



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, 2014, promulgated in terms of the National Environmental Management Act, 1998 (Act No. 107 of 1998), as amended.

Kindly note that:

1. This **basic assessment report** is a standard report that may be required by a competent authority in terms of the EIA Regulations, 2014 and is meant to streamline applications. Please make sure that it is the report used by the particular competent authority for the activity that is being applied for.
2. This report format is current as of **08 December 2014**. It is the responsibility of the applicant to ascertain whether subsequent versions of the form have been published or produced by the competent authority
3. The report must be typed within the spaces provided in the form. The size of the spaces provided is not necessarily indicative of the amount of information to be provided. The report is in the form of a table that can extend itself as each space is filled with typing.
4. Where applicable **tick** the boxes that are applicable in the report.
5. An incomplete report may be returned to the applicant for revision.
6. The use of "not applicable" in the report must be done with circumspection because if it is used in respect of material information that is required by the competent authority for assessing the application, it may result in the rejection of the application as provided for in the regulations.
7. This report must be handed in at offices of the relevant competent authority as determined by each authority.
8. No faxed or e-mailed reports will be accepted.
9. The signature of the EAP on the report must be an original signature.
10. The report must be compiled by an independent environmental assessment practitioner.
11. Unless protected by law, all information in the report will become public information on receipt by the competent authority. Any interested and affected party should be provided with the information contained in this report on request, during any stage of the application process.
12. A competent authority may require that for specified types of activities in defined situations only parts of this report need to be completed.
13. Should a specialist report or report on a specialised process be submitted at any stage for any part of this application, the terms of reference for such report must also be submitted.
14. Two (2) colour hard copies and one (1) electronic copy of the report must be submitted to the competent authority.
15. Shape files (.shp) for maps must be included in the electronic copy of the report submitted to the competent authority.

SECTION A: ACTIVITY INFORMATION

Has a specialist been consulted to assist with the completion of this section? 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 Holdings SOC Ltd proposes to construct a new 2x 2.5 MVA substation at the South-Africa / Namibia Rietfontein Border Post in the Northern Cape Province (see Locality Map in Appendix A). An approximate 120m 66kV powerline will connect from the metering point just across the Namibian border to the new substation and an approximate 55m 33kV powerline will be constructed from the substation to connect with the existing 33kV line. The metering point in Namibia is approximately 20m from the border fence. The new powerline will be ± 175m in length.

The substation will be constructed within an area of approximately 4 000m². The construction of the new substation will also include the upgrade of the 33kV metering point to a 66kV metering point to supply the 33kV feeder distribution line. The construction of the proposed substation will require the upgrade of an existing access road from the R31 arterial road as well as the construction of a new access road. The road will be 5m wide and 8m or wider at the turning points.

A temporary laydown area / material storage area / site camp area of approximately 4 000 m² will be utilised during the construction period. This area will be removed and rehabilitated after construction.

Background

An application for Environmental Authorisation (EA) was made in 2011 and the EA was subsequently issued on 3 August 2011. The validity period of this EA was for 3 years and since construction has not commenced before 2 August 2014 the EA has lapsed. The project reference numbers were

- NEAS Reference Number: DEAT/EIA/12860/2011
- DEA Reference Number: 12/12/20/1679

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

Listed activity as described in GN 983, 984 and 985	Description of project activity
<p>GN 983, Dec 2014, Number 11 The development of facilities or infrastructure for the transmission and distribution of electricity-</p> <p>(i) outside urban areas or industrial complexes with a capacity of more than 33 but less than 275 kilovolts; or</p> <p>(ii) inside urban areas or industrial complexes with a capacity of 275 kilovolts or more.</p>	<p>A substation as well as short sections of 66kV and 33kV powerlines will be constructed outside of an urban area.</p>

BASIC ASSESSMENT REPORT

<p>GN 983, Dec 2014, Number 12 The development of-</p> <ul style="list-style-type: none"> (i) canals exceeding 100 square metres in size; (ii) channels exceeding 100 square metres in size; (iii) bridges exceeding 100 square metres in size; (iv) dams, where the dam, including infrastructure and water surface area, exceeds 100 square metres in size; (v) weirs, where the weir, including infrastructure and water surface area, exceeds 100 square metres in size; (vi) bulk storm water outlet structures exceeding 100 square metres in size; (vii) marinas exceeding 100 square metres in size; (viii) jetties exceeding 100 square metres in size; (ix) slipways exceeding 100 square metres in size; (x) buildings exceeding 100 square metres in size; (xi) boardwalks exceeding 100 square metres in size; or (xii) infrastructure or structures with a physical footprint of 100 square metres or more; <p>where such development occurs-</p> <ul style="list-style-type: none"> a) within a watercourse; b) in front of a development setback; or c) if no development setback exists, within 32 metres of a watercourse, measured from the edge of a watercourse; - <p>excluding-</p> <ul style="list-style-type: none"> (aa) the development of infrastructure or structures within existing ports or harbours that will not increase the development footprint of the port or harbour; (bb) where such development activities are related to the development of a port or harbour, in which case activity 26 in Listing Notice 2 of 2014 applies; (cc) activities listed in activity 14 in Listing Notice 2 of 2014 or activity 14 in Listing Notice 3 of 2014, in which case that activity applies; (dd) where such development occurs within an urban area; or (ee) where such development occurs within existing roads or road reserves. 	<p>A substation will be constructed within 32m from a watercourse (a drainage line)</p>
<p>GN 983, Dec 2014, Number 19 The infilling or depositing of any material of more than 5 cubic metres into, or the dredging, excavation, removal or moving of soil, sand, shells, shell grit, pebbles or rock of more than 5 cubic metres from-</p> <ul style="list-style-type: none"> (i) a watercourse; (ii) the seashore; or (iii) the littoral active zone, an estuary or a distance of 100 metres inland of the high-water mark of the sea or an estuary, whichever distance is the greater <p>But excluding where such infilling, depositing, dredging, excavation, removal or moving-</p> <ul style="list-style-type: none"> a) will occur behind a development setback; b) is for maintenance purposes undertaken in accordance with a maintenance management plan; or c) falls within the ambit of activity 21 in this Notice, in which case that activity applies. 	<p>Foundations will be excavated for the substation and this will occur within 32m of a drainage line.</p>
<p>GN 983, Dec 2014, Number 24 The development of-</p> <ul style="list-style-type: none"> (i) a road for which an environmental authorisation was obtained for the route determination in terms of activity 5 in Government Notice 387 of 2006 or activity 18 in Government Notice 545 of 2010; or (ii) a road with a reserve wider than 13,5 meters, or where no reserve exists where the road is wider than 8 metres; <p>but excluding-</p> <ul style="list-style-type: none"> (a) roads which are identified and included in activity 27 in Listing Notice 2 of 2014; or (b) roads where the entire road falls within an urban area. 	<p>An access road will be constructed. The road will be 5m wide and 8m or wider at the turning points.</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 Appendix 1 (3)(h), Regulation 2014. Alternatives should include a consideration of all possible means by which the purpose and need of the proposed activity (NOT PROJECT) could be accomplished in the specific instance taking account of the interest of the applicant in the activity. The no-go alternative must in all cases be included in the assessment phase as the baseline against which the impacts of the other alternatives are assessed.

The determination of whether site or activity (including different processes, etc.) or both is appropriate needs to be informed by the specific circumstances of the activity and its environment. After receipt of this report the, competent authority may also request the applicant to assess additional alternatives that could possibly accomplish the purpose and need of the proposed activity if it is clear that realistic alternatives have not been considered to a reasonable extent.

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

a) Site alternatives

Site A (Preferred Alternative)		
Description	Lat (DDMMSS)	Long (DDMMSS)
Approximate centre of the substation site	26° 45' 24.84" S	20° 00' 04.77" E
Site B		
Description	Lat (DDMMSS)	Long (DDMMSS)
Approximate centre of the substation site	26° 45' 25.27" S	20° 00' 00.70" E
Alternative 3		
Description	Lat (DDMMSS)	Long (DDMMSS)

In the case of linear activities:

Alternative:

Alternative S1 (preferred)

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

Latitude (S):

Longitude (E):

26° 45' 25.70" S	19° 59' 56.43 E
26° 45' 26.10" S	20° 00' 02.20' E
26° 45' 25.46" S	20° 00' 04.40' E

BASIC ASSESSMENT REPORT

Alternative S2 (if any)

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

26° 45' 25.70" S	19° 59' 56.43 E
26° 45' 26.01" S	19° 59' 58.42 E
26° 45' 25.46" S	20° 00' 04.40" E

Alternative S3 (if any)

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

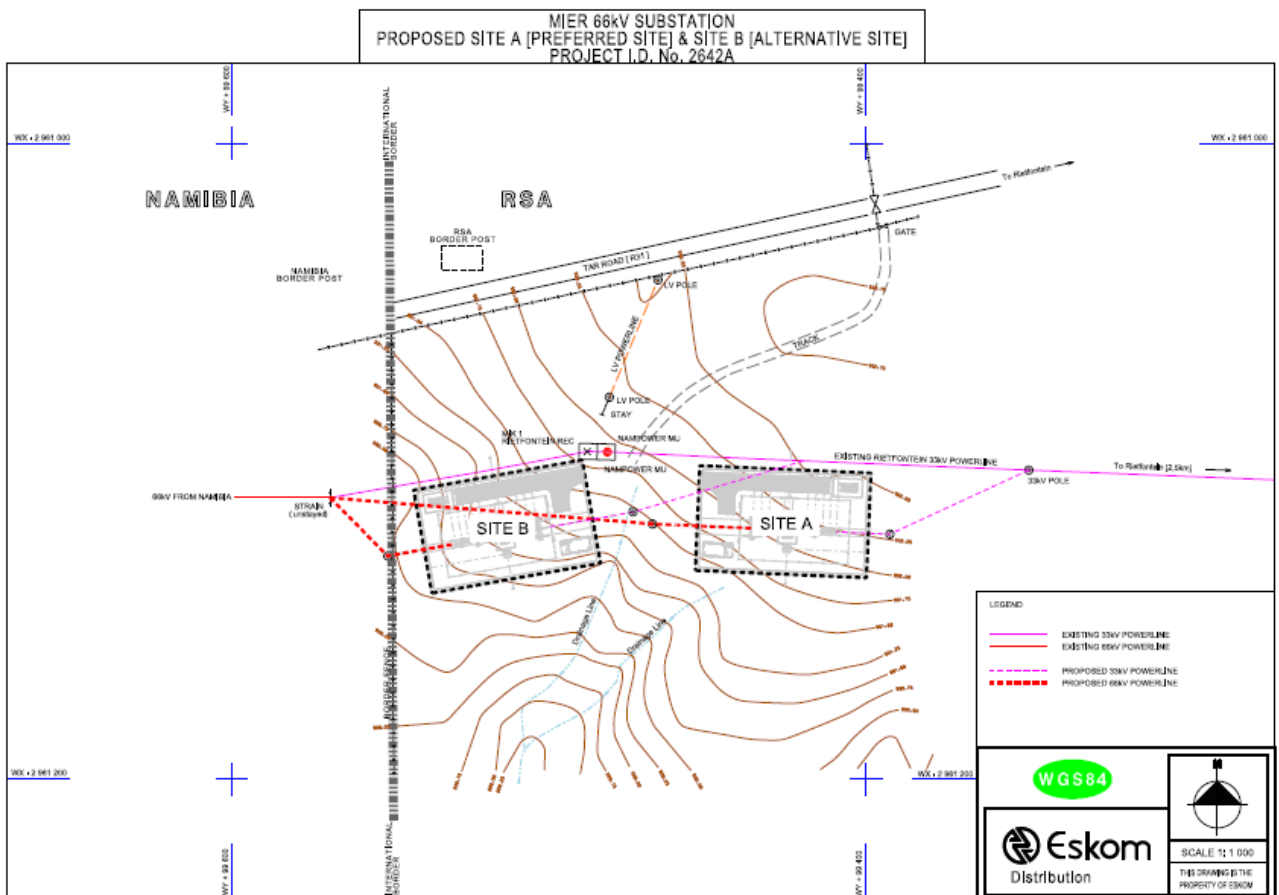
For route alternatives that are longer than 500m, please provide an addendum with co-ordinates taken every 250 meters along the route for each alternative alignment.

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

SELECTING AN ALTERNATIVE

Both site alternatives are located adjacent to the R31 provincial road which connects the border post with the town of Rietfontein and beyond. The sites are also adjacent to the existing 33kV line extending across the Namibian border. The metering point to which the new 66kV powerline will connect is in Namibia, approximately 20m from the border fence.

Although there is land available elsewhere in the vicinity of the border post for the substation, these site alternatives were chosen because any site further away from the existing 33kV powerline would extend the footprint of the project and require longer powerlines to connect to the existing distribution system. These site alternatives are therefore considered reasonable and feasible.



Vegetation

Due to the close proximity of the sites to each other, the ecosystem status of both sites is the same. The vegetation cover is Kalahari Karroid Shrubland and is classified as Least Threatened, with 99.2% remaining. All plant species present on site are natural to the area but they do however have a low cover due to degradation. No alien species are present, but the area has large open patches due to human induced influences such as the road and grazing by livestock.

From a plant ecological and ecosystem functioning point of view the area has a low conservation value and development on either Site A or Site B is supported.

Drainage lines

There are two drainage lines within close proximity of both sites. The Risk Assessment Table that was compiled for the Department of Water & Sanitation confirms that this is a *low risk* development and that the substation will have very little to no effect on the workings of the drainage lines. However, mitigation stipulated in the Environmental Management Plan includes the demarcation of the drainage lines and that it should be treated as no-go areas during the construction period. It is further stated that no temporary construction camps may be erected within these drainage features and that storage of any construction material will not be allowed.

In terms of the drainage lines, development on either Site A or Site B is supported.

Site A (Site Alternative 1), the Preferred Site

Site A (Site Alternative 1), the preferred site, is situated $\pm 120\text{m}$ east of the border fence within a controlled access area. It is within sight of the Rietfontein border post and the Klein Menase border post on the Namibian side, with no other dwellings within a 2.5km radius on the South African side of the border. The Namibian border post, Klein Menase, is approximately 150m northwest of the proposed substation site on the Namibian side of the border.

This site is the preferred site because it will not be required to construct any pylons within the borders of Namibia. The administrative load of constructing within Namibia is immense and Eskom prefers to avoid this where possible because it is time consuming and not cost effective. The new powerline will connect directly to the metering point in Namibia and will follow a straight line to the substation on Site A. Only one pylon on the South African side will be constructed within this new line.

Site B (Site Alternative 2)

Site B (Site Alternative 2) is in close proximity to Site A and is situated $\pm 20\text{m}$ east of the border fence within a controlled access area. It is directly across from the Rietfontein border post with no other dwellings or buildings within a 2.5km radius on the South African side of the border.

Should Site B be used, two turning points within the powerline will be required from the metering point in Namibia before it can connect to the substation. Pylons at turning points are more expensive and bigger than pylons within a straight line and this will therefore increase the cost considerably. This is especially important when taking the very short length of the powerline into consideration.

Furthermore, one pylon will have to be within the Namibian borders and this is not preferable due to the administrative load of constructing within Namibia.

BASIC ASSESSMENT REPORT

Conclusion on selecting an alternative

Site A is the Preferred Site because it would be more cost and time effective because no turning points are required within the powerline from the metering point in Namibia to the substation and no pylons will be constructed within Namibian borders. In terms of the ecology, there is no preference for any of the sites and development on both sites is supported.

b) Lay-out alternatives

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

c) Technology alternatives

Alternative 1 (preferred alternative)
Alternative 2
Alternative 3

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

Alternative 1 (preferred alternative)		
Alternative 2		
Alternative 3		

e) No-go alternative

The no-go alternative implies that the status quo remains, which is not to construct the substation and associated infrastructure.

The status quo of an unreliable supply of electricity to the Mier municipality will persist. The Mier municipality will not be able to meet increasing demand for electricity. Development of the area will stagnate as secure supply of electricity is key to the development of the area.

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:

±4 000m ²
±4 000m ²
m ²

or, for linear activities:

Alternative:

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

Length of the activity:

± 175m
± 100m
m

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

Alternative:

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

Size of the site/servitude:

66kV line = 22m wide servitude. No servitude will be registered for the 33kV line but the same building line restriction width applies, i.e. 11m on either side of the centreline.
66kV line = 22m wide servitude. No servitude will be registered for the 33kV line but the same building line restriction width applies, i.e. 11m on either side of the centreline.
m ²

4. SITE ACCESS

Does ready access to the site exist?

YES	NO
-----	----

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

m

Describe the type of access road planned:

An existing gravel track exists from the access gate off the R31 tarred road to the existing switching station. A short section of new road will have to be constructed to the new substation and a section of the existing road will be upgraded. The new road will be 5m wide and 8m or wider at the turning points.

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.

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

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 DWS);
- ridges;
- cultural and historical features;
- areas with indigenous vegetation (even if it is degraded or infested with alien species); and
- critical biodiversity areas.

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

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?	YES	NO	Please explain
<p>A new 22m servitude will be registered for the 66kV line. No servitude will be registered for the 33kV line but the same building line restriction width applies, i.e. 11m on either side of the centreline. The Mier Local Municipality gave consent that the substation and powerlines may be constructed on their land.</p>			
2. Will the activity be in line with the following?			
(a) Provincial Spatial Development Framework (PSDF)	YES	NO	Please explain
<p>The sectoral policies, objectives and implementation strategies proposed by the July 2012 PSDF are informed by, amongst others, the need for bulk engineering and social services including <i>electricity</i>, water, health, education, housing, and recreational facilities.</p> <p>Housing is one of the basic human needs that have a profound impact on health, welfare, social attitudes and economic productivity of the individual. In achieving the Millennium Development Goals, the South African government is to ensure that its citizens live in good housing conditions. In order to achieve this goal, the government aims to eliminate all informal dwellings, bucket type toilets, and ensure that all citizens have access to <i>electricity for lighting</i>, and access to clean, safe water within a reasonable distance.</p> <p>Economic development opportunities are the key determinant in the settlement pattern of the Northern Cape Province. Economic development, in turn, typically responds to the availability of Environmental Capital (e.g. water, suitable agricultural soil, mining resources, etc.) and Infrastructural Capital (e.g. roads, electricity, bulk engineering services, etc.).</p> <p>The proposed new Mier Substation aims to upgrade the wider electrical network, which would result in a more reliable energy supply.</p> <p>It is therefore clear that the project as proposed could assist the Northern Cape Province in achieving their development and service delivery goals.</p>			

BASIC ASSESSMENT REPORT

(b) Urban edge / Edge of Built environment for the area	YES	NO	Please explain
Not applicable			
(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?).	YES	NO	Please explain
<p>The Mier Municipality's Integrated Development Plan, dated 2012/2013 – 2017/2018 states that bulk electricity services are provided by Eskom, from Namibia (Nampower) to all the towns in the Mier Area, except for Noenieput. Distribution networks are available, except for Noenieput, and most houses have been electrified since 1996. According to the Community Survey in 2007 (Stats SA), 75.7% of households uses electricity for lighting, 57.3% for cooking and 34% for heating. In comparison with 2001 Census Data this indicates a major improvement in electricity provision over the last 7 years.</p> <p>The construction of the Mier Substation and associated short sections of powerline routes will enhance the Eskom electrical network, thereby further improving electricity provision to all users within the area.</p> <p>According to the 2008 ZF Mgcawu District Municipality's Environmental Management Framework Spatial Development Frameworks for the EMF area have not yet been developed. The Khara Hais Municipality is the only municipality within this district that has begun with the development process of a SDF and there is therefore no SDF for the Mier Municipality.</p>			
(d) Approved Structure Plan of the Municipality	YES	NO	Please explain
A Structure Plan for the Mier Municipality is not available / does not exist.			
(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?)	YES	NO	Please explain
<p>The 2008 ZF Mgcawu District Municipality's Environmental Management Framework states that there is enough spatial capacity to accommodate anticipated growth and densification needs on land that has low environmental sensitivity. There is no need for development on sensitive areas while there is currently adequate space available on land that is not sensitive.</p> <p>The proposed Mier Substation supports this statement because it is built within a vegetation type that is Least Threatened, with 99.2% remaining.</p>			
(f) Any other Plans (e.g. Guide Plan)	YES	NO	Please explain

BASIC ASSESSMENT REPORT

<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>	YES	NO	Please explain
<p>The provision of basic electricity to all households was identified as a priority issue / target in the Mier Municipality's Integrated Development Plan, dated 2012/2013 – 2017/2018.</p> <p>The Northern Cape PSDF states that provision of adequate <i>Infrastructural Capital</i> (e.g. roads, electricity, bulk engineering services, etc.) is a high priority in order to stimulate economic growth within the province</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>	YES	NO	Please explain
<p>The proposed new Mier Substation aims to upgrade the wider electrical network, which would result in a more reliable energy supply with associated positive social impacts within the greater area.</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>	YES	NO	Please explain
<p>This project forms part of the upgrade of the wider network and will enable a more reliable supply of electricity to the electricity users in the macro area.</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>	YES	NO	Please explain
<p>Municipalities recognise the need for proper engineering infrastructure (e.g. electricity) in its area of jurisdiction and much needed infrastructure (e.g. electricity) is identified as a priority to unlock the economic growth potential of the macro area.</p>			
<p>7. Is this project part of a national programme to address an issue of national concern or importance?</p>	YES	NO	Please explain
<p>This project does ultimately contribute on national level. Eskom is the national electricity utility which generates and distributes electricity to industrial, mining, commercial, agricultural and residential electricity consumers and re-distributors.</p>			

BASIC ASSESSMENT REPORT

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.)	YES	NO	Please explain
<p>All impacts can be mitigated to acceptable levels and this activity will not impact negatively on the current landuse along the route.</p>			
9. Is the development the best practicable environmental option for this land/site?	YES	NO	Please explain
<p>The project as proposed is required for the strengthening of the existing electrical network. Negative impacts that this development may have on the environment can be mitigated to acceptable levels and the protection of the bio-physical environment is therefore not jeopardised.</p>			
10. Will the benefits of the proposed land use/development outweigh the negative impacts of it?	YES	NO	Please explain
<p>All negative impact associated with this proposed activity can be mitigated to acceptable levels. The positive impact of reliable and adequate electrical supply outweighs possible negative impacts that may occur after mitigation measures have been applied.</p>			
11. Will the proposed land use/development set a precedent for similar activities in the area (local municipality)?	YES	NO	Please explain
<p>Existing electrical infrastructure such as a substation always has the potential for future upgrade and or construction of additional components to the facility and powerlines.</p>			
12. Will any person's rights be negatively affected by the proposed activity/ies?	YES	NO	Please explain
<p>No person's rights would be affected by the proposed activity. A thorough public participation programme was conducted and issues raised by interested & affected parties are satisfactorily addressed.</p>			
13. Will the proposed activity/ies compromise the "urban edge" as defined by the local municipality?	YES	NO	Please explain
<p>The substation site falls outside of the urban edge.</p>			
14. Will the proposed activity/ies contribute to any of the 17 Strategic Integrated Projects (SIPS)?	YES	NO	Please explain
15. What will the benefits be to society in general and to the local communities?	Please explain		
<p>A number of the new developments in the area are linked to tourism. Thus by increasing the supply and the stability of the supply of electricity, these proposed tourism developments can go ahead. Through these developments the area becomes more attractive to local and international tourists that are already attracted to the various national and trans-boundary conservation areas in the region.</p>			

The communities of the Mier municipality and surrounds will enjoy a more stable supply of electricity and the development of the area will not be stunted by the lack of capacity. The bulk of the benefits of this project will be accrued by the local communities.

16. Any other need and desirability considerations related to the proposed activity?

Please explain

The Mier Municipality is located at the end of a 2 000km transmission line originating in Hotezal in the Northern Cape. The area is subjected to electricity cuts as a result of regular faults reported along the line or unannounced routine maintenance. The Rietfontein area also receives electricity from a distribution line originating in Namibia, however the supply to the area is limited by the 33kV line and the area is fast approaching capacity in terms of electricity provision. There has been an increase demand for electricity and is set to increase further over time. Eskom intends to meet current demand and make provision for future demand by increasing the capacity of the distribution line which extends from the Namibian border to Rietfontein. The line coming from Namibia has a 66kV capacity while the current capacity of the line to Rietfontein is 33kV, the capacity of the existing line on the South African side can be increased by constructing a 2X2.5MVA substation at the Rietfontein border post.

By constructing the substation at the Rietfontein border post the capacity of electricity supply to the area will increase and the stability of the supply will improve. This is essential for the current supply and to make provision for future demand in the area.

17. How does the project fit into the National Development Plan for 2030?

Please explain

The **National Development Plan** aims to eliminate poverty and reduce inequality by 2030. South Africa can realise these goals by drawing on the energies of its people, growing an inclusive economy, building capabilities, enhancing the capacity of the state, and promoting leadership and partnerships throughout society.

The Commission's **Diagnostic Report, June 2011** set out South Africa's achievements and shortcomings since 1994. It identified a failure to implement policies and an absence of broad partnerships as the main reasons for slow progress, and set out nine *primary challenges of which the following is relevant to this project*: "Infrastructure is poorly located, inadequate and under-maintained".

Given the complexity of national development, the plan sets out six *interlinked priorities*. *Relevant to this project is bringing about faster economic growth*.

The **National Development Plan** makes a firm commitment to achieving a minimum standard of living. *Elements of a decent standard of living include the following relevant to this project* :

- A more efficient and competitive infrastructure.
- Infrastructure to facilitate economic activity that is conducive to growth and job creation.

An approach will be developed to *strengthen key services* such as commercial transport, energy, telecommunications and water, while ensuring their long-term affordability and sustainability.

Economic infrastructure: The proportion of people with access to the electricity grid should rise to at least 90 percent by 2030, with non-grid options available for the rest.

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

Current procedures and/or organisational structures are not necessarily achieving integrated decision-making and/or co-operative governance and, as a result, there is a failure to properly achieve the objectives of IEM as set out in Section 23 of NEMA. EIA's however often focus on the immediate harm a project will cause rather than any benefits it might create in the long term to sustainable development.

The stated objectives of Section 23 are to ensure integrated decision-making and co-operative governance so that NEMA's principles and the general objectives for integrated environmental management of activities can be achieved. The goals are to

- 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;
- 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;
- c) ensure that the effects of activities on the environment receive adequate consideration before actions are taken in connection with them;
- d) ensure adequate and appropriate opportunity for public participation in decisions that may affect the environment;
- e) ensure the consideration of environmental attributes in management and decision-making which may have a significant effect on the environment; and
- 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 2.

For this project the following actions were taken to reach the general objectives of Integrated Environmental Management as set out in Section 23 of NEMA:

- a) Applicable environmental, economic and social aspects have been assessed, thereby ensuring an integrated approach in order to balance the needs of all whom would be affected by this development.
- b) Impacts have been described and assessed elsewhere in this report. Mitigation measures have been supplied in order to ensure that all identified impacts are mitigated to acceptable levels. Alternatives have been thoroughly assessed and the best possible solution represents this development proposal.
- c) The development proposal has to be evaluated and approved by DEA and no construction may commence prior to the issuing of the Environmental Authorisation.
- d) The procedures which were followed during the public participation programme were based on the NEMA EIA Regulations which came into effect on 14 December 2015.
- e) DEA will take all information as represented in this report into consideration and may request further information should they feel that further studies/information is required before an informed decision can be made.
- f) The mitigation measures as supplied in this report together with the measures as per the Environmental Management Programme are deemed to be the best way to manage anticipated impacts.

By providing electricity whilst not impacting negatively on the environment, the project would contribute to a sustainable environment.

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

Chapter 2 of NEMA provides a number of principles that decision-makers have to consider when making decisions that may affect the environment, therefore, when a Competent Authority considers granting or refusing environmental authorisation based on an Environmental Impact Assessment, these principles must be taken into account.

The NEMA principles with which this application conforms are described as follows —

1. Environmental management must place people and their needs at the forefront of its concern, and serve their physical, psychological, developmental, cultural and social interests equitably.
2. Development must be socially, environmentally and economically sustainable.
3. Sustainable development requires the consideration of all relevant factors.

The social, economic and environmental impacts of activities, including disadvantages and benefits, were considered, assessed and evaluated, and informed decision-making by the authority is hereby made possible.

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 (Act 107 of 1998), as amended	Environmental Authorisation is required	Department of Environmental Affairs	1998
National Heritage Resources Act (25 of 1999)	Comment is not required	SAHRA	1999
National Water Act (Act 36 of 1998)	Application for GA is not required	Department of Water Affairs	1998
Section 7(1) and 15(1) of the National Forests Act of 1998 (Act 84 of 1998)	Authorisation is not required	Department of Agriculture	1998
Environment Conservation Act (Act 73 of 1989)	Authorisation is not required	Department of Environmental Affairs	1989
National Environmental Management: Biodiversity Act (Act 10 of 2004)	Authorisation is not required	Department of Environmental Affairs	2004
National Environmental Management: Biodiversity Act (Act 10 of 2004): Threatened & Protected Species Regulations	Authorisation is not required	Department of Environmental Affairs	2004
National Spatial Biodiversity Assessment (2004)	Authorisation is not required	Department of Environmental Affairs	2004
National Biodiversity Strategy Action Plan	Authorisation is not required	Department of Environmental Affairs	2005
Northern Cape Nature Conservation Act (2009)	Authorisation may / may not be required	Department of Environmental Affairs	2009

BASIC ASSESSMENT REPORT

Conservation of Agricultural Resources Act (43 of 1983)	Authorisation is not required	Department of Agriculture	1983
Endangered and Rare Species of Fauna and Flora (AN 1643 February 1984)	Authorisation is not required	Lists endangered species in terms of the Nature Conservation Ordinance, 1983 (Ordinance 12 of 1983)	1984

12. WASTE, EFFLUENT, EMISSION AND NOISE MANAGEMENT

a) Solid waste management

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

YES	NO
± 10m ³	

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

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

The solid waste produced during the construction phase is negligible and it would result from fencing activities, installation of the substation components as well as building rubble from laying the foundation.

The appointed contractor will however be responsible for disposing of any solid waste generated by the construction process. The contractor will use the Environmental Management Programme to manage the impacts relating to the construction phase.

- Unusable waste will be disposed of at registered waste disposal sites according to the applicable waste classification.
- Hazardous construction waste will be disposed of at a H:H registered waste disposal facility.
- Steel (ferrous and non-ferrous) and aluminium will be recovered and sold as scrap for recycling.
- Refuse bags will be supplied to construction personnel for dumping of household waste. Bins with lids will be provided at construction camps for household waste.

For all waste that is disposed of, Eskom shall obtain waste manifests and disposal certificates, which shall be recorded and reported to the Environmental Control Officer (ECO) on a monthly basis.

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

- It will be transported off site by the contractor and returned to Eskom stores where scrap will be handed over to buyers. Any waste that cannot be recycled will be transported to appropriate registered waste disposal sites.
- General household waste generated by the construction team will be removed by the relevant contractor to a registered waste disposal site / municipal waste transfer station.
- The expected volumes of solid waste are small and does not require authorisation in terms of relevant legislation.

For all waste that is disposed of, Eskom shall obtain waste manifests and disposal certificates, which shall be recorded and reported to the ECO on a monthly basis.

BASIC ASSESSMENT REPORT

Will the activity produce solid waste during its operational phase?

YES	NO
-----	----

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

m ³

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

--

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

--

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

--

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?

m ³

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

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

--

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	NO
-----	----

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

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:

--

d) Waste permit

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

YES	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	NO
-----	----

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

YES	NO
-----	----

Describe the noise in terms of type and level:

It is likely that some noise will be generated during the construction phase. The noise generated will vary depending on the activity but is anticipated to be short-lived.

Studies undertaken on behalf of Eskom confirmed that calculations of electric and magnetic field levels created by overhead powerlines / substations where the public may be exposed are well within the ICNIRP guidelines. Note that ICNIRP refers to Non-ionising Radiation Protection which receives world-wide support and is endorsed by the Department of Health in South Africa.

Given the remote location of the site, the only receptors would be border post personnel some distance from the substation which makes the potential impact even less significant.

13. WATER USE

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

Municipal (Construction)	Water board	Groundwater	River, stream, dam or lake	Other	The activity will not use water (Operation)
-------------------------------------	-------------	-------------	-------------------------------	-------	--

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:

litres	
--------	--

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

YES	NO
-----	----

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

14. ENERGY EFFICIENCY

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

Not applicable

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

The activity is designed to increase the distribution capacity of the electricity network extending from the Namibian border to the Rietfontein area. Energy is not being generated nor consumed by the activity, thus alternative energy has not been considered in this application.

SECTION B: SITE/AREA/PROPERTY DESCRIPTION

Important notes:

- 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):

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

- 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	Northern Cape
District Municipality	ZF Mgcawu District Municipality
Local Municipality	Mier Local Municipality
Ward Number(s)	Ward 3
Farm name and number	Remaining extent of the Farm Mier 585
Portion number	0
SG Code	C0280000000058500000

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

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?
 Consent from the Mier Local Municipality (the landowner), is attached in Appendix J.

YES	NO
-----	----

BASIC ASSESSMENT REPORT

Please note that specialist assessments were not conducted for this application due to the following reasons:

- Only two specialist studies could possibly be applicable for this small scale project; namely aquatic and vegetation assessments.
- A site visit was undertaken with two officials from the Department of Water Affairs & Sanitation: Northern Cape Region: Lower Orange Water Management Area. It was confirmed that it is not required to submit a Water Use License Application or to apply for General Authorisation. No further studies were requested from DWS. Proof of correspondence in this regard is included in Appendix E: Public Participation. The services of an aquatic specialist are therefore not required.
- Landscape Dynamics is confident that specialist vegetation assessments are not required for this project and that the in-house expertise which was used is adequate to ensure the protection of the fauna on and surrounding the site. The vegetation cover for both alternative sites is Kalahari Karroid Shrubland and is classified as Least Threatened, with 99.2% remaining. Even though all plant species present on site are natural to the area, they do however have a low cover due to degradation. From a plant ecological and ecosystem functioning point of view the area has a low conservation value. The mitigation measures as supplied in the BAR (this document) as well as the EMP will ensure protection of the vegetation.
- Furthermore, an Environmental Authorisation was issued for this project on 3 August 2011, but it lapsed because construction did not commence within the stipulated time frame. The conclusions reached by both studies (2011 as well as 2015/2016) are similar and specialist studies were also not conducted during the 2011 Basic Assessment process.

It is the very strong opinion of the EAP that specialist assessments are not required for this small scale project and that the environment are sufficiently protected by the mitigation measures as supplied.

1. GRADIENT OF THE SITE

Indicate the general gradient of the site.

Alternative S1:

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

Alternative S2 (if any):

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

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

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 type="checkbox"/>
2.2 Plateau	<input type="checkbox"/>	2.5 Open valley	<input type="checkbox"/>	2.8 Dune	<input type="checkbox"/>
2.3 Side slope of hill/mountain	<input type="checkbox"/>	2.6 Plain	<input checked="" type="checkbox"/>	2.9 Seafront	<input type="checkbox"/>
2.10 At sea	<input type="checkbox"/>				

3. GROUNDWATER, SOIL AND GEOLOGICAL STABILITY OF THE SITE

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

	Alternative S1:		Alternative S2 (if any):		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 project information or at the planning sections of local authorities. Where it exists, the 1:50 000 scale Regional Geotechnical Maps prepared by the Council for Geo Science may also be consulted.

4. GROUNDCOVER

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

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

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

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

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

Drainage lines

The drainage lines relevant to the Mier project could be described as slight and very shallow natural drainage features in a very dry landscape with very little rainfall and good drainage due to the sandy characteristics of the soil composition.

The preferred site lies outside of the drainage line as indicated on the site layout map. With the proposed stormwater management mitigation measures in place the project will not impede or divert the flow in a watercourse and neither will it alter the bed, banks, course or characteristics of a watercourse.

The Risk Assessment Table (attached in Appendix J) also confirms the low impact risk to the drainage lines associated with the project.

Recommendations are:

- Significant impact can be caused by oil or fuel spillages that can occur during construction or the installation and maintenance of the transformers. A clear plan of how to manage accidental spills is included in the Environmental Management Plan (EMP) for the site.
- It is suggested that no unnecessary travelling on the servitude is permitted during construction – low traffic volumes will lower the risk of erosion. Prevent and rehabilitate erosion on a regular basis.
- No travelling through the drainage lines are permitted; since all drainage lines are considered as corridors for the limited migration of species.
- The design engineers must compile a Stormwater Management Plan for the substation site according to generally acceptable engineering principles. The natural flow patterns of the surrounding land should be considered.
- The stormwater management plan must be submitted to the Department of Water & Sanitation: Northern Cape Region for their perusal and input.
- Further mitigation includes the demarcation of the drainage lines for the duration of the construction period and that it should be treated as no-go areas. No temporary construction camps may be erected within these drainage features and storage of any construction material will not be allowed.

With the proposed mitigation management measures in place the project will not impede or divert the flow in a watercourse and it will not alter the bed, banks, course or characteristics of any of the watercourses. The extent of the project is relatively small in the landscape. The activity (substation) will have no real impact on biodiversity processes, including the streams and rivers in the macro area.

The Department of Water & Sanitation confirmed that a Water Use License / General Authorisation is not required for this project (proof thereof is attached in Appendix E).

BASIC ASSESSMENT REPORT

6. LAND USE CHARACTER OF SURROUNDING AREA

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

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

* The Namibian border officials are housed at the border, given the remoteness of the border.

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

Not applicable

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:

Not applicable

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:

Not applicable

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

BASIC ASSESSMENT REPORT

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

Please note that the SANBI website has no CBA information for the Mier Local Municipality. The vegetation cover, Kalahari Karroid Shrubland is however classified as Least Threatened, with 99.2% remaining.

7. CULTURAL/HISTORICAL FEATURES

Please note this proposed development does not trigger any activities as per Section 38 of the National Heritage Resources Act 25 of 1999 and comment from a heritage authority is therefore not required.

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:

Will any building or structure older than 60 years be affected in any way?	YES	NO
Is it necessary to apply for a permit in terms of the National Heritage Resources Act, 1999 (Act 25 of 1999)?	YES	NO
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:

Unemployment rate = 30,9% Youth unemployment rate = 35,2%
--

Economic profile of local municipality:

Mier Local Municipality consists of nine small towns and the !Khomani San community within its jurisdiction. It has a total population of approximately 7 000 people. Rietfontein, which is the main
--

BASIC ASSESSMENT REPORT

town, is situated approximately 280km north-west from the nearest big town of Upington. Mier Municipality borders with Namibia in the west, the Kgalagadi Transfrontier Park in the north and Botswana in the north-east.

The main economic sectors are agriculture, business services, game farming, tourism and hospitality, manufacturing, transport, community services, social and personal services.

Local Economic Development focusses on the following key projects:
Salt workings projects; vegetable gardens; upgrading of cemeteries; arts and crafts by !Khomani San community; Kalahari Tourism tented camp and small business activities.

Level of education:

No schooling aged 20+	= 9,1%
Higher education aged 20+	= 5,1%
Matric aged 20+	= 14,9%

b) Socio-economic value of the activity

What is the expected capital value of the activity on completion?	Unknown	
What is the expected yearly income that will be generated by or as a result of the activity?	Unknown	
Will the activity contribute to service infrastructure?	YES	NO
Is the activity a public amenity?	YES	NO
How many new employment opportunities will be created in the development and construction phase of the activity/ies?	*Minimal	
What is the expected value of the employment opportunities during the development and construction phase?	Unknown	
What percentage of this will accrue to previously disadvantaged individuals?	Unknown	
How many permanent new employment opportunities will be created during the operational phase of the activity?	None	
What is the expected current value of the employment opportunities during the first 10 years?	Unknown	
What percentage of this will accrue to previously disadvantaged individuals?	Unknown	

* The proposed project involves the experience and expertise of highly skilled labour. All of Eskom's policies encourage the use of local labour where possible. Minimal additional employment opportunity will be available during the construction phase. During the operational phase no additional employment opportunities exist – the project will, however, secure employment for existing Eskom employees.

9. BIODIVERSITY

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

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

Systematic Biodiversity Planning Category				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)	

Information as required above is not available for the Mier Local Municipality on the BGIS SANBI website. However, the site consists of the Kalahari Karroid Shrubland, which, according to the SANBI website, is Least Threatened with 99.2% remaining.

- 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%	Typical natural species in an arid area. The area is however, degraded due to human influences.
Near Natural (includes areas with low to moderate level of alien invasive plants)	%	
Degraded (includes areas heavily invaded by alien plants)	70%	All species present are natural to the area. They do however have a low cover due to degradation of the area. No alien species are present, but the area has large open patches due to human induced influences such as the road and grazing by livestock.
Transformed (includes cultivation, dams, urban, plantation, roads, etc)	%	

BASIC ASSESSMENT REPORT

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		

The site consists of the Kalahari Karroid Shrubland, which, according to the SANBI website, is Least Threatened with 99.2% remaining (map attached in Appendix A).

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

The area is classified as belonging to the Kalahari Karroid Shrubland (NKb5) (Mucina & Rutherford, 2006). The vegetation is characterised by the presence of the dwarf shrub *Rhigozum trichotomum*, the grasses *Stipagrostis obtusa*, *Aristida congesta* subsp *congesta*, *Enneapogon desvauxi*, *Eragrostis obtuse* and the forb *Thesium hystrix*. The vegetation has an estimated 25-30% cover. Small rocks and bare soil cover up to 70% of the area. The vegetation type is not regarded as being threatened and is classified as Least Threatened, with 99.2% remaining. Individuals of the declared alien invasive tree *Prosopis glandulosa* were observed outside the study site. No red data species or habitat was observed within the study site. From a plant ecological and ecosystem functioning point of view the area has a low conservation value.

SECTION C: PUBLIC PARTICIPATION

1. ADVERTISEMENT AND NOTICE

Publication name	Die Gemsbok	
Date published	15 May 2015	
Site notice position	Latitude	Longitude
Rietfontein border post at the entrance gate to the site	26° 45' 23.00" S	20° 00' 02.92" E
Mier Local Municipality in Rietfontein	26° 44' 30.43" S	20° 01' 49.18" E
Date placed	14 May 2015	

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 41(2)(e) and 41(6) of GN 733.

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

Please refer to Appendix E for the contact details of below mentioned IAPs

GENERAL STAKEHOLDERS

Agri Noord Kaaplandse Landbou Unie, For attention: The Chairperson: Mr Henning Myburgh
Rietfontein Border Post, For attention: Chief Control Immigration Officer: Ms Hanlie du Plessis
SAPS at Rietfontein Border Post, For attention: Captain G Brooks
SAN Community, For attention: Mr Terrance Fife

NAMIBIA

Aroab Village Council
Ministry of Finance, Directorate Customs & Excise, Karas Region, Klein Manasse Border Post Deputy-director: Mr Frikkie van der Merwe at Head Office in Windhoek
Head of Immigration, (at the border) Officer Mr Kasona
Station Commander, (at the border) Warrant Officer Ananias
Namibia Power Corporation, Nampower Centre, 15 Lutherstreet, Windhoek <ol style="list-style-type: none"> 1. Managing Director: Mr Paulinus Shilamba 2. Divisional Manager: Strategy, Corporate Communication & Electrification: Ms Monica Nashandi 3. Chief Officer: Power Systems Developments: Mr Reiner Jagau
Nam Power, Manager: Safety, Health Environment & Wellness, For attention: Mr Danie Louw
Karas Regional Council, Governor of the Karas Region, Hon B Swartboo

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

This project was advertised onsite as well as in the local newspaper (Die Gemsbok) and no comment was received to date. The Draft BAR (this document) is now being distributed for further opportunity to comment.

Summary of main issues raised by I&APs	Summary of response from EAP
<p>Department of Water Affairs & Sanitation: Northern Cape Region: Lower Orange Water Management Area: Ms S Manamathela</p> <ul style="list-style-type: none"> • No development should be within 100m horizontal distance within a watercourse. • Should the development occur within the floodplain, there is a need for a WULA • The DWS should be furnished with an agreement letter between the contractor and the municipality where sewage will be disposed of. • Any spillage of hazardous waste must be dealt with and reported to the department within 24 hours after is occurred. <p><i>Response from Landscape Dynamics</i> Water Use Authorisation</p> <ul style="list-style-type: none"> • <i>The definition of a watercourse in terms of the National Water Act, 1998 (Act Nr 36 of 1998) is as follows: A watercourse means:</i> <ul style="list-style-type: none"> ○ <i>A river or spring</i> ○ <i>A natural channel in which water flows regularly or intermittently</i> ○ <i>A wetland, lake or dam into which, or from which, water flows; and</i> ○ <i>Any collection of water which the Minister may, by notice in the Gazette, declare to be a watercourse, and a reference to a watercourse include, where relevant, its bed and banks.</i> <p><i>The drainage lines relevant to the Mier project could be described as slight and very shallow drainage features in a very dry landscape with very little rainfall and good drainage due to the sandy characteristics of the soil composition. The term water course is therefore not strictly relevant to this project.</i></p> <ul style="list-style-type: none"> • <i>Note also that the preferred site lies outside of the two insignificant drainage lines as indicated on the site layout map. With the proposed stormwater management mitigation management measures in place the project will not impede or divert the flow in a watercourse and neither will it alter the bed, banks, course or characteristics of a watercourse.</i> 	

- *A Risk Assessment Table compiled confirms that this is a very low risk development and that the substation will have very little to no effect on the workings of the drainage lines. However, mitigation stipulated in the Environmental Management Plan includes the demarcation of the drainage lines and that it should be treated as no-go areas during the construction period. It is further stated that no temporary construction camps may be erected within these drainage features and that storage of any construction material will not be allowed. In addition, the Eskom engineers are compiling a stormwater management plan for the site to ensure that the Eskom structures will not be affected by natural stormwater drainage.*

It is therefore confirmed that no authorisation in terms of the National Water Act (Act 36, 1998) is required as Sections 21(c) and (i) are not triggered.

Agreement Letter between the Contractor and the municipality in terms of waste disposal

Only once all authorisations are in place, will Eskom identify and/or appoint the Contractor for this project. The condition that this letter in terms of sewage disposal be provided to the DWS prior to commencement of construction is now included in the EMP that will accompany the Final BAR to DEA for approval.

Spillages

Your requirement in terms of spillages of hazardous waste is included in the EMP under the heading Ground & Surface Water during the Construction Phase.

The DWS requested a site visit, which was attended by DWS and Landscape Dynamics on 24 November 2015. DWS submitted the following comment thereafter:

- The Department must be furnished with the stormwater management plan.
- Should this documented be submitted to DWS, the department may hold no objection to the development.

Response from Landscape Dynamics

- *As discussed on site, it is stipulated in the EMP that the Final stormwater management plan must be submitted to DWS before construction commences. Eskom is legally bound by the EMP so the stormwater plan will be submitted to DWS as soon as it is available.*
- *The Final stormwater management plan will only be drafted once the engineers do the final and detailed design for the substation, which will happen after the Environmental Authorisation has been issued.*
- *The Final BAR and Final EMP will now be submitted to DEA for the issuing of the EA.*

No further comment from DWS was received.

South African National Roads Agency SOC Limited: Environmental Coordinator: Ms Nicole Abrahams

SANRAL has received background information and a site layout plan for this project. A locality plan was requested.

Response from Landscape Dynamics

- A locality plan was emailed to Ms Abrahams.
- No further comment was received.

Department of Environmental Affairs: Chief Director: Integrated Environmental Authorisations: Deputy Director: Strategic Infrastructure Developments: Ms Constance Musemburi

- In terms of the EIA Regulations 2014, comment from DEA's Biodiversity Section, other relevant organs of state and all IAPs must be submitted in the final BAR.
- A motivation as to why no specialist assessments were done should be included in the Final BAR.
- It is required to comply with Regulation 19 (1)(a) of the EIA Regulations 2014.

Comment from Landscape Dynamics

- *Comment received during the commenting period is addressed in this section of the BAR. A request for comment was emailed to Seoka Lekota (contact details obtained from Ms Constance Musemburi). A 30-day commenting period, excluding the holidays, applied, with the last day for comment being 18 January 2016. No comment was received from the Biodiversity Section of DEA within the stipulated timed frame. Proof of distribution of the Draft BAR to Ms Lekota is attached as Appendix E2.*
- *This motivation is provided in Section B, page 22 of this report.*
- *Timeframes as stipulated in the Regulations are being adhered to.*

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:

Please refer to Appendix E for the contact details of below mentioned IAPs

MUNICIPALITIES

Mier Local Municipality, Municipal Manager, Mr Josef Willemse & the Councillor for Ward 3
Mayor for Mier Local Municipality, Ms Magrieta Eiman
ZF Mgcawu District Municipality, The Municipal Manager: For Attention: Mr Elias Ntoba
ZF Mgcawu District Municipality, Municipal Support: For Attention: Acting Ms Jolene van Wyk (PA: Thalita)

BASIC ASSESSMENT REPORT

ZF Mgcawu District Municipality, The Head Engineer: For attention: Mr Gregory Nganga
ZF Mgcawu District Municipality, The Environmental Officer: For attention: Mr Frikkie Ruppen

GOVERNMENT DEPARTMENTS

Department of Water & Sanitation, Northern Cape Regional Office, Chief Director: Water Sector Regulation and Use: Mr A Abrahams
Department of Water Affairs, Northern Cape Region, Upington Office, Assistant-director: Water Quality: For attention: Mr Sean Cloete
Department of Water & Sanitation, Northern Cape Region, Upington Office, Acting Area Manager: For attention: Ms Mashudu Ranwedzi
Department of Environment and Nature Conservation, The Principal Environmental Officer for the Siyanda District, For attention: Ms A Yaphi
Department of Environment and Nature Conservation, Environmental Officer, For attention: Mr Marvin Mathews
Department of Environment and Nature Conservation, For attention: Miss Tulu Leburu
The South African Heritage Resources Agency, Heritage Officer, For attention: Ms Katie Smuts
Department of Roads and Public Works: Northern Cape, Siyanda District Manager: For attention: Mr Garnett Keyser
Commission on Restitution of Land Rights: Northern Cape, The Chief Director: For attention: Mr O Mvula
SA National Roads Agency, Western Region, For attention: Regional Manager, Mr J C van der Walt
SA National Roads Agency, Western Region, Registration: For attention: Ms Marilyn Kleinhans
SA National Roads Agency: Western Region, Statutory Control: For attention Ms C Runkel and Ms R de Kock
Department of Economic Development & Tourism: Northern Cape, The Acting Head of the Department: For attention: Mr K Packireisamy
Department of Mineral Resources, Northern Cape, Regional Manager, For attention: Sunday Mamaso (PA: Ms Brenda Monnapula)
Department of Agriculture and Land Affairs, Northern Cape, The Chief Director: Agriculture Development Services: For attention: Ms N Moletsane
Department of Agriculture, Forestry & Fisheries: Assistant-director: Ms M Vuyokazim

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

BASIC ASSESSMENT REPORT

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, 2014 and should take applicable official guidelines into account. The issues raised by interested and affected parties should also be addressed in the assessment of impacts.

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

Provide a summary and anticipated significance of the potential direct, indirect and cumulative impacts that are likely to occur as a result of the planning and design phase, construction phase, operational phase, decommissioning and closure phase, including impacts relating to the choice of site/activity/technology alternatives as well as the mitigation measures that may eliminate or reduce the potential impacts listed. This impact assessment must be applied to all the identified alternatives to the activities identified in Section A(2) of this report.

Please note that a comprehensive Impact Assessment (with detailed mitigation measures) is supplied in Appendix F where the impacts are assessed in terms of the following criteria:

- Nature of the impact (what is being affected and how, is it positive or negative);
- Extent (site specific / local / regional / national / global);
- Duration (short / medium / long / permanent);
- Magnitude or intensity of the impact (would the impact be destructive or benign and rated as low / moderate / severe);
- Probability of impact occurring (unlikely / possible / probable / definite)

The **Significance Rating** of an impact is assessed before and after mitigation measures has been applied and refers to the following:

Significance of impact	Explanation of Significance
None	There is no impact at all
Low	Impact is negligible or is of a low order and is likely to have little real effect
Moderate	Impact is real but not substantial
High	Impact is substantial
Very high	Impact is very high and can therefore influence the viability of the project

Please note that detail impact descriptions and mitigation measures are supplied in the Impact Assessment (Appendix F). All mitigation measures are also included in the Environmental Management Plan (Appendix G).

BASIC ASSESSMENT REPORT

Preferred Site: Substation Site Alternative 1		
Short impact description	Significance before mitigation	Significance after mitigation
<p>Soils / Erosion Concrete foundations will be made for each pylon along the short powerline route as well as for the substation. Vegetation will therefore be cleared and there may be an increase in surface water runoff which could lead to soil erosion. Taking into account that this is an arid area, the chances of soil erosion caused by water runoff is low.</p>	Low	Very low
<p>Vegetation The site is situated in the Kalahari Karroid Shrubland and it is considered not to be threatened with large extents that have not been transformed. Site A is located on disturbed land already occupied by the switching station and an access road. The impact is considered to be low given the small area of the site compared to the extent of the land where this vegetation type occurs.</p>	Low	Very low
<p>Aquatic Ecosystems Apart from the drainage lines, there are no aquatic ecosystems on or close to the site</p>	Very low / no impact	Very low / None
<p>Avifauna (birds) No significant impact is expected</p>	Low / very low	No mitigation measures are proposed
<p>Cultural / Heritage The area broadly is one of the few remaining areas where the Khomani San inhabit and lead a life close to the way they would have throughout history. The current presence of the Khomani San people suggests that they may have inhabited the area for thousands of years. There is a likelihood that the excavation activities may result in an archaeological find. However, Site A is located predominantly on previously disturbed areas making the chances of an archaeological find unlikely.</p>	Low	Very low
<p>Groundwater Potential for groundwater pollution always exists as a result of oil spills, etc. during the construction period.</p>	Moderate	Low
<p>Visual Impact The visual impact of powerlines / substations can be substantial in a rural environment and factors to consider are the following:</p> <ul style="list-style-type: none"> • The ability of the surrounding environment to absorb the visual impact of the powerline / substation. 	Low	No mitigation measures are proposed

BASIC ASSESSMENT REPORT

<ul style="list-style-type: none"> The presence of pre-existing powerlines and other linear infrastructure in an area serves as a mitigatory factor (rather than a cumulative negative impact) in terms of establishing new powerlines / substation in the same area. In other words electrical infrastructure clutter is best confined to existing areas or corridors of vertical visual disturbance, rather than introducing new vertical visual disturbance to undisturbed landscape. <p>In the case of the Mier substation and short powerline route, the visual impact would be low because of existing electrical infrastructure as well as the infrastructure of the border post.</p>		
<p>Air quality Dust created by construction vehicles could impact on air quality during the construction period.</p>	Low	Very Low
<p>Noise Labourers and machinery could result in noise pollution during the construction period.</p>	Low	Very Low
<p>Indirect social impact <i>Increased potential for arrests as a result of petty trans-border transgressions by contract staff – there is a risk that contract workers may unwittingly transgress border control laws. An example would be fetching litter that may have blown away on the other side of the fence. The border fence comprises a waist-high barbed wire fence, which can easily be climbed over. Such a transgression may result in an arrest. Given that the site is so close to the fence it is likely that contractor staff may have to retrieve windswept litter or anything similar.</i></p> <p><i>Expectation of job creation:</i> With the initiation of new projects in an area there may be the expectation that it will result in job creation, which can attract job seekers to the area.</p> <p><i>An influx of workers could result in an increased risk for crime and safety.</i></p>	Moderate / Low	Low
<p>Socio-economic Impact Provision of a reliable and firm power supply with an increased load to the area. The network performance will improve and the duration and frequency of supply interruptions will be minimal.</p>	High (positive impact)	No mitigation measures are proposed – it is a positive impact

Substation Site Alternative 2		
Short impact description	Significance before mitigation	Significance after mitigation
Impacts as described above for Substation Site Alternative 1 also apply to Substation Site Alternative 2, with additional impacts as described below		
<p>Increase in construction cost and length of construction period Should Site B be used, two turning points within the powerline will be required from the metering point in Namibia before it can connect to the substation. Pylons at turning points are more expensive and bigger than pylons within a straight line and this will therefore increase the cost considerably. This is especially important when taking the very short length of the powerline into consideration.</p> <p>The administrative load of constructing within Namibia is immense and Eskom prefers to avoid this where possible because it is time consuming and not cost effective.</p>	Moderate	Mitigation: Use Site Alternative 1 Impact rating: None

Conclusion of Impact Significant Rating

All identified impacts that this Eskom project could have on the environment can be easily and reasonably mitigated to acceptable levels. There are no impacts that could influence the feasibility and viability of this project.

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

2. ENVIRONMENTAL IMPACT STATEMENT

Taking the assessment of potential impacts into account, please provide an environmental impact statement that summarises the impact that the proposed activity and its alternatives may have on the environment 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.

Please note that a comprehensive Impact Assessment (with detailed mitigation measures) is supplied in Appendix F. The Impact Statement below is a summary of the conclusion of this Impact Assessment. All mitigation measures are also included in the Environmental Management Plan (Appendix G).

Alternative A (preferred alternative)

Site A is the preferred site for the following reasons:

Site A (Site Alternative 1), the Preferred Site

This site is the preferred site because it will not be required to construct any pylons within the borders of Namibia. The administrative load of constructing within Namibia is immense and Eskom prefers to avoid this where possible because it is time consuming and not cost effective. The new powerline will connect directly to the metering point in Namibia and will follow a straight line to the substation on Site A. Only one pylon on the South African side will be constructed within this new line.

Conclusion on selecting an alternative

Site A is the Preferred Site because it would be more cost and time effective because no turning points are required within the powerline from the metering point in Namibia to the substation and no pylons will be constructed within Namibian borders. In terms of the ecology, there is no preference for any of the sites and development on both sites is supported.

Conclusion

Should all mitigation measures as proposed be followed and implemented by Eskom this environmental study concludes that the project and all its activities would not have an unacceptable negative impact on the biophysical and manmade environments. No impacts were identified that could not be mitigated to acceptable levels or that could influence the viability and feasibility of the proposed Eskom Mier Substation Project.

This application is therefore recommended for Environmental Authorisation.

Alternative B

Site B is not the preferred site due to the following:

- Should Site B be used, two turning points within the powerline will be required from the metering point in Namibia before it can connect to the substation. Pylons at turning points are more expensive and bigger than pylons within a straight line and this will therefore increase the cost considerably. This is especially important when taking the very short length of the powerline into consideration.
- Furthermore, one pylon will have to be within the Namibian borders and this is not preferable due to the administrative load of constructing within Namibia.

Alternative C

No-go alternative (compulsory)

Should the No-go option apply, the substation will not be built and this can have a severe negative impact on the electricity provision to the macro area. A lack of electricity and/or an unreliable supply will result in limited economic growth and will have a negative impact on the economy of the area.

The no-go alternative is not recommended.

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
-----	----

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

--

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

--

Is an EMPr attached?

YES	NO
-----	----

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.

NAME OF EAP

SIGNATURE OF EAP

DATE

SECTION F: APPENDIXES

The following appendixes must be attached:

Appendix A: Maps

- Locality Map
- Site A & Site B and Site layout
- SANBI Maps
 - Base Map
 - National Vegetation Type
 - National Wetlands
 - National Protected Areas

Appendix B: Photographs

- Photo Report

Appendix C: Facility illustration(s)

- Typical substation and pylon structures

Appendix D: Specialist reports (including terms of reference)

- Not applicable

Appendix E: Public Participation

- E1a – Proof of Placement of Advertisements: Newspaper
- E1b – Proof of Placement of Advertisements: Onsite Notices
- E2 – Proof of Notification of availability of the Draft BAR to all IAPs
- E3 – Comments & Responses Report
- E4 – Complete register of Interested & Affected Parties
- E5 – Copies of Correspondence, notes and minutes of meetings
 - Written comment received on the Draft BAR

Appendix F: Impact Assessment

- Impact Assessment

Appendix G: Environmental Management Programme (EMPr)

- Environmental Management Programme

Appendix H: Details of EAP and expertise

- Landscape Dynamics Company Profile and Condensed CVs

Appendix I: Specialist's declaration of interest

- Not applicable

Appendix J: Additional Information

- Consent from the Mier Local Municipality
- DWS Risk Assessment