



Established in 1952

Eskom Holdings SOC Limited

**PROPOSED ESKOM OUTENIQUA-OUTDSHOORN 132 KV POWERLINE
INSTALLATION, OUTDSHOORN, EDEN DISTRICT MUNICIPALITY, WESTERN
CAPE**



Final Basic Assessment Report

**DEA REF: 14/12/16/3/3/1/613
DEA&DP: 16/3/1/6/6/D7/9/0089/12**

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BASIC ASSESSMENT REPORT

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EXECUTIVE SUMMARY OF THE CONTENT OF THE BASIC ASSESSMENT REPORT

INTRODUCTION AND PROJECT DESCRIPTION:

The Applicant, Eskom Holdings (SOC) Ltd. is making an Application for Environmental Authorisation for the development of a 132kV Powerline (approx. 27km) between from the existing Outeniqua 132 kV Substation (Farm 21/27) to the existing Oudtshoorn Substation, in the town of Oudtshoorn, Western Cape, in terms of the National Environmental Management Act, Act No. 107 of 1998 (as amended). This Application for Environmental Authorisation is being made to the Competent Authority, namely, the National Department of Environmental Affairs (DEA), and is required since the proposed development includes activities which are listed in terms of the NEMA Environmental Impact Assessment (EIA) Regulations 2010 (as amended).

SiVEST Environmental has been appointed by Eskom Holdings (SOC) Ltd (herein after referred to as the Applicant) to undertake a Basic Assessment Process for the above-mentioned project. The proposed development requires compliance with the Environmental Impact Assessment (EIA) Regulations of 2010 (as amended), promulgated in terms of the National Environmental Management Act (No. 107 of 1998) (NEMA).

For ease of reference, all amended information since the publication of the Draft Basic Assessment Report has been highlighted in light grey.

The proposed development entails the following:

The construction of a 27km long, 132kV Powerline between the existing Outeniqua and Oudtshoorn Substations is proposed to provide sufficient capacity and reliability for future electricity demand in the Oudtshoorn area. The proposed Powerline will have a 40m servitude corridor. The preferred alternative route (Route A) will run in the existing servitude of the Outeniqua-Dysselsdorp 400kV line for the first 8.8km of the proposed 27km Powerline.

APPLICABILITY OF NEMA EIA REGULATIONS (2010):

The proposed development requires compliance with the Environmental Impact Assessment (EIA) Regulations of 2010 (as amended), promulgated in terms of the National Environmental Management Act, Act 107 of 1998, as amended. The proposed activity requires a Basic Assessment as listed **Activities 10(i), 11(xi) and 18 (i)** under **Government Notice No R. 544** as well as listed **Activities 12 (b), 13 (a) and 16 (iv)(d)(ii)(ff)** of **Government Notice No R. 546** of the EIA 2010 Regulations are triggered.

RECEIVING ENVIRONMENT:

The proposed Powerline is situated between the Outeniqua Substation, approximately 25km north of George and approximately 1.5km west of the N12, and the Oudtshoorn Substation located in the southern part of the town of Oudtshoorn. The proposed Powerline would run in a north-easterly direction from the existing Outeniqua Substation to the existing Oudtshoorn Substation with a total approximate length of 27km. The Powerline would run through natural and agricultural land and spans across the Olifants, Kammanasie and Doring Rivers. The preferred alternative route (Route A) runs north-east and parallel to the existing 400kV Powerline between Outeniqua and Dysseysdorp for the first 8.8km of the 27 km line, before turning north-west over natural veld and agricultural land to the existing

Oudtshoorn substation. The alternative route (Route B) runs in a northerly direction from the existing Outeniqua substation over natural veld and agricultural land to the existing Oudtshoorn substation.

The surrounding areas of the existing Outeniqua and Oudtshoorn Substations are substantially altered with existing infrastructure and urban development (i.e. Oudtshoorn southern urban areas). The proposed Powerline routes traverse veld that, in numerous places, has been subjected to heavy livestock grazing and agricultural activities (e.g. ploughing, cultivation). Field observations by the botanical specialist noted that plant communities do not seem to be highly negatively influenced by existing Powerlines running from Outeniqua to Dysseisdorp, with vegetation cover of good condition. Negatively impacting agricultural and grazing activities appear to outweigh the negative impacts of Powerline development in the area, from a botanical perspective. The proposed Powerline routes would traverse Little Karoo Critical Biodiversity Areas at various locations (refer to Specialist Botanical Report Appendix D). Most notably, an area of CBA is traversed by Route B from km 3.9 to km 9.9 of the 27km route. A small CBA is traversed approximately 2km south of Oudtshoorn, shortly before the existing Oudtshoorn substation.

ALTERNATIVES:

Alternatives are defined in the NEMA EIA Regulations (2010) as “*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; and (e) the operational aspects of the activity and (f) the option of not implementing the activity*”.

For the purpose of this Application, the following Alternatives were investigated:

Route Alternatives:

Two route alternatives were investigated for the Outeniqua-Oudtshoorn Powerline installation. Two route alternatives are proposed: Preferred Alternative Route A and Alternative Route B. The preferred alternative (A) runs in a north-easterly direction in the existing 400kV Powerline servitude between Outeniqua and Dysseisdorp for the first 8.8km of the proposed 27km line, before branching off in a north-westerly direction towards Oudtshoorn. The alternative route (B) runs in a northerly direction from the existing Outeniqua Substation and joins into the proposed preferred alternative route (A) 7.6km south of the existing Oudtshoorn Substation.

Note: Preferred Route Alternative A has been amended over Erf 6/139 to accommodate landowner concerns with regards to visual impacts. The original proposed layout (as presented in the Draft BAR) caused the powerline to traverse east of the landowner’s private and guest farm accommodation, providing a visual barrier to the Swartberge located in the north east. In order to mitigate this visual impact the powerline route has been modified to run west of the accommodation, therefore no longer blocking the view towards the Swartberge. Refer to Appendix A for an amended locality plan and Appendix E3 for further information.

Technological Alternatives:

Powerline:

Various design options for the Powerline structures /pylon (galvanised steel monopole vs. wooden pylons) exist and these were investigated by the design engineers. However, due to the type of land use activities and terrain in this area, the 132kV double circuit Kingbird line and the existence of a number of large Powerlines in the area, the preferred technological alternative for the pylons is a

galvanized steel design. Impacts associated with a galvanised steel design are assessed in this report. Refer to Section D.

No-Go Alternative:

The No-Go Alternative refers to the option of not implementing the proposed infrastructure development and ultimately the continuation of the current *status quo*. However, should Eskom not proceed with the development of the proposed Powerline development, the demand for electricity in the Oudtshoorn area will not be met. Currently, the electricity demand in Oudtshoorn is rising by 7.8% annually (Oudtshoorn IDP 2012-2016) and electricity shortages and subsequent power outages will increase in frequency.

This issue may be magnified due to the need to refurbish the existing 132kV Powerline running from the existing Dysselsdorp Substation to the existing Oudtshoorn Substation. Unfortunately, it is not possible to rebuild the Dysselsdorp - Oudtshoorn 132kV Powerline as it runs partly through built-up environment. As part of an overall network solution and for practical reasons, Eskom is therefore proposing the above mentioned, new 132kV corridor between the existing Outeniqua and Oudtshoorn Substations to meet the electricity demand for the area. With the proposed Outeniqua – Oudtshoorn Powerline in place, the existing Dysselsdorp- Oudtshoorn Powerline could then be refurbished in order to ensure a continuous and adequate supply of electricity between the Oudtshoorn and Dysselsdorp areas.

PUBLIC PARTICIPATION

A public participation process was undertaken in accordance with the NEMA EIA 2010 Regulations and in terms of the DEA&DP's Guideline on Public Participation (August 2010):

Initial and Draft BAR Notification

The following parties were notified of the Basic Assessment Process and the availability of the Background Information Document (BID), Draft Basic Assessment Report (DBAR) and Environmental Management Programme (EMP) for review and comment:

- Department of Environmental Affairs and Development Planning
- Department of Agriculture
- Eden District Municipality
- Oudtshoorn Local Municipality
- George Local Municipality
- Heritage Western Cape
- CapeNature
- NGO and Ratepayers Association of the Area
- Adjacent landowners
- Ward Councillor of the area

In addition to this, a newspaper advertisement was published (5 November 2012) in Die Burger newspaper; site notices were placed on the site (along both alternative routes and at the Substations); and the BID, Draft BAR and Draft EMP were delivered to:

- De Rust Public Library (14 Burger Street, De Rust, Oudtshoorn, 6650 [tel: 044 241 2105])
- CJ Langenhovern Memorial Library (Voortrekker Road, Oudtshoorn, 6650 [tel: 044 272 2221])

The documents were also made available on SiVEST's website (www.sivest.co.za) for review and comment. Stakeholders were given the opportunity to review and comment on the Draft BAR for a period of **40 days (5 November 2012 – 14 December 2012)**. All comments received or responses sent

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during the public comment period for the Draft BAR are recorded in a Comments and Responses Report (to be included in Appendix E3 of the FBAR)

Final BAR Notification

All registered Interested and Affected Parties (I&AP's) were notified of the availability of the Final Basic Assessment Report (Final BAR) and Final Environmental Management Programme (EMP) for review and comment. The following state departments received hard copies and electronic versions of the Final BAR and EMP:

- Department of Environmental Affairs and Development Planning
- Department of Agriculture
- Department of Transport (Roads)
- Department of Water Affairs
- Department of Agriculture
- Eden District Municipality
- Oudtshoorn Local Municipality
- George Local Municipality
- Heritage Western Cape
- CapeNature

In addition to the above, the Final BAR and Final EMP have been made available at the following libraries:

- De Rust Public Library (14 Burger Street, De Rust, Oudtshoorn, 6650 [tel: 044 241 2105])
- CJ Langenhoven Memorial Library (Voortrekker Road, Oudtshoorn, 6650 [tel: 044 272 2221])

The documents are also made available on SiVEST's website (www.sivest.co.za) for review and comment. Stakeholders are given the opportunity to review and comment on the Final BAR for a period of **21 days (11 July 2013 – 2 August 2013)**. Registered I&AP's are requested to send their comments directly to the Department of Environmental Affairs.

ENVIRONMENTAL IMPACT STATEMENT

The impact statement for the Preferred Route (A) is listed below, as it is the route associated with the least negative environmental impacts and runs in an existing 400kV servitude for the first 8.8km of the 27km line. The impact statement for the alternative route can be found in Section D3 in this report along with a comparative assessment of the preferred and alternative routes.

The impacts rated for the CONSTRUCTION PHASE for the PREFERRED ROUTE (ROUTE A):

Nature of Impact	Description of Impact	Status of Impact	Significance Prior to Mitigation	Significance Post Mitigation
Geographical and Physical (Direct Impact)	Soil erosion through vegetation clearance and soil compaction at by heavy duty vehicles	Negative	Low	Low
Geographical and Physical (Direct Impact)	Contamination of soils through indiscriminate disposal of construction waste and accidental spillage of petroleum products	Negative	Low	Low

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Botanical (Direct Impact)	Loss of Subtropical Thicket: Kandelaars Arid Spekboomveld and De Rust Sandolien-Spekboomveld	Negative	Medium	Low
Botanical (Direct Impact)	Loss of Arid Thicket Mosaic: Blossoms Asbos Gwarrieveld	Negative	Medium	Low
Botanical (Direct Impact)	Loss of Gannaveld: Kandelaars Gannaveld	Negative	Low	Low
Botanical (Direct Impact)	Loss of Gannaveld: Oudtshoorn Gannaveld	Negative	Very Low	Very Low
Botanical (Direct Impact)	Loss of Gravel Apronveld: Grootkop Gravel Apronveld	Negative	Low	Low
Ecological Processes (Direct Impact)	Loss of ecological processes	Negative	Low	Low
Freshwater (Direct Impact)	Disturbance of habitat and possibly impedance/diversion of flow at river crossings of proposed transmission lines	Negative	Very Low	Very Low
Freshwater (Direct Impact)	Disturbance of habitat and possibly impedance/diversion of flow at river crossings of proposed access routes	Negative	Low to Very Low	Very Low
Archaeological (Direct Impact)	The archaeological resources likely to be impacted are too insignificant to merit further concern. If archaeological impacts were to be rated independently they would end up with very low ratings	N/A	N/A	N/A
Dust (Direct Impact)	Dust impacts on surrounding environment associated with construction activities	Negative	Low	Low
Noise (Direct Impact)	Noise impacts on surrounding environment associated with construction activities (construction vehicles and equipment)	Negative	Low	Low
Waste (Direct Impact)	Generation of additional waste/litter and building rubble/hazardous material during the construction phase	Negative	Medium	Low
Socio-Economic (Direct Impact)	Positive socio-economic impact as a result of the creation of temporary employment for local labourers during the construction process	Positive	High	High

The impacts rated for the OPERATIONAL PHASE for the PREFERRED ROUTE (ROUTE A):

Nature of Impact	Description of Impact	Status of Impact	Significance Prior to Mitigation	Significance Post Mitigation
Socio-economic (Direct Impact)	Positive socio-economic impact as a result of constant, adequate, reliable supply of electricity to the area, thereby contributing positively to the expansion and strengthening of local economic activities	Positive	High	High

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Freshwater (Direct Impact)	Disturbance of habitat and possibly impedance/diversion of flow at river crossings of proposed transmission lines		Very Low	Very Low
Heritage Resources (Direct Impact)	Visual intrusion of the Powerline into the cultural and scenic landscape	Negative	Low	N/A
Avifauna (Direct Impact)	Potential avi-faunal impacts: electrocution of birds perching on the pylon structures supporting the conductors and collision of flying birds with suspended cabling of the line	Negative	High	Medium

The impact rated for the **NO-GO Alternative**:

Nature of Impact	Description of Impact	Status of Impact	Significance Prior to Mitigation	Significance Post Mitigation
Socio-Economic (Direct Impact)	Negative socio-economic impact as a result of inadequate supply of electricity to the area, thereby limiting growth and expansion of local economic activities. Improvement in supply of electricity to the area will not be secured.	Negative	High	High

To summarise, the negative environmental impacts associated with the proposed development (Preferred Route) are generally considered to be local of nature and can be mitigated to a low level of significance in accordance with the detailed EMP (Appendix G). The project will however, result in high positive cumulative impacts as a result of constant, reliable supply of electricity from the existing Outeniqua Substation to the existing Oudtshoorn Substation, and consequently into the Oudtshoorn area, thereby contributing positively to the expansion and strengthening of local economic activities. Additionally, the clearance of vegetation along the Powerline route, will allow for the monitoring and management of weedy species such as *Galenia Africana* (kraalbos) to encourage diverse re-vegetation near powerlines.

COMMENTS/ISSUES

The following summary of comments and potential issues were identified by stakeholders during the Draft BAR phase. All issues raised have been adequately addressed through mitigations measures presented in Section D of this Final BAR and/or the Final EMP (Appendix G). Further information with regards to comments can be found in the Comments & Responses Report (Appendix E3).

- CapeNature requested additional information, including exact tower positions and proposed access routes, in order to further investigate the proposed development. SiVEST provided a list of bend point GPS co-ordinates for the preferred alternative and alternative route, as a full set of tower position co-ordinates are not available at this time. The exact tower position co-ordinates will be available during the detailed design phase which follows a positive decision from the Competent Authority as the case may be.
- DEA&DP expressed concern with regards to the visual intrusion of the proposed powerline, specifically Route Alternative B that is located near the N12/N9 scenic route. The Heritage Impact Assessment report (Appendix D) provides a short section on the visual impact however a visual study was not requested by Heritage Western Cape (HWC). It was noted that should Route Alternative B be selected, a visual impact study will be conducted (refer to HWC comment below).

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- Department of Water Affairs confirmed that a General Authorization must be applied for. The application is in progress (refer to Appendix J for proof).
- Heritage Western Cape supported Preferred Route Alternative A. However, a visual impact study was requested should Route Alternative B be selected.
- Mr Frans Cilliers of Erf 6/139 over which Preferred Route Alternative A is to traverse, expressed concern with regards to the visual impact as the powerline would have traversed in front of his private and guest accommodation, providing a visual barrier to the Swartberge. Eskom conducted a site visit and, in collaboration with Mr Cilliers, the Preferred Route Alternative A was modified to traverse Erf 6/139 behind the accommodation units, therefore negating the previous visual impact (refer to Appendix A for modified locality plan).

CONCLUSION AND RECOMMENDATIONS

The Environmental Assessment Practitioner is therefore of the opinion that the negative environmental impacts associated with the proposed preferred route can be mitigated in accordance with the detailed EMP (Appendix G).

The proposed development has an overall positive benefit to the socio-economic development of the region as well potential botanical advantages through alien clearing along the proposed Powerline route. The project is aligned with the objectives of the policies and frameworks at both Provincial and local level.



environmental affairs

Department:
Environmental Affairs
REPUBLIC OF SOUTH AFRICA

(For official use only)

File Reference Number:

Application Number:

Date Received:

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

Kindly note that:

1. This **basic assessment report** is a standard report that may be required by a competent authority in terms of the EIA Regulations, 2010 and is meant to streamline applications. Please make sure that it is the report used by the particular competent authority for the activity that is being applied for.
2. This report format is current as of **1 September 2012**. 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.

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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 on 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? YES NO
 If YES, please complete the form entitled "Details of specialist and declaration of interest" for the specialist appointed and attach in Appendix I.

1. PROJECT DESCRIPTION

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

Eskom proposes to construct a 27km long, 132kV Powerline between the existing Outeniqua and Oudtshoorn substations. The following scope of works is proposed for the development:

- The proposed new Powerline between the existing substations will be a total length of 27km with a 40m servitude corridor;
- Preferred Alternative Route A will run in an existing servitude of a 400kV line for the first 8.8km of the proposed 27km Powerline;
- The structures to be used to support the overhead Powerline will either be steel monopole (preferred) or double-wood structures;
- The steel monopole or double-wood structures will be self-supporting, and will not require restrictive foundations or stay-wires, which will limit the footprint and impact of the structures;
- Where no access roads to the proposed route exist, new access roads or tracks will likely be created during the construction phase of the project with maintenance during the operational phase.

The existing 132kV Powerline running from the existing Dysselsdorp Substation to the existing Oudtshoorn Substation requires refurbishment. Unfortunately, it is not possible to rebuild the Dysselsdorp - Oudtshoorn 132kV Powerline as it runs partly through built-up environment. As part of an overall network solution and for practical reasons, Eskom is therefore proposing to build the aforementioned, new 132kV corridor between the existing Outeniqua and Oudtshoorn Substations. In addition, the existing 132kV Powerline from Outeniqua to Dysselsdorp will also require refurbishment in the future. The existing Dysselsdorp-Oudtshoorn Powerline can then be refurbished but the Outeniqua to Dysselsdorp 132kV line refurbishment can be further delayed.

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

Please note: the Listed Activities below were listed in the Draft BAR but are no longer applicable. A revised application form has been submitted to DEA on 10 July 2013.

GN No. 544 Activity 22 (ii): Construction of a road, outside urban areas (ii) where no road reserve exists and the road is wider than 8m. It has been confirmed that all access routes will be single-lane tracks no wider than 4m, therefore this Listed Activity no longer applies.

GN No. 546 Activity 4 (d) (ii): Construction of a road wider than 4 meters within a reserve less than 13.5 meters. It has been confirmed the proposed access tracks will not be wider than 4m. The access tracks will not have road reserves, therefore this Listed Activity no longer applies.

Listed activity as described in GN R.544, 545 and 546	Description of project activity
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<p>GN No. R544 Activity 10 (i): <i>The construction of facilities or infrastructure for the transmission and distribution of electricity – (i) outside urban areas</i></p>	<p>A 132 kV Powerline and associated infrastructure will be constructed for the distribution of electricity.</p>
<p>GN No. R544 Activity 11(xi): <i>The construction of (xi) infrastructure or structures covering 50m² or more where such construction occurs...within 32 meters of a watercourse...</i></p>	<p>The Powerline and associated infrastructure may be constructed within 32m of a watercourse.</p>
<p>GN No. R544 Activity 18 (i): <i>The infilling or depositing of any material of more than 5 cubic meters into, or the dredging, excavation, removal or moving of soil...or rock of more than 5 cubic meters from: (i) a watercourse</i></p>	<p>With the construction of the Powerline, infilling or depositing of material may be required within a watercourse.</p>
<p>GN No. R546 Activity 12 (b): <i>The clearance of an area of 300 square meters or more of vegetation where 75% or more...constitutes indigenous vegetation (b) within CBA identified in bioregional plans</i></p>	<p>Two options for the routing of the Powerline have been provided. With each option it is likely that an area of 300m² or more of indigenous vegetation may have to be cleared.</p>
<p>GN No. R546 Activity 13 (a): <i>The clearance of an area of 1 hectare or more of vegetation where 75% or more...constitutes indigenous vegetation (a) within CBA as identified in systematic biodiversity plans...</i></p>	<p>Two options for the routing of the Powerline have been provided. With each option it is likely that an area of 1000m² or more of indigenous vegetation may be cleared.</p>
<p>GN No. R546 Activity 16 (iv) (d) (ii) (ff): <i>The construction of: (iv) infrastructure covering 10 square meters or more where such construction occurs...within 32 meters of a watercourse...(d) in the Western Cape (ii) outside urban areas (ff) in CBA</i></p>	<p>Powerline structures could be located within 32m of the edge of watercourse outside an urban area and within CBA.</p>

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 Regulation 22(2)(h) of GN R.543. 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.

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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)
N/A		
Alternative 2		
Description	Lat (DDMMSS)	Long (DDMMSS)
N/A		
Alternative 3		
Description	Lat (DDMMSS)	Long (DDMMSS)
N/A		

In the case of linear activities:

Note: Preferred Route Alternative A has been amended over Erf 6/139 to accommodate landowner concerns with regards to visual impacts. The original proposed layout (as presented in the Draft BAR) caused the powerline to traverse east of the landowner's private and guest farm accommodation, providing a visual barrier to the Swartberge in the north east. In order to mitigate this visual impact the powerline route has been modified to run west of the accommodation, therefore no longer blocking the view towards the Swartberge. Refer to Appendix A for an amended locality plan and Appendix E3 for further information.

Alternative:	Latitude (S):	Longitude (E):
Alternative S1 (Preferred Alternative Route A)		
• Starting point of the activity	33°45'51.1"	22°21'21.2"
• Middle/Additional point of the activity	33°39'41.8"	22°19'54.9"
• End point of the activity	33°36'30.5"	22°13'13.3"
Alternative S2 (Alternative Route B)		
• Starting point of the activity	33°45'51.1"	22°21'21.2"
• Middle/Additional point of the activity	33°40'49.5"	22°18'5.2"
• End point of the activity	33°36'30.5"	22°13'13.3"
Alternative S3 (if any N/A)		
• Starting point of the activity		
• Middle/Additional point of the activity		
• End point of the activity		

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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 (**refer to Appendix J for a list of bend-point coordinates for Alternative Routes A and B**)

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.

b) Lay-out alternatives

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

c) Technology alternatives

Alternative 1 (preferred alternative)
Monochrome steel poles: steel poles are preferred as maintenance is lower and life span of the poles is longer, however the visual impact of steel in the landscape may be greater than that of wooden poles.
Alternative 2
Double-wood poles: wooden poles are not favoured due to high maintenance and lower lifespan compared to steel poles. This alternative is therefore not assessed in this report.
Alternative 3
N/A

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

Alternative 1 (preferred alternative)
N/A
Alternative 2
N/A
Alternative 3
N/A

e) No-Go alternative

The No-Go Alternative refers to the option of not implementing the proposed infrastructure development and ultimately the continuation of the current *status quo*. However, should Eskom not proceed with the development of the proposed Powerline development, the demand for electricity in the Oudtshoorn area will not be met. Currently, the electricity demand in Oudtshoorn is rising by 7.8% annually (Oudtshoorn IDP 2012-2016) and electricity shortages and subsequent power outages will increase in frequency.

This issue may be magnified due to the need to refurbish the existing 132kV Powerline running from the existing Dysseisdorp Substation to the existing Oudtshoorn Substation. Unfortunately, it is not possible to rebuild the Dysseisdorp - Oudtshoorn 132kV Powerline as it runs partly through built-up environment. As part of an overall network solution and for practical reasons, Eskom is therefore proposing the above mentioned, new 132kV corridor between the existing Outeniqua and Oudtshoorn Substations to meet the electricity demand for the area. With the proposed Outeniqua – Oudtshoorn Powerline in place, the existing Dysseisdorp- Oudtshoorn Powerline could then be refurbished in order to ensure a continuous and adequate supply of electricity between the Oudtshoorn and Dysseisdorp areas.

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:

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

Size of the activity:

	N/A m ²
	N/A m ²
	N/A m ²

or, for linear activities:

Alternative:

Alternative A1 (Preferred Alternative Route A)
 Alternative A2 (Alternative Route B)
 Alternative A3 (if any)

Length of the activity:

	(approx.) 27,000 m
	(approx.) 27,000 m
	m

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

Alternative:

Alternative A1 (Preferred Alternative Route A)

Alternative A2 (Alternative Route B)

Alternative A3 (if any N/A)

Size of the site/servitude:

	Approx. 40m (20m either side, exact pylon positions not yet known)
	Approx. 40m (20m either side, exact pylon positions not yet known)
	m ²

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

4. SITE ACCESS

Does ready access to the site exist?

✓ YES	NO
	m

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

Describe the type of access road planned:

- **There are existing farm access roads which provide access to the majority of the preferred alternative Powerline route (Route A) and some access to the alternative route (Route B).**
- **Existing access roads and tracks shall be used during construction as far as possible.**
- **Access roads on privately owned land and farms shall be used with the permission of the landowners.**
- **In instances where no access is available, an access road will be created.**
- **The potential impacts associated mitigation measures with the creation of access roads are addressed in the EMP (Appendix G).**

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).

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.

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 DWA);
- 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.

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.

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.

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?	<input checked="" type="checkbox"/> YES	NO	Please explain
<p>The majority of land on which the proposed Powerline is to be stationed, is currently zoned as agricultural. However, Eskom is a Statutory Body and as such is exempt in terms of Section 23 of the Land Use Planning Ordinance, 1985 (Ordinance 15 of 1985) from rezoning and subdivision application procedures, so no application will be undertaken for rezoning/ subdivision process.</p>			
2. Will the activity be in line with the following?			
(a) Provincial Spatial Development Framework (PSDF)	<input checked="" type="checkbox"/> YES	NO	Please explain
<p>Reference is made to Objective 1 (Socio-Economic Development): Oudtshoorn is identified as a potential economic development location in the agricultural and tourism sectors and is identified as a priority infrastructure investment location. Such infrastructure investments may include electricity supply. Additionally, economic development cannot be encouraged without adequate electricity supply, therefore supporting the development of the Outeniqua-Oudtshoorn Powerline.</p> <p>Reference is made to Objective 2 Human Development Programs and Basic Need Programs: Oudtshoorn is identified as a priority resource development and minimum basic services area with a high need and high development potential. Basic services includes electricity supply, and in order for resource development to occur, adequate electricity supply is essential. Therefore the proposed development is supported by Objective 2 of the PSDF.</p> <p>Reference is made to Objective 3 Strategically Invest Scarce Public Resources which identifies Oudtshoorn as a priority fixed investment urban settlement with high economic growth potential. Economic growth cannot occur without adequate and steady electricity supply, therefore Objective 3 indirectly supports the development of the proposed Powerline between the existing Outeniqua and Oudtshoorn substations.</p>			
(b) Urban edge / Edge of Built environment for the area	YES	NO	<input checked="" type="checkbox"/> Please explain
<p>Preferred Alternative Route A and Alternative Route B lie outside the urban edge or built environment. The proposed Powerline will be built between two existing substations, Outeniqua and Oudtshoorn substations respectively.</p>			

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<p>(c) Integrated Development Plan (IDP) and Spatial Development Framework (SDF) of the Local Municipality (e.g. would the approval of this application compromise the integrity of the existing approved and credible municipal IDP and SDF?).</p>	✓ YES	NO	Please explain
<p>Reference is made to the Oudtshoorn IDP (2012-2016) Chapter 8.3 Electricity Masterplan which identifies a need for increased electricity capacity due to steady growth of electricity demand at 7.8% yearly. It is also identified that the firm capacity of the 132kV main line from Dysselsdorp as well as 20kV distribution networks in the Oudtshoorn area are high, therefore warranting an additional Powerline from the existing Outeniqua substation to the existing Oudtshoorn substation, to supply adequate and steady electricity to the area.</p>			
<p>Reference is made to the George IDP (2012-2016) Section 3.5 (1) where it identifies the need for strategic measures to ensure that adequate electricity may be supplied to all areas. Section 4.6 on Municipal Challenges, identifies the need for access to basic services (including electricity) for all area residents. Section 4.7 on the Municipality's Overall Strategy identifies the need for adequate and steady service delivery, including electricity. Therefore all above mentioned sections support the proposed development for a Powerline between the existing Oudtshoorn substation, to supply adequate and steady electricity to the area.</p>			
<p>(d) Approved Structure Plan of the Municipality</p>	YES	✓ NO	Please explain
<p>Approved Structure Plans do not exist for the area in question.</p>			
<p>(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?)</p>	✓ YES	NO	Please explain
<p>Reference is made to the Garden Route EMF (2010) Chapter 4.7 on Visually Sensitive Landscape Areas which identifies power lines as a Category 5 Development (highest category) in terms of developing structures in visually sensitive areas. The objectives are to limit agricultural land from indiscriminate development, enforcing aesthetics in the area, retain the sense of place, and protect and enhance the visual quality of prominent tourism routes. Given that the preferred alternative Route A will run partially in an existing servitude corridor, and in a valley, therefore avoiding sensitive visual areas such as mountain sides, hilltops or koppies, the preferred alternative Route A is in line with the Garden Route EMF. Alternative Route B will run mostly over agricultural land and mountainous terrain, however the Powerline route is designed to cause minimal visual impact. Should Route B be selected, and Visual Impact Assessment will be conducted as per HWC final comment (refer to Appendix E3). Additionally, visual mitigation measures will be in place for the proposed Powerline, therefore further reducing the visual impact on the surrounding landscape. Refer to the EMP for complete mitigation measures (Appendix G).</p>			
<p>(f) Any other Plans (e.g. Guide Plan)</p>	YES	NO	Please explain
<p>N/A</p>			

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<p>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)?</p>	<p align="center">✓ YES</p>	<p align="center">NO</p>	<p align="center">Please explain</p>
<p>As per Oudtshoorn IDP Chapter 8.3 Electricity Master plan, page 148, the proposed Outeniqua-Oudtshoorn powerline is included in the 2012-2016 timeframe to urgently increase the electricity supply to Oudtshoorn in order to accommodate current and future load demands. The existing network is at maximum load capacity and can only accommodate minor, short-term natural development growth.</p>			
<p>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.)</p>	<p align="center">✓ YES</p>	<p align="center">NO</p>	<p align="center">Please explain</p>
<p>The proposed Powerline to be developed between the existing Outeniqua and Oudtshoorn Substations, will aid in meeting the increasing demand for electricity in the Oudtshoorn area. Additionally, the proposed Powerline will ensure the constant and adequate supply of electricity, as the Dysselsdorp – Oudtshoorn Powerline is in need of refurbishment.</p>			
<p>5. Are the necessary services with adequate capacity currently available (at the time of application), or must additional capacity be created to cater for the development? (Confirmation by the relevant Municipality in this regard must be attached to the final Basic Assessment Report as Appendix I.)</p>	<p align="center">YES</p>	<p align="center">NO</p>	<p align="center">✓ Please explain</p>
<p>The proposed development does not require municipal services.</p>			
<p>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 municipality (priority and placement of services and opportunity costs)? (Comment by the relevant Municipality in this regard must be attached to the final Basic Assessment Report as Appendix I.)</p>	<p align="center">✓ YES</p>	<p align="center">NO</p>	<p align="center">Please explain</p>
<p>Reference is made to the Oudtshoorn IDP (2012-2016) Chapter 8.3 Electricity Masterplan which identifies a need for increased electricity capacity due to steady growth of electricity demand at 7.8% yearly, therefore warranting an additional Powerline from the existing Outeniqua substation to the existing Oudtshoorn substation, to supply adequate and steady electricity to the area. The IDP has identified the proposed Outeniqua-Oudtshoorn powerline as a priority infrastructure development to provide electricity to Oudtshoorn.</p>			
<p>Eskom has identified the need to develop a Powerline between Outeniqua and Oudtshoorn in order to meet the increasing electricity demands of the Oudtshoorn area. Comments have been received from the George and Oudtshoorn Municipalities (refer to Appendix E3).</p>			

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7. Is this project part of a national programme to address an issue of national concern or importance?	YES	<input checked="" type="checkbox"/> YES <input checked="" type="checkbox"/> NO	Please explain
<p>The proposed development is in line with the National Spatial Development Perspective which states that “South Africa will become a nation in which investment in infrastructure...support government’s growth and development objectives: by focusing economic growth...in areas where it is most effective and sustainable; by fostering development on the basis of local potential...”. As alluded in section (2a), the PSDF (2010) has identified Oudtshoorn as an area of high economic potential. Building on economic potential and growth is not possible without adequate supply of electricity to the area.</p>			
8. Do location factors favour this land use (associated with the activity applied for) at this place? (This relates to the contextualisation of the proposed land use on this site within its broader context.)	<input checked="" type="checkbox"/> YES	NO	Please explain
<p>An existing servitude corridor that contains the 400kV Powerline running from the existing Outeniqua substation to the Dysselsdorp substation will be used for the first 8.8km of the proposed 27km line of the preferred alternative Route A. The remainder of the proposed Powerline preferred alternative Route A would run in a valley, therefore decreasing the visual impact of the Powerline. The use of an existing servitude as well as the location of the second part of the preferred alternative Route A in a valley, favour the land use proposed.</p>			
9. Is the development the best practicable environmental option for this land/site?	<input checked="" type="checkbox"/> YES	NO	Please explain
<p>An existing servitude corridor that contains the 400kV Powerline running from the existing Outeniqua substation to the Dysselsdorp substation will be used for the first 8.8km of the proposed 27km line of the preferred alternative Route A. The remainder of the proposed preferred alternative Route A and alternative Route B would run over agricultural land and, where possible, in valleys to decrease the visual impact. Therefore the development is the best practicable environmental option for the land with a minimal environmental impact after mitigation measures have been implemented (refer to the EMP in Appendix G). The proposed powerline would be part of the Eskom Distribution Network.</p>			
10. Will the benefits of the proposed land use/development outweigh the negative impacts of it?	<input checked="" type="checkbox"/> YES	NO	Please explain
<p>The demand for increased electricity capacity in the Oudtshoorn area and the need to refurbish the Oudtshoorn-Dysselsdorp line, for which a new line between the existing Outeniqua and Oudtshoorn Substations is required, will result in high positive impacts of greater electricity supply and reliability. Additionally, the proposed preferred alternative Route A runs in an existing 400kV servitude for 8.8km of the 27km proposed route, decreasing negative environmental impacts.</p>			
11. Will the proposed land use/development set a precedent for similar activities in the area (local municipality)?	YES	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	Please explain
<p>The proposed development of the Outeniqua – Oudtshoorn Powerline serves to increase electricity capacity to satisfy demand, however, no precedent is set for future development of Powerlines in the area as Oudtshoorn is already serviced by the Dysselsdorp-Oudtshoorn Powerline and Dysselsdorp is serviced by the Outeniqua-Dysselsdorp line as part of the Eskom Distribution Network.</p>			

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12. Will any person's rights be negatively affected by the proposed activity/ies?	YES	<input checked="" type="checkbox"/> NO	Please explain
Landowners affected, as well as landowners adjacent to the proposed preferred alternative Route A and alternative Route B, have been notified timeously (see Appendix E2) about the proposed development and given opportunity to comment. All comments received from affected and adjacent land owners, and other stakeholder have been addressed (refer to Appendix E3). Consent for land access and construction (where applicable) has been obtained.			
13. Will the proposed activity/ies compromise the "urban edge" as defined by the local municipality?	YES	<input checked="" type="checkbox"/> NO	Please explain
The proposed Powerline routes of Preferred Alternative Route A and Alternative Route B lie outside the urban edge until shortly before entering the existing Oudtshoorn Substation.			
14. Will the proposed activity/ies contribute to any of the 17 Strategic Integrated Projects (SIPs)?	<input checked="" type="checkbox"/> YES	NO	Please explain
The proposed development <u>will contribute</u> to one (1) SIP namely: SIP 9: Electricity Transmission and Distribution for all – <i>“expand the transmission and distribution network to address historical imbalances, provide access to electricity for all and support economic development”</i> .			
15. What will the benefits be to society in general and to the local communities?	Please explain		
The proposed development will ensure adequate, constant and reliable supply of electricity to the Oudtshoorn area, thereby contributing positively to the expansion and strengthening of local economic activities such as Ostrich farming and tourism.			
16. Any other need and desirability considerations related to the proposed activity?	Please explain		
All need and desirability aspects have been identified and considered in this report.			
17. How does the project fit into the National Development Plan for 2030?	Please explain		
The proposed development will provide electricity for all users in the area and support economic development, which will in turn ensure prosperity and equity through job creation.			

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18. Please describe how the general objectives of Integrated Environmental Management as set out in section 23 of NEMA have been taken into account.

- a) *Promote the integration of the principles of environmental management set out in section 2 into the making of all decisions which may have a significant effect on the environment;*
- This Basic Assessment process takes into account all the general objectives of Integrated Environmental Management. The social, economic, cultural and biophysical impacts have been considered and evaluated. The impacts will be mitigated and managed according to a detailed Environmental Management Programme.
- b) *Identify, predict and evaluate the actual and potential impact on the environment, socio-economic conditions and cultural heritage, the risks and consequences and alternatives and options for mitigation of activities, with a view to minimising negative impacts, maximising benefits and promoting compliance with the principles of environmental management set out in section 2;*
- Impacts associated with the proposed development of the Outeniqua-Oudtshoorn Powerline (construction and operational phases) have been identified, assessed and mitigation measures provided. These are detailed in Section D of this BAR.
- c) *Ensure that the effects of activities on the environment receive adequate consideration before actions are taken in connection with them;*
- This Application is being undertaken in accordance with the NEMA EIA Regulations (2010), the provisions of which themselves take into account the general objectives of Integrated Environmental Management in Section 23 of the NEMA
 - Please also refer to the attached Environmental Management Programme (Appendix G)
- d) *Ensure that adequate and appropriate opportunity for public participation in decisions that may affect the environment;*
- This Application has been undertaken in accordance with the Public Participation Requirements (and proposed deviations) set out in the NEMA EIA Regulations (2010). Public Participation Deviations are included in Section C of the BAR.
 - Please refer to section C of this BAR for details relating to PPP.
- e) *Ensure the consideration of environmental attributes in management and decision-making which may have a significant effect on the environment; and*
- This Basic Assessment process takes into account all the general objectives of Integrated Environmental Management. The social, economic, cultural and biophysical impacts have been considered and evaluated. The impacts will be mitigated and managed according to a detailed Environmental Management Programme.
- f) *Identify and employ the modes of environmental management best suited to ensuring that a particular activity is pursued in accordance with the principles of environmental management set out in section*
- This Basic Assessment process takes into account all the general objectives of Integrated Environmental Management. The social, economic, cultural and biophysical impacts have been considered and evaluated. The impacts will be mitigated and managed according to the detailed Environmental Management Programme attached at Appendix G.

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

4(a)	Sustainable development requires the consideration of all relevant factors including the following:	The proposed powerline development will have a positive impact on sustainability i.e. socio-economic activities: reliable and adequate supply of electricity to the Oudtshoorn area which will positively impact local and regional economic activities. Measures to avoid/ reduce/ minimise environmental impacts and disturbance, especially to vegetation and watercourses are included in Section D on impacts and in the EMP.
(i)	That the disturbance of ecosystems and loss of biological diversity are avoided, or, where they cannot be altogether avoided, are minimised and remedied;	
(ii)	That pollution and degradation of the environment are avoided, or, where they cannot be altogether avoided, are minimised and remedied;	
(iii)	That the disturbance of landscapes and sites that constitute the nation's cultural heritage is avoided, or where it cannot be altogether avoided, is minimised and remedied;	
(iv)	That waste is avoided, or where it cannot be altogether avoided, minimised and re-used or recycled where possible and otherwise disposed of in a responsible manner;	
(v)	That the use and exploitation of non-renewable natural resources is responsible and equitable, and takes into account the consequences of the depletion of the resource	The proposed upgrade is subject to the requirements of the National Heritage Act 25 of 1999. A Notice of Intent to Develop has been submitted to HWC. The NID response issued by HWC requested that a Heritage Impact Assessment (HIA) be commissioned. Subsequently a HIA was undertaken with potential impacts on archaeological resources identified and mitigation measures proposed. Refer to section 9 of this BAR and EMP for further details. This upgrade will adhere to the conditions of Authorization stipulated by HWC.
		Waste to be generated during construction phase of the upgrade will be limited. Waste will be re-used or recycled wherever possible, or disposed of according to the measures detailed in the EMP (Appendix G).The Contractor will reuse excavated material as fill material.
		The proposed development requires the use of non-renewable resources such as steel for the pylons and conductor cables. The minimum required materials will be used to construct the proposed powerline. Where

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		applicable and possible, recycled materials will be used.
(vi)	That the development, use and exploitation of renewable resources and the ecosystem of which they are part do not exceed the level beyond which their integrity is jeopardized.	The proposed development will use renewable resources in responsible quantities where applicable and possible.
(vii)	that a risk-averse and cautious approach is applied, which takes into account the limits of current knowledge about the consequences of decisions and actions; and	This project is assessing the environmental impacts associated with a Powerline development. The preferred Powerline route will run partially in an existing servitude and all necessary precautions have been taken to select the most viable route in terms of geography, visual, botanical and freshwater impacts. A risk-averse approach supports the proposed Powerline development.
(viii)	that negative impacts on the environment and on people's environmental rights be anticipated and prevented, and where they cannot be altogether prevented, are minimised and remedied.	Negative impacts on the environment and peoples' environmental rights have been investigated and measures to avoid/ reduce/ minimise environmental impacts are included in the BAR and EMP.
(b)	Environmental management must be integrated, acknowledging that all elements of the environment are linked and interrelated, and it must take into account the effects of decisions on all aspects of the environment and all people in the environment by pursuing the selection of the best practicable environmental option.	Negative impacts on the environment and peoples' environmental rights have been investigated and measures to avoid/ reduce/ minimise environmental impacts are included in the BAR and EMP.
(c)	Environmental justice must be pursued so that adverse environmental impacts shall not be distributed in such a manner as to unfairly discriminate against any person, particularly vulnerable and disadvantaged persons.	The public participation process will allow all potential I&AP's to raise concerns related to the proposed project.
(d)	Equitable access to environmental resources, benefits and services to meet basic human needs and ensure human wellbeing must be pursued and special measures may be taken to ensure access thereto by categories of persons disadvantaged by unfair discrimination	The proposed Powerline development will ensure that all people in the Outshoorn area have access to electricity which is defined as a basic human need.
(e)	Responsibility for the environmental health and safety consequences of a policy, programme, project, product, process, service or activity exists throughout its life cycle	An Environmental Management Programme (EMP) which deals with the construction and operational phases and associated impacts of the proposed upgrade is included in this Final BAR.
(f)	The participation of all interested and affected parties in environmental governance must be promoted, and all people must have the opportunity to develop the understanding, skills and capacity necessary for achieving equitable and effective participation, and participation by vulnerable and disadvantaged persons must be ensured.	Public participation is a component of the Basic Assessment process and all the requirements have been complied with. The Public Participation Report (Appendix E) provides an account of the detailed public participation process undertaken to date to ensure that the public are provided with an opportunity to play an active role in the decision-making process.
(g)	Decisions must take into account the interests, needs and values of all interested and affected parties, and this includes recognizing all forms of knowledge, including traditional and ordinary knowledge.	
(h)	Community wellbeing and empowerment must be promoted through environmental education, the raising of environmental awareness, the sharing of knowledge and experience and other appropriate means.	The sharing of local knowledge will be facilitated through the Public Participation Process by means of review and comment on all reports.
(i)	The social, economic and environmental impacts of activities, including disadvantages and benefits, must be considered, assessed and evaluated, and decisions must be appropriate in the light of such consideration and assessment.	Negative impacts on the environment and peoples' environmental rights have been investigated and measures to avoid/ reduce/ minimise environmental impacts are included in the BAR and EMP.
(j)	The right of workers to refuse work that is harmful to human health or the environment and to be informed of dangers must be respected and protected.	Noted - the Applicant and Project Contractor are responsible for this principle during the construction phase.
(k)	Decisions must be taken in an open and transparent manner, and access to information must be provided in accordance with the law.	Public participation is a component of the Basic Assessment process and all the requirements will be complied with. The Public Participation Report (Appendix E) provides an account of the detailed public participation process (to be) undertaken to date to ensure that the public are provided with an opportunity to play an active role in the decision-making process. All I&AP's will have access to reports and the Environmental Authorisation.
(l)	There must be intergovernmental co-ordination and harmonisation of policies, legislation and actions relating to the environment.	Refer to Section C of the BAR. Intergovernmental co-ordination is facilitated by DEA requesting comment from state departments within a 40 day comment period on the Draft BAR as well as a 21 day comment period on the Final BAR.
(m)	Actual or potential conflicts of interest between organs of state should be resolved through conflict resolution procedures.	Should any conflicts arise, these will be dealt with accordingly.
(n)	Global and international responsibilities relating to the environment must be discharged in the national interest.	This project is of local and regional relevance.

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 guideline	Applicability to the project	Administering authority	Date
National Environmental Management Act, 107 of 1998. NEMA EIA Regulations (Government Notices 543; 544; 546)	Identification of activities triggered by the proposed project for a Basic Assessment/Environmental Authorisation	Department of Environmental Affairs	1998 2010
DEA Integrated Environmental Management Guideline Series, Guideline 5: Assessment of the Environmental Impact Assessment Regulations, 2010	Guideline for the correct interpretation of legislation	Department of Environmental Affairs	2010
DEA Integrated Environmental Management Guideline Series, Guideline 7: Public Participation in the Environmental Impact Assessment Process, 2012	Guideline for the correct interpretation of regulations	Department of Environmental Affairs	2012
National Water Act, 36 of 1998	A General Authorisation may be required for the altering or temporary impedance of watercourses during the construction phase.	Department of Water Affairs	1998
National Heritage Act, 25 of 1999	Authorisation from HWC for commencement of construction and for a permit if required	Heritage Western Cape	1999
Provincial Spatial Development Framework (2010)	Identifies the need for additional electricity supply based on spatial development information on a provincial level.	City of Cape Town/ Western Cape Government	2010
Eden District Municipality Integrated Development Plan (2012-2016)	Identifies the importance of a Powerline development in a District Development context.	Eden District Municipality	2012
Garden Route Environmental Management Framework (2010)	Identifies the importance of visual and other environmental impacts in association with Powerline developments.	Eden District Municipality	2010

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George Development (2011/2012)	Integrated Plan	Identifies the environmental feasibility of a Powerline development based on a District EP.	George Municipality	2012
Oudtshoorn Development (2011/2012)	Integrated Plan	Identifies the environmental feasibility of a Powerline development based on a District EP.	Oudtshoorn Municipality	2012
Biodiversity Sector Plan for the Little Karoo Region (CBA Maps)		Identifies the extent of CBA's at the proposed development site	CapeNature	2010
The Vegetation of South Africa, Lesotho and Swaziland. Mucina & Rutherford (2006). SANBI, Pretoria		Utilised as a reference guide for the identification of upgrade-specific environmental information	CapeNature	2006
DEA&DP Guideline on Public Participation (Oct 2011)		Used as a guide to inform of the public participation process.	DEA&DP	2011
DEA&DP Guideline on Alternatives (Oct 2011)		Used as a guide to inform on the use and presentation of alternatives in the IA process.	DEA&DP	2011
DEA&DP Guideline on Need & Desirability (Oct 2011)		Used as a guide to inform on the need and desirability of the upgrade in conjunction with the above mentioned SDF's and IDP's.	DEA&DP	2011

12. WASTE, EFFLUENT, EMISSION AND NOISE MANAGEMENT

a) Solid waste management

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

<input checked="" type="checkbox"/> YES	<input type="checkbox"/> NO
Approx. 3m³	

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

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

Solid waste (construction waste and builders rubble) will be collected by independent contractors and disposed of at the registered licensed municipal landfill site with proof of safe disposal required.

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

Solid waste (construction waste and builders rubble) will be collected by independent contractors and disposed of at the registered licensed municipal landfill site with proof of safe disposal required.

Will the activity produce solid waste during its operational phase?

<input type="checkbox"/> YES	<input checked="" type="checkbox"/> NO
------------------------------	--

BASIC ASSESSMENT REPORT

If YES, what estimated quantity will be produced per month? m³

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

N/A

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

N/A

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

N/A

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

Can any part of the solid waste be classified as hazardous in terms of the NEM:WA? YES NO

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? YES NO

If YES, then the applicant should consult with the competent authority to determine whether it is necessary to change to an application for scoping and EIA. 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? YES NO

If YES, what estimated quantity will be produced per month? **N/A**

Will the activity produce any effluent that will be treated and/or disposed of on site? YES NO

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

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

If YES, provide the particulars of the facility:

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

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

N/A

BASIC ASSESSMENT REPORT

c) Emissions into the atmosphere

Will the activity release emissions into the atmosphere other than exhaust emissions and dust associated with construction phase activities?

YES	<input checked="" type="checkbox"/> NO
-----	--

If YES, is it controlled by any legislation of any sphere of government? **N/A**

YES	NO
-----	----

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:

N/A

d) Waste permit

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

YES	<input checked="" type="checkbox"/> NO
-----	--

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?

YES	<input checked="" type="checkbox"/> NO
-----	--

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

YES	<input checked="" type="checkbox"/> NO
-----	--

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

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

N/A

13. WATER USE

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

Municipal	Water board	Groundwater	River, stream, dam or lake	Other	<input checked="" type="checkbox"/> The activity will not use water
-----------	-------------	-------------	----------------------------	-------	--

If water is to be extracted from groundwater, river, stream, dam, lake or any other natural feature, please indicate the volume that will be extracted per month: **N/A**

	litres
--	--------

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

<input checked="" type="checkbox"/> YES	NO
---	----

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

Comments received from DWA (dated 03/12/12 as per Appendix E3) noting:

- **DWA has noted that the proposed activities falls within the 1:100 floodline of watercourses which constitutes a water use in terms of section 21(c) / (i) of the National Water Act, 1998.**
- **DWA concurs with the preferred Route Alternative (A), as the existing transmission structures will minimise the additional impacts on the water courses.**

- DWA is of the opinion that the construction of the powerline will not have a detrimental cumulative impact on the water courses if ALL MITIGATION MEASURES AS RECOMMENDED BY THE SPECIALIST are implemented.
- DWA considers the intended water use within the ambit of a General Authorisation.
- Proof of a preliminary report with regards to the GA application has been submitted to DWA (refer to Appendix J).

14. ENERGY EFFICIENCY

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

N/A

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

N/A

SECTION B: SITE/AREA/PROPERTY DESCRIPTION

Important notes:

1. For linear activities (pipelines, etc.) as well as activities that cover very large sites, it may be necessary to complete this section for each part of the site that has a significantly different environment. In such cases please complete copies of Section 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.

Property description/physical address:

Province	Western Cape
District Municipality	Eden District
Local Municipality	Oudtshoorn and George Local Municipalities
Ward Number(s)	25 (George) & 5,11,12 (Oudtshoorn)
Farm name and number	Please refer to full list in Appendix E3
Portion number	Refer to above
SG Code	Refer to above

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.

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

Agriculture Light Industry/Residential (near Oudtshoorn substation)
--

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

BASIC ASSESSMENT REPORT

1. GRADIENT OF THE SITE

Indicate the general gradient of the site.

Alternative S1 (Preferred Alternative Route A):

✓ 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
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Alternative S2 (Alternative Route B):

✓ 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
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Alternative S3 (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

Preferred Alternative Route A & Alternative Route B

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

2.1 Ridgeline	<input type="checkbox"/>	2.4 Closed valley	<input type="checkbox"/>	2.7 Undulating plain / low hills	<input checked="" type="checkbox"/>
2.2 Plateau	<input type="checkbox"/>	2.5 Open valley	<input checked="" type="checkbox"/>	2.8 Dune	<input type="checkbox"/>
2.3 Side slope of hill/mountain	<input checked="" type="checkbox"/>	2.6 Plain	<input type="checkbox"/>	2.9 Seafront	<input type="checkbox"/>

3. GROUNDWATER, SOIL AND GEOLOGICAL STABILITY OF THE SITE

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

	Alternative S1: (Preferred Alternative Route A)		Alternative S2 (Alternative Route B):		Alternative S3 (if any):	
Shallow water table (less than 1.5m deep)	YES	✓NO	YES	✓NO	YES	NO
Dolomite, sinkhole or doline areas	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

BASIC ASSESSMENT REPORT

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

Preferred Alternative Route A & Alternative Route B

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

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

If any of the boxes marked with an “^E” is ticked, please consult an appropriate specialist to assist in the completion of this section if the environmental assessment practitioner doesn’t have the necessary expertise.

5. SURFACE WATER

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

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

BASIC ASSESSMENT REPORT

If any of the boxes marked YES or UNSURE is ticked, please provide a description of the relevant watercourse.

Reference is made to the Freshwater Assessment by Toni Belcher (as attached in Appendix D).

Perennial Rivers:

- Doring River: the river is very disturbed due to the surrounding land use of agriculture. Dominant aquatic vegetation is the common reed (*Phragmites australis*). The in-stream habitat integrity is natural to moderately modified largely due to physical disturbance of the riparian habitat due to land clearing, agricultural activities and associated sediment run-off.
- Kammanassie River: the river is a large tributary of the Olifants River but due to the Kammanassie Dam, the river flow is completely modified. Embankments, to prevent flooding of agricultural land, are present in the riparian zones. The riparian vegetation is highly modified and the in-stream habitat moderately modified and consists of Sweet Thorn, Karee trees, Common Reed and Old Man Saltbush.
- Olifants River: the river is naturally braided, with the Stompdrif Dam up-stream of the intended Powerline crossing. The river's flow distribution has therefore been altered. It has a largely modified riparian zone with the main riparian and in-stream vegetation consisting of the Common Reed, Sweet Thorn and Karee trees. The in-stream habitat is moderately to largely modified with the major impacts on stream habitat stemming from physical disturbance to the riparian zone by land clearing and agricultural activities as well as flood flows from the Stompdrif Dam.

Non-Perennial Tributaries:

- Tributaries of Doring and Kammanassie Rivers: all tributaries only flow sporadically after heavy rainfall for a short period of time. Tributaries are formed by sloped stream channels and the main aquatic vegetation consists of Sweet Thors, Spanish Reed, Pepper trees and exotic *Prosopis* sp. trees. The tributaries are moderately modified mainly as a result of agricultural activities, resulting in erosion issues which increase the sediment load in stream beds.
- Tributary near Oudtshoorn Substation: this tributary is completely modified and extensively polluted due to nearby urban development. No natural riparian or in-stream vegetation remains. The tributary is channelized and a large invasion of kikuyu grass lines the bed and banks.

Wetlands:

Four wetlands were identified based on SANBI maps and satellite images. However upon inspection by the specialist, these wetlands were found to be highly modified ground depressions all of which were in-stream dams of surrounding tributaries.

6. LAND USE CHARACTER OF SURROUNDING AREA

Preferred Alternative Route A & Alternative Route B

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:

✓ 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

BASIC ASSESSMENT REPORT

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?

N/A

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:

N/A

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:

N/A

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

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

Sections of the Preferred Alternative Route A and Alternative Route B travers through Little Karoo CBA's. Most notably, an area of CBA is traversed by Preferred Alternative Route A from km 4.2 to km 8.6 of the 27km route. This same CBA is traversed by Alternative Route B from km 3.9 to km 9.9 of the 27km route. A small CBA is traversed approximately 2km south of Oudtshoorn, shortly before the existing Oudtshoorn substation.

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

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:

Reference is made to Case Number 120816TS09 issued by Heritage Western Cape (HWC) on 29 August 2012.

- There was reason to believe that heritage resources will be impacted upon
- A Heritage Impact Assessment (HIA) consisting of an archaeology study had to be undertaken

Mr. Jayson Orton from ACO Associated CC undertook an Archaeological Impact Assessment dated 25 October 2012. No severe limitations were identified in terms of Stone Age Archaeology. The heritage resources identified near the proposed Powerline routes are insignificant and no mitigation measures were suggested. The specialist identified visual/scenic impacts associated with the proximity of the N12 scenic route close to Alternative Route B.

Final comment (dated 19/12/12 as attached in Appendix E) from HWC received noting that HWC agreed that Alternative A is supported. Should Alternative B be selected by the decision maker, HWC requires that a visual impact be submitted to HWC in order to mitigate impacts. If any burials are found which have not been exhumed, they should be exhumed (similarly to those already found).

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

YES	<input checked="" type="checkbox"/> NO
YES	<input checked="" type="checkbox"/> 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.

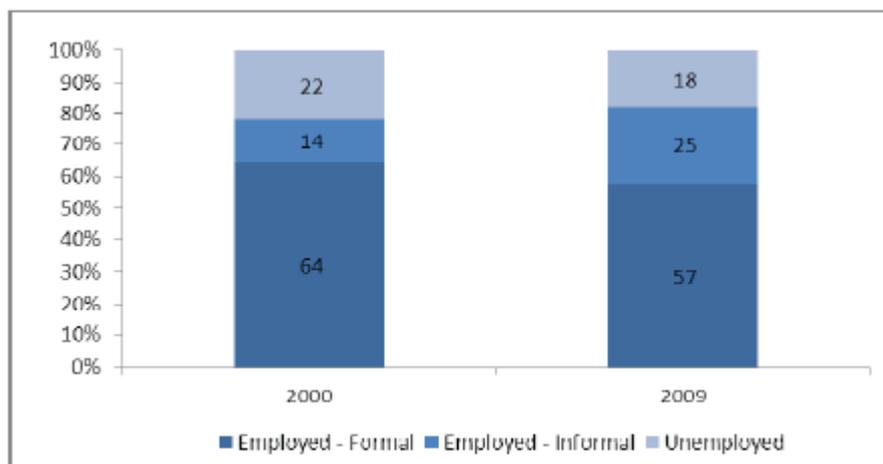
8. SOCIO-ECONOMIC CHARACTER

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:

Reference is made to the George IDP (2012-2016) with unemployment statistics as follows:



Source: George Municipality estimates based on Quantec data, 2012

“The total labour force in the George Municipal area grew at an average annual rate of 1.5%. Informal employment grew strongly (8%) and served as a buffer to absorb those members of the labour force that could not be absorbed within the formal sector.”

Reference is made to the Oudtshoorn IDP (2012 – 2016). The Labour Force Employment Status are as follows:

Year	Employed	Unemployed	Unemployment rate*	Labour Force	LFPR**	NEA***	Potentially economically active population
2001	20 602	10 488	33.73%	31 090	58.61%	16 464	53 044
2007	23 252	7 255	23.78%	30 507	59.19%	18 093	51 545

Table 4: Oudtshoorn Labour Force (Source: Stats SA, Census 2001 and Community Survey 2007)

* Unemployment rate is calculated as the share of unemployed persons to the total labour force.

** LFPR: Labour Force Participation Rate.

*** NEA: Not Economically Active (Persons not in the labour force, such as housewives/homemakers, students and scholars, pensioners and retired people, and any others not seeking work during the reference period as per Stats SA definition).

“In 2007, the potentially economically active population of the Municipality comprised of 51 545 people. The labour force declined at an average annual rate of 0.3% over the period 2001 to 2007, with the labour force participation rate (LFPR) increasing marginally from 58.61% to 59.19% in 2007. Employment grew from 20 602 to 23 252 workers in 2007, which represents an annual rate of 2.0%, while the unemployment rate decreased from 33.7% to 23.78%”.

Levels of unemployment (gender specific) are as follows:

Gender	2001	% Share	2007	% Share	Variation	% Average Annual Growth Rate 2001-2007
Male	4 942	47.12%	2 928	40.36%	-2 014	-8.35%
Female	5 546	52.88%	4 327	59.64%	-1 219	-4.05%
Total	10 488	100.00%	7 255	100.00%	-3 233	-12.41%

“In 2007, females accounted for 59.6% of the unemployed. Unemployment among females increased over the 2001 to 2007 period, whereas the unemployment rate amongst males improved from 47.1% in 2001 to 40.36% in 2007”.

Economic profile of local municipality:

Reference is made to the George IDP (2012-2016):

Economic Output of George Municipality:

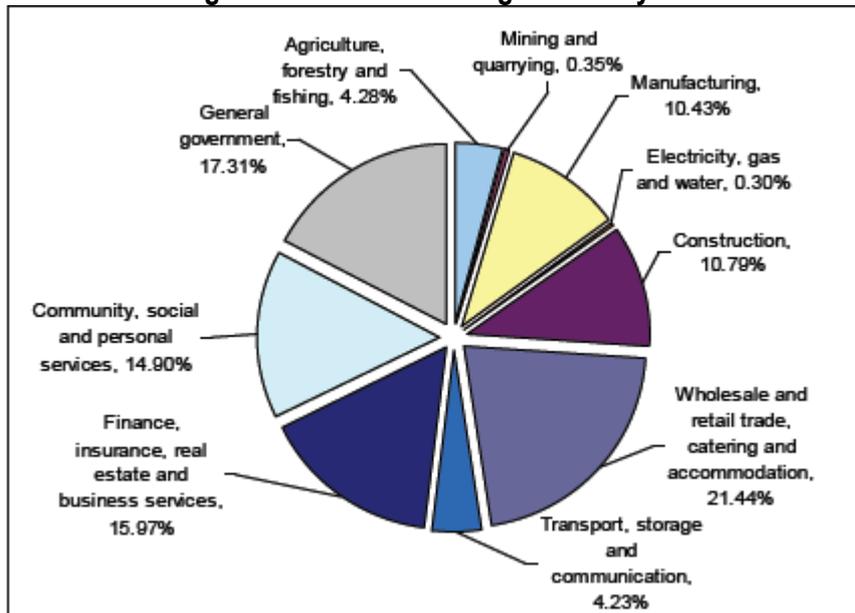
George Municipality – Changes in economic output, 1996, 2000, 2010

	GVA (2005 prices) ('million)			% GVA			% growth GVA	
	1996	2000	2010	1996	2000	2010	1996 -	2000 -
							2000	2010
Agriculture, forestry and fishing	154	164	175	4.64%	4.35%	3.09%	1.60%	0.62%
Mining and quarrying	17	7	14	0.50%	0.19%	0.25%	-18.78%	6.64%
Manufacturing	601	665	784	18.09%	17.62%	13.89%	2.58%	1.66%
Electricity, gas and water	142	156	104	4.29%	4.12%	1.84%	2.26%	-3.95%
Construction	143	178	489	4.30%	4.71%	8.67%	5.63%	10.66%
Wholesale and retail trade, catering and accom.	562	732	907	16.93%	19.40%	16.06%	6.83%	2.16%
Transport, storage and communication	254	344	711	7.64%	9.11%	12.59%	7.89%	7.53%
Finance, insurance, real estate and business services	736	811	1,403	22.15%	21.48%	24.84%	2.46%	5.64%
Community, social and personal services	187	227	337	5.63%	6.00%	5.96%	4.91%	4.04%
General government	526	491	723	15.82%	13.01%	12.81%	-1.67%	3.94%
Total	3,321	3,775	5,647	100%	100%	100%	3.25%	4.11%

(Source: Quantec 2012)

“Agriculture, forestry and fishing and manufacturing also recorded a decline in employment contribution. Construction showed strong employment growth.”

Sector Percentage contribution to George economy:



“The primary sector contributes close to 30% to the economy in terms of GVA, this has decreased significantly from a 52.7% in 1996. The shift has been mainly to the tertiary sector, with Finance, Insurance, Real estate and business services contributing 26.7% to the total GVA in 2010, compared to only 8% in 2000.”

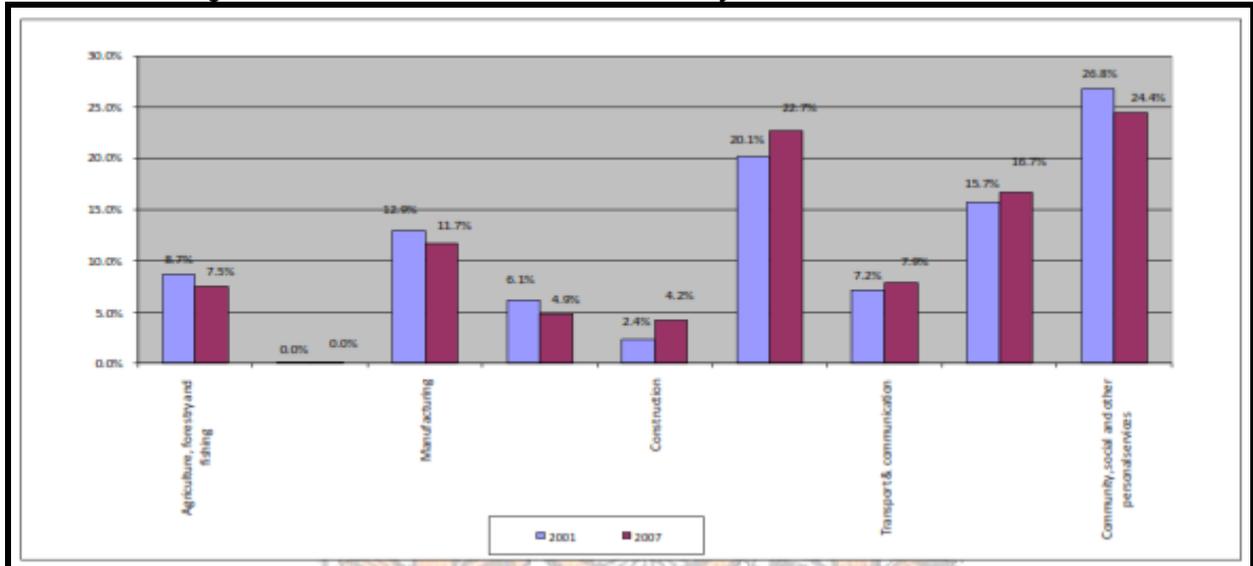
BASIC ASSESSMENT REPORT

Reference is made to the Oudtshoorn IDP (2012 – 2016) with economic statistics as follows:

Sectors	2001 (R'000)	2007 (R'000)	Average annual growth rate 2001-2007
Agriculture, forestry and fishing	83 521	89 167	1.10%
Mining	309	333	1.24%
Manufacturing	123 951	138 331	1.85%
Electricity and water	58 822	57 951	-0.25%
Construction	22 666	49 921	14.06%
Wholesale and retail trade; catering and accommodation	192 836	268 617	5.68%
Transport and communication	68 699	93 549	5.28%
Finance and business services	150 579	198 166	4.68%
Community, social and other personal services	256 270	289 391	2.05%
Total	957 654	1 185 427	3.62%

“The relative size of the Oudtshoorn Municipality shrunk from being the third largest economy in the Eden District in 2001 to the fourth largest economy in 2007. In 2001, gross domestic product (GDPR) was R 957.65 million, and increased to R 1 185.44 million in 2007, which represented an annual growth rate of 3.6%”.

Sector Percentage contribution to Oudtshoorn’s economy:

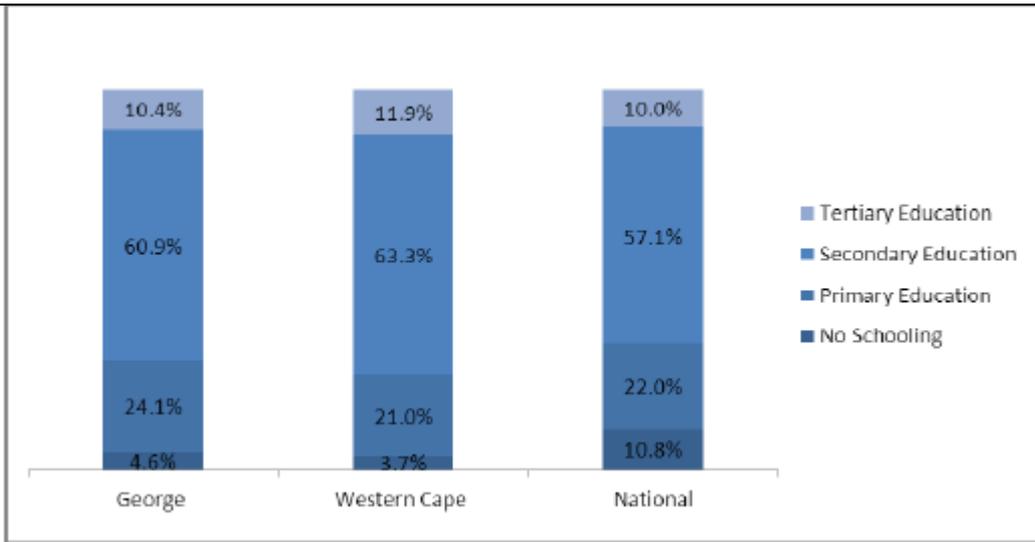


“The three largest contributing sectors in 2007 were community, social and other personal services (24%), wholesale retail and trade; catering and accommodation (23%) and manufacturing 12%”.

Level of education:

Reference is made to the George IDP (2012-2016) on education statistics:

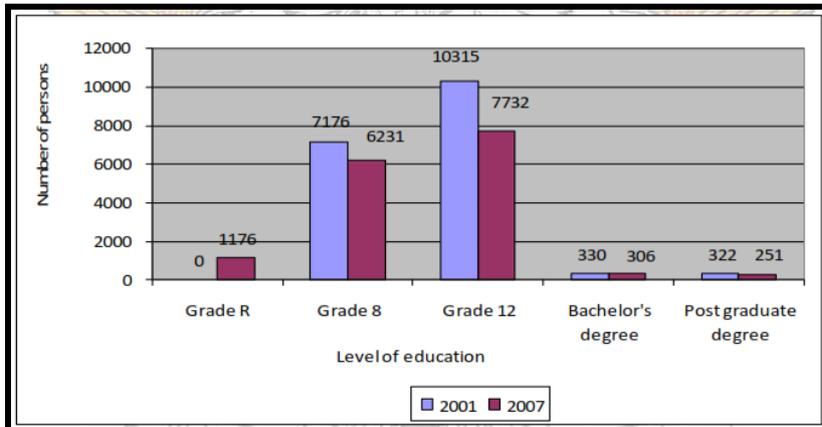
BASIC ASSESSMENT REPORT



Source: Quantec 2012

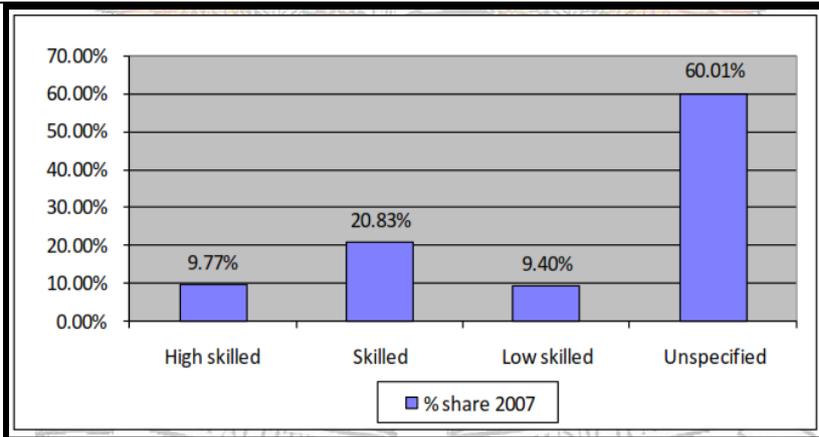
“George Municipality education levels are slightly above average with 95% of the population having some form of education and 60.9% have a secondary education which points to a skilled labour force.”

Reference is made to the Oudtshoorn IDP (2012 – 2016) with statistics on education levels as follows:



“The number of persons that have completed primary and secondary education declined between 2001 and 2007. A very small percentage of Oudtshoorns populatio has completed higher level education degrees”.

BASIC ASSESSMENT REPORT



"In 2007, low skill occupations accounted for 9.4% of unemployment, while skilled and high skilled accounted for 20.8% and 9.8% respectively".

b) Socio-economic value of the activity

- What is the expected capital value of the activity on completion?
- What is the expected yearly income that will be generated by or as a result of the activity?
- Will the activity contribute to service infrastructure?
- Is the activity a public amenity?
- How many new employment opportunities will be created in the development and construction phase of the activity/ies?

Unknown	
Unknown	
✓ YES	NO
YES	✓ NO
Unknown. Eskom will make use of registered vendors on its vendor list. Current Eskom Contractor and Employees will be utilized.	
Unknown	
Unknown	
Unknown	
N/A	
N/A	

- What is the expected value of the employment opportunities during the development and construction phase?
- What percentage of this will accrue to previously disadvantaged individuals?
- How many permanent new employment opportunities will be created during the operational phase of the activity?
- What is the expected current value of the employment opportunities during the first 10 years?
- What percentage of this will accrue to previously disadvantaged individuals?

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.

PREFERRED ALTERNATIVE ROUTE A

- 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				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)	CBA – Biodiversity Assessment of the Kannaland and Oudtshoorn Local Municipalities, and Eden District Management Area – Critically Endangered vegetation types
				ESA - Biodiversity Assessment of the Kannaland and Oudtshoorn Local Municipalities, and Eden District Management Area – watercourses and associated riparian vegetation

- b) **Indicate and describe the habitat condition on site**

Habitat Condition	Percentage of habitat condition class (adding up to 100%)	Description and additional Comments and Observations (including additional insight into condition, e.g. poor land management practises, presence of quarries, grazing, harvesting regimes etc.).
Natural	30%	Mostly undisturbed
Near Natural (includes areas with low to moderate level of alien invasive plants)	20%	Natural but overgrazed

BASIC ASSESSMENT REPORT

Degraded (includes areas heavily invaded by alien plants)	20%	Removal of gravel
Transformed (includes cultivation, dams, urban, plantation, roads, etc.)	30%	Agriculture

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 Ecosystems		Aquatic Ecosystems						
Ecosystem threat status as per the National Environmental Management: Biodiversity Act (Act No. 10 of 2004)	✓Critical	Wetland (including rivers, depressions, channelled and unchannelled wetlands, flats, seeps pans, and artificial wetlands)			Estuary		Coastline	
	✓Endangered							
	Vulnerable							
	✓Least Threatened							
	✓YES	NO	UNSURE	YES	NO	YES	NO	

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)

Described in specialist Botanical Assessment Report (refer to Appendix D).

ALTERNATIVE ROUTE B

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				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)	CBA – Biodiversity Assessment of the Kannaland and Oudtshoorn Local Municipalities, and Eden District Management Area – Critically Endangered vegetation types

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				ESA - Biodiversity Assessment of the Kannaland and Oudtshoorn Local Municipalities, and Eden District Management Area – watercourses and associated riparian vegetation

b) Indicate and describe the habitat condition on site

Habitat Condition	Percentage of habitat condition class (adding up to 100%)	Description and additional Comments and Observations (including additional insight into condition, e.g. poor land management practises, presence of quarries, grazing, harvesting regimes etc.).
Natural	40%	Mostly undisturbed
Near Natural (includes areas with low to moderate level of alien invasive plants)	10%	Natural but overgrazed
Degraded (includes areas heavily invaded by alien plants)	20%	Overgrazed
Transformed (includes cultivation, dams, urban, plantation, roads, etc.)	30%	Agriculture

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 Ecosystems		Aquatic Ecosystems								
Ecosystem threat status as per the National Environmental Management: Biodiversity Act (Act No. 10 of 2004)	✓Critical	Wetland (including rivers, depressions, channelled and unchannelled wetlands, flats, seeps pans, and artificial wetlands)			Estuary		Coastline			
	✓Endangered									
	Vulnerable									
	✓Least Threatened									
	✓YES	NO	UNSURE	YES	NO	YES	NO			

- 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)

Described in specialist Botanical Assessment Report (refer to Appendix D).

SECTION C: PUBLIC PARTICIPATION

1. ADVERTISEMENT AND NOTICE

Publication name	Die Burger	
Date published	5 November 2012	
Site notice position	Latitude	Longitude
	33°45'54.05"	22°21'22.73"
	33°41'29.13"	22°22'51.79"
	33°39'12.27"	22°18'46.73"
	33°37'58.37"	22°15'37.94"
	33°36'42.61"	22°14'12.23"
	33°36'30.15"	22°13'09.33"
	33°44'05.67"	22°19'34.91"
	33°44'33.46"	22°20'10.41"
	33°39'39.96"	22°17'07.44"
Date placed	5 November 2012	

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

2. DETERMINATION OF APPROPRIATE MEASURES

Provide details of the measures taken to include all potential I&APs as required by Regulation 54(2)(e) and 54(7) of GN R.543.

Key stakeholders (other than organs of state) identified in terms of Regulation 54(2)(b) of GN R.543:

Title, Name and Surname	Affiliation/ key stakeholder status	Contact details (tel number or e-mail address)
** Please refer to Appendix E2 for all key stakeholder information**		

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
- or any other proof as agreed upon by the competent authority.

3. ISSUES RAISED BY INTERESTED AND AFFECTED PARTIES

Summary of main issues raised by I&APs	Summary of response from EAP
<p>The Public Participation Process for the Draft BAR has been completed. Comments and issues raised as well as responses sent by the EAP during the Public Participation Process have been incorporated in the Final BAR and the Comments and Responses Chapter (Appendix E3) for review by all registered stakeholders and for submission to the DEA.</p>	
<p>A summary of the following issues and comments were received by I&AP's during the Draft BAR phase:</p>	
<ul style="list-style-type: none"> - CapeNature requested additional information, including exact tower positions and proposed access routes, in order to further investigate the proposed development. SiVEST provided a list of bend point GPS co-ordinates for the preferred alternative and alternative route, as a full set of tower position co-ordinates are not available at this time. The exact tower position co-ordinates will be available during the detailed design phase which follows a positive decision from the Competent Authority as the case may be. - DEA&DP expressed concern with regards to the visual intrusion of the proposed powerline, specifically Route Alternative B that is located near the N12/N9 scenic route. The Heritage Impact Assessment report (Appendix D) provides a short section on the visual impact however a visual study was not requested by Heritage Western Cape (HWC). It was noted that should Route Alternative B be selected, a visual impact study will be conducted (refer to HWC comment below). - Department of Water Affairs confirmed that a General Authorization must be applied for. The application is in progress (refer to Appendix J for proof). - Heritage Western Cape supported Preferred Route Alternative A. However, a visual impact study was requested should Route Alternative B be selected. - Mr Frans Cilliers of Erf 6/139 over which Preferred Route Alternative A is to traverse, expressed concern with regards to the visual impact as the powerline would have traversed in front of his private and guest accommodation, providing a visual barrier to the Swartberge. Eskom conducted a site visit and, in collaboration with Mr Cilliers, the Preferred Route Alternative A was modified to traverse Erf 6/139 behind the accommodation units, therefore negating the previous visual impact (refer to Appendix A for modified locality plan). 	

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.

5. AUTHORITY PARTICIPATION

Authorities and organs of state identified as key stakeholders:

Authority/Organ of State	Contact person (Title, Name and Surname)	Tel No	Fax No	e-mail	Postal address

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Department of Environmental Affairs and Development Planning	Francois Naude	044 805 8600	044 874 2423	Fnaude@westerncape.gov.za	Private Bag X6509, George, 6530
Heritage Western Cape	Mr. Troy Smuts	021 483 9680	021 483 9543	Justin.bradfield@pgwc.gov.za	Private Bag X9067 Cape Town 8000
Eden District Municipality	Municipal manager	044 803 1445	086 555 6303	admin@edendm.co.za	PO Box 12 George 6530
George Municipality	Municipal manager	044 802 2900 /	0865895494	ilse@george.org.za / georgemunicipality@george.org.za	PO Box 19 George 6530
Oudtshoorn Municipality	Municipal manager	044 203 3000	044203 30422	post@oudtmun.co.za	P.O.Box 255 Oudtshoorn 6620
CapeNature	Mr. Benjamin Walton	044 802 5300	086 645 2546	landusegeorge@capenature.co.za	Private Bag X6546 George 6530
Department of Agriculture	Mr. Cor vd Walt	021 808 5099	021 808 5092	landuse.elsenburg@elsenburg.com	Private Bag X1, ELSENBURG, 7607
Department of Water Affairs	D. Jephtha	021 941 6264	021 950 724	jephthaD@dwa.gov.za	Private Bag X16, SANLAMHOF, 7532

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

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

SECTION D: IMPACT ASSESSMENT

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

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.

1. Impact Rating for the Preferred Alternative Route A

CONSTRUCTION PHASE – PREFERRED ALTERNATIVE ROUTE A: SUMMARY OF THE IMPACT SIGNIFICANCE BEFORE MITIGATION AND RATING POST MITIGATION ASSOCIATED WITH THE PREFERRED OPTION

Nature of Impact	Description of Impact	Extent and Duration	Probability	Reversibility	Irreplaceable Loss of Resources	Indirect Impacts	Cumulative Impact	Status of Impact	Significance Prior to Mitigation	Proposed Mitigation	Significance Prior to Mitigation
Geographical and Physical (Direct Impact)	Soil erosion through vegetation clearance and soil compaction by heavy duty vehicles	Site Construction Period/Short Term	Possible	Reversible	Low	Low	Low	Negative	Low	Refer to EMP attached in Appendix G: All vehicles to remain within designated vehicle tracks; and Minimum/ no movement in areas already eroded.	Low
Geographical and Physical (Direct Impact)	Contamination of soils through indiscriminate disposal of construction waste and accidental spillage of petroleum products	Site Construction Period/Short Term	Possible	Reversible	Low	Low	Low	Negative	Low	Refer to EMP attached in Appendix G: Storage- Storage of any materials shall not take place within 32m of any watercourses or sensitive environments; Fuel, oil and any other hazardous substances and harmful	Low

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Nature of Impact	Description of Impact	Extent and Duration	Probability	Reversibility	Irreplaceable Loss of Resources	Indirect Impacts	Cumulative Impact	Status of Impact	Significance Prior to Mitigation	Proposed Mitigation	Significance Post Mitigation
Botanical (Direct Impact) **	Loss of Subtropical Thicket: Kandelaars Arid Spekboomveld and De Rust Sandolien-Spekboomveld	Regional Long Term	Highly Probable	Moderate Reversibility	Low	Low	Low	Negative	Medium	<p>Avoid causing disturbance wherever possible; vegetation that does not require removal should not be disturbed.</p> <p>Wherever possible existing tracks and roads should be used. They should be properly managed i.e. they should have water-bars where necessary to curb runoff and prevent erosion.</p> <p>If new tracks are required these should be carefully planned in conjunction with the respective landowners to ensure that they are properly constructed and can also serve the needs of the local farmers.</p> <p>No 'Search and Rescue' is advocated as a general requirement. Rehabilitation of disturbed areas due to construction and not required for maintenance should be carried out.</p> <p>Weedy species such as <i>Galenia africana</i> (kraalbos) to be monitored in disturbed areas and where necessary selectively removed to promote diverse re-vegetation.</p>	Low

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										<p>Extreme care must be taken to ensure that no fires are started that can spread into areas of flammable vegetation such as Blossoms Asbos Gwarrieveld.</p> <p>Bend OB18 to Bend OB17: large concentration of Aloe ferox to be avoided or transplanted away from Powerline route. Heuweltjies to be avoided as well.</p> <p>Refer to EMP in Appendix G.</p>	
Botanical (Direct Impact)	Loss of Arid Thicket Mosaic: Blossoms Asbos Gwarrieveld	Regional Long Term	Highly Probable	Moderate Reversibility	Low	Low	Low	Negative	Medium	Please refer to mitigation measures above, as well as the EMP in Appendix G.	Low
Botanical (Direct Impact)	Loss of Gannaveld: Kandelaars Gannaveld	Regional Long Term	Highly Probable	Medium Reversibility	Medium	Low	Low	Negative	Low	Please refer to mitigation measures above, as well as the EMP in Appendix G.	Low
Botanical (Direct Impact)	Loss of Gannaveld: Oudtshoorn Gannaveld	Regional Long Term	Highly Probable	Medium Reversibility	Medium	Low	Low	Negative	Very Low	Please refer to mitigation measures above, as well as the EMP in Appendix G.	Very Low
Botanical (Direct Impact)	Loss of Gravel Apronveld: Grootkop Gravel Apronveld	Regional Long Term	Highly Probable	Medium Reversibility	Medium	Low	Low	Negative	Low	Please refer to mitigation measures above, as well as the EMP in Appendix G.	Low

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Nature of Impact	Description of Impact	Extent and Duration	Probability	Reversibility	Irreplaceable Loss of Resources	Indirect Impacts	Cumulative Impact	Status of Impact	Significance Prior to Mitigation	Proposed Mitigation	Significance Post Mitigation
Ecological Processes (Direct Impact)	Loss of ecological processes	Regional Long Term	Probable	Medium Reversibility	Low	Low	Low	Negative	Low	Please refer to mitigation measures above, as well as the EMP in Appendix G.	Low
Freshwater (Direct Impact)	Disturbance of habitat and possibly impedance/diversion of flow at river crossings of proposed transmission lines	Site Construction Period/Short Term	Probable	High Reversibility	Medium to Low	Low	Low	Negative	Very Low	<p>Refer to EMP attached in Appendix G.</p> <p>Minimise duration and extent of construction activities in the river – construction should also preferably take place in the low flow season.</p> <p>Clearing of debris, sediment and hard rubble associated with the construction activities should be undertaken post construction to ensure that flow within the drainage channels are not impeded or diverted.</p> <p>Rehabilitate disturbed stream bed and banks and re-vegetate with suitable indigenous vegetation.</p> <p>Neither the monopoles nor the anchors should be constructed within the proposed buffer zones of 15m and 30m either side of the rivers.</p>	Very Low
Freshwater (Direct Impact)	Disturbance of habitat and possibly impedance/diversion of flow at river crossings of proposed access routes	Site Construction Period/Short Term	Probable	High Reversibility	Medium to Low	Low	Low	Negative	Low to very Low	<p>Refer to EMP attached in Appendix G.</p> <p>The existing road infrastructure should be utilized as far as possible to minimize the overall disturbance created by the proposed project. For new access roads to the pole structures, these should not be routed along the drainage/stream beds.</p> <p>The servitude roads and two track roads that are already in place along the existing power lines on the preferred route must be used during the construction phase and no new roads must be established along this component during or after the construction of the new additional power line.</p> <p>Where access routes need to be constructed through ephemeral streams, disturbance of the channel should be limited.</p> <p>Wetland areas should be avoided and any road adjacent to a wetland feature should also remain outside of the 30m buffer</p>	Very Low

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										<p>zone as far as possible.</p> <p>All crossings over drainage channels or stream beds should be such that the flow within the drainage channel is not impeded.</p> <p>Road infrastructure and cable alignments should coincide as much as possible to minimize the impact.</p> <p>Any disturbed areas should be rehabilitated to ensure that these areas do not become subject to erosion or invasive alien plant growth.</p>	
Archaeology (Direct Impact)	The archaeological resources likely to be impacted are too insignificant to merit further concern. If archaeological impacts were to be rated independently they would end up with very low ratings								N/A	<p>No mitigation is suggested for any aspects of heritage. However:</p> <p>Unmarked pre-colonial burials are more likely to be found on river floodplains than in the shale hills and cobbled areas and the ECO should be aware of this possibility. If any human remains are uncovered at any point during development then work in the immediate vicinity should be halted and the find reported to Heritage Western Cape or an archaeologist. The remains would need to be exhumed at the cost of the developer under a permit issued to an archaeologist.</p> <p>It should be ensured that no structures or ruins, including the ruin at point 041, will be impacted by the development.</p>	N/A
Nature of Impact	Description of Impact	Extent and Duration	Probability	Reversibility	Irreplaceable Loss of Resources	Indirect Impacts	Cumulative Impact	Status of Impact	Significance Prior to Mitigation	Proposed Mitigation	Significance Post Mitigation
Dust (Direct Impact)	Dust impacts on surrounding environment associated with construction activities	Site Construction Period/Short Term	Probable	Reversible	No Loss	Low	Low	Negative	Low	<p>Generation of dust shall be minimised and dust nuisance for the surrounding areas shall be kept to a minimum wherever possible.</p> <p>Dust from exposed soil surfaces shall be minimised at all times, only using water spray during extremely windy conditions.</p>	Low

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Nature of Impact	Description of Impact	Extent and Duration	Probability	Reversibility	Irreplaceable Loss of Resources	Indirect Impacts	Cumulative Impact	Status of Impact	Significance Prior to Mitigation	Proposed Mitigation	Significance Post Mitigation
										<p>Reasonable measures must be undertaken by the contractor to ensure that any exposed areas and material stockpiles are adequately protected against the wind.</p> <p>Dust screens of a suitable height should be erected wherever required and possible. All exposed surfaces should be minimised in terms of duration of exposure to wind and stormwater.</p>	
Noise (Direct Impact)	Noise impacts on surrounding environment associated with construction activities (construction vehicles and equipment)	Local Construction Period/Short Term	Probable	Reversible	No Loss	Low	Low	Negative	Low	<p>The contractor shall adhere to the local by-laws and regulations regarding the noise and associated hours of operations.</p> <p>The contractor shall limit noise levels (e.g. install and maintain silencers on machinery). The provisions of SANS 1200a sub-clause 4.1 regarding "built-up" area shall apply to all areas within audible distance of residents whether in urban, peri-urban or rural areas.</p> <p>Construction and demolition activities generating output of 85dB or more, shall be limited to normal working hours and not allowed during weekends.</p> <p>Should the contractor need to work outside normal working hours, any affected individuals shall be informed prior to the work taking place.</p> <p>No amplified music shall be allowed on site.</p>	
Waste (Direct Impact)	Generation of additional waste/litter and building rubble/ hazardous material during the construction phase	Site Construction Period/Short Term	Probable	Reversible	Medium	Low	Low	Negative	Medium	<p>Waste management mitigation measures as detailed in the EMP (Appendix G) includes:</p> <p>Solid waste (construction waste and builders rubble) will be collected by independent contractors and disposed of at the registered licensed municipal landfill site in Oudtshoorn with proof of safe disposal as required.</p> <p>The contractor shall ensure that all litter is collected daily from the work area. Similarly, all bins shall be emptied daily and the waste disposed of at a permitted landfill site.</p>	Low

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										<p>The contractor shall ensure that the construction site, working and eating areas are maintained in a clean, hygienic and orderly state.</p> <p>Separate bins should be provided for various materials to facilitate recycling. The bins should have liner bags for easy control and safe disposal of waste.</p> <p>The excavation and use of rubbish pits on site is forbidden.</p> <p>The burning of waste is forbidden.</p> <p>All vehicles and equipment must be maintained in a good condition in order to minimise the risk of leakage and possible contamination of the soil or stormwater by fuels, oils and hydraulic fluids.</p> <p>Sufficient quantities of suitable hydrocarbon absorption or remediation materials must be present on site at all times.</p>	
Socio-economic (Direct Impact)	Positive socio-economic impact as a result of temporary employment for local labourers during the construction process of the proposed development	Region Short Term	Definite	Reversible	N/A	Low	High	Positive	High	N/A: mitigation not required	High

**** Please refer to the Botanical Impact Assessment in Appendix D for details on the mentioned OB waypoints**

OPERATIONAL PHASE – PREFERRED ALTERNATIVE ROUTE A: SUMMARY OF THE IMPACTS SIGNIFICANCE BEFORE MITIGATION AND RATING POST MITIGATION ASSOCIATED WITH THE PREFERRED OPTION

Nature of Impact	Description of Impact	Extent and Duration	Probability	Reversibility	Irreplaceable Loss of Resources	Indirect Impacts	Cumulative Impact	Status of Impact	Significance Prior to Mitigation	Proposed Mitigation	Significance Prior to Mitigation
Socio-	Positive socio-economic impact as a result of	Region	Definite	Reversible	N/A	Medium	High	Positive	High	N/A: mitigation not required	High

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economic (Direct Impact)	constant, adequate, reliable supply of electricity to the area, thereby contributing positively to the expansion and strengthening of local economic activities	Long Term										
Freshwater (Direct Impact)	Disturbance of habitat and possibly impedance/diversion of flow at river crossings of proposed transmission lines	Site Long Term	Probable to Unlikely	High Reversibility	Medium to Low	Low	Low	Negative	Very Low	All crossings over drainage channels or stream beds after the construction phase should be rehabilitated such that the flow within the drainage channel is not impeded. Maintenance of Powerlines should only take place via designated access routes and multiple crossings over streams and rivers should not be established.	Very Low	
Freshwater (Direct Impact)	Disturbance of habitat and possibly impedance/diversion of flow at river crossings of proposed access routes	Site Long Term	Probable to Unlikely	High Reversibility	Medium to Low	Low	Low	Negative	Very Low	Maintenance of infrastructure related to the project should only take place via the designated access routes. Disturbed areas along the access routes should be monitored to ensure that these areas do not become subject to erosion or invasive alien plant growth.	Very Low	
Nature of Impact	Description of Impact	Extent and Duration	Probability	Reversibility	Irreplaceable Loss of Resources	Indirect Impacts	Cumulative Impact	Status of Impact	Significance Prior to Mitigation	Proposed Mitigation	Significance Post Mitigation	
Heritage Resources (Direct Impact) *	Visual intrusion of the Powerline into the cultural and scenic landscape	Local Long Term	Definite	Reversible	Low	Low	Low	Negative	Low	N/A	N/A	
Avifauna	Potential avi-faunal impacts: electrocution of birds perching on the pylon structures supporting the conductors and collision of flying birds with suspended cabling of the line	Site Long Term	Possible	Reversibility	Medium	Low	Medium	Negative	High	The risks of electrocution should be minimized in two ways, both of which apply equally to all the proposed routes: <ul style="list-style-type: none"> - The pylon structures used to support the conductors must be of a bird-friendly configuration, with sufficient gaps between the conducting elements and the metalwork, and with perching surfaces spaced adequately away from the conductors to prevent even the largest birds (African Crowned Eagle) from spanning these gaps. - Bird-guards should be fitted wherever birds might perch above the conductors to reduce bird-streamer related faulting. Collision impacts should be minimized in two ways: <ul style="list-style-type: none"> - Suitable marking devices (Bird Flight Diverters or 	Medium	

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										Bird-flappers) should be fitted to all identified problem areas on each of the selected routes. - Bird flappers to be erected with expert ornithological guidance to identify the exact locations of the marked areas. Once erected, the line should be periodically surveyed for signs of avian collisions for at least a year. Any further problem areas identified in this way should be retrofitted with bird-flappers to alleviate such problems	
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* Please refer to the Heritage Impact Assessment Report in Appendix D for full impact ratings including rating on “intensity”

2. ENVIRONMENTAL IMPACT STATEMENT (PREFERRED ALTERNATIVE ROUTE A)

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

Summary of impact ratings:

The impacts rated for the CONSTRUCTION PHASE (as detailed in the tables above) for the PREFERRED ALTERNATIVE ROUTE A

Nature of Impact	Description of Impact	Status of Impact	Significance Prior to Mitigation	Significance Post Mitigation
Geographical and Physical (Direct Impact)	Soil erosion through vegetation clearance and soil compaction at by heavy duty vehicles	Negative	Low	Low
Geographical and Physical (Direct Impact)	Contamination of soils through indiscriminate disposal of construction waste and accidental spillage of petroleum products	Negative	Low	Low

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Botanical (Direct Impact)	Loss of Subtropical Thicket: Kandelaars Arid Spekboomveld and De Rust Sandolien-Spekboomveld	Negative	Medium	Low
Botanical (Direct Impact)	Loss of Arid Thicket Mosaic: Blossoms Asbos Gwarrieveld	Negative	Medium	Low
Botanical (Direct Impact)	Loss of Gannaveld: Kandelaars Gannaveld	Negative	Low	Low
Botanical (Direct Impact)	Loss of Gannaveld: Oudtshoorn Gannaveld	Negative	Very Low	Very Low
Botanical (Direct Impact)	Loss of Gravel Apronveld: Grootkop Gravel Apronveld	Negative	Low	Low
Ecological Processes (Direct Impact)	Loss of ecological processes	Negative	Low	Low
Freshwater (Direct Impact)	Disturbance of habitat and possibly impedence/diversion of flow at river crossings of proposed transmission lines	Negative	Very Low	Very Low
Freshwater (Direct Impact)	Disturbance of habitat and possibly impedence/diversion of flow at river crossings of proposed access routes	Negative	Low to Very Low	Very Low
Archaeological (Direct Impact)	The archaeological resources likely to be impacted are too insignificant to merit further concern. If archaeological impacts were to be rated independently they would end up with very low ratings	N/A	N/A	N/A
Dust (Direct Impact)	Dust impacts on surrounding environment associated with construction activities	Negative	Low	Low
Noise (Direct Impact)	Noise impacts on surrounding environment associated with construction activities (construction vehicles and equipment)	Negative	Low	Low

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Waste	Generation of additional waste/litter and building rubble/hazardous material during the construction phase	Negative	Medium	Low
Socio-Economic	Positive socio-economic impact as a result of the creation of temporary employment for local labourers during the construction process	Positive	High	High

Impacts rated for the OPERATIONAL PHASE for the PREFERRED ALTERNATIVE ROUTE A

Nature of Impact	Description of Impact	Status of Impact	Significance Prior to Mitigation	Significance Post Mitigation
Socio-economic (Direct Impact)	Positive socio-economic impact as a result of constant, adequate, reliable supply of electricity to the area, thereby contributing positively to the expansion and strengthening of local economic activities	Positive	High	High
Freshwater (Direct Impact)	Disturbance of habitat and possibly impedance/diversion of flow at river crossings of proposed transmission lines		Very Low	Very Low
Freshwater (Direct Impact)	Disturbance of habitat and possibly impedance/diversion of flow at river crossings of proposed access routes		Very Low	Very Low
Heritage Resources (Direct Impact)	Visual intrusion of the Powerline into the cultural and scenic landscape	Negative	Low	N/A
Avifauna (Direct Impact)	Potential avi-faunal impacts: electrocution of birds perching on the pylon structures supporting the conductors and collision of flying birds with suspended cabling of the line	Negative	High	Medium

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3. Impact Rating for the Alternative Route B

CONSTRUCTION PHASE – ALTERNATIVE ROUTE B: SUMMARY OF THE IMPACT SIGNIFICANCE BEFORE MITIGATION AND RATING POST MITIGATION ASSOCIATED WITH THE ALTERNATIVE OPTION

Nature of Impact	Description of Impact	Extent and Duration	Probability	Reversibility	Irreplaceable Loss of Resources	Indirect Impacts	Cumulative Impact	Status of Impact	Significance Prior to Mitigation	Proposed Mitigation	Significance Prior to Mitigation
Geographical and Physical (Direct Impact)	Soil erosion through vegetation clearance and soil compaction by heavy duty vehicles	Site Construction Period/Short Term	Possible	Reversible	Low	Low	Low	Negative	Low	Refer to EMP attached in Appendix G: All vehicles to remain within designated vehicle tracks; and Minimum/ no movement in areas already eroded.	Low
Geographical and Physical (Direct Impact)	Contamination of soils through indiscriminate disposal of construction waste and accidental spillage of petroleum products	Site Construction Period/Short Term	Possible	Reversible	Low	Low	Low	Negative	Low	Refer to EMP attached in Appendix G: Storage- Storage of any materials shall not take place within 32m of any watercourses or sensitive environments; Fuel, oil and any other hazardous substances and harmful materials shall be stored in suitable containers within adequately banded areas (with 110% of the capacity of the volume of the container) in a dry, secure environment, with concrete or sealed flooring; Material Safety Data Sheets shall be kept for all hazardous materials and substances and a copy of the Material Safety Data sheets shall be made available to all workers to ensure that the required safe handling and necessary precautions are taken when using the materials; The PC will ensure that materials storage facilities are cleaned/maintained on a regular basis, and that leaking containers are disposed of in a manner that allows no spillage onto the bare soil or surface water.	Low

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Nature of Impact	Description of Impact	Extent and Duration	Probability	Reversibility	Irreplaceable Loss of Resources	Indirect Impacts	Cumulative Impact	Status of Impact	Significance Prior to Mitigation	Proposed Mitigation	Significance Post Mitigation
Botanical (Direct Impact)	Loss of Subtropical Thicket: Kandelaars Arid Spekboomveld and De Rust Sandolien-Spekboomveld	Regional Long Term	Highly Probable	Moderate Reversibility	Low	Low	Low	Negative	High	<p><u>Avoid causing disturbance wherever possible</u>: vegetation that does not require removal should not be disturbed.</p> <p>Wherever possible existing tracks and roads should be used. They should be properly managed i.e. they should have water-bars where necessary to curb runoff and prevent erosion.</p> <p>If new tracks are required these should be carefully planned in conjunction with the respective landowners to ensure that they are properly constructed and can also serve the needs of the local farmers.</p> <p>No 'Search and Rescue' is advocated as a general requirement. Rehabilitation of disturbed areas due to construction and not required for maintenance should be carried out.</p> <p>Weedy species such as <i>Galenia africana</i> (<i>kraalbos</i>) to be monitored in disturbed areas and where necessary selectively removed to promote diverse re-vegetation.</p> <p>Extreme care must be taken to ensure that no fires are started that can spread into areas of flammable vegetation such as Blossoms Asbos Gwarrieveld.</p> <p>Refer to EMP in Appendix G.</p>	Medium
Botanical (Direct Impact)	Loss of Arid Thicket Mosaic: Blossoms Asbos Gwarrieveld	Regional Long Term	Highly Probable	Moderate Reversibility	Low	Low	Low	Negative	High	<p>Please refer to mitigation measures above, as well as the EMP in Appendix G.</p>	Low

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Botanical (Direct Impact)	Loss of Gannaveld: Kandelaars Gannaveld	Regional Long Term	Highly Probable	Medium Reversibility	Medium	Low	Low	Negative	Low	Please refer to mitigation measures above, as well as the EMP in Appendix G.	Low
Botanical (Direct Impact)	Loss of Gannaveld: Oudtshoorn Gannaveld	Regional Long Term	Highly Probable	Medium Reversibility	Medium	Low	Low	Negative	Very Low	Please refer to mitigation measures above, as well as the EMP in Appendix G.	Very Low
Botanical (Direct Impact)	Loss of Gravel Apronveld: Grootkop Gravel Apronveld	Regional Long Term	Highly Probable	Medium Reversibility	Medium	Low	Low	Negative	Low	Please refer to mitigation measures above, as well as the EMP in Appendix G.	Low
Nature of Impact	Description of Impact	Extent and Duration	Probability	Reversibility	Irreplaceable Loss of Resources	Indirect Impacts	Cumulative Impact	Status of Impact	Significance Prior to Mitigation	Proposed Mitigation	Significance Post Mitigation
Ecological Processes (Direct Impact)	Loss of ecological processes	Regional Long Term	Highly Probable	Medium Reversibility	Low	Low	Low	Negative	Low	Please refer to mitigation measures above, as well as the EMP in Appendix G.	Low
Freshwater (Direct Impact)	Disturbance of habitat and possibly impedance/diversion of flow at river crossings of proposed transmission lines	Site Construction Period/Short Term	Probable	High Reversibility	Medium to Low	Low	Low	Negative	Very Low	Refer to EMP attached in Appendix G. Minimise duration and extent of construction activities in the river – construction should also preferably take place in the low flow season. Clearing of debris, sediment and hard rubble associated with the construction activities should be undertaken post construction to ensure that flow within the drainage channels are not impeded or diverted. Rehabilitate disturbed stream bed and banks and re-vegetate with suitable indigenous vegetation.	Very Low

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										Neither the monopoles nor the anchors should be constructed within the proposed buffer zones of 15m and 30m either side of the rivers.	
Freshwater (Direct Impact)	Disturbance of habitat and possibly impedance/diversion of flow at river crossings of proposed access routes	Site Construction Period/Short Term	Probable	High Reversibility	Medium to Low	Low	Low	Negative	Low to very Low	<p>Refer to EMP attached in Appendix G.</p> <p>The existing road infrastructure should be utilized as far as possible to minimize the overall disturbance created by the proposed project. For new access roads to the pole structures, these should not be routed along the drainage/stream beds.</p> <p>The servitude roads and two track roads that are already in place along the existing power lines on the preferred route must be used during the construction phase and no new roads must be established along this component during or after the construction of the new additional power line.</p> <p>Where access routes need to be constructed through ephemeral streams, disturbance of the channel should be limited.</p> <p>Wetland areas should be avoided and any road adjacent to a wetland feature should also remain outside of the 30m buffer zone as far as possible.</p> <p>All crossings over drainage channels or stream beds should be such that the flow within the drainage channel is not impeded.</p> <p>Road infrastructure and cable alignments should coincide as much as possible to minimize the impact.</p> <p>Any disturbed areas should be rehabilitated to ensure that these areas do not become subject to erosion or invasive alien plant growth.</p>	Very Low
Archaeology (Direct Impact)	The archaeological resources likely to be impacted are too insignificant to merit further concern. If archaeological impacts were to be rated independently they would end up with very low ratings									<p>No mitigation is suggested for any aspects of heritage. However:</p> <p>Unmarked pre-colonial burials are more likely to be found on river floodplains than in the shale hills and cobbled areas and the ECO should be aware of this possibility. If any human remains are uncovered at any point during development then work in the immediate vicinity should be</p>	

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Nature of Impact	Description of Impact	Extent and Duration	Probability	Reversibility	Irreplaceable Loss of Resources	Indirect Impacts	Cumulative Impact	Status of Impact	Significance Prior to Mitigation	Proposed Mitigation	Significance Post Mitigation
										<p>halted and the find reported to Heritage Western Cape or an archaeologist. The remains would need to be exhumed at the cost of the developer under a permit issued to an archaeologist.</p> <p>It should be ensured that no structures or ruins, including the ruin at point 041, will be impacted by the development.</p>	
Dust (Direct Impact)	Dust impacts on surrounding environment associated with construction activities	<p>Site</p> <p>Construction Period/Short Term</p>	Probable	Reversible	No Loss	Low	Low	Negative	Low	<p>Generation of dust shall be minimised and dust nuisance for the surrounding areas shall be kept to a minimum wherever possible.</p> <p>Dust from exposed soil surfaces shall be minimised at all times, only using water spray during extremely windy conditions.</p> <p>Reasonable measures must be undertaken by the contractor to ensure that any exposed areas and material stockpiles are adequately protected against the wind.</p> <p>Dust screens of a suitable height should be erected wherever required and possible. All exposed surfaces should be minimised in terms of duration of exposure to wind and stormwater.</p>	Low
Noise (Direct Impact)	Noise impacts on surrounding environment associated with construction activities (construction vehicles and equipment)	<p>Local</p> <p>Construction Period/Short Term</p>	Probable	Reversible	No Loss	Low	Low	Negative	Low	<p>The contractor shall adhere to the local by-laws and regulations regarding the noise and associated hours of operations.</p> <p>The contractor shall limit noise levels (e.g. install and maintain silencers on machinery). The provisions of SANS 1200a sub-clause 4.1 regarding "built-up" area shall apply to all areas within audible distance of residents whether in</p>	

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										<p>urban, peri-urban or rural areas.</p> <p>Construction and demolition activities generating output of 85dB or more, shall be limited to normal working hours and not allowed during weekends.</p> <p>Should the contractor need to work outside normal working hours, any affected individuals shall be informed prior to the work taking place.</p> <p>No amplified music shall be allowed on site.</p>	
Waste (Direct Impact)	Generation of additional waste/litter and building rubble/ hazardous material during the construction phase	<p>Site</p> <p>Construction Period/Short Term</p>	Probable	Reversible	Medium	Low	Low	Negative	Medium	<p>Waste management mitigation measures as detailed in the EMP (Appendix G) includes:</p> <p>Solid waste (construction waste and builders rubble) will be collected by independent contractors and disposed of at the registered licensed municipal landfill site in Oudtshoorn with proof of safe disposal as required.</p> <p>The contractor shall ensure that all litter is collected daily from the work area. Similarly, all bins shall be emptied daily and the waste disposed of at a permitted landfill site.</p> <p>The contractor shall ensure that the construction site, working and eating areas are maintained in a clean, hygienic and orderly state.</p> <p>Separate bins should be provided for various materials to facilitate recycling. The bins should have liner bags for easy control and safe disposal of waste.</p> <p>The excavation and use of rubbish pits on site is forbidden.</p> <p>The burning of waste is forbidden.</p> <p>All vehicles and equipment must be maintained in a good condition in order to minimise the risk of leakage and possible contamination of the soil or stormwater by fuels, oils and hydraulic fluids.</p> <p>Sufficient quantities of suitable hydrocarbon absorption or remediation materials must be present on site at all times.</p>	Low
Socio-economic (Direct Impact)	Positive socio-economic impact as a result of temporary employment for local labourers during the	<p>Region</p> <p>Short Term</p>	Definite	Reversible	N/A	Low	High	Positive	High	N/A: mitigation not required	High

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construction process of the proposed development										
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**** Please refer to the Botanical Impact Assessment in Appendix D for details on the mentioned OB waypoints**

OPERATIONAL PHASE – ALTERNATIVE ROUTE B: SUMMARY OF THE IMPACTS SIGNIFICANCE BEFORE MITIGATION AND RATING POST MITIGATION ASSOCIATED WITH THE ALTERNATIVE OPTION

Nature of Impact	Description of Impact	Extent and Duration	Probability	Reversibility	Irreplaceable Loss of Resources	Indirect Impacts	Cumulative Impact	Status of Impact	Significance Prior to Mitigation	Proposed Mitigation	Significance Prior to Mitigation
Socio-economic (Direct Impact)	Positive socio-economic impact as a result of constant, adequate, reliable supply of electricity to the area, thereby contributing positively to the expansion and strengthening of local economic activities	Region Long Term	Definite	Reversible	N/A	Medium	High	Positive	High	N/A: mitigation not required	High

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Freshwater (Direct Impact)	Disturbance of habitat and possibly impedance/diversion of flow at river crossings of proposed transmission lines	Site Long Term	Probable to Unlikely	High Reversibility	Medium to Low	Low	Low	Negative	Very Low	All crossings over drainage channels or stream beds after the construction phase should be rehabilitated such that the flow within the drainage channel is not impeded. Maintenance of Powerlines should only take place via designated access routes and multiple crossings over streams and rivers should not be established.	Very Low
Freshwater (Direct Impact)	Disturbance of habitat and possibly impedance/diversion of flow at river crossings of proposed access routes	Site Long Term	Probable to Unlikely	High Reversibility	Medium to Low	Low	Low	Negative	Very Low	Maintenance of infrastructure related to the project should only take place via the designated access routes. Disturbed areas along the access routes should be monitored to ensure that these areas do not become subject to erosion or invasive alien plant growth.	Very Low
Nature of Impact	Description of Impact	Extent and Duration	Probability	Reversibility	Irreplaceable Loss of Resources	Indirect Impacts	Cumulative Impact	Status of Impact	Significance Prior to Mitigation	Proposed Mitigation	Significance Post Mitigation
Heritage Resources (Direct Impact) *	Visual intrusion of the Powerline into the cultural and scenic landscape	Local Long Term	Definite	Reversible	Low	Low	Low	Negative	Medium	N/A	N/A
Avifauna	Potential avi-faunal impacts: electrocution of birds perching on the pylon structures supporting the conductors and collision of flying birds with suspended cabling of the line	Site Long Term	Possible	Reversibility	Medium	Low	Medium	Negative	High	The risks of electrocution should be minimized in two ways, both of which apply equally to all the proposed routes: <ul style="list-style-type: none"> - The pylon structures used to support the conductors must be of a bird-friendly configuration, with sufficient gaps between the conducting elements and the metalwork, and with perching surfaces spaced adequately away from the conductors to prevent even the largest birds (African Crowned Eagle) from spanning these gaps. - Bird-guards should be fitted wherever birds might perch above the conductors to reduce bird-streamer related faulting. Collision impacts should be minimized in two ways: <ul style="list-style-type: none"> - Suitable marking devices (Bird Flight Diverters or Bird-flappers) should be fitted to all identified problem areas on each of the selected routes. - Bird flappers to be erected with expert ornithological 	Medium

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Botanical (Direct Impact)	Loss of Arid Thicket Mosaic: Blossoms Asbos Gwarrieveld	Negative	High	Low
Botanical (Direct Impact)	Loss of Gannaveld: Kandelaars Gannaveld	Negative	Low	Low
Botanical (Direct Impact)	Loss of Gannaveld: Oudtshoorn Gannaveld	Negative	Very Low	Very Low
Botanical (Direct Impact)	Loss of Gravel Apronveld: Grootkop Gravel Apronveld	Negative	Low	Low
Ecological Processes (Direct Impact)	Loss of ecological processes	Negative	Low	Low
Freshwater (Direct Impact)	Disturbance of habitat and possibly impedance/diversion of flow at river crossings of proposed transmission lines	Negative	Very Low	Very Low
Freshwater (Direct Impact)	Disturbance of habitat and possibly impedance/diversion of flow at river crossings of proposed access routes	Negative	Low to Very Low	Very Low
Archaeological (Direct Impact)	The archaeological resources likely to be impacted are too insignificant to merit further concern. If archaeological impacts were to be rated independently they would end up with very low ratings	N/A	N/A	N/A
Dust (Direct Impact)	Dust impacts on surrounding environment associated with construction activities	Negative	Low	Low
Noise (Direct Impact)	Noise impacts on surrounding environment associated with construction activities (construction vehicles and equipment)	Negative	Low	Low
Waste	Generation of additional waste/litter and building rubble/hazardous material during the construction phase	Negative	Medium	Low
Socio-Economic	Positive socio-economic impact as a result of the creation of temporary employment for local labourers during the construction process	Positive	High	High

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The impacts rated for the OPERATIONAL PHASE for the ALTERNATIVE ROUTE B

Nature of Impact	Description of Impact	Status of Impact	Significance Prior to Mitigation	Significance Post Mitigation
Socio-economic (Direct Impact)	Positive socio-economic impact as a result of constant, adequate, reliable supply of electricity to the area, thereby contributing positively to the expansion and strengthening of local economic activities	Positive	High	High
Freshwater (Direct Impact)	Disturbance of habitat and possibly impedance/diversion of flow at river crossings of proposed transmission lines		Very Low	Very Low
Freshwater (Direct Impact)	Disturbance of habitat and possibly impedance/diversion of flow at river crossings of proposed access routes		Very Low	Very Low
Heritage Resources (Direct Impact)	Visual intrusion of the Powerline into the cultural and scenic landscape	Negative	Medium	N/A
Avifauna (Direct Impact)	Potential avi-faunal impacts: electrocution of birds perching on the pylon structures supporting the conductors and collision of flying birds with suspended cabling of the line	Negative	High	Medium

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SUMMARY OF IMPACTS ASSOCIATED WITH THE NO-GO OPTION FOR BOTH PREFERRED ALTERNATIVE ROUTE A AND ALTERNATIVE ROUTE B

Nature of Impact	Description of Impact	Extent and Duration	Probability	Reversibility	Irreplaceable Loss of Resources	Indirect Impacts	Cumulative Impact	Status of Impact	Significance Prior to Mitigation	Proposed Mitigation	Significance Prior to Mitigation
Socio-Economic (Direct Impact)	Negative socio-economic impact as a result of inadequate supply of electricity to the area, thereby limiting growth and expansion of local economic activities. Improvement in supply of electricity to the area will not be secured	Region Long Term	Definite	Reversible	High	Medium	High	Negative	High	N/A: mitigation not required	High

5. ENVIRONMENTAL IMPACT STATEMENT

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

Summary of impacts:

The impact rated for the NO-GO Alternative

Nature of Impact	Description of Impact	Status of Impact	Significance Prior to Mitigation	Significance Post Mitigation
Socio-Economic (Direct Impact)	Negative socio-economic impact as a result of inadequate supply of electricity to the area, thereby limiting growth and expansion of local economic activities. Improvement in supply of electricity to the area will not be secured.	Negative	High	High

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SECTION E. RECOMMENDATION OF PRACTITIONER

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

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

N/A

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

Refer to EMP.

Is an EMPr attached?

✓ YES	NO
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The EMPr must be 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.

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

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

JENNY BARNARD (SiVEST ENVIRONMENTAL)

NAME OF EAP



SIGNATURE OF EAP

11 July 2013

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)

Appendix E: Public Participation

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: Additional Information