the project if ESKOM might need such related skills.		
3.	Will the land use / development have any benefits for the local communities where it will be located?	YES	
4.	Explain: Local people will have access to uninterrupted power supply for domestic and business usage. Local contractors will benefit in terms of maintenance contracts from ESKOM if there will be a need for such service		

10. APPLICABLE LEGISLATION, POLICIES AND/OR GUIDELINES

List all legislation, policies and/or guidelines of any sphere of government that are applicable to the application as contemplated in the EIA regulations, if applicable:

Table 1: List all legislation, policies and/or guidelines

Title of legislation, policy or guideline:	Administering authority:	Date:
Constitution of the Republic of South Africa (No. 108, 1996)	Parliament	1996
Environmental Impact Assessment Regulations, 2010	D Environmental Affairs	2010
National Water Act (No. 36, 1998)	D Water Affairs and Forestry	1998
Mpumalanga Nature Conservation Act (No. 10, 1998)	MTPA	1998
Conservation of Agricultural Resources Act (No.43, 1983)	Department of Agriculture	1983
National Environmental Management: Biodiversity Act(No. 10, 2004)	Department of Environment	2004
National Environmental Management: Protected Areas Act (No. 57, 2003) as amended by the National Environmental Management: Protected Areas Amendment Act (No 31 of 2004)	Department of Environment	2004
National Environment Conservation Act (No 73, 1989)	Department of Environmental Affairs	1989
National Roads Act (No. 7, 1998)	Department of Public works	1998
Advertising on Roads and Ribbon Development Act(No. 21, 1940)	Department of Public works	1940
National Heritage Resources Act (No. 25, 1999)	Department of Arts and Culture	1999
Occupational Health and Safety Act (No. 85, 1993)	Department of Labour	1993
Promotion of Access to Information Act (No. 2, 2000)	All Departments	2000
Electricity Regulation Act (No. 4, 2006)	Department of Environmental Affairs	2006
National Environment Management: Waste Act, 2008 (No 59 of 2008)	Department of Environment	2008
EIA regulations as listed in Government Notices R543 and R544 (20 June 2010)	Department of Environment	2010

11. WASTE, EFFLUENT, EMISSION AND NOISE MANAGEMENT

11(a) Solid waste management

Will the activity produce solid construction waste during the construction/initiation phase?	YES	
If yes, what estimated quantity will be produced per month?	0.05 ton	

How will the construction solid waste be disposed of (describe)?

It will be collected and be disposed of at a registered landfill site. The constructor will at his/her own discretion decide upon days when the collection can be done.

Where will the construction solid waste be disposed of (describe)?

It will be disposed off at a permitted landfill site.

Will the activity produce solid waste during its operational phase?		NO
If yes, what estimated quantity will be produced per month?	N/A	

How will the solid waste be disposed of (describe)?

The proposed development will not produce any waste during its operation.

Where will the solid waste be disposed if it does not feed into a municipal waste stream (describe)?

N/A

If the solid waste (construction or operational phases) will not be disposed of in a registered landfill site or be taken up in a municipal waste stream, then the applicant should consult with the competent authority to determine whether it is necessary to change to an application for scoping and EIA.

Can any part of the solid waste be classified as hazardous in terms of the relevant legislation?	NO
If yes, inform the competent authority and request a change to an application for scoping and EIA.	
Is the activity that is being applied for a solid waste handling or treatment facility?	NO

If yes, then the applicant should consult with the competent authority to determine whether it is necessary to change to an application for scoping and EIA.

11(b) Liquid effluent

Will the activity produce effluent, other than normal sewage, that will be disposed of in a municipal sewage system?	NO
If yes, what estimated quantity will be produced per month?	N/A
Will the activity produce any effluent that will be treated and/or disposed of on site?	NO

If yes, the applicant should consult with the competent authority to determine whether it is necessary to change to an application for scoping and EIA.

Will the activity produce effluent that will be treated and/or disposed of at another facility?	NO

If yes, provide the particulars of the facility:

Describe the measures that will be taken to ensure the optimal reuse or recycling of waste water, if any:

N/A

11(c) Emissions into the atmosphere

Will the activity release emissions into the atmosphere?	YES	N/A
If yes, is it controlled by any legislation of any sphere of government?	N/A	NO

If yes, the applicant should consult with the competent authority to determine whether it is necessary to change to an application for scoping and EIA.

If no, describe the emissions in terms of type and concentration:

There will be emissions from vehicles and construction machinery. However, these emissions will be at a lower degree and short term that authorisation will not be applied for.

11(d) Generation of noise

Will the activity generate noise?	YES	N/A
If yes, is it controlled by any legislation of any sphere of government?	N/A	NO

If yes, the applicant should consult with the competent authority to determine whether it is necessary to change to an application for scoping and EIA.

If no, describe the noise in terms of type and level:

Noise will be generated by moving vehicles in and out of the line route and will only affect the surrounding properties within the route in short term basis. This will be moving vehicles noise and will generally be classified as low impact.

12. WATER USE

Please indicate the source(s) of water that will be used for the activity by ticking the appropriate box(es)

municipal	water board	groundwater	river, stream, dam or lake	Other	the activity will not use water

If water is to be extracted from groundwater, river, stream, dam, lake or any other natural feature, please indicate

the volume that will be extracted per month: N/A

Does the activity require a water use permit from the Department of Water Affairs? NO

If yes, please submit the necessary application to the Department of Water Affairs and attach proof thereof to this application if it has been submitted.

13. ENERGY EFFICIENCY

Describe the design measures, if any, that have been taken to ensure that the activity is energy efficient:

Cables to be used for the distribution and transmission are of low resistance which will reduce power losses during transmission.
The line design measures will reduce power congestion to the designated power consumers; this includes the physical capacity of the devices used which have been designed to reduce congestion.
The transmission and distribution system network has been designed to be efficient and reliable to account for very low power loss of between 6% and 8% which are considered normal.

Describe how alternative energy sources have been taken into account or been built into the design of the activity, if any:

N/A

SECTION B: SITE/AREA/PROPERTY DESCRIPTION

Important notes:

1. For linear activities (pipelines, etc) as well as activities that cover very large sites, it may be necessary to complete this section for each part of the site that has a significantly different environment. In such cases please complete copies of Section C and indicate the area, which is covered by each copy No. on the Site Plan.

Section C Copy No. (e.g. A):	1

2. Paragraphs 1 - 6 below must be completed for each alternative.

3. Has a specialist been consulted to assist with the completion of this section?

NO	

If YES, please complete the form entitled "Details of specialist and declaration of interest" for each specialist thus appointed:
All specialist reports must be contained in Appendix D.

Property description/physical address:	Refer to list of Farms Attached in Appendix E.
	(Farm name, portion etc.) Where a large number of properties are involved (e.g. linear activities), please attach a full list to this application.
	N/A
	N/A
	In instances where there is more than one town or district involved, please attach a list of towns or districts to this application.
Current land-use zoning:	Agriculture, natural vegetation, ridges, road servitudes and existing power lines.
	In instances where there is more than one current land-use zoning, please attach a list of current land use zonings that also indicate which portions each use pertains to , to this application.

Is a change of land-use or a consent use application required?	NO
Must a building plan be submitted to the local authority?	NO

Locality map:

An A3 locality map must be attached to the back of this document, as Appendix A. The scale of the locality map must be relevant to the size of the development (at least 1:50 000. For linear activities of more than 25 kilometres, a smaller scale e.g. 1:250 000 can be used. The scale must be indicated on the map.) The map must indicate the following:

- an indication of the project site position as well as the positions of the alternative sites, if any;
- road access from all major roads in the area;
- road names or numbers of all major roads as well as the roads that provide access to the site(s);
- all roads within a 1km radius of the site or alternative sites; and
- a north arrow;
- a legend; and
- locality GPS co-ordinates (Indicate the position of the activity using the latitude and longitude of the centre point of the site for each alternative site. The co-ordinates should be in degrees and decimal minutes. The minutes should have at least three decimals to ensure adequate accuracy. The projection that must be used in all cases is the WGS84 spheroid in a national or local projection)

1. GRADIENT OF THE SITE

Indicate the general gradient of the site.

Alternative S1:

Flat	1:50 – 1:20	1:20 – 1:15	1:15 – 1:10	1:10 – 1:7,5	1:7,5 – 1:5	Steeper than 1:5

Alternative S2 (if any):

Flat	1:50 – 1:20	1:20 – 1:15	1:15 – 1:10	1:10 – 1:7,5	1:7,5 – 1:5	Steeper than 1:5

2. LOCATION IN LANDSCAPE

Indicate the landform(s) that best describes the site:

2.1 Ridgeline
2.2 Plateau
2.3 Side slope of hill/mountain
2.4 Closed valley
2.5 Open valley
2.6 Plain
2.7 Undulating plain / low hills √
2.8 Dune
2.9 Seafront

3. GROUNDWATER, SOIL AND GEOLOGICAL STABILITY OF THE SITE

Is the site(s) located on any of the following (tick the appropriate boxes)?

	Alternative S1:		**Alternative S2 (if any):**		**Alternative S3 (if any):**	
Shallow water table (less than 1.5m deep)		NO		NO		
Dolomite, sinkhole or doline areas		NO		NO		
Seasonally wet soils (often close to water bodies)	YES		YES			
Unstable rocky slopes or steep slopes with loose soil		NO		NO		
Dispersive soils (soils that dissolve in water)		NO		NO		
Soils with high clay content (clay fraction more than 40%)	YES		YES			
Any other unstable soil or geological feature		NO		NO		
An area sensitive to erosion		NO		NO		

If you are unsure about any of the above or if you are concerned that any of the above aspects may be an issue of concern in the application, an appropriate specialist should be appointed to assist in the completion of this section. (Information in respect of the above will often be available as part of the project information or at the planning sections of local authorities. Where it exists, the 1:50 000 scale Regional Geotechnical Maps prepared by the Council for Geo Science may also be consulted).

4. GROUNDCOVER

Indicate the types of groundcover present on the site:

The location of all identified rare or endangered species or other elements should be accurately indicated on the site plan(s).

Natural veld - good condition[E]	Natural veld with scattered aliens[E]	Natural veld with heavy alien infestation[E]	Veld dominated by alien species[E]	Gardens
Sport field	Cultivated land	Paved surface	Building or other structure	Bare soil

If any of the boxes marked with an "E "is ticked, please consult an appropriate specialist to assist in the completion of this section if the environmental assessment practitioner doesn't have the necessary expertise.
See attached Appendix D for the Specialists Reports.

5. LAND USE CHARACTER OF SURROUNDING AREA

Indicate land uses and/or prominent features that does currently occur within a 500m radius of the site and give description of how this influences the application or may be impacted upon by the application:

5.1 Natural area √
5.2 Low density residential √
5.3 Medium density residential
5.4 High density residential √
5.5 Informal residential[A]
5.6 Retail commercial & warehousing
5.7 Light industrial
5.8 Medium industrial [AN]
5.9 Heavy industrial [AN]
5.10 Power station
5.11 Office/consulting room
5.12 Military or police base/station/compound
5.13 Spoil heap or slimes dam[A]
5.14 Quarry, sand or borrow pit
5.15 Dam or reservoir
5.16 Hospital/medical centre
5.17 School
5.18 Tertiary education facility
5.19 Church
5.20 Old age home
5.21 Sewage treatment plant[A]
5.22 Train station or shunting yard [N]
5.23 Railway line [N]
5.24 Major road (4 lanes or more) [N]√
5.25 Airport [N]
5.26 Harbour
5.27 Sport facilities
5.28 Golf course
5.29 Polo fields
5.30 Filling station [H]
5.31 Landfill or waste treatment site
5.32 Plantation
5.33 Agriculture √
5.34 River, stream or wetland √
5.35 Nature conservation area
5.36 Mountain, koppie or ridge √
5.37 Museum
5.38 Historical building
5.39 Protected Area
5.40 Graveyard
5.41 Archaeological site
5.42 Other land uses (describe)

If any of the boxes marked with an "[N] "are ticked, how will this impact / be impacted upon by the proposed activity?

If any of the boxes marked with an "An" are ticked, how will this impact / be impacted upon by the proposed activity?
If YES, specify and explain: N/A
If YES, specify:

If any of the boxes marked with an "H" are ticked, how will this impact / be impacted upon by the proposed activity.
If YES, specify and explain: N/A
If YES, specify:

6. CULTURAL/HISTORICAL FEATURES

Are there any signs of culturally or historically significant elements, as defined in section 2 of the National Heritage Resources Act, 1999, (Act No. 25 of 1999), including		NO
Archaeological or paleontological sites, on or close (within 20m) to the site?	UNCERTAIN	
If YES, explain:	Refer to Heritage Impact Report	
If uncertain, conduct a specialist investigation by a recognised specialist in the field to establish whether there is such a feature(s) present on or close to the site.		
Briefly explain the findings of the specialist:		
Will any building or structure older than 60 years be affected in any way?		NO
Is it necessary to apply for a permit in terms of the National Heritage Resources Act, 1999 (Act 25 of 1999)?		NO

If yes, please submit or, make sure that the applicant or a specialist submits the necessary application to SAHRA or the relevant provincial heritage agency and attach proof thereof to this application if such application has been made.

SECTION C: PUBLIC PARTICIPATION

1. ADVERTISEMENT

The person conducting a public participation process must take into account any guidelines applicable to public participation as contemplated in section 24J of the Act and must give notice to all potential interested and affected parties of the application which is subjected to public participation by—

(a) fixing a notice board (of a size at least 60cm by 42cm; and must display the required information in lettering and in a format as may be determined by the competent authority) at a place conspicuous to the public at the boundary or on the fence of—
  (i) the site where the activity to which the application relates is or is to be undertaken; and
  (ii) any alternative site mentioned in the application;

(b) giving written notice to—
  (i) the owner or person in control of that land if the applicant is not the owner or person in control of the land;
  (ii) the occupiers of the site where the activity is or is to be undertaken or to any alternative site where the activity is to be undertaken;
  (iii) owners and occupiers of land adjacent to the site where the activity is or is to be undertaken or to any alternative site where the activity is to be undertaken;
  (iv) the municipal councillor of the ward in which the site or alternative site is situated and any organisation of ratepayers that represent the community in the area;
  (v) the municipality which has jurisdiction in the area;
  (vi) any organ of state having jurisdiction in respect of any aspect of the activity; and
  (vii) any other party as required by the competent authority;

(c) placing an advertisement in—
  (i) one local newspaper; or
  (ii) any official *Gazette* that is published specifically for the purpose of providing public notice of applications or other submissions made in terms of these Regulations;

(d) placing an advertisement in at least one provincial newspaper or national newspaper, if the activity has or may have an impact that extends beyond the boundaries of the metropolitan or local municipality in which it is or will be undertaken: Provided that this paragraph need not be complied with if an advertisement has been placed in an official *Gazette* referred to in subregulation 54(c)(ii); and

(e) using reasonable alternative methods, as agreed to by the competent authority, in those instances where a person is desiring of but unable to participate in the process due to—
  (i) illiteracy;
  (ii) disability; or
  (iii) any other disadvantage.

2. CONTENT OF ADVERTISEMENTS AND NOTICES

A notice board, advertisement or notices must:

(a) indicate the details of the application which is subjected to public participation; and

(b) state—
  (i) that the application has been submitted to the competent authority in terms of these Regulations, as the case may be;
  (ii) whether basic assessment or scoping procedures are being applied to the application, in the case of an application for environmental authorisation;
  (iii) the nature and location of the activity to which the application relates;
  (iv) where further information on the application or activity can be obtained; and

(iv) the manner in which and the person to whom representations in respect of the application may be made.

3. PLACEMENT OF ADVERTISEMENTS AND NOTICES

Where the proposed activity may have impacts that extend beyond the municipal area where it is located, a notice must be placed in at least one provincial newspaper or national newspaper, indicating that an application will be submitted to the competent authority in terms of these regulations, the nature and location of the activity, where further information on the proposed activity can be obtained and the manner in which representations in respect of the application can be made, unless a notice has been placed in any *Gazette* that is published specifically for the purpose of providing notice to the public of applications made in terms of the EIA regulations.

Advertisements and notices must make provision for all alternatives.

4. DETERMINATION OF APPROPRIATE MEASURES

The practitioner must ensure that the public participation is adequate and must determine whether a public meeting or any other additional measure is appropriate or not based on the particular nature of each case. Special attention should be given to the involvement of local community structures such as Ward Committees, ratepayers associations and traditional authorities where appropriate. Please note that public concerns that emerge at a later stage that should have been addressed may cause the competent authority to withdraw any authorisation it may have issued if it becomes apparent that the public participation process was inadequate.

5. COMMENTS AND RESPONSE REPORT

The practitioner must record all comments and respond to each comment of the public before the application is submitted. The comments and responses must be captured in a comments and response report as prescribed in the EIA regulations and be attached to this application. The comments and response report must be attached under Appendix E.

6. AUTHORITY PARTICIPATION

Please note that a complete list of all organs of state and or any other applicable authority with their contact details must be appended to the basic assessment report or scoping report, whichever is applicable.

Authorities are key interested and affected parties in each application and no decision on any application will be made before the relevant local authority is provided with the opportunity to give input.

List of authorities informed:

1. Department of Water Affairs
2. Mpumalanga Tourism and Parks Agency
3. South African Heritage Resources Agency
4. Nkomazi Local Municipality

List of authorities from whom comments have been received:

1. South Africa Heritage Resources Agency
2. Department of Water Affairs

7. CONSULTATION WITH OTHER STAKEHOLDERS

Note that, for linear activities, or where deviation from the public participation requirements may be appropriate, the person conducting the public participation process may deviate from the requirements of that sub-regulation to the extent and in the manner as may be agreed to by the competent authority.
Proof of any such agreement must be provided, where applicable.

Has any comment been received from stakeholders?	YES	

If "YES", briefly describe the feedback below (also attach copies of any correspondence to and from the stakeholders to this application):

Stakeholder Comments
Please refer to the public participation report attached as Appendix E

SECTION D: IMPACT ASSESSMENT

The assessment of impacts must adhere to the minimum requirements in the EIA Regulations, 2010, and should take applicable official guidelines into account. The issues raised by interested and affected parties should also be addressed in the assessment of impacts.

Criteria	Description	
Nature of the impact	An assessment of the type of effect the activity would have on the affected environment including the description of what is being affected and how.	
Extent	Describes whether the impacts are either limited in extent or affect a wide range of group of people.	
	National / International	Reaches national or international scale
	Regional	Widespread, far beyond site
	Local	Beyond site boundary. Local area.
	Site	Within site boundary.
Duration	Describe the life time of the impact	
	Permanent	Beyond decommissioning.
	Long Term	More than ≥16-30 years
	Medium Term	Medium (6-15 years). Lifespan of the project. Reversible over time
	Short term/once off	Short term (0-5 years). Less than the project lifespan. Quickly reversible
	No impact	
Intensity/ Severity	Describe the potential for causing negative impacts	
	High	The impact will have a serious impact unless mitigation measures are implemented
	Medium	The impact will have moderate impacts unless mitigation is implemented
	Low	The impact will have small negative impacts
	Negligible	The impact is insignificant
	Unknown	The severity of the impact in unknown
Probability /Certainty	Describes the degree of certainty of the impact actually occurring	
	Definite	More than 90% sure of a particular fact.
	Probable	Over 70% sure of a particular fact
	Unsure	Less than 40% sure of a particular fact
Significance	Synthesis of the above	
	High	It will influence the decision regardless of any possible mitigation. (widespread)
	Medium	It should have an influence on the decision unless it is mitigated. (limited)
	Low	It will not have an influence on the decision. (insignificant)

1. ISSUES RAISED BY INTERESTED AND AFFECTED PARTIES

List the main issues raised by interested and affected parties.

A more detailed compilation of the concerns and comments is attached in Appendix E.

Response from the practitioner to the issues raised by the interested and affected parties (A full response must be given in the Comments and Response Report that must be attached to this report as Annexure E):

A more detailed compilation of the responses is attached in Appendix E.

2. IMPACTS THAT MAY RESULT FROM THE PLANNING AND DESIGN, CONSTRUCTION, OPERATIONAL, DECOMMISSIONING AND CLOSURE PHASES AS WELL AS PROPOSED MANAGEMENT OF IDENTIFIED IMPACTS AND PROPOSED MITIGATION MEASURES

List the potential direct, indirect and cumulative property/activity/design/technology/operational alternative related impacts (as appropriate) that are likely to occur as a result of the planning and design phase, construction phase, operational phase, decommissioning and closure phase, including impacts relating to the choice of site/activity/technology alternatives as well as the mitigation measures that may eliminate or reduce the potential impacts listed.

2.1 IMPACTS EVALUATION

Both alternatives have medium-low scores, indicating that the environment has already been impacted significantly. Alternative 1 will have the lowest risk and management of impacts because of the more disturbed area. Alternative 1 crosses fewer roads and mountains and is shorter than Alternative 2. Alternative 1 also has a reduced number of potential sensitive receptors. Although Alternative 1 is less sensitive than Alternative 2, the management and monitoring of impacts will be the same.

2.2 POTENTIAL IMPACTS DURING CONSTRUCTION - ALTERNATIVE 1.

Table 2: Assessment of predicted impacts before mitigation measurements are applied in the construction phase – Alternative 1.

ISSUE	NATURE OF IMPACT	EXTENT / LOCATION	DURATION	MAGNITUDE / INTENSITY	PROBABILITY	SIGNIFICANCE	DIRECT / INDIRECT / CUMULATIVE	STATUS
Topography & Geology	Moderate - steep slopes Erosion	Local	Short term	Low	Probable	Low	Direct	Negative
Surface & Ground water quality	Possible leaks, spillage of hydraulic oils, diesel and grease	Site	Short term	High	Definite	High	Direct	Negative
Waste management	Construction material created with	Site	Short term	Low	Definite	Medium	Direct	Negative
Flora (Vegetation)	Removal of pristine vegetation	Site	Long term	Medium	Probable	Low	Direct	Negative
	Medical Plants and Protected tree	Site	Long term	Medium	Probable	Low	Direct	Negative
Fauna	Biodiversity of indigenous animal species.	Local	Short term	Medium	Unsure	Low	Indirect	Negative
	Birds that catch insects in flight.	Local	Short term	Medium	Unsure	Low	Indirect	Negative
	Birds that nest in trees	Local	Short term	Medium	Unsure	Low	Direct	Negative
Air quality	Dust during construction by vehicles.	Site	Short term	Low	Probable	Low	Direct	Negative
Noise pollution	Malfunction of vehicles. Noisy workforce.	Site	Short term	Low	Unsure	Low	Indirect	Negative
Visual	Construction of high power lines.	Local	Short term	Medium	Unsure	Low	Indirect	Negative
Socio-economic	Job creation and local economic impact	Local	Long term	High	Definite	High	Direct	Positive
	Undisciplined workers.	Local	Short term	Low	Definite	Medium	Indirect	Negative
	Traffic and neighbourhood disruptions.	Site	Short term	Medium	Probable	Medium	Direct	Negative

Table 3: Suggested management actions to mitigate possible negative impacts during construction phase – Alternative 1.

ISSUE	POTENTIAL IMPACT	MANAGEMENT ACTIONS	MONITORING OF IMPACTS
Topography &Geology	• Deviation from the access and service roads by heavy machinery might result in vegetation being trampled. This enable surface water run-off. • Newly created roads might encourage erosion.	• Movement of equipment and machinery have to be restricted to designated roads. • Avoid steep slopes with newly established access roads. • Re-vegetation of temporary roads with indigenous vegetation. • Use sandbags to prevent silting up of streams and rivers.	• Regular monitor conditions of access roads. • Monitor establishment of vegetation. • Monitors effectiveness of sandbags after a storm.
Surface & Ground Water quality	1. Possible leaks, spillage of hydraulic oils, diesel and grease from heavy machinery.	• Inspect machinery and equipment for possible leaks and malfunction. • Refuelling should be designated to a specific concrete site. • Refuelling site has to be more than 200m from a stream, drainage line or wetland. • Empty grease, diesel, hydraulic oil and petrol should be disposed of at a licensed hazardous facility.	• Inspect and maintain equipment on a daily basis. • Regular checking of diesel tanks. • Regular removal of empty drums.
	2. Disinfectants used for mobile toilets	• Experienced people should empty or remove mobile toilets. • Antiseptic liquids should be handled and stored in a safe place.	• Weekly inspections of leaking toilets
Waste management	• Waste can be created during the construction phase in the form of excess concrete, cement bags. • Workers can litter during lunch times.	• After the construction of poles, all waste has to be removed to a registered landfill site. • Workers have to take all their waste with them after lunch.	Inspection of ESKOM personnel.
Flora (Vegetation)	• Removal of vegetation, especially trees.	• Only remove specific trees in the servitude. • For every tree that was removed, 1 tree per year has to be replanted in the vicinity for next 10 years.	Inspection of ESKOM personnel to ensure the establishment of the trees.
	Four (4) protected plant and four (4) RDL species were found.	• Only remove specific trees in the servitude. • For every tree that was removed, 1 tree per year has to be replanted in the vicinity for next 10 years.	Inspection of ESKOM personnel to ensure the establishment of the trees.
Fauna	• Habitat fragmentation • The impacts on large and small terrestrial fauna, including small mammals, reptiles and amphibians is considered to be of low significance. • Workers can kill and poach animals in the constructed areas.	• Use existing access roads and or disturbed areas (existing power line, farm boundaries and service roads). • Avoid sensitive areas such as rocky outcrops, wetlands, forests areas. • Placing poles on preselected sites of low fauna importance. • Restrict workers from killing and poaching of animals and birds in the constructed areas.	No monitoring needed.
	Impacts on birds will be on ridges, along rivers and drainage lines and in areas with a combination of game farming. The impact can also include:	• Spans that cross major drainage line and skirt water bodies should be marked with "Bird Flight Diverters" on the earth wire	No monitoring

ISSUE	POTENTIAL IMPACT	MANAGEMENT ACTIONS	MONITORING OF IMPACTS
	• Collision risk. • Electrocution risk. • Electrical faults caused by bird excreta. • Disturbance of habitat during construction of the power lines.	of the line, 5m apart, altering white and black. • Removal of large trees has to be restricted to the minimum. • Poles should be fitted with bird perches on top of the poles to draw birds away from potentially risky insulators.	
Air quality	Access roads are mostly gravel roads, dust will be experienced Dust can be generated during excavation due to hard rock.	Access roads should be sprinkled with water from water tanks. Vehicles have to drive slowly to create less dust.	Daily monitoring of covered areas.
Noise pollution	1. Movement of equipment and inspection by management.	• Regular servicing of vehicles to prevent high pitched roars	Daily monitoring of vehicles.
	2. Noise created by workers when travel to and from sites.	• Construction workers should be alerted not to scream or hoot at the public or near residential areas.	No monitoring needed
Visual	The construction of the power lines will be visually exposed and can have a possible negative impact on the environment.	• Use monopole structures. • Restrict to already existing infrastructure. • Four legged structures should only be used at river crossings or difficult terrains.	No monitoring needed
Socio-economic	1. Job creation and local economic impact.	• No management suggested.	• No monitoring needed.
	2. Undisciplined Workers	• Workers have to be provided with a code of conduct to address the required standards in terms of team member's behaviour and not to insult the public. • Workers should have an allocated site for lunch. • Smokers should not discard life cigarette buds to prevent fire risk. • Access control at camp site to protect equipment and property.	• No monitoring needed.
	3. Traffic disrupted by construction of the power line where it crosses a road. 4. Electricity disruptions when lines are connected.	• Signage and notification through media. • Provide consumers with schedules of power interruptions	• No monitoring needed

POTENTIAL IMPACTS DURING THE OPERATIONAL PHASE - ALTERNATIVE 1.

Table 4: Assessment of predicted impacts before mitigation measurements are applied in the operational phase – Alternative 1.

ISSUE	NATURE OF IMPACT	EXTENT / LOCATION	DURATION	MAGNITUDE / INTENSITY	PROBABILITY	SIGNIFICANCE	DIRECT / INDIRECT / CUMULATIVE	STATUS
Topography & Geology	Moderate - steep slopes Erosion	Site	Short term	Low	Unsure	Low	Indirect	Negative
Surface or Ground water quality	Possible breakage of cables in and around streams/wetlands	Local/ downstream	Long term	Low	Unsure	Low	Indirect	Negative
Waste management	Minimum waste will be created during inspections/surveys.	Local	Long term	Low	Unsure	Low	Direct	Negative
Ecology: Fauna & Flora	Biodiversity of indigenous animal species.	Local	Long term	Medium	Probable	Low	Indirect	Negative
	Birds that catch insects in flight – collisions and electrocutions	Local	Long term	Medium	Probable	Medium	Direct	Negative
	Birds that nest on poles	Local	Long term	Medium	Probable	Medium	Direct	Negative
	Four (4) protected plant and four (4) RDL species were found.	Local	Long term	Medium	Probable	Medium	Direct	Negative
Visual	High Power lines	Local	Long term	High	Definite	Medium	Direct	Negative
Social Impacts	Undisciplined workers	Site	Long term	Medium	Definite	Medium	Direct	Negative
	The quality of life of the residents that will receive electricity will improve dramatically.	Local	Long term	High	Definite	High	Direct	Positive

Table 5: Suggested management actions to mitigate possible negative impacts during operational phase – Alternative 1.

ISSUE	POTENTIAL IMPACT	MANAGEMENT ACTIONS	MONITORING OF IMPACTS
Topography &Geology	• Deviation from the existing access and service roads by vehicles might result in vegetation being trampled. This enable surface water run-off. • Newly created roads might encourage erosion.	• Movement of equipment and machinery have to be restricted to designated roads during maintenance of power lines. • Avoid steep slopes with newly established access roads. • Re-vegetation of temporary roads with indigenous vegetation. • Use sandbags to prevent silting up of streams and rivers if necessary.	• Regular monitor conditions of access roads. • Monitor establishment of vegetation. • Monitors effectiveness of sandbags after a storm.
Surface & Ground Water quality	Possible leaks, spillage of hydraulic oils, diesel and grease from heavy machinery during maintenance.	• Inspect machinery and equipment for possible leaks and malfunction.	• Inspect and maintain equipment before a maintenance trip.
Waste management	• Waste can be created during the maintenance. • ESKOM workers that inspect power lines can litter during lunch times.	• All possible waste has to be removed from the site after a maintenance survey. • Workers have to take all their waste with them after lunch.	Inspection of ESKOM personnel after maintenance team was on site.
Ecology: Flora & Fauna	• Habitat fragmentation • The impacts on large and small terrestrial fauna, including small mammals, reptiles and amphibians is considered to be of low significance. • Workers can kill and poach animals during maintenance of the power lines.	• Use existing access roads and or disturbed areas (existing power line, farm boundaries and service roads). • Avoid sensitive areas such as rocky outcrops, wetlands, forests areas. • Placing poles on preselected sites of low fauna importance. • Restrict workers from killing and poaching of animals and birds in the constructed areas.	No monitoring needed.
	Impacts on birds will be on ridges, along rivers and drainage lines and in areas with a combination of game farming. The impact can also include: • Collision risk. • Electrocution risk. • Electrical faults caused by bird excreta. • Disturbance of habitat during operation of the power lines.	• Spans that cross major drainage line and skirt water bodies should be marked with "Bird Flight Diverters" on the earth wire of the line, 5m apart, altering white and black. • Removal of large trees has to be restricted to the minimum. • Poles should be fitted with bird perches on top of the poles of draw birds away from potentially risky insulators.	Regular monitoring of power lines, "Bird Flight Diverters" and bird perches on poles.
	Four (4) protected plant and four (4) RDL species were found.	• Replant protected and endemic trees on a yearly basis.	No monitoring needed
Noise pollution	1. Movement of equipment and inspection by management.	• Regular services of vehicles to prevent high pitched roars	Daily monitoring of vehicles.
	2. Noise created by workers when travel to and from sites.	• Construction workers should be alerted not to scream or hoot at the public or near residential areas.	No monitoring needed
Visual	Visibility of high power lines	• No management actions	No monitoring needed
Socio-economic	Undisciplined staff/workers	• Workers have to be provided with a code of conduct to address	Regular training of workers.

ISSUE	POTENTIAL IMPACT	MANAGEMENT ACTIONS	MONITORING OF IMPACTS
		the required standards in terms of team member's behaviour and not to insult the public. • Workers should have an allocated site for lunch. • Smokers should not discard life cigarette buds to prevent fire risk.	

2.3 POTENTIAL IMPACTS DURING CONSTRUCTION - ALTERNATIVE 2.

Table 6: Assessment of predicted impacts before mitigation measurements are applied in the construction phase – Alternative 2.

ISSUE	NATURE OF IMPACT	EXTENT / LOCATION	DURATION	MAGNITUDE / INTENSITY	PROBABILITY	SIGNIFICANCE	DIRECT / INDIRECT / CUMULATIVE	STATUS
Topography & Geology	Moderate - steep slopes Erosion	Local	Short term	Medium	Probable	Medium	Direct	Negative
Surface & Ground water quality	Possible leaks, spillage of hydraulic oils, diesel and grease	Site	Short term	High	Definite	High	Direct	Negative
Waste management	Construction material created with construction of power line poles	Site	Short term	Low	Definite	Medium	Direct	Negative
Flora (Vegetation)	Removal of pristine vegetation	Site	Long term	High	Probable	High	Direct	Negative
	Medical Plants and Protected tree	Site	Long term	High	Probable	Medium	Direct	Negative
Fauna	Biodiversity of indigenous animal species.	Local	Short term	High	Probable	Medium	Indirect	Negative
	Birds that catch insects in flight.	Local	Short term	Medium	Probable	Medium	Indirect	Negative
	Birds that nest in trees	Local	Short term	Medium	Probable	Medium	Direct	Negative
Air quality	Dust during construction by vehicles.	Site	Short term	Low	Probable	Low	Direct	Negative
Noise pollution	Malfunction of vehicles. Noisy workforce.	Local	Short term	Low	Unsure	Low	Indirect	Negative
Visual	Construction of high power lines.	Local	Long term	Medium	Unsure	Medium	Indirect	Negative
Socio-economic	Job creation and local economic impact	Local	Short term	High	Definite	High	Direct	Positive
	Undisciplined Workers	Local	Short term	Low	Definite	Medium	Indirect	Negative
	Traffic and neighbourhood disruptions.	Site	Short term	Medium	Probable	Medium	Direct	Negative

Table 7: Suggested management actions to mitigate possible negative impacts during construction phase – Alternative 2.

ISSUE	POTENTIAL IMPACT	MANAGEMENT ACTIONS	MONITORING OF IMPACTS
Topography &Geology	• Deviation from the access and service roads by heavy machinery might result in vegetation being trampled. This enable surface water run-off. • Newly created roads might encourage erosion.	• Movement of equipment and machinery have to be restricted to designated roads. • Avoid steep slopes with newly established access roads. • Re-vegetation of temporary roads with indigenous vegetation. • Use sandbags to prevent silting up of streams and rivers.	• Regular monitor conditions of access roads. • Monitor establishment of vegetation. • Monitors effectiveness of sandbags after a storm.
Surface & Ground Water quality	3. Possible leaks, spillage of hydraulic oils, diesel and grease from heavy machinery.	• Inspect machinery and equipment for possible leaks and malfunction. • Refuelling should be designated to a specific concrete site. • Refuelling site has to be more than 200m from a stream, drainage line or wetland. • Empty grease, diesel, hydraulic oil and petrol should be disposed of at a licensed hazardous facility.	• Inspect and maintain equipment on a daily basis. • Regular checking of diesel tanks. • Regular removal of empty drums.
	4. Disinfectants used for mobile toilets	• Experienced people should empty or remove mobile toilets. • Antiseptic liquids should be handled and stored in a safe place.	• Weekly inspections of leaking toilets
Waste management	• Waste can be created during the construction phase in the form of excess concrete, cement bags. • Workers can litter during lunch times.	• After the construction of poles, all waste has to be removed to a registered landfill site. • Workers have to take all their waste with them after lunch.	Inspection of ESKOM personnel.
Flora (Vegetation)	• Removal of vegetation, especially trees.	• Only remove specific trees in the servitude. • For every tree that was removed, 1 tree per year has to be replanted in the vicinity for next 10 years.	Inspection of ESKOM personnel to ensure the establishment of the trees.
	Four (4) protected plant and four (4) RDL species were found.	• Only remove specific trees in the servitude. • For every tree that was removed, 1 tree per year has to be replanted in the vicinity for next 10 years.	Inspection of ESKOM personnel to ensure the establishment of the trees.
Fauna	• Habitat fragmentation • The impacts on large and small terrestrial fauna, including small mammals, reptiles and amphibians is considered to be of low significance. • Workers can kill and poach animals in the constructed areas.	• Use existing access roads and or disturbed areas (existing power line, farm boundaries and service roads). • Avoid sensitive areas such as rocky outcrops, wetlands, forests areas. • Placing poles on preselected sites of low fauna importance. • Restrict workers from killing and poaching of animals and birds in the constructed areas.	No monitoring needed.
	Impacts on birds will be on ridges, along rivers and drainage lines and in areas with a combination of game farming. The impact can also include:	• Spans that cross major drainage line and skirt water bodies should be marked with "Bird Flight Diverters" on the earth wire	No monitoring

ISSUE	POTENTIAL IMPACT	MANAGEMENT ACTIONS	MONITORING OF IMPACTS
	• Collision risk. • Electrocution risk. • Electrical faults caused by bird excreta. • Disturbance of habitat during construction of the power lines.	of the line, 5m apart, altering white and black. • Removal of large trees has to be restricted to the minimum. • Poles should be fitted with bird perches on top of the poles to draw birds away from potentially risky insulators.	
Air quality	Access roads are mostly gravel roads, dust will be experienced Dust can be generated during excavation due to hard rock.	Access roads should be sprinkled with water from water tanks. Vehicles have to drive slowly to create less dust.	Daily monitoring of covered areas.
Noise pollution	3. Movement of equipment and inspection by management.	• Regular servicing of vehicles to prevent high pitched roars	Daily monitoring of vehicles.
	4. Noise created by workers when travel to and from sites.	• Construction workers should be alerted not to scream or hoot at the public or near residential areas.	No monitoring needed
Visual	The construction of the power lines will be visually exposed and can have a possible negative impact on the environment.	• Use monopole structures. • Restrict to already existing infrastructure. • Four legged structures should only be used at river crossings or difficult terrains.	No monitoring needed
Socio-economic	5. Job creation and local economic impact.	• No management suggested.	• No monitoring needed.
	6. Undisciplined Workers	• Workers have to be provided with a code of conduct to address the required standards in terms of team member's behaviour and not to insult the public. • Workers should have an allocated site for lunch. • Smokers should not discard life cigarette buds to prevent fire risk. • Access control at camp site to protect equipment and property.	• No monitoring needed.
	7. Traffic disrupted by construction of the power line where it crosses a road. 8. Electricity disruptions when lines are connected.	• Signage and notification through media. • Provide consumers with schedules of power interruptions	• No monitoring needed

POTENTIAL IMPACTS DURING THE OPERATIONAL PHASE - ALTERNATIVE 2.

Table 8: Assessment of predicted impacts before mitigation measurements are applied in the operational phase – Alternative 2.

ISSUE	NATURE OF IMPACT	EXTENT / LOCATION	DURATION	MAGNITUDE / INTENSITY	PROBABILITY	SIGNIFICANCE	DIRECT / INDIRECT / CUMULATIVE	STATUS
Topography & Geology	Moderate - steep slopes Erosion	Site	Short term	Low	Unsure	Low	Indirect	Negative
Surface or Ground water quality	Possible breakage of cables in and around streams/wetlands	Local/ downstream	Short term	Low	Unsure	Medium	Indirect	Negative
Waste management	Minimum waste will be produced, only during inspections/surveys.	Local	Long term	Low	Unsure	Low	Direct	Negative
Fauna	Biodiversity of indigenous animal species.	Local	Long term	Medium	Probable	Medium	Direct	Negative
	Birds that catch insects in flight – collisions and electrocutions	Local	Long term	Medium	Probable	Medium	Indirect	Negative
	Birds that nest on poles	Local	Long term	Low	Probable	Low	Direct	Negative
Visual	Visibility of high power lines.	Local	Long term	Medium	Definite	Medium	Indirect	Negative
Social Impacts	Undisciplined workers	Local	Long term	Medium	Probable	Low	Direct	Negative
	The quality of life of the residents that will receive electricity will improve dramatically.	Local	Long term	High	Definite	High	Direct	Positive

Table 9: Suggested management actions to mitigate possible negative impacts during operational phase – Alternative 2.

ISSUE	POTENTIAL IMPACT	MANAGEMENT ACTIONS	MONITORING OF IMPACTS
Topography &Geology	• Deviation from the existing access and service roads by vehicles might result in vegetation being trampled. This enable surface water run-off. • Newly created roads might encourage erosion.	• Movement of equipment and machinery have to be restricted to designated roads during maintenance of power lines. • Avoid steep slopes with newly established access roads. • Re-vegetation of temporary roads with indigenous vegetation. • Use sandbags to prevent silting up of streams and rivers if necessary.	• Regular monitor conditions of access roads. • Monitor establishment of vegetation. • Monitors effectiveness of sandbags after a storm.
Surface & Ground Water quality	Possible leaks, spillage of hydraulic oils, diesel and grease from heavy machinery during maintenance.	• Inspect machinery and equipment for possible leaks and malfunction.	• Inspect and maintain equipment before a maintenance trip.
Waste management	• Waste can be created during the maintenance. • ESKOM workers that inspect power lines can litter during lunch times.	• All possible waste has to be removed from the site after a maintenance survey. • Workers have to take all their waste with them after lunch.	Inspection of ESKOM personnel after maintenance team was on site.
Ecology: Flora & Fauna	• Habitat fragmentation • The impacts on large and small terrestrial fauna, including small mammals, reptiles and amphibians is considered to be of low significance. • Workers can kill and poach animals during maintenance of the power lines.	• Use existing access roads and or disturbed areas (existing power line, farm boundaries and service roads). • Avoid sensitive areas such as rocky outcrops, wetlands, forests areas. • Placing poles on preselected sites of low fauna importance. • Restrict workers from killing and poaching of animals and birds in the constructed areas.	No monitoring needed.
	Impacts on birds will be on ridges, along rivers and drainage lines and in areas with a combination of game farming. The impact can also include: • Collision risk. • Electrocution risk. • Electrical faults caused by bird excreta. • Disturbance of habitat during operation of the power lines.	• Spans that cross major drainage line and skirt water bodies should be marked with "Bird Flight Diverters" on the earth wire of the line, 5m apart, altering white and black. • Removal of large trees has to be restricted to the minimum. • Poles should be fitted with bird perches on top of the poles of draw birds away from potentially risky insulators.	Regular monitoring of power lines, "Bird Flight Diverters" and bird perches on poles.
	Four (4) protected plant and four (4) RDL species were found.	• Replant protected and endemic trees on a yearly basis.	No monitoring needed
Noise pollution	3. Movement of equipment and inspection by management.	• Regular services of vehicles to prevent high pitched roars	Daily monitoring of vehicles.
	4. Noise created by workers when travel to and from sites.	• Construction workers should be alerted not to scream or hoot at the public or near residential areas.	No monitoring needed
Visual	Visibility of high power lines	• No management actions	No monitoring needed
Socio-economic	Undisciplined staff/workers	• Workers have to be provided with a code of conduct to address	Regular training of workers.

ISSUE	POTENTIAL IMPACT	MANAGEMENT ACTIONS	MONITORING OF IMPACTS
		the required standards in terms of team member's behaviour and not to insult the public. • Workers should have an allocated site for lunch. • Smokers should not discard life cigarette buds to prevent fire risk.	

3. ENVIRONMENTAL IMPACT STATEMENT

Taking the assessment of potential impacts into account, please provide an environmental impact statement that summarises the impact that the proposed activity and its alternatives may have on the environment after the management and mitigation of impacts have been taken into account, with specific reference to types of impact, duration of impacts, likelihood of potential impacts actually occurring and the significance of impacts.

ALTERNATIVE S1 (PREFERRED ALTERNATIVE)							
Phase	Nature of Impact	Extent	Duration	Intensity/ Severity	Probability/ Certainty	Significance	
						Before	After mitigation
Planning	Topography & Geology	Site	Long term	Low	Definite	Medium	Low
	Fauna & Flora	Local	Long term	Medium	Probable	Medium	Low
	Land use	Site	Long term	Low	Definite	Low	Low
	Locality	Site	Long term	Low	Definite	Low	Low
Construction	Topography & Geology	Local	Short term	Low	Probable	Low	Low
	Surface & groundwater quality	Site	Short term	High	Definite	High	Low
	Waste management	Site	Short term	Low	Definite	Medium	Low
	Loss of Fauna & Flora	Site	Long term	Medium	Unsure	Low	Low
	Air quality	Site	Short term	Low	Probable	Low	Low
	Noise	Site	Short term	Low	Unsure	Low	Low
	Visual impacts	Local	Short term	Medium	Unsure	Low	Low
	Social Impact	Local	Short term	Medium	Definite	High-Medium	Low
Operational	Topography & Geology	Site	Short term	Low	Unsure	Low	Low
	Surface & groundwater quality	Local/ downstream	Long term	Low	Unsure	Low	Low
	Waste management	Local	Long term	Low	Unsure	Low	Low
	Fauna: Birds	Local	Long term	Medium	Probable	Medium	Low
	Visual impacts	Local	Long term	High	Definite	Medium	Low
	Social impact: Work force	Site	Short term	Medium	Definite	Medium	Low
	Social Impacts: available electricity	Local	Long term	High	Definite	High	No mitigations

ALTERNATIVE S2							
Phase	Nature of Impact	Extent	Duration	Intensity/ Severity	Probability/ Certainty	Significance	
						Before	After mitigation
Planning	Topography & Geology	Site	Long term	Low	Definite	Medium	Low
	Fauna & Flora	Local	Long term	Medium	Probable	Medium	Low
	Land use	Site	Long term	Medium	Definite	Medium	Medium
	Locality	Site	Long term	Low	Definite	Low	Low
Construction	Topography & Geology	Local	Short term	Medium	Probable	Medium	Low
	Surface & groundwater quality	Site	Short term	High	Definite	High	Medium
	Waste management	Site	Short term	Low	Definite	Medium	Low
	Loss of Fauna & Flora	Site	Long term	High	Probable	Medium	Medium
	Air quality	Site	Short term	Low	Probable	Low	Low
	Noise	Local	Short term	Low	Unsure	Low	Low
	Visual impacts	Local	Local term	Medium	Unsure	Medium	Medium
	Social impact	Local	Short term	Medium	Definite	High-Medium	Low
Operational	Topography & Geology	Site	Short term	Low	Unsure	Low	Low
	Surface & groundwater quality	Local/ downstream	Short term	Low	Unsure	Medium	Low
	Waste management	Local	Long term	Low	Unsure	Low	Low
	Fauna: Birds	Local	Long-term	Medium	Probable	Medium	Low
	Visual impacts	Local	Long term	Medium	Definite	Medium	Low
	Social impact: Work force	Site	Long term	Medium	Probable	Low	Low
	Social Impacts: available electricity	Local	Long term	High	Definite	High	No mitigations

No-go alternative (compulsory)

THIS ALTERNATIVE MEANS THAT THE PROPOSED PROJECT WILL NOT BE IMPLEMENTED AND THE POWER SHORTAGES WITHIN THE NKOMAZI AREA WILL NOT BE RESOLVED. THUS THIS ALTERNATIVE IS NOT RECOMMENDED AS THE PRESENT PROBLEM WILL PERSIST.

SECTION E. RECOMMENDATION OF PRACTITIONER

Is the information contained in this report and the documentation attached hereto sufficient to make a decision in respect of the activity applied for (in the view of the environmental assessment practitioner)?	YES	

If "NO", indicate the aspects that should be assessed further as part of a Scoping and EIA process before a decision can be made (list the aspects that require further assessment):

N/A

If "YES", please list any recommended conditions, including mitigation measures that should be considered for inclusion in any authorisation that may be granted by the competent authority in respect of the application:

- The landowners must be informed when the activity is about to commence and permission must be sought for accessibility to farms.
- The recruitment of local labour must be encouraged.
- Contractor(s) that will be responsible for the construction of the line must familiarise themselves with the mitigation measures enshrined within this document.
- The contractor(s) must implement and adhere to the requirements of the Occupational Health and Safety Act, 1993 (Act 85 of 1993) and all other acts cited with the report. The contractor(s) must have a Safety and Health specialist at all times on site to attend to injuries and offer first aid.
- The implementation of the Environmental Management Programme (EMPr) must be strictly enforced during all construction and operational activities. This includes all the recommendations suggested by other specialists within the report for mitigating any identified impacts within the proposed project area.
- During the construction period, construction activities must be stopped if heritage resources are discovered and the South African Heritage Resources Agency (SAHRA) consulted for inspection.

Is an EMPr attached?	YES	

The EMPr must be attached as Appendix F.

SECTION F: APPENDIXES

The following appendixes must be attached as appropriate:

Appendix A: Site plan(s)

Appendix B: Photographs

Appendix C: Facility illustration(s)

Appendix D: Specialist reports

Appendix E: Comments and responses report

Appendix F: Environmental Management Programme (EMPr)

Appendix G: Other information