

environmental affairs

Department: Environmental Affairs **REPUBLIC OF SOUTH AFRICA**

(For official use only)

File Reference Number:
Application Number:
Date Received:

(00 01 <i>j</i>)			

Basic assessment report in terms of the Environmental Impact Assessment Regulations, 2014, 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, 2014 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.
- This report format is current as of 08 December 2014. It is the responsibility of the applicant to ascertain whether subsequent versions of the form have been published or produced by the competent authority
- 3. 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.
- 4. Where applicable tick the boxes that are applicable in the report.
- 5. An incomplete report may be returned to the applicant for revision.
- 6. 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.
- 7. This report must be handed in at offices of the relevant competent authority as determined by each authority.
- 8. No faxed or e-mailed reports will be accepted.
- 9. The signature of the EAP on the report must be an original signature.
- 10. The report must be compiled by an independent environmental assessment practitioner.

- 11. 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.
- 12. A competent authority may require that for specified types of activities in defined situations only parts of this report need to be completed.
- 13. Should a specialist report or report on a specialised process be submitted at any stage for any part of this application, the terms of reference for such report must also be submitted.
- 14. Two (2) colour hard copies and one (1) electronic copy of the report must be submitted to the competent authority.
- 15. Shape files (.shp) for maps must be included in the electronic copy of the report submitted to the competent authority.

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 interes	t" for the
specialist appointed and attach in Appendix I.		

1. PROJECT DESCRIPTION

a) Describe the project associated with the listed activities applied for

The power supply to the greater Cape area is mostly provided by the coal-fired power stations on the Highveld, mainly in Mpumalanga. As a result, a Transmission network from Mpumalanga to the Cape has grown over the years as demand has increased. Much of this network is now over two decades old and is approaching its peak operational capacity. In order to meet the increasing demand of electricity, Eskom proposes to import power from the 800MW Kudu CCGT power station at Uubvlei, 15km north of Oranjemond in Namibia. The 800MW Kudu CCGT power station will supply 200MW to Namibia and the balance will be available for integration into the South African grid.

Eskom proposes to integrate the power from the Kudu CCGT power station into the South African grid via Transmission lines from the Namibian border. A number of alternative integration options and routes have been proposed to connect to the Eskom's Western Grid and supply the increasing demand in the Cape. This specific project forms part of the Kudu Integration project and relates specifically to the proposed 230km 400kV Juno-Gromis Transmission line and the proposed deviation along same which aims to enhance the supply to the Western Cape, which has been plagued by outages

An Environmental Impact Assessment (EIA) was commissioned for the proposed construction of the Eskom 400kV transmission power line, Kudu integration project in terms of the Environment Conservation Act 1989 (Act No. 73 of 1989). The study presented various alternatives and included a number of specialist studies, as a result a Record of Decision (RoD) currently known as Environmental Authorisation (EA) was issued on 6 November 2007 under reference 12/12/20/720. Further an extension for the EA issued was applied for and granted in 20 March 2014.

Subsequent to the Authorisation, the negotiation process with the affected landowners along the approved corridor commenced and was concluded with recommendations from the affected landowners. The landowners raised concerns and several issues regarding the approved corridor and the proposed alignment within the corridor; following which they recommended deviations along

specific portions of the line.

In an effort to address the issues raised by the landowners, Eskom proposes the deviation of portions of the authorised corridor as follows:

- Landing strip in Lutzville which will result in a deviation of approximately 4.1km;
- Tronox Mine Namakwa Sands which will result in a deviation of approximately 3km; and
- A new mine in Kamiesberg which will result in a deviation of approximately 7.2km.

Further, Eskom's proposes the development of two optic Fibre Repeater Stations (FRS) which will be located along the proposed power line. These will be 5m long, 3m wide and 4m high and its exact location is not yet determined. The proposed FRS will not trigger any additional listed activities; however, the facility illustration for the FRS is attached as Appendix C.

The proposed deviations triggers listed activities under Government Notices R. 983 and R.985 Activity therefore, Environmental Authorisation must be obtained in terms of the National Environmental Management Act, 1998 (Act No. 107 of 1998) and the Environmental Impact Assessment Regulations of December 2014.

b) Provide a detailed description of the listed activities associated with the project as applied for

Listed activity as described in GN 734, 735 and 736	Description of project activity
Example:	
GN 734 Item xx xx): The construction of a	A bridge measuring 5 m in height and 10m in
bridge where such construction occurs	length, no wider than 8 meters will be built
within a watercourse or within 32 metres of a	over the Orange river
watercourse, measured from the edge of a	
watercourse, excluding where such	
construction will occur behind the	
development setback line.	
GN R.985	
Activity 14 (xii) (a) (ii) (hh)	
The development of infrastructure or structures	
The development of infrastructure or structures with a physical footprint of 10 square meters or	

ff) Critical Biodiversity Areas or ecosystem service areas as identified in systematic biodiversity plans adopted by the competent authority or bioregional plans.	
hh) areas within 10km from national parks or world heritage sites or any other protected area identified in terms of NEMPAA or from the core area of a biosphere reserves.	Proposed deviation will encroach on identified CBA, both terrestrial and aquatic in the Northern Cape.
GN R.985 Activity 14 (xii) (f) (ii) (hh)	
The development of infrastructure or structures with a physical footprint of 10 square meters or more outside an urban area, in ff) Critical Biodiversity Areas or ecosystem service areas as identified in systematic biodiversity plans adopted by the competent authority or bioregional plans.	Proposed deviations 1 will encroach on the identified CBA, both terrestrial and aquatic in the Western Cape.
GN R. 983, Activity 24(ii)	
(ii) a road with a reserve wider than 13,5 metres,	construction of access roads that would be used
or where no reserves exists where the road is wider than 8 metres; but excluding –	during both construction and operation phases of the proposed project.
(b) roads where the entire road falls within an	
urban area.	
GN R. 985, Activity 4(a)(ii)(aa)	The proposed development would require the
The development of a road wider than 4 metres	construction of access roads that would be used
with a reserve less than 13,5 metres (a) In	during both construction and operation phases.
Northern Cape:	
(ii) Outside urban areas, in;	
(aa) A protected area identified in terms of NEMPAA, excluding disturbed areas;	
(ee) Critical biodiversity areas as identified in systematic biodiversity plans adopted by the	

competent authority or in bioregional plans.	
GN R. 985 Activity 4(f)(aa)	
The development of a road wider than 4 metres	The proposed development would require the
with a reserve less than 13, 5 metres (f) In	construction of access roads that would be used
Western cape:	during both construction and operation phases.
(i) Areas outside the urban areas;	
(aa) Areas containing indigenous	
vegetation.	
GN R. 983 Activity 12	The study area contains a number of
The development of-	watercourses that may be affected during the
(xii) infrastructure or structures with a physical	construction of the proposed development. A
footprint of 100 square metres or more;	Water Use Licence Application (WULA) will be
where such development occurs-	undertaken accordingly prior to commencement
(a) within a watercourse;	of construction activities.
(c) if no development setback exists, within 32	
metres of a watercourse, measured from the	
edge of a watercourse.	

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 as required by Appendix 1 (3)(h), Regulation 2014. Alternatives should include a consideration of all possible means by which the purpose and need of the proposed activity (NOT PROJECT) 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.

The identification of alternatives should be in line with the Integrated Environmental Assessment Guideline Series 11, published by the DEA in 2004. Should the alternatives include different locations and lay-outs, the co-ordinates of the different alternatives must be provided. The co-ordinates should be in degrees, minutes and seconds. The projection that must be used in all cases is the WGS84 spheroid in a national or local projection.

a) Site alternatives

Alternative 1 (preferred alternative)		
Description	Lat (DDMMSS)	Long
		(DDMMSS)
The proposed development will traverse various farms within the		
jurisdiction of Kamiesberg Local Municipality in the Northern Cape and		
Matzikama Local Municipality in the Western Cape Province of South		
Africa. The closest towns to the proposed deviation are Nuwerus		
Garies, Vredendal and Lutzville.		
Sections of the proposed deviations will encroach on identified Critical		
Biodiversity Areas in the Western Cape Province and traverse various		
farm portions as indicated below:		
	Start	
Deviation 1 - Landing Strip: located on Erf No 630,631, 632,633 and	31°28'43.813"S	18°19'06.517"E
1343, Ward 8 within the jurisdiction of Matzikama Local Municipality in		
the Western Cape.	Middle	
	31°30'48.427"S	18°23'13.539"E
	End	
	31°33'51.089"S	18°25'48.452"E
Deviation 2 - Tronox Mine: located on the Farms Klein Kogelfontein	Start	
561-Portion RE, Karoovlei 454-Portion, Farm 502, Karoeties Kop 150.	31°12'13.231"S	17°56'29.185"E
Houtkraal 145-Portion 5. Klein Kogelfontein 148- Portions 1 and 8.		



considered as it would defeat the purpose.

The corridor was approved in November 2007 and the requisite extensions granted, however owing to the land issues encountered during land negotiations deviations were proposed.

In the case of linear activities:

Alternative:

Alternative S1 (preferred)

Latitude (S):

Longitude (E):

- Starting point of the activity
- Middle/Additional point of the activity
- End point of the activity

Deviation 1 - Landing Strip		
31°28'43.813"S	18°19'06.517"E	
31°30'48.427"S	18°23'13.539"E	
31°33'51.089"S	18°25'48.452"E	

- Starting point of the activity
- Middle/Additional point of the activity
- End point of the activity

Deviation 2 - Tronox Mine		
31°12'13.231"S	17°56'29.185"E	
31°13'48.09"S	18°01'16.591"E	
31°16'08.01"S	18°05'34.604"E	

- Starting point of the activity
- Middle/Additional point of the activity
- End point of the activity

Deviation 3 - Kamiesberg Mine		
30°37'12.91"S	17°38'59.97"E	
30°42'13.673"S	17°44'12.202"E	
30°48'18.501"S	17°45'43.431"E	

Alternative S2 (if any)

- Starting point of the activity
- Middle/Additional point of the activity
- End point of the activity 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.

In the case of an area being under application, please provide the co-ordinates of the corners of the site as indicated on the lay-out map provided in Appendix A of this form.

b) Lay-out alternatives

Alternative 1 (preferred alternative)				
Description		Lat (DDMMSS)	Long (DDMMSS)	
Description	Alternative 2	Lat (DDMMSS)	Long (DDMMSS)	
Description	Alternative 3	Lat (DDMMSS)	Long (DDMMSS)	

c) Technology alternatives

Alternative 1 (preferred alternative)
Alternative 2
Alternative 3

d) Other alternatives (e.g. scheduling, demand, input, scale and design alternatives)

Alternative 1 (preferred alternative)	
Alternative 2	
Alternative 3	

e) No-go alternative

In accordance with the requirement of the Regulations, consideration must be given to the option not to develop. This option is usually considered when the proposed development is envisaged to have such significant negative environmental impacts that mitigation measures cannot ameliorate the identified impacts effectively.

The no-go alternative would be the option of not undertaking the proposed deviation of the approved 400kV Juno-Gromis transmission line. The proposed development is a deviation of an already approved corridor; therefore, the no-go option will imply that the already approved transmission line proceeds with disregard of other developments in the area which are the landing strip, Tronox mine and Kamiesberg Mine.

Further the no-go alternative would be the option of not undertaking the development of the proposed 400kV Juno-Gromis transmission line as planned. This option is not preferred for the following reasons:

- the Kudu Integration project which relates specifically to the proposed 230km 400kV Juno-Gromis Transmission line will not continue.
- should it be adopted the Municipality and community will be deprived of a much needed essential service/facility, particularly the Western Cape province, which has been plagued by outages.

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

3. PHYSICAL SIZE OF THE ACTIVITY

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

Alternative:

Size of the activity:

Alternative A1¹ (preferred activity alternative) Alternative A2 (if any) Alternative A3 (if any) m² m² m²

or, for linear activities:

¹ "Alternative A." refer to activity, process, technology or other alternatives.

Alternative:

Length of the activity:

Alternative A1 (preferred activity alternative)	51200m
Deviation 1 - Landing strip in Lutzville	41000m
Deviation 2 - Tronox Mine	3000m
Deviation 3 - New mine in Kamiesberg	7200m
Alternative A2 (if any)	m
Alternative A3 (if any)	m

Alternative:

Length of the activity:

Alternative A1 (preferred activity alternative)	m
Alternative A2 (if any)	m
Alternative A3 (if any)	m

Alternative:	Length of the activity:
Alternative A1 (preferred activity alternative)	m
Alternative A2 (if any)	m
Alternative A3 (if any)	m

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

Alternative:

Alternative A1 (Deviation 1 – Landing Strip) Alternative A1 (Deviation 2 – Tronox Mine) AlternativeA1(Deviation 3 – Kamiesberg Mine) Alternative A2 (if any) Alternative A3 (if any)

Size of the site/servitude:

225500m ²
165000m ²
396000m ²

4. SITE ACCESS

Does ready access to the site exist? YES NO

If NO, what is the distance over which a new access road will be built

m

Describe the type of access road planned:

Currently there is limited access to site, which is through farm roads. The few access roads that exist may have to be upgraded prior to commencement of construction work. At the sites where no access roads exist, roads will need to be established and these will be wider than 4 metres with a reserve less than 13, 5 metres.

The access roads will be compliant with a Type 6 gravel road; which comprises of 6 meter wide raised gravel extended with meadow drainage in flat terrain, with additional meters to cater for the 'V' type drainage in rolling terrain. Where necessary, suitable erosion control measures such as the construction of gabions and culverts to control storm-water will be implemented.

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.

5. 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 accurate indication of the project site position as well as the positions of the alternative sites, if any;
- indication of all the alternatives identified;
- closest town(s ;)
- 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).

The Locality Map is attached as Appendix A

6. LAYOUT/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:

- the property boundaries and numbers of all the properties within 50 metres of the site;
- the current land use as well as the land use zoning of the site;
- the current land use as well as the land use zoning each of the properties adjoining the site or sites;
- the exact position of each listed activity applied for (including alternatives);
- servitude(s) indicating the purpose of the servitude;
- a legend; and
- a north arrow.

The Layout/Route Plan is attached as Appendix A.

7. SENSITIVITY MAP

The layout/route plan as indicated above must be overlain with a sensitivity map that indicates all the sensitive areas associated with the site, including, but not limited to:

- watercourses;
- the 1:100 year flood line (where available or where it is required by DWS);
- ridges;
- cultural and historical features;
- areas with indigenous vegetation (even if it is degraded or infested with alien species); and
- critical biodiversity areas.

The sensitivity map must also cover areas within 100m of the site and must be attached in Appendix A.

The Sensitivity Map is attached as Appendix A.

8. 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 report. It must be supplemented with additional photographs of relevant features on the site, if applicable.

Eight - directional colour photographs are attached as Appendix B.

9. FACILITY ILLUSTRATION

A detailed illustration of the activity must be provided at a scale of at least 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.

The Facility Illustration is attached as Appendix C.

10. ACTIVITY MOTIVATION

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

1. Is the activity permitted in terms of the property's existing land use rights?	YES	NO	Please explain	
The proposed project entails the deviation of the approved Juno-Gromis 400kV Transmission line				
authorised on 06th November 2007 with DEA Reference Number: 12/12/20/720 and it is well within				
the existing land use rights				

2. Will the activity be in line with the following?			
	YES		
(a) Provincial Spatial Development Framework (PSDF)	~	NO	Please explain
The Western Cape provincial SDF takes as its starting point the goal of sustainable development.			

The SDF indicates that development is only acceptable and in the public interest if it is ecologically justifiable, socially equitable and economically viable, i.e. environmentally sustainable. This means that the development needs of present generation should be met without compromising the ability of future generations to meet their own needs. Sustainable development encompasses the integration of social, economic and ecological factors into planning, decision-making and implementation so as to ensure that development serves present and future generations. It is of crucial importance for the long-term survival of humankind that all development complies with this principle.

According to the Northern Cape SDF, an effective, competitive and responsive infrastructure network is imperative for on-going economic development of the province. Much of the province's primary agricultural and mineral production is produced in localities distant from markets and from points of export.

This Basic Assessment process is being undertaken with utmost consideration of the principle of sustainable development; furthermore, the proposed project is part of the programme of increasing electricity supply capacity to allow for improved infrastructure, which in turn will help uplift on-going economic development and growth in the province.

(b) Urban edge / Edge of Built environment for the area

YES

NO Please explain

The proposed project is outside the urban edge.

(c) Integrated Development Plan (IDP) and Spatial Development Framework (SDF) of the Local Municipality NO YES Please explain (e.g. would the approval of this application compromise V the integrity of the existing approved and credible municipal IDP and SDF?).

According to the Kamiesburg Local Municipality's IDP dated 2015 - 2016, the municipality provides electricity to 86 farms and about 88% of households have access to electricity within its jurisdiction. One of the Municipality's strategic objectives for 2011 - 2017 is the reduction of infrastructure backlogs i.e. human settlement, water, roads, electricity etc.

The provision of sustainable and affordable electrical services is one of the corner stones of any vibrant economy and Kamiesberg Municipality is therefore no exception. According to its IDP, currently the Municipality has adequate capacity to deliver bulk electricity services for any current or future residential of commercial developments in the area. However there seems to be some contradiction in the IDP as it also states that about 88% of households have access to electricity.

The current Matzikama Local Municipality IDP dated 2016 -2017 and Western Cape SDF promote industrial development and it is very specific about supply of power in its clearly stated support of National and Provincial Government's key projects. Further, it supports Strategic Infrastructural Project (SIP).

The proposed project will further increase the electricity provision within the municipalities especially in the residential areas as well as the new developments such as mines etc.

This application is well within the Municipality's mandate and its approval will not compromise the integrity approved of the IDPs.

(d) Approved Structure Plan of the Municipality

NO YES

Please explain

It is not within the Municipalities mandate to approve Eskom's structure plan; however, the Municipalities has been identified as a primary stakeholder eligible to comment on this draft Basic Assessment Report.

 (e) An Environmental Management Framework (EMF) adopted by the Department (e.g. Would the approval of this application compromise the integrity of the existing environmental management priorities for the area and if so, can it be justified in terms of sustainability considerations?) The proposed project will have a number of environmental impacts outlined in Appendix F that to an extent may compromise the integrate managed. However, the long term developmental and sustainability g economic activity and overarching benefits to both the region and th supply, justify the project. 	YES with va grity of goals co ne count	NO rying s the EN upled v ry in te	Please explain ignificance as //F if not well with increased erms of power
(f) Any other Plans (e.g. Guide Plan)	YES	NO V	Please explain
None identified.			
3. Is the land use (associated with the activity being applied for) considered within the timeframe intended by the existing approved SDF agreed to by the relevant environmental authority (i.e. is the proposed development in line with the projects and programmes identified as priorities within the credible IDP)?	YES	NO	Please explain
The proposed project is an energy supply related project which is price	ority for t	he Mur	nicipalities and
the country at large. Further, the proposed project is a Strategic Infra-	structure	e Projec	t (SIP) and is
A Does the community/area need the activity and the accepted			
4. Does the community/area need the activity and the associated land use concerned (is it a societal priority)? (This refers to the strategic as well as local level (e.g. development is a national priority, but within a specific local context it could be inappropriate.)	YES	NO	Please explain
As indicated above, 88% of households in Kamiesburg Local Municipality have access to electricity;			
this implies that 12% of households are not electrified. This development will assist in provision of electricity within the communities were electricity is lacking as well as in the mining and industrial environment.			
The Matzikama Local Municipality IDP states that with regards to progress with respect to community needs, electricity upgrades remain a need for the Municipality to accommodate new developments.			

This is a clear indication that this project is needed within the Matzikama and Kamiesburg Local Municipalities.

5. Are the necessary services with adequate capacity currently available (at the time of application), or must additional NO capacity be created to cater for the development? YES Please explain V (Confirmation by the relevant Municipality in this regard must be attached to the final Basic Assessment Report as Appendix I.) Currently there is limited access to site. The few access roads that exist may have to be upgraded prior to commencement of construction work. At the sites where no access roads exist, roads will need to be established and these will be wider than 4 metres with a reserve less than 13.5 metres. 6. Is this development provided for in the infrastructure planning of the municipality, and if not what will the implication be on the infrastructure planning of the YES municipality (priority and placement of services and NO Please explain opportunity costs)? (Comment by the relevant Municipality in this regard must be attached to the final Basic Assessment Report as Appendix I.) The proposed power line is well within the Municipality's plans and it will make way for other development within the municipalities. The objective of the proposed project is to boost the electricity supply to the Western Cape, which has been plaqued by outages. Therefore, this project is provided for in the infrastructure planning of the Municipality. YES 7. Is this project part of a national programme to address an 1 NO Please explain issue of national concern or importance? This project addresses a localised problem. However at national level, the project would contribute to implementing South Africa's new energy policy as embodied in the White Paper on Energy (DME, 1998). The priorities to which this project would contribute are laying the groundwork for promoting electrification and off-grid power supply. 8. Do location factors favour this land use (associated with the YES activity applied for) at this place? (This relates to the NO Please explain / contextualisation of the proposed land use on this site within its broader context.) The proposed project is deviation of an already approved power line route. The reason for the

deviation is due to the developments that have encroached near the previously approved corridor. The current locations that the line is being deviated to will be the best option as it will be far from the Tronox mine, landing strip and Kamiesburg mine. The proposed locations favour the land use as there are other existing power lines in the vicinity of the proposed line.

9. Is the development the best practicable environmental option for this land/site?	YES	NO	Please explain
The proposed project entails deviation of an approved corridor based on environmental and technical studies undertaken as well as input from consultations with the Municipalities, landowners and l&APs therefore, the development is the best practicable environmental option for the land.			
10. Will the benefits of the proposed land use/development outweigh the negative impacts of it?	YES	NO	Please explain
The proposed project will benefit the Municipality, the district and the country at large. The identified impacts will be managed according to the recommendations from the specialists as well as the EMPr approved by the Department of Environmental Affairs. Moreover, the proposed development will ensure a more positive economic outlook; therefore, the benefits of the proposed project will outweigh the negative impacts. The negative impacts have been identified and mitigation measures proposed			
11. Will the proposed land use/development set a precedent for similar activities in the area (local municipality)?	YES	NO ✓	Please explain
The proposed development is the deviation from an already approved servitude, to accommodate the industrial and mining development therefore; the proposed development will not set a precedent but will compliment activities in the area.			
12. Will any person's rights be negatively affected by the proposed activity/ies?	YES	NO ✓	Please explain
The Constitution of South Africa Act No. 108 of 1996 provides for an environmental right (contained in the Bill of Rights, Chapter 2). In terms of Section 7, the State has an obligation to respect, promote and fulfil the rights as defined in the Bill of Rights. The undertaking of the Basic Assessment is in line with the State's obligation as outlined in the Constitution in its effort to ensure sustainability. The consultation through the Public Participation will ensure that the Interested and Affected Parties' comments and issues are adequately addressed to ensure that the proposed project does not negatively affect any person's rights. Further the proposed deviations are undertaken in an effort to avoid infringing the rights of other land users.			
13. Will the proposed activity/ies compromise the "urban edge" as defined by the local municipality?	YES	NO ✓	Please explain
The proposed project is outside the urban edge.			

14. Will the proposed activity/ies contribute to any of the 17 Strategic Integrated Projects (SIPS)?	YES	NO	Please explain	
The proposed project is SIP 10 which entails: Expansion and the transmission and distribution network to address historical imbalances and provide access to electricity for all and support economic development. Align the 10-year transmission plan, the services backlog, the national broadband roll-out and the freight rail line development to leverage off regulatory approvals, supply chain and project development capacity.				
15. What will the benefits be to society in general and to communities?	o the lo	cal	Please explain	
At the local level, the power line aims to improve the inadequate operation of the existing network. At the national level, the project would control Africa's new energy policy as embodied in the White Paper on Energy which this project would contribute are laying the groundwork for promote power supply.	tional flex ribute to (DME, 19 ting electi	ibility imple 98). 1 rificat	(back feeding) ementing South The priorities to ion and reliable	
16. Any other need and desirability considerations related to th activity?	e propos	sed	Please explain	
None identified.				
17. How does the project fit into the National Development Plan for	2030?		Please explain	
The proposed project forms part of SIP 10 which aims at transmitting and distributing electricity for all and support economic development; as well as SIP 6 which is integrated municipal infrastructure aiming at maintenance of backlogs and upgrading electricity infrastructure – all a part of the National Development Plan 2030.				
18. Please describe how the general objectives of Integrated Environmental Management as set out in section 23 of NEMA have been taken into account.				
The general objectives of IEM have been taken into account by means predicting the actual and potential impacts on the natural, cultural and s consequences and mitigation measures have been considered to mi enhance the positive impacts and promote compliance with environmen	of identify social env nimise th tal manag	/ing, /ironn e neg geme	evaluating, and nent. The risks, gative impacts, nt principles.	

19. Please describe how the principles of environmental management as set out in section 2 of NEMA have been taken into account.

The principles of NEMA have been considered in this assessment through compliance with the requirements of the applicable legislation. Following discussions with the department it was agreed that the project would have to follow the EA amendment. On initiation as well as public engagement it was noted that sections of the deviation would encroach on Critical Biodiversity Areas, which triggers the aforementioned activities under NEMA 2014 Regulation hence the requirement of the Basic Assessment process. This Basic Assessment Report (BAR) ensures that the impacts of the proposed activity on the environment are thoroughly and comprehensively assessed to ensure sustainability. Further, successful implementation of the EMPr will aid in minimising pollution and environmental degradation.

The undertaking of the Basic Assessment process has been transparent in approach and as such involves Interested and Affected Parties (I&AP), landowners, organs of State and other key stakeholders, which will ensure that well informed decision is undertaken by the Authority.

11. 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:

Title of legislation, policy or	Applicability to the project	Administering	Date
guideline		authority	
Republic of South Africa -	The Constitution of South Africa	National	1996
Constitution, Act 108 of	Act No. 108 of 1996 provides for	Government	
1996	an environmental right (contained		
	in the Bill of Rights, Chapter 2). In		
	terms of Section 7, the state has		
	an obligation to respect, promote		
	and fulfil the rights as defined in		
	the Bill of Rights. The		
	environmental right states that:		
	"Everyone has the right -		
	a)To an environment that is not		
	harmful to their health or well-		
	being; and		
	b)To have the environment		

	protected,		
	for the benefit of present and		
	future generations, through		
	reasonable legislative and other		
	measures that -		
	Prevent pollution and ecological		
	degradation;		
	Promote conservation; and		
	Secure ecologically sustainable		
	development and use of natural		
	resources while promoting		
	justifiable economic and social		
	development."		
	The undertaking of the BA process		
	is in line with the state's		
	obligations as outlined in the		
	constitution in its effort to ensure		
	sustainability.		
National Environmental	The overarching principles of	National &	1998
National Environmental Management Act, Act 107 of	The overarching principles of sound environmental responsibility	National & Provincial	1998
NationalEnvironmentalManagementAct, Act 107 of1998 (as amended in 2009).	The overarching principles of sound environmental responsibility are reflected in the National	National & Provincial Government	1998
NationalEnvironmentalManagementAct, Act 107 of1998 (as amended in 2009).	The overarching principles of sound environmental responsibility are reflected in the National Environmental Management Act	National & Provincial Government	1998
National Environmental Management Act, Act 107 of 1998 (as amended in 2009).	The overarching principles of sound environmental responsibility are reflected in the National Environmental Management Act (NEMA). The principles set out in	National & Provincial Government	1998
National Environmental Management Act, Act 107 of 1998 (as amended in 2009).	The overarching principles of sound environmental responsibility are reflected in the National Environmental Management Act (NEMA). The principles set out in the National Environmental	National & Provincial Government	1998
National Environmental Management Act, Act 107 of 1998 (as amended in 2009).	The overarching principles of sound environmental responsibility are reflected in the National Environmental Management Act (NEMA). The principles set out in the National Environmental Management Act, 1998 (Act No.	National & Provincial Government	1998
National Environmental Management Act, Act 107 of 1998 (as amended in 2009).	The overarching principles of sound environmental responsibility are reflected in the National Environmental Management Act (NEMA). The principles set out in the National Environmental Management Act, 1998 (Act No. 107 of 1998), hereafter referred to	National & Provincial Government	1998
National Environmental Management Act, Act 107 of 1998 (as amended in 2009).	The overarching principles of sound environmental responsibility are reflected in the National Environmental Management Act (NEMA). The principles set out in the National Environmental Management Act, 1998 (Act No. 107 of 1998), hereafter referred to as NEMA, applies to all listed	National & Provincial Government	1998
National Environmental Management Act, Act 107 of 1998 (as amended in 2009).	The overarching principles of sound environmental responsibility are reflected in the National Environmental Management Act (NEMA). The principles set out in the National Environmental Management Act, 1998 (Act No. 107 of 1998), hereafter referred to as NEMA, applies to all listed projects. Construction and	National & Provincial Government	1998
National Environmental Management Act, Act 107 of 1998 (as amended in 2009).	The overarching principles of sound environmental responsibility are reflected in the National Environmental Management Act (NEMA). The principles set out in the National Environmental Management Act, 1998 (Act No. 107 of 1998), hereafter referred to as NEMA, applies to all listed projects. Construction and operation have to be conducted in	National & Provincial Government	1998
National Environmental Management Act, Act 107 of 1998 (as amended in 2009).	The overarching principles of sound environmental responsibility are reflected in the National Environmental Management Act (NEMA). The principles set out in the National Environmental Management Act, 1998 (Act No. 107 of 1998), hereafter referred to as NEMA, applies to all listed projects. Construction and operation have to be conducted in line with the generally accepted	National & Provincial Government	1998
National Environmental Management Act, Act 107 of 1998 (as amended in 2009).	The overarching principles of sound environmental responsibility are reflected in the National Environmental Management Act (NEMA). The principles set out in the National Environmental Management Act, 1998 (Act No. 107 of 1998), hereafter referred to as NEMA, applies to all listed projects. Construction and operation have to be conducted in line with the generally accepted principles of sustainable	National & Provincial Government	1998
National Environmental Management Act, Act 107 of 1998 (as amended in 2009).	The overarching principles of sound environmental responsibility are reflected in the National Environmental Management Act (NEMA). The principles set out in the National Environmental Management Act, 1998 (Act No. 107 of 1998), hereafter referred to as NEMA, applies to all listed projects. Construction and operation have to be conducted in line with the generally accepted principles of sustainable development, integrating social,	National & Provincial Government	1998
National Environmental Management Act, Act 107 of 1998 (as amended in 2009).	The overarching principles of sound environmental responsibility are reflected in the National Environmental Management Act (NEMA). The principles set out in the National Environmental Management Act, 1998 (Act No. 107 of 1998), hereafter referred to as NEMA, applies to all listed projects. Construction and operation have to be conducted in line with the generally accepted principles of sustainable development, integrating social, economic and environmental	National & Provincial Government	1998
National Environmental Management Act, Act 107 of 1998 (as amended in 2009).	The overarching principles of sound environmental responsibility are reflected in the National Environmental Management Act (NEMA). The principles set out in the National Environmental Management Act, 1998 (Act No. 107 of 1998), hereafter referred to as NEMA, applies to all listed projects. Construction and operation have to be conducted in line with the generally accepted principles of sustainable development, integrating social, economic and environmental factors	National & Provincial Government	1998
NationalEnvironmentalManagementAct, Act 107 of1998 (as amended in 2009).	The overarching principles of sound environmental responsibility are reflected in the National Environmental Management Act (NEMA). The principles set out in the National Environmental Management Act, 1998 (Act No. 107 of 1998), hereafter referred to as NEMA, applies to all listed projects. Construction and operation have to be conducted in line with the generally accepted principles of sustainable development, integrating social, economic and environmental factors The purpose of the Biodiversity	National&ProvincialGovernmentNational&	1998 2004
NationalEnvironmentalManagementAct, Act 107 of1998 (as amended in 2009).NationalEnvironmentalManagement:BiodiversityAct,	The overarching principles of sound environmental responsibility are reflected in the National Environmental Management Act (NEMA). The principles set out in the National Environmental Management Act, 1998 (Act No. 107 of 1998), hereafter referred to as NEMA, applies to all listed projects. Construction and operation have to be conducted in line with the generally accepted principles of sustainable development, integrating social, economic and environmental factors The purpose of the Biodiversity Act is to provide for the	National&ProvincialGovernmentGovernmentImage: Second sec	1998 2004

	South Africa's biodiversity within		
	the framework of the NEMA and		
	the protection of species and		
	ecosystems that warrant national		
	protection. As part of its		
	implementation strategy, the		
	National Spatial Biodiversity		
	Assessment was developed.		
	The proposed deviations will either		
	cross or encroach on both		
	terrestrial and aquatic biodiversity		
	areas as well as Ecological		
	Support Areas Specialist		
	investigation have been		
	commissioned as part of this		
	application to assess the extent		
	and severity of the notential		
	impacts on this protected areas as		
	well as proposed mitigation		
	measures The outcomes of the		
	investigations highlighted that the		
	impact of the development on		
	CRAs and NRAES Focus Aroos is		
	CBAS and NPAES FOCUS Areas is		
	not likely to be significant given the		
	low overall footprint of the		
	development and the currently		
	intact nature of the majority of the		
	route. No highly significant		
	impacts or impacts which cannot		
	be mitigated to an acceptable level		
	have been identified		
National Water Act, Act 36 of	The National Water Act, 1998 (Act	National &	1998
1998	No. 36 of 1998) [NWA] provides	Provincial	
	for Constitutional water demands	Government	
	including pollution prevention,		
	ecological and resource		
	conservation and sustainable		

	utilisation. In terms of this Act, all		
	water resources are the property		
	of the State and are regulated by		
	the Department of Water and		
	Sanitation (DWS).		
	There are watercourses that are		
	considered to be aquatic		
	Ecological Support Areas (ESA)/		
	Critical Biodiversity Areas (CBA)		
	that the proposed deviations will		
	cross. Many non-perennial		
	streams cover various sections of		
	the study area. Mitigation		
	measures will be put in place and		
	the requirements of the Act will be		
	complied with in terms of Water		
	Use Licence Applications.		
National Heritage Act, Act 25	The Act legislates the necessity for	National &	1999
National Heritage Act, Act 25 of 1999	The Act legislates the necessity for cultural and heritage impact	National & Provincial	1999
National Heritage Act, Act 25 of 1999	The Act legislates the necessity for cultural and heritage impact assessments in areas earmarked	National & Provincial Government	1999
National Heritage Act, Act 25 of 1999	The Act legislates the necessity for cultural and heritage impact assessments in areas earmarked for development, which exceed	National & Provincial Government	1999
National Heritage Act, Act 25 of 1999	The Act legislates the necessity for cultural and heritage impact assessments in areas earmarked for development, which exceed 0.5ha. The Act makes provision for	National & Provincial Government	1999
National Heritage Act, Act 25 of 1999	The Act legislates the necessity for cultural and heritage impact assessments in areas earmarked for development, which exceed 0.5ha. The Act makes provision for potential destruction to existing	National & Provincial Government	1999
National Heritage Act, Act 25 of 1999	The Act legislates the necessity for cultural and heritage impact assessments in areas earmarked for development, which exceed 0.5ha. The Act makes provision for potential destruction to existing sites, pending the archaeologist's	National & Provincial Government	1999
National Heritage Act, Act 25 of 1999	The Act legislates the necessity for cultural and heritage impact assessments in areas earmarked for development, which exceed 0.5ha. The Act makes provision for potential destruction to existing sites, pending the archaeologist's recommendations through	National & Provincial Government	1999
National Heritage Act, Act 25 of 1999	The Act legislates the necessity for cultural and heritage impact assessments in areas earmarked for development, which exceed 0.5ha. The Act makes provision for potential destruction to existing sites, pending the archaeologist's recommendations through permitting procedures. Permits are	National & Provincial Government	1999
National Heritage Act, Act 25 of 1999	The Act legislates the necessity for cultural and heritage impact assessments in areas earmarked for development, which exceed 0.5ha. The Act makes provision for potential destruction to existing sites, pending the archaeologist's recommendations through permitting procedures. Permits are administered by the South African	National & Provincial Government	1999
National Heritage Act, Act 25 of 1999	The Act legislates the necessity for cultural and heritage impact assessments in areas earmarked for development, which exceed 0.5ha. The Act makes provision for potential destruction to existing sites, pending the archaeologist's recommendations through permitting procedures. Permits are administered by the South African Heritage Resources Agency	National & Provincial Government	1999
National Heritage Act, Act 25 of 1999	The Act legislates the necessity for cultural and heritage impact assessments in areas earmarked for development, which exceed 0.5ha. The Act makes provision for potential destruction to existing sites, pending the archaeologist's recommendations through permitting procedures. Permits are administered by the South African Heritage Resources Agency (SAHRA).	National & Provincial Government	1999
National Heritage Act, Act 25 of 1999	The Act legislates the necessity for cultural and heritage impact assessments in areas earmarked for development, which exceed 0.5ha. The Act makes provision for potential destruction to existing sites, pending the archaeologist's recommendations through permitting procedures. Permits are administered by the South African Heritage Resources Agency (SAHRA).	National & Provincial Government	1999
National Heritage Act, Act 25 of 1999	The Act legislates the necessity for cultural and heritage impact assessments in areas earmarked for development, which exceed 0.5ha. The Act makes provision for potential destruction to existing sites, pending the archaeologist's recommendations through permitting procedures. Permits are administered by the South African Heritage Resources Agency (SAHRA).	National & Provincial Government	1999
National Heritage Act, Act 25 of 1999	The Act legislates the necessity for cultural and heritage impact assessments in areas earmarked for development, which exceed 0.5ha. The Act makes provision for potential destruction to existing sites, pending the archaeologist's recommendations through permitting procedures. Permits are administered by the South African Heritage Resources Agency (SAHRA).	National & Provincial Government	1999
National Heritage Act, Act 25 of 1999	The Act legislates the necessity for cultural and heritage impact assessments in areas earmarked for development, which exceed 0.5ha. The Act makes provision for potential destruction to existing sites, pending the archaeologist's recommendations through permitting procedures. Permits are administered by the South African Heritage Resources Agency (SAHRA). Very few site of archaeological significance were noted along the approved corridor and the	National & Provincial Government	1999
National Heritage Act, Act 25 of 1999	The Act legislates the necessity for cultural and heritage impact assessments in areas earmarked for development, which exceed 0.5ha. The Act makes provision for potential destruction to existing sites, pending the archaeologist's recommendations through permitting procedures. Permits are administered by the South African Heritage Resources Agency (SAHRA). Very few site of archaeological significance were noted along the approved corridor and the proposed deviation. However, the	National & Provincial Government	1999
National Heritage Act, Act 25 of 1999	The Act legislates the necessity for cultural and heritage impact assessments in areas earmarked for development, which exceed 0.5ha. The Act makes provision for potential destruction to existing sites, pending the archaeologist's recommendations through permitting procedures. Permits are administered by the South African Heritage Resources Agency (SAHRA). Very few site of archaeological significance were noted along the approved corridor and the proposed deviation. However, the requirements of the Act will be	National & Provincial Government	1999

National Environmental Management: Protected Areas Act, 2003 (Act No. 57 of 2003)	The purpose of this Act is to provide for the protection, conservation and management of ecologically viable areas representative of South Africa's biological diversity and its natural landscapes. The diversity of ecological processes was determined throughout the study. This Act will be read together with relevant policies and management plans. The proposed deviations will either cross or encroach on both terrestrial and aquatic biodiversity areas as well as Ecological Support Areas. Specialist investigation have been commissioned as part of this application to assess the extent and severity of the potential impacts on this protected areas as well as proposed mitigation measures.	National	2003
Conservation of Agricultural Resources Act, 1983 (Act 43 of 1983)	The objective is to provide for control over the utilisation of the natural agricultural resources of the Republic in order to promote the conservation of the soil, the water sources and the vegetation and the combating of weeds and invader plants; and for matters connected therewith.	National	1983

	to highly active agricultural fields		
	while Deviations 2 and 3 will		
	encroach on farms that are used		
	for crop farming activities.		
National Environmental	The objective of the Act is to	National &	2004
Management: Air Quality Act,	protect the environment by	Provincial	
Act 39 of 2004	providing reasonable measures for	Government	
	the protection and enhancement of		
	the quality of air and to prevent		
	pollution of air and ecological		
	degradation Part 6 of the Act		
	makes provision for measures to		
	control dust noise and offensive		
	odours The assessment of		
	impacts relating to air quality		
	control and management where		
	control and management, where		
	appropriate, will form part of the		
	environmental impact assessment		
	report and environmental		
	The proposed project may create		
	minimal dust during excavations		
	which is expected to be short term		
	and site specific.		
Noise Control Regulations in	The assessment of impacts	Local Authority	1989
terms of the Environmental	relating to noise pollution		
Conservation Act 73 of 1989	management and control, where		
	appropriate, forms part of the		
	environmental impact assessment		
	report and environmental		
	management plan. Applicable laws		
	regarding noise management and		
	control refers to the national noise		
	control regulations issued in terms		
	of the Environment Conservation		
	Act 73 of 1989.		
	The occupation of site by		
	contractors may generally		

increase the ambient noise levels	
in the area. Additional noise may	
be expected from the increased	
heavy duty traffic as well as	
construction equipment.	

12. WASTE, EFFLUENT, EMISSION AND NOISE MANAGEMENT

a) Solid waste management

Will the activity produce solid construction waste during the construction/initiation phase?

If YES, what estimated quantity will be produced per month?

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

The proposed development will generate general construction waste which will be removed by a waste contractor and disposed of at a registered waste disposal site. Any solid waste generated on site will be collected in suitable containers and removed from site by means of waste disposal vehicle. Further, details on solid waste management are provided in the Environmental Management Programme (EMPr). Solid waste could include the following:

- Excess construction material;
- concrete rubble from structure foundations;
- any vegetation cleared; and
- general waste produced by the construction workers.

All waste will be transported to a registered waste site. Should any hazardous waste be generated, it shall be disposed of appropriately at a registered waste disposal site. Records of the type and quantity of waste disposed will be kept on site.

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

YES 🖌	NO
Unkn	iown m ³

Solid waste will be managed and disposed of in accordance with the attached EMPr and may include:

- General waste, consisting of non-hazardous substances and substances that cannot be recycled. Examples include (but not limited to rubble, that cannot be reused, and food waste). This will be disposed and collected in a waste skip and disposed of at a registered site.
- Re-usable and excess material, which can be used at construction sites will be carefully packaged and delivered to other sites for reuse.
- Hazardous waste will be disposed of accordingly at a registered hazardous waste disposal site.
- Refuse will at all times be disposed of at a registered site, which is also approved by the local authority. Refuse will not be burned or buried on or near the site but will be appropriately disposed.
- Records of the type and quantity of waste disposed will be kept on site.

Will the activity produce solid waste during its operational phase?

If YES, what estimated quantity will be produced per month?

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

Waste produced during the operational phase will be minimal and primarily from maintenance and general waste from employees. Waste generated will be managed according to the requirements of the EMPr, which will include proper disposal of waste at a registered site as well as recycling were feasible. A record of waste generated and disposed of will be kept and managed accordingly to encourage waste reduction.

If the solid waste will be disposed of into a municipal waste stream, indicate which registered landfill site will be used.

A registered landfill site will be used and permission will be sought from the Municipality before commencement of the construction activities. It is assumed that the closest registered waste disposal site will be used.

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

Waste that does not fit into the municipal waste stream will be disposed of at a registered hazardous waste disposal site while recyclable and reusable waste will be treated as such.

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 NEM:WA?

If YES, inform the competent authority and request a change to an application for scoping and EIA. An application for a waste permit in terms of the NEM:WA must also be submitted with this application.

Is the activity that is being applied for a solid waste handling or treatment facility?

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. An application for a waste permit in terms of the NEM:WA must also be submitted with this application.

b) Liquid effluent

Will the activity produce effluent, other than normal sewage, that will be disposed of in a municipal sewage system?

If YES, what estimated quantity will be produced per month?

Will the activity produce any effluent that will be treated and/or disposed of on site?

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?

If YES, provide the particulars of the facility:

Facility name:			
Contact			
person:			
Postal			
address:			
Postal code:			
Telephone:		Cell:	
E-mail:		Fax:	

NO

1

YES

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

None identified.

c) Emissions into the atmosphere

 Will the activity release emissions into the atmosphere other that exhaust emissions
 YE

 and dust associated with construction phase activities?
 YE

If YES, is it controlled by any legislation of any sphere of government?

If YES, the applicant must 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:

Low levels of dust emissions may also be expected from excavations during the construction phase; this will be site specific and low in significance, provided that mitigation measures are in place. Appropriate dust control measures such as dampening of surfaces will be put in place as may be required. Further detail on dust management is provided in the EMPr.

d) Waste permit

Will any aspect of the activity produce waste that will require a waste permit in terms of the NEM:WA?

If YES, please submit evidence that an application for a waste permit has been submitted to the competent authority

e) Generation of noise

Will the activity generate noise?

If YES, is it controlled by any legislation of any sphere of government?

Describe the noise in terms of type and level:

Noise pollution will occur as a result of construction activities and movement of vehicles on site; the impact will be highly localised and of a temporary nature particularly given the remoteness of the site. The potential noise impact will be mitigated by restricting construction activities to normal working hours, which will result in an impact of low significance. Further details on noise management are provided in the EMPr.

YES	NO
YES	NO
	~

YES VO	
--------	--

13. WATER USE

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

Municipal	r board Groundwate	River, stream, dam or lake	Other	The activity will not use water
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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:

Does the activity require a water use authorisation (general authorisation or water use license) from the Department of Water Affairs?

If YES, please provide proof that the application has been submitted to the Department of Water Affairs.

The Water Use Licence Application process is in progress.

14. ENERGY EFFICIENCY

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

None.

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

None.

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 B and indicate the area, which is covered by each copy No. on the Site Plan.

Section B Copy No. (e.g. A):

- 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?

YES NO

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

Specialist reports are attached as Appendix D.

- D-1 Wetland Impact Assessment
- D-2 Biodiversity Assessment
- D-3 Heritage Impact Assessment
- D-4 Avifauna

Property	Province	Northern Cape Province
description/physi	District	Namakwa District Municipality
cal address:	Municipality	
	Local Municipality	Kamiesberg Local Municipality
	Ward Number(s)	Ward 02
	Farm name and	Refer to Appendix J for Farm Names and Numbers
	number	
	Portion number	Refer to Appendix J for Portion Numbers
	SG Code	Refer to Appendix J for SG Codes

Province	Western Cape Province					
District	West Coast District Municipality					
Municipality						
Local Municipality	Matzikamma Local Municipality					
Ward Number(s)	Ward 08					
Farm name and	Refer to Appendix J for Farm Names and Numbers					
number						
Portion number	Refer to Appendix J for Portion Numbers					
SG Code	Refer to Appendix J for SG Codes					

Where a large number of properties are involved (e.g. linear activities), please attach a full list to this application including the same information as indicated above.

Agriculture and Mining

Current land-use zoning as per local municipality IDP/records:

> 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?

YES	NO
	~

1. GRADIENT OF THE SITE

Indicate the general gradient of the site.

Alternative S1: Deviation 1 Landing Strip

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 S1: Deviation 2 Tronox

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 S1: Deviation 3 Kamiesburg

Flat	1:50 – 1:20	1:20 – 1:15	1:15 – 1:10	1:10 – 1:7,5	1:7,5 – 1:5	Steeper
	v					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
Alternative S3	3 (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:

Deviation 1

3. GROUNDWATER, SOIL AND GEOLOGICAL STABILITY OF THE SITE

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

	Alternative		ŀ	Alternati	ive S2	Alternative S3	
	S1:Deviation 1		(if any):		(if any):	
Shallow water table (less than 1.5m deep) Possibly close to towers 563,564,569,570 (These towers are located close to the Hol River)	YES	NO		YES	NO	YES	NO
Dolomite, sinkhole or doline areas But only between towers 561-566 and 570-575	YES	NO		YES	NO	YES	NO
Seasonally wet soils (often close to water bodies) No perennial water bodies occur close to the towers but towers 569 and 570 is located 80- 120m from a wetland.	YES	NO ✓		YES	NO	YES	NO
Unstable rocky slopes or steep slopes with loose soil The landscape is mainly flat with the steepest gradient located between towers 561 and 563 (1:15)	YES	NO ✓		YES	NO	YES	NO
Dispersive soils (soils that dissolve in water)	YES	NO ✓		YES	NO	YES	NO
Soils with high clay content (clay fraction more than 40%)	YES	NO ✓		YES	NO	YES	NO
Any other unstable soil or geological feature	YES	NO ✓		YES	NO	YES	NO
An area sensitive to erosion	YES	NO ✓		YES	NO	YES	NO
	Alternative S1:Deviation 2		Alterna S2 (if a	ative ny):	Alternati (if any):	ve S3	
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Shallow water table (less than 1.5m deep) Possibly close to towers 459, 460, 461, 462, 468, 469 and 471 (These towers are located close to the Grootgoerap River).	YES	NO	YES	NO	YES	NO	
Dolomite, sinkhole or doline areas Geology dominated by undifferentiated granites and gneisses of the Namaqualand Metamorphic Complex.	YES	NO V	YES	NO	YES	NO	
Seasonally wet soils (often close to water bodies) No perennial water bodies occur close to the deviation route.	YES	NO ✓	YES	NO	YES	NO	
Unstable rocky slopes or steep slopes with loose soil. The landscape is flat. The deviation routes runs mostly along the Grootgoerap River.	YES	NO V	YES	NO	YES	NO	
Dispersive soils (soils that dissolve in water) Soil Classification: Red-yellow apedal, freely drained soils, red, high base status, < 300 mm deep (Towers 447-467) and > 300 mm deep (no dunes)(Towers 468-472)	YES	NO ✓	YES	NO	YES	NO	
Soils with high clay content (clay fraction more than 40%) <15%	YES	NO ✓	YES	NO	YES	NO	
Any other unstable soil or geological feature	YES	NO ✓	YES	NO	YES	NO	
An area sensitive to erosion The proposed route deviation does not have any steep slopes. Closer to the river erosion may be of concern. The route runs between 450- 1000m south of the Grootgoerap River with 3-4 crossing points.	YES	NO ✓	YES	NO	YES	NO	

	Alternative		Alterna	ative S2	Alternative S3	
	S1:Devi	ation 3	(if any)):	(if any):	
Shallow water table (less than 1.5m deep) Possibly close to towers 316-318 and 305,306 (These towers are located close to the Groenrivier)	YES	NO	YES	NO	YES	NO
Dolomite, sinkhole or doline areas Geology dominated by undifferentiated granites and gneisses of the Namaqualand Metamorphic Complex.	YES	NO ✓	YES	NO	YES	NO
Seasonally wet soils (often close to water bodies)	YES	NO ✓	YES	NO	YES	NO
Unstable rocky slopes or steep slopes with loose soil	YES	NO ✓	YES	NO	YES	NO
Dispersive soils (soils that dissolve in water)	YES	NO ✓	YES	NO	YES	NO
Soils with high clay content (clay fraction more than 40%)	YES	NO ✓	YES	NO	YES	NO
Any other unstable soil or geological feature	YES	NO ✓	YES	NO	YES	NO
An area sensitive to erosion	YES	NO ✓	YES	NO	YES	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).

Deviation 1

Natural veld -	Natural veld with	Natural veld with	Vold dominated	
good condition ^E	scattered aliens ^E	heavy alien	by alien species ^E	Gardens
~		infestation ^E	by anon opened	

Sport field	Cultivated land	Deved surface	Building or other	Bare soil
Sport lield		Paved sufface	structure	>

Deviation 2

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 🖌

Deviation 3

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.

The vegetation Studies was undertaken by Simon Todd and the report is attached as Appendix D-2.

5. SURFACE WATER

Indicate the surface water present on and or adjacent to the site and alternative sites?

Deviation 1

Perennial River	YES	NO 🖌	UNSURE
Non-Perennial River	YES 🖌	NO	UNSURE
Permanent Wetland	YES	NO	UNSURE
Seasonal Wetland	YES	NO	UNSURE
Artificial Wetland	YES	NO	UNSURE
Estuarine / Lagoonal wetland	YES	NO 🖌	UNSURE

Deviation 2

Perennial River	YES	NO	UNSURE
Non-Perennial River	YES	NO	UNSURE

Permanent Wetland	YES	NO	UNSURE
	V/F0		
Seasonal Wetland	YES	NO	UNSURE
Artificial Wetland	YES	NO	UNSURE
Estuarine / Lagoonal wetland	YES	NO	UNSURE
Deviation 3			
Perennial River	YES	NO	UNSURE
Non-Perennial River	YES	NO	UNSURE
Permanent Wetland	YES	NO	UNSURE
Seasonal Wetland	YES	NO	UNSURE
Artificial Wetland	YES	NO	UNSURE
Estuarine / Lagoonal wetland	YES	NO	UNSURE

If any of the boxes marked YES or UNSURE is ticked, please provide a description of the relevant watercourse. Rowena Harrison of Afzelia Environmental Consultants (Pty) Ltd was appointed to undertake a wetland and watercourse sensitivity assessment for the presence of wetland or watercourse systems for the deviation of the proposed construction of the Juno-Gromis 400kV transmission power line project from the authorised corridor, traversing through portions of the Western and Northern Cape provinces.

The outcomes of the specialist study indicated numerous drainage channels associated with nonperennial river systems were identified along the deviation areas of the power line based on topographic setting, vegetative indicators and the presence or absence of alluvial soils as described in 'A Practical Field Procedure for Identification and Delineation of Wetland and Riparian Areas – Edition 1' (DWAF, 2005) requirements. This manual separates the classification of watercourses into three (3) separate types of channels or sections defined by their position relative to the zone of saturation in the riparian area. The classification system separates channels into:

- those that do not have baseflow ('A' Sections).
- o those that sometimes have baseflow ('B' Sections) or are classified as non-perennial.
- those that always have baseflow ('C' Sections) or are classified as perennial.

'A' Section and 'B' Section channels were identified along the power line route including the deviation areas. 'B' Section channels are non-perennial river systems through which the power line will traverse. The 'A' Section channels are associated with very temporary drainage channels that will convey storm water into the larger non-perennial rivers. The study indicated that there are no wetlands within the vicinity of the proposed study area. Water courses identified are as follows:

Deviation 1

This deviation occurs within close proximity of the existing Juno Substation, 7km East of Lutzville and is associated with 30 towers (572 to 542). Six 'A' Section drainage channels and two 'B' Section channels, named the Hol River and the Moedverloor River, were delineated during the walk down.

Deviation 2

This proposed deviation is associated with 40 towers (474 to 434) in the vicinity of Tronox Mine, Namaqua Sands. Two 'B' Section channels were delineated during the walk down. One of these is named the Groot-Goerap River.

Deviation 3

This proposed deviation is associated with 50 towers (323 to 273). One 'B' Section Channel, named the Groen River as well as six 'A' Section channels were delineated during the walk down.

A number of potential impacts have been identified relating to soil erosion and sedimentation, alteration to the hydrological flow entering the wetland areas, pollution of wetlands and soil as a result of construction and operational activities. The specialist highlighted that mitigation measures are key to limiting the negative effects on the watercourses and must be included in an Environmental Management Programme for the proposed project.

6. LAND USE CHARACTER OF SURROUNDING AREA

Indicate land uses and/or prominent features that 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:

Deviation 1		
Natural area	Dam or reservoir	Polo fields
Low density residential	Hospital/medical centre	Filling station ^H
Medium density residential	School	Landfill or waste treatment site
High density residential	Tertiary education facility	Plantation
Informal residential ^A	Church	Agriculture 🗸
Retail commercial & warehousing	Old age home	River, stream or wetland ✓
Light industrial	Sewage treatment plant ^A	Nature conservation area
Medium industrial AN	Train station or shunting yard N	Mountain, koppie or ridge
Heavy industrial AN	Railway line ^N	Museum
Power station	Major road (4 lanes or more) N	Historical building
Office/consulting room	Airport ^N	Protected Area 🗸
Military or police base/station/compound	Harbour	Graveyard
Spoil heap or slimes dam ^A	Sport facilities	Archaeological site
Quarry, sand or borrow pit 🗸	Golf course	Other land uses (describe)

Deviation 2		
Natural area	Dam or reservoir	Polo fields
Low density residential 🗸	Hospital/medical centre	Filling station ^H
Medium density residential	School	Landfill or waste treatment site
High density residential	Tertiary education facility	Plantation
Informal residential ^A	Church	Agriculture 🗸
Retail commercial & warehousing	Old age home	River, stream or wetland 🗸
Light industrial	Sewage treatment plant ^A	Nature conservation area
Medium industrial AN	Train station or shunting yard N	Mountain, koppie or ridge
Heavy industrial AN	Railway line ^N	Museum
Power station	Major road (4 lanes or more) ^N	Historical building
Office/consulting room	Airport N	Protected Area 🗸
Military or police base/station/compound	Harbour	Graveyard

BASIC ASSESSMENT REPORT

Spoil heap or slimes dam ^A	Sport facilities	Archaeological site
Quarry, sand or borrow pit	Golf course	Other land uses (describe)

Deviation 3				
Natural area	Dam or reservoir	Polo fields		
Low density residential	Hospital/medical centre	Filling station ^H		
Medium density residential	School	Landfill or waste treatment site		
High density residential	Tertiary education facility	Plantation		
Informal residential ^A	Church	Agriculture 🗸		
Retail commercial & warehousing	Old age home	River, stream or wetland 🗸		
Light industrial	Sewage treatment plant ^A	Nature conservation area		
Medium industrial AN	Train station or shunting yard N	Mountain, koppie or ridge		
Heavy industrial AN	Railway line ^N	Museum		
Power station	Major road (4 lanes or more) ^N	Historical building		
Office/consulting room	Airport ^N	Protected Area 🗸		
Military or police base/station/compound	Harbour	Graveyard		
Spoil heap or slimes dam ^A	Sport facilities	Archaeological site		
Quarry, sand or borrow pit	Golf course	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? Specify and explain:

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

If any of the boxes marked with an "H" are ticked, how will this impact / be impacted upon by the proposed activity? Specify and explain:

Critical Biodiversity Area (as per provincial conservation plan)	YES	NO
	~	
Core area of a protected area?	YES	NO
		~
Buffer area of a protected area?	YES	NO
		~
Planned expansion area of an existing protected area?	YES	NO
		~
Existing offset area associated with a previous Environmental Authorisation?	YES	NO
		~
Buffer area of the SKA?	YES	NO
		~

Does the proposed site (including any alternative sites) fall within any of the following:

If the answer to any of these questions was YES, a map indicating the affected area must be included in Appendix A.

Sensitivity Map is Attached as Appendix A.

7. 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 Archaeological or paleontological sites, on or close (within 20m) to the site? If YES, explain:

YES NO Uncertain

If uncertain, conduct a specialist investigation by a recognised specialist in the field (archaeology or palaeontology) to establish whether there is such a feature(s) present on or close to the site. Briefly explain the findings of the specialist:

A heritage specialist study was undertaken by Munyadziwa Magoma of Vhubvo Archaeo-Heritage consultants and the report is attached as Appendix D3.

The Phase I Archaeological and Cultural Heritage Impact Assessment for the proposed Juno-Gromis 400KV power line has identified no archaeological or cultural heritage material on the area proposed for Landing strip, Tronox mine and Kamieberg mine. Stone tools are almost ubiquitous in the wider region of Namaqualand, their unavailability in the proposed area is however unexpected, impacts to archaeological objects are unlikely next to the shoreline due to sparse nature of human settlement away from the coast.

In compliance with the National Heritage Legislature, there was no observable development activities associated with the proposed project. The developer is reminded that archaeological material (e.g. pottery, remains of stone-walling, graves, etc) and fossils are often located underground. Thus, unavailability of archaeological material does not mean absenteeism as material might be hidden underground. It was recommended that precautions be taken during construction activities, further the report emphasised the following:

- that should any archaic material be unearthed, activities should be halted immediately and SAHRA be consulted.
- The need for Pre-construction education and awareness training on how to identify and protect archaeological remains that may be discovered during the project. The preconstruction training should include some limited site recognition training for the types of archaeological sites that may occur in the construction areas.

In conclusion the report recommended that the proposed development proceed without further archaeological or cultural heritage assessment.

Will any building or structure older than 60 years be affected in any way?

YES	NO ✓
YES	NO ✓

Is it necessary to apply for a permit in terms of the National Heritage Resources Act, 1999 (Act 25 of 1999)?

If YES, please provide proof that this permit application has been submitted to SAHRA or the relevant provincial authority.

8. SOCIO-ECONOMIC CHARACTER

a) Local Municipality

Please provide details on the socio-economic character of the local municipality in which the proposed site(s) are situated.

Level of unemployment:

Matzikama Local Municipality's unemployment rate is 14%, which does not include the 1 301 discouraged work-seekers who have given up looking for work, while Kamiesberg Local Municipality's unemployment rate is 30, 8%.

Economic profile of local municipality:

The agricultural is the largest employer in Matzikima Local Municipality accounting for 31% and is the second largest agricultural region after Swartland. Commercial services contribute 30 %; manufacturing accounts for 16 % and the government, community, social & personal services sector contribute 14 %.

Retail, catering and accommodation sectors contribute 21.12% of Kamiesburg Local Municipality's economy. Construction and tourism sector are seasonal and susceptible to economic changes such as the Rand/Dollar Exchange and global recession etc.

Level of education:

The level of education within the Matzikama Local Municipality is relatively low as depicted in the stats below:

- No Schooling 4%,
- Matric 28%
- Higher Education 5,9%

The level of education within the Kamiesberg Local Municipality is relatively low as depicted in the stats below No Schooling 5,2%

- Matric 16,4%
- Higher Education 4.3%

b) Socio-economic value of the activity

What is the expected capital value of the activity on completion?	Undetermined.
	Cost estimations
	have not been
	calculated as they
	strongly depend
	on current
	construction costs.
What is the expected yearly income that will be generated by or as a result of the	It is not expected
activity?	that the proposed
	development will
	earn any income -
	it is primarily to
	provide reliable
	bulk services to
	the industries and
	communities.
Will the activity contribute to service infrastructure?	YES NO
	~
Is the activity a public amenity?	YES NO
	~
How many new employment opportunities will be created in the development and	During the
construction phase of the activity/ies?	construction
	phase of the
	proposed project it
	is not envisaged
	that any direct
	employment will
	be created.
What is the expected value of the employment opportunities during the	The Client will
development and construction phase?	appoint
	Contractors who
	will bring in their
	own working
	teams to
	teams to undertake the

What percentage of this will accrue to previously disadvantaged individuals?	This cannot be
	quantified as it is
	not foreseen that
	any additional
	employment will
	be generated by
	the project.
How many permanent new employment opportunities will be created during the	None – due to the
operational phase of the activity?	nature of the
	project no
	permanent
	employees will be
	required on site to
	manage the
	operational phase.
What is the expected current value of the employment opportunities during the	No direct
first 10 years?	employment
	opportunities will
	be generated by
	the project, during
	any of the phases.
	However it is
	estimated that
	numerous indirect
	employment
	opportunities
	might be
	generated as a
	result of the
	additional bulk
	infrastructure
	which the project
	proposes to install
	in the area.

What percentage of this will accrue to previously disadvantaged individuals?

None – it is not foreseen that any additional employment opportunities will be created by the project.

9. BIODIVERSITY

Please note: The Department may request specialist input/studies depending on the nature of the biodiversity occurring on the site and potential impact(s) of the proposed activity/ies. To assist with the identification of the biodiversity occurring on site and the ecosystem status consult http://bgis.sanbi.org or BGIShelp@sanbi.org. Information is also available on compact disc (cd) from the Biodiversity-GIS Unit, Ph (021) 799 8698. This information may be updated from time to time and it is the applicant/ EAP's responsibility to ensure that the latest version is used. A map of the relevant biodiversity information (including an indication of the habitat conditions as per (b) below) and must be provided as an overlay map to the property/site plan as Appendix D to this report.

a) Indicate the applicable biodiversity planning categories of all areas on site and indicate the reason(s) provided in the biodiversity plan for the selection of the specific area as part of the specific category)

Systematic Biodiversity Planning Category		Category	If CBA or ESA, indicate the reason(s) for its selection in biodiversity plan	
Critical Biodiversity Area (CBA)	Ecological Support Area (ESA)	Other Natural Area (ONA)	No Natural Area Remaining (NNR)	Deviation 1. Less than 5 km of the route traverses CBAs designed for biodiversity pattern in order to maintain connectivity. Deviation 3: Approximately 6.5km of route lies within an ESA designed to maintain the connectivity of the landscape along the Groen Rivier.

b) Indicate and describe the habitat condition on site

Habitat Condition	Percentage of	Description and additional Comments and
	habitat	Observations

	condition	(including additional insight into condition, e.g. poor	
	class (adding	land management practises, presence of quarries,	
	up to 100%)	grazing, harvesting regimes etc).	
Natural	Deviation 1: 98% The majority of the route lies with natural vegetation within the Namaqualand Spinesce Grassland, Namaqualand Riviere and Knersvlakte Qua Vygieveld vegetation types Deviation 2. 93% The majority of the deviation occurs intact Namaqualand Strandveld with a small section Namaqualand Sand Fynbos. Deviation 3. 95% The majority of route traverses into Namaqualand Heuweltjieveld and Namaquala Strandveld with some Namaqualand Inland Duneveld a		
Near Natural (includes areas with low to moderate level of alien invasive plants)	0.7%	Namaqualand Riviere. Deviation 1. 1% There are some restricted areas of degradation and areas with some erosion, however these are of limited extent only. Deviation 2. 1% There are some areas which are considered somewhat degraded as a result of livestock grazing. These are however of limited extent and do not occupy a significant proportion of the route	
Degraded (includes areas heavily invaded by alien plants)	3%	Deviation 2: 5% there are some short section of the route which traverse abandoned agricultural fields and which are currently degraded. Deviation 3: 4% there are some section of the route which traverse degraded areas which have resulted from livestock overgrazing.	
Transformed (includes cultivation, dams, urban, plantation, roads, etc)	1%	Deviation 1. 1% There are a few roads within the study area which have resulted in a small amount of transformation. Deviation 2. 1% There are a few roads within the study area which have resulted in a small amount of transformation. Deviation 3. 1% There are a few roads within the study area which have resulted in a small amount of transformation.	

c) Complete the table to indicate:

- (i) the type of vegetation, including its ecosystem status, present on the site; and
- (ii) whether an aquatic ecosystem is present on site.

Terrestrial Ecos	ystems			Aquatic Ecos	ystems	6		
	Critical							
Ecosystem threat status as per the National Environmental	Endangered Vulnerable	Wetlan depressi unchann seeps	d (includ ons, cha ieled we pans, ar	ling rivers, annelled and tlands, flats, nd artificial	Esti	uary	Coas	tline
Management:		wetlands)						
Biodiversity Act (Act	Least							
No. 10 of 2004)	Threatened	YES 🖌	NO	UNSURE	YES	NO ✓	YES	NO ✓

The Table below summarises the terrestrial ecosystem status as derived from the specialist report.

Status	Count
CR	2
EN	18
VU	36
NT	10
Thr*	7
Rare	14
Declining	3
DDD	5
LC	754
DDT	16
Grand Total	865

 d) Please provide a description of the vegetation type and/or aquatic ecosystem present on site, including any important biodiversity features/information identified on site (e.g. threatened species and special habitats) The study was undertaken by Simon Todd of Simon Todd Consulting.

Deviation 1. Deviation 1 traverses mostly Namaqualand Spinescent Grassland with some short sections of Namaqualand Riviere and Knersvlakte Quartz Vygieveld vegetation types. The most significant feature of this section of the route are the two river crossings at the Hol and Moedverloor Riviers. Provided that construction vehicles do not create new roads through the rivers and that pylons can be kept off the floodplain, then impact on these areas would be low. The abundance of listed species along the route is low, but the number of protected species along the route is high on account of the dominance of *Mesembryanthemaceae* as well as a number of *Iridaceae* and other protected geophytes. Common and dominant species include *Cladoraphis spinosa*, *Stoberia spp*, *Zygophyllum morgsana*, *Galenia africana*, *Hermannia scordifolia*, *Hermannia trifurca*, *Lebeckia halenbergensis*, *Asparagus juniperoides*, *Tetragonia fruticosa*, *Conicosia elongata*, *Dorotheanthus rourkei* and *Lycium spp*.

Deviation 2. The majority of Deviation 2 occurs on intact Namaqualand Strandveld with a small section of Namaqualand Sand Fynbos. There only drainage line along this deviation is the Groot Goerap, but as this is not large it would not be difficult to traverse without impacting the drainage line. There are few listed species along the route, but many provincially protected species on account of the abundance of *Mesembryanthemaceae* along large sections of the route. In terms of sensitive habitats along the route, there are some rocky outcrops present as well as many heuweltjies and some limited areas of unstable dunes.

Common and dominant species include Othonna cylindrica, Zygophyllum morgsana, Zygophyllum cordifolium, Eriocephalus africanus var paniculatus, Galenia fruticosa, Salsola namibica, Drosanthemum deciduum, Ruschia bipapillata, Drosanthemum latipetalum, Delosperma crassum, Lampranthus uniflorus and Lycium ferocissimum. Annuals are common and consist of species such as Osteospermum pinnatum var. pinnatum, Arctotis hirsuta, Cotula bipinnata, Foveolina tenella, Rhynchopsidium pumilum, Oncosiphon suffruticosum and Senecio arenarius.

Deviation 3. The majority of Deviation 3 traverses intact Namaqualand Heuweltjieveld, Namaqualand Strandveld and Namaqualand Inland Duneveld with some Namaqualand Riviere. The main feature of concern along the route is the Groen Rivier and associated floodplains. Impact to this area can however be minimised by avoiding placement of pylons near to the river course. Apart from the River, other sensitive habitats along the route include numerous dunes and some heuweltjies. Disturbance in the dune habitat should be kept to a minimum as these areas are vulnerable to wind erosion. Listed species are uncommon along the route but many provincially protected species are present on account of the abundance of *Mesembryanthemaceae* along large sections of the route

Common and dominant species include Othonna cylindrica, Pteronia onobromoides, Helichrysum stellatum and Euphorbia burmanii, Berkheya fruticosa, Justicia cuneata, Hermannia trifruca, Zygophyllum morgsana, Zygophyllum cordifolium, Eriocephalus africanus var paniculatus, Didelta carnosa var. carnosa, Dicrocaulon ramulosum, Galenia sarcophylla, Asparagus capensis, Karroochloa shismoides, Caulipsolon rapaceum, Mesmbryanthemum crystallinum, Tripteris oppositifolia, Hirpicium alienatum, Pteronia ovalifolia.

Avifauna

The avifauna specialist study was undertaken by Craig Widdows of Afzelia, and the report is attached and summarised as follows:

A total of 73 bird species are predicted to occur within the three quarter degree grid squares through which the proposed power line deviations will traverse (South African Bird Atlas Project 2), one of which are considered "Endangered", two are considered "Vulnerable" and "Near Threatened" (Barnes 2014). Avian species likely to be impacted by the proposed power line development include locally resident or transient raptors (Martial Eagle) and large terrestrial birds (Secretary bird, Blue Crane, Ludwig's Bustard and Kori Bustard).

Avifaunal activity within arid areas, in which the deviated power line corridor is located, is driven by rainfall events as this influences the growth of vegetation, presence of prey items and most notably the presence of water. As a result, avian populations tend to follow these rainfall events. This makes it very difficult to predict the abundance of avian species within this biome. The impacts associated with the proposed 400kV power line project include:

- Destruction and alteration of avian habitats;
- Disturbance and displacement of birds; and
- Collision on associated overhead power lines.

Collisions with the earth wire are the main impact associated with the power line deviation. In order to mitigate this impact, it is imperative that earth wires crossing important avian habitats (agricultural lands, rivers, drainage lines and avian flyways) are fitted with anti-collision marking devices to increase the visibility of the power line and reduce likelihood of collisions. These must be Eskom approved anti-collision devices that are durable as the area is prone to strong winds.

The deviation of the route at the three localities is not deemed significant from avifaunal perspective. However, marking of the power line within sensitive avifaunal areas of the deviated power line route is imperative to mitigating the impacts of this project.

SECTION C: PUBLIC PARTICIPATION

1. ADVERTISEMENT AND NOTICE

Publication name	Cape Times			
Date published	Public announcement of the project and call to register as an I&AP – 15 July 2016			
Site notice position	Latitude Longitude			
	Lutzville Public Library			
	31°33'35.48"S 18°20'29.30"E			
	Matzikama Municipality			
	31°33'16.50"S 18°20'46.80"E			
	Outside Tronox Mine			
	31°16'19.05"S	17°58'28.40"E		
Date placed	Site notices were placed at various sites on 16 July 2016			

Include proof of the placement of the relevant advertisements and notices in Appendix E1.

Proof is included as Appendix E1.

2. DETERMINATION OF APPROPRIATE MEASURES

Provide details of the measures taken to include all potential I&APs as required by Regulation 41(2)(e) and 41(6) of GN 733.

Key stakeholders (other than organs of state) identified in terms of Regulation 41(2) (b) of GN 733

Title, Name and Surname	Affiliation/ key stakeholder	Contact details (tel number or
	status	e-mail address)
		Tel: 021 866 8000
		Aduffell-
Alana Duffell-Canham	CapeNature	canham@capenature.co.za
		Tel: 021 701 1397
		Fax: 021 701 1399
		Email philippa@wessa.co.za
	Wildlife and Environment Society	31 The Sanctuary, Kirstenhof,
	of South Africa (WESSA) -	7945
Philippa Huntly	Western Cape Province	P.O. Box 30145, Tokai, 7966

Include proof that the key stakeholder received written notification of the proposed activities as Appendix E2. This proof may include any of the following:

- e-mail delivery reports;
- registered mail receipts;
- courier waybills;
- signed acknowledgements of receipt; and/or

Proof of notification of stakeholder is attached as Appendix E2.

3. ISSUES RAISED BY INTERESTED AND AFFECTED PARTIES

Summary of main issues raised by I&APs	Summary of response from EAP

4. COMMENTS AND RESPONSE REPORT

The practitioner must record all comments received from I&APs and respond to each comment before the Draft BAR 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 the Final BAR as Appendix E3.

Comments and response report is attached as Appendix E3a.

5. AUTHORITY PARTICIPATION

Authorities and organs of state identified as key stakeholders:

Authority/Organ	Contact	Tel No	Fax No	e-mail	Postal
of State	person				address
	(Title, Name				
	and				
	Surname)				
Western Cape Province					
South African	Ms	021 462 4502	021 462 4509	nkhumalo@sahra.org.za	P.O. BOX 4637
Heritage	Nokukhanya				Cape Town

Resource	Khumalo				8000
Agency					
Western Cape	Mr Murovhi	021 941 6000	021 483 3016	mnyakaa@dws.gov.za	Private Bag
Department of	Mashudu				X16,
Water and					Sanlamhof,
Sanitation					Bellville, 7530
					- /-
Western Cape	Ms Laryn	021 483 4094	021 483 4372	laryn.dreyer@westernc	P/Bag X9086
Department of	Dreyer			<u>upo.gov.zu</u>	Cape Town
					8000
Allaiis a					
Plan					
		027 201 3300	027 201 3238	cfo@matzikamamun.co	PO BOX 78
				Za	Vredendal,
				or odminace@motaikamam	8160
Matzikama Local				un.co.za	
Municipality	Mark Bolton				
Western Cape	Mr Cor van	021 808 5099	021 808 5092	joyenei@elsenburg.com	Private Bag X1,
Department of	der Walt			corvdw@elenburg.com	7607
Agriculture					
Cape Nature	Mr. Barny	021 /83 0100		hharnes@capenature.co	Bridgetown
Cape Nature	Rames	0214030190			Postal Address
	Dames			<u></u>	Private Bag
					X29
					Gatesville
					7766
Western Cape	Sharonette			Sharonette.webb@west	P/Bag x9185
Department of	Webb	021 483 3959		erncape.gov.za	Cape town
Transport and	Beverline			Beverline.thomas@west	8001
Public Works	Thomas	021 483 5256		erncape.gov.za	
Northern Cape Pr	ovince				
Northern Cape	Mr W Mothibi	053 838 9100	053 831 4685/		Private Bag
Department of			3635		X5018
Agriculture, Land					Kimberley
Reform and					8300
Rural					

Development					
Northern Cape Department of Environment and Nature Conservation	Ms. L Toos- Thulani Mthombeni	053 807 7430 071 673 7525	0538313530		P/Bag X 6102, Kimberley, 8300 90 Long Street Sasko Building Kimberly
Northern Cape Department of Water and Sanitation	Mr Philani Msimango	053 836 7649		<u>Msimangop@dws.gov.z</u> <u>a</u>	Private Bag X6101 Kimberley 8301
Northern Cape Department of Water and Sanitation	Kelekegile Rapelang	054 338 5846	054 334 0205	rapelangk@dws.gov.za	P/Bag X5912 Upington 8800
Kamiesberg Local Municipality	Mr S. Jenner	027 652 8000	027 652 8001		P/Bag X200 Garies 8220 22 Main Street, Garies
Northern Cape Department of Roads and Public Works	Mr Kholekile Nongwili	053 839 2100	053 839 2291		P.O. Box 3132 Kimberley 8300

Include proof that the Authorities and Organs of State received written notification of the proposed activities as appendix E4.

Proof of notification of Organs of State is attached as Appendix E4.

In the case of renewable energy projects, Eskom and the SKA Project Office must be included in the list of Organs of State.

6. CONSULTATION WITH OTHER STAKEHOLDERS

Note that, for any activities (linear or other) 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. Application for any deviation from the regulations relating to the public participation process must be submitted prior to the commencement of the public participation process.

A list of registered I&APs must be included as appendix E5.

List of Registered I&AP attached as Appendix E5.

Copies of any correspondence and minutes of any meetings held must be included in Appendix E6.

Refer to Appendix 6. No meetings have been held with stakeholders and I&APs yet.

SECTION D: IMPACT ASSESSMENT

The assessment of impacts must adhere to the minimum requirements in the EIA Regulations, 2014 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.

1. 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

Provide a summary and anticipated significance of the potential direct, indirect and cumulative impacts 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. This impact assessment must be applied to all the identified alternatives to the activities identified in Section A(2) of this report.

Activity	Impact summary	Significance	Proposed mitigation			
Alternative 1 (p	Alternative 1 (preferred alternative)					
	Direct impacts:					
	Avifauna Habitat destruction During the construction phase as well as maintenance of the power line, some habitat destruction and alteration will occur due to the clearing of servitudes along the deviated power line route. These activities have an impact on foraging, breeding and roosting ecology of avian species within the area through modification of habitat.	Medium-Low	 All construction and maintenance activities must be carried out according to the generally accepted environmental best practice and the temporal and spatial footprint of the development must be kept to a minimum. In particular, care must be taken in the vicinity of the drainage lines and existing roads must be used as much as 			

Activity Impact summary Sig	gnificance Proposed mitigation
ActivityImpact summarySigElectrocutionElectrocution of birds on associated overhead power lines is a primary cause of mortality for a variety of bird species particularly storks, cranes and raptors in South Africa. Electrocution risk is influenced by the voltage of the power line coupled with the pole structure, however, the risk of avian electrocution due to 400kV power lines utilised for this project are low.Collision The potential collision of avian species with the power line earth wire is considered the most significant impact pertaining to avifauna within the three corridor deviation localities. It is predicted that this impact will have a moderate negative impact prior to the implementation of mitigation measures. This is due to the presence of collision prone species including Ludwig's Bustard, Kori Bustard, Secretarybird, Blue Crane and to a lesser extent Southern Black Korhaan. Furthermore, the deviated power line corridor traverses sensitive avian habitats such as streams and rivers.	gnificance Proposed mitigation during construction. An Eskom approved bird friendly pole design must be used. An Eskom approved bird friendly pole design must be used. The Distribution Technical Bulletin must be be used in this regard. The construction camps must be as close to the corridor as possible.

Activity	Impact summary	Significance	Proposed mitigation
Activity	Impact summary Visual Impact The proposed and approved 273km power line will certainly have a negative visual impact; similarly the approximately 15km deviation as proposed will have a negative visual impact. It is not expected that the negative visual impact of the proposed deviation will be any more significant than that of the approved corridor; more so because the proposed	Significance	 • Keep the construction sites and camps neat, clean and organised in order to portray a tidy appearance. • Screen the construction camp and lay-down yards by enclosing the entire area with a dark green or black shade cloth of no less than 2m
	so because the proposed deviation aims to address and minimise such impacts from the neighbouring and surrounding land users. The visual impact on tourists who are considered visual receptors of high sensitivity will be medium, whilst the impact on motorist and sparsely populated population in the small towns will be low during the operational phase.		 Cloth of no less than 2m height. Storage facilities and other temporary structures on site must be located such that they have as little visual impact on local residents as possible. Soil excavated must not be stockpiled above 2m. All temporary structures erected on site for the purposes of the project's construction phase will be removed from site upon completion of the project. The site must be clean and tidy at all times.
	Impact on cultural and heritage resources The proposed deviation was comprehensively assessed from a	Low	 Isolated stone tools were observed on site

Activity	Impact summary	Significance	Proposed mitigation
	heritage perspective on a tower to tower specific basis. There were no obvious site of heritage significance noted along the proposed deviations; however, isolated stone tools, have been identified along the route.		 therefore, no stone robbing or removal of any material is allowed. It is recommended that the transmission line route stay as far west as possible, to avoid impacts on the scenically important N7 route. Vehicles must be restricted to drive only the existing track and approved tracks and may not create new tracks in the veld during construction of the new transmission line. Where burial sites are accidentally disturbed during construction, the affected area should be demarcated as no go areas.
	It can be expected that the impact on agricultural potential within the proposed deviation will be of relatively higher significance considering the active farming that is taking place. However, the proposed deviation will move the line further away from agricultural land rendering the impact to be of relatively lower significance.	Low	 Strict use of internal roads for heavy machinery; Control of vegetation clearing and exposure of soil; and Management of construction waste

Activity	Impact summary	Significance	Proposed mitigation
	Other impacts expected particularly on grazing and dry land production areas will include loss of grazing capacity and potential arable land. This is expected mostly around the proposed deviations 2 and 3. This impact is reversible; short term in duration and will be low to medium in significance with mitigation measures in place. Impact on Traffic		
	The proposed deviations will move the line further away from the primary access roads, subsequently the will be an increased use of local and private dirt roads that are more prone to erosion and poses a higher safety risk. It is expected that the deviation will not necessarily have a significantly increased impact on the N7, however the deviation moves the alignment to more remote areas thus increasing traffic on secondary access roads as well as private farm roads. This impact is expected to be of medium significance with and without mitigation	Medium	 The delivery of construction material and equipment should be limited to hours outside peak traffic times (including weekends) prevailing on the surrounding roads. Access roads must be clearly marked. Delivery vehicles must comply with all traffic laws and bylaws. A speed limit of 30km per hour must be maintained on farm/dirt roads.
	<i>Flora</i> The impact of the development on		

Activity	Impact summary	Significance	Proposed mitigation
	CBAs and NPAES Focus Areas is	Medium	• The natural vegetation
	not likely to be significant given the		encountered on site is to
	low overall footprint of the		be conserved and left
	development and the currently		intact as much as
	intact nature of the majority of the		possible.
	route. No highly significant impacts		• Only flora within the
	or impacts which cannot be		construction footprint
	mitigated to an acceptable level		must be cleared.
	have been identified.		Clearance must be as per
			the approved Method
	The proposed deviations will have		statement in line with
	an equally significant impact on		Eskom policies.
	sensitive environs as the approved		Sensitive features along
	corridor. The alignments will		the power line deviations
	traverse both terrestrial and		include the major
	aquatic CBA. Both Deviation 1 and		drainage lines, especially,
	3 are proposed to move		the Hol, Groen, Groot
	eastwards, thus moving away from		Goerap and Moedverloor
	the identified protected areas.		rivers. Disturbance in
			these areas should be
	Impacts on Vegetation and		minimised as much as
	Species of Conservation Concern		possible.
	as well as faunal Impacts during		• The sections of line on
	construction are rated as medium		deep sandy soils,
	significance without mitigation and		especially along
	low with measures in place.		Deviation 2 are
			vulnerable to wind
			erosion and the footprint
			of the power line should
			be kept as low as
			possible within these
			areas.
			• Apart from the drainage
			lines, there are few
			features of significance
			along the deviations and
			no specific habitats of

Activity	Impact summary	Significance	Proposed mitigation
			concern that would need
			to be avoided were
			observed.
			• Search and rescue must
			be done by a Specialist in
			consultation with the ECO.
			 No laydown areas may
			be located within
			identified areas of high
			ecological sensitivity.
			Creation of new access
			tracks should be
			minimised in all areas of
			natural vegetation.
			 Point out and/or
			demarcate all ecologically
			"sensitive" areas to the
			construction team (e.g.
			red data habitats &
			species, water courses,
			sensitive soils, sand
			dunes, steep slopes and
			No person shall:
			\sim Uproot the plant in
			the process of
			picking the flower or
			any flora:
			 Without a permit pick
			any endangered or
			protected flora, or
			pick any flora on a
			public road or on the
			land on either side of
			such road within a

Activity	Impact summary	Significance	Proposed mitigation		
			distance of ninety		
			metres from the		
			centre of the road;		
			 Pick any protected or 		
			indigenous		
			unprotected flora on		
			land of which he or		
			she is not the owner,		
			without the		
			permission of the		
			owner of such land or		
			of any person		
			authorised by such		
			owner to grant		
			permission.		
			\circ If the above-		
			mentioned activities		
			will be involved in		
			project, an		
			application for permit		
			must be lodged with		
			CapeNature.		
			• Where applicable, the		
			location of fire beaks		
			should be indicated and		
			these fire breaks may be		
			considered part of the		
			development footprint.		
			• Fire-breaks must be		
			brush-cut and vegetation		
			must not be completely		
			removed.		
			Brush cutting under		
			power lines must occur		
			as infrequently as		
			possible as brush cutting		
			will lead to loss of		

Activity	Impact summary	Significance	Proposed mitigation
			 species diversity over time. A fire risk can help inform an appropriate layout for developments adjacent to fire-prone vegetation.
	Water Resources Potential impacts have been identified relating to soil erosion and sedimentation, alteration to the hydrological flow entering the wetland areas, pollution of wetlands and soil as a result of construction and operational activities. These are impacts of medium significance if mitigation measures are not put in place. However, with proper mitigation they can be reduced to low.	Medium	 The creation of access roads must take all watercourses into consideration and these systems must be avoided; The development footprint area is to be limited to what is absolutely essential so that environmental damage is minimised along the power line corridor. Demarcate all sensitive ecological areas outside of the construction servitude and ensure that these areas remain off-limits during construction. No vehicles must be allowed to drive through and within watercourse channels. No stockpiling of any materials may take place adjacent to any of the watercourses. Erosion control measures

Activity	Impact summary	Significance	Proposed mitigation
			 must be implemented in areas sensitive to erosion, particularly in areas prone to wind erosion and where erosion has already occurred. No release of any substance i.e. cement, oil, that could be toxic to fauna or faunal habitats within the watercourses.
	Waste generation During the construction phase there will be a variety of waste material produced. The contractors must adhere to all proposed measures and provide adequate waste skips and bins around the site. This impact will last the duration of the construction and operational phases and the impact will be low in significance.	Low	 Waste must be separated at source (e.g. containers for glass, paper, metals, plastic, organic waste and hazardous waste). An adequate number of scavenger proof refuse bins must be provided at the construction site and must be clearly labelled (general or hazardous) according to waste streams. All waste must be transported in an appropriate manner (e.g. plastic rubbish bags) and disposed of at a licensed waste disposal facility. Proof of safe disposal must be kept on site. The Contactor may not dispose of any waste and

Activity	Impact summary	Significance	Proposed mitigation
			 / or construction debris by burning, or burying. Waste bins must be emptied regularly (minimum weekly) such that they do not overfill. The Contractor shall maintain 'good housekeeping' practices and ensure that all work sites and the construction camp is kept tidy and litter free.
	Socio-cultural impacts During the negotiation phase of the approved corridor, landowners along the approve alignment recommended the proposed deviations for various reasons. Subsequently in an effort to ensure that the possible socio- cultural impacts are managed, the proposed deviation is proposed. During the construction phase socio-cultural issues must be taken into consideration	Medium	 Property owners or occupiers must be treated with respect and courtesy at all times; The culture and lifestyles of the communities living in close proximity to the substation must be respected; Removal of agricultural products is prohibited. Receipts must be obtained for any merchandise purchased or received from landowners; Tribal graves, archaeological sites and sites of historical interest are to be treated with respect and protected. No firewood is to be

Activity	Impact summary	Significance	Proposed mitigation
			 collected except with the written consent of the landowner; and A register must be maintained of all complaints or queries received as well as action taken.
	Soil erosion		
	The loss of topsoil in South Africa is a national concern and thus erosion control should be taken seriously ineffective storm water management systems can result in soil erosion. The proposed development is located on an arid area prone to wind erosion. During the assessment some towers will be located on Aeolian material and sand dunes that are highly erodible particularly deviation 2 and 3. Soil erosion is expected during the construction of the proposed project and adequate measures must be implemented to prevent undue soil erosion. It must be	Low	 During construction, the Contractor will protect areas susceptible to erosion by installing necessary temporary and / or permanent drainage and by taking suitable measures to prevent surface water concentration into nearby roadways. Prior to construction, all topsoil must be stripped and stockpiled separately from subsoil and rocky material. Soil must be stripped in a phased manner so as to retain vegetation cover for as
	impact on erosion along the deviation will not be any more significant than that of the approved corridor as the geology remains the same. The impact will remain medium in significance without mitigation and can be		 Stockpiled topsoil must not be compacted and must be replaced as the final soil layer. Stockpiled soil must be protected by erosion-

Activity	Impact summary	Significance	Proposed mitigation
	reduced to low with mitigation.		for a period of greater
			than 14 days during the
			wet/windy season.
			 Topsoil stockpiles must
			not be contaminated with
			oil, diesel, petrol, waste or
			any other foreign matter,
			which may inhibit the later
			growth of vegetation and
			micro-organisms in the
			soil.
			Soil must not be
			stockpiled on drainage
			lines or near
			watercourses
			• The timing of clearing and
			grubbing must be co-
			ordinated as much as
			possible to avoid
			prolonged exposure of
			soils to wind and water
			erosion.
			If topsoil will be stockpiled
			for a longer period, it must
			be covered with a suitable
			material to prevent
			erosion and invasion by
			To limit the introduction of
			IO minit the introduction of
			area no soil may ho
			imported onto site
			• Where required out off
			trenches can be installed
			to divert substantial run.
			off and nrevent erosion as
			and when necessary
			and when necessary.

Activity	Impact summary	Significance	Proposed mitigation
	Indirect Impacts		 Where new roads are constructed, water diversion berms should be constructed to prevent erosion.
	Safety and Security The presence of the construction workforce in the area is a potential risk to the surrounding landowners in terms of safety, crime and security. The significance of the potential impacts without the corrective actions (adequate safety measures in dangerous areas) is considered to be of low significance. The implementation of corrective actions could reduce the impacts to a lower level of significance.	Low	 Liaison with landowners prior to entering their properties; Access to the construction site should be controlled; Warning signs should be placed on site to make people aware of the dangers; No-go area should be clearly demarcated, marked and visible; Landowners must be kept abreast with movements in and around their properties; Health and Safety standards and guidelines must be implemented.
	<i>Cumulative impacts:</i> A low impact on Critical Biodiversity Areas and Broad- Scale Ecological Processes	Low	 The development footprint should be kept to a minimum, especially with regards to access roads created during construction. Follow-up checks should be conducted on an annual basis to ensure
Activity	Impact summary	Significance	Proposed mitigation
---------------	--------------------------------------	--------------	-----------------------------
			that alien species have
			not invaded the disturbed
			areas and no other forms
			of degradation have
			occurred.
Alternative 2			
	Direct impacts:		
	Indiract impacts:		
	maneet impacts.		
	Cumulative impacts:		
	Direct impacts:		
	Indirect impacts:		
	Cumulative impacts:		
Alternative 3	Direct imposto		
	Direct impacts:		
	Direct impacts:		
	Indirect impacts:		
	Cumulative impacts:		
No-go option			
	Direct impacts:		
	Socio-economic		
	Should the proposed project not	Modium	The proposed project must
	proceed there will not be sufficient	Medium	nroceed and all
	electricity provision in the future		recommendations and
	given the industrial and residential		mitigation measures must be
	developments that are taking		adhered to.
	place in the area.		

Activity	Impact summary	Significance	Proposed mitigation
	The identified job opportunities will not be realised.		
	Physical Environment		
	Positive impact – The area will remain intact as it will not be disturbed by the proposed development i.e. all negative impacts identified will not occur.	Neutral	The potential impact on the physical environment is minimal and therefore the proposed project must proceed and all recommendation and mitigation measures must be adhered to.
	Indirect impacts:		
	Business/Employment Opportunities Local suppliers and Contractor will	Medium	The proposed project must
	opportunities and job creation relating to construction.		recommendations and mitigation measures must be adhered.
	<i>Cumulative impacts:</i> The cumulative impacts of not constructing the proposed transmission line are significant particularly given the current electricity challenges		

A complete impact assessment in terms of Regulation 19(3) of GN 733 must be included as Appendix F.

APPENDX F IS ATTACHED.

2. 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 <u>after</u> 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 A (preferred alternative)

PLANNING AND DEVELOPMENT PHASE

Impacts associated with the planning and development phase of the proposed activity include the creation of job opportunities for skilled engineers and planning professions. This positive impact will be definite and short term in duration. No significant negative impact has been associated with this phase.

CONSTRUCTION PHASE

The positive impacts identified for this phase include job creation and a positive economic outlook for the municipality and the country at large, these impacts will be enhanced in order to maximise the benefits.

Negative impacts associated with the construction phase of the proposed activity can be regarded as being of high to medium significance without mitigation and medium to low with mitigation. These includes impacts on the following:

- Vegetation;
- Water resources;
- Faunal and avifaunal communities;
- Heritage;
- Traffic; and
- Agriculture.

With corrective measures in place the identified negative impacts can be reduced to low and can be manageable.

OPERATIONAL PHASE

No significant negative impact can be associated with the operational phase of the proposed activity.

The operational phase will have positive impacts associated with increased capacity and reliable supply.

The potential negative environmental impacts will impact on avifauna due to collision and electrocution which can be mitigated. Further, disturbance along the power line route is likely to increase the vulnerability of the disturbed areas to erosion and these areas are likely to remain vulnerable to alien plant invasion for some time following construction and alien species are likely to invade the disturbed area to a greater or lesser degree.

Provided that the proposed mitigation measures are implemented, no factors were determined which should prevent the proposed development from taking place.

DECOMMISSIONING PHASE

No significant impacts have been identified for the decommissioning phase of the proposed activity since decommissioning will not take place for the proposed activity in the foreseeable future. However, if decommissioning were to take place, it would have a negative impact due to potential soil erosion and waste generation.

Alternative 2

Alternative 3

No-go alternative (compulsory)

The no-go alternative was assessed and found not to be a viable option given the economic and social benefits of the proposed project which far outweigh identified negative impacts. If the no-go alternative is considered none of the identified impacts will be realised.

This option is not preferred for the following reasons:

- It implies no improvement in reliability of electricity systems which would benefit electricity users within the Municipality, the region and country at large.
- Should it be adopted the Municipality and community will be deprived of a much needed essential service/facility, particularly given the already existing problem with energy supply in the country.

Impacts associated with the no go option include,

• Continued unreliable power supply which will directly affect the economy.

- Current outages will continue.
- The identified negative impacts on the environment will not occur.

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)?

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).

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.

It is recommended that the proposed deviation be authorised i.e. the deviation of portions of the authorised corridor as follows:

- Landing strip in Lutzville which will result in a deviation of approximately 4.1km;
- Tronox Mine Namakwa Sands which will result in a deviation of approximately 3km; and
- A new mine in Kamiesberg which will result in a deviation of approximately 7.2km.

The recommendation is based on the following:

- The identified positive impacts far outweigh the negative impacts; and
- The proposed project will strengthen the electricity network in the area thereby ensuring better livelihoods.
- The proposed deviation was proposed in consultation with the directly affected landowners; therefore the project takes into consideration the constitution and associated policies.

Environmental Management Programme (EMPr) has been prepared and it will serve as the key reference of the EAPs recommendations jointly with Eskom's policies that are already in place. The EMPr has included measures proposed to mitigate any adverse impacts of the activities and the monitoring. Some of the key recommendation include:

- The flora and fauna specialist indicated that here are no impacts associated with the development that cannot be reduced to a low level through avoidance and mitigation and there are no unavoidable impacts present that are likely to represent a red flag or no-go situation for the development of the power line deviations. Therefore recommendation made by the specialist pertaining to fauna and flora must be adhered to.
- The wetland specialist indicated that the deviation of the route at the three localities is not deemed significant from a wetland and watercourse perspective. However, mitigation measures will be key to limiting the negative effects on the watercourses and must be

included in an Environmental Management Programme for the proposed project. Therefore recommendation made by the specialist pertaining to water resources must be adhered to.

- The avifauna specialist emphasised that the deviation of the route at the three localities is not deemed significant from avifaunal perspective; however, marking of the power line within sensitive avifaunal areas of the deviated power line route is imperative to mitigating the impact of this project on avifaunal populations. This measure must be adhered to.
- The heritage specialist advised that no obvious archaeological indicators were noted along the deviated corridor, however, chance finds are always a possibility; therefore measures must be put in place.
- Ensure compliance with the requirements of WULA considering the proximity of the proposed project to water resources.

The attached construction EMPr must be implemented and adhered to in order to minimise all potential negative impacts and to enhance positive impacts where applicable.

Is an EMPr attached?

The EMPr must be attached as Appendix G.

EMPr is attached as Appendix G

The details of the EAP who compiled the BAR and the expertise of the EAP to perform the Basic Assessment process must be included as Appendix H.

Details of the EAP are included as Appendix H.

If any specialist reports were used during the compilation of this BAR, please attach the declaration of interest for each specialist in Appendix I.

Specialist Declarations are attached as Appendix I.

Any other information relevant to this application and not previously included must be attached in Appendix J.

YES

1

NO

MUNYADZIWA RIKHOTSO

NAME OF EAP

17 October 2016

SIGNATURE OF EAP

DATE

SECTION F: APPENDIXES

The following appendixes must be attached:

Appendix A: Maps

Appendix B: Photographs

Appendix C: Facility illustration(s)

Appendix D: Specialist reports (including terms of reference)

- D1: Wetland Impact Assessment
- D2: Biodiversity Assessment
- D3: Heritage Impact Assessment
- D4: Avifauna Study

Appendix E: Public Participation

- E1a: Proof of Placement of Site Notices
- E1b: Newspaper Advertisement
- E2: Proof of Written Notifications to key Stakeholders
- E3a: Comments and Response Report
- E3b: Public Participation Report
- E4: Proof of Written Notices to Organs of State
- E5: I&APs Database
- E6: Copies of Correspondence and minutes of meetings
- E7: Background Information Document

Appendix F: Impact Assessment

Appendix G: Environmental Management Programme (EMPr)

Appendix H: Details of EAP and expertise

Appendix I: Specialist's declaration of interest

Appendix J: Farm Names and Numbers